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CAMPUS REPORT

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Strike still deadlocked in 12th day

President Donald Kennedy of Stanford Tuesday, Sept. 21, declined an invitation for a personal meeting with Michael Baratz, executive secretary of United Stanford Workers, saying that "the only appropriate forum for resolution of our differences is at the bargaining table."

In a letter delivered to Baratz Monday, Kennedy praised the union for its "restraint" at the San Jose State football game, saying conduct of bargaining unit workers "showed real class."

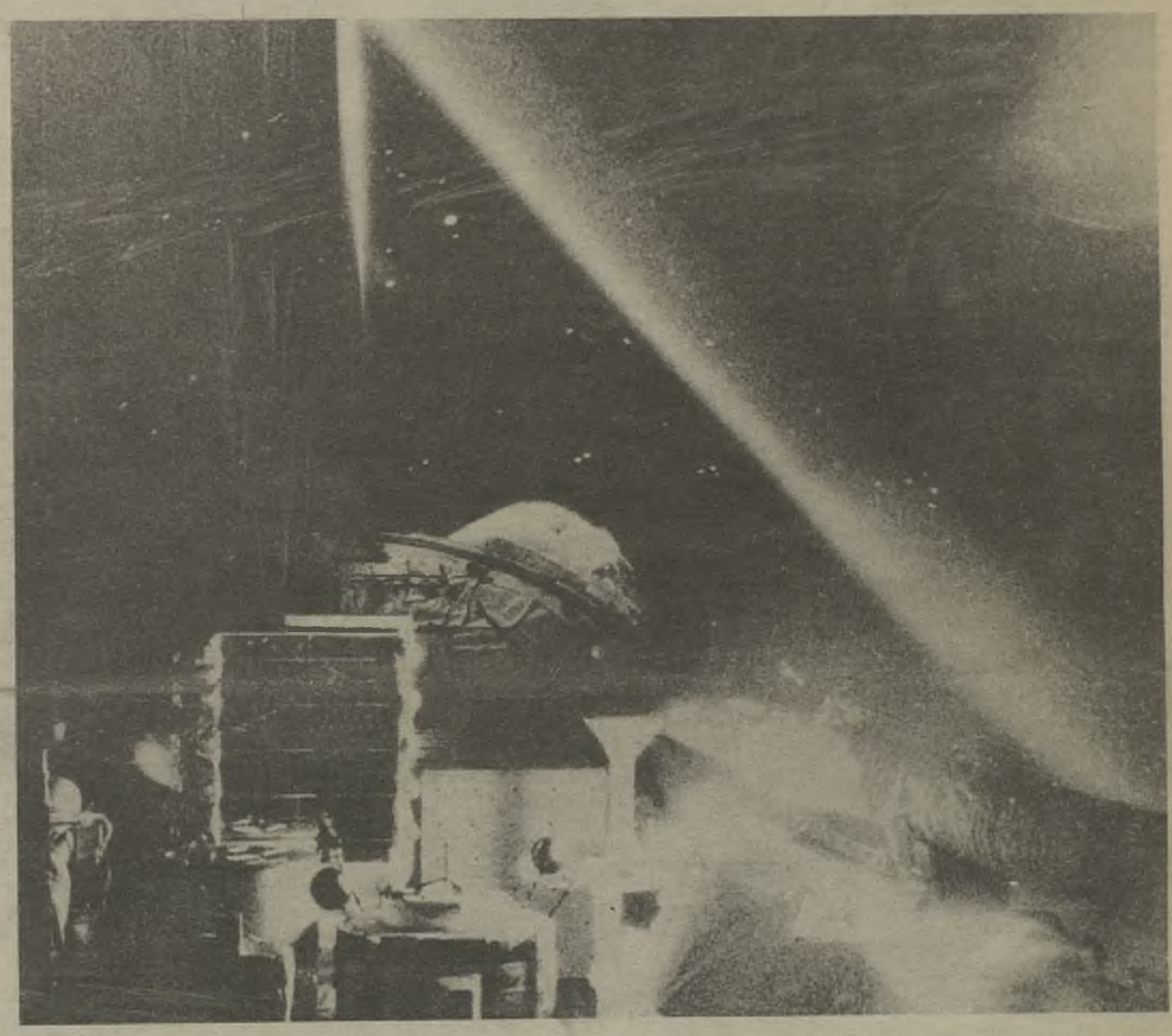
Replying, Baratz suggested a personal meeting "to present a full explanation of the issues from our perspective. Perhaps we could explore some creative ways in which a settlement could be pursued."

Earlier, Kennedy canceled the pre-game Employee's Day picnic, citing the risk of "serious disruption." Scores of union supporters leafleted 60,000 people attending the San Jose State game. A helicopter with a banner, "Stanford Unfair to Workers" circled overhead.

Federal mediator Dorothy Christiansen met with both sides alter-

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The cargo bay of the space shuttle Columbia is lit by the Stanford electron gun experiment. The glow from the atmosphere of the Earth is seen in the background. Story on page 5.

Rosse heads new Center for Economic Policy Research

Stanford's new Center for Economic Policy Research, which formally opened Sept. 1, will expand the University's top reputation nationally in economic theory and methodology into the realm of applied policy.

Its faculty will include some of the leading economists in the nation. Its Advisory Board includes such names as George Shultz, William Hewlett, Walter Hoadley, Frank Lodato, Arjay Miller, Anthony Ridder and Thomas Schelling.

The Center has taken two years in planning. It was brought into being by a committee headed by Prof. Paul David, chairman of the Economics Department.

The director will be noted economist Prof. James N. Rosse, who just finished a tour of duty as associate dean of humanities and sciences. The chairman of the Planning Committee will be Prof. Michael Boskin, who has a national reputation in economics and works regularly with the Administration in Washington, D.C.

The main purpose of the Center is to foster research on economic policy among economists at Stanford. "We see ourselves as being concerned with the sort of research that doesn't go to a subcommittee the day after tomorrow. We try to work

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Rodriguez tells how to move beyond affirmative action

Moving beyond compliance in affirmative action requires active management, positive rewards, and improved recruitment and promotional opportunities, according to Santiago Rodriguez, Stanford's affirmative action officer.

Since the mid-1970s, Stanford has experienced a "plateau" mentality, with little substantive progress toward diversity, especially in faculty and staff, he declares in a report to University President Donald Kennedy. Other universities face "similar, perhaps even worse" dilemmas.

"No minorities and women currently hold positions in the top administrative ranks," he notes. "Some women, and only a handful of minorities, occupy positions in the mid-level administration. The professoriate is still overwhelmingly composed of majority males.

"Greater success in diversification has occurred within the student body, notably within the professional schools and, to some extent, in the undergraduate ranks. Major problems continue in the graduate programs, which are a vital source of potential candidates for future academic positions."

Successful affirmative action requires an "active" management style, he observes. If it is unreasonable to expect professors to be active, day-to-day supervisors,

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Advisory Board chooses Jim Adams as chairman

Prof. James L. Adams, associate dean of the School of Engineering, has been elected chairman of the Advisory Board at Stanford for 1982-83.

The board reviews every appointment, reappointment, and promotion in the professoriate at Stanford. It is composed of seven full professors elected by their faculty colleagues in the Academic Council. The board chooses its own officers.

Nobel Laureate Kenneth Arrow, the Joan Kenney professor of economics and a professor of operations research, was elected vice-chairman. Prof. George Dekker, English, will be secretary.

Other members are Nobel Laureate Paul Berg, holder of the Jack, Lulu, and Sam Willson professorship in biochemistry; Eugene Webb, the Lane professor of organizational behavior in the Graduate School of Business, who holds courtesy appointments in communication and psychology; Robert A. Chase, the Emile Holman professor of surgery and a professor of structural biology; and Donald Knuth, the Fletcher Jones professor of computer science.

Adams, former head of the Department of Mechanical Engineering, recently was named head of the Values, Technology, and Society program. A Caltech graduate, he received both his master's and doctorate degrees at Stanford



James Adams

and has been a faculty member here since 1966.

Author of *Conceptual Blockbusting*, a book on problem solving, Adams received the University's highest honor for outstanding service to undergraduate education, the Lloyd W. Dinkelspiel award, last year. He was cited for his "freewheeling, blockbusting, barn-burning style that makes him an exciting teacher in all known media" and for his "steadfast commitment to the view that engineers and technologists have an obligation to reach out academically to the rest of the University, and beyond it."

Adams was vice-chairman of the Advisory Board last year. Members serve three-year terms on a staggered basis. Only with their approval does the president of the University forward appointment recommendations to the Board of Trustees for final approval.

The Advisory Board also:

* Counsels the president and provost of the University on any matter they submit to the board for advice;
* Initiates its own advice to the president and provost on academic and policy issues about which its members are concerned; and
* Conducts final reviews of faculty grievances and faculty discipline when these matters cannot be resolved except by a formal hearing.

Detailed duties of the Advisory Board are described in the articles of organization of the Academic Council. It is the only group of faculty involved in University governance that is selected by the entire Academic Council.

Cox gets fellowship

Stanford Business School **Prof. John C. Cox** has been awarded a Batterymarch Fellowship to pursue his research interests in 1982-83.

He is one of three academicians from throughout the United States to be so honored. The award, which carries a $35,000 stipend, permits nontenured faculty members to take a year off from teaching to do basic research in investments or finance.

The faculty research fellowships are sponsored by Batterymarch financial Management, an investment advisory firm in Boston.

This is the second consecutive year in which a Stanford Business School professor has been a Batterymarch Fellowship recipient.

Research associate positions

Department of Oncology

This position entails studies on muscle cell differentiation, particularly cell surface changes during myogenesis. We will be using monoclonal antibodies to characterize these myogenic cells as well as to identify the contractile proteins which they synthesize.

Candidates must have a Ph.D. or M.D., postdoctoral training, and demonstrated skills in biochemistry, cell biology, or developmental biology.

Please send applications or resumes to Frank E. Stockdale, M.D., Division of Oncology, Stanford Medical Center, Stanford, Calif. 94305.

Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify minority persons and women with appropriate qualifications.

Department of Opthalmology

The research to be done will focus on mechanisms involved in the active transport of water across the cornea. Qualifications are a Ph.D. or M.D. and a few years of subsequent experience in the area of study; experience with electron microscopy helpful.

Applications or resumes should be sent by October 21, 1982 to Dr. David Maurice, Division of Ophthalmology, Room S030, Stanford Medcial Center, Stanford, Calif. 94305, or you may call 497-5844.

Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify minority persons and women with appropriate qualifications.

Humanities, Sciences announces four new tenured professors

Alban K. Forcione, 43, Princeton University professor of Spanish and comparative literature, is one of four tenured appointments and promotions in the Stanford School of Humanities and Sciences approved by the Board of Trustees Tuesday, Sept. 14.

Jerome H. Friedman, 42, leader of the Computation Research Group at the Stanford Linear Accelerator Center since 1972, was appointed professor of statistics on a 50 percent time basis, effective immediately.

Corey S. Goodman, 31, and Steven George Boxer, 34, were promoted to associate professorships in biological sciences and chemistry, respectively, effective immediately.

Alban Forcione

Forcione, who will come to Stanford in September, 1983, has taught at Princeton since receiving his Ph.D. there in 1968. His research interests have centered on Cervantes, Spanish literature of the Golden Age, and European literature of the Renaissance and the Baroque, for which he recently received a major grant from the National Endowment for the Humanities.

His undergraduate courses have covered such topics as Cervantes, *Don Quixote*, Spanish drama of the Golden Age, masterpieces of Western literature, Renaissance culture, and literary theory. At the graduate level he has taught the literature of European humanism, masterpieces of the European Baroque, Renaissance epic and literary theory, the development of the European short story, the origins of picaresque fiction, Baroque satire and all areas of Spanish Golden Age literature.

Born Nov. 17, 1938 in Washington, D.C., Forcione received his bachelor's degree at Princeton in 1960 and his master's at Harvard in 1961. He has been a full professor at Princeton since 1975. His most recent publication is *Cervantes and the Humanist Vision*, published this year.

Jerome Friedman

Born Dec. 29, 1939 in California, Friedman received his bachelor's at Berkeley in 1962 and his doctorate there in 1967. He joined SLAC after four years as a research physicist at Lawrence Berkeley Laboratory.

Friedman is regarded as the leading force in developing projection pursuit methodology for a large variety of statistical problems. Projection pursuit is a method of fitting regression models when there are many explanatory variables and no strong *a priori* notion of the proper regression model.

He also has used computers to develop a new method of recursive partitioning for classification problems. His most recent publications are *Projection Pursuit Regression* (1981) and *An Adaptive Importance Sampling Procedure* (1982).

His teaching will concentrate on data analysis, computational statistics, and graphical statistics.

Corey Goodman

A Stanford faculty member since 1979, Goodman's research interests center on embryonic development of the nervous system. He lectures extensively on neurobiology and developmental biology in the biology core program. He helped establish the developmental biology program on campus and obtained a National Institutes of Health training grant for predoctoral and postdoctoral students in this field.

Born June 29, 1951 in Chicago, he received his bachelor's degree from Stanford in 1972 and his doctorate from Berkeley in 1977. He was a postdoctoral fellow at UC-San Diego for two years before coming to Stanford.

He has been a Helen Hay Whitney fellow, an Alfred P. Sloan fellow, a McKnight Foundation scholar, and won the Charles Judson Herrick award.

George Boxer

A Stanford faculty member since 1976, Boxer specializes in biophysical chemistry. His primary interest has been to understand the basis of photosynthesis, how plants use the sun's energy to convert carbon dioxide and water into organic compounds. He has inserted chlorophyll into a protein, thus determining aspects of its absorption spectrum as an "isolated" molecule.

Born Oct. 18, 1947 in New York, he received his bachelor's degree from Tufts in 1969 and his doctorate from Chicago in 1976. He has been named a Camille and Henry Dreyfus teacher-scholar fellow for 1980-85, an Alfred P. Sloan Foundation fellow for 1979-83, and was an Atomic Energy Commission predoctoral fellow in 1972-76.

Magician to perform

Muddled magician **Prof. Denis Phillips**, education, will be one of the special attractions at the Beggar's Bazaar, to be held 1-5 p.m. Sunday, Oct. 3, in the Palo Alto Cultural Center's sculpture garden.

The event, a fund-raiser for West Bay Opera, will feature also other entertainment and items for sale. Admission is tax-deductible.

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Schimke's team finds clue to why some tumor cells resist anticancer drugs

BY DONALD STOKES

A new line of research at Stanford into fundamental properties of genes gives strong promise of advances in cancer treatment.

Prof. Robert T. Schimke, internationally known for his work in the field of gene expression and protein synthesis, is leader of a team of 20 researchers in the Department of Biological Sciences.

The team is following a new line of inquiry that may change basic concepts of how to deal with malignancies.

The Stanford researchers, who include recombinant DNA and somatic cell geneticists, as well as developmental biologists, tend rows of cell incubators and sophisticated instruments. They probe the process whereby mammalian cells, including human cells, grown in culture develop resistance to certain anti-cancer drugs.

One of the great frustrations of clinicians treating patients with cancer chemotherapeutic agents is the development of drug resistance in the tumor cells.

Why is it that the cancer cells overcome the drugs which physicians use to try to kill the cancer?

"Because nature, whether it be entire organisms or individual cells, is based on the survival of the fittest," says Schimke. "In terms of cancer cells, the fittest are cells that will grow in the presence of drugs." Various types of mutations, i.e. alterations of DNA structure, occur constantly, and out of this process comes cells that are resistant. Evolution springs from such processes, and drug resistance is a form of such evolution.

This evolutional process occurs in many ways, but what Schimke and his laboratory group have been studying is how cells acquire resistance by increasing the numbers of copies of a specific gene, i.e. gene amplification.

"Cells normally contain only two, or at most, a few copies of a particular gene. What we are finding is that cells resistant to the cancer drug we are studying, methotrexate, may contain as many as 400 copies of a particular gene per cell.

Although Schimke has won international recognition for his research, only this year, at the age of 49, has he been able to devote full-time to research. For the past 14 years he has been chairman of two departments successively at Stanford, editor of several major professional journals, member of a number of national committees, and responsible for a number of other administrative activities.

With these have come national honors, including election to membership in the National Academy of Sciences and the American Academy of Arts and Sciences.

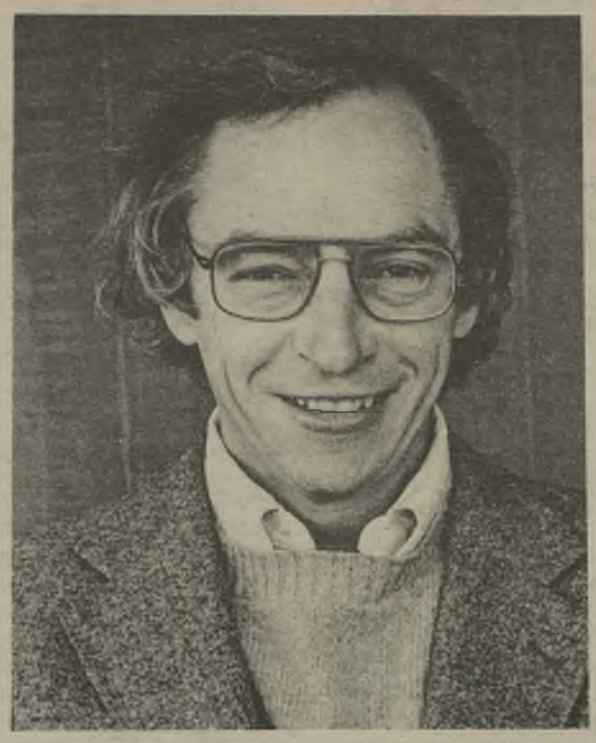
Today he is happily devoting himself full-time to the research to which he committed himself nearly a quarter of a century ago.

"In our laboratory we have been examining the mechanism whereby cultured mouse and hamster cells become resistant to the drug, methotrexate, a chemotherapeutic agent used in the treatment of human cancer," he said. "The drug kills cancer cells by binding tightly to the enzyme dihydrofolate reductase at the same site where the normal substrate, dihydrofolate, would bind.

"If one grows cells in the presence of a low concentration of methotrexate, virtually all of the cells are killed. Occasionally, however, some cells (approximately one in every 100,000 of the cells we have been working with) survive and will grow.

"These cells are then resistant to a low concentration of methotrexate, and they have an elevated level of dihydrofolate reductase. If such cells are now grown in the presence of a somewhat higher concentration of methotrexate, again the majority of cells will be killed, but some will survive and grow; they will be even more resistant to the drug, and they will have even more enzymes.

"By continuing the process through additional incremental selections in progressively higher concentrations of methotrexate, one eventually gets cells that are highly resistant to methotrexate.



We think we are beginning to understand how drugs might be used in therapeutic regimes to reduce the possibility of developing resistance in the tumor.

—Robert Schimke

"It is important to realize that this procedure is equivalent to a Darwinian selection process, inasmuch as most of the cells are killed at each step along the way.

"The selection pressure in this case is far greater than would ever be expected in normal evolutionary processes in mammals. However, perhaps a comparable selection pressure is attained when insects are exposed to a massive application of insecticide.

What causes the cells to become increasingly resistant?

"In very simple terms, because the cells that are selected are those that have undergone a relatively infrequent event of gene amplification. We started this line of experimentation in 1974; this was a time when the various techniques of recombinant DNA, including isolation of messenger RNAs, and cloning specific genes were just being developed in many laboratories throughout the world. In 1977 we found that the reason why cells resistant to methotrexate overproduce dihydrofolate reductase was because these cells have more copies of the gene.

"The fact that you can select drug-resistant cells that have multiple copies of a particular gene was unexpected to us, for we have not entertained such a possibility. Other researchers have begun to look at this type of phenomenon in other cells and with other drugs, and the realization is growing that amplifications of this kind are quite common. For instance George Stark and his colleagues in the Department of Biochemistry at Stanford have found resistance to another drug results from amplification of yet another gene.

"Although we started out this research in cultured cells, we now believe that this type of amplification process occurs in the clinical world as well. We are about to publish two papers which indicate that patients who have been treated with methotrexate and whose tumor cells are resistant to methotrexate have amplified dihydrofolate reductase genes in the surviving tumor cells."

"During the last three years we have also learned a great deal about what chromosomes look like when you have amplified genes."

Schimke displayed microscopic pictures of chromosomes in a drug-sensitive cell taken from a Chinese hamster's ovary. He then compared them with chromosomes from a drug-resistant cell. There was a striking difference. One of the chromosomes in the drug-resistant cells had a long, extended addition to a specific chromosome.

"The extended region of that chromosome contains about 150 amplified genes which cause the resistance," said Schimke. "In some cases we have found up to 400 copies of the gene on a single chromosome. The identical genes are often grouped together in a chromosome as a "gene cluster."

Schimke went on to explain that the drug resistance and amplified genes could be either stable or unstable. When some of the drug-resistant cell lines are grown in the absence of selection (i.e. methotrexate) drug resistance and the amplified genes are lost. "This instability phenomenon in many instances of gene amplification has not been understood in the past, so classical geneticists have tended to ignore it."

"What we are trying to figure out are the molecular and biochemical reasons for the emergence of resistance, i.e. gene amplification. Our most recent findings suggest that amplifications of genes are quite frequent in the cultured cells we are studying. In addition we are finding that certain treatments of cells, including such things as intermittent treatment with compounds that inhibit DNA synthesis increase the frequency of gene amplification. Other types of treatments, including ultraviolet light and use of carcinogens, also increase the frequency of amplification of the dihydrofolate reductase gene.

"We think we are beginning to understand how drugs might be used in therapeutic regimens to reduce the possibility of developing resistance in the tumor. A very important question is whether intermittent treatment of cancer by chemotherapy may, in fact, increase the frequency of emergence of resistant cells. Since intermittent treatment is a relatively standard regimen for drug administration, perhaps more attention should be given to considering mechanisms of resistance in the development of new drugs and treatment regimens so that resistances can be decreased.

"We hope that our studies may shed some light on this area. Once we understand how amplification occurs, it may well be possible to find out how to prevent it from occurring. This may greatly improve the success of treatment in those cases where resistance, unfortunately, develops."

Asked if gene amplification is involved in malignancies, Schimke replies: "As with any relatively new concept, attempts are made to apply that concept to poorly understood biological phenomenon.

"In the past year researchers are beginning to look for abnormal types of chromosome structures in various types of tumors, including breast, lung, brain and bowel tumors. They are finding structures which are suggestive of amplified genes as we have studied them in terms of methotrexate resistance. These chromosome changes occur unrelated to treatment, and probably preexisted in the tumors.

"There is considerable interest in whether amplification of genes is related to the onset of the cancer process, or occurs as part of the process whereby many cancers progress to a more malignant state. There are no answers at the present time, and only more research will tell. It is an exciting time.

Schimke opened one of his incubators and took out containers that held mouse or human cells growing in nutrients. He placed these under the microscope.

Bathed in a greenish glow were scyth-shaped

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MacArthur fellow Charles Bigelow to teach art, computing at Stanford

Charles Bigelow, 37, recent winner of a five-year $192,000 MacArthur Foundation fellowship, will return to the Bay Area this fall as an assistant professor of art and computer science at Stanford.

Internationally known as a type designer, he will teach "Introduction to Grammatology." Grammaton is the Greek word for letter, and the course will cover the art and science of letter formation.

Bigelow credits Stanford computer science Prof. Donald Knuth and the proximity of Silicon Valley with drawing his interests back to the West Coast and teaching.

He has lived in an apartment in Cambridge, three blocks away from the Stanford of the East. "I've been studying at the Harvard evening school three years, but I'm still in the dark," he quips.

Bigelow marvels at the idea that a typographer would be selected for the MacArthur award, which has absolutely no restrictions on its use.

While "the figures involved are embarrassing," he adds, "it's wonderful to work for 12 years and then get a retroactive grant for all the time donated various research projects."

Better letters

His interests have ranged from designing better letter forms for modern computer texts—videotexts, typesetters, and terminals, for example—to finding an appropriate typography for an oral form of Indian poetry.

A graduate of Reed College, where he majored in anthropology and linguistics, Bigelow studied calligraphy with Lloyd Reynolds, Oregon's poet laureate.

"He was a very forceful personality, as well as a scholar and enthusiast," Bigelow recalls. "Reynolds felt that if everyone took a small part of the world under their control that would be a measure of success—that writing beautifully (in calligraphy) could improve communication, for example."

After studying at the San Francisco Art Institute and free lancing for the San Francisco Mime Troupe and the Oregon Environmental Council, Bigelow became art director for the *Oregon Times* magazine, now known more simply as the *Oregon* magazine.

In the mid-1960s Bigelow took a course from Jack Stauffacher—a former book designer for the Stanford Press—which turned his interests from calligraphy toward typography. They formed a small Center for Typographic Language in the City.

In the late 1970s, Bigelow and his partner, Kris Holmes, worked with Dell Hymes, an anthropologist interested in the Chinookan Indian culture to develop an alphabet and design a book for what was largely an oral form of poetry. The National Endowment for the Humanities and National Endowment for the Arts supported this project.

Subsequently, Bigelow was named designer in residence at the Rhode Island School of Design, where he remained during 1978-80 before returning to Cambridge to work on digital typography.

Bigelow calls the Bay Area "very relaxed and easy going" compared to Boston, "where people dress formally, with frowns and furrowed faces, and either get froze nor broiled."

It's a reflection of "Anglo prejudice" to say the East is older than the West, especially for those familiar with the Mission traditions and Indian life, he suggests.



Charles Bigelow

When the call came through from Roderick MacArthur, Bigelow at first thought an eager real estate salesperson might be on the line from California. "But when the caller said he was chairman of the MacArthur prize committee, I knew it wasn't about a house."

And what does he plan to do with the award? "I'll just use it to buy time to keep on working," Bigelow says. He plans to move his studio from Cambridge to the Palo Alto area with his partner, Kris Holmes.

"I don't even own a car, and hope I don't have to buy one, even in California," Bigelow says. "But I might use part of the grant to buy a bike."

Applebee elected to literacy group

Arthur N. Applebee, associate professor at the Stanford School of Education, has been named as a member of the Early Childhood and Literacy Development Committee of the International Reading Association.

The association, with 65,000 members worldwide, is a nonprofit education organization devoted to the improvement of reading instruction and promotion of lifetime reading. Its members include reading teachers, researchers, administrators, reading specialists and others interested in reading education.

Davis receives scholarship recognition

Kingsley Davis, senior research fellow at Stanford's Hoover Institution, has received the highest award of the American Sociological Association, the career of distinguished scholarship award.

Davis also is distinguished professor of sociology at the University of Southern California and Ford professor of sociology and comparative studies, emeritus, at UC-Berkeley.

He has "had a profound impact upon the profession and upon social policy" in a scholarly career of nearly four decades, the ASA citation said. "His voluminous works cover such diverse fields as demography, urbanization and development of Third World countries, family and youth, social stratification, and theory."

Coining the phrase "Zero Population Growth" in 1967, he has been one of the principal exponents of the use of incentives in fertility control policies. He has served as a consultant on population policies and demographic information in India, Nepal, Bahrain, and Latin American countries.

His books include *The Population of India and Pakistan*, *World Urbanization* (two volumes), and *Cities: Their Origin, Growth and Human Impact*. He is editor of *Studies in Population and Urban Demography*, which now includes 18 volumes. His work has appeared in *Scientific American*, the *New York Times Magazine*, *Commentary*, *Foreign Affairs*, and in newspapers generally.

Currently he is writing a book on the demographic changes responsible for major economic and social developments in industrial societies.

Schimke. . .

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objects, cells growing. An occasional cell was rounded up as a ball, cells that were in the process of dividing. In these small objects, seen only with the microscope, may lie understanding of one of mankind's greatest scourges.

Schimke began his career by winning a national scholarship which would have sent him to Yale in the fall of 1951. In February of that year, his draft board sent him an induction notice—the Korean War was then at its height. So he had to quickly find a good university that would admit him right away on a scholarship. This turned out to be Stanford, and he became a freshman in spring, 1951.

He chose a biology major, but enjoyed most the courses he took in philosophy. After three years he entered Stanford School of Medicine, which at that time was in San Francisco. "They were trying to induce medical students to go into research," said Schimke "so the dean took the two students with the highest grades and gave us each a fellowship for a year.

"At that time I was interested in psychiatry and in brain chemistry, so I spent the year in the Department of Pharmacology, where Avram Goldstein had just become chairman.

"I wanted to do my own research. Avram was very supportive and sent me off to Washington University in St. Louis to learn some special techniques from Oliver Lowry."

On returning to Stanford Schimke concentrated on research, and received his own grant from the Lucie Stern Foundation.

Although committed to research at that time, he decided to take an internship and assistant residency in medicine at the Massachusetts General Hospital in Boston.

Schimke made arrangements to work with Herbert Tabor, a well-known biochemist at the National Institutes of Health in Bethesda, Maryland.

"I thought I would give myself about three years to see if I could accomplish something worthwhile in research." He became a commissioned officer in the Laboratory of Biochemical Pharmacology at the National Institute of Arthritis and Metabolic Diseases.

His pattern of research ever since 1960 has been in the same broad direction: he worked to find out what was involved in the regulation of expression of genes in higher vertebrates. Early on in his research he demonstrated that there was a significant relationship between how much urea is excreted by rats and the levels of a series of enzymes involved in the synthesis of urea. His major contribution during his six years at Bethesda was to show that not only are levels of proteins regulated by how rapidly they are synthesized, but also by how rapidly they are broken down.

In 1966 he returned to Stanford as associate professor of pharmacology and biology, and within four years had become chairman of the Department of Pharmacology.

For nearly 7 years the focus of his laboratory work was into the role of steroid hormones, for instance estrogen, in the regulation of protein synthesis. During this time recombinant DNA technology entered the scene and became available as a tool.

In 1978 he began a four-year term as chairman of the Department of Biological Sciences, which he completed on September 1, this year. Now, for the first time in some 14 years, he will be able to give the majority of his time to research.

One of Schimke's great regrets is that so few persons with M.D. training are currently going into medical research. "The problem is obvious. By the time people leave medical school, they usually have debts of over $50,000 accumulated for their education. There is no way they are going to be able to repay that debt as a committed scientist.

"Also, there is the shrinking of monies devoted to basic research, and this makes it most difficult for the beginning investigator."

His own team of researchers is a very mixed one, including graduate students, Medical Scientist Training Program trainees, an M.D. clinical oncologist, as well as postdoctoral fellows, and undergraduate students. Schimke looks on them all as a precious breed, but an imperiled species.

"The problems are so vast and urgent, and researchers so few," he states.

Electron gun in space

Stanford experiment will lead to fancy flying by shuttle

BY JOEL SHURKIN

A joint Stanford-University of Iowa experiment to be carried into space aboard a shuttle in 1984 will require the shuttle astronauts to perform the most complex and difficult maneuvers ever attempted in manned spaceflight.

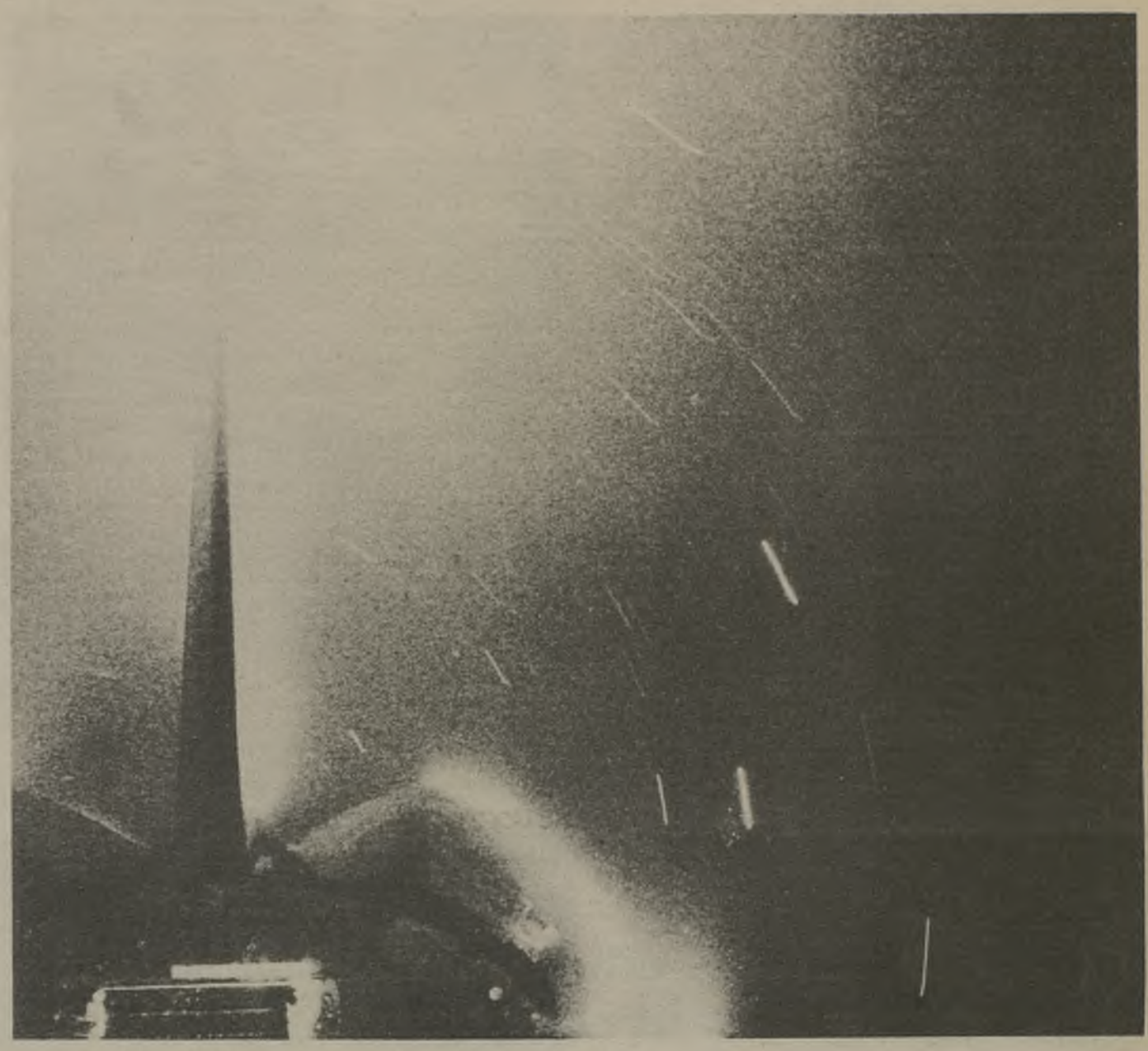
The astronauts will have to fly in tandem with a satellite for the first time, then aim their craft into elliptical loops around the satellite in order to record streams of electrons fired at it. The maneuver, which is potentially dangerous, has excited the NASA astronauts, according to Stanford researcher Peter M. Banks.

"It gives them a chance to prove they can fly the vehicle," he says.

The flight is scheduled for November, 1984, the second scheduled flight of Space Lab, the European-constructed flying laboratory that fits in the cargo bay of the shuttles. The flight will be the 21st American shuttle flight, probably using the second shuttle, the Challenger, now getting ready for service.

The experiments are designed to study the plasma of the earth's upper atmosphere. Although it appears the shuttles are flying in the vacuum of space they are, in reality, flying through a plasma, a soup of charged particles. In order to study this plasma Stanford scientists have experimented with firing electron guns into space from the shuttle to see how the electrons react.

The electron gun, part of an experiment package called Vehicle Charging and Potential (VCAP) is now being refurbished at Utah State University where Banks and his co-investigator Roger Williamson worked until last year. The electron gun was used on the third flight of the shuttle Columbia.



The space shuttle tail and engine mount glow from interaction with the upper atmosphere for reasons not entirely understood. The curving white lines in the background are stars.

Iowa diagnostics package

Banks, a professor of electrical engineering, said the electron gun will again be used in conjunction with the Plasma Diagnostics Package (PDP) of the University of Iowa.

The PDP will be carried in the cargo bay and lifted away from the spacecraft by the shuttle's maneuvering arm. As with the last experiment, the PDP then will be moved all around the spacecraft as the electron gun is fired. Banks said the scientists are duplicating the earlier experiment because "the results from the first are so complicated that we don't understand them completely. We want to change angles and energies."

What happens next will be new: the shuttle arm will lift the PDP away from the spacecraft and let go. The PDP will become a satellite flying alongside the shuttle.

The astronauts will fly the shuttle away from the satellite to a distance of about 100 meters (110 yards.) They will then begin flying elliptical loops around the PDP, going out as far as 600 meters (656 yards). This will be followed by a series of zigzags, back and forth, and finally, at the end of the mission, flying 5,000 kilometers (3,100 miles) away.

All the while the shuttle electron gun will be firing at the PDP as both pass through the magnetic field lines of earth.

"The exciting thing about it is that electrons are strongly guided by magnetic field lines," Banks says. "I can't just shoot in space; I can't just get from here to there if there is magnetic field."

The field lines run from earth out into space. The electrons would travel along these lines like beads on a string, Banks says.

The shuttle will be flown to within one meter of these lines—"that's incredible flying," Banks says.

Each time they are directly on top of the PDP, and each time they are directly underneath the PDP relative to the earth, the electron gun will go off as they fly through a field line. The beam is about 10 meters (15 yards) in diameter.

"We know the electron beam propagates out to a distance of 15 meters (16 yards); we know its properties. There's tremendous scientific interest in knowing what happens to the electron beam as it propagates to longer distances.

"It's a good target practice problem," he says, "really tough. You can't sense the magnetic field in a physical sense, you have to rely on instruments."

NASA isn't sure just how to fly this maneuver, he says, and will have to set it up in simulators.

"They definitely don't want to hit the satellite. One collision with a windshield will wipe out the whole vehicle."

The shuttle will be carrying a crew of six: two astronaut-pilots, two mission specialists, and two payload specialists. The payload specialists, who will actually operate the experiments, are to be non-NASA personnel, probably from universities or industry.

The shuttle will have rendezvous radar to keep track of the satellite and for part of the time the astronauts will have visual sighting. Although objects in space have no weight, both the shuttle and the satellite will have mass and inertia so collisions are to be avoided.

The principal investigator of Iowa for this experiment is physicist Stanley Shawhan.

Banks says the Stanford group will also be participating in other experiments on the flight. They also make use of VCAP.

As the electron beam shoots off the negatively charged electrons, the spacecraft "sucks" electrons from the plasma to make up for the loss. Additionally, the spacecraft picks up an electric charge by just flying through the plasma. The difference in electric potential from tail to nose is 20 volts. Banks says the spacecraft can pick up as much as 100 volts at nighttime when the gun is fired.

"We need to know more about that because it has impacts for big structures in space, space stations, which will have active electrical equipment on board. . . .

"If you're talking about some of the big space stations you can get potentials of 60-80 volts—and those are real volts. If you make a mistake about how you hook stuff together you can lose semiconductor chips, you can get a breakdown—all sorts of bad things can happen. It's a new environment people have to learn to operate in."

He says it's even possible for an astronaut on a large space station to get substantial electric shock because of this charge potential.

Another experiment involving the electron gun is based on research being done at Boston University. The shuttle will fire off its main rockets which will produce water vapor that will react with the plasma, forming "holes" in the plasma.

The Stanford people will fire the electron gun into the holes to see how they react.

Williamson, a senior research associate, is co-investigator of the Stanford group and Lon Raley, administrative services manager, is project manager. John Raitt is co-investigator at Utah State.

RLG gives use guidelines for members' library facilities

The Research Libraries Group (RLG), of which Stanford is a member, is dedicated to developing cooperative activities to improve library services to its members' constituents.

One of the means of making collections available is by reciprocal access which allows visiting faculty, academic staff and graduate students to use materials in the library, but not to borrow them directly.

Thus, a qualifying member of the Stanford community, upon presenting proper identification, has access to the collections and can anticipate assistance from the staffs of such university libraries as those at Columbia, Yale, Princeton, Dartmouth, Brown, Cornell, Northwestern and Johns Hopkins, among others.

Some RLG libraries do not control access to their buildings or general stacks, but when general library access is controlled, the following guidelines apply:

1. Visiting faculty (including academic staff) and graduate students, upon presentation of their home institution's currently validated I.D. card, will be accorded stack access under the same policies which are applied to local faculty and graduate students.

2. Visiting undergraduates are welcome to use the resources of other RLG libraries. It is expected that the home institution will be able to satisfy most needs. Stack access may or may not be granted.

3. The On-Site Access Policy does not apply to alumni, retired faculty (with the exception of emeritus faculty), fee borrowers, or to faculty and students of affiliated institutions unless such institutions are considered RLG members through the parent institution.

4. The On-Site Access Policy will not override pre-existing local protocols which have governed access between neighboring institutions.

5. The library being visited may request the presentation of additional identification if the institutional I.D. does not include a photograph.

The visiting RLG faculty member or student can expect the following services:

1. **Reference service**—guidance in using the collections.

2. **Photocopy service**—use of photocopy machines at the same rate the local constituency pays.

3. **Data base search service**—Normally, an individual will be encouraged to request a data base search at his own institution. However, special arrangements *may* be made if an institution has access to unique data bases. At libraries which do not charge their own constituency, the RLG visitor may be charged.

4. **Special arrangements** may be made for special needs if arranged in advance, for example, the use of restricted collections (rare books, manuscripts), accomodations for physically limited users, etc.

Interlibrary loan is excluded from the above on-site services. When using the resources of another RLG library it is best to make your visits during regular business hours. A telephone call in advance may be necessary to confirm library hours. For a complete list of RLG member libraries consult the Reference Desk at Green Library.

Joan Krasner

CIT's new rate schedule for the 3081 now in effect

On September 1, 1982, the Center for Information Technology (CIT) announced a new rate schedule for the 3081 node. (The use of the word "node" is in anticipation of the development of the SUNet, the campus computing network; the 3081 node refers to the campus IBM computer located in Forsythe Hall.)

The new schedule reflects a simplification of the rate structure through a consolidation of categories, an adjustment in rates to reflect costs, and a sizeable discount in computing rates during night and weekend periods. It is designed to enable computer users to make decisions more easily concerning the most cost-effective use of the system.

This year, the rate for interactive processing is lower than last year's interactive rate, but still higher than the batch rate. (Interactive tasks are executed at a higher priority than batch jobs, so the interactive CPU rate is higher than the batch rate.)

In addition, the new rates encourage evening and weekend computing through a drastic (65 percent) rate reduction during these nonpeak hours, when the system tends to be under-utilized. Low-cost interactive and Class L services promote further use at night and on weekends.

For Stanford-funded computer accounts, all terminal sessions in night and weekend time blocks are now being charged a flat $2.50 per hour, replacing the usual charges for session connect time, terminal I/O, and up to 30 seconds of interactive CPU time per session. (Interactive CPU time in excess of 30 seconds per session are billed at the normal rate.)

Rates are simpler

Basic print rates are now simplified; separate line and page charges are consolidated into a straightforward charge per page image.

Rates for labor-intensive services, such as tapes and printers, have been increased, to reflect associated costs more closely. (Requirements for the tape storage have exceeded the facilities in Forsythe Hall, and related costs have not been fully recovered in the past.)

The rapid growth in disk use, combined with a reduction in costs for the new 3380 disk drive technology and the difficulty in allocating and supporting disk drives dedicated to specific user communities, has resulted in a simplification in charging for disk use.

Detailed information concerning these rates may be obtained by reading the CIT's Rate Schedule #13 or the next issue of the Computing Bulletin (these are available through the Document Sales office in Forsythe Hall). It is also available online to the 3081 account holders in DOC#RATES PUBLIC.

Personnel update

Insurance meetings slated

Jeannie Thomas, the University's manager of benefits and records, advises that the new life insurance plan open enrollment is off to a very active start.

"We are very pleased with the initial responses and continue to encourage anyone having questions to call the life insurance enrollment center for assistance," she says.

Staff members are available to talk with employees between the hours of 9 a.m. and 4:30 p.m., including the lunch hour, at the temporary life insurance office located in the Old Pavilion.

Employees also may call the life insurance phone number, 7-0757, during the same hours.

During the open enrollment period, September 10 to November 10, open meetings are being held to answer questions and to explain the plan in more detail. The schedule of meetings is as follows:

September 22—9:30-10:30 a.m., Fairchild Auditorium.

October 6—9-10 a.m., CERAS 112.

October 6—2-3 p.m., Fairchild Auditorium.

October 7—9:30-10:30 a.m., SLAC Auditorium.

Thomas wants to remind employees that enrollment forms should be completed and returned to the life insurance center at the Office of Benefits and Records by November 10. Even employees who choose to participate in the free $5,000 life insurance coverage option should complete, sign, and date an enrollment form for beneficiary designation purposes.

Controller's Office classes explain many facets of accounting system

The Controller's Office has scheduled nine workshops in September, October, November and December. The courses are:

1. **Introduction to the Stanford Accounting System** (two two-hour sessions). For employees new to Stanford who monitor either departmental or auxiliary activity expenditure statements. The course includes the organization of the Controller's Office, discussion on account numbers, responsibility for the use of funds and record retention. Practical work includes practice in reading an expenditure statement and in forecasting for future results.

Thursday Sept. 23 and 30, 10 a.m.-12 noon, Room 282, Tresidder.

2. **Travel** (One two-and-a-half-hour session). For employees who need to understand the University's travel policy (Guide Memo 36.7) to complete travel and expense reports. The Travel Workshop summarizes travel policy, defines allowable travel costs, and provides practice in completing the necessary forms for Advances (SU-34A) and Expense Reports (SU-35).

Thursday, Oct. 7, 9:30 a.m.-12 noon, Room 282, Tresidder.

3. **Equipment Administration** (One two-and-a-half-hour session). For employees who are new to the field of equipment administration as well as for those who want to "brush up" and/or need more information on the new computerized system. The emphasis of this workshop is on how to use the manual, forms and reports.

Friday, Dec. 17, 9:30 a.m.-12 noon, Room 112, CERAS Building.

4. **Payroll/Personnel** (three two-hour sessions). For employees completing forms related to Payroll/Personnel actions and record keeping. This workshop includes a review of policies and procedures, and practice in completing all necessary forms.

Tuesday, Oct. 19, 26 and Nov. 2; 10 a.m.-12 noon, Room 112, CERAS Building.

5. **Payroll/Personnel Update** (one two-hour session). This new workshop is planned for administrators and other interested employees to discuss specific topics and common problems encountered in the payroll/personnel system. The topic for this update workshop is Sick Leave Reporting. Short Term Disability forms as well as the Yearly Leave Record (SU-5) will be discussed.

Tuesday, Dec. 7, 10 a.m.-12 noon, Room 112, CERAS Building.

6. **Fund accounting at Stanford and how to read fund statements** (two two-hour sessions). The purpose of this workshop is to teach interested employees the fundamentals of fund accounting as practiced at Stanford. The University's financial statements are discussed as well as fund statements and fund summary reports.

Friday, Dec. 3 and 10, 10 a.m.-12 noon, Room 112, CERAS Building.

7. **Fundamentals of grant and contract administration** (four two-hour sessions). This workshop is planned for administrators and others involved with the preparation of proposals as well as accounting procedures for expenditures, monitoring and forecasting for sponsored research projects. Members of the Sponsored Projects Office will participate in the workshop. The sessions planned are:

1. Introduction and overview of definitions, Federal regulations and the role of SPO.
2. Proposal preparation.
3. Proposal processing and post-award administration.
4. Contract and grant rebudgeting, forecasting and financial management.

Friday, Oct. 8, 22, 29, and Nov. 5; 10 a.m.-12 noon, Room 112 CERAS Building.

8. **Grant and contract administration update** (one two-hour session). This new workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session. The topic for this first workshop is the closing out of sponsored projects. A panel discussion is planned, followed by guest speaker, Fred Bentley, associate director of SPO, who will speak on current issues.

Friday, Nov. 19, 10 a.m.-12 noon, Room 112, CERAS Building.

9. **Procurement** (two two-hour sessions). This new workshop reviews the procurement process along with criteria for choosing the correct form amongst the SU-10, SU-11, SU-12, SU-13, SU-14, SU-15, SU-34A, SU-34B, SU-35, SU-40, SU-41 and SU-43.

Tuesday, Nov. 16 and 23, 10 a.m.-12 noon, Room 112, CERAS Building.

Send name, department, campus address and phone extension and choice of class to Alice Forbes, 200 Encina Hall.



Robert MacKinnon

High school teacher triggered the musical career of Bob MacKinnon

By Donald Stokes

If a middle-aged teacher had not taken in hand the life of a high school freshman, Stanford would have missed having, for the past 19 years, one of the finest glee clubs in the nation.

During that span of time, Robert MacKinnon has been everything to the club—its inspirer, composer, arranger, orchestral director and universal uncle.

Under his guidance the Stanford Glee Club changed from a forlorn group of seven angry young men into a 60-voice chorus with a 21-piece orchestra that has become well known in every major city on the West Coast. Its reception everywhere is what *Variety* calls "boffo."

On Sept. 1, MacKinnon retired from leadership of the club, and a chapter ended in the Stanford story. But the Glee Club lives on, and with a new conductor, continues to have bookings all over the state.

When MacKinnon was 11 years old his parents separated, and the boy was left with his father, Raymond, who was a traveling insurance salesman. When the boy was 13, the father took his son to Coeur de'Alene, Idaho, to be near his grandfather, who was dying.

It was in Coeur de'Alene High School that the boy's destinty began to take shape.

This was during the depths of the Depression. Because of the scarcity of jobs, the school had been able to recruit some of the finest music teachers in the country.

"It was practically a music conservatory," recalled MacKinnon, interviewed at his Menlo Park home. "Raymond Fahringer was a brilliant violinist, teacher, and conductor. At the school he created two orchestras, two bands, many small ensembles, and instrumental soloists.

"Under Fahringer I learned to play the drums, the tuba, baritone horn, saxophone, and finally the clarinet.

"But another teacher, Evelyn Townsend, did even more. She had graduated from Columbia School of Music in New York, and she was brilliant. She taught German, French, and Italian, in addition to piano and voice, and directed the high school chorus.

"When Miss Townsend discovered that I had what she considered a fine high tenor voice, she gave me lessons five days a week. She made up her mind that I was going to be a musician—and that was that.

"Evelyn Townsend became the center of my universe. Within a year I became her assistant choral director. I was the tenor soloist, the tenor lead in musical comedies, and I did whatever else I could to help out.

"Musical instruments intrigued me, and always will. However, my voice was my greatest asset at that time. It has stood me in good stead all my life."

After graduating, MacKinnon attempted to continue his education at several colleges. Difficulties always seemed to arise—"probably due to my immaturity," he says.

Even now Townsend was very supportive, and at crucial periods she was always behind him. After floundering for a while, he became a dance band vocalist. He also composed and arranged music, and played the saxophone and clarinet.

Musical instruments intrigued me, and always will. However my voice was my greatest asset [in high school]. It has stood me in good stead all my life.

—Robert MacKinnon

At age 22, MacKinnon organized a campus dance band and made his living playing at sorority and fraternity houses on the University of Idaho campus. After two years he was ready to aim higher.

"In Salt Lake City, after almost starving for a few months, I landed a job with a superb dance band called Jerry Jones, and my eating problems disappeared. I was getting a good salary, was earning extra money for my arrangements, and two nights a week I sang solos over the NBC radio network."

It was in Salt Lake City that MacKinnon met the woman who was to become his wife, Carolyn McMullin.

"I never even thought of marriage before I met this wonderful girl. I was then 25. In no time I was proposing to her. She laughed at me a lot and said things like 'I've never planned to get married' and 'Robert, you character, get up off your knees.'

"I don't know how I won her over, but somehow I did. It took a couple of years and many letters. On Dec. 19 we shall have been married 40 years."

Next came San Francisco, where he spent a year playing in a small combo in Chinatown. It was three floors below street level. These were the beginning days of World War II, and MacKinnon was suddenly drafted and put into an Army band.

The band members had little time to perform, for they became part of General Patton's Third Army, hurtling across Europe.

On demobilization, MacKinnon went to the University of Kansas on the G.I. Bill of Rights. This time he buckled down in earnest, and within three years had obtained his bachelor of music degree, with honors.

By this time he had become captivated by composing. A superb teacher of composition at Kansas, Laurel Everett Anderson, made MacKinnon realize that composing had now become his greatest ability, and that he should develop it.

"Since then I have never stopped composing. It is hard work for me, and I am slow at it. Every note has to be right. But I can keep at it day and night, and never grow tired."

His wife Carolyn researched music departments and urged him to go to Yale for his master's degree. "I was a bit overwhelmed, but since Carolyn is

continued on next page

University team analyzes union's latest contract proposal

Following is a Sept. 21 statement to the Stanford community from the University Negotiating Team on the status of negotiations with United Stanford workers:

Mediation/Negotiations

After 10 weeks of negotiations between the University and USW, the Union announced it would convene a general membership meeting on Sept. 8 to vote on whether to accept or to reject the University's last proposal. The night before the meeting, when it became clear the union was not moving toward settlement, the University gave to the Union its final offer, urging the union to consider the offer seriously and to refer it to its membership. The union negotiating team stated almost immediately that it would unanimously recommend rejection. The next day, the membership did vote to reject the University's final offer. On Sept. 10, the Union went on strike.

On Friday, Sept. 17, upon the request of a federal mediator, we agreed to meet again with the union in the hope of achieving a settlement. But in fact we did not. After nearly 10 hours, the result was a union proposal not significantly different from its earlier proposals. This last union proposal is detailed below and its combined costs over two years is at least 23.25 percent and, for many workers, considerably more than that.

The Union's Proposal

The union's proposal provides, *in the first year*, across-the-board wage increases from 10.25 percent to 13.9 percent. The union further proposes increased benefit arrangements which would cost the University approximately another 1 percent on the wage base. Thus, the compensation increase of the union's proposal for *the first year* ranges between 11.25 percent and 14.9 percent per worker.

The union's proposal provides, *in the second year*, an across-the-board wage increase of 5 percent plus a new step 4 of 5 percent. Combined with the automatic step increases of the current contract, this means that each worker would receive at least a 10 percent increase in the second year. Furthermore, the union proposes additional range adjustments for various classifications, comprising over half the workers, of up to 15 percent, costing the University 3 percent on the wage base. This means that USW workers in the second year would receive wage increases ranging from 10 percent to 25 percent. Finally, the union proposes further increased benefit arrangements which would cost the University approximately another 2 percent on the wage base. Thus the compensation increase of the union's proposal for *the second year* ranges between 12 percent and 27 percent per worker.

A demand of such magnitude is simply not reasonable, particularly in this time of national and local economic difficulty.

The University's Final Offer

The University's final offer includes 9.5 percent across-the-board for *the first year*.

For *the second year*, the University's offer is 5 percent across-the-board plus a new step 4 of 2.5 percent. Combined with the automatic step increases of the current contract, this means that each worker would receive an increase of either 7.5 percent or 10 percent in *the second year*.

For *the third year*, the University's offer is 5 percent across-the-board plus a broadening of the new step 4 by another 2.5 percent. Combined with the automatic step increases of the current contract, this means that each worker would receive an increase of either 7.5 percent or 10 percent in *the third year*.

In addition, the University's offer includes a cost-of-living adjustment in this third year if inflation should warrant.

Contracting Out/Use of Temporaries, Students, and Scientists

The latest union proposal on this subject would require the University to provide "prior notice" to the union and then to wait for up to three weeks before allowing *anyone* to do "work customarily and regularly performed by workers."

In these times of increasing economic constraints, particularly in the areas of research grants and contracts, the University needs increased flexibility to meet short-term, staffing needs. The current contract provides protection for individual workers. The University cannot accept the further restrictions proposed by the union.

Wages

The setting of wages is a complex mechanism dominated by consideration of the "markets"—wages paid employees doing equivalent work outside the University. The union's recent flyers attempt, on the other hand, to emphasize comparisons of wages with other employees of the University and of the Hospital, and does so inaccurately.

In point of fact, accurate figures are: across-the-board increases for *clerical workers* at the University over the past three years total to 30.25 percent and for *USW workers* the same total is 27.25 percent. Increases for clerical employees over this period were due to the University's recognition of the changing clerical labor market.

Again, in point of fact, accurate figures are: across-the-board wage increases this year at the Hospital have been 9.0 percent for technical workers, 9.5 percent for service workers, and 10.0 percent for clericals. And, despite the union's claims, *no new steps were added to any Hospital classifications.*

In any event, the labor markets for clerical workers and hospital employees are different from the labor market for USW workers. USW does not represent clerical or hospital employees. USW's focus should be on the workers it does represent. For these workers, the University's offer provides a competitive wage which realistically reflects the comparative labor market.

Benefits

The union has characterized the University's medical plans as a substandard benefit. In fact, the University provides full medical and major medical insurance coverage to all full-time employees completely free of charge and, in addition, contributes to dependant coverage. Whatever some full-time employees do pay for medical insurance is for extended dependant coverage. Because of this structure, whatever rate increases occur, the University's contribution rises accordingly.

In addition, the USW contract includes a provision requiring the University to offer to USW any benefit improvements made for other University employees.

Dignity and Respect

The union suggests that the University's offer is an affront to the dignity and respect of union members and other employees who may be considering unionization. The University's offer is the result of serious and good faith bargaining which responds to the express needs of the workers while preserving the flexibility which is essential to University operations.

Despite this, the union insists it has been forced to strike. The extent of the union's demands only makes us wonder whether the real issue is a fair and realistic settlement for current workers or a settlement which can be used as an organizing strategy for the future.

We recognize the strains caused by any strike. We remain hopeful that the situation will be resolved.

MacKinnon. . .

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seldom wrong about anything I decided at least to apply, and was delighted to be accepted.

"I studied with some excellent men. Quincy Porter was a composer on the staff and was my main teacher. Some useful work was beginning to come out of me, and Porter knew just how to bring it out.

"Paul Hindemith was also working there, and it was exciting to study his approach to music theory and composition.

"But the man who has had the greatest effect on my life is Normand Lockwood, both as a friend and as musician. He has great strength, superior talent (a nationally known composer), and is always willing to help his friends in any manner possible. He is now 76, and turns out music every day of his life."

After leaving Yale, MacKinnon found his first teaching job at Tarleton State College in Texas. He took his wife and baby son to Texas for two years. At the end of that time Carolyn again suggested they move on.

"I'm not sure, but I believe I began to tremble when I asked her what she had in mind.

"She said the next step was to apply for a doctorate. Which state would I like to live in?

"I replied without hesitation, 'California.'

After leaving Yale, MacKinnon found his first teaching job at Tarleton State College in Texas. He took his wife and baby son to Texas for two years. At the end of that time Carolyn again suggested they move on.

" 'And what is the best university in California?' she asked.

" 'I think it is Stanford' I replied.

" 'Good,' said Carolyn, 'we'll go to Stanford.' "

They found that the only musical doctorate Stanford offered at that time was in musicology, "which was the farthest removed from my talents."

There were many outlets for MacKinnon's energies in the Stanford area. He was able to teach voice, play with bands, and compose. He decided to drop his doctoral studies and concentrate on those areas where his talents were best used. He had been on his own barely a year when he was invited to take over the moribund Glee Club.

Although the club had been formed in 1898, it had never had a director who lasted more than three years. Its seven active members were frustrated and angry. They went to the head of the Music Department, demanding credits for membership, department affiliation, and effective support.

The upshot was the offer to handle this hot potato. On being assured that he would be given a completely free hand, he accepted the job.

He called the members together and told them that he would stay for 10 years; that he intended to turn it into a first-class organization; that they would receive credits for their work; and that the club would be attached to the Music Department. The men cheered.

"Your part," MacKinnon told them, "is to bring in the members." This they did. From that time the club never looked back. Very soon they were up to 60 voices in the club, and the supporting orchestra consisted of 21 fine musicians.

As a result of solid backing by Robert Pierce, then director of the Stanford Alumni Association, and his assistant Cynthia Wordell, the club was soon touring all over the state, and its red jackets became familiar in every major city.

MacKinnon did all the arranging, the coaching, and the direction of the orchestra. He even found sponsors who helped provide the money for tours. The club was able to cover nearly all its expenses.

In the early 1970s, by general consent, the club expanded to include women, and for the last 10 years the voices of both sexes have blended in the part-singing.

Since I have been at Stanford so many people have been important to me and the club that it would be impossible to name them all and invidious to pick out a few," said MacKinnon.

Asked whether he will miss his creation, MacKinnon replied: "I shall miss everything except the constant pressures. In running an organization like this the stress is continual, and that I can now do without."

How will he spend his time?

"I shall be busy. I am always composing and arranging, and from now on I shall be able to do this sort of thing at my leisure."

Strike...

continued from page 1

nately from 10:30 a.m. to 7:30 p.m. Friday at the Palo Alto Hyatt. "The parties just aren't ready to settle this dispute," she said. She plans to keep in touch with both sides and "will call a meeting when I discern there is some change in position that would lead toward a settlement."

Strike support continued strong Tuesday, but most campus functions remained close to normal. The University Strike Information Center reported 884 workers staying off the job Friday, declining slightly to 852—or 68.5 percent of those regularly scheduled to work—on Monday. USW said the strikers totaled 1,000 of the 1,350 in the bargaining unit of technical, maintenance, and service employees.

Vandalism diminished, claims and counter-claims escalated, and both sides braced for the return of more than 12,000 students in the coming week, starting with 1,600 freshmen Thursday. Kennedy is scheduled to address them at 7 p.m. in Memorial Auditorium.

Baratz, who requested Friday's mediation session, presented a new union proposal which he said called for a two-year contract with a wage increase of 10.25 percent or $140, whichever is greater, the first year, and a five percent increase plus a full new fourth step of five percent in the second year. It also asked for realignments—assigning jobs to different salary ranges—for science and engineering technicians, crafts workers, and food service and custodial workers the second year.

On benefits, the union asked that any increase in medical premiums be paid by the University during the first year of the new contract and that medical premiums be fully paid up to the amount of the minimum plan in the second year.

Baratz said these wage and benefit proposals would cost the University no more than 11.3 percent the first year and 12 percent the second. The University bargaining team, headed by Priscilla Wheeler, said the union's proposal ranged from 11.25 to 14.9 percent per worker the first year, followed by increases of 12 to 27 percent per worker in the second year. *(See text, p. 8)* . She said the union offer was "no significant change in the differences that separate us."

The University's final offer is for a 9.5 percent increase the first year, with increases of 7.5 to 10 percent in the second and third years of a three-year contract.

Wheeler took strong exception to a union flyer distributed Tuesday which claimed that while "Wheeler told a mediator she was expecting half the strikers to return to work on Monday, justifying her refusal to bargain Friday. This prediction was proved wrong. Once again Wheeler's disrespect and arrogance toward University workers was thrown back at her."

Wheeler denied making any such comment, and Christiansen concurred. "The statement attributed to Wheeler is totaly inappropriate because she didn't say that."

Christiansen added, "I'm not going to be caught in a media war or leaflet war between the parties that does not serve the purpose of mediation."

Baratz Monday claimed "University negotiators felt the strike would crumble and that's why they broke off talks." The union's reasons for striking go "way beyond whether we get another percent or not," he said. "It has to do with the arrogance with which we are treated by Priscilla Wheeler and the people who direct her in what position she should take."

In his Monday letter to Baratz, Kennedy wrote: "Since I publicly criticized United Stanford Workers/Local 715 for some unfortunate incidents earlier in the strike, fairness certainly requires that I praise you for this weekend's restraint. The decision to avoid confrontation at Saturday's game was admirable, and I thought the conduct of Stanford's bargaining unit workers showed real class. Please accept my thanks on behalf of others at Stanford and those who attended the game."

Baratz replied: "On behalf of United Stanford Workers, Local 715, I want to thank you for your letter of Sept. 20 regarding our conduct at Saturday's football game. We are gratified to see your recognition of our reasonableness and would hope that recognition would be extended to the counterproposal we made to your negotiators this past Friday. It was presented by us as a major effort to settle this strike.

"Beyond the above comments, I would hereby request a personal meeting with you as an opportunity to present a full explanation of the issues from our perspective. Perhaps we could explore some creative ways in which a settlement could be pursued. I am available day or night for such a meeting and will await your response."

In his letter Tuesday, Kennedy said "My letter complimented the union's restraint at that event and was intended to encourage similar union conduct in the future.

"I must decline your invitation for a personal meeting. I firmly believe that the only appropriate forum for resolution of our differences is at the bargaining table in discussions between the designated University and union representatives or perhaps between you and Priscilla Wheeler, the University's chief negotiator. I strongly encourage you to explore those avenues."

Construction workers back

Major construction projects brought to a standstill last week, when construction workers honored USW's picket lines, were back in full operation by Monday, Baratz said pickets were voluntarily withdrawn. But the absence of pickets coincided with threatened legal action by contractors at the new student housing complex, Braun music center, and cardiovascular research building.

With freshman orientation due to start Thursday, Sept. 23, and registration for all students set for Monday, Sept. 27, the effects of the strike may be more widely felt.

Administrators have developed plans to feed 3,300 students living in campus dormitories. *(See separate story)*. Ed Scoles, manager of housing and food services, said "nearly normal food service" would be provided during freshman orientation Thursday through Sunday. Students registering Monday and Tuesday will be given cash rebates to purchase one week's meals either on or off campus. Rebates will be made every Monday for the duration of the strike, he said.

Food Service will operate at Wilbur Hall and students will have the option of purchasing breakfast and lunch there on a cash basis when adequate staff is assembled, dinner also will be available. Other options Scoles suggested for students include eating with friends in the trailers or purchasing meals at co-op dorms or Tresidder Union.

Construction delays at the new student housing project last week did not prevent completion of 180 spaces that will open to students Sunday. Several pieces of furniture for the common area will not arrive in time, but otherwise the houses are ready for student occupancy, Scoles said.

At the SLAC main entrance, pickets daily have slowed entry of employees and deliveries, but have not prevented access.

The accelerator is still scheduled to be turned on Oct. 10, despite the srike. "Things are fairly normal considering we have more than 300 workers out," said Bernie Lighthouse, assistant director of personnel at SLAC. Supervisory personnel are working long hours, getting "an amazing amount accomplished." Job-shoppers have been hired to perform critical jobs, he said.

Mail delivery at SLAC resumed Tuesday with new people trained to do the work.

With Stanford classes set to start Sept. 29, Pathology 213 at the Medical School has been canceled for the duration of the strike. An advanced autopsy lab, it would have been attended by three to 10 students. The basic overview course, Pathology 230, will go on as scheduled.

Routine medical autopsies are still being performed.

Scattered incidents of vandalism continued, including damage to sprinkler system pipes and automatic controllers. Grounds supervisor Herb Fong estimated $100 repairs would be required on each of six controllers. Plants that show signs of water stress are being hand watered. Fong also said valves in the White Plaza and Old Union fountains had been tampered with and the fountains flooded. Officials turned off the fountains and drained the water. Fong did not know if there was any actual damage to the fountains.

Four arrests were made Thursday for picket-related activities, bringing the total to five since the strike began.

Strike chronology

Wednesday, Sept. 15: As most construction resumed, pickets moved elsewhere in the University. Some Santa Clara County Transit drivers honored picket lines, dropping passengers on El Camino instead of delivering them to the medical center. A University vehicle parked at the home of a supervisor had its tires slashed. A private vehicle and a University truck were doused with a pungent substance, possibly butric acid, when their drivers crossed the picket line at Bonair Siding.

Thursday, Sept. 16: Pickets delayed a CBS truck containing technical equipment needed for broadcast of Saturday's football game at the stadium. The truck eventually was allowed into the stadium. Two pickets at the medical center claimed they were struck when a truck hit their signs. They were treated at the emergency room for knee abrasions.

At SLAC, a technician was struck by a car which had stopped, then accelerated through the picket line. The driver, a job-shopper, was promptly dismissed by SLAC. The technician was taken to Kaiser in Redwood City, where x-rays showed no broken bones. He was sent home with a bruised leg.

Four pickets were arrested and charged with vandalism. Varrie Booker was accused of throwing spikes under cars Wednesday. Karl Stephen Reimer was arrested while picketing at Bonair Siding, also accused of throwing spikes under cars earlier. Manuel Sanchez was charged with two counts of vandalism and one count of intimidating a witness the previous Friday when a student allegedly was harassed and spat upon. John Richard Sterling was arrested while picketing at the stadium and charged with two counts of vandalism in connection with the cracking of an independent truck driver's windshield Tuesday. In each case, arrest warrants were obtained from the district attorney's office.

Kennedy decided to cancel the Employee's Day picnic set for Saturday.

Friday, Sept. 17: A total of 31 tires on 18 University vehicles were punctured through the sidewalls during the night in the Bonair Siding area. Included were 12 delivery trucks and six emergency generator supply trailers, used to provide emergency power in the event of a major disaster. The union said no confrontation had been planned at the Employee's Day picnic. They announced a Workers' Day rally at 10 a.m. Saturday outside Frost.

Negotiations with the federal mediator were suspended at 7:30 p.m.

Saturday, Sept. 18: Approximately 100 unit members attended a rally, then passed out leaflets at the football game. A helicopter flew over the stadium with a sign, "Stanford Unfair to Labor."

Sunday, Sept. 19: Several pickets distributed leaflets at a tennis match held on campus. Power failure affecting the east side of campus between 4 and 9:40 a.m. was attributed to bad underground calbe, not vandalism.

Monday, Sept. 20: A University truck parked at the home of a supervisor in Burlingame had all four tires punctured during the night.

Tuesday, Sept. 21: Toilets plugged up at Stores.

—Karen Bartholomew, Bob Beyers

Managers to serve frosh meals

Stanford has formed contingency plans in the event that the strike by its technical, service, and maintenance workers is still in effect when students begin to arrive Thursday, Sept. 23, according to Norman W. Robinson, associate dean of student affairs.

Food Service is expected to be most affected by the strike. The University Food Service will provide meals throughout orientation week, beginning with lunch on Thursday, Sept. 23. The meals, to be served in Wilbur and Stern dormitories only, will be served by exempt workers and student hashers, according to Edward Scoles, director of housing management.

Beginning Monday, Sept. 27, the first day of orientation, all meals during the strike must be paid for in cash only. All students who participate in one of the University Food Service Meal plans will receive cash refunds on their room and board payments on registration day.

Refunds, to be given on a weekly basis, will be porated and rounded up to the nearest $5. Students contracting for Plan A will receive a refund of $60 per week, for example, although the actual weekly cost is $58.17. Adjustments to compensate for the approximations will be made when the strike is over and a final accounting is made for each student.

Approximately 3,300 of the nearly 5,000 students who live in campus residences are required to participate in a meal plan.

Meals will be served in Wilbur only. Breakfast will be $1.50, lunch $3, and dinner will not be served until sufficient staff is available.

Students may claim refunds at the Meal Ticket Refund window in Maples Pavilion during registration, and at the Cashier's Office in the Old Union on other days.

Students will be able to pick up their phones as usual, but any necessary repairs on the phones will not be done until after the strike is over. Telephone repairers are not required to cross picket lines.

Only maintenance requests involving health or safety emergencies will be acted on immediately.

—Phil Taylor

Matching funds offer incentive to University

A statewide effort to broaden and increase alumni support of 19 private California colleges and universities already has brought very positive results, Vice-President Kenneth M. Cuthbertson of the James Irvine Foundation told 200 Stanford fund-raising volunteers Sept. 10.

The foundation has made a three-year commitment of $7 million in matching funds to encourage more alumni to support their colleges and to reward increases total alumni gifts to annual funds.

Stanford alumni could earn as much as $2 million in matching funds for the University from the Irvine Foundation if their gift support rises by $3 to $4 million over the next three years.

During 1981-82 more than 37,000 individuals, including alumni, made annual fund contributions totaling $9.6 million, compared to $8.9 million the previous year. Total donors increased three percent, according to Annual Fund chairman Douglas Minge Brown.

Cuthbertson, former vice-president for development at Stanford, said private California colleges and universities trail their Eastern counterparts in alumni gift support. "We're younger, and don't have quite the same tradition" of giving, he explained.

While private California colleges and universities have been "quite successful" in maintaining their student enrollments and are "reasonably healthy" financially, "the uncertainties are fearsome," he said.

The Irvine Foundation matching program is designed to lift the long-term trend line in alumni support and to reduce this great financial uncertainty, he added. The gift matching is limited to alumni as "the heart of the program."

Five institutions began the Irvine matching program last year, including the University of Santa Clara and St. Mary's College in Northern California, and Whittier, Pomona, and Harvey Mudd in Southern California."

In several instances initial response has exceeded expectations.

While primarily designed to encourage broader participation by younger alumni, the matching program at Stanford recognizes there is "enormous room for growth" in gifts from older graduates as well, Cuthbertson said.

Any increase in total gifts from Stanford graduates who earned their degrees in 1968 or later will be matched dollar for dollar. For those whose last degrees were received in 1967 or earlier, the match will be one dollar for every two in increased alumni support.

In addition, the foundation will provide a bonus if the number of donors giving $10 or more increases at least 10 percent from one year to the next. The bonus will be equal to $25 multiplied by the increased number of donors. Thus, if the total number of alumni donors rises by 4,000, Stanford would qualify for a $100,000 bonus.

Cuthbertson noted that the terms of the Irvine matching fund vary by institution. Those with annual funds of $200,000 or less will have any increase matched dollar for dollar.

Other regional matching programs to encourage college gift support in recent years have included the Bush Foundation in Minnesota and North Dakota, the Joyce Foundation in Chicago and the Midwest, and the Hewlett and Bush Foundations for black colleges in the South, he noted.



Kenneth Cuthbertson

The 19 institutions covered by the Irvine program in California enroll about 70 percent of the students in the independent sector.

They include: Claremont Graduate School, Loyola Marymount College, Occidental College, Pitzer College, Scripps College, University of the Pacific, University of Redlands, University of San Diego, University of San Francisco, University of Southern California, Mills College, California Institute of Technology, Claremont McKenna College.

The Irvine Foundation has assets of about $230 million and makes grants totaling $13-14 million a year, Cuthbertson said. About half this support goes to private higher education in California.

Trustees establish new Watkins chair

Stanford's Board of Trustees has established a new endowed professorship to be awarded at the discretion of the Provost for five-year non-renewable terms.

The Howard H. and Jessie T. Watkins University Professorship is the first such chair at Stanford. It is unique in permitting the University's chief academic officer the opportunity to select holders of the Chair from any academic division of the University.

The chair was made possible by a generous bequest from the late Zoe Watkins Johnson, a member of the Stanford Class of 1910. A long-time resident of Pasadena, Mrs. Johnson lived in Laguna Hills at the time of her death in 1981. She specified in her will that a part of her bequest be used to endow a professorship honoring her parents and an equal part be used for scholarships.

Provost Albert H. Hastorf, in commenting on the new position, said, "I welcome the opportunity this chair creates to consider the entire institution in selecting the initial recipient and future holders of the Watkins professorship."

The gift requirement to endow a named chair to honor a present member of the faculty at Stanford is currently $1 million.

Gifts to Stanford slightly lower this year—but still $77 million

Donors gave Stanford $77 million in the fiscal year ending Aug. 31, second only to the all-time high of $79.5 million in 1980-81.

Stanford's volunteer fundraising leader Melvin B. Lane reported the total to the Board of Trustees Sept. 14 at their first meeting of the new year, on campus.

Citing changes in the tax laws, which some believed would discourage charitable giving, and the unfavorable economy, Lane termed the results "gratifying and significant."

Board President William R. Kimball expressed his thanks to all donors who made this year's achievement possible.

Gifts increased by a million dollars in the Stanford Annual Fund.

Corporate giving also showed great strength - $23 million in fiscal '81-82, up from $15.5 million the year before. Gifts from foundations and associations were down slightly over the preceding year, as were bequests.

The only large falloff was in gifts of $25,000 and over from individual donors. In that category, gifts declined from $19.4 million in 1980-81 to $11.3 million in the year just completed. Other universities have reported the same experience, lending credence to the theory that the economy is to blame.

President Donald Kennedy said that even with such excellent results, the University needs more and larger giving to support its programs.

"Considering what's happening to private institutions as a result of actions in Washington," Kennedy said, "we're all challenged to show how much we can do on our own. There is no better evidence of that generous gift support from the private sector."

Electronic system links campuses

Electronic mail systems on 16 university campuses, including Stanford and Sweden's Stockholm University, will be linked in a pilot program funded with $165,000 from the Carnegie Corporation of New York.

The central facilities will be designed and operated by Massachusetts Institute of Technology. The intercampus system, called MAILNET, is a project of EDUCOM, a non-profit consortium of 450 colleges and universities dealing with computers and communications based in Princeton, N.J.

Participating institutions include Carnegie Mellon, Chicago, Cornell, Dickinson College, Harvard, Iowa State, Michigan, New Jersey Institute of Technology, Northwestern, Rice, Southern California, Swarthmore and Wisconsin at Madison.

Gold Spike Awards go to four alumni

Four Stanford alumni, including two former trustees, received Gold Spike awards from University President Donald Kennedy Sept. 10.

The spikes, similar to those which marked completion of the nation's first transcontinental railroad, are the highest form of recognition for volunteer services to the University.

The recipients, limited to four annually, were former trustees Alan N. Weeden, Class of 1947, and Roger Lewis, Class of 1934, both of New York; Douglas Minge Brown, Class of 1950, MBA 1961, national chairman of the Annual Fund, of Hillsborough; and Templeton Peck, Class of 1930, a 40-year volunteer, of Palo Alto.

Weeden, elected to the Board of Trustees in 1970-74 and 1975-80, has "diplomatically but effectively helped the University focus on the future," Kennedy said.

Lewis, who served continuously as a trustee for 18 years after his election in 1964, was cited for "nearly 25 years commitment to Stanford fund-raising at the highest level, giving generously of his time, talents, and own resources, and setting an example for others."

Brown, a senior vice-president with Wells Fargo Bank, has led both the Business School Trust and the Annual Fund to new records in gift support. He is "an outstanding and involved alumnus whose devotion to Stanford is exceptional," Kennedy said.

Peck, a former *Stanford Daily* editor who now directs the *San Francisco Chronicle* editorial page, was praised for "the quantity, quality, and diversity of his service" to Stanford.

Nineteen alumni received Stanford Associates awards in recognition of exemplary service continuing over a period of time. They were: North Baker, of San Francisco; Ronald F. Daly, of Boise, Idaho; James F. Dickason, of San Marino; Leonard Ely, of Palo Alto; H. Anthony Engelbrecht, of Lafayette; Louise Faye, of San Diego.

Also: Bernard L. Gabrielson, of San Jose; Diana Goodwin, of Mercer Island, Wash.; Richard T. Hart, of Watsonville; Yoshio Higashiuchi, of Tokyo; Gregg Ross Hopkins, of Washington, D.C.; Max G. Kolliner, of Los Angeles; Bowen "Buzz" McCoy, of Riverside, Conn.

And: Gunther W. Nagel, of San Francisco; John J. O'Connor, of Washington, D.C.; Stephen W. Player, of Palo Alto; Joseph Rodgers, of Los Altos; George E. Stephens Jr., South Pasadena; and John A. Young, of Portola Valley.

Eleven alumni received outstanding achievement awards for their work in a single year. They were: Kenneth A. August, of Los Angeles; Jack Byron Boyer, of Florence, Italy; Hans L. Carstensen, of Alexandria, Va.; William A. Corbus, of Juneau, Alaska; Bert T. Edwards, of Rockville, Md.

Also: Millett F. Keller, of Anchorage, Alaska; E. Tyler Miller Jr., of Rancho Santa Fe, Cal.; Lili D. Pratt, of San Francisco; Margaret P. Simmons, of Dallas, Texas; Roger C. Sullivan Jr., of Washington, D.C.; and Kathleen Ann Welton, of New York City.

Fair, rather than equal treatment should be managers' aim

continued on next page

then others should be clearly given this responsibility.

"In too many instances at Stanford, supervisors appear quite distant from their employees and show little concern for their development as human beings and productive employees," Rodriguez says.

Supervisors often try to avoid conflict at the expense of sound human interaction. "In racially and culturally diverse settings, the failure to manage actively can often result in heightened tension, increased turnover, lower productivity, and a larger number of equal opportunity complaints," he notes.

Managers should treat individuals fairly under a single set of standards for job performance. Some are reluctant to criticize poor performance by women or minorities because they fear a grievance or feel "sorry" for a particular group; others are much less tolerant of errors by women or minorities than those by majority males.

Accurate, honest performance evaluations are critical for any employee, he notes. A large number do not receive even one evaluation yearly. This failure becomes critical when an individual is terminated for cause but was unaware of any performance deficiences.

Cultural baggage

Poor management or "erratic" behavior by supervisors account for about three-fourths of the individual complaints which are brought to the Affirmative Action Office, Rodriguez says. " Because all of us bring 'cultural baggage' to the job, many minorities and women perceive bad mangement in general to be discriminatory behavior."

When friction does arise and a termination may be in the offing, supervisors may adopt a "passive" management style and turn the controversy offer to a staff affairs officer. In these instances, the University should either insist on greater direct involvement by the supervisor or give the staff affairs officer clear responsibility to act as the supervisor.

Affirmative action should be more clearly used as a basis for evaluating the performance of managers, and those who perform well should be rewarded. This could be done through public letters of commendation, salary increases above and beyond those otherwise warranted, or through special rewards to departments which have performed well in affirmative action.

In recruitment, very little attention has been given to using existing female and minority sources in an effective manner, he says. Stanford alumni might offer help. The Development Office has recently begun to contact minority graduate for recruitment assistance, for example.

The University also should consider developing more formal career ladders for nonacademic staff, Rodriguez believes. Annual turnover rates, including mobility within the University, now approach 60 percent in most clerical categories. About 25 percent of the staff leaves in University annually.

"Much of this movement may be unavoidable, but the rate might be reduced if people saw clearer opportunities for advancement within the University," he says. The Sponsored Projects Office has designed a system to encourage capable employees to move into better positions, for example.

Besides trying to identify logical "tracks" for advancement, carefully constructed "bridges" between nonexempt and exempt positions could be created. Among the classifications for which such bridges might work are office assitant or secretary to administrative assistant; accounting technician to accountant; and library specialists and possibly some of the "technician" job groups.

More informal mentoring of new employees, especially those in managerial positions, might be useful for affirmative action, he adds. "A great number of minorities and women experience problems in adjusting to the cultural and organizational style of the University.

"Turnover rates for exempt minority staff are probably aggravated by the difference in style, as well as the feeling of isolation resulting from the very small presence of minorities in administrative and policy positions."



Affirmative action should be more clearly used as a basis for evaluating the performance of managers, and those who perform who perform well should be rewarded.

—Santiago Rodriquez

During the past year and a half, the Affirmative Action Office has provided about 400 managers and supervisors a course on conceptual and practical aspects of affirmative action.

"Few individuals can draw a distinction between equal opportunity and affirmative action," he notes. "Equal opportunity, simply put, is a policy of passive nondiscrimination. It is race and sex neutral and focuses on the 'rights' of individuals based on merit. Equal opportunity's legal origin is legislative and assumes perpetuity.

"Affirmative action, on the other hand, focuses on the 'rights' of groups and is race and sex conscious. It is a process to achieve equal opportunity and, by definition, must be temporary.

"Premised on executive order, rather than specific legislation, affirmative action requires efforts to remedy the effects of past discrimination *but not at the expense of merit consideration*.

"Under affirmative action, for example, if engineering has traditionally been a 'male' occupation and if in recent years the number of women in that occupation has risen dramatically, then an employer develops a sex-conscious recruitment effort to enlarge the recruitment pool with women. Efforts are aimed at those institutions generating women engineers in order to enhance the likelihood of obtaining women in the recruitment pool.

"The evaluation criteria that are used to identify competitive engineers must be as objective and job-related as possible.

"In the selection process, equal opportunity supercedes affirmative action considerations. In other words, the best qualified person is selected.

"Only in the unlikely instance when two individuals appear similarly qualified can race or sex conscious selection be made. In that instance, in a job category where minorities or women have traditionally be absent, the institutional value placed on diversity can serve to make the nontraditional candidate more qualified."

Many minorities and women argue that the standard used for evaluating their work performance varies considerably from the standard for white males: where white males are presumed competent, minorities and women are presumed incompetent until proven otherwise. In every case, Rodriguez emphasizes, the criteria used for evaluating job performance must be based on the work itself.

"The myth exists that 'equal treatment' is the desired objective in any managerial decision involving people. I would argue that fair, rather than equal, treatment should be a more basic aim.

"Standards relating to performance and conduct in the workplace should indeed be equal. Yet, at the same time, we know that different people are motivated and perform differently precisely because they are individuals."

Accurate, honest performance appraisals are critical to any employee, regardless of sex or race.

While the number of complaints filed by Stanford employees with external agencies has risen, "to my knowledge, the University has not been found to have acted discriminatorily in any specific instance by an enforcement agency, such as the U.S. Equal Employment Opportunity Commission or the California Department of Fair Employment and Housing," Rodriguez says. "One case, however, was apparently resolved through the conciliation process.

"A limited number of complaints have been filed under Title IX provisions, but the University was also sustained in these instances. No complaint has yet been filed with the Office of Contract Compliance Programs."

Procedural improvement

Among the procedural improvements he suggests are these:

"In view of the number of grievances relating to tenure conversion among the faculty, more specific guidelines to the schools and departments outlining the respective roles of affirmative action and equal employment opportunity in the process would be useful.

"Better coordination is necessary in disciplinary personnel action or terminations involving minorities and women. At a minimum, the Affirmative Action Office should be informed at an early stage if problems are devloping with a staff employee. In this way, the office could possibly play a more constructive role and help avoid some formal grievances.

"The University's policy on sexual harrassment should be reviewed with possible coordination in mind. Specifically, a central 'clearinghouse' for information should exist." Appropriate individual and offices should meet to identify problem areas and review sexual harrasment allegations for purposes of better training.

In addition, the philosophy and effectiveness of present grievance procedures generally should be reviewed by the task force on personnel. "A significant number of employees, irrespective of equal employment opportunity or affirmative action issues, place little credence in the internal grievance procedures," he notes.

"While this phenomenon may be a fallacious perception on the part of employees regarding the utility and fairness of the procedures, the fact that the perception exists is troublesome."—**Bob Beyers**

Carpools

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Need rider from Los Gatos/Saratoga area arriving at Stanford 7:30 a.m., leaving 4:30 p.m. Call Gloria, 497-4970.

Want to join or form carpool from Sunset Dist., S.F. (near 19th Ave.) to Stanford, T-F, 9-5 or 6. Robert, 753-3860 or ext. 7-4116.

Rider needed for existing carpool from Newark to Stanford. Leave 7 a.m., return 4:45. Call Mark, 7-4342.

Want to join or start carpool from S.F. (Parkmerced) to Stanford. M, W, Th, F 8-5 (but times negotiable). Call Jim Gibbs at ext. 7-3912 or 586-9354 (evenings).

Trustees take action on faculty member appointments

Two Medical Center faculty members have been promoted to professor, and four others have been named associate professor by recent action of the Board of Trustees. A seventh faculty member received tenure as an associate professor.

The two new full professors are Drs. William Brody, radiology and electrical engineering by courtesy, and Samuel Strober, medicine.

Brody, an associate professor since 1977, has attracted worldwide attention for his research into the use of advanced radiologic imaging techniques. He founded and serves as director of the advanced imaging techniques laboratory at Stanford.

The multiple energy imaging pioneered by Brody involves pulsing X-rays of different wavelengths, making it possible to precisely identify various types of tissue being scanned.

Brody received his M.D. in 1970 and his Ph.D in 1972 from Stanford. From 1973-75 he served as a clinical associate at the National Heart and Lung Institute and then completed a residency at UC San Francisco before returning to his alma mater as an associate professor in 1977.

Strober, who came to Stanford as an associate professor in 1978, has helped expand the benefits of total lymphoid irradiation—a form of radiation treatment developed to treat cancer—to include help for arthritis sufferers and to control the immune system among transplant patients.

He received his M.D. from Harvard in 1966. He completed his residency at Stanford in 1971. Since 1978, Strober is chief of the Division of Immunology.

The associate professor of pediatrics reappointed to tenure is Iris Litt, a specialist in adolescent medicine.

Litt's major research interest includes assessing teenagers' abilities to be responsible for their own care, establishing that autonomy and sexual maturity are accurate predictors of adolescent compliance with medical regimens, especially contraception. She originated the division of adolescent medicine at Stanford.



William Brody



Samuel Strober



Iris Litt



Vincent Hentz



Chong-Hong Hu



Lawrence Rinsky



Frank Sarnquist

A 1965 M.D. graduate of the State University of New York, Brooklyn, Litt came to Stanford in 1976 from Albert Einstein College of Medicine in New York. She became an associate professor without tenure in 1976.

The four new associate professors appointed are:

• Dr. Vincent R. Hentz, surgery; a 1968 graduate of the University of Florida College of Medicine, Hentz currently serves as chief of plastic surgery at the VA Medical Center. His primary research interests are anatomy of the upper limb and its surgical reconstruction, as well as peripheral nerve regeneration and repair.

Hentz served his residency at Stanford in 1968-74, and was an instructor in surgery at Columbia University College of Physicians and Surgeons in New York before returning to Stanford in 1975.

• Dr. Chong-Hong Hu, clinical dermatology; a 1966 M.D. graduate of Taipei Medical College, Hu has served as chief of the dermatology service at the VA Medical Center since 1979. He came to Stanford from Case Western Reserve University School of Medicine in 1979. Recent work has concentrated on immuno-fluorescence as a diagnostic tool in connective tissue disease, and various aspects of dermatologic oncology.

• Dr. Lawrence Rinsky, clinical surgery; his current research includes electrical stimulation of experimental Legg Perthes Disease in rabbits, bone tissue blood flow in experimental osteomyelitis, and a review of the benefits of the surgical treatment of scoliosis patients.

He is assistant chief of orthopaedic and rehabilitation services at Children's Hospital at Stanford. A 1971 graduate of the University of Cincinnati, Rinsky came to Stanford as a resident in 1972..

• Dr. Frank Sarnquist, clinical anesthesia, is assistant chief of anesthesia and director of the Palo Alto Analgesic Research at the VA Medical Center. Recent research has focused on the relationship between blood chemistry, exertion and high altitude. Sarnquist conducted field studies as a member of the 1981 American Medical Research Expedition to Mt. Everest.

Sarnquist received his M.D. from UC San Francisco, where he also served his residency. He came to Stanford as an assistant professor in 1976.

In other action at their September meeting, the trustees—meeting as the governing body of the Hospital—formally agreed to consolidate the pediatrics programs of SUH and Children's Hospital at Stanford.

The agreement provides for constructing as part of the Hospital Modernization Plan a new $40 million in- and outpatient facility combining all services now provided by the two separate hospitals.

Lawsuit settlement reached for quadriplegic child

Stanford University Hospital agreed Thursday, Sept. 16, to settlement of a lawsuit filed on behalf of an infant born in the facility's delivery room April 7, 1980.

The settlement calls for lifetime support for Anna Younger, a spastic quadriplegic who according to the plaintiffs "sustained severe and permanent brain damage" because she stopped breathing for some minutes in the first hour after birth.

Named as defendants are SUH, Dr. Joseph R. Hopkins, and Mid-Peninsula Health Services, Inc., a member-owned health care organization where Hopkins practices family medicine and serves as medical director. The defendants have denied allegations of negligence. No personnel at SUH were identified by name in the suit.

The agreement, ratified by Santa Clara County Superior Court Judge Edward Panelli, calls for an annuity to be established for support of the child, who most recently lives in a Santa Clara County foster home under voluntary arrangements of her parents.

The suit was filed by Anna's mother, Jocelyn Cunningham, 34, an accountant. She and her husband, Charles Younger, 37, a computer programmer, were Los Altos residents at the time of their daughter's birth.

Support payments for the child are to start Oct. 1 at $81,960—and increase according to a predetermined formula annually. By the year 2002, the child will be receiving more than $275,000 per year, according to the complex formula.

SUH and its malpractice insurer are responsible for funding the annuity during the life of the child, estimated by medical testimony and actuarial data to be 76 more years.

Thaddeus John Whalen, professor of economics at the University of Santa Clara, stated in a declaration filed by the plaintiffs that the present cash value of the settlement—taking into account tax advantages and other economic parameters—was at least $8.1 million.

In addition to personal damages for the child, SUH was to split a $1.2 million payment with Hopkins and Mid-Peninsula. Of this figure, about $200,000 is to be used for the child's current medical expenses, $150,000 was earmarked as personal and economic damages for each of her parents, with the remainder of the money going for plaintiff attorneys fees, court costs and related contingencies.

A review of the Delivery Room records filed as an exhibit with the court by Dr. L.L. Trigiano stated that a pediatric resident had examined the child moments after birth and "concluding she (the infant) was normal, returned her to her mother's arms." Trigiano, a San Francisco physician, had been asked by the plaintiff's attorney to review medical records and examine the child.

". . .At approximately one hour of age in response to a remark from the father of the child as to whether the child was living, the nurse in the Delivery Room called attention to Dr. Hopkins, the obstetrician (family medicine specialist), that the child was found to be flacid with no respirations and no detectable apical (heart) pulse.

"Cardiopulmonary respiration was begun immediately with an urgent call to the neonatal intensive care nursery for return of the staff with subsequent full resuscitative measures to the infant."

The baby was transferred to the intensive care nursery, Trigiano's review said, where a CAT scan indicated oxygen deficit and death of brain tissue. The child was discharged a week later but continued to receive frequent medical care at a variety of institutions.

Trigiano, who examined Anna on July 12, predicted she will require constant custodial care for the rest of her life.



Robert Cutler

Cutler appointed associate dean

Dr. Robert W.P. Cutler, professor of neurology, has been named to the newly-created position of associate dean of medical education, announced Dominick P. Purpura, dean of the Medical School.

"Dr. Cutler, a distinguished medical scientist and respected clinical neurologist, is ideally suited to serve in this pivotal position, helping to formulate and monitor medical education priorities here at Stanford," Purpura said.

In his new post, Cutler will be responsible for ensuring that courses and the curriculum maintain a consistently high standard and are appropriate to the aim of helping guide students towards their goal of becoming new members of the academic medicine community, Purpura said.

Cutler, currently chairman of the committee on courses and curriculum of the Medical School's faculty senate, came to Stanford in 1974 from the University of Chicago Pritzker School of Medicine. A graduate of Harvard University Medical School, he has studied the relationship between amino acids and the nervous system. His new appointment is effective immediately.

Purpura added that he was "particularly pleased that the University has accepted my recommendation that this position be created in recognition of the central importance of teaching and the curriculum."

Purpura forms special group to help shape academic policy

The Medical School's faculty senate recommends that a kidney transplant program be started.

But no money is available, so the proposal is never implemented.

This example is hypothetical but realistic, said Dean Dominick Purpura, who sought and achieved an Academic Policy Coordinating Council for the Medical School.

The 13-member APCC, which held its first meeting Aug. 2, is intended to help translate Faculty Senate and the Dean's Executive Committee recommendations into substantive policy based on the availability of space and money, Purpura said.

The group is also expected to aid the dean in researching faculty and student affairs issues, major academic programs and long-range planning, he added.

"We need to bridge the gap between seminal thinking needed to spawn innovative ideas and the practicality needed to implement them," Purpura said.

Subgroups

Two permanent subcommittees have been incorporated in the APCC, including a Budget Review Subcommittee. This committee previously reported directly to the Executive Committee. Dr. David Korn, chairman of the Department of Pathology, will continue as chairman.

Newly formed was a Space Subcommittee to help in allocating space for programs discussed by the APCC. This group will be chaired by Dr. Hal Holman, professor of medicine.

In addition, five special subcommittees were appointed to deal with specific issues:

• A Department Review/Visiting Committee is to develop criteria for reviewing the quality of departments. Membership includes Drs. John Collins, chairman of the Department of Surgery; Eric Shooter, professor of neurobiology; and John Wilson, associate dean for faculty affairs and professor of surgery. The subcommittee's first task will be to develop procedures for implementing department reviews, Purpura said.

• A Student Financial Aid Subcommittee will be expected to advise the Budget Subcommittee on student matters. Drs. John Steward, associate dean for student affairs, and Merton Bernfield, professor of pediatrics, were appointed.

• Korn, David Mendelow, associate dean for administration, and Dr. James A. Spudich, professor of structural biology, were named to a subcommittee to advise the dean on issues pertaining to specific matters involving the operating budget of the Medical School.

• A Teaching Affliliations Subcommittee would monitor clerkship and residency programs at outlying institutions. Appointed were Drs. Robert Cutler, professor of neurology and newly appointed associate dean of medical education; and Kenneth Melmon, chairman of the Department of Medicine.

• A group, chaired by Purpura, will define the conceptual thrusts of a new Interdepartmental Program in Molecular and Genetic Medicine, which will comprise a Science Center. Other members include Drs. Paul Berg, professor of biochemistry; Stanley Cohen, professor of genetics; Dale Kaiser, chairman of the Biochemistry Department; Korn; Melmon; Irving Schulman, chairman of the Pediatrics Department; and Shooter.

Meetings of the APCC will be held twice monthly. Members include all committee members listed above, who will serve for two-year, renewable terms.



Robert Zollinger

Zollinger to give Kovitz lecture

Dr. Robert M. Zollinger, emeritus professor and chairman of surgery at the Ohio State University College of Medicine, will present the eleventh Louis and Dorothy Kovitz visiting professorship lecture at Stanford School of Medicine Friday, Sept. 24.

Zollinger will speak from 5:30 till 6:30 p.m. in Fairchild Auditorium. His topic will be "Islet Cell Tumors and GI Hormones." The lecture is open to the public.

Zollinger will also present the surgical grand rounds on Saturday, Sept. 25. He will discuss "Reflections on Gastric Surgery" at 8 a.m. in room M106. This talk will be geared towards medical and health professionals, and medical students.

Zollinger is former president of the American College of Surgeons and the American Surgical Association.

Prior to joining Ohio State's department of surgery in 1946, he served on the faculties of Peter Bent Brigham Hospital and Harvard Medical School. He received his M.D. degree from Ohio State.

The Kovitz lectureship was established in 1969 by Dr. and Mrs. Kovitz of Los Altos to bring outstanding lecturers in medical and surgical fields to the Medical Center. Dr. Kovitz died in 1979.

Clinics welcome Tower's arrival



Donald Tower

Donald B. Tower is the new executive director of the Faculty Practice Program and the Stanford University Clinics, effective Sept. 13.

His position includes reponsibility for administrative affairs, business operations, policy development, and financial planning for the FPP in close liaison with the FPP's executive committee and the vice president for medical affairs.

Tower comes to Stanford from Columbia, Mo., where he served as administrator of the University Physicians, a practice group.

Tower can be reached temporarily in room M121, and his phone number is 497-6441. Eventually he will be moved to a new location, to be announced at a later date.

Course to teach preteens about their changing bodies

Puberty can be a bewildering and traumatic time for children who don't understand what is happening to their bodies.

To ease the transition into adulthood, Dr. Paula Maguire Duke, assistant professor of pediatrics at Stanford, is offering puberty education to boys and girls, ages 10-12, and their parents.

Often, puberty education isn't offered until children are already experiencing puberty, Duke said. "By that time, it's too late. Children need information about the changes that are going to happen before they happen. Unlike most other things, puberty is a very individual process. If children don't know what to expect, it can make them feel like 'outsiders' compared with their peers.

"What we really need to stress is that there is a very wide range of normalcy," she said.

Educating children early, Duke said, may help to avoid negative body images that often accompany their developing sexuality.

For example, 1981 studies in a high socioeconomic area showed 65 percent of 12-year-old girls wanted to be thinner, and 73 percent of boys wanted to be more muscular. But, there are physiological reasons that pre-pubertal boys cannot develop large muscles, and that pubertal girls experience weight gain and increase in body tissue, Duke said.

The course series, which will not include any discussion of moral values, each consist of two hour-long sessions at Children's Hospital at Stanford. The first series is scheduled for Oct. 27 and Nov. 3. The second is scheduled for Nov. 9 and 16.

Parents are included, Duke said, because studies have indicated that up to 70 percent of children in that age group want to hear this type of information from their parents. Many parents forget what puberty was like, Duke said, and are uncomfortable or unsure of how to approach and discuss the topic.

The first session, for everyone together, will include discussion of the physical changes and development of secondary sex characteristics. The second session will provide more detailed information, with separate groups for boys, girls, and parents.

Questionaires should help indicate if children feel more at ease with puberty as a result of the early education.

"Our goal is to change the way children deal with puberty by intervening at an early age," Duke said. "If children and parents start talking about these issues early enough, by the time they need to discuss interactive sex they will feel more comfortable."

Duke has been researching puberty education for about five years. She was instrumental in incorporating sex education in Palo Alto Unified School District's seventh grade curriculum.

For further information 'or course registration, call 327-4800, extension 538.

—Shirley Kraus

New class count

In the Sept. 8 issue of the *Medical Center Memo*, we reported that there are 91 incoming students at the Medical School this fall.

Updated information from the Office of Student Affairs brings the actual final count to 86 new students.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

A breath of fresh air. . .

Activity-filled week greets non-smoking policy

This week marks the official "kick off" of the Hospital's new non-smoking policy, passed by both the Medical and Hospital Boards.

Activities throughout the week are designed to introduce patients, faculty, staff, students, and visitors to the present regulations, which clearly delineate smoking from non-smoking areas.

A poster campaign has begun, in hopes of encouraging smokers to quit. A series of quit smoking classes for Medical Center employees, sponsored by the University's health improvement program (HIP), will begin Oct. 4. Smoking and non-smoking signs have been posted, and patient information is being distributed by Patient Admitting Services and via meal trays.

A letter has been mailed to all employees from executive director and vice president Sheldon King, along with "non-smoking cards" which employees may hand to persons smoking outside a designated smoking area. (More cards, as well as "non-smoking buttons," are available from the Department of Community Relations.)

For a couple of days this week, a booth has been installed between the cafeteria and the patient admitting area to distribute informational materials, balloons, buttons, cards, and other items, and to provide sign-up sheets for exercise and quit smoking programs.

Those lunching in the cafeteria have been treated to a clown performance in honor of the non-smoking campaign.

The general guidelines of the Hospital's new non-smoking policy follow:

- In public areas of the Hospital, including waiting rooms, cafeterias, public hallways and lobbies, smoking is not permitted except in specially designated smoking areas.
- Where smoking is not permitted, conspicuous signs stating this fact shall be posted in both English and Spanish or by a generally recognized no-smoking symbol.
- Smoking is not permitted in any Hospital elevator, escalator, or stairwell.
- Smoking is prohibited in any area of the Hospital where flammable liquid or gases or oxygen are in use or stored.
- Visitors are not permitted to smoke in patient rooms at any time. For patients, smoking is permitted only in specially designated areas. The exception to this rule is a patient in a private room unable to go to a designated smoking area. Such a patient may smoke in the private room only on the written order of a physician.
- If an unsafe situation exists (for example, a patient is affected by medication), smoking materials may be removed.
- Employees, physicians, and students are not permitted to smoke in patient rooms at any time. No smoking is recommended in meeting rooms and classrooms.

Dr. James Silverman, chief of staff, has stressed the importance of the physicians' role in implementing the new policy. "The concept of non-smoking needs repeatedly to be emphasized because of the disastrous health consequences which come with the habit," he said.

Nursing staff, as well, have been provided with guidelines for their part in the non-smoking implementation.

The non-smoking campaign grew out of concern expressed to the Department of Community Relations by patients and their families, according to director Jeanne Kennedy. At that point, an advisory committee for patient relations was established with representatives from Nursing, community physicians, faculty, Social Services, and Admitting.

That committee, reporting to Kennedy, made policy recommendations on the areas of patient television viewing and visiting hours, as well as smoking. Evaluation of the new non-smoking policy and its implementation is hoped to be completed by December.

For further information regarding this week's activities, or the non-smoking campaign in general, call Community Relations at 497-7167. For further information regarding the quit smoking classes, call 497-7940.



Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, SEPTEMBER 22

Basic Science Research Colloquium: "A DNA Primase from *Drosophila melanogaster*"—Dr. I.R. Lehman. 5 p.m., Fairchild Auditorium.

Nursing Educational Services: "Basic EKG Interpretation Workshop—Junctional and Ventricular Dysrhythmias." Limited to 20. Fee required. Continuing education credit available. 7 till 9 p.m., W005. For further information, call 497-6366.

Div. of Hematology: "Gamma Globulin Therapy"—Dr. Richard Schwartz. (Cutter Labs), noon, S102.

Dept. of Pathology: "Biochemical and Genetic Studies of Mammalian DNA Synthesis: Recent Results on Thymidylate Synthase and DNA Polymerase with Primase Activity"—Dr. Takeshi Seno (Saitama Cancer Ctr. Research Institute, Japan). Noon, L201.

THURSDAY, SEPTEMBER 23

Dept. of Medicine Grand Rounds: "A Genetic Defect in Vitamin D Resistant Rickets"—Dr. David Feldman. 8:30 a.m., Fairchild Auditorium.

Nursing Educational Services: " 'Burnout'—Treatment and Preventions." Continuing education credit available. Fee required. 8:30 a.m. till 3:30 p.m. 701 Welch Rd., #327. For further information, call 497-6366.

La Raza Staff Association: Annual Wine and Cheese Reception. Plan to join other staff, faculty and administrators from the University, Medical Center and SLAC. 4:30 till 6:30 p.m., Faculty Club. For further information, call Margarita Ibarra at 497-0791.

FRIDAY, SEPTEMBER 24

Dept. of Gynecology and Obstetrics Grand Rounds: "Hepatic Rupture as a Complication of Mild Pre-eclampsia"—Drs. Harise Stein and Kent Ueland. 8 a.m., A336.

National Kidney Foundation of Northern California: "Advances in Organ Transplantation." Continuing education credit available. Registration begins 7:45 a.m., reception 5 p.m., Fairchild Auditorium. For further information, call 697-0110.

Dept. of Surgery—Kovitz Lecture: "Islet Cell Tumors and GI Hormones"—Dr. Robert Zollinger (Ohio State Univ.). 5:30 p.m., Fairchild Auditorium.

Dept. of Pediatrics Grand Rounds: "Ambiguous Genitalia"—Drs. Ron Rosenfeld and Jose Enz. 8 a.m., M106.

SATURDAY, SEPTEMBER 25

Dept. of Surgery Grand Rounds: "Reflections on Gastric Surgery"—Dr. Robert Zollinger (Ohio State Univ.). 8 a.m., M106.

MONDAY, SEPTEMBER 27

Div. of Otolaryngology/Head and Neck Surgery—Resident Lecture Series: "Sound Perception by Normal Ears"—Earl D. Schubert, Ph.D. 7:30 a.m., R117.

WEDNESDAY, SEPTEMBER 29

Nursing Educational Services: "Basic EKG Interpretation Workshop—Heart Blocks and Pacemakers." Enrollment limited to 20. Fee required. Continuing education credit available. 7 till 9 p.m., W005. For further information, call 497-6366.

FRIDAY, OCTOBER 1

Arthritis Self-Management Classes Begin. Sponsored by the Stanford Arthritis Center. Offered at 12 locations in the Bay and Peninsula Area. Sessions run for six weeks. Pre-registration necessary. Fee required, scholarships available. For further information and applications, call 497-7935.

TUESDAY, OCTOBER 5

Dept. of Dietetics: "Recent Advances in Nutritional Care," a symposium of current practices. 8 a.m. till 1 p.m., auditorium of Children's Hospital at Stanford. For further information, call Jane Woeckener, R.D., at 497-6904.

WEDNESDAY, OCTOBER 6

Nursing Educational Services: "Basic EKG Interpretation Workshop." Enrollment limited to 20. Fee required. Continuing education credit available. 7 till 9 p.m., W005. For further information, call 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Patient care issues face review by new quality assurance committee

The Medical Board approved at its last meeting the formation of an executive quality assurance committee.

The new seven-member panel of the Medical Board is expected to meet at least every other month and will review patient care issues throughout the Hospital, including those "which cannot be effectively handled within a standing committee of the Hospital or Medical Board."

Generally, the committee is charged with "ensuring that patient care evaluation activities throughout the Hospital are ongoing, appropriate, comprehensive, and effective in maintaining and improving the quality of patient care."

The measure was presented to the Board by Carole Price, associate Hospital director, and Karen Axnick, associate director of Care Review/Risk Management. Formation of the new committee will now be sent to the Hospital Board for its approval.

The committee is to be composed of the chief of staff, president of the medical staff, chairman of the care review committee, two members of the Medical Board, the director of the Hospital (or his designee), the director of Care Review/Risk Management, and the director of Nursing.

Other members of the medical staff are to be added as needed for particular issues.

...News Notes...News Notes...News Notes...



Donald Harrison

Dr. Donald Harrison, professor and chairman of Cardiology and president of the American Heart Association, will speak on "Newer Experimental Antiarrhythmic Drugs" at the 52nd annual Physicians' Postgraduate Symposium on Cardiovascular Diseases.

The program will explore four major topics: cardiovascular and pulmonary emergencies, ischemic heart disease, cardiovascular therapeutics, and treatment of acute myocardial infarction.

It is scheduled for Oct 7-8 at the San Franciscan Hotel, 1231 Market St. in San Francisco. Harrison will speak at 2 p.m. Thurs., Oct. 7.

* * * *

Drs. William Dement, professor of psychiatry and behavioral science, Avram Goldstein, professor of pharmacology, and Dominick Purpura, dean of the Medical School, are among 49 new members recently elected to the Institute of Medicine of the National Academy of Sciences.

* * * *

SUH is among 23 hospitals in eights states which completed gathering data by the end of August on the frequency and cost for all lab and X-ray tests ordered in its emergency department, announced Dr. Michael Eliastam, director of Emergency Services and assistant dean for clinical affairs.

Three months of data collection is to be analyzed, and then about 40 high-cost, high frequency tests will be targeted for cost containment, said Eliastam.

The study is being conducted by the Dallas-based American College of Emergency Physicians, in hopes of developing lower-cost alternatives to diagnostic tests currently used.

One premise of the study has been to determine if the routine ordering of certain diagnostic tests should be questioned more closely.

* * * *

Grace Neal has been appointed to the position of clinical nursing coordinator (CNC), Support Services, announced Claire Mailhot, R.N., M.S., director of Operating Room (OR) Services and assistant director of Nursing Services.

Neal's responsibilities will include system development for the instrument room and sterile room, and inventory control and planning for the Hospital Modernization Project.

Neal has been an OR nurse at Stanford since 1964. She has functioned in both the clinical services and administration. Most recently she served as assistant CNC for Ophthalmology/Plastic Services.



John Farquhar

Dr. John Farquhar, director of the Stanford Heart Disease Prevention Program and professor of medicine, has been awarded the James D. Bruce Memorial Award for distinguished contributions in preventive medicine.

The award has been given yearly since 1948 by the American College of Physicians.

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Linda Slezak has been appointed to the position of CNC, Operations, announced Claire Mailhot, R.N., M.S., director of OR Services and assistant director of Nursing Services.

Slezak's responsibilities will include OR scheduling, coordination of front desk activities, auxiliary staff, and the OR's relationship with other departments.

Slezak has been with the Stanford OR region intermittently since 1966. She has held various staff and management positions, coordinating the first preceptor program in the OR. She served as assistant CNC, scheduling coordinator, since Jan., 1981.

* * * *

Duane Walker, R.N., M.S., director of Nursing Services, has announced the following appointments in his department:

Joyce Miller, R.N., M.N., has been named associate director of Nursing responsible for the adult critical care region, surgical region, Operating Room, P.A.R., A.S.T.U., and nurse recruitment. Miller has been at Stanford for three and a half years as assistant director of adult critical care. She has now relocated to the main Nursing office, room C020-B. Her phone number is 497-6496.

Jean Bronstein, R.N., M.S., has been appointed assistant director of Nursing for adult critical care. Bronstein has been the assistant director at Hoover Pavilion for the past four years.

Nancy Gear, R.N., M.S., has been appointed assistant director of Nursing for Hoover Pavilion. Gear has been the CNC of West 3B for the past four years.

Mary Lou Murphy, R.N., M.S., has been appointed assistant director of Nursing for the surgical region. Murphy has been at Stanford for eight years. She served as acting assistant director of Nursing for the surgical region for the past three months.

These appointments reflect replacement of vacant positions in the department due to internal transfers and were made within the allocated budgeted positions of the department, said Walker.

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The Mid-Peninsula Health Fair, to be held at the Stanford Shopping Center Sept. 25 and 26, will feature several Medical Center department displays along with a variety of area health programs.

The Operating Room will display various instruments, sutures, prostheses, and implants. Staff will be on hand to answer visitors' questions. Brook Odobas and Gerry Schulman, both R.N.s in the OR, helped to coordinate the health fair.

The Department of Dietetics will target their presentations towards both adults and children. For the latter there will be Walt Disney educational programs, filmstrips, recipes, and quiz sheets. The adult portion will concentrate on weight control. There will be available scales, charts, and evaluations of nutritional fads.

Other SUMC groups participating in the fair include Hospital Personnel, Pediatrics, and Friends of Nursing.

* * * *

Pat Cook has been appointed assistant manager of the Human Resources Group, announced manager Rosemary Hornby.

Cook has been on the group's staff for five years. The expansion of her responsibilities will make her accountable for the daily operation of all aspects of the human resources program in the Medical School.

Cook will continue to work closely with Hornby in policy development and implementation as well as employee relations. The new arrangement is hoped to provide departments with a more effective response from the office, while allowing Hornby more time to develop and implement new activities.

Also, announced Hornby, two new regular staff members joined the group over the summer, replacing Gail Selke and Emily Chow. Sue Skelton was appointed manager of the office. Having been a teacher and most recently a consultant in the Santa Clara school district, Skelton is now developing her skills in computer programming and training.

Catherine White will be personnel assistant to Anna Garcia And Dorothy Thompson. She will coordinate the processing of all personnel forms and work directly with departments in resolving employment and other personnel actions. White is a recent graduate of Cal State in San Luis Obispo.

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Karen Richards, R.N., M.A., is leaving her position at SUH as assistant director of Nursing for marketing and recruitment, to become director of Personal Shopping Services at Neiman-Marcus, an exotic fashion specialty store.



Karen Richards

Richards, at SUH since 1969, has done freelance shopping consulting part-time.

"I've had a wonderful career at Stanford," she said, "and it was difficult to decide to leave. I wouldn't want to work in nursing administration anywhere else."

Richards started at SUH in the perinatal area, where she specialized in labor and delivery. She became the nurse consultant for Hospital computing services, and then the first coordinator of Concurrent Review. Under Peter Levin, she was special assistant to the executive director from 1977 until 1981.

Richard's last day at SUH will be Sept. 24.

* * * *

Alice Morrow, R.N., M.S.N., has resigned her position as CNC of Pediatrics effective Sept. 10, announced Judy Lanigan, R.N., assistant director of Nursing for medical pediatrics.

Morrow is returning to Texas and has accepted a position as nursing supervisor of a 24-bed pediatric intensive care unit at Children's Medical Center in Dallas.

Dorothy Holmes, R.N., B.S.N., assistant clinical nursing coordinator of Pediatrics, has agreed to serve as acting CNC during the interim period.

Wanted: Research Volunteers

Healthy volunteers are needed to serve in control groups for diabetes research being conducted by Dr. Gerald Reaven and associates at Stanford University's clinical research center.

To be eligible, volunteers must be between 30 and 70 years of age, male or female, and without diabetes.

Participants will be offered the following free of charge: an evaluation of blood sugar, insulin and cholesterol; routine health evaluation including liver and kidney function test, blood chemistry, cardiogram and physical exam; and meals during the entire study period.

Anyone wishing further information about the ongoing studies should call Clarie Hollenbeck, Ph.D., or George Liu, M.D., between 9 a.m. and 5 p.m., at 497-6973.

Editor's note: The Medical Center Memo *is happy to help publicize the need for volunteers in research efforts throughout the Medical Center, when appropriate. Contact Lisa Ames, at 7-6911, or send materials to Medical News Bureau, TC-135.*

Happy listening!

CBS radio's "Frontiers in Medicine" series next weekend will feature several Stanford faculty members interviewed by science reporter Charles Crawford.

For those interested in tuning in, the air times and topics will be:

- 9:40 a.m., Sat., Sept. 25: SUMEX. Speakers are Dr. Edward Shortliffe, assistant professor of medicine, and Thomas Rindfleisch, director of SUMEX.
- 6:40 p.m., Sat., Sept. 25: genetic engineering. The speaker is Dr. Jeffrey Sklar, assistant professor of pathology.

Also, Dr. Donald Harrison, professor and chairman of Cardiology, will be included in no. 15 of the 20-part series, time tentatively set for 1:40 p.m., Sun., Sept. 26.

KCBS is at 740 on the AM dial.

Access issue separate from modernization, says Crowley

Recently, Vice President for Medical Affairs Lawrence G. Crowley, M.D., published an article in the Peninsula Times Tribune *concerning the importance of Stanford University Hospital's modernization plans, and the issues surrounding the access of community physicians to the Hospital's clinical-based services and laboratories. Because of space limitations, some points were omitted in the* Times Tribune *version. Following is the complete text:*

Stanford University Hospital's urgently needed modernization project has recently been obscured by fiction and political maneuvering over how much access community doctors should have in the Hospital's specialized services and laboratories. In order to comprehend exactly what is at stake, here is a clarification of what is fiction and what is fact:

• **Some say Stanford needs to modernize its hospital solely to meet its medical school's academic needs.**

FACT: The modernization is essential because the buildings are obsolete. The Hospital must be modernized to meet new state and federal codes, and to accommodate new technology to meet the future needs of patients, physicians, and the Medical School's educational programs. If modernization is to be aborted, for any reason, community and faculty physicians will suffer equally. The biggest losers, however, will be the citizens.

• **Some say Stanford wants the Hospital solely for its own needs. It doesn't want community physicians to practice there.**

FACT: The Hospital's medical staff policy is the most liberal of any teaching hospital in the nation. About 600 community physicians are members of the medical staff and admit patients to the Hospital. Even more, the Hospital's policy provides controlled access to community physicians in many Hospital-based clinical services and laboratories. By contrast, a recent survey shows that all other major Peninsula hospitals have completely closed or extremely limited access arrangements for the same specialized services.

Hospitals limit access to control cost—to the hospital and to the community—by limiting the number of expensive pieces of equipment, and professional and support personnel, to those necessary to provide medical services to all patients. Limited access also ensures high quality care to all patients, and maximum efficiency by allowing administrators to work with a single organized group of physicians.

Most importantly, patient care and education by highly qualified, well-organized and motivated faculty aids the teaching and training of tomorrow's physicians and conduct of clinical research. By limiting access to these services, Stanford is attempting to meet faculty and community physicians' needs, without sacrificing cost control and quality of care.



Lawrence Crowley

• **Some say Stanford wants limited access to the laboratories because if faculty doctors perform the tests, the professional fees go to Stanford.**

FACT: The professional fees do in fact go to Stanford—to support the Medical School's educational programs. Faculty physicians receive salaries that are modest compared to what their colleagues earn in private practice. The faculty contributes not only part of its income to the general welfare of the Medical Center, but also expensive equipment available to all patients. And Stanford assumes all the financial risks for the $125-million modernization project. Neither Palo Alto nor the community physicians have any financial liability.

• **Some say lack of access to the Hospital-based clinical services means that community patients cannot benefit from the special procedures available.**

FACT: The Hospital-based clinical services and laboratories are available to ALL patients upon order of their physician. The procedures are simply done either by faculty or by community physicians who have staff privileges in these services.

• **Some say if community doctors do not gain unlimited access to the hospital-based clinical services, all private practice in Palo Alto will vanish, forcing citizens to use only faculty physicians.**

FACT: As a medical school, Stanford has a specific mission—training doctors and advancing medical knowledge. In addition to providing care of the highest quality, it must ensure that its graduates develop the clinical expertise enabling them to practice anywhere, not just in Palo Alto. While many of Stanford's medical graduates go all over the country to set up their professional practices, many physicians are attracted to Palo Alto because of the intellectual stimulation and quality of life here.

Despite more restrictive access policies to the Hospital-based clinical services prior to August 1981, private practice has thrived in Palo Alto. There is a high concentration of physicians per population; this will continue to be the case. Stanford University Hospital cannot accommodate all these physicians in its specialized services. No hospital can.

• **Some say not enough progress has been made on the four-year-old access issue.**

FACT: About one year ago, the Board of Hospital Directors, following the recommendations of a faculty-community physicians committee, expanded the access guidelines to include those who already were members of the medical staff, those who were on the voluntary clinical faculty, those qualifying as courtesy physicians under the Palo Alto-Stanford contract, and those who affiliate with the School of Medicine to teach and do research under full-time faculty supervision.

In June 1982 the Board adopted a set of policies governing utilization of its facilities that were widely supported by the medical community. Also, the Board has appointed a permanent community/faculty physicians access committee to develop future policies.

Stanford is continuously concerned and is making an effort to achieve as much as possible its own essential needs as well as those of community physicians and Palo Altans. The access issue, however, is not a political issue. And there are dangers in making it one. The sooner it is taken off the hot seat, the sooner the community will be able to benefit from a state-of-the-art hospital with adequate facilities and space. The best way outstanding access issues can be resolved is by discussion and agreement among professionals. This ongoing process should continue, because community physicians have been and will continue to be part of the collaborative relationship that has characterized the Stanford University Medical Center.

Attempts to disrupt the process through legislative end-run initiatives, and attempts to coerce or extort a settlement at any price, however, will simply destroy the goodwill that has made progress thus far possible.

Center will permit distinguished scholars to focus on policy questions

continued from page 1

more deeply and more distantly from the policy process," Rosse said in a campus interview.

"We can bring to bear powerful methodologies which we have developed over the last 20 years at a reasonably fundamental level.

"Stanford is already very well known in economics for its theory and methodology, with such outstanding names as Nobel Laureate Kenneth Arrow and Mordecai Kurz, Theodore Anderson and Takeshi Ameniya, and a good many others. We see CEPR as a means of bringing that methodology to focus more closely on policy issues.

"Many of us are already engaged in major policy issues. Michael Boskin, for example, has been very active in the federal budget process where he worked with the Senate Committee on the Budget. He has also been active in social security policy. I am busy in regulation and anti-trust matters.

"John Pencavel is an expert on labor, pension and compensation matters. John Shoven is an authority on the tax system. James Sweeney is well known for his work in energy. Paul David has a leading reputation in science policy matters.

"How do we operate? We depend almost entirely on grants from private foundations and individuals. Most of the funds we receive are unrestricted, in the sense that we can use them for any project we feel is appropriate.

"The Steering Committee encourages faculty to present proposals to us, we analyze them to see if they fit our research objectives, and if they do we fund them.

"Most fall into one of two categories. The first are those which yield one or two papers. An example of this is a study done by Timothy Bresnahan on the impact of proposed emissions rollbacks on the automobile industry. John Pencavel is doing one on labor unions and productivity.

"We are in the process of developing several much larger projects. For example, John Shoven has proposed a general study of the tax system. This would be a major project, and we are trying to arrange for its funding."

Independent laboratory

The Center will have the status of an independent laboratory and will report to Vice Provost Gerald J. Lieberman. The staff is now moving into refurbished offices in Encina Commons.

Rosse pointed out that economics flourishes not only in the Economics Department, but also in many other parts of the University. "Important work is going on in Engineering-Economic Systems, the Graduate School of Business, the Medical School, the Schools of Law and Education, the Food Research Institute, Hoover Institution and elsewhere."

The Center will serve to integrate some of the more policy relevant parts of this work.

The Associates Committee now has 18 members, most of them business leaders in the community who make annual pledges of support. The Center has received a grant from the Koret Foundation to sponsor some of the conferences that will be held during the next five years.

Rosse paid great tribute to Boskin, the most important investigator of the idea of creating the center. "He has also played a leading part in setting research policy and in fund-raising activities," Rosse said.

"An important reason for the success of CEPR and my optimism about it is the Advisory Board, which is headed by Edmund Littlefield, and every member is a notable."

Among the associates, Herb Dwight is president of Spectraphysics, while Reid Dennis, Tom Ford, Pitch Johnson and Frank Lodato are venture capitalists.

Paul David, who headed the committee that brought CEPR into existence, said that the field of economics is moving in new directions.

"This is caused by worrying signs of retarded growth and persisting underutilization of productive resources in the economy, combined with a lingering threat that rapid inflation will resume.

"A number of younger economists are now focusing on applied research that can help to solve our economic problems. They are saying that the traditional methods of governmental intervention tinkering with this or that feature of the tax laws, deficit spending to prop up demand, wage and price guidelines to hold down inflation—have outlived their usefulness.

"Instead, what is needed is an effort to design longterm, consistent and predictable government policies to replace the 'quick fixes' of the past, many of which have only aggravated the problems they were meant to solve.

"A number of economists who take this approach are among the distinguished faculty at Stanford. To facilitate their research, and to mobilize their resources of the university community to take a fresh look at fundamental economic policy issues, CEPR has come into being."

Many widely-known policy centers, David point out, are located close to the "scene of action" in Washington, D.C. One result of this proximity has been research dominated by the short-term perspective of political propinquity.

"CEPR provides a clear alternative, in that it sponsors sustained research by first-rate independent scholars, free to pursue the study of economic issues, that will be of enduring concern to the American people," David says.—**Donald Stokes**

Ted Good takes a look at how piano technology has affected musical history

Ted Good sat down at the piano to play a Brahms Sonata, and out came a book.

That's the way it is at Stanford, where intellectual ideas and concepts leap in every direction like a bolt of summer lightning. The fact that it took 10 years from the first notes to publication of *Giraffes, Black Dragons and Other Pianos* (Stanford University Press, $29.50) is unimportant.

What is important is that the education of Stanford students was enhanced, because the Brahms Sonata also led to an entirely new course in the Values, Technology and Society Program: VTS 165, "Technology and Musical Expression."

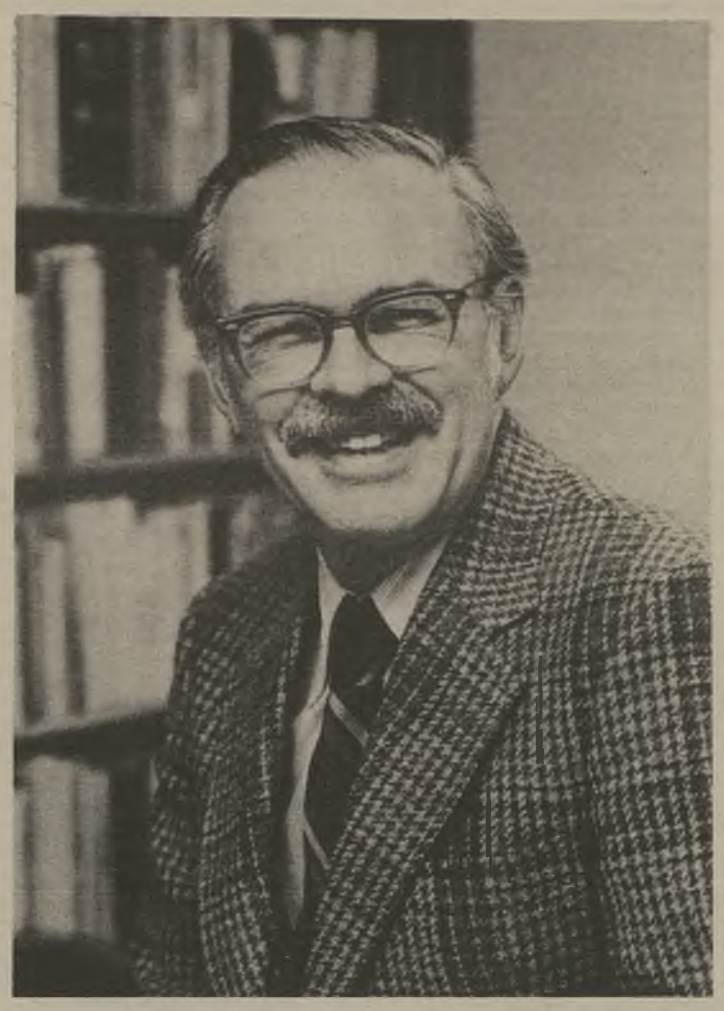
Edwin M. Good is a professor of religious studies, but that's another story.

More closely related is the fact that he also is a concert pianist and a member of the Manzanita Quartet. And that portion of his life gave him the idea, in the early 1970s, to expand his life by getting an M.A. degree in music—in his spare time. (He had to get special permission from the University administrators and faculty, but he solved that, too.)

"I was playing and studying the Brahms Sonata for Two Pianos for my M.A. project," said Good, "and I wondered what kind of piano would have been used by Brahms when he wrote in 1863.

"Soon after I completed my M.A. degree in 1974, I became chairman of the Values, Technology and Society program, and began thinking about what kind of course I might teach. The piano is a piece of technology, and I began thinking about the relationship between the technology that produces means of making musical sound, and the expressive ways composers have used those means in Western music since the 18th century.

"That led to the development of the course—and the book, which I believe is the only one covering pianos from early to electronic, using a technological point of view—the artisans who made them, their design, materials and manufacture, how they work, and the musicians who wrote for and played the piano." The major concept Good discovered in his research for the book, he says, is that "an innovation isn't adopted universally until a very long time has passed."



The piano is a piece of technology, and I began thinking about the relationship between the technology that produces means of making musical sound, and the expressive ways composers have used those means in Western music since the 18th century.

Pianos always were constructed of wood, because their makers were cabinetmakers. But they began to buckle and collapse because "the demand for more volume and range led to thicker strings, and the wooden frame couldn't stand up under the increased tension," says Good.

In 1825, Alpheus Babcock of Boston, "a superb craftsman and piano maker," patented a one-piece cast iron frame to hold the strings.

"But it wasn't until around 1910—68 years after Babcock's death—that everybody was using the iron frame," says Good. "Babcock never became rich. No one wanted to pay royalties, and other makers doubted that it was a good idea, worrying that a metal frame would distort the tone. The leadership of Steinway in the second half of the 19th century laid that idea away."

The Smithsonian Institution and the Metropolitan Museum of New York have the best early piano collections in America, says Good, and in the Smithsonian he found the only existing Babcock piano with the iron frame.

Pianos used by romantic composers such as Schumann, Schubert and Brahms, says Good, were "much different from today's instruments, in action, range and volume. Schumann's piano, now in the Kunsthistorisches Museum in Vienna, was all wood and had a very much smaller and cleaner sound than a modern grand. At Schumann's death, Clara Schumann gave the instrument to Brahms, who owned it until 1873.

"In my VTS course, I teach the correlation between an instrument and the music, pointing out that music is written with a specific sound in the composer's head. I demonstrate my thesis on the piano, and also play records for the students."

The piano was invented in Florence, about 1700, by Bartolemeo Cristofori. One he built in 1720, the earliest now in existence, is at the Met.

"What a conceptual leap it was when he invented the piano mechanism," says Good. "It was a completely new principle."

Cristofori left nothing in writing, but a 1711 article about him exists. "Eric Hutchinson (professor of chemistry) owns a copy of the original journal, in Italian, and I struggled to translate it, word by word," laughs Good.

The title of Good's book really does refer to pianos.

"'Giraffe' is the name for early 19th century German upright pianos, which were grand pianos standing on end," says Good. " 'Black dragon' is my personal term for any concert grand, because they're all painted black, a custom that began only in the late 19th century. Before that, they were veneered in beautiful walnut, cherry, and sometimes rosewood."

Good's own piano is one he just obtained—a Bluthner from East Germany.

He describes its tone as "marvelous." It is made of walnut.

—Harry Press

There's still no effective civil defense against nuclear attack—Drell

There's still no effective defense against nuclear retaliation, a Stanford arms control expert testified in Washington Wednesday, Sept. 15.

Prof. Sidney Drell spoke on the consequences of nuclear war at a hearing called by the Subcommittee on Investigations and Oversight of the House Committee on Science and Technology.

Both America and the Soviet Union remain hostages to the threat of retaliation, he said. "I cannot conceive of a civil defense system that could protect either the Soviet or American society from unprecedented and unacceptable disaster and devastation in all-out nuclear war."

He took sharp issue with suggestions that the U.S. could recover from all-out nuclear war in two to four years, an assessment attributed to T.K. Jones, deputy undersecretary of defense for strategic and theater nuclear forces.

"The problem with all precise nuclear war scenarios, with their neat assumptions and predictions, is that we fortunately have no data," Drell said.

"In real wars—the nonnuclear conflicts of past experience—we have learned to appreciate that the course of events in determined by vitally important factors such as surprise, individual bravery, motivation, and luck. These do not appear in theoretical scenarios.

"The imaginary scenarios and computer printouts of casualty levels seem to proliferate only when there are neither data nor experience to test them against."

As Rebecca West once observed: "Before a war, military science seems like a real science, like astronomy; but after a war, it seems more like astrology."

The U.S. and the Soviets now have "vast arsenals of more than 50,000 nuclear weapons," Drell said. There is no technical basis for confidence that any nuclear conflict would remain limited:

"There are too many opportunities during conflict for confusion and error. Once the nuclear threshold is crossed, there will inevitably be broad delegation of authority down the line for nuclear release."

All the bombs and other munitions used in World War II totalled only six megatons—less than the megatonnage of a single large nuclear warhead, he said.

Hiroshima and Nagasaki were devastated by relatively small atomic bombs, whose yield was roughly 15 kilotons; the totals today exceed 10,000 megatons. Each megaton detonated on the earth's surface or at low altitude will typically make 1,000 square miles uninhabitable to unsheltered humans for several weeks or more.

A major nuclear exchange designed to kill civilians would result in a combined total of 200 million deaths in the U.S. and the Soviet Union. Tremendous fires in forests, croplands, and urban and industrial areas could reduce sunlight by a factor of 150.

Drell noted that six years ago Fred Ikle, now undersecretary of defense for policy, observed that "the aggressor country might suffer serious psychological, economic, and environmental effects even without a nuclear response by the country attacked."

In the early days of the hydrogen bomb, President Eisenhower observed that "we're rapidly getting to the point that no war can be won." Instead of battle to exhaustion and surrender, the outlook comes closer to "destruction of the enemy and suicide," he added.

Drell said that "since then, all we have done is to increase the level of potential devastation by many orders of magnitude, and the arsenals have grown to more than 50,000 nuclear weapons which, if they are unleashed will, obliterate our civilization, built over the centuries by the human spirit and human genius."

Board of Trustees report

Board of Trustees appoints several faculty, students to committees

The Board of Trustees took the following actions at its meeting on September 14, 1982:

1. Approved actions already taken by the Office of the Vice Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of May, 1982, totalling $12,123,574; for the month of June, 1982, totalling $9,071,629; and for the month of July, 1982, totalling $22,374,533. The monthly average of such awards for the twelve-month period ending July 31, 1982, was $13,114,432 compared with $13,168,703 for the corresponding period the year before.

2. Accepted gifts received during the month of June, 1982, totalling $5,954,960; during the month of July, 1982, totalling $5,383,191; and during the month of August, 1982, totalling $6,302,641.

3. Appointed faculty and student members of its committees as follows:

Academic Affairs and Development: John Freccero, Theodore H. Geballe, Jerusha A. Stewart, Steven P. Westly, and Rod A. Beckstrom (ASSU Observer).

Finance and Administration: Robin A. Cooper, Richard H. Jahns, Susan Mensinger, Lyle M. Nelson, and R. Mark Epstein (ASSU Observer).

Investments: Craig Albright and James C. Van Horne.

Nominations: Eleanor E. Maccoby.

4. Welcomed Martin Anderson, Daniel L. Brenner, John A. Ditz, and Katharine Heard Hanson, elected to the Board by alumni this summer, to their first meeting.

5. Honored Trustee John W. Gardner upon his retirement from the Board after many years of distinguished service.

6. Approved actions taken earlier by officers of the Board regarding matters of estate.

7. Authorized the Vice President for Business and Finance to enter into a lease for the 5.092-acre parcel at 600 Hansen Way in the Stanford Research Park.

8. Authorized the Vice President for Business and Finance to negotiate within the guidelines listed below for the terms and conditions governing Stanford's participation in Palo Alto's Below-Market-Rate Housing Program:

a. The dedication of 15 percent of units at Stanford West to below-market-rate housing using pricing mechanism.

b. Of that 15 percent, a dedication of at least 60 units to Below-Market-Rate Housing Program participants designated by the City of Palo Alto.

c. A 35-year lease of the Mayfield-School site to the City of Palo Alto for $100,000 to allow it to develop below-market-rental housing. This development would revert to Stanford at the end of the lease.

9. Heard a report of the following actions taken between meetings:

a. That our target-asset-allocation mix should continue to be maintained; that Capital Guardian Trust Company be given the discretion to increase the amount in short- and medium-term maturities of U.S. Treasury securities; and that a limit of 15 percent of the portfolio was set with a maximum maturity of five years being reaffirmed.

b. That the Vice President for Business and Finance be authorized to invest up to $750,000 in the equity securities of Synapse Corporation and to sign, following legal review, any documents necessary to accomplish that investment.

c. That the Vice President for Business and Finance be authorized to invest $420,000 in the securities of Felsway Investors, Inc.

10. Heard a report on the staff pension plan managed by Prudential Insurance Company.

11. Discussed the fixed-income portion of our endowment investment pools with portfolio managers from Rosenberg Capital Management.

12. Approved the design for Phase I of the B. Gerald Cantor Sculpture Garden to be located adjacent to the Stanford Museum and approved the preliminary design for Phase II of the same project.

13. Heard a report of the following actions taken between meetings:

a. Approval of an increase of $57,000 in the total budget for the renovation of Cubberley Auditorium, from $625,000 to $682,000, to add air conditioning.

b. Approval of an increase of $292,000 in the total Memorial Church organ-installation budget, from $1,679,000 to $1,971,000, to enable the University to acquire an enhanced version of the organ.

c. Approval of an increase of $101,000 in the total budget for the relocation of Ventura Hall, from $724,000 to $825,000, to meet the minimal costs of the project.

14. Heard a presentation on the process by which architects are selected for projects at the University.

15. Established the Howard H. and Jessie T. Watkins University Professorship, unrestricted as to field, with holders to be designated by the Provost for five-year, non-renewable terms.

16. Meeting as General Members of the Stanford University Hospital, approved the participation of Stanford University in the consolidation of the pediatrics programs of Stanford University Hospital and Children's Hospital at Stanford as detailed in the Consolidation Agreement and authorized the President of Stanford University and the President of the Hospital to sign the Agreement on its behalf.

17. Approved the replacement of the Stanford Cabinet by a Subcommittee on Development of the Committee on Academic Affairs and Development.

18. Approved revisions on Article III, Section 4, and Article V, Section 1, of the Statement of Policy on Appointment and Tenure.

19. Received the Annual Report of the Board of Overseers of the Hoover Institution on War, Revolution and Peace.

20. Heard a report from William E. Stone, Director of Stanford Alumni Association, on progress and prospects for the Association.

Faculty appointments, promotions approved by Board of Trustees

On September 14, 1982, the Board of Trustees made the following appointments, effective September 1, 1982, unless indicated otherwise:

Promotions

Lawrence V. Berman, professor of religious studies; Charles P. Bonini, professor of management science, G.S.B.; Steven G. Boxer, associate professor of chemistry; William R. Brody, professor of radiology and, by courtesy, of electrical engineering; Brian J. Cantwell, associate professor of aeronautics and astronautics and mechanical engineering; Corey S. Goodman, associate professor of biological sciences; Vincent R. Hentz, associate professor of surgery; Diane W. Middlebrook, professor of English, 9/1/83; Boyd C. Paulson, professor of civil engineering; Robert D. Simoni, professor of biological sciences; Samuel Strober, professor of medicine.

Reappointments

Robert D. Beuchel, professor of clinical anesthesia; Russel Caflisch, assistant professor of mathematics; John C. Cox, associate professor of finance, G.S.B.; Savas Dimopoulos, assistant professor of physics; Iris F. Litt, associate professor of pediatrics; David M. Maurice, adjunct professor of surgery; Michael I. Taksar, assistant professor of operations research; Charles E. Whitcher, professor of clinical anesthesia; Gio C. M. Wiederhold, assistant professor of computer science.

Appointments

Elizabeth A. Abel, assistant professor of dermatology; Michael D. Amylon, assistant professor of pediatrics; Douglas B. Bernheim, assistant professor of economics; Charles Bigelow, assistant professor of art and computer science; John C. Boothroyd, assistant professor of medical microbiology; David L. Burke, assistant professor at the Stanford Linear Accelerator Center, 10/1/82; Eugene C. Butcher, assistant professor of pathology; Dennis R. Carter, associate professor of mechanical engineering, 10/1/82; Mark W. Denny, assistant professor of biological sciences; John A. DuPre, assistant professor of philosophy; Alban K. Forcione, professor of Spanish and comparative literature, 9/1/83; Jerome H. Friedman, professor of statistics; James G. Gamble, assistant professor of surgery; Andrew R. Hoffman, assistant professor of medicine, 10/1/82; Albert J. Hofmann, adjunct professor at the Stanford Synchrotron Radiation Laboratory and the Stanford Linear Accelerator Center, 10/1/82; Chung Hong Hu, associate professor of clinical dermatology; James L. Lear, assistant professor of radiology.; Edward R. North, assistant professor of surgery; Susan P. Perrine, assistant professor of pediatrics; Helen L. Reed, assistant professor of mechanical engineering; Lawrence A. Rinsky, associate professor of clinical surgery; Pierre N. Saint-Amand, assistant professor of French; Frank H. Sarnquist, associate professor of clinical anesthesia; Richard H. Scheller, assistant professor of biological sciences; Lila R. Stuart, adjunct professor of music.

Report Matters

James L. Adams, professor of industrial engineering and engineering management and mechanical engineering, reappointed associate dean of the School of Engineering, 9/1/82 to 8/31/85.

Fernando Alegria, professor of Spanish, reappointed Acting Chairman of the Department of Spanish and Portuguese, 9/1/82 to 12/31/82.

Theodore M. Andersson, professor of German studies, appointed chairman of the Department of German Studies, 9/1/82 to 8/31/84.

John I. Baruman, J. G. Jackson—C. J. Wood professor of chemistry, reappointed chairman of the Department of Chemistry, 9/1/82 to 8/31/85.

Gilbert M. Masters, adjunct professor of civil engineering (teaching and practice), appointed associate dean of the School of Engineering, 9/1/82 to 8/31/85.

John McCarthy, professor of computer science, reappointed professor, by courtesy, of electrical engineering, 9/1/82 to 8/31/87.

Walter Mischel, professor of psychology, appointed chairman of the Department of Psychology, 9/1/82 to 8/31/85.

Robert Osserman, professor of mathematics, appointed chairman of the Department of Mathematics, 9/1/82 to 8/31/83.

John Perry, professor of philosophy, reappointed chairman of the Department of Philosophy, 9/1/82 to 8/31/83.

Nathan Rosenberg, Fairleigh S. Dickinson, Jr. professor of public policy, reappointed chairman of the Public Policy Program, 9/1/82 to 8/31/83.

James J. Sheehan, professor of history, appointed chairman of the Department of History, 9/1/82 to 8/31/85.

Myra H. Strober, associate professor of education, reappointed associate professor, by courtesy, of economics in the Graduate School of Business.

Arthur F. Veinott, Jr., professor of operations research, appointed chairman of the Department of Operations Research, 9/1/82 to 8/31/85.

Timothy R. Warner, appointed associate provost effective 9/1/82.

Stanley G. Wojcicki, professor of physics, appointed chairman of the Department of Physics, 9/1/82 to 8/31/85.

Faculty Emeritus Appointments

Ernest C. Arbuckle, appointed dean of the Graduate School of Business and professor of business management, emeritus, effective 6/14/68.

Harry S. Mosher, appointed professor of chemistry, emeritus, effective 9/1/81.

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the months of April, May, June and July:

FEDERAL

New Contracts

David C. Luckham, electrical engineering, "Analysis and Verification of High Order Language Programs," $852,368 from the Department of the Navy for 2 years.

John McCarthy, computer science, "Basic Research in Artificial Intelligence and Formal Reasoning," $543,122 from the Department of the Navy for 2 years.

John McCarthy, computer science, "Image Understanding," $1,046,733 from the Department of the Navy for 2 years.

Oleg D. Sherby, materials science and engineering, "Mechanical Behavior Ultrafine-Grain Aluminum Alloys," $226,250 from the Department of the Navy for 18 months.

Gio C. M. Weiderhold, computer science, "Management of Distributed Knowledge," $655,203 from the Department of the Navy for 2 years.

Daniel B. Debra and John V. Breakwell, aeronautics and astronautics, "Gravity Gradiometer Studies," $330,110 from the Air Force for 3 years.

Arthur L. Schawlow and Mason R. Yearian, W. W. Hansen Laboratories of Physics, "The Evaluation of the Mark III Linac as a High Current Source for FEL Experiments," $260,898 from the Air Force for 6 months.

Joel Ferziger and Joseph Oliger, computer science, "Center for Research on Large Scale Scientific Computing," $1,345,552 from the Department of the Navy for 33 months.

Drew V. Nelson and John C. Shyne, materials sciences and engineering, "The Use of Surface Acoustic Waves to Study Small Fatigue Cracks," $365,000 from the Department of Energy for 3 years.

William E. Spicer, Stanford Electronics Laboratories, "Novel Approaches to Passivation of Si for VHSIC Based on Fundamental Studies," $431,289 from the Department of the Army for 3 years.

Contracts—Amendments

Arthur I. Bienenstock and Herman Winick, Stanford Synchrotron Radiation Laboratory, "SSRL Beamline," $1,200,000 from NSF for 1 year.

Perry McCarty, civil engineering, "Autohydrolysis of Organic Residues," $209,734 from the Department of Energy for 1 year.

Amos N. Tversky, psychology, "Decision and Judgement," $312,405 from the Navy for 2 years.

James D. Meindl, Stanford Electronics Laboratory, "Joint Services Electronics Program," $250,068 from the Department of the Army for 2 years.

Bruce G. Buchanan, computer science, "Recognizing and Articulating Diagnostic Skills in an Intelligent Tutoring System," $714,122 from the Department of the Navy for 3 years.

Anthony E. Siegman, W. W. Hansen Laboratories of Physics, "Microwave Research ISEP," $363,000 from the Department of the Navy for 1 year.

Fouad A. Tobagi, electrical engineering, "Real Time Communication Systems Design Analysis and Implementation," $458,658 from the Defense Advanced Research Projects Agency for 2 years.

Leonard G. Tyler and Von R. Eshleman, Stanford Electronics Laboratories, "Voyager Uranus," $991,000 from NASA for 54 months.

New Grants

Ingolf Lindau, Stanford Synchrotron Radiation Laboratory, "Relationship of Atomic and Electronic Structure of Semiconductor Surfaces and Interfaces," $200,000 from NSF for 7 months.

Ronald Levy, Michael P. Link, and Saul A. Rosenberg, Department of Medicine, "Human Anti-Tumor Therapy with Monoclonal Antibodies," $307,831 from NIH for 1 year.

James A. Spudich, Roger D. Kornberg, Peter Parham, Peter B. Sargent, Lubert Stryer, and Peter N. Unwin, structural biology, "Membrane Channels, Receptors and Anchors," $448,222 from NIH for 1 year.

Grants—Amendments

Daniel Bershader and Jean Mayers, aeronautics and astronautics, "A Summer Program of Faculty Fellowships," $278,127 from NASA for 15 months.

Carl Djerassi, chemistry, "Resource-Related Research—Computers and Chemistry," $281,686 from NIH for 1 year.

William C. Fowkes, family, community and preventative medicine, "Primary Care Associate Program," $230,653 from the Health Resources Administration for 1 year.

Theodore H. Geballe, Center for Materials Research, "Materials Research Laboratory Program," $2,000,000 from NSF for 1 year.

George S. Harell, radiology, "Comparison of Micro-Spheres and RBS Behavior In Vivo," $245,355 from NIH for 1 year.

Henry S. Kaplan, radiology, "Biological Aspects of Carcinogenesis," $347,541 from NIH for 1 year.

Henry S. Kaplan, radiology, "Clinical Cancer Research Center Program, $706,375 from NIH for 1 year.

Henry M. Levin, School of Education, "Plans for Fiscal Year 1982-Institutional Grant," $779,922 from the National Institute of Education for 7 months.

Antony E. Siegman, W. W. Hansen Laboratories of Physics, "Laser Physics and Laser Techniques," $384,551 from the Department of the Air Force for 2 years.

Luigi Cavelli-Sforza, genetics, "Genetics Research Projects," $471,220 from NIH for 1 year.

Carl Djerassi, chemistry, "Marine Chemistry with Special Emphasis on Steroids," $298,977 from NIH for 1 year.

Robert Hofstadter, W. W. Hansen Laboratories of Physics, "High Energy Physics Program," $452,500 from NSF for 1 year.

Henry S. Kaplan, radiology, "Human Hybridoma Antibodies in Neoplastic Disease," $295,261 from NIH for 1 year.

Paul V. Roberts, David Freyberg, James O. Leckie, Perry L. McCarty, George A. Parks, and Robert L. Street, civil engineering, "Evaluating Groundwater Contamination Risks Resulting from Hazardous Waste Disposal," $941,400 from the Environmental Protection Agency for 1 year.

Arthur L. Schawlow and Theodor W. Hansch, W. W. Hansen Laboratories of Physics, "Spectroscopy and Quantum Electronics," $309,000 from NSF for 1 year.

Robert T. Schimke, biological sciences, "Molecular Mechanisms in Resistance to Folate Analogues," $249,176 from NIH for 1 year.

Stanley L. Schrier, medicine, "Metabolism of Erythrocyte Stroma," $232,736 from NIH for 1 year.

George R. Stark, biochemistry, "Aspects of Control in Mammalian Gene Expression," $277,283 from NIH for 1 year.

Edward B. Stinson, Carl F. Gromet, and Margaret Billingham, cardiovascular surgery, "Clinical Heart and Lung Transplantation," $1,533,518 from NIH for 1 year.

Irving L. Weissman, pathology, "Normal and Neoplastic T and B Lymphocyte Maturation," $221,406 from NIH for 1 year.

Merton R. Bernfield, pediatrics, "Extracellular Materials and Embryonic Organ Formation," $258,884 from NIH for 1 year.

Thomas G. Binford, computer science, "Exploratory Research in Integrated Programmable Automation," $248,304 from NSF for 1 year.

David A. Clayton, Medical School, "Medical Scientist Training Program," $589,368 from NIH for 1 year.

Philip C. Hanawalt, biological sciences, "Cellular and Molecular Biology Training Program," $373,221 from NIH for 1 year.

David M. Maurice, surgery, "Control of Corneal Hydration," $339,639 from NIH for 1 year.

Thomas C. Merigan, Department of Medicine, "Interferon, Immunity and Latent Viruses," $235,735 from NIH for 1 year.

David A. Prince, Bruce Ransom, Kao Ling Chow, Barry Tharp, neurology, "Epilepsy Research Program," $440,471 fron NIH for 1 year.

Richard N. Zare, chemistry, "State Selection and State Detection of Molecules with Lasers," $224,484 from NSF for 1 year.

Richard H. Britt, surgery, "Hyperthermia in the Treatment of Brain Tumors," $232,737 from NIH for 1 year.

James F. Fries, Department of Medicine, "A National Arthritis Data Resource (ARAMIS)," $472,405 from NIH for 1 year.

George M. Hahn, radiology, "Tumor Radiochemotherapy—Effects of Ultrasound and Heat," $261,793 from NIH for 1 year.

Henry S. Kaplan, radiology, "Clinical Cancer Research Center Program" $1,693,682 from NIH for 1 year.

Arthur Kornberg, biochemistry, "DNA Transactions and Aging," $646,370 from NIH for 1 year.

Eleanor E. Maccoby, psychology, "Basic Processes in Cognitive and Social Development," $469,923 from NIH for 1 year.

Arturo Pacheco, School of Education, "Bilingual Education Doctoral Fellowship Program," $203,920 from the Department of Education for 1 year.

David D. Perkins, biological sciences, "Genetics of Neurospora," $245,075 from NIH for 1 year.

Gerald M. Reaven, Department of Medicine, "Endocrinology of Aging," $436,972 from NIH for 1 year.

David C. Weber, University Libraries System, "Improving Access to Microform Research Resources: Early American Imprints: 1806 to 1810," $231,030 from the Department of Education for 1 year.

Peter D. Wood, Department of Medicine, "Exercise Training and Plasma Lipoproteins in Man," $386,589 from NIH for 1 year.

NON-FEDERAL

New Contracts

Robert L. Street, civil engineering, "Air Quality Mode, Development—Coastal Regimes," $245,843 from the Electric Power Research Institute for 32 months.

Contracts—Amendments

Sidney A. Self and Morton Mitchner, mechanical engineering, "Basic Studies in Electrostatic Precipitation," $250,435 from the Electric Power Research Institute for 9 months.

Gordon S. Kino and H. John Shaw, W. W. Hansen Laboratories of Physics, "Acoustic Technique for Measuring Stressed Regions in Steel," $351,091 from the Electric Power Research Institute for 1 year.

New Grants

Rudolf H. Moos, psychiatry, "Measuring Environmental Stressors and Coping Resources," $295,306 from the John D. and Catherine T. MacArthur Foundation for 3 years.

Donald E. Knuth, computer science, "Research on Computer Typography," $975,000 from the System Development Foundation for 3 years.

Grants—Amendments

Nathan Rosenberg, economics, "Undergraduate Public Policy Studies Program," $260,000 from the Alfred P. Sloan Foundation for 3 years.

John M. Chowning, music, "Support of the Center for Computer Research in Music and Acoustics (CCRMA), $2,321,637 from the System Development Foundation for 5 years.

Comparative education top subject for October conference at SIDEC

The Comparative and International Education Society (CIES) will hold its Western regional meeting at Stanford October 22-24, hosted by Stanford's program in International Development Education (SIDEC).

Those attending will include several hundred faculty and graduate students from universities throughout the Western U.S., Canada, and Mexico, as well as scholars from Brazil, France, Turkey, and the Philippines, including many SIDEC alumni. "Critical Paradigms in Social Theory, Research, and Practice: Implications for Comparative Education" will be discussed in several panels and the following general sessions:

* Higher Education and the Limits of Relative Autonomy: The Transformation of the Community College (Jerome Karabel, The Huron Institute)

* The "Political Language" of Comparative Education: Scholarship and Symbols (Hans N. Weiler, Stanford)

* Education and Social Transformation: La Cruzada de Alfabetizacion in Nicaragua (Francisco Lacayo, Vice Minister for Adult Education, Nicaragua)

* Class, Gender, and Curriculum Control (Michael W. Apple, University of Wisconsin, Madison)

* Critical Paradigms and Comparative Education (Carlos A. Torres, Stanford)

In addition to these plenary sessions, a total of 18 panels will deal with such issues as Educational Development and Educational Reform, Education and Radical Change, Critical Departures in Research Methods and Research Training, Culture and Language in Education, Education and Change in Asia, The Political Economy of Schooling in Brazil, Education and Legitimacy in Comparative Perspective, Policy and Administration in Education, Education Policy in the U.S. and Australia, and Education, Work, and the State in Mexico.

The conference has been prepared by an organizing committee of SIDEC faculty and graduate students under the chairmanship of Hans N. Weiler and Carlos A. Torres.

Financial assistance is being provided by the Cubberley Lectureship Fund of the School of Education, the Graduate Division, and the Center for Research in International Studies.

The conference program and registration information is available from CIES Conference, SIDEC School of Education, Stanford University, Stanford, CA 94305. Phone (415) 497-4644.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827 or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

30961-PM (JCC:1747) LIBRARY SPEC I: 50%; fixed term 9/27/82-9/26/83; 1-5pm; performs duties in Catalog Dept; keys in bibliographic records fr worksheets into RLIN database; corrects coding errors that are received on-line during inputting process; other duties as assigned; OUALIFICATIONS: typ 45; atten to detail; good clerical skills; ability to learn RLIN II or other automated sys; prev exp w/ automated sys desirable; reading knowl of one or more foreign langs desirable; send appl/resume to Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $595-623.

30962-PM (JCC:1747) LIBRARY SPEC I: 50%; fixed term 9/27/82-9/26/83; 8:30-12:30; performs duties in Catalog Dept; keys in bibliographic records fr worksheets into RLIN database; corrects coding errors that are received on-line during inputting process; other duties as assigned; OUALIFICATIONS: typ 45; atten to detail; good clerical skills; ability to learn RLIN II or other automated sys; prev exp w/ automated sys desirable; reading knowl of one or more foreign langs desirable; send appl/resume to Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $595-623.

27080-PM (JCC:1755) LIBRARY SPEC II: Lib Spec in Catalog Dept of Western Languages Collection of Hoover Institution Lib; processing lib mat'ls using RLIN-2; inputting original cataloging; searching RLIN data files, public card catalog, Nat'l Union Catalog, New Serial Titles, & other reference tools; helping to train new lib specs in inputting & searching at terminal; correcting discrepancies in maintenance function; typing series & cross-reference cards; QUALIFICATIONS: typ 45+; Catalog dept exp required; familiarity w/ RLIN or other lib automated sys; knowl of one or more Western Langs; detail orientation; accuracy in typing; send appl/resume to Joseph Kladko, Hoover Institution, Stanford, CA 94305; or call 497-2054.; B12; $1310-1373.

31950-BP (JCC:2454) OFFICE ASST II: Act as relief receptionist for breaks, vacations, & other absences; asstant to personnel officer, processing & recording applications, forms, PAF, PDF; record sick leave & vacations reports; keep records for offc accts & distribute budget statements; operates word processor/approx 2,000 ltrs/yr to applicants; taking care of IBM machine 3 mos out of the yr; QUALIFICATIONS: typ 50; accurate typing skills; exp in answering business phones & taking messages; willingness to be trained on word processor; exercise good judgment; willing to work w/ interruption; familiar w/ univ payroll helpful; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; 1 B09; $1130-1189.

21650-BP (JCC:2470) OFFICE ASST IV: Asst telecomm mgmt in the development & preparation of the annual budget; develop an initial budget for subcomponents of the operations group budget; make recommendations to mgmt re: various line items in the budget; coord paper flow of all user serv requests w/ vendor & user; generate logs & reports of status of serv order requests using word processor and/or on-line data base; screen & route telephone calls for entire dept; take minutes of mtgs for multiple parties, etc; QUALIFICATIONS: high sch'l or equiv exp & training; thorough knowl of offc procedures, offc equip't & sound judgement; knowl of or exp in CIT, WYLBUR, SCRIPT, Word processing, & Apple II; accurate typing skills; basic math skills; send appl/resume to The Committee, 327 Bonair Siding., B14; $1440-1514.

26088-PM (JCC:2470) OFFICE ASST IV: Fixed term 9/20/82-5/14/83; maintain dept law lib; update legal periodicals; order new books & publications; maintain accurate index of all lib holdings; pay invoices & renew subscriptions; keep detailed, accurate records of lib expenses, orders, etc; monitor lib budget; corresp w/ publishers, vendors, Univ depts as nec; maintain file sys; order file sys supplies, etc; QUALIFICATIONS: typ 60; 2-3 yrs exp or edu in lib or offc informa sys; good oral & written commu skills; meticulous & attentive to detail; familiarity w/ Univ policies & procedures highly desirable; send appl/resume to Patricia Chor, University Counsel's Office, P. O. Box N, Stanford, CA 94305.; B14; $1440-1514.

33284-PM (JCC:2546) SECRETARY I: 50%, 1-5; answer phones; screen calls; take message; support other sec w/ ordering & maintaining offc supplies, prepare purchase requisitions for lab supplies; keep daily log book & file all reqs; sorting mail; collecting & distribution of radiation badges, etc; QUALIFICATIONS: typ 45-50; good command of English; med terminology helpful; good organizational ability; able to work independently & deal effectively w/ the public; send appl/resume to S. Butler, R-132, 497-6101.: B09; $565-595.

14255-PM (JCC:2554) SECRETARY II: 75%, 9-4; performs finished form typing of corresp, manuscripts & proposals; sel data & compiles reports & bibliographies fr genl instructions; sets up & maintains a variety of offc files; operates word processor, offc copiers, & dictating machines; receives & screens telephone calls for Div Coordinator; bkup functions for front desk reception & Div phones; schedules routine AV/TV serv requests for projection & video playbacks; QUALIFICATIONS: typ 60-70; 2-3 yrs of clerical/sec'l exp; knowl of word processing & use of dictating machines desirable; contact: Marlene Cork/Robert Hecht, 497-6813.; B11; $935-983.

33353-PM (JCC:2562) SECRETARY III: 50%, 8-12; Sec to Chief of Ophthalmology Section of Veterans Admin Med Ctr in Palo Alto; able to manage offc w/ complete sec'l duties incl opening mail, answering telephones, screening visitors, set up conference, check grant budgets, type finished corresp, complete forms & order supplies; QUALIFICATIONS: typ 70-75; good sec'l skills & med terminology; able to edit manuscripts & papers; this position is an add'l 50% Veterans Admin Med Ctr position and a CIVIL SERVICE RATING REQUIRED FOR THE VA MED CTR POSITIONS; send appl/resume to Mariann M. Crane, Division of Ophthalmology, A227 Med Ctr.; B14; $720-757.

95160-JM (JCC:2596) SECY II-SPEC: 50%; (afternoon); asst in providing all sec'l services for group of 20; type genl corresp, tech papers (physics & engineering) using math symbols, etc; QUALIFICATIONS: typ 50 wpm; good spelling skills; several yrs offc exp; some knowl of bookkeeping, recordkeeping & filing sys; ability to learn use of computer terminals; good interaction skills.; B12; $655-687.

26932-BP (JCC:2630) SPECIALIST TYPIST: Typing fr handwritten notes, dictated notes, or verbal instructions received fr 22 professors who specialize in various areas of anthropology constituting great diversity in specialized terminology, i.e., med, psychological/symbolic, economic, political, legal, etc; typing may incl use of Greek symbols & foreign langs; answering phones in absence of receptionist, etc; QUALIFICATIONS: typ 65-70; ability to listen & follow oral & written directions; ability to work under pressure to meet deadlines; excel understnading of English lang; ability to sit for extended periods of time; knowl of word processing on Lexitron or willingness to learn; ability to work as a member of a team; send appl/resume to Betty Hummer, Bldg. 110, Rm 111-F, Anthropology Dept., 497-3421.; B12; $1310-1373.

32867-TC (JCC:6810) SOC SCI RES ASST I: Research assistant to a professor & his research staff in Social Ecology Lab; analyze data fr ongoing psychological res projs using existing computer programs & hand calculators; involve in some bibliographical res related to res program topics; contacting & obtaining data fr subjs thru telephone & personal interviews; QUALIFICATIONS: BA in social sci or equiv; knowl of statistics & data analysis; familiar w/ psychological statistical tech; access to own transportation for short, local trips.; B12; $1310-1373.

33360-PM (JCC:2512) Offc Asst III-S: Transcription of Orthopedic Surgery Clinic notes; letters to referring physicians; discharge summaries & operative notes; genl receptionist duties; greet visitors, patients & their families; answer phones; distribute mail; order offc supplies; QUALIFICATIONS: typ 60; requires knowl of med terminology (Orthopedics preferred); accurate typing & transription; knowl of or ability to learn use of word processing eqpt; pleasant phone manner; able to interat effectively w/faculty, residents & patients; will be working in offc w/many people in close proximity; nonsmoker preferred; contact: Jane Pelton, Med Ctr R171, 497-7609; B12; $1310-1373

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Sept. 28, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Exempt

33682-VW (JCC:2036) ADMIN SERVICES MGR II: Manage business & admin affairs of Dept of Neurology; relieve Chairman & faculty members of dept of admin respon; have respon & authority for overall admin in support of the research, teaching & patient care function of the total dept; negotiation on behalf of dept w/ outside agencies, such as Nat'l Institute of Health, & other public & private institutions; negotiate w/ Hospital on behalf of Dept labs, etc; QUALIFICATIONS: strong financial & analytical skills; prev exp in supvn & offc mgmt required; demonstrated ability to interact w/ faculty & sr. administrators; knowl of Univ finance & genl acctg procedures, personnel policies & preparation of fiscal reports desirable; interest or prev exp w/ computer sys desirable; bkground in med or academic environment preferred.; C07; $2113-2724.

94111-JM (JCC:2070) ADMIN ASST II: Prov admin assistance to Plant Officer & prof'l staff, e.g., prepare reports, assemble audits & appraisals; schedule mtgs, review budgets; supv clerical staff; QUALIFICATIONS: several yrs of applicable exp & edu in admin, policies & procedures; ability to develop & improve recordkeeping procedures; good interactive skills; supervisory exp or ability; contracts admin exp desirable.; C05; $1670-1890.

44514-DS (JCC:2120) ACCOUNTANT I: Prov acctg support to various div Directors w/in CIT, principally the directorate staff for Admin Informa Sys Div; control of operating statement data; budget preparation & control; acctg payable functions; purchasing activities; prep of various acctg enhancements; liaison work w/ approp cost ctr mgrs; calculate internal & external rates for Ctr programmers; close interaction w/ Directors of several Divisions; QUALIFICATIONS: Bachelor degree in acctg or related exp in acctg & acctg sys, audit, budget & financial planning analysis; requires excel ability to analyze, organize, direct varied admin functions; excel oral & written skills; bkground in Univ acctg procedures desired; knowl of WYLBUR & SPIRES helpful.; C05; $1670-2086.

32502-JB (JCC:2254) FIN/MGMT ANALYST I: Collect & analyze data for compilation in financial reports; perform genl analyses & resolution of budget problems; asst w/ financial analyses for budget & long-range planning process, incl financial projections & trade-off analysis; monitor offc operating budgets; prov computer data-entry support; QUALIFICATIONS: energetic, self-motivated; require basic financial & analytical skills, good judgment & strong organizational skills; ability to write & commu well & to handle multiple projs & demands in a timely manner; knowl of or willingness to learn Wylbur, SPIRES, SPSS & other computing langs; BA in business admin, economics, statistics or equiv work exp preferred; professional & diplomatic manner in dealing w/ people nec; familiarity w/ Univ procedures desirable.; C05; $1670-2086.

32391-TC (JCC:3882) PHOTOGRAPHER III: Prov photographic serv for Autopsy, Surgical & Neuropathology involving color & black & white photomicrography & macrophotography for record & publications; flat copy photography for projection slides, either black & white or color; photograph research mat'l incl transilluminated mat'l for record & photomicrography & macrophotography of autopsy & surgical specimens; QUALIFICATIONS: formal biologic or med photographic training desirable; prev exp essential, especially black & white photomicroscopy of histologic sections.; C06; $1854-2312.

17877-LL (JCC:5116) PROGR SCIENTIFIC III: 8:30-5pm; respon for maintaining current sys software for 2 separate computer sys; one computer sys supports Cath/Angio Lab & incl reporting sys for hemodynamic, angiographic & electrophysiologic patient evaluations; the second computer sys performs high-speed analysis of ambulatory electrocardiograms; both sys, require continued development & implementation of various enhancements, as well as installation & trouble shooting of specialized sys hardware; collaborate in sys & software develop't & report results at national mtgs & in professional journals; QUALIFICATIONS: BS in Engrg or Sci; 1-3 yrs exp (Hewlett Packard 1000 sys preferred); some knowl of analog & digital design & construction; exp in (cardiovascular) med desirable; must be highly motivated.; C07; $2113-2724.

23964-LL (JCC:5588) LIFE SCI RES ASST I: Perform radioimmunoassays & related procedures for quantitations of hormones & autoantibodies in a specialized clinical lab & to asst in ongoing research projs; occasional prep of biological mat'ls & isolation & radioiodination of proteins used in various tests; processing of blood specimens for testing; record keeping; maintenance of lab equip't; ordering of lab supplies; QUALIFICATIONS: BS degree or equiv training & exp w/ strong bkgound in biochemistry & immunology; some work exp in genl lab tech essential; prior exp in radioimmunoassay field & certification as Clinical Chemist or Med Technologist essential since results of work are patient related.; C05; $835-1043.

29808-AW (JCC:4084/4092) Programmer/Analyst III/IV: Must possess a high degree of expertise & exp in sys analysis using full range of analytic skills; ability to scope & analyze into cohesive sys design, 2 or more Univ functions, interface w/other complex sys & programs & must consider decisions regarding relationships among parts of sys; involves understanding of user proceds, organization's program requirements, & documentaiton requiremt; thorough knowl of sys environs & capabilities of such eqpt as IBM 3033 (MVS) DEC, Wang; expertise in software such as COBOL, use of CICS, sys 2000, SPIRES, etc & other database mgmt sys; familiarity w/standard batch sys approaches; familiarity w/modern offc informa sys helpful; familiarity w/structured analysis/design tech; C07/C08; $1875-2974/2180-3393

Bargaining unit

29955-FM (JCC:5638) LIFE SCI TECH I: TMS Unit; do routine operation w/ analytical instruments (mass spectrometry) in Chemistry Dept; upkeep of instrument(s) under close supvn of prof'l personnel; QUALIFICATIONS: no prev exp w/ equip't is nec; skilled in use of hands & willing to perform detailed, exacting & delicate work.; A18; $7.01.

24641-FM (JCC:5786) LAB ASST I: TMS Unit; 8:30-5:30; approx 80% time will be spent in maintenance of a colony of experimental insects; involve growing plants & feeding them to immature growth stages of the insects; sorting & organizing insect pupae in prep for adult emergence; caring for adult insects; mating adult insects & collection of their eggs; 20% time will be devoted to learning & performance of various routine biochemical lab procedures; QUALIFICATIONS: prefer college level exp w/ biological sci; relevant tech employment exp helpful but not essential.; A13; $6.24.

24640-FM (JCC:5794) LAB ASST II: TMS Unit; asst in field & lab sampling programs: collect , sort, & analyze plant & soil samples; collect & summarize environ data; asst in greenhouse maintenance & field plots: propagation & culture of plant mat'l, involving plant establishment, watering, fertilization, & labelling; asst in lab growth chamber: planting & processing of plant mat'l; calibration & maintenance of chambers; QUALIFICATIONS: prev work w/ plant mat'l; must have flexible schedule & be able to work w/ little supvn.; A16; $6.69.

24468-JB (JCC:6492) LAB MECHANICAN III: TMS Unit; fabricate quality parts & assemblies fr a variety of mat'ls to exacting tolerances; involved in construction & installation of large research apparatus such as wind tunnels & water channels; build & install a variety of instrumentation such as pressure probles & like devices; QUALIFICATIONS: requires a min 5 yrs exp (prototype machinist, model making); 2 yrs exp in specialty area of acrylic fabrication; a relevant bkground in shop math is a must; basic skills in all phases welding.; A41; $12.13.

30233-FM (JCC:7810) MAINT PERSON LDR PREM: 8-4:30; performs repairs & maintenance tasks in Escondido Village, Manzanita Park, & Mirrielees House; leads & directs other workers & part time student crews; receives instructions, supvn & work specifications fr shop supvr; motivates employees to meet quality standards; assts supvr or worker in solving tasks related problems; insures that proper safety procedures & precautions are followed at all times, etc; QUALIFICATIONS: able to inspect & report on work of others; able to work cooperatively & effectively w/ co-workers & customers; journeyman abilities in at least 2 or more of the areas; ability to follow verbal, written, or work sketch instruc & be able to commu these to others; know & be willing to implement affirmative action goals; able to act for supvrin his absence in areas of scheduling, estimating & assigning work.; A39; $11.58.

94915-JM (JCC:8262) INSTR MECH-RES FAC: TMS Unit; perform assigned maintenance, adjustment & repair of all plant process instrumentation plus overhaul, modification of & fabrication of a wide variety of experimental instrumentation & controls for use on sys; QUALIFICATIONS: high sch'l or equiv; tech college courses or equiv desirable; several yrs related exp ability to work fr prints, sketches and/or verbal instructions; able to qualify for gov't driver's license.; A37; $1912.

94926-JM (JCC:8270) INSTR MECH SPEC-RES FAC: TMS Unit; perform assigned maintenance, adjustment & repair of all plant process instrumentation plus overhaul, modification of & fabrication of a wide variety of experimental instrumentation & controls for use on sys; respon for planning, scheduling, work distribution and/or direction and/or training of other instrument mechanics; design new instrumentation sys, etc; QUALIFICATIONS: high sch'l or equiv; tech college courses or equiv desirable; several yrs related exp; ability to work fr prints, sketches and/or verbal instructions; able to qualify for gov't driver's license.; A39; $2007-2103.

18561-FM (JCC:8586) HV/AC Mech, Maintenance: TMS unit; 8-4:30; practical skills reqd, soldering, brazing, cutting, ability to read & interpret blueprints & wiring schematics; piping & plumbing tech as they apply to heating, ventilating & air conditioning trade; knowl of refrigerants & their proper application; knowl of spec instruments & tools used extensively in HV & A/C trade & as recording instruments; refrigeration gauges, ohm meter, volt meter tachometer, lead detector, pyrometer, etc; A35; $10.49

18569-FM (JCC:8586) HV/AC Mech Maint: TMS unit; 8-4:30; inspect, troubleshoot, repair, & maintain refrigeration as it applies to all phases of (a) food preparation & storage, (b) lab & res eqpt; all types of air conditoning units & their related eqpt; all bldgs heating & cooling temperature control sys; all ventilation & air distribution sys, etc; practical skills reqd, soldering, brazing, cutting; ability to read & intrpret blueprints & wiring schematics; piping & plumbing tech as they apply to heating, ventilating & air conditioning trade; knowl of refrigerants & their proper application; knowl of spec instruments & tools used extensively in HV & A/C trade & as recording instruments; refrigeration gauges, ohm meter, volt meter tachometer lead detector, pyrometer, etc; A35; $10.49

Stanford Alumni Association sponsors open conference on 'Living Well'

Participants in "Living Well," a three day-conference sponsored by the Stanford Alumni Association, will assess their own heritage and habits, then set goals to promote health and longevity.

Scheduled for Oct. 7-10, the program will be held at the Stanford Sierra Camp at Fallen Leaf Lake.

Five members of the Stanford Medical School faculty will be joined by a professor of education and psychology in presenting the seminar. They will explore choices about diet, physical activity, and handling stress, emphasizing that small changes can have a powerful impact on well-being. "Personal Vitality Reports" will be analyzed in advance to help determine participants' risk levels for each of the major diseases.

Dr. John W. Farquhar, head of the Stanford Heart Disease Prevention Program, will participate, as will Dr. Peter Wood, deputy director, and Mia Clark, nutritionist in the program.

Other faculty will be Dr. James F. Fries, associate professor of medicine and director of the Stanford Arthritis Center; Dr. John Bunker, director of health services research at the Medical School; and Carl Thoresen, professor of education and psychology at Stanford, who has written widely on behavioral modification.

Lectures are scheduled for the morning and early evening, leaving afternoons free for recreation.

An Alumni Association continuing education program, Living Well is open to all interested. Tuition is $550 for single participants and $775 for couples. Spouses are encouraged to attend.

A $50 per person deposit should be sent to the Stanford Alumni Association, Bowman Alumni House.

Rental housing

HOUSING NEEDED

□ **NOW:** Resp. female grad. student, 29, seeks studio/cottage or rm in hse w/priv. ent. & BA, light cooking and lndry facil. Conv. to campus. Courteous, $250-$350/mo. and/or poss. light wrk. xchng. Call Cynthia, 322-4996 (to 9/10) or 497-2108 (day).

□ **Feb. '83 to Sept. '83:** Visit prof. seeks 3BR apt. or hse. on or nr campus. Poss. xchng for beautiful flat nr Tel-Aviv U. Call Margaret at 497-3910 (day).

□ **Summer '83:** EXCHANGE—LONDON: Los Altos cpl would like to exchange homes with London cpl for 4-6 weeks, summer '83. Call (415) 948-5290 (eves).

□ **Jan.-March '83:** Visit. prof, Anthropology Dept., seeks 1 or 2BR furn. apt. or hse. for self & spouse. Call Betty, 497-3421 (day).

□ **Jan.-June '83:** Visit. prof., Anthropology Dept., seeks 2 or 3BR furn. apt. or hse. for self, spouse and year-old child. Call Betty, 497-3421 (day).

□ **Feb. '83 to June '83:** Visit. prof. & wife from MIT seek hse or apt, 1 or 2BR, furn., on or nr. campus. Call (415) 593-6506 or call COLLECT: (617) 369-4713; or write: 163 Valley Rd., Concord, MA 01742, c/o E. Brown.

□ **Beg. Sept. 30:** Prof. woman and college-age daughter seek safe, quiet hse. Share, or 2BR apt. to $600. Prefer MP, PA or hills nr bus. Call 497-0809 (day) or 322-0387.

March '83: EXCHANGE. Finnish-French family w/2 daughters seek 2-4 BR hse/apt. in Bay Area. Exchange for 3BR/2BA apt. in beautiful area 5 mi. from ctr. Paris. 2 cars & wkly clean. incl. Will care for pets & garden. Local refs. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Oct. '82 to March '83:** Want to rent 2BR (or more) furn. condo or hse. Please call collect Newport Beach (714) 752-7870.

□ **Beg. Oct. '82:** Resp. female, staff/student, 34, seeks quiet studio/cottage. Will consider compatible rmmate. $250-$350/mo. Call Lisa, (415) 322-6966 after 4 pm or weekends.

□ **Jan. 3 to Feb. 16, '83:** Distinguished Emeritus Prof. visiting needs furn. rm on or nr campus. Call Barbara, 497-2651 (day).

□ **NOW:** New British faculty, wife, baby, seek unfurn. 3BR hse for 1-1½ yrs in quiet nghbrhd, nr. campus. Call 497-0935, r 497-0474.

□ **Jan. 1 to Aug. '83:** Physician on sabbatical at Stanf. & Berkeley seeks 4BR furn. hse. 2 children, 9 & 11. Willing to consider either area. Call (608) 231-2804 or write: Dr. E. Borden, 1609 Camelot Dr., Madison, WI 53705.

□ **NOW:** Female, employed at Stanf., seeks reasonably priced 1BR cottage or studio. Will consider compatible roommate. Call Mary Louise, 856-0763.

HOUSING AVAILABLE

□ **Oct. 1, '82 to Jan. 10, '83:** Luxurious 2BR/2BA condo dwntwn Los Altos. Compl. furn, 10 min. to Stanf. $950/mo. Call (415) 948-1240.

□ **NOW:** Cultured woman from France has penthouse apt. to SHARE. Sharon Hts, rm. w/priv. BA + study/den. Kitchen priv., decks w/view, gar., pool, sauna. Nonsmoker pref. $500/mo. + ½ util. Call (415) 591-8015 (lv. message) or (415) 592-6885.

□ **NOW:** Furn. 3BR/1BA hse, Skyline. Spac. living, outside areas for family. No smokers or cats. 35 min. drive to campus includes 5 mi. of curvy mtn. roads. Sep. qtrs kept for pers. use. Elec. avrge $120. $650/mo. Call (415) 493-8363 for appt.

□ **NOW:** Tranquil oasis 9 min. to Stanf. Priv. guest-wing rear of Eng. cott. Sep. entry, 1BR (king size bed)/1BA. Fully furn. incl. linens, dishes, TV, phone, util, grdnr. LR w/frpl. Fenced grdn/patio. Driveway parking. No pets, nonsmoker, 1 person only. RENT by mo. Call (415) 856-0608.

□ **NOW:** Prime, very private 3BR/2BA hse. Large LR & FR, 2 frpl. ½ acre, low foothills. $1950/mo. or best offer. 1 yr., poss. longer or lease option. Call (415) 948-4493.

□ **NOW:** Unique, contemp. hillside hse. 3BR/2BA + 2 half BA. Rec. rm/bar. Sep. DR. 20 ft. cell, redwood & glass, decks, hot tub. For lease furn. Priv. cul-de-sac in high Ladera. Avail. 1 yr. max. $3000/mo. Call (415) 854-7140.

□ **Reg. Avail:** 1 & 2BR, furn. & unfurn. apts. & twnhses in Palo Alto & Menlo Pk in good neighborhoods, close to campus. $525 to $800/mo. Call Shirley, 493-2321 or Jane, 968-4957.

□ **Beg. end Sept. '82:** Lge. 1BR lux. condo. 3 mi. to campus; carpets, drapes, appl., gar., deck. 2 pools, sauna, tennis, game rm. $500/mo., option to buy. Call 322-4418 (eve).

□ **NOW:** Prof. woman, 33, seeks rommmate w/compatible lifestyle to SHARE 3BR hse in mid-Penin. area. Nonsmoker. Spacious, partly furn., yd. $450/mo. Call Joanne, (415) 349-3887.

□ **Jan. to June 30, '83:** Furn. hse. 3BR/2BA, W/D, frpl, fenced yd., conv. to campus, shops. Children ok. $850/mo. Call 497-9253 (day), 327-5641 (eve).

□ **Sept. '82 to June/Sept. '83:** Looking for nonsmoker, pref. female, to share furn. 3BR/2½BA Old Mill Twnhse. Pool, jacuzzi, sauna, prkng. $300/mo. + 1/3 util. Call John, 497-3944 or Kateri, 949-3297 (8 a.m. to midnite).

□ **Beg. Sept. 15, 1 yr. lease:** Exec. home, 3BR/2BA, hot tub, lux. rec. rm. w/magnificent view. Unfurn. Easy commute. $1550/mo. Call Guy Lau, (415) 342-6613.

□ **NOW:** 2 story, furn. or unfurn. hse, 3BR/2BA, newly redecorated, elec. oven, gas cook-top, frig, DW, W/D, FR, study. Fenced yd. Walk/bike to campus. Family w/children pref. Nr. Rinconada Pk. $1200/mo. incl. garden maintnce. Call Shannon Penrose, 321-4542 (lv. message), 328-2234.

□ **NOW:** SHARE lovely 3BR/2BA hse, 20 min. to campus. Lge patio, yd, quiet location. Nonsmoker only. $345/mo. + ⅓ util. Call (408) 255-5947 day/eve.

□ **Sept. 15, long term:** So. Palo Alto Eichler, 3BR/1BA, unfurn. Quiet street. $700/mo. Call 329-1082.

□ **Jan. 1 to June 15, '83 (flex):** Fully furn. 3BR/2BA lge. campus hse. Lge garden & patio. Children ok, no pets. $1500/mo. incl. gardener, water, wkly hse-cleaning. Call 857-9127 or 497-2180 (day).

□ **Avail. Sept. 21, lease:** Unfurn. hse in Menlo Pk, 5BR/2½BA, den. Stove, frig, carpeted. 5 min. to Stanf. Rent nego. Lease/purchase optin also avail. Call Chuck, (415) 854-3082 or (415) 461-9263.

□ **Beg. Sept. 1, '82:** For lease: 2BR hse w/FR, woodburning stove, all appl., gar., garden. 20 min. to campus. $625/mo. Call Arn, (415) 329-1500.

□ **NOW:** TAHOE, NORTH SHORE. 3BR/2BA vacation rental, octagon adj. Nat'l Forest. Nr. Dollar Hill. AEK, TV, phone, W/D, cozy frpl. Fall rates thru 11/30. Call (415) 324-1701.

□ **NOW:** One-half of attractive 2BR/2½BA lux. condo. In San Carlos hills. W/D, frpl, deck, gar., pool, tennis crts. $500/mo. Call Jim, (415) 854-2306 (day).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Computer training at Sierra Camp

The Stanford Alumni Association's Sierra Camp at Fallen Leaf Lake near South Lake Tahoe will be the site of a computer training workshop for adults Oct. 2-6.

Participants will receive 20 hours of lectures and hands-on training presented by a Santa Barbara-based training team of instructors.

The sessions are designed for business, educational and health professionals, as well as others interested in learning the basics of microcomputer operations.

Lectures include an introduction to computer technology and concepts, evaluation and selection of equipment and programs, and programming in BASIC.

The sessions will run for approximately 4 hours daily, allowing time for participants to take advantage of the Sierra Camp's hiking, boating, fishing, tennis, and other facilities.

For reservations or information, call the Sierra Camp, 916-541-1244.

Campus crime report

Sept. 13-20

Burglary/residence	1	Phone harassment	0
Burglary/nonresidence	3	Controlled substance	0
Burglary/Vehicle	1	Felony arrest	0
Theft/under $200	7	Misdemeanor arrest	19
Theft/over $200	1	Adult booking	13
Bicycle theft	4	Adult cite/release	5
Vehicle accident	2	Juvenile booking	0
Bicycle accident	0	Juvenile citation	1
Indecent exposure	0	Warrants served	8
Assault	0	Driving under influence	4

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
9/17-18	Even.	Pearce Mitchell Complex	Misc.	Without force

Health and safety report

Accidents—most are avoidable

For the past six months the Department of Health and Safety has been listing each injury and its cause in the *Campus Report*. These injuries, from now on, will be presented by type of accident and the total number of days lost for these accidents. Presenting the accidents in this format will enable all of us to get a perspective on the most frequent types of accidents and those which cause the most lost time and perhaps pain, and enable us to enact preventive measures, including developing training programs.

Sometimes an accident involves only minor injury; this does not mean, however, that the potential for injury from similar accidents will always be of a minor nature. When an injury or near miss occurs, it usually indicates that there are causes to these incidents that need to be eliminated.

Any actions appropriate to prevent accidents must be initiated by each of us.

Accidents and injuries occurring Sept. 6-17

Type of accident or injury	Number of incidents	Days Lost
Impact with object	2	1
Contact with sharp object	1	1
Other contact caused (abrasion)	1	0
Fall from same level	1	5
Fall from height (includes stairs)	2	3
Lifting	3	15
Other: burned cornea from looking into laser beam	1	0
Overexertion	2	0

Films, panels on civil defense set

Civil defense in the event of nuclear attack will be the subject of free films and a public debate sponsored by the Stanford Arms Control and Disarmament Forum at 7:30 p.m. Thursday, Sept. 30 at Stanford's Kresge Auditorium.

The program, entitled "Civil Defense Controversy—a Public Debate," will include a 35-minute film presentation consisting of a segment of the film, "The Last Epidemic," in which Dr. Jack Geiger speaks of the consequences of an explosion of a one megaton warhead over San Francisco, and a 1978 Federal Emergency Management Agency Film, "Protection in the Nuclear Age."

The films will be followed by a public debate concerning the seven-year, $3.4 billion program outlined by the Reagan Administration designed to keep a substantial portion of the nation's population alive in the event of a nuclear war through crisis relocation planning.

The three panelists for the debate are:

Beverly Myers, director of the California Department of Health Services. Myers has refused to participate in federal relocation planning.

Loren Fields, California Office of Emergency Services. Active in civil defense programs since 1952, Fields has worked on crisis relocation planning for the State of California since 1978.

Sidney Drell, deputy director of the Stanford Linear Accelerator Center. Drell is a consultant to the Department of Defense and the Arms Control and Disarmament Agency. His position is that preparations to win a nuclear war are both dangerous and technically unsound.

The Stanford Arms Control and Disarmament Forum is a student, faculty and staff group organized to "educate the greater Stanford community about the effects and dangers of the nuclear arms race, and to promote discussion of arms control and disarmament related issues."

Skogh shows work at Faculty Club

Marianne Skogh, a weaver who taught herself photography, will show recent photographs at the Stanford Faculty Club through October.

Skogh is a Swede from Linkoping who now lives in La Honda.

In the late 1970s, she exhibited at the Museum of Modern Art in Stockholm. In California, she has shown her photographs at Southland Photo Society in Los Angeles, Palo Alto Cultural Center, Stanford Research Institute, Los Robles Gallery, Capricorn Asunder (San Francisco Art Commission Gallery), and other places.

Inklings to meet

The first fall meeting of the Stanford Inklings will be held from 5 to 7 p.m. Tuesday, Sept. 28, at the Women's Club House, Old Union.

The Inklings, a group of Christians who are *writers*, meet together twice a month (second and fourth Tuesdays) to share manuscripts, ideas, and knowledge of the writing craft. All writers are welcome.

For information call Jon, 497-0574, or Dorothy, 329-0361.

Fall quarter recreation

Encina lockers and showers: M-F 7:30 a.m.-9 p.m.; SS 9 a.m.-6 p.m.

Roble gym, lockers, showers, and weight training facilities: M-F 8 a.m.-midnight; Sat. 9 a.m.-8 p.m.; Sun. noon-8 p.m.

Olympic Gamefield, Perrier Parcourse, Angell Field (track): every day, daylight hours.

Angell Field (infield), Taylor field, IM fields (north and south): Reserved only, call 497-0505.

Maples pavilion (show ID): M-F noon-1 p.m.; closed Sept. 27 & 28.

Roble gym floor (show ID): Hours posted at Roble gym for open recreation, basketball, badminton, and volleyball.

Roble pool (show ID): M-F noon-1 p.m. faculty/staff only; T & Th 1 p.m.-5 p.m.; M, W, F 3 p.m.-5 p.m.; Sat. 1 p.m.-5 p.m. adult only-family swim; open Sat. on home game days. Oct. 2, 16, 30 and Nov. 6.

deGuerre pools (show ID): M-F noon-1 p.m.; M, W, F 1 p.m.-2 p.m.; T & Th 11 a.m.-noon; T & Th 1 p.m.-2 p.m.; M-F 5:30-7 p.m.; SS 1 p.m.-5 p.m. family swim.

deGuerre courts (show ID): M-F 10 a.m.-11 a.m. reservations only, 497-1588; M-F 11 a.m.-11 p.m.; SS 9 a.m.-11 p.m.

Tennis courts (show ID): Sign up sheets are posted on court bulletin board for the next day's play at the following times: Encina courts, 8:30 a.m.; Roble courts, 8:30 a.m.; Varsity courts, 5:10 p.m.; FSS sun-up to sun-down; M-Th when no classes are scheduled; M-F noon-1 p.m. Roble and Encina courts reserved for faculty/staff only.

Encina volleyball courts: M-Th daylight-2 p.m. and 5:30-dark; Fri. daylight-3 p.m. and 5:30-dark; SS daylight-9 a.m. and 12 noon-dark.

Encina weight room (show ID): M-Th noon-2 p.m. and 3:30-8:30 p.m.; Fri. 9 a.m.-8:30 p.m.; SS 11 a.m.-5 p.m.

Roble field, gym dance studio (show ID), gym studio 42 (show ID), gym room 33 (show ID): Check at Roble gym office.

Golf course driving range: M-F 8:30 a.m. until one hour before dark; Sat., Sun., Holidays 7 a.m. until one hour before dark.

Golf course (show ID): Mon. closed; Tues. ladies priority; T-F first available starting time; Sat., Sun., Holidays first available starting time after 11 a.m.; must obtain starting time *in person* and show ID's at the Pro Shop.

Tresidder recreation center: M-Th 8 a.m.-midnight; Fri. 8 a.m.-1 a.m.; Sat. 10 a.m.-1 a.m.; Sun. 10 a.m.-midnight; M-F no bowling until 10 a.m.

deGuerre pools and Encina weight room closed on home football days Oct. 2, 16, 30 and Nov. 6.

Dance Quorum classes begin Oct. 4

Stanford Dance Quorum offers autumn quarter classes in ballet, modern, and jazz dance techniques.

Two levels of ballet will be taught by Elizabeth Larkam. Level I meets 6-7:30 p.m. Monday and Wednesday evenings. Level II meets 7:30-9 p.m. Monday and Wednesday. A class for all levels is held Saturday from 12 noon to 2 p.m.

All ballet classes meet in Roble Dance Studio 33 and are accompanied by Bill Sorenson. First class meeting is Monday, Oct. 4.

Noon Hour Dance taught by Joy Weston meets 12 noon-1 p.m. Monday through Thursday in Roble Dance Studio 42. This modern dance-exercise class is especially for Stanford staff members.- First class meeting is Monday, October 4.

Floor barre alignment and modern dance technique classes are taught by Lisa Burnett. They are scheduled for Tuesday and Thursday in the early evening and for Saturday morning.

Jazz dance taught by Elizabeth Gustafson will meet Monday and Wednesday in the early evening.

Registration for all Quorum classes will take place at a meeting of the organization at 5 p.m. Tuesday, October 5 in Roble Lounge. Dance Quorum charges quarterly membership dues and a fee for classes.

Stanford Dance Quorum is a nonprofit student organization in operation the entire calendar year. Stanford students, faculty, staff, and their families may register for classes. The public is invited to participate in special events such as master classes, workshops, and film series.

Museum, Gallery plan docent tours

Docent tours at the Stanford Museum of Art and the Art Gallery will be held regularly during fall quarter.

The Museum tours of the permanent collection will be held at 12:15 p.m. Tuesdays and 2 p.m. Sundays; the Rodin collection at 12:15 p.m. Wednesdays and 2 p.m. Saturdays; and the print collection at 12:15 Thursdays.

Printmaking techniques will be shown at the Museum Sept. 30 through Dec. 19.

Docent tours of the Venetian 18th century exhibit at the Art Gallery are scheduled for 12:15 p.m. Thursdays, Oct. 7 through Dec. 16; 2 p.m. Sundays, Oct. 10 through Dec. 19.

Docent tours for private groups may be arranged by calling 497-3469. All tours are free of charge.

Children's Dance starts next week

Children's Dance at Stanford opens its third year with a full spectrum of classes for children ages three to 13. The autumn session beginning Sept. 29 features classes in rhythms and movement, movement and music, dance for boys, ballet, and two levels of modern dance.

Classes meet once a week—Wednesday or Friday afternoons or Saturday mornings—in Roble Dance Studios on the Stanford campus. Tuition is $32.50 for the 10-week session.

Children's Dance at Stanford instructors Elizabeth Larkam and Joy Weston encourage a creative approach to dance supported by musicality and technique. Class accompaniment includes live and recorded music and percussion instruments for the children.

For registration information and a brochure call 497-4254. Children's Dance at Stanford is sponsored by the Stanford Dance Division within the Department of Athletics Physical Education and Recreation.

ASSU classes have lots of variety

The Associated Students of Stanford University (ASSU) will offer fall quarter classes especially tailored to appeal to faculty, staff, and the local community as well as to students.

Class descriptions follow:

Bartending, taught by Marty Weiner, teaches all you need to know to be a professional bartender, a portable skill that allows you to work wherever you choose to live. First meeting is 3 p.m. Thursday, Oct. 7, in Room 48, Old Chemistry Bldg.

Ballet, taught by Laurie LaBerge (851-4297). Beginning classes will start at 4 p.m. Thursday, Sept. 30, and Tuesday, Oct. 5. Intermediates will start at 1:15 p.m. Friday, Oct. 1, and 5:30 or 6 p.m. Monday Oct. 4 (classes and times may change). The fee is $39 for 10 weeks.

Belly Dance Club, instructed by Samara (321-8964). First meeting is 6 p.m. Wednesday, Oct. 6, in the Old Union Clubhouse ballroom. Fee is $5 per 1 1/2 hour class.

Balkan Dancing, taught by John Nicoara, will meet at 7:15 p.m. Thursday nights beginning Oct. 7 in the Old Union Clubhouse ballroom. Fee is $17 for 10 weeks or $2 per week.

Robin Clute will teach three cooking classes at Bechtel International Center (sign up beforehand in the ASSU business office, 497-4331).

All About Tofu. 10 a.m.-2 p.m. Saturday, Oct. 30, will show how this low-cost, low-fat, low-calorie wonder food can be used in all sorts of Western dishes; $6 per person.

Super Soups. 10 a.m.-1:30 p.m. Saturday, Nov. 13, $6 per person.

A Vegetarian Sampler. 7-9:30 p.m. Tuesdays, Nov. 16 to dec. 7, $20 per person.

Each week will cover a different aspect of meatless cooking and nutrition -ideas for better breakfasts, secrets of whole-grain baking, vegetarian nutrition and meal planning, and cooking with fresh vegetables.

YWCA has classes for adults, kids

The Stanford YWCA will continue its program of classes for adults and children during fall quarter.

Classes for adults in the Clubhouse include morning dance exercise to music with Elizabeth Larkam, and noon aerobic fitness with Meredith Einaudi.

Art, dance, tennis, and cooking classes will be taught at Escondido Village.

Afternoon classes for children have been scheduled in art, dance, and several sports.

For more information or a brochure, call 497-1101 between 9 a.m. and 1 p.m. Classes begin the week of Oct. 4.

For better tennis...

Tennis lessons (six pupils per group) will again be offered to graduate students, staff, and/or their families on weekday mornings *or* Saturday mornings.

Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed printed information and registration form. Lessons begin the week of Oct. 9.



The successful Nimitz Run finishers are, from left: leader Lindy Birkel; Melodye Khattak, Alda Wells, Cindy Cramer, Maureen Novotny, and Roberta Johnson

Walk, jog, run, or swim—the HIP will help you get started this fall

Five Stanford staff members successfully completed the 5 kilometer (3.1 mile) Nimitz Run held on Treasure Island last May.

What's so unusual about running in a local Fun Run?

These women started training only seven weeks before the race, and many of them had never jogged before.

They began in one of the Health Improvement Program's (HIP) walk/jog classes, mostly walking during the first few sessions. They met three times per week, developed a spirited commitment to complete the Nimitz Run *without* walking, and they were successful.

Training to complete a running race is good incentive to become fit; however, not all HIP exercise participants choose this as their goal. Many simply want to learn new exercise skills in a comfortable atmosphere, and for many, exercising is simply a good break from work.

Other potential benefits include effective weight loss, cardiovascular improvements, better carbohydrate metabolism, improved muscle tone and perhaps most important, a greater sense of well-being.

HIP classes offer an opportunity to improve fitness in several ways, including aerobic dance, walking, jogging, running, swimming and calisthenics. An advantage is that classes are structured to accommodate all levels of ability and are offered on campus at convenient times for staff and faculty.

Faculty and staff members and their spouses are invited to join the program for a fee of $5. Classes will be taught by experienced exercise leaders, with several sessions offered quarterly.

Fall meeting times and places are:

Walk/jog/run at Roble Field—Sunrise Exercise MWF 6:45-7:30 a.m. or the Healthiest Lunch Break Around, MWF 12:10-12:50 p.m. beginning Monday, Oct. 4. Each session begins with a 10-minute warm-up, then participants divide up into groups.

The walking group—people who want some aerobic activity but not interested in jogging—typically circles Lake Lagunita or makes a trip to the golf course and barn during one 30-minute session.

The beginning jogging group combines walking and jogging, with a goal of jogging more and walking less as the class continues. The group usually develops the ability to complete one of the several scenic golf course routes during the sessions.

The jogging and running group participants jog or run continuously throughout the 30-minute session. The difference between the two is the distance covered.

Swimming at DeGuerre Pools—Noon to 1 p.m. beginning Monday, Oct. 4. Instructors Corinne Powell and David Schrom help people of any ability with individual instruction as participants swim at their own pace. Nonswimmers and those who are uncomfortable in the water are particularly encouraged to join.

To join any of these HIP classes, send name, ID mail address, campus phone number, choice of class, and a check for $5 made payable to Stanford University to HIP, 730 Welch Rd., Suite B. For more information, call HIP at 7-7940.

ISL plans first grad orientation

The Information Systems Laboratory (ISL), in the Electrical Engineering Department, is planning an orientation for its new graduate students.

It is the first time a two-week formal orientation will take place. The activities have been coordinated with those provided by the EE Department, I-Center, and graduate Student Association.

The main objective of the orientation is to encourage communication and participation between the students. The Lab is expecting some 60 new M.S. students and 6 Ph.D. candidates.

The program starts Monday, Sept. 27, with a breakfast and welcoming speeches by Prof. Joseph Goodman, director of ISL, and Juan-Manuel Jover, graduate student and coordinator of the orientation.

Other events scheduled for the first week are: panel discussions about the courses, research areas, etc. Several social events are being prepared, like lunch Sept. 28, an evening at the Coffee House or a dinner in a local restaurant on Saturday, Oct. 2.

The second week concentrates on a tutorial about the ISL computer system. Orientation finishes Friday, Oct. 7, with the traditional ISL wine and cheese party.

The Electrical Engineering Department also organizes other activities: fellow students will be available Sept. 22-24 to help incoming students; a party on Friday, Sept. 24; and an introduction to all of its six labs during the week of Oct. 11-15.

Grateful Dead comes to Stanford in October—get your tickets now

The Grateful Dead will usher in what is hoped will be a new, more successful era of rock concerts at Stanford when they perform in Stanford's Frost Amphitheater at 2 p.m. Oct. 9 and 10.

Co-sponsored by *Chaparral*, the campus humor magazine, and Bill Graham Presents, the performances will be the first rock concerts at Stanford since the Jefferson Starship appeared in 1980.

The sponsors and University officials hope to avoid the financial problems that have plagued the production of rock concerts at Stanford in the past.

The performances were discontinued in 1980 when ASSU Special Events, the student organization that had sponsored them, was disbanded. Declining attendance and the rising cost of producing the concerts caused Special Events to lose about $125,000 that year.

This has prompted the Dean of Students Office to create the Committee on Contemporary Entertainment (COCE), which helps student organizations co-produce concerts with professional promoting companies like Bill Graham Presents.

The Grateful Dead, known as The Warlocks when they first began playing at San Francisco coffeehouses in the 1960s, came to national prominence through their performances at the 1967 Monterey Pop Festival and at Woodstock in 1969.

Several of their albums have sold more than 1,000,000 copies, including *American Beauty*, *Live/Dead*, *Terrapin Station*, and *Workingman's Dead*, which included two of their most popular songs, "Truckin" and "Sugar Magnolia."

The six-member band includes Jerry Garcia, Bob Weir, Phil Lesh, Billy Kreutzmann, Mickey Hart, and Brent Mydland.

Tickets for the concerts, the Grateful Dead's first at Stanford in more than a decade, go on sale at all BASS outlets Sept. 12. They are $12 in advance and $13.50 at the gate.

Tickets for Stanford students, who will receive a $1 discount, go on sale at Tresidder Box Office Sept. 28.

Music Department's David Burkhart and friends open concert season

David Burkhart, Stanford's lecturer in trumpet, opens the Music Department's fall concert series at 8 p.m. Friday, Oct. 1, in Dinkelspiel Auditorium.

Burkhart will be joined by Deborah Shidler, oboe; Greg Barber, bassoon; Nancy Kelley Sheng, piano; and Vicki Riley, organ.

The program will include the first performance of Fiala's *Divertimento for trumpet* in a new edition by Burkhart, Krol's *Fantasia notturna* for piccolo trumpet and organ, *Concerto in C minor for oboe* by Telemann, a transcription of Ravel's *Alborada del Gracioso* for bassoon and piano, Biscogli's *Concerto for trumpet, oboe, and bassoon*, and Roland-Manuel's *Suite dans le gout espagnol* for trumpet, oboe, bassoon, and piano.

Burkhart is principal trumpet with the Oakland Symphony and a member of the Arch Ensemble for Experimental Music and the Classical Brass Quintet. He is a recent winner of the California Young Artists' Competition.

Burkhart received his B.A. and M.M. from Yale. He then joined the Jerusalem Symphony as principal trumpet. While in Israel, Burkhart also played with the Jerusalem Brass Quintet and taught at the Rubin Academy of Music.

Tickets are $4 general, ($2 students and senior citizens), available at Tresidder Ticket Office (497-4317) and the door.

Auditions set for all music groups

Stanford's Department of Music will hold auditions for all its performing groups Monday and Tuesday, Sept. 27 and 28, on campus.

Community members are encouraged to audition. For information regarding specific times and locations, call the Department of Music, 497-3811.

The department's performing groups include Chorale/Chorus/Church Choir, Marching Band/Jazz Band/Wind Ensemble, Symphony & Chamber Orchestra, Early Music Singers, Renaissance Wind Band, and Percussion Ensemble.

Alea II, the ensemble for new music, will hold auditions Tuesday, Oct. 5.

Computer search demonstration set

Demonstrations of computerized literature searching will be part of a campus-wide orientation by the Science Department Libraries of the Stanford University Libraries at 10 a.m.-12 noon and 1-5 p.m., Tuesday, Sept. 28, in Skilling 193.

One may attend at any time, but different disciplines within the sciences will be emphasized at the following hours: life sciences. 10-11 a.m.; chemistry, 11-12 a.m.; engineering, 1-2 p.m.; earth sciences, 2-3 p.m.; mathematics and physics, 3-4 p.m.; and computer science, 4-5 p.m.

This will be an opportunity for those attending to learn more about the collections located in the seven branches which make up the Science Department Libraries of SUL; Engineering, Branner Earth Sciences, Physics, Mathematical and Computer Sciences, Falconer Biology, Swain Library of Chemistry and Chemical Engineering, and Hopkins Marine Station Library.

Other science collections on campus which are also of interest are located at the Green Library, Lane Medical Library, and SLAC Library.

There are over 100 data bases available for online searching. In the sciences, this includes chemical abstracts, engineering index, conference papers, biological abstracts, physics abstracts, dissertation abstracts, georef, geoarchive, computer and control abstracts, patent indexes, and science citation index. The Research Libraries Information Network—RLIN II—and the SLAC high energy physics data base and other files will also be shown.



Trustees OK three concepts for below market rate housing

Stanford Trustees have approved three major "concepts" under which the University could participate in Palo Alto's Below Market Rate (BMR) housing program as part of the proposed Stanford West housing project.

The first is that 15 percent of the projected 1,500 units on two parcels of Stanford land along Willow Road within Palo Alto will be made available at below market rates through the use of pricing mechanisms.

The second is that at least 60 of the BMR units would be dedicated to the city's BMR program participants—people on the city's waiting list for such housing.

The third is that Stanford would lease the Mayfield School site on El Camino Real to the city for $100,000 for BMR rental housing. The development would revert to the University at the end of a 35-year lease period. In addition, Stanford employees now excluded from the city's BMR program because they neither live nor work in Palo Alto would be eligible for housing elsewhere in the city.

The "concepts" were worked out through discussions between the University and city staff members.

Under Palo Alto's comprehensive plan, at least 10 percent of housing developments of 10 or more units must be provided to low and moderate income families. Larger projects are expected to devote a greater percentage to that purpose.

If a 1,500-unit project were to be approved by the city, 225 of the units thus would be below market rate. The city's share of the 225 would be based upon the percentage of non-Stanford residents in the market-rate units. That share would be 10 percent of the non-Stanford units, or 60 units, whichever is greater.

Stanford estimates that, over time, one third of the project households could be non-Stanford affiliated. If that were the case when the project opened, 50 of the units would be earmarked for Palo Alto. Under the concepts approved by the Trustees, however, at least 60 would be assigned.

Under these concepts, Stanford would retain the bulk of the BMR units it provides, and its employees would have access to the city's other BMR projects. The city in turn would gain at least 60 units and would lease the 4.2—acre Mayfield site at extremely low cost. The land is estimated to be worth about $3.5 million.

The site is north of Page Mill Road. It was leased by Stanford to the Palo Alto Unified School District for one dollar a year from 1923 until last February. The school was closed in 1966.

Stanford is making the site available to the city at the same price that the University paid the school district to terminate the lease.

Palo Alto has rezoned the property for multi-family use. The city has until the end of 1985 to obtain approval of housing on the site, or by the completion of "rough inspections" of the first Stanford West units, whichever occurs latest.

The Stanford West Environmental Impact Report will be taken up by the Palo Alto Planning Commission on Oct. 13. The proposal consists of 1,275 units on a 46-acre site between Willow Road and San Francisquito Creek, and 194 units on a 4.3-acre site at the corner of Willow Road and Pasteur Drive.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next Calendar deadline is Wed., Sept. 22 to cover the week of Mon., Oct. 4 through Sunday, Oct. 10.

LATE ANNOUNCEMENT

Wed., Sept. 22. Structural Biology Dept. Lecture: "Structure of the Type I Collagen Fibril" by Dr. Karl Piez, director, Connective Tissue Research Laboratories, Collagen Corp. Noon. Fairchild Bldg., Room D-102.

MONDAY, SEPTEMBER 27

Varsity Soccer: Vs. Brigham Young Univ. 2 p.m. Maloney Field.

TUESDAY, SEPTEMBER 28

Stanford Savoyards Auditions: For "H.M.S. Pinafore" by Gilbert & Sullivan. Singers for lead roles and chorus should come prepared to sing a song of their choice. Orchestra members and technical crew should stop by to sign up. Anyone interested in working in any capacity, please drop in. 7-9:30 p.m. Dinkelspiel Aud. Production dates, Nov. 12-14, 19-20. (Auditions also tomorrow, same details.)

ASSU Flicks: "Chariots of Fire." 7 & 9:45 p.m. Memorial Aud. $1.50.

Science Libraries Annual Orientation: Demonstrations of computerized literature searching 10 a.m.-noon, 1-5 p.m. Skilling 193. Science librarians on hand to discuss library programs, services and policies. Different disciplines emphasized at these hours: life sciences 10-11 a.m.; chemistry 11 a.m.-noon; engineering 1-2 p.m.; earth sciences 2-3 p.m.; math and physics 3-4 p.m.; computer science 4-5 p.m. Open to all. Detailed information at 497-0864.

WEDNESDAY, SEPTEMBER 29

Varsity Soccer: Vs. Sacramento State. 2 p.m. Maloney Field.

Stanford Savoyards Auditions: See details for Mon., Sept. 27.

Colloquium of the Dept. of Chemical Engineering: "Thermal Cracking for Olefins Production" with Dr. G. F. Froment, Univ. of Ghent, Belgium. 4:15 p.m. Chemical Engineering Conference Room.

THURSDAY, SEPTEMBER 30

Condensed Matter Physics Seminar: "Spectroscopic Studies of the Interaction of Cl with Zn—O Surfaces" with E. I. Solomon, S.U. 4:15 p.m. Applied Physics 200.

Stanford Arms Control and Disarmament Forum: "The Civil Defense Controversy—a Public Debate." A film, "Protection in the Nuclear Age," followed by the debate with panelists Beverlee Myers, Loren Fields, Sidney Drell. 7:30-10:30 p.m. Kresge Aud. Public cordially invited.

Yoga Discussion Series: "The Science of Yoga" with Rene Ochoa. 7:30 p.m. History Corner, Room 217. Open to all.

FRIDAY, OCTOBER 1

Water Polo: NorCal Tournament. All day. deGuerre Pool.

Applied Mathematics Seminar: "Dynamic Dislocation Pileups" with Prof. Hilary Ockendon, visiting S.U. from the Univ. of Oxford. 3:15 p.m. Room 380-C (Mathematics Corner Basement).

SATURDAY, OCTOBER 2

Water Polo: NorCal Tournament. All day. deGuerre Pool.

Varsity Football: Vs. Oregon State. 1:30 p.m. Stanford Stadium. Ticket information at 497-1021.

SUNDAY, OCTOBER 3

University Public Worship: Student Worship Service, 8:30, a.m.; Robert G. Hamerton-Kelly, dean of the chapel, sermon and eucharist, 11 a.m.; Catholic Mass, 4:30 p.m.

ASSU Sunday Flicks: "On Golden Pond." 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Sept. 28-Jan. 2.

Water Wholes. Color photomurals by Benjamin W. McKendall, Jr. International Center. Through Sept. 29.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through Nov. 5.

Handwoven Tapestries by Anton Grubman. Tresidder Union 2nd floor gallery. Through September.

Stanford Arms Control and Disarmament Forum: "The Civil Defense Controversy—a Public Debate." A film, "Protection in the Nuclear Age," followed by the debate with panelists Beverlee Myers, Loren Fields, Sidney Drell. 7:30-10:30 p.m. Kresge Aud. Public cordially invited.

CAMPUS REPORT

Volume XV, Number 2 | A publication for Stanford University faculty & staff | September 29, 1982



REGISTRATION was carried out directly on computers Monday and Tuesday, and before procedures were worked out fully, students waited in line for as much as two hours before their turns came up. Someday—the ideal system.

Long-term faculty affirmative action urged

Faculty affirmative action should remain an active process for at least a decade at Stanford, a new committee report recommends.

Headed by Prof. Arthur I. Bienenstock, the Committee on Faculty Affirmative Action said the Stanford situation "is not a good one," even though the University "for the most part has hired women and minority group members over the past eight or nine years at a rate which is equal to or greater than what would be expected on the basis of national Ph.D. conferral rates.

"What's more, the junior faculty among them have been retained with tenure at a rate which is equal to or greater than that for white males. . . .

"(But) there are just not enough women, black, or chicano faculty, tenured or nontenured, at this University to meet its perceived needs" for student advising, special services, and community requirements.

"Hiring rates are low and we have a long way to go before we have sufficiently large numbers so that a woman, black, or chicano faculty member can devote his or her time almost exclusively to teaching or scholarship for a year or two and still assume that other University needs. . .are being met," the committee said.

To continue a long-term effort, the committee recommended that departmental faculty affirmative action officers constitute a new Faculty Affirmative Action Board, meeting at least quarterly, and that a new University Committee on Faculty Affirmative Action serve as its executive committee.

The faculty Committee on Committees currently is considering a list of potential appointees to the executive committee, whose formation has the support of President Donald Kennedy.

The departmental faculty affirmative action officers should work closely with

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Mediation effort resumes as strike enters 20th day

Mediation will resume between United Stanford Workers and the University at 10 a.m. Wednesday, Sept. 29, with federal mediator Dorothy Christiansen in an attempt to settle the strike of technical, maintenance, and service employees, now in its 20th day.

The return to mediation was requested by Michael Baratz, executive secretary of Local 715, who said Friday that "President Kennedy said this should be resolved at the table, so we're going to take him up on that. We hope the University will come prepared to settle the dispute. We're prepared to stay there day and night to resolve this."

An earlier session Sept. 17 ended in a deadlock.

The University released a statement Sunday saying the strike had not been necessary and that the University "would have continued negotiating in good faith and would have worked hard to reach agreement with or without a strike." The University "will settle only on terms that it believes it can responsibly approve. . . ."

The statement also says "the purpose of the (University's final) offer was to alert the union to the fact that the University's ability to make further major compromise was exhausted and to provide the union with a clear and candid indication of the University's viewpoint. Obviously the University was signaling that it would accept anything reasonably close to its offer. Equally obvious, the University would not accept proposals that are as excessive as those the union has been making during the strike." *(See text, p.20.)*

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Stanford first in comp sci, statistics

Stanford ranks first nationally in the perceived quality of its faculty in computer science and tied for first in statistics, according to a major new national survey.

In the four other fields covered by the study, Stanford ranked sixth nationally in chemistry, mathematics, and geosciences, and tied for seventh in physics.

Sponsored by the Conference Board of Associated Research Councils, including the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council, the $500,000 two-year study was funded by the Mellon, Ford, and Sloan Foundations, the National Institutes of Health, the National Science Foundation, and the National Academy of Sciences.

California Institute of Technology ranked first in geosciences and tied for first in chemistry and physics. UC-Berkeley tied CalTech for first in chemistry and Stanford for first in statistics. Harvard tied CalTech for first in physics and chemistry. Princeton ranked first in mathematics and MIT shared top billing in chemistry.

In general, the reported differences among top-ranked institutions appeared quite small.

The evaluations were based on a survey of 1,155 math and sciences professors, or about eight percent of all professors in these fields.

The report gave two figures for scholarly quality. The first number was the raw score ranging from 0 to 5 on a scale where 4 was "strong" and 5 "distinguished." The second figure transposed the raw scores onto a scale of 1 to 99, with 50 representing the average and about two-thirds clustered between

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ACADEMIC COUNCIL

A special meeting of the Academic Council will be held at 4:15 p.m. Friday, Oct. 8, in Dinkelspiel Auditorium. The agenda and materials for the meeting appear on pages 22-23.

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People

Prof. Katharina Mommsen, German studies, presented a paper on "Lyrical or Theatrical Creativity? Young Hofmannsthal at the Crossroads" at the University of Toronto at the Conference "Vienna at the turn of the century"; a paper on "Goethe's Views on Women—A Modern Perspective" at the Carleton University and the Goethe Institute (both in Ottawa); and a paper on "Goethe als Wegbereiter der Frauenemanzipation" ("Goethe Paving the Way for Women's Liberation") as guest lecturer of the Goethe-Gesellschaften in Darmstadt, Hannover, Kiel, and Stuttgart, as well as at the Bonn and Munich Universities.

On the occasion of the 150th anniversary of Goethe's death Mommsen published a small volume, translated by Leslie Willson, entitled *Who is Goethe?* which compiles quotations of his works and documents from his life. Her book *Goethe and 1001 Nights* was published in Arabic by the University of Damascus.

As a guest of the German Academy for Language and Poetry (Deutsche Akademie fur Sprache and Dichtung) Mommsen read the leading part in a public reading from Goethe's tragedy "Die naturliche Tochter" ("The Natural Daughter"). At the conference of Chinese Germanists from the People's Republic of China she gave the lecture of the opening ceremony on the topic of "Goethe and China—China and Goethe" in the Alte Aula (The Old Auditorium) of the University in Heidelberg.

In the Yearbook for International German Studies (Internationale Germanistik) she opened with Prof. Jutta Goheen/Ottawa, the discussion on "The Role of Women in German Literature and Language."

President Donald Kennedy of Stanford has been elected a member of the Conference Board for a two-year term.

Founded in 1916, the Conference Board is a global network of leaders who exchange information on management, economic and public policy issues.

The Stanford Business School office of MBA admissions has announced appointment of two new admissions officers.

Named assistant director of admissions is **William H. White III**, 35, who has been associate director of admissions at the Johns Hopkins University since 1979. He replaces Emily Canales.

White, who joined the staff September 13, will direct the Business School's minority recruiting program, participate in the general recruiting and evaluation of applicants, and assist in directing the admissions office staff. He holds a B.S. degree in business and industrial communications from Emerson College in Boston.

Appointed admissions officer is **Deborah L. Henken**, 24, who received a Master of Management degree from Northwestern University's J. L. Kellogg Graduate School of Management in June of this year. She joined the staff August 2. Henken will participate in general recruiting, interviewing and evaluating of applicants, oversee production of admissions office publication materials, and handle placement of applicants in the School's guaranteed admission program.

White and Henken will report to Kathleen Gwynn, director of admissions.

News Service science writer **Joel Shurkin** will teach a California Publishing Institute (Palo Alto) seminar on science writing on Thursday evenings this quarter, beginning Sept. 23.

Shurkin, who shared a Pulitzer Prize for the Philadelphia *Inquirer's* coverage of the Three Mile Island incident, has been a Stanford staff member since 1980.

Luis L. Arroyo, associate professor of history at the University of California, Davis, has been appointed visiting professor of history at Stanford for 1982-83 by the Chicano Fellows Program and the History Department.

The Chicano Fellows Program consists of one visiting faculty member and two chicano graduate fellows. Its purpose is to provide undergraduate instruction for chicano students while simultaneously contributing to the career development of the two fellows.

As visiting professor, Arroyo will offer three undergraduate courses, two as introductory courses to chicano studies and the third as a disciplinary course with a focus on chicanos. The classes are intended to establish a core set of courses for chicano studies.

His second major responsibility will be to work closely with the two fellows, who have yet to be named, including coordinating their roles as teaching assistants and advising them on their respective degree programs.

Arroyo earned a B.A. in philosophy (1970) and an M.A. in modern European and modern Latin history (1973) from the University of California, Santa Barbara. He received a Ph.D. in recent U.S. history with an emphasis on chicano and labor history from UCLA in 1979.

A native of San Fernando, Arroyo has published several papers on chicano and labor history, including "Labor and the Development of the Chicano Working Class," (1980), and "Changes in the Attitudes and Practices of Organized Labor Towards Mexicans: Los Angeles, 1900-1935," (1979).

Dr. Carolyn C. Lougee, associate professor of history at Stanford University, has been appointed a member of the Advanced Placement European History Development Committee of the College Board for the year commencing July 1, 1982.

This committee is responsible for developing examinations that the Board offers through its Advanced Placement Program. The committee's charge includes specifying the kinds of knowledge and skills to be measured, writing and reviewing examination questions, helping to communicate information about the examinations to those using or affected by them, and advising on related policies and services.

A member of Stanford's Internal Audit Department has received two honors for his research in anthropology and education.

David M. Fetterman, a senior internal auditor as well as a regular guest lecturer in the Anthropology Department and School of Education at Stanford, is a winner of the 1981 Praxis Publication Award international competition, sponsored by the Washington Association of Professional Anthropologists.

His ethnographic study of an alternative high school program for dropouts was cited as a "concrete example of the successful application of anthropological knowledge to 'real world' problem solving."

Fetterman has also been elected to the New York Academy of Sciences "on the basis of his scholarly contributions to the scientific community."

Formerly a senior associate and project director at the RMC Research Corporation, Fetterman has conducted other research in migrant education, medical anthropology, and education for gifted students.

Prof. Clara N. Bush succeeds Hutchinson as academic secretary

Prof. Clara N. Bush, a leader in developing linguistics and special language programs at Stanford, has been named Academic Secretary of the University, effective immediately, President Donald Kennedy has announced.

Head of the Department of Linguistics from 1973 to 1980, Bush has served on a wide variety of committees, including those concerned with the Honor Code and foreign language proficiency requirements.

The Academic Secretary plays a central role in coordinating committee work and meetings for the Faculty Senate and the Academic Council. Bush succeeds Prof. Eric Hutchinson, who served eight years in the position.

Bush has a "strong interest" in the way faculty participation in University governance has grown over the years. "It's been remarkable," she says.

Bush has been at Stanford since 1956, when she started work on her Ph.D. in acoustic phonetics. After earning the degree in four years, she was named director of the program in English for foreign students, a position which eventually put her in touch with a wide variety of schools and academic departments.

Her first few weeks in her new job already have provided "an even better feeling of what the whole University is about," she says. "This is truly a University-wide resource office."

Like Hutchinson, Bush plans to continue teaching. This fall, she will teach a course in phonetics. According to the *Associated Students Course Guide*, students have found her lectures "very clear" and "helpful. . .all in all (her) course received widespread praise and little or no complaints."

During winter and spring quarters, she will teach a freshman seminar on errors and what they reveal about language and how the brain functions. "Slips of the tongue, eye, ear and hand are not random," she notes. "They shed significant light on how we process language."

Bush had planned to be a freshman adviser this fall, but postponed this because of her new responsibilities.

A graduate of Western Michigan University and the University of Michigan, she taught for a decade at WMU before coming to Stanford.

Her initial work in teaching English to foreign students concentrated on spoken English and on understanding lectures. Then a writing component was developed, and more specialized programs created for such fields as engineering and law. Eventually EFS became part of Linguistics.

Starting in the early 1970s, Bush followed with Prof. Charles Ferguson in directing the Special Language Program in Linguistics, a program which had developed in response to student requests and initiatives. Now, each year, small groups of students study 20 to 25 different languages, ranging from Norwegian and Czech to Korean, Navajo and American Sign. "This is very challenging," Bush says. "Quality control is difficult. But it's better to try than to ignore students' interests."

She has warm praise for Hutchinson. "Eric left 40 pages of handwritten script about his experience as Academic Secretary which are absolutely invaluable.

"He's also available to answer questions, while so many details remain fresh in his mind. That's an immense help."

Bush's selection was recommended by a search committee headed by Prof. Halsey Royden, former dean of humanities and sciences. Profs. James Gibb, anthropology; Ronald Rebholz, English; and Robert Street, engineering, were members.

Her first session with the full Faculty Senate comes at 3:15 p.m. Thursday, Sept. 30, when it holds its opening meeting of the new academic year at the Law School.

The Academic Secretary's Office is located in Building 170, Room 105, behind the President's Office Building. Phone 497-4991.

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Jeff Ullman works for tenfold increase in computer speed

BY DONALD STOKES

Prof. Jeffrey D. Ullman is writing a book in daily collaboration with coauthors 3,000 miles away, but almost every morning they consider each other's contributions as soon as they are written. It is all done with display terminals.

The book is about data structures and algorithms (methods of solving problems).

This is appropriate, for Ullman, professor of computer sciences at Stanford, is one of the small band of theoreticians who are preparing the way for the next generation of computers.

Ullman has made fundamental contributions in the areas of automata theory, computational complexity, compiling and relational database theory.

He has developed powerful algorithms for code generation (the problem of converting high-level computer language into instructions that the machine can understand) and code optimization (the problem of automatically transforming a computer program so as to make it run faster or use less storage).

More recently he has become interested in applying some of the same concepts to the design of integrated circuits.

"In a sense I have come full circle, for circuit design is what I began work in more than 15 years ago," said Ullman. "Stanford is the national center for this type of work, and it was natural to get involved in it when I came here three years ago.

"The size of the circuits having shrunk, the amount of logic that can go into a design is now a thousand times greater than when I was a student."

Ullman believes that many important computational tasks can be speeded up by factors from 10 to 30 by replacing the micro-processor with specially-designed chips.

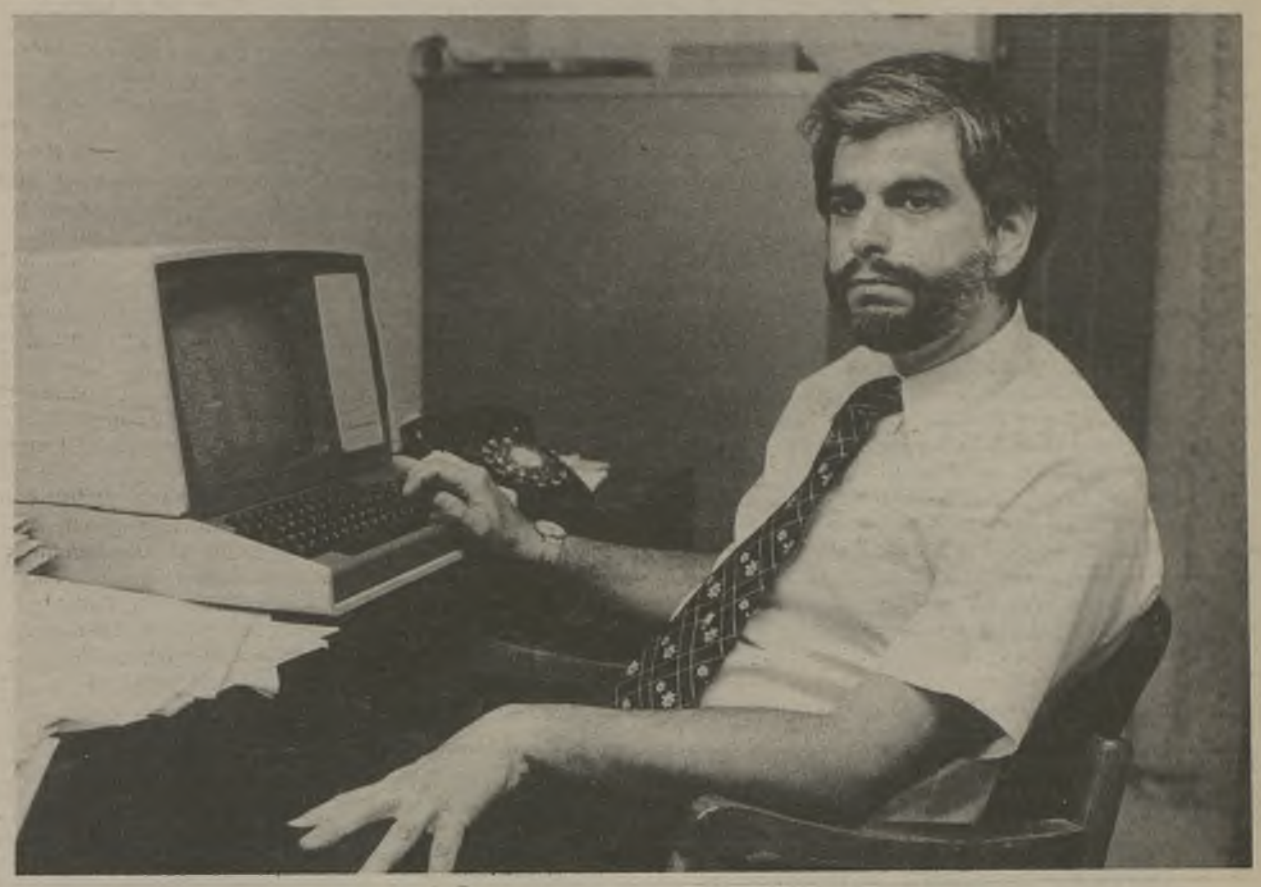
"If we are successful in our goals to provide high-level design facilities for integrated circuits, we should be able to build chips with no more effort than it takes to write a program for the micro-processor.

"Instead of programming the computer to do something, we go out and in roughly the same time it takes to create the program, we make a chip that is guaranteed to perform the role specified by that program.

"Several difficulties lie in the way of these goals. The first is that chips the size of a micro-processor are so hard to design that there is considerable delay while the work is going on.

"At the moment it is too costly to design a chip for some random task. That is why generally we use the micro-processor, which is itself the product of monumental labor, and program it to perform that task.

"We know how to process high-level language into code, but we do not yet know how to convert high-level descriptions into high-quality circuits."



In a sense I have come full circle, for circuit design is what I began work in more than 14 years ago. Stanford is the national center for this type of work, and it was natural to get involved in it when I came here three years ago.

—Jeff Ullman

Some of Ullman's work is presently concentrated on compiling high-level descriptions of what circuits should do, trying to achieve a compact representation of the circuits.

Has he made any breakthroughs?

"I think we have made some slow improvements. By developing certain optimization techniques we have gotten the quality of the circuits improved by a factor of, say two, in other words to half the size of when we started doing these projects. Ours is really a series of small changes rather than any sudden big ones.

"In this field, like the others I have worked in, there is still the same opportunity to help the user—in this case the circuit designer—get away from the need to deal with every little wire.

"However, there is the usual trade-off between ease of use versus quality of result. If you give the designer high-level primitives he does not tend to get as good a design from your system as he would from a system using low-level primitives.

"The area of a design often turns out to be critical. Thus, developing good systems that support design with high-level primitives is tough work."

Ullman's second important project involves providing users with easy and rapid access to large data bases, in a language that is reasonably close to the way they speak and write. The common theme between the two projects is making life easier for the user by having the computer do more of the work.

"I should like to see a large increase in user-friendly interfaces, ones that can be used without warping one's thinking" he said.

"The particular direction we are taking now is the implementation of a 'universal relation' interface where the user sees data, no matter how complex, as if it were stored in a single table.

"The user states what elements he wants connected, e.g. 'retrieve shirtsize where employee—Jones.' The machine must deduce what the likely connection is between shirtsize and employee, in the data as structured in the computer.

"For example, does the company record each employee's shirt-size, or are different sizes of shirts sold in different departments, and are we then asking for the sizes sold in Jones' department?"

Soon after Ullman arrived at Stanford it became clear that new ways were opening up to manage large amounts of data in such ways that answers could be produced relatively quickly. He became interested in what became known as 'the relational model.'

"This model allowed some nice mathematical solutions to some fundamental problems of database design.

"But, as with translating high-level circuit descriptions into chips, there is an optimization problem. The relational model gave much higher levels of constructs to the user, but translating his queries into operations on the database became more difficult than with earlier models of data."

Ullman and his colleagues worked on these problems and made a number of advances. They carried out work in what became known as 'universal relations.' In effect, this carried the relational model one step further.

"The nice thing about the relational model was that it relieved the user of certain 'navigational' problems said Ullman. "Instead of phrasing queries (requests for data) in terms of the way data was stored in the computer, the user queries about relations (tables) of data.

"Just as the relational model avoided forcing the user to navigate with the data in the computer, the 'universal relation' system we are building tries to save him the trouble of navigating among the relations.

"Part of the mathematics we are developing is designed to model what is natural, to see what people see as natural in a given situation, and what they do not. We are trying to set up structures that model the ways in which people naturally think about a real-world situation, so that the system can respond in the expected way.

"It is very pleasant to see how much mathematics is necessary to make headway against problems like these."

Ullman does not like to use anthropomorphic words about computers which imply that they can think.

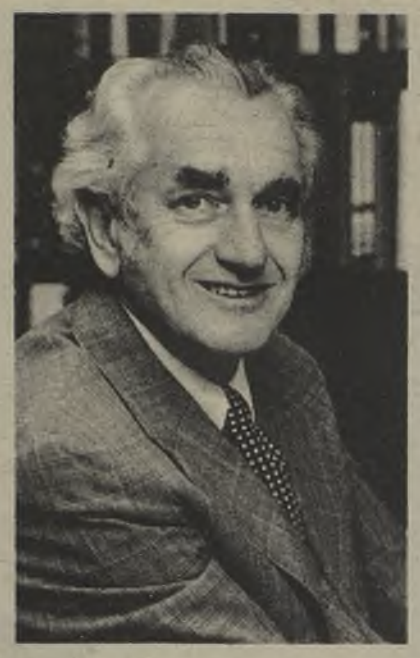
"That is the wrong image," he said. "When we produce better algorithms—perhaps ways for the machines to search for the right way to proceed—they will produce better results, but probably they will never 'think' about it in the accepted sense of the word.

"Probably in several hundred years there will be machines that behave like Seethreepio, but at the moment such things belong in the realm of science fiction.

"I think you will find that even most scientists who deal in what is called 'Artificial Intelligence' don't think in terms of creating 'thinking machines' but rather in discovering good ways to perform specific operations such as reasoning formally about

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Carl Degler: History's being redefined to include women's interests



Carl Degler

Undoubtedly, it will take many years for scholarly disciplines to be redefined to include women's interests as integral elements.

Following is an essay by Stanford history Prof. Carl Degler, which appeared in the Sept. 15 issue of The Chronicle of Higher Education.

For most people who favor affirmative action in hiring at colleges and universities, the goal seems clear: to increase equality of opportunity. In actuality, however, for women, much more is implied than that.

Unlike minorities, women are not only as numerous as men; they also differ from that dominant group more profoundly than any minority. Because of those differences, affirmative action for women must have a deeper effect upon fields of scholarship. It will, if it is achieved, literally reshape the content and meaning of many if not all disciplines.

It is quite true, to be sure, that over the last century or so, in the course of which women entered academe for the first time in force, they adapted to, rather than changed, the fields they entered. Since the professions and academic disciplines had been defined, not to say created, over the centuries by men, adaptation was essential. Indeed, it was on that basis that women are allowed to enter the disciplines at all.

Today, however, with the new self-consciousness among women, many of them are beginning to see their scholarly interests and concerns as different in some ways from those of men. They ask of history, literature, and even economics: How does this field relate to me as a woman? For, where values are intrinsic to a discipline, as they certainly are in the humanities and social sciences, it is inevitable that personal or group identities will shape how one thinks about a subject.

In my own field of American history, the effect of this self-consciousness has already become evident. A number of senior female historians who entered the profession and achieved tenure working on subjects that were unrelated to women are today turning out books about women. As their consciousness has been raised, they have asked the fateful question: Where am I, where are women, in my discipline?

The same development can be seen in the growing number of female graduate students in American history who want to work on aspects of the past related to women. At Stanford University this year, of the five top female candidates for admission in American history, four specifically expressed an interest in women's history. Among undergraduates, the strong interest among young women in courses in women's history and literature and in women's studies in general testifies to the consequences in education of the new self-consciousness among women.

If one thinks about it, the concern of women with their interests and values is quite natural and to be expected. Where it presents a problem is in that the academic fields, as they have been defined over the centuries, are not prepared to recognize as legitimate these peculiarly women's concerns. After all, men have defined what it means to be human and what are proper scholarly concerns of human beings.

Yet what we have been forcefully taught over the last decade or so is that women's conception of humanity is not necessarily identical to that of men, and that therefore the ways of studying human beings may not be the same when women's interests and concerns are acknowledged and included.

The differences between women's and men's views of the past are already quite clear. The most obvious is that very few men do research in women's history; apparently men do not see it as legitimate or important. A second sign is that women are introducing novel aspects of the past into the history they write, aspects that few men have been concerned with in the study of the past, and that even today are not seen by many men as legitimate subjects for scholarly inquiry.

The history of sexuality is a case in point. Only since the advent of women's history has the subject of sexuality been studied historically in a serious manner. That it has been discussed at all is clearly related to women's special character and difference from men. For sexuality is to women as color or race is to blacks: a source of difference from the dominant group and therefore a source of possible oppression.

Other subjects, equally sex-related, such as the history of childbirth, experiences with war and social aggression, the character of families, and the uses of power, will undoubtedly be explored in new ways as women become increasingly active and prominent in historical studies and in the humanities and social sciences in general.

Never before in the history of any academic discipline or profession has a society sought to vouchsafe to women the level of equality promised them today. Up until the modern feminist movement, women have been allowed into professions and academic departments in competition with men, and, in effect, they have worked like men.

Today, however, many young women are entering academic departments as self-conscious women, asking research questions that relate to them as women and seeking to reshape their particular discipline to include women's interests and needs.

One consequence of the rising self-consciousness among women is that the scholarly and professional work they produce is related to their values as women. Yet that work inevitably appears to many men—and to the traditions of the fields in which the women work—as not only novel but even faddish and perhaps irrelevant.

That is where the real problem for the future of affirmative action in practice is located. How can men have their consciousness raised so that they are able to recognize the sex-specific origins and definitions of their fields and thus not dismiss out of hand as irrelevant the concerns that inform as well as motivate the new research by women about women?

If the new history of women tells us anything, it is that our generally accepted conception of the past has been derived from the interests of men. Men wrote history to meet their needs and concerns as men. They did not exclude or ignore women because they were misogynists or malicious; they did so because what women did, felt, or thought was not important to them when they looked to the past for guidance, understanding, and identity.

Now that women in increasing numbers are writing history, they are including women because as human beings women need history, too. They need history that includes them just as they need literature, philosophy, economics, and sociology that include them, and of a kind not necessarily like that written by men for men.

In sum, the real test of the success of affirmative action for women will come not by counting the number or proportion of women in a department or profession, but by the extent to which men—who still dominate all the academic disciplines and professions—are willing to accept the new and peculiar interests of women as legitimate and serious, even when those interests are strikingly novel and perhaps even bizarre when compared with current acceptable work in a given field.

Undoubtedly it will take many years for scholarly disciplines to be redefined to include women's interests as integral elements; after all, it took many centuries for those fields to be developed to suit the needs of purposes of men, and they are still in the process of evolution. But simply because the disciplines have been defined by men, they have given us a one-sided or one-sex conception of man. A fuller, two-sex conception has to be developed because the old version is no longer adequate.

Women today are, as they never have been in any previous society, public as well as private human beings. Their interests and their past have to be included in our definition of man or humankind. And they will remain public figures in the future. That watershed in human history has been crossed; there will be no retracing our steps. The only question remaining is, How quickly can we begin to include women and their interests in every aspect of our definition of what it means to be a human being?

Trustees approve new system of faculty titles

The Stanford Board of Trustees has approved a new system of faculty titles, effective Oct. 1.

Developed by the Ad Hoc Committee on the Adjunct Professoriate and approved by the Faculty Senate, the changes include using terms "tenure line" and "nontenure line" faculty instead of adjunct professors.

Changes in titling of nontenure appointments, using parentheses, are as follows:

* Adjunct professors will become professor of chemistry (teaching) or professor of teaching (research) or other subject fields, as appropriate.

* Clinical professors will be described as professor of pediatrics (clinical) or other subjects, as appropriate.

In addition, a new rank—associate professor in the nontenture line—will extend to the entire University. Previously, it was available only in the Medical School.

Present limits on the total nontenure line positions remain the same. They may not exceed 10 percent of the Academic Council, except in the Medical School, where the limit is 20 percent. Only half of these positions are now filled.

Principal investigators status on research grants will remain restricted to members of the Academic Council, except that it may be extended to academic staff members when the sole purpose of a grant is for a workshop or conference appropriate to the University.

Signs is both a women's journal and a way of life—Gelpi

BY MILLICENT DILLON

You could say the subject matter of our journal has become the way of our working life," says Barbara Gelpi, editor of *Signs*, the Journal of Women and Culture in Society, based at Stanford.

"Those of us who work on the publication—and that includes a number of women who are volunteers as well as paid staff—work as a team in which we each respect the capabilities and efforts of the others, she says.

Gelpi, who is also a professor of English, has been editor of *Signs* since 1980, when it moved to Stanford, where it is housed at the Center for Research on Women.

Published and funded by the University of Chicago Press, the magazine is the most important scholarly and academic publication in women's studies nationally. It also has a large influence and readership internationally.

Of the working situation, Gelpi says, "I had heard, before I took over as editor, that women have more trouble than men delegating work or asking other women for advice. I was told that this was true in the business world. But it certainly hasn't been my experience here.

"Of course, I am the one who is responsible in some final way, but in the actual working situation that responsibility is shared. There is a separation of tasks, according to talent and to other things determined by the professional lives of the people involved.

"What goes into the magazine is decided on by the six associate editors and myself with advice from the managing editor, Clare Novak, and the editorial associate, Susan Johnson."

The associates are Stanford history Prof. Estelle Freedman; Myra Strober, director of CROW and professor of education; Carol Jacklin, research associate in psychology; Margery Wolf, an ethnographer specializing in China; and Jane Collier and Sylvia Yanagisako, both professors in anthropology. This year Barrie Thorne, visiting professor of sociology, is a guest associate editor.

Signs has a number of internships that are channeled through the university's undergraduate research and SCIRE programs. The students, working from 10 to 15 hours a week, are treated as part of the working team.

One of the interns, senior Mary Alexander, has set up and developed a book review assistant job for the journal. Other interns have worked on international correspondence *(Signs* has 16 correspondents from foreign countries on its masthead) and on feminist periodicals. Still others have done research in connection with special issues of the journal.

In addition, *Signs* has had summer interns from Arizona State history department, which has a historical editing and publishing emphasis. This year's intern was Rose Byrne, a student from that program. Last year's intern, Susan Johnson, went on to become the editorial associate.

All of the members of the team, though committed feminists, have their own ideological orientation.

"When *Signs* first came here," says Gelpi, "we were very conscious of our ideological range. I think of myself as a liberal. Shelly (the late Shelly Rosaldo, professor of anthropology) was Marxist radical. And there's a whole range of feminist opinion among us.

"However, it's worked out as a non-problem. None of us wanted to make *Signs* the exponent a of particular point of view.

"We really don't argue about matters of ideology. Sometimes because so many people are involved our procedures haven't been good enough. The lines of communication haven't worked.

"In that case we don't take it as a matter of bad feeling, but just that the system didn't work.

"Of course, there are also some differences which we have, when we get together, because time is so limited and we have to cover so many subjects.



Staff of *Signs*, left to right: Myra Strober, Clare Novak, Barbara Gelpi, Susan Johnson

"But then we have evaluations at the end of each meeting and it seems to help us get over rough spots."

Gelpi does not usually chair the meetings of the work group. "That's not one of my skills. I tend to get involved in anecdotes. There are other people who are much better at it than I am, so I'm happy to let them do it.

"Estelle Freedman is a terrific chair. She's very clearly organized and has a strong sense of direction. She's problem oriented and is willing and able to pull people up when they get off the subject. She's courageous in asking people to get back to the point."

Gelpi does not consider *Signs* to be an "advocacy" journal. "We describe ourselves as a journal of feminist research. On the other hand, it's true that we don't publish material about women that isn't feminist.

"When *Signs* first began, in 1975, it didn't make political sense to use the word 'feminist.' There was the old problem in academe: If you're feminist then you're ideological, which means you're not scholarly.

"It is still a problem. There are many academics who say that if you're feminist you can't be objective. But feminists always answer: 'But if you're 'new critic,' you have so much slant to your perspective. You're a white middle-class, middle-aged man and yet you take it that you're objective.'

"I think it's much more honest to say, 'Yes, I'm a feminist. I'm interested in the betterment of women and I'm studying women in this and this situation.' It would only be unscholarly if you fudged your findings, if you were to say, 'I'm going to find out that women are better.'

"It seems to me it's much more true to academic honesty to define to yourself what your slant is, what your interest is and take that into account. The idea of objectivity is often self-deluding in any case. It just means you're taking yourself as the norm."

On the question of what she considers the most important areas for the future in feminist research, Gelpi notes six significant areas for study: The relationship of women to historical change; the role of woman as mother—in fact, in myth, as metaphor; the nature, significance, and permanence of sexual difference, of femaleness and maleness; the relationship of women and science; the social geography of women's worlds; and the development and mechanism of women's movements.

"These are all outlined by Catharine Stimpson, the former editor, and I agree that they are crucial."

At the most recent conference of the National Women's Studies Association, Gelpi noticed several changes in attitude. In the first place, she saw a shift toward much better communication between straight women and lesbians within the movement.

"The lesbian issue wasn't a separate panel. It was much better integrated within all panels. So the lesbian voice was heard with greater openness, as part of a dialogue and with less defensiveness on both sides.

In addition, Gelpi notes, up until now, white middle class feminists have been tending to take themselves as the norm in the women's movement. "Women of color are objecting strongly and vocally. And the white middle class women are beginning to recognize that they have done to women of color what men did to them.

"It's important to listen and to have the intellectual honesty to hear what the problem is. It seems simple once you've heard it."

Gelpi and her co-workers are planning a number of special issues for *Signs*, including "Gender and the Law" (scheduled for 1985, to be preceded by a conference in 1984), "Women and Poverty," "Women and Aging," and "The Lesbian Issue," (to be published in 1984).

A conference on communities for women will be held at Stanford next February. First, there will be a small *Signs* conference, at which papers will be given on special issues. The following day a conference will be held, oriented to the community as a whole, with a keynote speech by Nan Keohane, now president of Wellesley, formerly professor of political science at Stanford.

Dolores Hayden, author of *The Grand Domestic Revolution*, and a professor of architecture and city planning at UCLA, will discuss "Women's Utopian Visions."

"Hayden herself is a socialist," Gelpi says. "She has very strong feelings against the suburban street with its reduplication of resources. She writes about ideas, about women who have had plans for other ways of living and working. Some of those plans, as she shows in her book, have actually been carried out."

Communities of women—that's a subject all of us here at *Signs* are particularly interested in. After all, we ourselves are a community of working women."

Engineers' salaries up 8%, but market more competitive

Salary offers to Stanford engineering students rose more than eight percent this year, but the national market is becoming more competitive for students, according to Richard Reis, director of career planning and placement for engineering and science.

The average of all engineering offers was $2,164 per month for bachelor's degree recipients, up 8.6 percent from last year. Master's degree recipients averaged $2,440, up 9.7 percent, and doctorates $3,119, up 8.9 percent.

But 20 percent of the graduating students made no report of salary offers, compared to only three or four percent in previous years, an indication that quite a few may still be looking for jobs, Reis says. He's also counseled more students this summer than in any previous year, although the situation now is "starting to get better."

This year both the Placement Center and students had to become "proactive rather than reactive," he adds. "Before, students simply went through the motions and offers came. Now they seek jobs out and sometimes make compromises. But the market's still good for them, certainly in comparison to fields outside engineering.

"I see this as a temporary dip, with engineering and science still a good bet for employment down the road.

"It can be healthy, too. The market's been out of kilter for so long that employers were tripping all over themselves making offers. Job turnover was exceptionally high. A more balanced relationship encourages students to think more carefully about what they want to do and how they view their jobs."

Nationally, the number of job offers to bachelor's degree graduates in engineering dropped to 51,290 this year from 62,835 last year. "This would have been considered a boom year as recently as 1978," Reis notes. "In some fields and specialties, such as integrated circuit design and computer programming, demand continues to exceed supply.

"Even in the more recession hit areas of civil, chemical, and environmental engineering, the demand is far better than for non-engineering fields of human biology, economics, and history."

The University of California at Berkeley Placement Center recently reported that "while offers to electrical and mechanical engineers are down only slightly, campus recruitment of civil and chemical engineers has markedly declined.

"The most dramatic turnaround has been experienced by chemical engineers, a group in very strong demand in the past. This year, fewer offers have been reported, and chemical, electronics and aerospace recruiting of these engineers are all down. Petroleum companies, too, are hiring less."

Reis notes that "job hopping among experienced engineers, which was rampant at 36 percent in 1979, was down to a more manageable 23 percent last year.

"While demand has dropped, supply continues to increase at the bachelors and masters degree level. Final 1981 enrollment figures are not in yet, but it is likely they will exceed, or at least match, the record freshman enrollment of 110,149 nationally and the record masters enrollment of 18,500."

For some time, he adds, the allure of industry has reduced the total number of students seeking Ph.D.'s in engineering. As many as 50 percent of the U.S. engineering Ph.D. students now are foreign nationals; some of whom will return to their home countries. Current sluggishness in the bachelors and masters degree market could result in more Americans deciding to pursue Ph.D.'s in engineering, Reis suggests.

Despite the recession, there were more than 416 company recruiting visits to Stanford, involving 5,200 recruiting interviews, compared to 420 company visits and 4,500 interviews a year ago.

Increased student interest and concern was reflected in a rise from 75 to 100 counseling appointments with Reis per month, starting earlier than usual and continuing well into July and August. The number of students participating in the Engineering Resume Book rose from 250 to 525.

Besides helping students find jobs, Reis says the Center helps them develop long-term career planning and decision-making skills through workshops, seminars, and counseling. Students may typically face five to seven occupational changes and three to five career changes. Certain specialized occupations now have a "half-life" of only three to five years, he notes.

"While the immediate short term picture is not as bright as in recent years, the prospects two to five years ahead look good. The next decade looks especially encouraging, especially for bright students graduating from top schools."

Following is a comparison of 1982 starting monthly salary offers at Stanford with those at 158 colleges, including Stanford, as reported by the College Placement Council:

A Comparison of 1982 Stanford University Starting Monthly Salary Offers with Average Nation-Wide Starting Monthly Salary Offers at 158 Colleges as Reported by the College Placement Council

	B.S. Degree		M.S. Degree		Ph.D. Degree	
	Stanford	nation-wide	Stanford	nation-wide	Stanford	nation-wide
Aero & Astro	—	1.973	2.328	—	3.141	—
Chemical Engineering	2.295	2.256	2.525	2.459	2.885	3.019
Civil Engineering	2.144	1.925	2.470	2.249	—	2.851
Electrical Engineering	2.211	2.046	2.457	2.369	3.315	3.099
Engineering-Economic Systems	—	—	2.656	—	3.123	—
Industrial Engineering	2.102	2.023	2.436	2.295	2.825	—
Materials Science & Engr.	—	—	2.433	2.320	2.965	2.968
Mechanical Engineering	2.148	2.098	2.384	2.332	3.164	2.959
Operations Research	—	—	2.427	—	2.758	2.544
Petroleum Engineering	2.531	2.539	2.651	—	3.027	—

– No degree, insufficient data

New program helps Ph.D.s find professional careers

The widely touted "taxi-driver syndrome" no longer strikes terror in the hearts of growing bands of Stanford graduate students.

Faced with increasingly bleak prospects for careers in college teaching, they're starting early to assess their skills and find nonacademic jobs through the professional opportunities program (POP) of the Career Planning and Placement Center.

They call themselves "poppies," and they're starting to blossom. The prospective Ph.D.'s don't regard themselves as poor seconds to MBA's; through informal networks with fellow Ph.D.'s they're becoming executive trainees, marketing analysts, and development directors.

The self-confidence gained through systematic assessment of their abilities and interests have helped several gain good starting jobs in academe as well.

In recent years, about half of Stanford's doctoral graduates in humanities and social sciences have obtained college teaching jobs. Another one in four started work in industry, nonprofit organizations, or government. The remainder continued as postdoctoral fellows, returned to their home countries, or continued to seek employment.

"Stanford Ph.D.'s are still doing well in the university teaching market, but that doesn't mean we can ignore the problem of dwindling job opportunities," says Edward Escobedo, the Placement Center's director for college and university teaching, who helped create the professional opportunities program last year. He credits Ruth Schneider and Alice Branstrom with making the program "successful beyond our expectations."

Again this fall starting Oct. 19 they'll offer graduate students a series of workshops on 1) academic job searches, 2) preparation of curriculum vitae and cover letters, and 3) job interviewing and personal presentation. "POP" series is scheduled for winter and spring quarters.

Those who come back discouraged from the academic conference "meat-markets" in the late fall and early winter may opt for POP during winter and spring quarter.



Edward Escobedo

"Career planning doesn't have to be left to chance or last minute desperation," Escobedo emphasizes.

"We're dealing with people who are incredibly talented.

"We're really amazed at the help other Ph.D.'s who've started professional careers outside academe are willing to give. In fact, they've become our teachers.

"There are many opportunities for people who know how to organize, conduct research, and communicate well.

"Networking and support systems are important. Many of those in last year's workshops have decided to continue meeting on their own as they complete their degrees. They may publish a newsletter. They're kind of forming a family of their own."

Academic departments have been supportive of the new program. Escobedo urges participants to talk with the academic advisers, to consider summer internships and other jobs offering a "window" on possible careers, and to think carefully about any elective courses they may take.

As one of the POP participants put it: "To be a Renaissance person, you have to know the language. These days, it's computers."

Under "languages," some "poppies" list "Greek, Latin, Spanish, and Fortran."

To reject computers out of hand, Escobedo suggests, may risk following in the footsteps of those who heard of the printing press soon after Guttenberg but reject it as "too mechanical." Familiarity with statistics is another skill which may prove helpful in nonacademic employment, as well as in the classroom.

Besides having Ph.D.'s lead panel discussions on how their degrees help in their current careers, Escobedo has employers provide insight on appropriate ways to prepare for industrial opportunities.

"We don't want to force students to abandon any aspirations for an academic career. Instead, we emphasize the process of career planning and exploration, leaving the decision of when and where this can be applied up to individual participants."

continued on next page

Nonstop, continuous writing can help some overcome blocks



Stanford gets the cream of the crop. They are all bright and motivated. But...that doesn't mean they can write adequately.

—Nancy Packer

Nonstop, continuous writing can help some bright students overcome their fear of writing, says Prof. Nancy Packer, head of Stanford's freshman English program.

These students are eager to do well, yet they have so internalized criticism that paralysis sets in, and their writing becomes stifled and abstract.

To deal with this problem, teachers may encourage students to "free write"—to write continuously, never lifting the hand from the paper, putting down whatever thoughts occur, and when no thoughts come, to fill in with repetition or nonsense.

"This method helps to break down that instant self-censorship which grips many very good students when they start to write," Packer says.

At the other extreme is the student who writes down anything that comes into his or her head, without any conception of making an argument or organizing evidence. The point of their writing is only self-expression.

For this kind of student, Packer points out that the Stanford Freshman English program now has a strong component of logic or critical thinking.

"We think we can show them something about how to develop a persuasive argument, about assumptions, inferences and conclusions, and about what constitutes evidence."

In between are students with a whole range of problems in writing. Fortunately, "we now have small enough classes so that each student can get special attention from the instructors, whatever the problem," she notes.

"Stanford gets the cream of the student crop. They are all bright and motivated. But of course that doesn't mean they can write adequately."

Writing skills decline

It is generally conceded that writing skills have declined. "One bit of evidence is the national decline of SAT scores," Packer notes. "But just picking up a national magazine points to the same conclusion. "Both *The New Yorker* and *Time* have always prided themselves on their good writing, but it's clear from reading them that the writing in both has declined considerably."

This ought not to surprise anyone, she adds. "In the first place, young people who might have spent time reading are now watching television, going to the movies, and listening to tapes. In addition, in many high schools there are fewer hours of instruction than there used to be. In some areas the reduction is as much as 12 percent. At the same time more demand is made for those fewer hours."

New courses are offered, including the almost obligatory driver's education, as well as social sciences that had no part in the high school curriculum 40 years ago. Even the sciences, Packer points out, are more demanding than they were.

"With all this competition for student time, what gives? English, language study, and history. There is little wonder that we are seeing a continuous decline in the ability of students to read and write."

Often when people talk about bad writing, they mean that students can't spell or punctuate or use good grammar, she notes. "Those are the easiest problems to correct. There is not a student at Stanford who could not learn these mechanics. The problems we see are much more serious."

Packer pays warm tribute to the staff of writing instructors. "They are very devoted, competent, and hard-working. And they love working at Stanford. We're lucky to have such a good staff."

Although the focus of all the 60-plus courses is writing, students choose sections according to what special topics will be explored. "It is a tenet of our faith that students can learn to write better more quickly and easily if they are not also fighting the subject matter. We encourage them to choose courses in which they will read and write about what they care about," she says.

"Writing is at the heart of the whole academic enterprise. It is given short shrift in many universities but that is not true at Stanford. The Academic Senate has always required that freshmen take composition and the administration has been very supportive."

Packer spoke at a recent conference of volunteers and fund-raisers for Stanford.

—Donald Stokes

Faculty should be alert to promising new directions in scholarship, research

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search committees, validate the procedures followed, maintain rosters of potential minority and women candidates for future vacancies, and provide advice to deans and department heads, the report said.

The University should "inquire carefully" about the attitudes and records on affirmative action of candidates for administrative positions. "It should be unthinkable to appoint as administrator anyone who does not wholeheartedly support" affirmative action, the report said.

To strengthen recruitment of women and minority scholars, the Faculty Affirmative Action Fund should support campus talks by highly qualified candidates, encourage trips to national scholarly meetings to identify potential women and minority faculty members, and help Stanford faculty members briefly extend their stay at other institutions when there is an opportunity to become familiar with the academic work of promising students close to completing their Ph.D. theses.

Faculty members should remain alert to "promising new directions in which scholarship and research may be moving." The accurate, early assessment of such trends can be a decisive factor in the long-term standing of departments, as seen in the response to the development of Darwinism in several disciplines and the introduction of solid-state electronics in electrical engineering and computer science.

"It is vital that Stanford make such assessments as well in emerging fields in the humanities and the social sciences in which gender and racial-ethnic differences have become key categories of analysis. *(See Degler story, page 4).*

"The study of race and gender in history, for example, has moved from the periphery of attention to an important role in understanding the development of society. Such inquiries have attracted many of the most eminent of established historians and the most talented of our graduate students. Similar perspectives of gender and race have altered other fields in the humanities and the social sciences."

To help retain and strengthen younger faculty members, the committee recommended reinstituting the junior faculty leave program, permitting those facing special demands to develop their scholarly careers. The relatively small number of women and minority faculty members, compared to the large number of women and minority students, creates pressure to "advise and assist on a scale that goes far beyond normal departmental advising."

Mentors needed

Junior faculty also need mentoring and monitoring by "sympathetic but demanding" senior faculty to keep track of individual progress, provide informed advice, and help in obtaining research grants.

"All too often, graduate students do not learn of these activities prior to taking an academic position. It is to the faculty member's and the institution's advantage that they be taught," the committee said.

Department heads should provide "meaningful and carefully considered annual conferences" with individual junior faculty members, the committee added. "Too often, we have heard, the conferences do not take place or are superficial. These conferences are extremely important feedback to all junior faculty. . . ."

During 1981-82, there were 13 new appointments of women to the faculty, including one full professor. There were 10 minority appointments to the faculty, including one associate professor.

The percentage of minority group members in tenure line positions has increased slowly but the proportion among all those with tenure has doubled in the past decade, the report shows.

Affirmative action fund

The Faculty Affirmative Action Fund should be continued to help hire "outstanding people who would add significantly to our academic programs but who do not fill an existing billet (or vacancy). . . .

"The small numbers of black and chicano graduate students in all fields, and the small number of women graduate students in many fields, imply that progress in increasing the numbers of these minority and women faculty will be slow, indeed, if our hiring of them is determined alone by the matching of existing positions with the best people."

The text of the committee's report will be published in *Campus Report*, the University's weekly newspaper for faculty and staff members, Wednesday, Oct. 6.

Bienenstock formerly served as the University's faculty affirmative action officer. Other committee members and their schools included Profs. Barbara Babcock, law; William R. Evitt, earth sciences; Dora B. Goldstein, medicine; Arturo Islas and Diane Middlebrook, both humanities and sciences; James G. March, education, who resigned; Susan S. Owicki, engineering; and Jerry I. Porras, business. Student members were John Trasvina, law, and Kendyll Stansbury, education. Assistant Provost Cecilia P. Burciaga served ex-officio.

Graduate POP...

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Most students starting POP completed the program. "In general, they were highly qualified, success-oriented individuals representing a broad range of past experience. One woman had been a secretary and a roofer and was about to complete a doctoral program in social science faster than usual. Only a few had decided to leave academia entirely."

Initial fear and apprehension gave way to more self-confidence and cooperation as the program progressed, he added.

"Many expressed a renewed determination to complete their programs of study."

All participants agreed that the initial program met or exceeded their expectations. For most, the greatest gain was in self-confidence.

As one "poppy" put it: "Since completing my Stanford Ph.D. in 1979, I have experimented with part-time teaching in the area. Finding that temporarily satisfying but too tenuous a path to pursue, I was sinking into a stupor of despair and self-pity until I enrolled in the POP seminar. . . . The program provided me with an arena for fresh self-evaluation, the moral support of others in my position, and clear, practical advice." Further information concerning the program may be obtained from Escobedo at the Career Planning and Placement Center, Stanford, Calif. 94305. Phone (415) 497-2009.



The first of the new undergraduate residences to be completed, on Governor's Avenue behind the great eucalyptus trees, house 60 students each.

Governor's Corner: housing rises where horses once roamed

Where Leland Stanford's horses once did their trotting, nearly a century ago, a new little city has been built: housing for 800 undergraduates.

Appropriately, the new complex is called Governor's Corner.

The first of the 800 moved in at the beginning of autumn quarter, 60 students in each of three independent houses, similar to the newest of the Row houses.

In January, another 260 will move into four buildings with suites, and in September, 1983, Sterling Quad, the final portion, will be ready—four houses, each for 90 students.

The net increase for undergraduates will be 350 spaces, because Manzanita Park will be changed into a residence for single graduate students.

The new residences will make it possible for the first time (since the University's opening years) "to house all undergraduates who are willing to live in any University housing," says Norman Robinson, associate dean of students for residential education.

For a quarter of a century, the University's "long-range policy, as the ideal, is ultimately to house all undergraduate students on campus," except those permitted to and wanting to live off-campus. But while it has not been easy to achieve that end, steady steps have been taken over the years to provide more housing *(See story, page 9.)*

"Stanford is in the housing business because it is in the education business," said the authors of *Student Housing Needs at Stanford* in 1979—Robinson; Sally Cole, student affairs; and Edward A. Scoles, housing management. "Stanford's commitment to the educational importance of students' living in campus residences is long-standing and unequivocal."

They realized that off-campus housing prices were beginning to escalate; that 1,000 undergraduates were being denied campus residences; and that single graduate students, as well, needed on-campus housing.

A Committee on New Residences, composed of students, staff and faculty, was organized and met weekly for more than two years, discussing ideas, physical facilities, uses-every possible aspect of the proposed new housing.

"We decided we didn't want to build just one huge building," says Robinson, "but to capitalize on two of Stanford's characteristics—diversity and residences as complement to undergraduate education."

("A residence which is no more than a collection of students in a collection of rooms," says one advance study, "does not belong, and should not exist, on the Stanford campus.")

Representatives of the architectural firm, Esherick, Homsey, Dodge and Davis; the construction manager, Rudolph & Sletten; and the interior designer, Marquis Associates, worked closely with the committee. The final result is a variety of housing, linked by multiple-use facilities, landscaping, and concepts.

Total cost of the new housing, including designing, building, and furnishing, is $36,200,000, the University's largest single construction project.

The first segment to be completed is composed of three independent houses similar to the Robert Moore houses built on the Row in 1975. Each holds 60 students and a resident fellow and family.

Each of the new houses is named after a distinguished faculty and staff member:

Treat House, for Payson Jackson Treat, who earned Stanford's first Ph.D. in history in 1910. He taught Far Eastern history from 1905 until his retirement in 1945, and estimated his classes had included 7,000 students. He died in 1972.

Murray House, for Augustus Taber Murray, classicist, Quaker, and athlete who taught at Stanford from 1892 to 1932. He died in 1940.

Yost House, for Mary Yost, who began 25 years of Stanford service in 1921, when she was appointed Dean of Women and associate professor of English. She died in 1954.

Room designs allow for almost unlimited flexibility. Many rooms have storage lofts, over the hallway and taking advantage of the peaked roof. The oak furniture (wardrobe, bed, desk, dresser and bookcase) is specially designed to provide options—the bed, for example, can be on the floor or elevated to provide more floor space.

Every room is wired for data and video terminals, and has a smoke detector plus a red light outside over the door to tell firemen if there is a fire inside that room. The residences had to be built to the same state codes as hotels and motels.

The big living rooms have fireplaces, built with reclaimed sandstone blocks from the University's early construction days. The buildings are stucco painted natural earth colors, with quarry tile floors in many public areas. Outdoor sitting and meeting areas are numerous, with barbecues and volleyball.

Resident Fellows of the three new houses are Albert and Susan Camarillo; John and Betty Kaplan; and Harumi and Kei Befu (whose residence has been designated as the East Asian Studies Theme House).

The next phase, four buildings for 260 students living in suites, plus four eating clubs, is scheduled to open in January, 1983.

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New residences...

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Each suite houses four to six students (plus two housing eight) whose living space includes a small living room and shared bathroom, plus individual bedrooms—an apartment minus the kitchen. Access is via outside corridors and the buildings have many sun decks. Two small kitchens are available, for the always-hungry students to prepare snacks at any hour.

Residents will affiliate with one of the four eating clubs.

Each of the eating clubs has open beam ceilings, carpets, and a lounge with fireplace, and each has space to accommodate a limited number of non-residents. The clubs, according to Project Manager Elizabeth Kittas, are designed to be used by their members also for parties, lectures, dances and other group activities.

In September, 1983, Sterling Quad is scheduled to be completed—four houses, each for 90 students, and a resident fellow and family. The houses share a central dining hall/performance center building.

"There will be lounges and seminar rooms in every building, plus two formal classrooms," says Robinson. "In Sterling Quad, for example, the buildings are designed in shapes that allow room for special interest groups, such as 10 or so students with a project, that won't disrupt the overall life of the house."

The big dining room will acommodate the 360 Sterling Quad residents, but in addition will be a theater. Dorm drama is ubiquitous at Stanford, and now a new stage will be provided for all kinds of performances.

Also opening this fall is a new program center, right on the west edge of Lake Lagunita. It has many of the spaces that normally would be in every house.

The second floor, with a huge deck overlooking the lake, has two multipurpose rooms. The larger one has a hardwood floor for dance and musical performances, and lectures, and the other is carpeted for receptions, meals and meetings. A large kitchen is available for catering or demonstration cooking (students love to learn how to cook), and an entire house could have a meal there—the big rooms will hold 100 at a sit-down dinner.

The center also houses mailboxes for all residents, music practice rooms, a darkroom, a theater set construction room, a computer terminal room, and other general use space, as well as administration offices. A central communications room has facilities to broadcast video and audio material into every residence. It also has a small student-run snack bar.



Room designs in the new houses near Lake Lagunita provide great flexibility for students, who moved in last Sunday. Here sophomore Laurie Magnusson begins to get settled.

All the buildings have plumbing and roof brackets for solar panels to heat hot water when it becomes economically viable at Stanford. In addition, a substantial energy saving has been made through use of fluorescent and metal halide sodium vapor lighting rather than incandescent lights.

Jan van Houten, director of the new residences, notes that next door to the center will be guest rooms, one a small apartment designed for a visiting professor-in-residence, and that the program center—as well as the residences—offers facilities for round-table discussions of almost any size.

Governor's Avenue, the historic lane which led from the Stanford residence to the horse barns, trotting oval, and lake, has been retained as "a public spine" which provides the means of extending the housing area if and when needed in the future.

"Governor's Avenue is an important part of Stanford's history," says Elizabeth Kittas, "and with its magnificent trees it provides a beautiful entry way and route for pedestrians and cyclists."

A tree expert was and will be on hand to protect the trees during the long construction period; some eucalpytus trees had to be taken down for age and safety reasons, but many new trees have been planted. In the middle of the new residences, a meadow dotted with native oak trees has been left in its natural state.

The new landscaping is drought resistant, with limited irrigation area. The one big new grass area occupies the center of the site.

When planning for the new residences began, committee members visited and investigated university residences across the country. One fact they brought back was statistical. In 1978, comparing on-campus housing for upperclass students, Princeton housed 97 percent; Dartmouth, 93 percent; Harvard, 88 percent; Brown 79 percent; M.I.T. 77 percent; and Stanford, 74 percent. (The 1981 Stanford figure had grown to 77.3 percent.)

When Stanford's 800 units are complete, Stanford will be able to house 82.6 percent of all undergraduates, and, in the summer, will have new facilities for conferences.

—Harry Press

New residences reflect goals adopted by trustees in 1979

The goals of Stanford's student residence programs were outlined in a 1979 report, "New Undergraduate Residences at Stanford," prepared for the Board of Trustees:

* **An intellectual** and friendly atmosphere conducive to high academic interest and achievement.

* **Stimulation** of interest in cultural activities such as theater, art, and literature through direct participation in University activities of this nature; attendance at campus and Bay Area events; discussions; the development of house libraries, including several newspapers and periodicals; the introduction of art into residences; the encouragement of good music; and a wide variety of information to assist students in making better decisions about graduate school, scholarships, and career opportunities.

* **Opportunity** for members of the faculty to have closer, informal association with students in the dining rooms, lounges, and student rooms, where student experiences will be deepened and widened, and their ideas quickened, challenged, and tested.

* **A means** whereby faculty of the University can meet individual students, and learn enough about them to make intelligent recommendations for employment, scholarships, and advanced study.

* **A place** where tutoring is available, academic advising is given both as to specific courses and career opportunities, and individual student problems are identified and referred for professional services.

* **An opportunity** for each student to choose, within the limitations of practical necessities, the group with which he will associate.

* **An opportunity** for intercultural exchange by living with students from other geographical areas of this country and overseas.

* **An environment** conducive to good citizenship and consideration of others and their property, with opportunity to learn responsibility through house government, and opportunities for leadership.

* **A varied** social program in which members of the house may entertain guests and have opportunities to meet people from outside their own group. Activities should be conducted so as to foster good manners and social competence, and to provide opportunities for recreational outlets including intramurals for every member of the house.

Commitment to residential education reflected throughout post-war period

Stanford began life as a residential university, and has tried to be just that ever since. It's not always been easy.

But in 1957, the Board of Trustees voted that "the long-range policy of the University, as the ideal, is ultimately to house all undergraduate students. . .on campus," except those permitted to live off-campus and wanting to do so.

Since then, those responsible for student housing constantly have been moving toward that ideal:

* In 1969, 460 "temporary, emergency" spaces were provided in a cluster of trailers known as Manzanita Park. They're still in use, and will be for many years.

* In 1974, a major study of undergraduate housing was completed and, as a result of its recommendations, 250 spaces were added: three new Row houses for 50 students each, and 100 more by closing in the ground floor of Florence Moore Hall.

* The "guaranteed housing plan," started in 1975, gives every undergraduate three of four guaranteed years of on-campus housing.

* In 1979, the study begun in 1974 was expanded and updated, and its conclusions said 800 new spaces were needed. The first of those spaces were occupied by undergraduates Sept. 26.

David Kennedy gives frosh new view of A-bomb's role in U.S. policy

The atomic bombs dropped on Hiroshima and Nagasaki were "not the last shot of World War II, but the first shot of the Cold War," Stanford history Prof. David M. Kennedy told 400 freshmen during orientation Friday, Sept. 24.

A member of the Stanford arms control faculty and author of *Over Here*, an analysis of World War I which was runner up for the Pulitzer Prize last year, Kennedy described the Cold War as "a two-handed game. . .with responsibility allocated to both players," the U.S., and the Soviet Union.

"The U.S. has not been a passive, innocent actor in this historic drama," he declared.

As early as 1942, President Franklin D. Roosevelt ordered work on the atomic bomb slowed until the U.S. received assurances from Winston Churchill that the British would not pass on information about its development to the Soviets. At that time, Britain and the Soviet Union had a formal treaty favoring such exchange of information.



David Kennedy

The U.S.-British alliance deepened as the war continued, and their attitude toward the Soviets hardened, Kennedy said. When physicist Niels Bohr urged sharing of atomic information with the Soviets in 1944, FDR had him tailed to be sure this did not happen.

From the outset, there was "a very deliberate, determined policy to freeze the Soviets out" of this knowledge, while the U.S. and Britain moved to control the raw materials and technology of atomic weapons.

After the fall of Germany in 1945, the U.S. delayed the Potsdam conference for two and a half months, sensing that successful development of the bomb would strengthen its diplomatic hand at the table. President Harry S. Truman once said: "if it explodes, as I think it will, I'll certainly have a hammer on those boys."

Contrary to their popular image, American leaders were "realistic, tough-minded, and hardly naive" about Soviet intentions, Kennedy said.

At Potsdam, Truman informed Stalin about the bomb "almost as an afterthought," others observed. Instead of sharing information to obtain compliance with U.S. goals, Truman had begun to see the political utility of actually using the bomb. It would be "a much harder twist" diplomatically, Kennedy said.

By the summer of 1945, there is "indirect, but powerfully suggestive" evidence the U.S. wanted to end the war against Japan before the Soviet Union entered the conflict and enlarged its power in the region.

At the Yalta conference, the Soviets had agreed to join the war against Japan three months after Germany fell. The intervening time was needed to move troops from Europe to Asia. Germany surrendered May 8, 1945; the Hiroshima bomb was dropped Aug. 6, 1945, just two days before the three-month period would have elapsed.

Kennedy said it was "essentially true, but not fully accurate" to say the bomb was dropped to save American lives which would have been lost if an invasion of Japan had proven necessary.

Because it had broken the Japanese diplomatic codes, the U.S. knew Japan was trying to arrange a negotiated surrender through Moscow, asking only that the institution of the emperor be retained.

Every alternative to dropping the atomic bomb either took time, which would allow the Soviets to mobilize for war in Asia, or directly involved the USSR, which would then be in a position to extract diplomatic concessions, Kennedy noted. The alternatives included a prolonged naval blockade and bombardment of Japan, a demonstration of the bomb's power at an uninhabited island site, or simply the "shock effect" of a Soviet declaration of war against the Japanese.

Confidence in their nuclear capability made American leaders reluctant to comply with the Yalta agreements, especially concessions to the Soviets in China and the Far East and reparations from Germany.

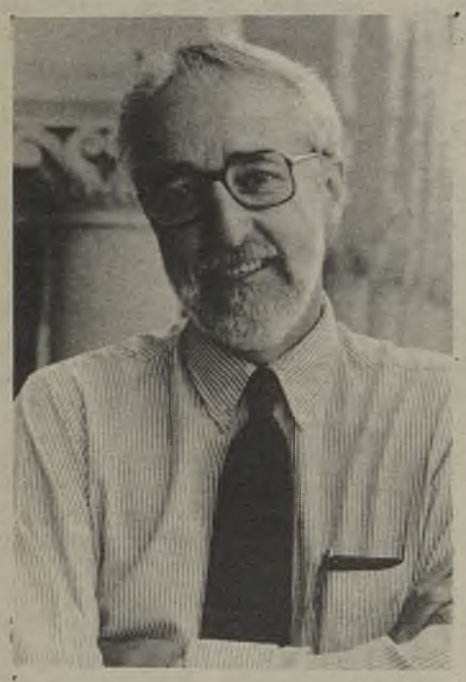
"The U.S. was suspicious of Russia and behaved hostilely toward Russia well before the Yalta conference and well before the Cold War is usually assumed to have begun," Kennedy said.

"The American attitude toward the Soviet Union hardened in the summer of 1945, before the major Russian provocations of the Berlin crisis and their behavior in Eastern Europe really made an impression.

"The American mind against the Soviet Union hardened not because of these provocations but because of the confidence that the possession of atomic weaponry gave American leadership. . . .

"The U.S. had very definite, hard-nosed, well-considered policy goals. As early as 1942, it perceived the Soviet Union as an obstacle to the accomplishment of these goals. The development and eventual use of the atomic bomb demonstrated that the U.S. was willing to play very aggressive geopolitics.

"This does **not** add up to the conclusion that the U.S. caused the Cold War, or that the Cold War was avoidable if only the U.S. had behaved more nicely toward the Soviet Union." Responsibility rested with both sides.



Norman Wessells

Self-examination rough at times, but central to education—Wessells

While it may be "rough at times, self-examination is central to self-education," Humanities and Sciences Dean Norman K. Wessells told 1,300 Stanford parents Thursday, Sept. 23.

"The social and economic diversity of our students, and the educational processes that go on here, result in innumerable subtle and direct challenges to personal, family, political, ethical and moral values," he added. But these challenges ultimately will yield young adults on whom their parents, their university, and their country can depend.

"Though you may feel loneliness upon returning home and walking into an empty bedroom, or have mixed feelings at being able to use your own car on Saturday night without asking permission, you should not despair," Wessells said.

Going to college "is not a permanent break or a rejection of parents or home. Through your genes—genetic, that is, not blue—your family life, your role in the pains and joys of adolescent...years, you have passed on to your daughter or son values and standards that will serve as guidelines for these years at Stanford. Do not worry that they will be easily eroded or lost.

"We on the faculty can never be all that you have been to your children. But we can do some things very well, one appropriate for what we are as teachers and scholars....This will be a glorious time in their lives, but only they can live those lives."

Student Affairs Dean James Lyons noted that "Stanford is a place where students take responsibility, individually and collectively, for their own affairs." He cited the presence of more than 400 red-shirted upperclass students who returned early to help with orientation as a prime example.

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President's advice: work hard, stay healthy, have fun

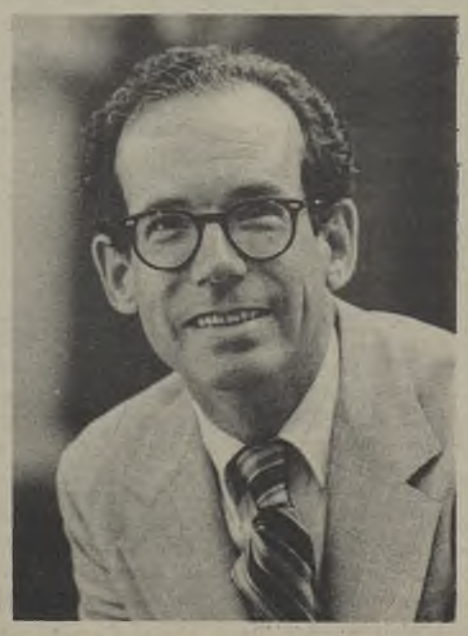
"Work hard, stay healthy, and have some fun," Stanford President Donald Kennedy advised 1,600 freshmen Thursday, Sept. 24.

Urging students to sense the unity of their education with the rest of their life, he said:

"If I have anything to criticize about Stanford's style, it is that even some of the most conscientious and devoted students here fail to extend intellectual exploration to the life they lead outside the classroom and the library.

"The best parts of what you do here may entail the sharing with others of new insights and understandings. That should go on in the residences as much as it goes on in the seminar room."

As he did with seniors at commencement last June, Kennedy urged freshmen to develop "the confidence that comes from knowing that one's education actually works—that things one has been taught actually can succeed when applied to new problems, in unfamiliar circumstances. . . .



Donald Kennedy

"Think of learning not in terms of remembering and writing things down, but in terms of working new problems and breaking new ground.

"If you have just spent an hour underlining things with one of those dreadful yellow marking pens, something is wrong! Application, synthesis, writing new things about new knowledge—those are the kinds of activities that yield. . .confidence."

Noting that the class includes the largest proportion of blacks and chicanos in Stanford history, Kennedy said: "At Stanford, we believe that confronting difference is valuable even—perhaps especially—when it is painful.

"This is why we lay such great stress upon admissions and financial aid policies that yield us a student body that represents the full richness of our culture; and that is why we propose to continue those policies even though others may be abandoning them.

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Stanford, other universities seek lower PUC rate hikes

Representatives from various universities and colleges in California, including Stanford, the University of California system and the State University and College system, have met several times this summer to try to form an association of large, nonprofit energy consumers.

The primary motive for organizing the group is the financial impact that Public Utilities Commission (PUC) rate decisions have had on California institutions of higher education.

The impact that rate changes can have is illustrated by their effect on Stanford's energy bill last year. Four decisions on PG&E rate applications increased Stanford's energy costs by $2 million. Other California schools have experienced similar increases.

Other energy consumers have organized groups that participate in PUC cases for the benefit of members—for example, the California Manufacturers Association and the consumer organization Toward Utility Rate Normalization. But the universities and colleges have not had such an organization.

"It is inefficient for staff at Stanford, UC, and the State university system to separately spend time tracking PUC activities when our interests are similar," explained Energy Program Assistant Manager Nancy Teater, who has represented Stanford at this summer's meetings.

Nonprofits hit hard

"The PUC has tried to protect residential customers from having to bear the brunt of utility rate hikes, so it has passed a larger share of the increases on to industrial and commercial sized customers," she continued. "But the schools are uniquely affected because we are nonprofit service institutions and cannot readily pass our price increases on to consumers."

The impact of price increases is not the only motivation for forming the energy association. It is equally important for universities to remain informed about the amounts and timing of utility rate changes. Rates can be altered several times during the fiscal year, and if the changes are not expected, an institution can experience serious fiscal problems. For example, Stanford's 1981-82 Operating Budget could not have readily absorbed an unanticipated $2 million increase in energy costs.

One of the important purposes of the association would be to monitor energy price changes so that the member institutions could update their budget forecasts immediately after PUC decisions are made. The association would also intervene as a group in PUC cases that adversely affect large nonprofit institutions.

Stanford staff members have been following PG&E rate cases closely for two years. They knew that the University of California's state-wide office was involved in similar activities and that other universities and colleges were interested in the efforts of the two schools. So they decided to attempt to establish a more formal organization. The purpose of this summer's meetings has been to work out the administrative details of such an association.

According to the most recent proposal, the association would be led by a steering committee chosen from among the institutions involved: the UC systems, the State University and College system, the state community college system, and the independent colleges and universities.

Consultant sought

This committee would hire a consultant who would follow the utility rate cases and PUC decisions and provide an information service for the members. The group would also hire a law firm to represent the association in PUC hearings, when the committee decides that rate case intervention would be beneficial. The membership fee for the association would be based in part on a percentage of the school's annual energy bill and in part on the number of utilities that the school wishes to monitor. Under the present scheme, Stanford would contribute about $13,000 to the effort.

While the existence of an association would not be a guarantee of immediate financial payback for the member institutions, such a return is a possibility. As a result of testifying in a natural gas rate case in December, 1980, the University of California was able to convince the PUC to conform to the wording used in certain Federal regulations. As a result, the UC-Berkeley campus qualified for annual savings of about $300,000, as well as a lump-sum credit of $200,000.

The Stanford representatives are not emphasizing the possibility of such immediate financial rewards, however. "We may end up intervening in a case which will save us all a significant amount of money," said Teater, "but since we cannot guarantee such results, we will continue to emphasize the administrative benefits of the association. We can certainly save time for those who have been performing overlapping duties in the past, and we are sure to be able to cut down on budget uncertainties associated with energy price instability."

From Stanford to Harvard, electronic mail now links more than 1,000 users

The President of Stanford uses it. So does the University of Chicago. If you are a Stanford faculty or staff member, you may be using it too.

More than 1,000 people at institutions from Stanford to Harvard participate in CONTACT/EMS, the electronic mail system administered by Stanford's Center for Information Technology (CIT). In these people's offices, the computer terminal has become as essential as the telephone.

Access to CIT's IBM 3081 computers offers several advantages over both the telephone and ID mail. Electronic mail can be sent whenever it's convenient for the sender; it's transmitted instantly; and it can be processed in turn whenever it's convenient for the receiver. Paper copies can be made if desired.

Research confirms the benefits of electronic mail: users tend to send and receive fewer paper and phone messages, and they believe the quality and quantity of their work has improved.

Electronic messaging at Stanford has been growing for several years now. The ancestor of CONTACT/EMS is WYLBUR MAIL, with which users of CIT's IBM computer system can "talk" to each other while logged-on to the computer or send messages to others' electronic mailboxes.

In 1979 the WYLBUR delivery vehicle was combined with the storage and retrieval facilities of SPIRES, a database management system. This led to the development of the Terminals for Managers (TFM) electronic mail system, which in turn evolved into CONTACT/EMS. The user community has expanded to include nation-wide educational groups such as the Association of American Universities.

While logged-on to their WYLBUR account, users of CONTACT/EMS can compose messages and send them to other users' electronic mailboxes. CONTACT/EMS includes an extensive directory, allowing messages to be sent using a person's individual name or a distribution list name, as well as a computer account.

When messages are received, they can be forwarded or replied to, filed under a given subject, discarded, or filed to be brought up again on a specified date.

The EMS staff is continuing to develop the system, producing enhancements such as the recently installed automatic answering feature, which manages your electronic mail while you are away from your office for an extended period.

CIT is offering a one-session introductory course this quarter on the use of CONTACT/IMS for those who are interested in learning more about electronic messaging. The class will be given from 10 to 11:50 a.m. Thursday, Oct. 7, in Turing Auditorium (Polya Hall, Room 111) by Suzanne Mills of Departmental Information Systems. Registration is at the Information Desk in Forsythe Hall.

Copy centers run 3 million a month

The main copy center operated by Word Graphics is open from 8 a.m. to 5 p.m., Monday through Friday. It is located in the Graduate School of Business, Room B-02.

Word Graphics Copy Centers produce three million copies per month using top-of-the-line Xerox and Kodak duplicators. They now have a 27 percent enlargement feature with their new Canon copier.

First priority is to complete all jobs submitted by campus departments. If workload permits they will accept personal and nondepartmental jobs.

For order forms and information on services call 497-3132.

New publication-quality laser printer offered users of 3081 computer by CIT

A new publication-quality laser printer, the Xerox 9700, is being offered to users of the 3081 computing node.

Edgar Williams, director of Computer Systems and Services at the Center for Information Technology (CIT), announced that introduction of the 9700 marks the first step in the development of a "printer/publications node" on SUNet, the campus computing network.

The Xerox 9700 is more than a printing subsystem, in that it has the ultimate capability to do significantly more than the present laser printer.

Like the IBM printer now in use, the Xerox 9700 uses a laser to produce character images on a page. It prints 8½ by 11-inch pages at a rate up to two per second, and at a resolution of 300 dots per inch (twice the resolution of the present printer).

This means that copy from the Xerox 9700 looks like letter-quality typewritten material, a great boon to those who would like to make more use of computer-aided publishing tools.

The Xerox printer also allows character sets to be more clearly defined than was possible in the past; it will eventually allow a greater variety of print styles, including proportionally spaced characters. The Xerox prints on plain white bond, 3-hole punched, and blue paper.

The 9700 printer can print on both sides of a page (duplex printing), and can print on the entire page, including top and bottom margins. Two page formats are available: "portrait," in which the lines are printed parallel to the short sides of the page, and "landscape," with the lines printed parallel to the long sides of the page.

Also a double-page format allows printing of two pages on one side of a page, using a smaller typeface. The double-page format allows compact, high-density printing of archival or reference data. Each page side contains two complete page images, cutting in half both the size and the cost of the output. The size of the output can be reduced further by using the duplex option to print on both sides of the paper.

Initial service for the Xerox 9700 is limited, but significant enhancements and a transition to a wide variety of publication-quality output are planned.

A document called "Using the Xerox 9700 Printer" will soon be available from CIT's Document Sales office in Forsythe Hall.

Museum, Gallery closed by strike

The Stanford Museum and Art Gallery will remain closed for the duration of the strike of service, maintenance and technical employees at the university.

When the labor dispute has been resolved and the museum opens, the following exhibits will be on view: **Museum**, *Paul Harris: Still Life* thru January 2, 1983, and *Printmaking Techniques* thru December 19, 1982; **Art Gallery**, *Venice in the 18th Century* thru December 19, 1982.

University contends final wage offer fair, competitive

The following statement is a collaborative effort by several administrators and represents the viewpoint of the University administration.

The University says that it has bargained in good faith and placed a fair offer on the table. The union says that the University can afford to pay much more, that the offer is less than other staff at Stanford are receiving and that the University is refusing to negotiate. Such differences in perception result from misunderstandings about two things: the nature of the economic forces now acting on universities, and the character of the collective bargaining process.

Stanford is often thought of as a "rich" university. It does indeed have a larger endowment than many schools—but as a charitable trust, it must exercise fiscal responsibility to keep that endowment intact and maintain a balanced budget. In that budget, the significant income sources are tuition, funds given by the government for the general support of research and earnings on its endowment. Of those the University can only control tuition. Thus the major annual increases in expenses, such as salaries and energy, must come primarily from sources such as tuition increases or reduction in the expenses for items such as academic programs and student aid. Obviously, though, there are limits as to the amount of tuition increase and program and financial aid cuts. Last year the University made substantial expense reductions, partly so that faculty and staff salaries would move up with inflation. This past spring improvements in salaries for faculty and clerical workers were announced to make their pay competitive with that offered by outside employees.

The union has claimed it should receive a wage increase that exactly matches or betters these. In fact exact comparability is neither fair nor reasonable. University faculty and staff do different jobs, are comparable with different "markets" and have different compensation structures and histories. The total offer made to the union would provide wages and benefits very competitive with those provided to similar employees by comparable employers, including the University Hospital; it is substantially above the current inflation rate; and it is about twice about the national average for negotiated new contract agreements in this year.

The University's offer was developed through negotiations at the bargaining table. In collective bargaining there are two quite different approaches—a party may start with proposals far from any reasonable goal at which it ultimately wishes to arrive, or it may start fairly close to that ultimate point. The first approach subsequently allows large and seemingly dramatic moves by the party but places the party in the initial position of making proposals that are not particularly credible. ("We have reduced our demands by one-half—we now want only a 50 percent increase.") The second approach provides credibility because the proposals are close to an ultimate reasonable goal, but restricts the party's ability to move significantly further.

continued on next page

USW proposals called "excessive"...

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Baratz announced Tuesday that union members would start a vigil at 7 p.m. on the lawn of Lou Henry Hoover House, the University-owned residence of President Donald Kennedy. "We're going to stay there until we settle the strike," he said, adding that the vigil will be "nice and peaceful." Participants, including people from other unions, will bring candles, he said.

The Stanford Daily reported Tuesday that at a union membership meeting Monday afternoon a move failed which would have required the negotiating team to get membership approval before accepting any new University proposals.

Of the tabled motion Baratz said Tuesday "it's clear we've made an incredibly reasonable proposal and this shows the membership is concerned that we don't go down any lower."

Strike support remains high, with approximately 800 workers still off their jobs. Picket activity, which was suspended during the weekend, continues, but many delivery trucks are crossing the lines. Pickets were removed from major construction project sites last week and construction is again underway.

In the last week, vandalism dropped dramatically, but Stanford police are still working 12-hour shifts.

Over the weekend, the campus came alive with more than 12,000 students who begin fall quarter Wednesday.

Food service affected

The strike's greatest inconvenience was to the University Food Service, which is trying to feed the 3,300 students who live in dorms it serves. Food Service Director Maxine Anderson Tuesday had nothing but praise for students, staff, faculty, and administrators who are working together to get the job done. Many faculty residents are hosting students for dinner in their homes. Fraternities and eating clubs also are helping out by serving other students.

Food Service supervisors and mangers worked long hours preparing food for freshman attending orientation Thursday through Sunday. On Monday, Anderson's staff began serving breakfast and lunch on cash basis at Wilbur Hall.

Students were given rebates covering what they paid for meals during registration Monday and Tuesday. The rebates will be handed out every Monday at the Old Union Cashier's Office from 9 a.m. to noon and 1 to 4 p.m. for the duration of the strike.

Approximately 1,000 meals were served Monday, Anderson said. Adequate staff has now been assembled so that Florence Moore Hall will open for breakfast and lunch Wednesday.

Among Anderson's helpers are Jason Mavis, associate vice-president for business and finance, who worked the grill cooking hamburgers during freshman orientation, and Norm Robinson, associate dean of student affairs, who served on the line. Paul Hanna, emeritus professor of education, and Ed Scoles, director of housing management, worked cash boxes at Wilbur Hall Monday.

The University's final offer, presented Sept. 7, is for a 9.5 percent increase the first year, with increases of 7.5 to 10 percent in the second and third years of a three-year contract.

The union says its proposals would cost the University 11.5 percent the first year and 12.6 the second.

—Karen Bartholomew

Students must initiate request for help, Lyons notes

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While it makes both deans and parents jittery at times, Lyons noted that students are repeatedly told: "If you need help, ask for it. There's lots of help here and it is responsive. But the responsibility for seeking help rests with you."

While the University pays attention to students, they are not monitored as closely as parents or high schools might do.

"We do have safety nets here," Lyons said, "But they are not constantly in view.

"As parents, you may learn from time to time that things are not going perfectly—that your son or daughter is experiencing some difficulty or another. It is perfectly reasonable in such situations to ask them what *they* have done about their quandry, whatever it is."

Stanford's own studies of undergraduates have shown that most students continue to turn to their parents for advice and support, Lyons added. "It seems to be a time when they begin to view their parents as friends rather than as someone to grow up under; as a sounding board for views and opinions rather than as sources of direction and control; and as sources of pride, encouragement and good comments."

"There is an underlying assumption here that students learn and grow better if they learn about, confront, and come to terms with the social, religious, and ethical differences that abound in our society. (These) will show up repeatedly in the informal curriculum of residential life at Stanford."

Lyons observed that "few universities so deliberately try and so obviously succeed in having a student body as diverse as at Stanford. Aside from the common traits of high aspirations, brightness, and a history of solid academic achievements, this student body is amazingly diverse.

President Donald Kennedy urged the parents to reinforce in the young "a sense of adventure, a willingness to take intellectual and social risks, and a curiosity about portions of the world that have previously been beyond their reach.

"For that voyage we can provide a good stock of opportunity, and eager hands to help. But we cannot compel, any more than you can, the drive to explore and to know. We can only believe in it, hope for it, and reward it."

Admissions Dean Fred Hargadon said that the nearly 14,000 applicants to Stanford this year were "academically able" and "highly energetic," coming from every state and more than 50 foreign countries.

More than 2,000 had straight-A averages in high schools. Well over half had grade point averages of 3.5 or more on a 4.0 scale. In the past four years, applications to Stanford have risen about 40 percent while the freshman class size has remained unchanged.

To understand student interests, Hargadon suggested, the most important single fact to keep in mind is the year in which they were born—basically 1963-65 for this year's freshmen.

This year, for the first time, Stanford applicants were asked what person in history they would most like to meet. One replied: "The Beatles." Another, more calculating, said: "The mother of the dean of admissions."

Don Kennedy...

continued from page 10

"Confronting other cultures, other values, other beliefs, can only succeed if you are willing to do things that occasionally make you uncomfortable.

"I urge you in the strongest possible way to take those risks, to avoid the temptation to seek the comfort of the familiar in your years here."

Kennedy said: "You are in every way the most remarkable freshman class ever to enter Stanford," quickly adding: "I enjoy being able to say that each fall; it indicates we are moving in the right direction."

Applicant test scores averaged 10 points higher that last year's, he noted. "You come from all over the world, as well as from all parts of the U.S." Geographically, the class balance has shifted significantly, with more students coming from the East and fewer from California.

As he did with last year's seniors, Kennedy urged the freshmen to develop a tolerance for ambiguity: "This is not a world in which many things are certain. We often need to exist for a time in the presence of awkward, unresolved difficulties. . .but there is comfort in sharing a challenge. . . . Others are in the same boat; talk to them about it. . . .

"The great issues with which we grapple are seldom confrontations between good and evil; rather they are collisions between competing goods.

"Also, I wish for you a strong, but not incapacitating, skepticism about certified truth.

"Remember one of the great Stanford lessons: the textbook may be wrong, even if the professor teaching the course did write it.

"That is not a criticism of your professor, who is doubtless wonderful. But the impermanence of the written word, the instability of conventional wisdom, is an important part of the intellectual dynamic in which I hope you will choose to live. . . .

"Confidence in your own capacity to analyze, interpret, project, experiment, and reason includes the suspicion that *they may have it wrong*.

Besides maintaining a sense of humor, he suggested, "be committed to things in an unembarrassed and enthusiastic way. Being 'cool' is really not so great. . . .

"Be willing to speak up for an important idea, to urge others to get involved in something important, even when you appear to encounter reluctance and passivity. There are all sorts of things in this world that are much worse than being condemned for overenthusiasm."

Letters to the editor

University should improve final offer, end strike quickly— six faculty

Editor, *Campus Report*:

Many of our colleagues have told us they do not understand the issues at stake in the current labor dispute between the University administration and the United Stanford Workers, Local 715, and the implications of the strike and the stalled negotiations. Perhaps their uncertainties result from the adversarial character of most material published by both sides and the difficulty of reading between and under the printed lines.

While not pretending to complete understanding of the intricacies of the dispute, we think we have some insights worth sharing with the community. Our first purpose is therefore informative.

But we have a second purpose: to urge the University administration to resume the negotiations which it stopped with its "final offer" to the union of September 7.

The United Stanford Workers, numbering about 1,300, are a heterogeneous group, with membership ranging from carpenters, electricians, plumbers, and skilled technicians at SLAC and elsewhere, to gardeners, food-service workers in the dormitory kitchens, and custodial and janitorial workers. Their contract with administration expired on August 31. After negotiations lasting more than two months, the administration made its "final offer" on September 7 and the union went out on strike on September 10.

There are three stated issues: the union's demand for information about temporary workers, job-shoppers and workers that are contracted for with non-union agencies; wages; and medical and dental benefits.

The first issue is the union's legal justification for the strike because it failed, apparently, to give the required thirty days notice of a strike for economic causes to the NLRB. For two years the union has been demanding this information, presumably because they believe that these workers do the kind of work that ought to be done by union members and they want the opportunity to organize them. The NLRB has ruled in the union's favor on this issue, but the university has appealed that ruling in the courts, on the grounds that it needs these non-union workers for "flexibility."

One of the union's early demands in this area might have had an impact on working hours available to students because the union sought a redefinition of part-time work from 19.9 hours per week to 14.5 hours per week. But the union has dropped that demand, so nothing related to the first issue threatens the part-time jobs of students.

The second issue, wages, is the most difficult to describe because of its intrinsic complexity and the intricacies of the language in which demands and offers are stated. The administration's "final offer" includes four components: a three-year contract; a 9.5 percent across-the-board increase in the first year; a 5 percent across-the-board increase in the second and third years; and new "fourth steps" of 2.5 percent in the second year and 2.5 percent in the third year. The "step system" involves graduated increases in pay related to length of service in the job; the expired contract had three "steps."

On September 17 the union made a major reduction in its wage demands. The latter now have three components: a two-year contract; in the first year an increase of 10.25 percent or $140 per week, whichever is higher (the union estimates this increase, designed to give particular help to its lower paid members, as averaging out at 10.75 percent); in the second year an across-the-board increase of 5 percent plus the introduction of a new fourth step of 5 percent; and "realignments" or upward reclassifications of the jobs of about 50 percent of the workers, involving increases of up to 15 percent for some workers. The union and administration agree that the realignments would increase the wage base about 3 percent.

The third issue is medical and dental benefits. The administration has offered **no** improvements in this area. The union is making three demands: that the administration pay for any increases in the cost of medical insurance; that in the second year the administration pay for full coverage for dependents in the cheapest plan (probably Kaiser); and that in the second year the deductible for dental insurance be reduced from $150 for a family of three or more to $50 for a family of any size.

We have a few observations to make about these issues. We agree with the NLRB that a union should have the opportunity to identify workers who, in an open shop, might wish to join the union if they understood the options. It is sadly indicative of the lack of such an opportunity that, when two janitors cleaning the rooms of Inner Quad were asked about the strike, they responded: "What strike?" Not surprisingly, the janitorial work in Inner Quad (and elsewhere?) is contracted out to ACME.

Wage differences appear small

On wages, the two sides seem so close, apart from the difference over length of contract, that they should be able to settle the matter quickly if the administration would budge from its "final offer." Priscilla Wheeler, the administration's negotiator, stated, in her September 21 memorandum to the University community, that the union's demand is "of such magnitude" as to be "simply not reasonable." Surely this is an instance of managerial hyperbole.

Medical and dental benefits cry out for improvement, not only for members of the union, but for members of the faculty and staff as well, especially with respect to coverage for dependents.

It is ironic that Priscilla Wheeler boasts of the contract's including a provision "requiring the University to offer to USW any benefit improvements made for other University employees." If the union had not won a dental plan for its members, it is highly unlikely that faculty and staff would have even the inadequate one they have now.

This review of the issues raises in our minds a crucial question: why has the administration refused to move from its "final offer" of September 7 when the union has shown genuine flexibility in its demands?

Is it possible that the real issue in this dispute from the administration's perspective is not money but **unions**?

Does the administration have its eye on the vote, to be taken soon, by the technical and service workers at the Hospital, to organize, to join USW or not to join? Is the administration refusing to move from its "final offer" in order to starve the union into acceptance and thereby make it appear an impotent agent in the eyes of the Hospital workers?

Now we wish to turn to the implications of the strike's continuation, due so far as we can tell to the administration's refusal to bargain, for us as members of the faculty, for our students, and for the university community.

For many teachers, especially in the Humanities, Social Sciences, and programs like VTS and Western Culture, the nature of justice is a central issue in our courses, and most of us, we believe, hope that our students come to admire and strive for a just society. But a university community in which members of the faculty are receiving raises of up to 11 percent and secretaries about as much, but in which technical and service workers are offered raises of 9.5 percent, strikes us as setting before our students an example of an unjust society, especially when some of those workers, like cooks and janitors, are trying to support families in the Bay Area on about $6 per hour. Similar percentage-raises mask the injustices created by the different wages on which those raises are calculated. And even Plato, that great admirer of hierarchy, might have balked at Ms. Wheeler's argument that the setting of wages must be "dominated by consideration of the 'markets' " for employees outside the University.

Moreover, we believe that most of us try to help our students understand the origins of racism stereotypes in our culture in the hope, so often expressed by Donald Kennedy in his addresses to students, that they will come to respect and cherish people different from themselves.

Strike may foster racial hostilities

But we fear that the continuation of this strike will breed hostility in many of our students toward workers for not providing them the services that they have come to expect; and because the workers most directly denying them these services are the Blacks and Chicanos who ordinarily work in the kitchens and clean the toilets, their hostility to the workers might quickly translate into hostility to racial minorities.

This problem, we fear, will be especially acute in the dormitories—Wilbur, Stern, Branner, Florence Moore, Roble, and Lagunita—and it will impose a virtually intolerable burden on Resident Fellows and Resident Assistants who will be making strenuous efforts, both during and after the strike, to discourage tendencies to racism.

Finally, we suspect that few members of the faculty realize that, as of Monday, September 27, no evening meals will be served in the dormitories. Apart from the logistical problems of helping students, especially freshmen who do not know the area, find those meals, resident fellows and resident assistants will lose one of the most important contexts they have for residential education—the leisure of dinner. And the students will inevitably be distracted from study by the scramble to find evening meals.

Our conclusion is simple: the strike must be ended quickly, and the administration must move from its "final offer" of September 7 and bargain in good faith to end it.

Ronald A. Rebholz, English
Sandra Drake, English
Lucio Ruotolo, English
Arturo Islas, English
William M. Todd II, Slavic languages
John Winkler, classics

USW plans vigil at President's House

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In this case, the union has used the first bargaining approach, and the University the second. Thus, the union was able to make many moves away from its proposals because the proposals were excessive to begin with while the University has been able to make only small moves, because it chose to make proposals that were reasonable and credible to begin with. The University's negotiating team advised the union at the time of its proposals that the University was not holding back significant amounts, but was making proposals very close to the University's ultimate goal.

Where have these efforts led? The University made a final offer because the union had stopped making significant moves. A final offer, as the union is aware, does not mean that the union must accept that proposal precisely as it was structured by the University. The purpose of the offer was to alert the union to the fact that the University's ability to make further major compromise was exhausted and to provide the union with a clear and candid indication of the University's viewpoint. Obviously the University was signaling that it would accept anything reasonably close to its offer. Equally obvious, the University would not accept proposals that are as excessive as those the union has been making during the strike.

At this point the union continues to strike and to claim its decision was forced by the University. Yet, the choice to strike was USW's. Strikes are not necessary to the resolution of contract disputes. The University would have continued neogitating in good faith and would have worked hard to reach agreement with or without a strike; and it will settle only on terms that it believes it can responsibly approve, with or without a strike.

Six professors plan lectures at Palo Alto's Senior Center

Six Stanford professors will discuss "Our American Political and Cultural Heritage" in a series of public lectures at 2 p.m. on alternate Mondays, starting Oct. 4, at the Senior Center of Palo Alto, 450 Bryant St.

Prof. Carl Degler of the History Department will give the opening lecture on "Understanding American History Today" and will speak again Nov. 15 on "Plantation Culture in the South."

Other speakers and their topics will include Prof. Seymour Martin Lipset, senior fellow at the Hoover Institution, "Creating a New Nation: The Revolutionaries and The Statesmen," Oct. 18; Prof. Jack Rakove, history, "The Revolutionary Legacy and Northern Society," at 2:30 p.m. Nov. 1; Prof. Don Fehrenbacher, history, "Fort Sumter and Appomattox," Nov. 29; and Prof. Jay Fliegelman, chairman of American studies, "The American Enlightenment and Its Legacy," Dec. 13.

Prof. William Goss, historian and emeritus president of Canada College, will discuss "The World Today" at 1:30 p.m. on alternate Mondays, starting Oct. 11.

The lectures are free to senior center members, 25 cents each to non-members.

Derwood Becker, emeritus professor from New York University, is coordinator of the series. It is part of the group services program conducted by Beverly Fuchs.

Further information may be obtained by calling the Center at 327-2811.

Academic Council

To Members of the Academic Council
Notice of Special
Academic Council Convocation
Friday, October 8, 1982

A special meeting of the Academic Council will be held on Friday, October 8, 1982, beginning at 4:15 p.m. in Dinkelspiel Auditorium. The agenda for the meeting will be as follows:

1. Remarks by the Provost and announcement of national awards to members of the faculty.
2. Remarks by the Deans of the Schools and announcement of teaching awards to members of the faculty.
3. Minutes of the Council meeting held on April 9, 1982 (Draft minutes below).
4. Memorial Resolution: Friedrich W. Strothmann.
5. Report from the Chairman of the Senate.
6. Report from the President.
7. Unfinished business.
8. New business.
9. Adjournment.

The President and Provost will host an informal wine and cheese reception following the meeting.

Clara N. Bush
Academic Secretary

DRAFT MINUTES OF THE ACADEMIC COUNCIL

(SUBJECT TO APPROVAL)
April 9, 1982

The Spring Quarter meeting of the Academic Council was held on Friday, April 9, 1982, beginning at 4:15 p.m., in the Physics Lecture Hall (ph100), with President Donald Kennedy presiding.

The Minutes of the Academic Council meeting held on January 8, 1982, and published in draft form in *Campus Report* of March 31, 1982, were approved as submitted.

The following memorial resolutions were presented to the Council.

MEMORIAL RESOLUTION
VERNON DALE WICKIZER
(1904 — 1982)

Professor Eric Hutchinson presented a resolution in memory of the late Vernon D. Wickizer, Professor Emeritus in the Food Research Institute, who died on February 8, 1982. The resolution, which was prepared by Emeritus Professor William O. Jones (Chairman), Professor Walter P. Falcon, and Professor Roger W. Grey, was adopted by the Council in the customary mannner.

MEMORIAL RESOLUTION
ANATOLE GREGORY MAZOUR
(1900 — 1982)

Professor George H. Knoles presented a resolution in memory of the late Anatole G. Mazour, Emeritus Professor of History, who died on January 26, 1982. The resolution, which was prepared by Emeritus Professors Wayne S. Vucinich (Chairman), Thomas A. Bailey, and George H. Knoles, was adopted by the Council in the customary manner.

REPORT FROM THE CHAIRMAN OF THE SENATE

Professor David B. Abernethy, Chairman of the Fourteenth Senate, presented a report on the activities of the Senate during Winter Quarter 1981-82. The full text of Chairman Abernethy's report is given below.

REPORT FROM THE PRESIDENT

President Kennedy thanked members of the Council for agreeing to meet one week later than is usual. The delay of one week was caused by the scheduling of a memorial service for Mrs. Kennedy's mother, who recently died.

President Kennedy said that he wished to devote much of his report to a discussion of undergraduate education at Stanford. He did so in part because the undergraduate program lies at the heart of the University, and in part because in his inaugural address a year ago he had identified undergraduate education as an important priority for future planning.

During the past academic year we have seen the complete installation of the Western Culture Program and the new Distribution Requirement program. There have been the usual growth pains, but the programs have fared better than is expected of academic experiments. Likewise the new program in Public Policy is off to a good start.

A remaining, and troublesome, item is the lack of multi-quarter programs that, while directing attention at particular themes or fields, would satisfy two (or even three) areas of the Distribution Requirements. Especially troublesome is the lack of new courses for non-majors in the sciences and technology. President Kennedy said that we plainly cannot afford a society in which to be "educated" does not demand basic scientific and technological literacy.

Professor James L. Adams will shortly be taking over the direction of the program in Values, Technology, and Society, and President Kennedy appealed to all members of the Council to assist Professor Adams in that work.

We have a continuing need for ways in which undergraduate students can acquire experience in independent study. During the 1960s and early 1970s, a number of departments had active undergraduate research programs. Much of that activity has survived, and we now have some centrally organized programs in undergraduate research, but we ought to make a much more intensive effort in this field in order to have our undergraduates take advantage of being in a research university.

This past year, when we are undertaking a large undergraduate residence construction, has provided an opportunity for concentrating on residential education.

Provost Hastorf has appointed an *ad hoc* committee to look at many aspects of undergraduate education, including the organizational arrangements for the management of and advocacy for undergraduate education. One possible outcome of that committee's work may be a closer and more effective working relationship between pragramming and planning for undergraduate education and the Schools and departments most directly involved in getting it done. Our present system has only minimal central controls over the curriculum. That circumstance has been valuable and has led to innovations and flexibility, but it has also produced some schedule problems, some complaints about overlap, and a thick catalog that many believe needs some pruning.

Whether we intend it or not, we can easily transmit the wrong signals about our values regarding undergraduate education. The neglect of quad classrooms and some of our major lecture halls may well have been such a wrong signal - one that we cannot afford to tolerate. Over the past two years we have spent nearly $300,000 restoring some of those facilities to first-rate condition, and others will be restored in the coming years.

Our plans for residential education provide for greater faculty involvement. Seven of the eleven houses in the new complex have been designed with faculty residences, and a number of distinguished faculty members have agreed to take up residence there.

President Kennedy said that in his talk to the seniors at Commencement he had gone to some lengths to exonerate them from charges of being too "careerist and preprofessional." During the current year, he said, he had experienced some twinges of doubt. There are grounds for concern that many of our students appear to focus on the aftermath of their Stanford experience at the expense of the here and now. That problem may be worst for just those students who know most clearly what they want to do. We should not flag in our determination to encourage our students to think much about matters unrelated to their career ambitions.

A major problem in any undergraduate education program is to know how effective our efforts are, what we have added to the students' values through our own efforts. We have developed a serious program of assessment through the institutional researches initiated by Dean Katchadourian. We are now acquiring more information than we ever had before about what undergraduates do at Stanford and how they feel about their experiences here. In particular, the Senior Survey tells us something about student reactions to major programs, instructors, etc.

These studies will remind us how important students are to *one another* in the educational process. That point is worth emphasizing, because, paradoxically, it is the quality of our student body that is most threatened by current economic and political forces. We shall continue to admit students without reference to their financial needs, but it will be harder than ever before to find the means to do so. Yet nothing can be more important than for us to continue to admit students on the basis of merit alone. Our need-blind admissions policy is central to everything that we do, and if a principle is good, as we believe this to be, it is worth keeping absolutely intact.

President Kennedy ended his report by reading a letter that he had recently written to the father of a member of the class of 1985, who had congratulated the University on the fine experience that his scholarship-holding daughter was having while, at the same time, apologizing for the family's present inability to make a financial gift to Stanford.

The full text of President Kennedy's report may be read in *Campus Report* of April 14, 1982.

There being no *Unfinished Business* and no *New Business* having been raised, the Council adjourned at approximately 5:00 p.m., on a motion moved and seconded.

REPORT OF SENATE CHAIRMAN, ACADEMIC COUNCIL MEETING, APRIL 19, 1982

Winter quarter is usually the least busy time for the Senate. In autumn quarter the Senate is occupied in hearing Annual Reports from the seven Council Committees; and in spring quarter policy matters that have been generated in those committees during the previous two quarters begin to come before the Senate for action. This year's agenda has been different.

For a variety of reasons, two Committee Reports, those for the Committee on Graduate Studies, and for Undergraduate Studies, came to the Senate in winter quarter.

The main item in the Annual Report of C-GS dealt with the transferability of credit from another institution to Stanford. For many years it has been the practice for the Graduate Studies Office to rule on the transferability of course credit. The Committee decided that in such basically academic matters it is much more reasonable for Schools (and their departments) to make those rulings. The Senate approved that change.

Another recommendation from C-GS fared less well in the Senate. For many years the Graduate Studies Office has held as informal guidelines a number of recommendations, proposed in the 1972 Report of the Study of Graduate Education at Stanford, for terminating graduate students on academic grounds. It is rather extraordinary that, in the 10 years since those recommendations were made, the Senate has not been asked to affirm them as *policy*.

The termination of graduate students for academic reasons is not a common occurrence, but when it does occur it occasions some difficulty and some pain for all parties. It is reasonable for both students and faculty to expect that we should have a clear policy to deal with a step as serious as termination, and in February C-GS brought to the Senate for approval what were, for all practical purposes, the 1972 recommendations for dealing with this issue. The Senate, after fairly lengthy discussion, decided that the language of the recommendations needed to be written more clearly, particularly as regards the way in which evidence unfavorable to a student should be presented and evaluated. The Senate also questioned whether rules that might work well in large departments are equally appropriate in small departments.

The outcome was that C-GS was asked to reconsider its recommendations and to submit them to the Senate at a later date. This is an important matter and we should establish a clear policy as soon as we can.

Most of the items in the Annual Report of the Committee on Undergraduate Studies had already received Senate approval, so that no new policy actions needed to be taken. But one rather troublesome matter came up—not for the first time. C-Us has statutory oversight responsibility for about 15 academic programs, some of which nominate candidates for degrees, which are not "lodged in academic departments." These programs are subject to review by the Senate every five years, and approval for continued authorization is by no means a routine matter. The accidents of history have resulted in the accumulation of a large number of such reviews during spring quarter of this year, which means that the Senate will be busy. The large number of programs that has accumulated prompted the Senate to consider a more general question to which these programs are related.

Interdepartmental programs not infrequently entail setting up new courses, and that, in turn, uses up some University resources. In most cases the funds to support these programs come from a budgeted item called Consolidation and Improvement. Some years ago that "C & I" item amounted to three percent of the Operating Budget base, and we could afford to be relatively generous and open-handed in supporting new programs. In recent years, however, rising costs have forced a reduction in the percentage of the Operating Budget that we can devote to "C & I." The figure is now 1.5 percent, and there is some doubt that it can be maintained at that level unless Deans are able from their own resources to make some financial contributions to innovative programs.

Accordingly, the Steering Committee, and later the Senate, concluded that the review and re-authorization of these programs should be more searching. We probably cannot afford to keep establishing new programs unless we

Academic Council...

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are prepared to terminate some that have not come up to earlier expectations or have outlived their usefulness. The Senate therefore has asked that all future reviews of interdepartmental programs include comments by Deans on the financial impact of individual programs and committee views on their comparative educational value. This spring we hope to review programs in related clusters, to make better comparative judgments.

As far back as last summer, the School of Medicine, after an extensive internal study, concluded that its main component of the adjunct professoriate—the Associate Professors and Professors of Clinical Subjects—labors under the disadvantage of titles which discourage recruitment. Dr. Crowley requested that the titles be changed to something along the lines of "Professor of Anesthesia at the Valley Medical Center." Shortly thereafter the School of Engineering raised questions regarding the adjunct professoriate, and from other sources questions concerning who should or should not be allowed to serve as a principal investigator arose. The Senate decided that the questions were sufficiently numerous and of sufficient importance to justify the formation of an *ad hoc* Committee on the Adjunct Professoriate, with fairly broad terms of reference.

Nearly two years ago the Senate established a committee on the status of our emeriti. That committee reported to the Senate on January 21. The report was published in *Campus Report* and I will not repeat it here. Although many of our emeriti seem to be surviving financially, there is a small number who are clearly suffering some financial hardship. It was reassuring to learn that the University has offered to provide some relief in those cases which, were it not for the existence of this valuable committee, might well go unnoticed.

At the same January meeting the Senate also heard a final report from the Provost's Task Force on Retirement Policies. That report also was published in *Campus Report*. The main conclusions in the report were that Stanford should continue to have a mandatory retirement age, under the law, as it now stands, at age 70; that provision should be made (as it has been) to make it financially possible for faculty members to take early retirement between the ages of 62 to 70; that, whenever it is mutually beneficial, departments should recall emeriti to part-time active duty; and that the Personnel Office should provide counseling for faculty members approaching retirement or contemplating early retirement. In all, the Task Force has made 11 recommendations; a number have already been approved and put into effect; others are still under study by the administration.

The Senate also heard a report on the University's Comprehensive Housing Program, the highlights of which have been published in *Campus Report*. The program is based on an extensive survey of faculty and staff on their perceived needs for campus housing. In addition to the Peter Coutts units which are now well along in construction, the long-range program includes the purchase of housing in the Oak Creek Apartments and the building of some 1,200 housing units in the neighborhood of the Children's Hospital and some 190 units on a smaller site on Welch Road. The report provides definitions of various eligibility pools. The comprehensive program for housing, which follows last year's program for land use, is a useful document, but it must be remembered that it is a program, not a settled policy that must be followed in every detail in some predetermined time-sequence.

In February the Senate heard a wide-ranging and fascinating account from Dean Cox of the work now being carried out in the School of Earth Sciences. Dean Cox took us on an interesting tour which started with a theory of fossils in 18th century canal-digging in England, passed through the present-day formation of mineral deposits on the ocean bed, and dealt with great movements in the earth's crust as interpreted in terms of plate tectonics. Dean Cox also pointed out that the Geological Survey, is very directly involved in geological research. That circumstance produces a need for the School to look at sources other than the federal government for a substantial fraction of its research support.

In March the Senate heard a presentation of the Operating Budget Guidelines for the coming academic year. It should be a comfort to members of the Council to understand that with some tightening of the fiscal belt—to the extent of one percent of the budget base—Stanford is looking at 1982-83 with the prospect of a balanced budget for the sixth consecutive year. To balance a budget, in the face of rapidly rising costs—for labor, for materials, and most of all for utilities—is no small achievement in times when the return on stock market investments is notably poor. The feat is the more remarkable in that, in the same year, the University is taking strong steps to reduce the dependence of professorial salaries on research grants and contracts, through the long-practiced but risky procedure of "salary offsets." In 1982-83 our dependence will be greatly reduced.

To balance increased expenses, it is elementary that we have to increase income—notably through increased tuition. However painful the Stanford tuition increases may seem, an analysis of comparable institutions shows that we have been relatively restrained in putting further pressures on our students or their families. It is some time since we experienced a substantial increase in the rate of recovery of indirect costs, and one of the penalties for holding the line in this regard is that when increases are inevitable they tend to be quite large. Such will be the case in 1982-83, where the indirect cost recovery rate will be 69 percent, but, Principal Investigators should bear in mind that Stanford's negotiating team managed to retain the principle that the tuition for graduate research assistants continues, against expectations, to be chargeable against the Staff Benefits Pool. Furthermore, the negotiations resulted in desired modifications to the effort-reporting system.

The prospects for 1983-84 suggest that the password may be "austerity," but austerity is not synonymous with bleakness, and we have much cause to thank a number of individuals dealing with budget matters for their ingenuity in finding sound ways of raising and disbursing the University's general funds.

Many of you have read accounts of the difficulties that have arisen from attempts on the part of some government officials to impose on the University, under the guise of new interpretations of regulations dealing with technology export, limitations on how Stanford scholars shall deal with visiting scholars from particular countries. In the face of those difficulties the University administration, notably in the persons of President Kennedy and Dean Lieberman, has spoken with a single unequivocal voice. This is an open university with a very clear policy that forbids the practice of classified research.

At the last meeting of winter quarter the Senate adopted in an undivided vote a statement that reaffirms Stanford's policy on openness in research. It seemed appropriate at this time to reaffirm our position, to make clearly and publicly a statement that openness in universities such as Stanford makes a contribution to liberty in our society and, rather than reducing the effectiveness of our national security, adds to our technological security.

Senate chairmen report to you, routinely as it seems, that each quarter the Senate confers degrees on suitably qualified and approved candidates. On, happily, rare occasions the Senate also takes away degrees. During the past quarter the Senate had the unwelcome duty of withdrawing an advanced degree that it conferred last June and of concurring in a disciplinary decision to suspend, for the same student, a degree for a period of two years. In withdrawing the degree the Senate was not making any moral judgment on the student involved: it came to light that as a consequence of misrepresented grades the student had not in fact qualified for the advanced degree, so that the grounds on which the degree had originally been conferred were inadequate.

I would also like to pay special tribute on behalf not only of myself but also my eight predecessors in chair of the Senate, to Professor Eric Hutchinson for serving so ably and conscientiously as the University's Academic Secretary. At our last meeting, Provost Hastorf announced that Professor Hutchinson would be stepping down from this post at the end of this academic year, to become more involved in writing the centennial year history of the University. I will hold the Academic Secretary remiss as an historian if he does not include some immodest reference, in his forthcoming book, of his own contributions to this University—as our institutional memory, as the authority on parliamentary procedure, as invaluable assistant to the Chair, Steering Committee, and Committees of the Senate, as calligrapher, as chemistry professor—and perhaps most visible as flag designer. You return to a more private life. Professor Hutchinson, with our thanks and best wishes.

MEMORIAL RESOLUTION
FRIEDRICH W. STROTHMANN
(1904-1982)

Friedrich W. Strothmann was born in Elberfeld, Germany, on October 25, 1904. In 1924, after graduating from the local *Gymnasium*, he enrolled in the University of Cologne. There in 1929 he received his Dr. phil. in Germanic philology under the direction of the distinguished scholar Friedrich von der Leyen, and a year later earned diplomas in both English and philosophy. In the latter subject, which he studied under Professor Nikolai Hartmann at Cologne, he developed an enduring interest in the philosophy of Kant and Herder, which also led to his becoming an expert in the thought of Thomas Aquinas. His doctoral dissertation *Die Gerichtsver handlung als literarisches Motiv in der deutschen Literatur des ausgehenden Mittelalters* (Jena 1930) was reprinted in 1969 by the Wissenschaftliche Buchgesellschaft in Darmstadt. In 1930 he was appointed an instructor in Germanic languages at Stanford, and that September arrived by ship in San Francisco to find awaiting him a first-term teaching load of four courses, ranging from elementary German to Middle High German philology and the plays of Schiller. At the end of that busy year, he returned to Germany and, with the help of a non-quota visa arranged for by President Ray Lyman Wilbur, then on leave as Secretary of the Interior, was able to bring his wife Luise back with him to Stanford. Over the next few years, despite heavy responsibilities within his own department, he helped his colleagues in English to set up an important minor program in philology which, as the executive head of that department enthusiastically reported, attracted its graduate students "to real philological study." In addition, he won acclaim for his excellent work as a member of the planning committee of the then-existing School of Letters, and still found time to pursue his study of Medieval Latin and to deepen the knowledge of the writings of Aquinas for which he was noted among many generations of Stanford students.

An amusing sidelight to these latter interests is that, as America's entry into the Second World War approached in 1941, rumors began to circulate that two Stanford professors of German origin were seen to be out suspiciously late of nights around the Menlo Park area. A letter from Professor William Cooper, head of the department, informed President Wilbur that the suspicious persons in question were Professor Strothmann and his colleague, Kurt Reinhardt, who were spending Thursday evenings reading Latin and the works of Aquinas with faculty members of the nearby St. Patrick's seminary.

Willi Strothmann's limitless energy and enthusiasm for the general educational enterprise of the university during these earlier years did not slacken, but rather presaged his later impressive achievements as one of the most innovative and influential educators in Stanford's history. From 1949 until his retirement in 1970 he served as executive head of his department, which expanded for a decade (1958-1968) into the Department of Modern European Languages. As its leader, he worked tirelessly to elevate the various language divisions, several of which had been treated before as mere service units, into strong representatives of the humanistic disciplines. In 1953, he wrote a report on *The Graduate School Today and Tomorrow* that led to his founding of Stanford's interdisciplinary Graduate Program in Humanities, which he also directed during the first five years of its existence. Mindful too of the need to expand the horizons of the undergraduate curriculum, he conceived the idea of the Overseas Campuses and in 1958 served as the director of the original center at Beutelsbach. From 1960-1969 he also supervised the highly regarded NDEA Summer Institute for Advanced Study at Bad Boll, Germany. For his contributions to scholarship and to education in German studies he was awarded the Medal of Merit of the Federal Republic of Germany in 1959, and in 1960 the Silver Medal of the Goethe-Institut in Munich. He was also the first recipient of the Lloyd W. Dinkelspiel Award for oustanding service to undergraduate education at Stanford.

His varied scholarly interests are also reflected in his publications. He is best known for his coauthored textbooks, *German Reading Grammar* (1940), *Reading German* (1943), and *German: A Structural Approach* (1967), which has enjoyed three editions and has been used in more than 500 universities and colleges. In addition, he published articles on Germanic philology, on Herder and T.S. Eliot, and, as general editor of the Milestones of Thought series, issued by Frederick Ungar Company, brought out selections from the writings of St. Augustine and Jean Calvin.

As teacher, administrator, student of philology and philosophy, and educational innovator, F.W. Strothmann has bequeathed a heritage to Stanford that will long survive his more than fifty years as a leading member of the university community.

Walter F.W. Lohnes, *Chairman*
Kurt Mueller-Vollmer
Lawrence V. Ryan

Donald Kennedy
President

Clara N. Bush
Academic Secretary

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

21814-AW (JCC:1464/1472) Student Serv Offcr I/II Fixed term 10/15/82-6/15/83; advise student organizations; elected student reps on programming, funding, etc; interpret Univ policies, guidlines to students seeking planning advice; consult SU faculty & staff who can be of assistance to student groups; prov orientation on Univ to groups needing to work w/ SU depts; ability to establish commu & working relationships w/ all students; QUALIFICATIONS: submit letter of app to Thomas Massey & incl a writing sample (report, publicity announcement, proposal, etc), a proposal for program development, in which substantial work was done by applicant in planning, fundraising, & implementation of program, & outline of workshop appl could facilitate, etc.; C04/C06; $1511-1880/1854-2312.

26671-AW (JCC:5116/5124) Scientific Programmer III/IV Prov support & dir to academic community in area of personal computers; oversee operation of instructional microcomputing facility; asst faculty w/ curriculum & software develop't; participate in planning & implementation of campus-wide microcomputing network; in conj w/ admin group, support dept'l informa sys needs; act as liaison to academic depts in support of instruction & research computing & informa sys; QUALIFICATIONS: Bachelor's degree or equiv edu & exp; 2 yrs exp in application of personal computers, using a variety of software & hardware, pref. in edu environ; 5 yrs applications computing exp in academic or research environ on mainframe computer (pref. IBM); exp in customer serv; exp writing tech docum; exp in sys design & develop't; excel written & oral commu skills; extensive exp in classroom teaching & course develop; for level IV: 8+ yrs exp; unusually thorough knowl of p.c. in educ & of p.c. comm & net working.; C07/C08; $2113-3344/2464-3848.

19639-AW (JCC:6406) SCI & ENGR ASSOC I 50%; the Ctr for Computer Research in Music & Acoustics (CCRMA) is an increasingly complex analog/digital audio facility; prov professional audio expertise in a highly interactive 'open studio' environ; required to work closely w/ composers & researchers in mod, design, develop't & fabrication of high-level audio equip't; prov expertise & serv in areas of audio recording, sound reinforcement, & concert production; maintenance & tech use of CCRMA's listening & recording studios; QUALIFICATIONS: BA or BS in Electrical Engrg or equiv exp; 2-3 yrs exp in tech audio production & in use & fabrication of high quality audio equip't; familiar w/ D/A & A/D converters, line propogation, amplifiers, microphones, speakers & mixer sys, analog & digital tape recorders & expertise in state-of-the-art digital & analog audio techniques.; C06; $927-OPEN.

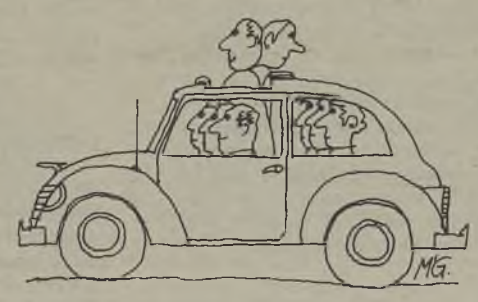
44516-AW (JCC:6406) SCI & ENGR ASSOC I Data commu network troubleshooting: Working w/in Network Control Ctr to serv users & to support central network staff; coord vendor serv technicians at remote sites; maintain & test network diagnostic equip't; plan & implement construction & repair of cable & other network devices; QUALIFICATIONS: good working knowl of digital & analog theory; familiar w/ genl data commu theory & application; diagnostic procedures, synchronous & asynchronous transmission, ADCCP protocols, EIA interface standards (RS232c); effective commu skills, oral & written; able to commu at both tech & user levels to explain network status & procedures.; C06; $1854-2312.

28700-JB (JCC:7526) FACIL ENGINEER/COORD I Fixed term, 10/1/82-10/11/84; asst Energy Engr in implementing Univ-wide lighting efficiency proj; analysis of energy savings potential of various lighting sys changes; financial analysis of lighting sys changes; conduct lighting surveys & supv part-time or student workers conducting surveys, design lighting forms & procedures; prep proj descriptions for contract bids, etc; investigate new lighting & other energy saving products; QUALIFICATIONS: ability to analyze complex problems & develop efficient solutions; exp in energy conservation studies, especially lighting sys; abiltiy to follow thru on detailed studies & implementation; strong commu skills & ability to work well w/ a large variety of people; tech and/or analytical bkground w/ exp in cost-benefit analysis; familiarity w/ Stanford bldgs & community helpful.; C06; $1854-2312.

— Bargaining unit —

33687-PB (JCC:5835) ANIMAL CARE ASST I TMS Unit; 7:30-4pm; basic animal husbandry; watering, feeding, cleaning all types of cages; report sick and/or dead animals to Supvr; maintain animals & work areas in a sanitary condition; maintain supplies inventory; required to work w/ numerous & diverse species at varied sites on campus, etc; QUALIFICATIONS: must possess manual dexterity & some mechanical ability; prior animal handling exp; required habits of personal cleanliness, neatness & atten to details; able to read, write understand, commu in English & follow written & oral directions; should be free of animal allergies; capable of undergoing physical exam & immunizations; have valid Calif. driver's license & able to handle manual transmissions; able to lift 50 lbs or more; willing & able to work some wkends & holidays.; A12; $6.11.

Carpools



Carpool/rider, nonsmoker. SF to Stanford. 9-5, M-W, F. Call Paul Turner, 497-4275 or 497-3404, or David, 497-2727.

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Need rider from Los Gatos/Saratoga area arriving at Stanford 7:30 a.m., leaving 4:30 p.m. Call Gloria, 497-4970.

Want to join or form carpool from Sunset Dist., S.F. (near 19th Ave.) to Stanford, T-F, 9-5 or 6. Robert, 753-3860 or ext. 7-4116.

Want to join or start carpool from S.F. (Parkmerced) to Stanford. M, W, Th, F 8-5 (but times negotiable). Call Jim Gibbs at ext. 7-3912 or 586-9354 (evenings).

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Oct. 5, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Nonexempt

30884-PM (JCC:1755) LIBRARY SPEC II Check ID's, charge & discharge books; maintain stack areas; issue ID's; process reserve mat'ls; search for missing books; prov informa'l & direc'l help to lib users; work at very busy Circ. Desk; update mat'ls; answer phones; page books; help train new staff; open lib on wkdays; sort & deliver mail; do on & off site bibliographic searching in card cat. & by computer in RLIN for law faculty & students & in interlib loan; QUALIFICATIONS: keep up w/ constant work flow; handle several patrons/tasks simultaneously using tact & discretion & good judgment w/in framework of established policies & procedures; flexible enough to change work schedule temp during intersessions, holidays, emergencies; knowl of or ability & willingness to learn computerized searching thru RLIN; send appl/resume to Heidi Quitman, Room 250E, Law Library.; B12; $1310-1373.

44519-BP (JCC:2058) ADMIN ASST I (N) Respon for RLG requisition sys; writes description of item requested; determines lease or purchase arrangements most cost effective; describes terms required; contacts procurement & vendors to research costs & services available; act as liaison w/ vendor to arrange delivery schedule; make special arrangements; assigns acct numbers to requisitions; interprets policies & procedures on procurement, travel, & inventory for RLG admin support staff & asst in resolving programs; QUALIFICATIONS: familiar w/ SU forms & procedures desirable; punctuality in attendance; ability to deal w/ a variety of personnel; work quickly & accurately; familar w/ WYLBUR & SPIRES or other automated data-base sys; send appl/resume to Tahitia Kremer, Pine Hall 175, Stanford, CA 94305.; B16; $1593-1671.

127281-PM (JCC:2058) ADMIN ASST I (N) Maintains effective commu for Dir of/Offce of Chicano Affairs w/ wide range of Univ offcs & special programs; coord committees & task force groups; interacts w/ broad range of faculty, students, & staff, as well as w/ reps of private & public organizations outside of Stanford; prep reports; gathers & analyzes inform & composes corresp; writes narrative portions of brochures & newsletters; respon for maintenance of records, expenditures, budgets & supplies; supv temp clerical staff, etc; QUALIFICATIONS: Typ 60; excel organizational skills; excel sec'l skills; knowl of (or willingness to learn) word processing or WYLBUR; publications exp desirable, as well as knowl of Chicano programs & activities at Stanford; knowl of Spanish desirable; send appl/resume to Elaine Gloystein, President's Office.; B16; $1593-1671.

31830-BP (JCC:2194) ACCOUNTING ASST I Accurately, efficiently & independently prepare for recording & acknowlmt gifts received for Univ; serv as both a resource & as a reference to other resources for gift related inquiries; good promotional opportunities; QUALIFICATIONS: typ 35; accurate & rapid use of 10-key adding machine; an understanding of/aptitude for genl acctg procedures; legible handwriting; flexibility in changing tasks & priorities; aptitude to handle large volumes of work under constant pressure; overtime often necessitated by workload fluctuation & monthly, fiscal & calendar yr-end deadlines; send appl/resume to Shelley Shaw, 167A Encina Hall/East Wing.; B10; $1189-1246.

25863-PM (JCC:2454) OFFICE ASST II Fixed term 11/1/82-4/30/83; processing of admissions applications; assemble file into finished product for committee review; type letters, some form; label, mail appls & sch'l bulletin; answer phones; must be discreet because of admission decision & financial matters; computer inputting of appl data; QUALIFICATIONS: typ 50+; college bkground helpful in reading grade/college transcripts; checking appl credentials; assumes heavy pressure during admission peak periods; accuracy very important; must like detail; willingness to learn computer inputting; send appl/resume to Dena Landsman, Rm 113, Crown Quad, Law School.; B09; $1130-1189.

25560-BP (JCC:2454) OFFICE ASST II Fixed term 10/8/82-8/31/83; handle admin affairs for students going overseas during 1982-83 academic yr; asst staff in admin prep for students going overseas, prep orientation mat'ls, process program mail at end of the workday; photocopy mat'ls; answer phone; routine mail; typing; QUALIFICATIONS: typ 35; strong oral & written commu skills; ability to perform routine offc functions & follow thru on assignments; familiarity w/ SU & Overseas Studies' programs 1 highly desirable; send appl/resume to Michael L. Jackson, Asst Dir, Stanford Overseas Studies, Old Union 112.; B09; $1130-1189.

25861-PM (JCC:2454) OFFICE ASST II Fixed term 11/1/82-4/30/83; processing of admissions applications; assemble file into finished product for committee review; type letters, some form; label, mail appls & sch'l bulletin; answer phones; must be discreet because of admission decision & financial matters; computer inputting of appl data; QUALIFICATIONS: typ 50+; college bkground helpful in reading grade/college transcripts; checking appl credentials; assumes heavy pressure during admission peak periods; accuracy very important; must like detail; willingness to learn computer inputting; send appl/resume to Dena Landsman, Rm 113, Crown Quad, Law School.; B09; $1130-1189.

30401-BP (JCC:2462) OFFICE ASST III Read & separate incoming inquiry letters for grad appl/informa & give to approp offc personnel for further action; initiate & maintain a large & complex filing sys for US & Foreign grad appls; master file cards; GRE & TOEFL scores & preappls 'holding' files; check admitted student's folders against Registrar's computer run of enrolled students each qrter & make any corrections required; countless other detailed work; QUALIFICATIONS: typ 55-60; ability to perform detailed clerical work quickly & accurately; require flexibility to shift fr one task to another; typing skills required; send appl/resume to Lynette Hall, Old Union, Bldg 590, Room 203.; B11; $1246-1310.

33458-PM (JCC:2462) OFFICE ASST III 94%; Book Order Clerk; 100 book orders are received daily fr booksellers & others, domestic & foreign (25%); fr each order the coder extracts informa & translates it into number codes according to book title & customer; all Sales Dept corresp is read daily, along w/ important journal articles & trade news dealing w/ book publishing; QUALIFICATIONS: rudimentary reading knowl of a Modern European lang is desirable; precision & strict atten to detail are essential; neat, legible handwriting required; an acquaintance w/ organization of institutions of higher learning, & of libs, is essential; familiarity w/ bibliographical terms in lib & academic work; send appl/resume to Jaime Telles, Press Bldg.; B11; $1171-1231.

5195-PM (JCC:2554) SECRETARY II 60% flex; typing corresp fr rough-typed & hand written drafts or dictating equip't; typing manuscripts, professional papers & reports; preparing edu'l mat'ls and/or grants; selecting data fr a variety of sources & organizing data into specific reports; composing routine letters; making appts, travel & hotel arrangements; arranging mtgs & conferences; perform genl sec'l duties for 2 or more faculty members; QUALIFICATIONS: typ 60-70; ability to construct letters, type accurately & proofread; knowl of dictating equip't needed; word processing skills desired but not nec; dir contact w/ students in Grad Sch'l Program; contact: Barbara Kent, 497-5795.; B11; $748-786.

27143-PM (JCC:2554) SECRETARY II Answer telephone & act as joint receptionist, referring visitors & calls to approp person; extremely busy offc; sort & route dept'l mail twice a day; prov sec'l serv for 4 anesthesia faculty, incl genl corresp, type fr handwritten mat'ls; maintain files; transcribe med terminology fr dictating machine; prep mat'l for slides; key operator for xerox copying machine; respon for Sony recorders for genl dept'l use & on-call beepers; QUALIFICATIONS: typ 55; it is important for work to be accurate, neat & well organized; have exp or training in a high pressure job & able to handle emergency situations, i.e. cardiac arrests; contact: Adena Goodart, S236, or call 497-7555.; B11; $1246-1310.

27083-PM (JCC:2562) SECRETARY III Sec for Sr. Fellow of Hoover Institution who holds joint appts w/ Political Science & Sociology Depts; coord of work of several student res assistants; using word processing sys for manuscript prep & instructing others in offc in use of same; coord of supvr's Univ commitments; coord of activities connected w/ his membership in national & internat'l assocs, & dealings w/ publishers & the media; all sec'l support duties; QUALIFICATIONS: typ 65; s/h, helpful; prev sec'l exp, w/ strong typing skills; coord numerous activities which occur simultaneously; ability to handle some confidential mat'ls, recommendations, & grant mat'ls; college bkground in soc sci desirable; familiarity w/ Stanford Univ procedures desirable; send appl/resume to Prof. Martin Lipset, Hoover Institution, Stanford Univ or call 497-4741.; B14; $1440-1514.

29439-PM (JCC:2596) SECY II-SPEC Prov sec'l support to GSB Doctoral Program, w/ increasing levels of respon in & exposure to admissions (incl computation of grade point averages), maintenance of student records, written exams, student review, financial aid, placement, & publications; extensive student contact; also act as sec to Dir of Doctoral Program; heavy typing, high percentage of technical (equations, use of math & Greek symbols); screen telephone calls; schedule appts & mtgs; QUALIFICATIONS: typ 65; sec'l or related work exp, preferably in a univ setting; excel spelling, grammar, typing are essential; aptitude for basic math to compute grade averages ability to use tact & diplomacy in student & faculty contact; send appl/resume to Ann Coulthard, Room 224, GSB or call 497-2831.; B12; $1310-1373.

29655-PM (JCC:2596) SECY II-SPEC 50%; answering calls; typing letters, manuscripts, & various papers for scientific publications fr transcribed and/or handwritten drafts thru to final, publishable copy; making travel arrangements; filing & Record keeping; ordering of supplies; opening & sorting mail; transcription of letters & manuscripts & grants fr tapes; grant appl prep; some budget record keeping & filing; QUALIFICATIONS: typ 60; a couple yrs of sec'l exp helpful; familiarity w/ Stanford sys & NBI word processing useful; scientific or med terms preferred; send appl/resume to Shayne Frankel, D307 Fairchild Bldg.; B12; $655-687.

26066-BP (JCC:2596) SECY II-SPEC Sec/Word Processor for 4 teaching faculty members & a Res Assoc for grad Construction Program in Dept of Civil Engrg; heavy typing incl tech reports, course mat'ls, res reports, genl corresp; ordering of offc supplies & handling cash deposits; xeroxing; asst in organizing conferences & mtgs; willing to learn/use DPD Word-11 Word Processing Sys on A DEC PDP-11 computer; interact w/ students, faculty, staff, & visitors; QUALIFICATIONS: typ 65; typing speed & accuracy important; ability to commu effectively in person & on phone; prev exp required; prev word processing exp strongly desired; send appl/resume to John W. Fondahl, Terman Engineering, Room 294.; B12; $1310-1373.

'Glory days' of surburban papers have passed, Rosse tells editors

The "glory days" of strong suburban newspapers "probably have passed," Prof. James Rosse of the Stanford Economics Department told the Northern California chapter of Sigma Delta Chi in San Francisco Thursday night, Sept. 23.

Director of the newly-formed Center for Economic Policy Research, Rosse has frequently been an expert witness in newspaper mergers and joint operating agreements.

Competitive newspaper markets are "extremely unstable," he said. "When one paper loses its circulation edge, a vicious circle of lower advertising revenues and declining circulation quickly develops.

"People buy newspapers to read advertisements," he said. "I hate to say that, but it's true."

His own studies, dating from the mid-1960s, show that the amount of news space a newspaper provides is the most important single factor in estimating its market demand. Advertising is about two thirds as important.

Editorial quality also is "quite important," he said. To measure this, Rosse divided total editorial expense by the number of inches of news published. The results were "extremely consistent...and really incredible," ranging from as low as 15 to 20 cents per inch in papers which simply filled their pages with wire service copy to $10 or more for *The New York Times*.

Rosse said rapidly rising newsprint prices and technological change were key factors in the recent rash of failures among large city papers. Higher newsprint prices following the 1973 oil embargo "hurt everybody," but especially large city newspapers, where newsprint is a major share of total expenses.

New technologies have been a "great blessing," but also tend to help smaller papers at the expense of bigger ones. As their production costs have risen less rapidly, there's been a tendency for advertisers and reading audiences to shift toward smaller newspapers.

The San Francisco Chronicle is "no longer competitive out in the country," for example, and the *Minneapolis Star-Tribune* has greatly curtailed remote circulation since he worked there as a student years ago.

Being No. 1 counts

In competitive cities, "not a lot is explained" simply by whether a newspaper publishes in the morning or the afternoon, he added. "Whichever's ahead is what counts."

The recent demise of *The Washington Star* could be followed in New York by the *Daily News*. Despite its large circulation, it may no longer have a clear market segment. "It looks a little more like *The New York Times*," Rosse said. "That's a sign it's in trouble."

Afternoon newspapers tend to be "better off" in the West, since they have more time to report the day's news from the East. "Honolulu is the best example of that," Rosse said.

While they may remain strong well into the next decade, larger suburban newspapers may have passed their peak. "*The Palo Alto Times* probably was stronger relative to its market" than its successor, *The Peninsula Times-Tribune*" will be in the future, he said.

Newspapers like the *Hayward Review* and *San Rafael Independent-Journal* are relatively insulated from television, enjoy a monopoly position in local markets and have good density of circulation, "a powerful combination," he observed.

Their position faces a clear long-term threat from the combination of computers, cable television, and other technologies capable of delivering saturation coverage in a well-defined community. That threat is "some distance off" but "sooner or later it will come."

Many suburban papers already face competition from weeklies, throwaways, and total market coverage papers, he added. *The Palo Alto Weekly* is "a very successful paper."

Leonard Koppett, editor of *The Peninsula Times-Tribune* disagreed that weeklies threatened dailies. While weeklies are competition, "I can't see any way a weekly can replace a daily. They're apples and oranges."

Rosse replied that weeklies can "whittle away" the revenue base of dailies, making them more vulnerable.

Koppett, Rosse, and Lawrence Walker Jr., vice-president and business manager of the San Francisco Newspaper Agency, all agreed that newspapers need stronger business management.

"Editors no longer determine how many" reporters will be hired, although they do control who is actually picked, Koppett said.

While job opportunities for journalists are not shrinking as fast as the demise of bigger papers might suggest, there probably will be fewer openings when the economy improves and employment freezes end, he added. Newspapers will have smaller staffs, but try to do more with them.

News up, classifieds down

Walker said the San Francisco Newspaper Agency, which jointly operates the business side of both *The Chronicle* and *The Examiner*, expects to finish its new East Bay printing plant in Union City by January, 1983. No news office will be located in the plant, but news editors plan to "greatly beef up" coverage in the West Bay.

If better zoned editions can be developed in the East Bay, both papers may improve their circulation coverage there. There probably is greater growth potential for *The Examiner* than *The Chronicle*. But the greatest single advantage will be more timely delivery of their Sunday editions.

While the new plant is located near San Jose, that market is not a primary target, he indicated. But the location "gives us some flexibility there we haven't had before," Walker admitted.

He said the two papers had published 600 more pages of news this year, despite losing 25 to 30 percent of their classified advertising lineage."

Rental housing

HOUSING AVAILABLE

□ **Oct. 1, '82 to Jan. 10, '83:** Luxurious 2BR/2BA condo dwntwn Los Altos. Compl. furn, 10 min. to Stanf. $950/mo. Call (415) 948-1240.

□ **NOW:** Cultured woman from France has penthouse apt. to SHARE. Sharon Hts, rm. w/priv. BA + study/den. Kitchen priv., decks w/view, gar., pool, sauna. Nonsmoker pref. $500/mo. + ½ util. Call (415) 591-8015 (lv. message) or (415) 592-6885.

□ **NOW:** Tranquil oasis 9 min. to Stanf. Priv. guest-wing rear of Eng. cott. Sep. entry, 1BR (king size bed)/1BA. Fully furn. incl. linens, dishes, TV, phone, util, grdnr. LR w/frpl. Fenced grdn/patio. Driveway parking. No pets, nonsmoker, 1 person only. RENT by mo. Call (415) 856-0608.

□ **NOW:** Prime, very private 3BR/2BA hse. Large LR & FR, 2 frpl. ½ acre, low foothills. $1950/mo. or best offer. 1 yr., poss. longer or lease option. Call (415) 948-4493.

□ **NOW:** Unique, contemp. hillside hse. 3BR/2BA + 2 half BA. Rec. rm/bar. Sep. DR. 20 ft. ceil, redwood & glass, decks, hot tub. For lease furn. Priv. cul-de-sac in high Ladera. Avail. 1 yr. max. $3000/mo. Call (415) 854-7140.

□ **April thru Sept. '83:** Furn. 3BR/2BA hse in Palo Alto. Frpl, FR, all appl., swim pool w/solar heat, solar hot water. 1 min. to campus, on bus rte. Children fine, smoking not. Call Sladen, 858-0494.

□ **Jan. thru June or July '83:** Fully furn. 4BR/2BA hse, all appl., nr shops, bus, mid-twn Palo Alto. 1.5 mi. to campus. Nonsmokers, lease & dep. req. Lease of car poss. Call Robert Schreiber, 497-1923 (day) or 325-2709.

□ **Beg. Nov. 1 for 1 yr:** Atherton hse, 3BR/2BA, den, frpl, patio in rear yd. Unfurn., carpets, drapes, stove, frig. Call Wells Fargo, 855-7631.

□ **Beg. Oct. 11, '82:** Beautifully renovated 3BR hse to SHARE in old Palo Alto. Frpl., built-ins, fully equip. DR, prefer female, nonsmoker, Stanf. fac. or staff. Call Robbie Weinman, 855-2663 or 326-3497 (eve).

□ **Now:** Gracious Atherton hse. Unfurn, 2BR/2BA, lge LR, sep. DR, frpl., hardwood flrs. Spac. grounds, oaks & redwoods. $1750/mo, incl. pool maint. & gardener. Call 328-7721 (day), 328-2330 (eve).

HOUSING NEEDED

□ **Oct. '82 to March '83:** Want to rent 2BR (or more) furn. condo or hse. Please call collect Newport Beach (714) 752-7870.

□ **Beg. Oct. '82:** Resp. female, staff/student, 34, seeks quiet studio/cottage. Will consider compatible rmmate. $250-$350/mo. Call Lisa, (415) 322-6966 after 4 pm or weekends.

□ **Jan. 3 to Feb. 16, '83:** Distinguished Emeritus Prof. visiting needs furn. rm on or nr campus. Call Barbara, 497-2651 (day).

□ **NOW:** New British faculty, wife, baby, seek unfurn. 3BR hse for 1-1½ yrs in quiet nghbrhd, nr. campus. Call 497-0935, r 497-0474.

March '83: EXCHANGE. Finnish-French family w/2 daughters seek 2-4 BR hse/apt. in Bay Area. Exchange for 3BR/2BA apt. in beautiful area 5 mi. from ctr. Paris. 2 cars & wkly clean. incl. Will care for pets & garden. Local refs. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Nov. to Mar. '83:** Visit. prof, Chem. Dept., seeks 2-3BR furn. hse or apt on or nr campus. 3 children (10, 18, 20). Call Lydia, 497-3507 (day), or write: Prof. Th. Dorfmuller, Univ. of Bielefeld, Dept. of Chem., POB 8640, 4800 Bielefeld 1, West Germany.

□ **Beg. Oct. '82, long term:** Prof. woman, 34, full-time Stanf. empl., seeks unfurn. 1BR apt. or cottage. Very resp., quiet, neat, stable. No pets or children. Local refs. Call Julia, 497-3811 (day).

□ **Jan. '83 to Aug. '83:** Visit. prof, wife & 2 children (11, 8) seek 2-3BR furn. hse or apt. nr. good public sch., easy commute to Stanf. WILL SWAP 3BR/2BA hse on 2 acres, 10 min. to U. Mass. Amherst. 1 hr to Vermont ski slopes, 1½ hr to Boston. Call collect, John Collura, (413) 253-3287.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Neurology seeks research associate

Position available for research associate in neural ultrastructure in Department of Neurology, Stanford University School of Medicine.

This position is for an individual with the Ph.D. or M.D. degree, who will take part in ongoing studies on development and plasticity of neuronal membranes. Experience in ultrastructure is essential, and previous work in freeze-fracture and/or cytochemistry is desirable.

Send curriculum vitae, reprints, and names of three references to Stephen G. Waxman, M.D., Ph.D., Neurological Unit (127), VA Medical Center, 3801 Miranda Avenue, Palo Alto, CA 94304. An affirmative action/equal opportunity employer.

Houle's views on early music...

continued from page 13

the ones used in a particular solo. That was it. From then on the oboe was my instrument, and I played regularly.

"I became enamoured of the oboe, and have been ever since. It is a superb instrument, capable of a wide range of expression."

Houle was educated at Stanford, where he gained successive degrees ending with a Ph.D. in 1961. After musicological research in Europe Houle taught successively at Mills, Colorado, and Minnesota. He joined Stanford as an assistant professor in 1962.

Soon after coming to Stanford he began to develop courses in Rennaissance and Baroque music. He came under the influence of Putnam Aldrich.

Houle played such ancient instruments as the shawm, viola da gamba, recorder, baroque oboe, cornett and krummhorn. However, he could not find time amid larger commitments to play them as well as they deserved, so he concentrated on the oboe.

In 1972 Houle assumed leadership of New York Pro Musica, a renowned professional ensemble playing early music; he took leave from Stanford to do so. this group was the first in the nation to revive at a high level the music of the Middle Ages and the Renaissance.

"Only after listening to and playing with Pro Musica did I realize the full extent of what was possible in early music. I spent two years directing and touring with it, and they were important years of my life."

Houle teaches both graduates and undergraduates. His courses include performance in Rennaissance music. introduction to performance practices, and the history of musical instruments and of music itself. He also teaches general students in such courses as Music I. He tends to specialize in the Baroque era.

Ever since his marriage 14 years ago to Glenna Mount, whom he met at Esalen, at Big Sur, the couple have shared many musical experiences. In addition to her playing, she signs in the choir at St. Anne's, Palo Alto.

Houle will play the oboe at a memorial concert for Jason Paras on Oct. 2 (see page 27) and conduct the Stanford Baroque Ensemble in a concert on Nov. 14.

'Great Race' runners on Oct. 3 will fund award for woman athlete

As many as 3,000 runners are expected on Sunday, October 3, in the fifth annual Great Race at Stanford.

Sponsored by Western Federal Savings, the race has become one of the most popular ones in the area for celebrity runners as well as the general public.

Proceeds from the Great Race are used to fund women's athletic scolarships at Stanford University.

The race will have a novel innovation this year: videotape playbacks of the winners will be shown while the results are being compiled before the awards ceremony.

"Most of the runners in the race wouldn't get a chance to see the finish because they're back in the pack," race director Oz Crosby said. "Now they will be able to see it all."

Crosby asserted that the race isn't designed just for the elite runners. "This is a race for the ordinary runner, too." he said. "It's a mostly-flat course and it gives ordinary runners the chance to run with many well-known athletes."

Entrants need not test themselves on the 10K course; there's a 2.5 km (1.55 mi.) "fun run" that starts half an hour before the longer race. The fun begins at 8:30 and the 10K event at 9 a.m.

Well-known runner Nancy Ditz (assistant to the director of the Alumni Association) has summed it up succinctly, "The race is scenic, flat, fast, and for a good cause." As the former director of the Cardinal Club, she is most concerned with the latter. "The Great Race has raised over $25,000 to date for women's athletic scholarships," she said.

The Cardinal Club and the Great Race both started five years ago, according to director Donna Tepe Garton. At that time, Western Federal's. Vice-Chairman of the Board (and Stanford grad) Henry Duque decided that something needed to be done to fund women's athletics.

Duque and his friend Joe Reutz, Stanford's retired athletic director, finally came up with the idea of the Great Race. Each year since 1978, race proceeds have paid for a scholarship for one talented female athlete.

Among the runners will be Stanford President Donald Kennedy, San Francisco Marathon winner, Nancy Ditz, Congressman and Mrs. Pete McCloskey, and other outstanding names in the running world—Jackie Caselli, Duncan McDonald, Derek Clayton, Len Wallach, Tony Sandoval, Peanut and Tena Harms, Skip Brown, Patrice Cross, Hal Schulz, Glynn Reynolds, and Tom Laris.

The grand prize is a Zenith color console television donated by Matteson Investment Corp. The top male finisher gets a new Camaro for three months free from Ely Chevrolet. The top woman runner receives a 14-karat gold necklace donated by Thomas L. Broadwin Ltd. All first-place winners of the seven age categories receive Amfit custom-fit running shoes, and all second and third-place winners will receive prizes.

the entrance fee is $7 ($10 after September 24) and includes a Great Race t-shirt. Refreshments have been donated by Dole bananas and Calistoga Mineral Water. Advance registration is at the Stanford Athletic Department or at Western Federal Savings office in the Stanford Barn at 700 Welch Rd., Palo ALto, 94304. For inoformation, call (415)

Aerobic dancing offered by HIP

Aerobic exercise, with or without music, and a coed early morning stretch will be offered this quarter by the Health Improvement Program (HIP).

Aerobic dance (with music) will meet 1:10-2 p.m. Tuesday and Thursday in the Encina Gym wrestling room, beginning Oct. 12. An evening section will be held 5:30-6:30 p.m. Monday and Wednesday in the I-Center assembly room, beginning Oct. 13.

Aerobic exercise without music will be given 12:10-12:50 p.m. Tuesday and Friday in Room W001 at the Medical Center, beginning Oct. 13.

The coed early morning stretch is a program that includes calisthenics to music for stomach, back, legs, and arms, appropriate for pre- and postnatal women, and back strengthening as a supplement to running. It will meet 7:30-8:10 a.m. Monday, Wednesday, and Friday in Roble Gym, beginning Oct. 11.

The registration fee for the classes is $20 per quarter. Send name, campus address and phone number, and choice of class along with a check payable to Stanford University to HIP, 730 Welch Road. For further information, call 497-7940.

Roble Pool closed by strike action

Roble Pool, slated to open Monday, Sept. 27, will not open for at least a week, reports recreation coordinator Shirley Schoof.

Those who usually maintain the pool and get it ready for opening are on strike. The de Guerre Pools have remained open through the efforts of manager Rick Schavone.

Watch Campus Report for notice of Roble's opening or call Roble Gym, ext. 7-4895.

Travel film series opens on Oct. 4

"Egypt," Eric Pavel's travel film will open Stanford University's 1982-83 Discovery Film Series at 2:30 p.m. Monday, Oct. 4 in Kresge Auditorium and at 7:45 p.m. in Memorial Auditorium.

The Discovery Film Series features nine travel films personally narrated by their producers. The following films are also included in the series. "The River Thames" with Bill Madsen, Nov. 1; "Morocco" with Clay Francisco, Dec. 6; "The Danube—Vienna to the Black Sea" with Gene Wiancko, Jan. 3; "Inside Passage to Alaska" with Scotty Armstrong, March 21; "Belgium" with Kathleen Dusek, April 4; and "Holland" with John Roberts on May 2.

Each film is presented twice—at 2:30 p.m. in Kresge Auditorium and again at 7:45 p.m. in Memorial Auditorium. Series tickets and single tickets for both the matinee and evening performance are now available. For ticket information, call Tresidder Ticket Office, (415) 497-4317. The Discovery Film Series is presented by University Events and Services.

Hear lectures on many topics

Experts in experimental techniques

The Applied Physics 395 lectures on Experimental Techniques in Lasers and Optics, beginning Monday, Oct. 4, with speaker Gary Bjorklund of IBM, are open to the community.

The lectures, all at 4:15 p.m. Mondays in Applied Physics 200, are:

Oct. 4—Dr. Gary Bjorklund of IBM, San Jose, "Progress in Frequency Domain Optical Memories;"

Oct. 11—Dr. Donald Scifres of XEROX PARC, Palo Alto, "High Power Phase-Locked Semiconductor Laser Arrays;"

Oct. 18—Dr. Robert Eckardt of the Naval Research Laboratory, "Mid-Infrared Rare Earth-Doped Solid State Lasers;"

Oct. 25—Dr. Narinder Kapany of Kaptron, Palo Alto, "Interface Devices for Fiber Optic Communications;"

Nov. 1—Prof. Hyatt Gibbs of the University of Arizona, "Optical Bistability and Chaos;"

Nov. 8—Dr. Andrew Tam of IBM, San Jose, "New Uses of Light Generated Sound;"

Nov. 15—Dr. Ronald Schmidt of XEROX PARC, Palo Alto, "Fiber Optic Networks;"

Nov. 22—Prof. Yuen-Ron Shen of UC-Berkeley, "Highly Nonlinear Effects in Liquid Crystals;"

Nov. 29—Dr. Richard Caro of Stanford, "Excimer Lasers and Their Uses;"

Dec. 6—Prof. Michael Bass of USC, "Intensity Dependent Absorption/Laser Damage in Various Materials."

Questions should be addressed to Philippe Fauchet, Ginzton Lab, Room 52, ext. 7-0115 or 7-1992.

Series features 'Women at the Top'

"Women at the Top: The Issues They Face" will be presented at Stanford this fall by the Center for Research on Women.

Donna Shalala, president of Hunter College, will present the opening lecture of the Jing Lyman lecture series in Kresge Auditorium, 8 p.m. Tuesday Oct. 5.

The other speakers include the following:

Prof. Margaret Burbidge, director of the Center for Astrophysics and Space Sciences at UC-San Diego, at noon Wednesday, Oct. 13 in Terman Auditorium.

Marion Sandler, president and chief executive officer, World Savings and Loan Association, at noon Wednesday, Oct. 20 in Terman Auditorium.

Ruth Bader Ginsburg, judge, U.S. Court of Appeals, District of Columbia circuit, at noon Monday Nov. 1, in Terman Auditorium.

Liz Gallese, staff reporter, *Wall Street Journal*, at noon Wednesday, Nov. 10 in Terman Auditorium.

Congresswoman Pat Schroeder of Colorado, 8 p.m. Tuesday, Nov. 30 in Kresge Auditorium.

Coordinator of the lecture series is Margo Davis, assistant director of the Center for Research on Women. Further information may be obtained from CROW at (415) 497-1994.

Third World problems to be aired

David Abernethy, professor of political science at Stanford, will open this year's Tuesday luncheon/lecture series at noon on Oct. 5 at the Bechtel International Center. His topic is "Contemporary Third World Problems: The Colonial Legacy."

The popular International Center on-going program, which now begins its seventh consecutive year of presenting weekly speakers on international topics, will focus during 1982-83 on major world issues. This quarter speakers will interpret the historical backgrounds of problems which impede peaceful resolution of political and social conflict. During winter quarter programs will focus on more specific regional and issue cases, and in the spring, on ideas and plans for the resolution of acknowledged problems.

Future confirmed speakers are Gafar Adamola Olaniyan, night editor of the *Nigerian Herald*, Ilorin, Nigeria, who will address "The Legacy of Colonialism from an African Perspective" on October 12, and Kirk Hanson, lecturer, Stanford Graduate School of Business, who will discuss "Corporations and World Poverty" on October 19.

Tickets at $2.50 for each luncheon meeting are on sale at the International Center one week in advance and are limited in number; brown baggers are also welcome at no charge. For more information, phone 497-1831.

Seven profs in geothermal seminars

Radar, magnetics, and volcanoes will be among the topics discussed during the Stanford Geothermal Program, a series of seminars to be held from 1:15-2:30 p.m. Thursdays from Oct. 7 to Dec. 16 in Room B67 of Stanford's Mitchell Building.

Sponsored by the Petroleum Engineering Department, the seminars will feature lectures by seven Stanford professors. The schedule of speakers and their topics is:

Oct. 7: Prof. Ronald J.P. Lyons, applied earth sciences, "Evaluation of Remote Sensing in Study of Japanese Geothermal Resources: Radar, Landsat and Airborne Magnetics."

Oct. 21: Prof. Mark A. Miller, petroleum engineering, "Relative Permeability Investigations."

Oct. 28: Prof. George A. Parks, applied earth sciences, "Low Temperature Geothermometry."

Nov. 4: Prof. Lewis Semprini, civil engineering, "Radon Transport in Two-Phase Reservoirs."

Nov. 11: Prof. Gail A. Mahood, geology, "Silicic Volcanic Centers Supporting Geothermal Systems in the Mexican Neo-Volcanic Belt."

Nov. 18: Prof. Stephan T. Lam, mechanical engineering, "Heat Extraction Modeling."

Dec. 2: Prof. Amos M. Nur, geophysics, "Geophysical Monitoring of Vapor-Liquid Interfaces in Reservoirs."

The program ends with the 8th Geothermal Reservoir Engineering Workshops, Dec. 14-16.

Diana Peterson in flute concert

Diana Peterson, flutist, will perform at 8 p.m. Sunday, Oct. 10 in Tresidder Lounge.

Sponsored by the Music Department, her free concert will include Handel's *Sonata in B minor* for flute and harpsichord, Mozart's *Andante in C* for flute and piano, *Acht Stucke* for solo flute by Hindemith, *Sonata for flute and harp* by Damase, and Bartok's *Suite Paysanne Hongroise* for flute and piano.

Joining Peterson will be John Toenjes, harpsichord; Dan Levitan, harp; and Jeff Williams, piano.

Peterson is a senior at Stanford studying flute with Frances Blaisdell and majoring in "philosophy and logic of formal systems"—a program which combines the study of philosophy, logic, linguistics, and computer science. Last year she was in Vienna with the Stanford Overseas Program.

From San Carlos, Peterson has also studied with Maria Tamburrino, principal flute with the San Jose Symphony. Two years ago Peterson soloed with the Stanford Symphony.

Her piano accompanist, Jeff Williams, is a student of Adolph Baller.

Dramatists set two auditions

Auditions will be held for two Stanford Drama Department productions, Brecht's *The Good Soul of Setzuan* and Shaw's *Arms and the Man*, at 7 p.m. Wednesday, and Thursday, Sept. 29-30 in Little Theater.

The Good Soul of Setzuan will be directed by Geoffrey Reeves, the English director who last year directed *The Recruiting Officer* and the Spring Quarter Nitery production of *King Lear* for the Drama Department.

The Good Soul of Setzuan is a parable play set in China about the search of the gods for a good person. Reeves will use the Paul Dessau musical score and there are roles for over thirty actors, singers and non-singers. Production dates in Little Theater are Nov. 9-13; the play replaces Brecht's *Turandot* originally scheduled at that time.

George Bernard Shaw's *Arms and the Man*, directed by second-year doctoral student Stephen Weeks, was Shaw's first theatrical success and has maintained its popularity. It demonstrates the playwright's mastery of sharp characterization and witty dialogue and provides challenging roles for three women and four men. The play explores the conflict between realism and romanticism and the subtle and shifting balance of realism and idealism in human experience. Production dates in the Nitery are Dec. 1-4.

Auditions for both plays are open to all with priority casting given to Stanford students and staff. No preparation is necessary. For further information, please call 497-2576.

Cap & Gown calendars

The 1983 Stanford Calendar, published by Cap and Gown, the Stanford women's honorary society, and featuring hitherto unpublished photographs by Leo Holub, is now on sale at the Stanford Bookstore.

Proceeds from the sale benefit the Cap and Gown Scholarship Fund.



Eric Hoover

Eric Hoover plays flute on Oct. 9

The Stanford Music Department and the Bay Flute Club present flutist Eric Hoover Saturday, October 9, in Annenberg Auditorium.

Hoover, visiting from Arizona State University, will give a master class at 2 p.m. and a free recital at 8 p.m. On his evening program are works by La Montaine, Hindemith, Robertson, Moyse, Reinecke, and Genin.

Hoover is professor of flute and member of the Gammage Woodwind Quintet, in residence at Arizona State. During the summer he is principal flute at the Brevard Music Center in North Carolina.

Hoover has been a member of the U.S. Army Band and principal flute with the San Antonio Symphony Orchestra.

Stoner concert with Wodehouse

Martin Stoner, violinist and Stanford A.B. '71, will perform with pianist Artis Wodehouse at 2:30 p.m. Sunday, Oct. 10, in Tresidder Lounge. His free concert is sponsored by the Stanford Music Department.

Stoner and Wodehouse will perform *Ciaccona for violin and piano* by Vitali-Auer, Beethoven's "Spring" sonata, Kreisler's *Praeludium and Allegro*, and Sonata in D minor, op. 108, by Brahms.

Stoner also holds a masters degree from Juilliard, where he studied with Ivan Galamian and Sally Thomas. He is currently a member of the New York City Ballet Orchestra, the Brooklyn Philharmonic, and the White Plains Symphony. He has also performed in solo and chamber music recitals at Lincoln Center and Carnegie Hall, and on radio and TV.

Wodehouse, who performs frequently in the Bay Area, received her D.M.A. from Stanford in 1977.

Tennis classes continue

Tennis lessons (six pupils per group) will again be offered to graduate students, staff, and/or their families on weekday mornings *or* Saturday mornings.

Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed printed information and registration form. Lessons begin the week of Oct. 9.

Memorial concert for Jason Paras slated Saturday

A concert of baroque and medieval music in memory of Jason Paras, who died July 14, 1982, will be presented by the Stanford Department of Music at 8 p.m. Saturday, Oct. 2, in Dinkelspiel Auditorium.

Performers will include George and Glenna Houle, Margaret Fabrizio, Sally Sanford, and John Toenjes.

Paras, Stanford D.M.A. '78, was a gambist and medieval string instrument player of the highest promise. At the time of his death he was teaching at the Schola Cantorum in Basel, Switzerland, and had accepted a position at Indiana University for this year. He drowned while swimming with friends in the Rhine River.

Paras taught briefly for the Department of Music before going to Europe to establish his performing career. "The promise he displayed was cut short before a wide public knew of his marvelous talents, noted Music Prof. George Houle, "but his friends at Stanford were aware that they made music with a musician of extraordinary talent during the years he studied, played, and taught here."

The memorial concert music is connected with Paras, either because he played, studied, or taught it, or because he inspired it through his interests and abilities.

Robert Strizich has written *Tombeau* in memory of Paras for baroque flute and harpsichord, to be played by Janet See and Margaret Fabrizio. Evocations of music from Paras's life are to be found in it, from the jazz he played on his guitar through the medieval and baroque improvisations he loved to bring to life.

John Toenjes will perform a group of variations on the *bascia fiamignia* by Antonio Valente—a melodic fragment upon which harmonies and melodies are elaborated, first by the composer and further by the player. Houle remembers many evenings with Jason playing variations on just such a pattern.

Sally Sanford, D.M.A. '79, will sing medieval songs she was to have performed with Paras this year.

Monteclair's cantata *Pan & Sirinx*, a work Paras played with the Stanford Baroque Ensemble, will be performed by Deborah Barney, Jonathan Salzedo, and Glenna and George Houle.

Through this music a portrait of Jason Paras, as his friends remember him in music, will be attempted.

Gifts in memory of Paras may be sent to the Jason Paras Memorial Early Music Fund at Stanford c/o the Department of Music.

Faculty Women's Club to welcome newcomers

The Newcomer's Section of the Stanford Faculty Women's Club invites new female faculty members and wives of new or visiting scholars or faculty to a coffee at 10 a.m., Tuesday, October 5 at Dale Mnookin's house, 430 El Escarpado, Stanford.

The aim of this section is to help make the year a good one by making new friends and becoming acquainted with the campus and surrounding area. Activities are planned for the second Tuesday of every month. For more information call Caroline Pease, 857-1472, or Dale Mnookin, 328-1430.



Mayumi Ohira

Alma Trio sets concert Oct. 8

The Stanford Music Department presents the Alma Trio and Guests at 8 p.m. Friday, Oct. 8 in Dinkelspiel Auditorium.

The trio was founded 40 years ago by pianist Adolph Baller and cellist Gabor Rejto. Violinist Andor Toth joined in 1963. Among world-class groups, it has the distinction of being the longest-established trio performing today.

The "Ghost" trio of Beethoven, a perennial favorite, will open the concert, followed by Kodaly's stunning Duo for violin and cello.

Joining the Alma Trio for Dvorak's Quintet in A Major, op. 81, will be Don Ehrlich, violist with the San Francisco Symphony and the Aurora String Quartet, and Mayumi Ohira, violinist.

As concertmaster of the Tanglewood Festival Orchestra, Ohira recently won the Joseph Silverstein Award for most outstanding player at the festival. She has soloed with the Marin and Modesto symphonies and the Carmel Bach Festival Orchestra.

Toth has just returned from a solo recital tour, including appearances at Schoenberg Hall in Los Angeles and Merkin Concert Hall in New York.

The *Los Angeles Times* said of his concert: "Playing this committed is seldom combined with playing this clean; instead of contradiction, however, what one hears in Toth's performance is pure music."

Tickets are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317).

Hillel builds Sukkah in Union courtyard

In celebration of Sukkot, the Jewish Festival of the Harvest, Stanford Hillel is building a Sukkah in the courtyard of the Old Union Building, Stanford campus, The Sukkah will hold over 100 people, and Hillel is planning a variety of events to be held in it. Desserts will be served at 6:30 p.m. in the Sukkah from Monday, October 4, through Thursday, October 7; programs will follow. There is no admission charge.

On Friday, October 8, Liberal Shabbat Services will begin at 7 p.m. in the Old Union Clubhouse. An Oneg Shabbat, featuring storytelling with Peretz Wolf Prusan, will follow in the Sukkah.

For more information on these and other programs, please contact Stanford Hillel at 497-1602.

Some freshmen complain of dirty rooms, inconveniences stemming from strike

The first students to arrive on Stanford's campus for fall quarter Thursday, Sept. 23, voiced differing opinions on the extent to which the strike by the University's technical, service and maintenance employees has affected them.

"Things have certainly gone as well as we could have hoped for," said Bart Carey, a sophomore resident adviser from Palo Alto. "The strikers have not been very visible, and they have caused us no problems."

Other students complained of inconveniences caused by the strike, however. In 15 interviews, soon after students began arriving in their dorms, none voiced strong support for the union.

"Some of the rooms in Stern are really dirty, dusty and gross," according to Debbie Pagangis, a resident adviser from San Jose. "We have had problems with broken fixtures and things, and we can't get anything repaired."

Laura Keller, a freshman from Sunnyvale, said, "Some of the rooms obviously weren't cleaned very well before we got here. There were bits of garbage scattered around some of the rooms."

The reluctance of outside workers to cross Stanford picket lines is also causing difficulty for students. They cannot have packages sent to Stanford by United Parcel Service delivered, and they have to pick up their phones in downtown Palo Alto instead of on campus, as they normally would.

Most students said they were satisfied with the Food Service, which is being operated by student workers, and supervisors and managers who are not part of the striking union. But some mentioned that they thought service suffered because of lack of sufficient staff.

"The thing that makes me mad is that the union struck just as the freshmen were about to arrive. We have so much that's new to deal with, having this added to it just makes everything that much harder for us," Keller said. The strike started Sept. 10.

Pagangis said, "Maybe I'm wrong, but a 9½ percent increase doesn't sound bad to me. It appears that (the union) is using the students to put pressure on the University, and I don't like that. The students are the ones who are suffering, and we have nothing to do with it."

Freshman Chip Overstreet thinks the students can handle the loss of services "as long as it doesn't go on too long. There won't be anyone to clean out the bathrooms and things like that until the strike is over, but we can take care of ourselves. I really don't think the strike will affect us if we don't let it."

—Phil Taylor

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Sept. 29 to cover the week of Mon., Oct. 11 through Sun., Oct. 17.

LATE ANNOUNCEMENTS

Thurs., Sept. 30. Solid Mechanics Seminar: "History of Composites in Aircraft Structures" with Prof. N. J. Hoff, S.U. 4:15 p.m. Skilling Aud.

Ecumenical Ministries Open House: These ministries are UCCM, Newman, Episcopal, Memorial Church and Lutheran Center. Meet staff and students and hear about fall programs. 4:15 p.m. Old Union Courtyard.

MONDAY, OCTOBER 4

Computing Seminar: CIT orientation for beginning users. 10 a.m. Information at 497-4329.

Discovery Film Series: "Egypt" with Eric Pavel. 2:30 p.m., Kresge Aud., $3; and at 7:45 p.m., Memorial Aud., $4.

Numerical Analysis Seminar: "The Accurate Numerical Solution of Higher Oscillatory Ordinary Differential Equations" with Robert Scheid, Jet Propulsion Laboratory, Pasadena. 4:15 p.m. Mathematics Basement 380C.

Stanford Film Society: "Four Hundred Blows." 7 p.m. Kresge Aud. $1.50.

Biological Sciences Dept. Seminar: "Biogenesis of Chloroplast Components" with Dr. Arthur Grossman, Dept. of Plant Biology Carnegie Institution. 4 p.m. Herrin Hall, T175.

TUESDAY, OCTOBER 5

Bechtel International Center Tuesday Lunch/Lecture Series: "Contemporary Problems in the Third World: The Colonial Legacy" by Prof. David Abernethy, Political Science Dept. Noon. $2.50 includes lunch. Tickets on sale in advance. Brown baggers also welcome. I-Center.

Computing Seminar: CIT orientation for experienced users. 1:15 p.m. Information at 497-4329.

Varsity Soccer: Vs. UC-Santa Cruz. 2:30 p.m. Maloney Field.

Fluid Mechanics Seminar: "The World's Largest Wind Tunnel; Design Rationale and Construction" with Kenneth W. Mort, NASA-Ames Research Center. 4:15-5:30 p.m. Skilling Aud.

Computer Science Colloquium: "Experience in the Design and Implementation of an Integrated Network and Distributed Operating System Architecture" with Richard Watson, Lawrence Livermore Laboratory. 4:15 p.m. Jordan 040.

Applied Physics Colloquium: "Experiments in Catastrophic Behavior in Nonlinear Systems" with Dr. F. Neville, prof. of physics, Oxford University. 4:15 p.m. Applied Physics 200.

CROW Women at the Top Lecture Series: The speaker is Donna Shalala, president, Hunter College, NY. Topic to be announced. 8 p.m. Kresge Aud. Public invited.

WEDNESDAY, OCTOBER 6

Computing Seminar: CIT orientation for experienced users. 9 a.m. Information at 497-4392.

The Archive of Recorded Sound Sale: Over 2,000 new and used duplicate LP's. Classical, jazz, pop, etc. 10 a.m.-5 p.m. Music Bldg. lobby on the Knoll. 25 cents to $2/disc.

Book Sale: Books and periodicals in many fields. Hardbound $1 and up, paperback 25 cents and up, periodicals 10 cents. 11 a.m.-1:30 p.m. Green Library, West Wing, 1st floor, Room 101.

UCCM Lunch Discussion: Social Responsibility and Obligation in Today's Economy" with Dr. Robert McAfee Brown. Noon. Casa Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata. Directed reading credit available. (First in a weekly series of eight.)

Computing Seminar: CIT orientation for beginning users. 1:15 p.m. Information at 497-4392.

Electronics in Medicine Seminar: "Chemically Sensitive Field Effect Transistors for Physiologic Applications" with David Harame, Electrical Engineering Dept. 4:15 p.m. McCullough 134.

Colloquium of the Dept. of Chemical Engineering: "Zeolites, Chemistry and Catalysis" with Dr. Pierre Gallezot, Centre National de la Recherche Scientifique, France. 4:15 p.m. Chemical Engineering Conference Room.

Overseas Studies Program/Casa Italiana/Dept. of French and Italian Lecture: "Semiotics and Mass Media" by Umberto Eco. 8 p.m. History Corner, Room 2. Open to all. Reception follows at Casa Italiana, 582 Mayfield Avenue.

THURSDAY, OCTOBER 7

Rhodes/Marshall Scholarship Deadline: Applications are due at noon, Overseas Resource Center, 2nd floor, I-Center. Further information at 497-0856.

The Archive of Recorded Sound Sale: See details for Wed., Oct. 6.

Stanford Geothermal Program Seminar: "Evaluation of Remote Sensing in Study of Japanese Geothermal Resources: Radar, Landsat and Airborne Magnetics" with Ronald J. P. Lyons, Applied Earth Sciences Dept. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

Solid Mechanics Seminar: "Recent Developments in Elastic-Plastic Crack Growth" with Prof. James Rice, Harvard Univ. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Electron Band Theory in High Pressure Physics" with Dr. Andrew K. McMahan, Lawrence Livermore Laboratory. 4:15 p.m. Applied Physics 200.

Yoga Seminar: "The Complete Science of Yoga" with Rene Ochoa. 7 p.m. History Corner (Main Quad) Room 217. Public invited.

Women's Volleyball: Vs. San Diego State. 7:30 p.m. Maples Pavilion.

I-Center Other Cultures Film Series: "The Human Face of Japan." Three parts of a new film show the character of a nation through the lives of a handful of Japanese people. "Lifetime Employment" in the Mazda assembly line; "Tomorrow and Yesterday" shows contrasts in child rearing; "Raw Fish and Pickle," life in the salmon boats. 7:30 p.m. I-Center. 75 cent donation at the door.

Overseas Study Program/Casa Italiana/Dept. of French and Italian Lecture: "The Italian Communist Party and the World Crisis Today" by the Mayor of Florence, Elio Gabbuggiani. 3 p.m. Casa Italiana, 562 Mayfield Avenue. All interested in Italy and Florence invited.

FRIDAY, OCTOBER 8

Water Polo: Vs. San Francisco State. 3 p.m. deGuerre Pool.

Applied Mathematics Lectures: "Inverse scattering in two dimensions" by Dr. Margaret Cheney, Mathematics Dept. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Materials Science and Engineering Dept. Colloquium: "Titanium Alloy Blades for Low Pressure Steam Turbines" with Dr. R. I. Jaffee, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Liberal Shabbat Services: Begin 7 p.m., Old Union Clubhouse. An Oneg Shabbat, featuring storytelling with Peretz Wolf Prusan follows services and will be held in the Sukkah in the courtyard of the Old Union Bldg. More information on this and other programs, call Stanford Hillel, 497-1602.

SATURDAY, OCTOBER 9

Men's and Women's Cross Country: College Invitational. 11 a.m. Stanford Golf Course.

Water Polo: Vs. UC-Berkeley. 11 a.m. deGuerre Pool.

Field Hockey: Vs. Long Beach State. 11 a.m. Roble Field.

Bill Graham/Chaparral Present: The Grateful Dead. 2 p.m. Frost Amphitheater. $12 in advance, $13.50 at the gate. Stanford students will receive a $1 additional discount at Tresidder Ticket Office on tickets which go on sale Sept. 28.

SUNDAY, OCTOBER 10

University Public Worship: Student Worship Service, 8:30 a.m.; Robert G. Hamerton-Kelly, dean of the chapel, 11 a.m.; Evening Communion in the Round Room at rear of Memorial Church, 6 p.m.

Bill Graham/Chaparral Presents: The Grateful Dead. See details for Sat., Oct. 9.

ASSU Sunday Flicks: "Star Wars." 4:30 p.m., 7 p.m., 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through Jan. 2.

Venice in the Eighteenth Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Oct. 5-Dec.19.

The Map as Landscape. Familiar and new aspects of Western landscapes by Donna Van Dijk. Reception, Fri., Oct. 8, 5-7 p.m. Bechtel International Center. Oct. 4-31.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through Nov.

Thirty Miles from Stanford. Photographs by Paul Berger. Tresidder 2nd floor gallery. Month of October.

Paintings on Canvas by David Cusic. Coffee House Gallery. Month of October.

Note: The Museum and Art Gallery will be closed until strike is resolved.

VISITORS FROM OTHER COUNTRIES

Oct. 4: Prof. Arnulfo M. Nadela, dean of the School of Engineering, CEBU Institute of Technology, the Philippines.

Oct. 5: Mr. Michael Franzke, program director, West German Broadcasting Corp. in Cologne.

Oct. 6: Group of 13—Economists from Japan.

Oct. 7: Prof. Shujiro Kato, comparative politics and sociology, Kyoto Sangyo Univ., Japan.

Oct. 11: The Hon. Risphpal Singh, consul, cultural affairs, consulate of India in San Francisco.

Mr. Tilden Santiago, editor, "Diario do Comercio" newspaper, Belo Horizonte, Brazil.

For further information, please call 497-1984, International Visitors, Maria Bun.

CAMPUS REPORT

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Mediating talks resume at 10 a.m. Thursday

Federal mediators Tuesday summoned both sides to a mediation session set for Thursday, Oct. 7, as the strike by United Stanford Workers against the University neared the end of its fourth week.

Heavy picketing Friday and Monday at SLAC and the new student housing project resulted in 16 arrests, bringing the total to 24 since the strike began Sept. 10.

The stepped-up picketing Friday followed an off-the-record session last Thursday between the chief negotiators for each side and two federal mediators. The mediation was suspended after three hours when neither side made any concessions.

Following the San Francisco meeting, USW released to the press confidential University documents about bargaining unit salaries. *(See text, page 9.)*

Federal mediator Clarence Washington said Tuesday "we're getting both parties back together." The session,

continued on page 8

Stanford opposes ending mandatory retirement at 70

Stanford University strongly opposes ending mandatory retirement for tenured faculty at age 70, President Donald Kennedy and Provost Albert Hastorf told the Faculty Senate Thursday, Sept. 30.

Legislation ending mandatory retirement has attracted broad Congressional support and has been endorsed by President Reagan.

Even so, Hastorf said, it is "doubtful" Congress will act on the proposal this year. But it is "quite likely" to pass in the future, possibly with a seven or eight-year "temporary pause" or moratorium for institutions will tenure, Kennedy said.

"We will continue to use age 70 as the retirement age, unless required by law to do otherwise," Kennedy said. This will apply to those reaching 70 in any transition period. "Our capacity to treat people in (such a) 'window' is exhausted," he warned.

When the mandatory retirement age was recently raised from 65 to 70, the University tried to ease the financial burden of those caught in the transition period.

Many of those reaching mandatory retirement age are recalled to active duty, when this accords with the needs of their departments. Presumably, this practice will continue.

In an Aug. 13 letter to Senator Donald Nickles, Kennedy said that "uncapping" retirement for tenured faculty would have "an unusual and profound" effect on the University, especially younger faculty,

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Kennedy on science, liberal arts

During the past century, scientific discovery has deeply influenced humanistic views of freedom, rationality and equality, Stanford President Donald Kennedy said Monday, Oct. 4, in remarks prepared for the University of Oregon's fall convocation in Eugene.

"Serious pursuit of the implications of scientific discovery for liberal learning" should become a "crucial educational objective" of institutions like Stanford and Oregon, which are strong in science but committed to the full range of cultural exploration, he suggested.

"Uprooting the humanities from science robs us of a critical understanding—that they are the products of a co-evolutionary process, just as surely as the brain and culture are," he said. "That unity is the brightest and most exciting academic vision we could have."

A biologist, Kennedy said that "nowhere can the case for interpretation between the sciences and humanities be made more compelling than in the area of evolutionary thought. Yet ironically, it was the Darwinian Revolution that probably created the 'two cultures' problem in the first place."

(See text, page 10.)

Ombudsperson...

Goheen says Taiwanese spy on students

There is a nation-wide system of Taiwanese students spying on each other for the Taiwan government, Prof. John Goheen declares in the annual report of the Stanford Ombudsperson for 1981-82.

"The objective is to suppress any criticism of the Taiwan regime or dissent from its totalitarian principles," he adds.

This "strange and disconcerting situation" came to light in the aftermath of a news story published by *The Stanford Independent*, a student newspaper, last fall.

"The documentation is extensive, including calls in the U.S. Congress for an investigation of Taiwanese 'intelligence surveillance' in this country," Goheen says.

"It is only fair to add that the active Taiwanese informants appear to be a limited group, involving some but not all Taiwanese students. Furthermore, some Taiwanese nationals other than students have been involved in these activities."

Stanford has about 134 Taiwanese students. In its Oct. 21, 1981 issue an article based on extensive interviews, *The Independent* reported that 11 professionals in the Stanford area had written a confidential letter to Congressman Steven Solarz, chairman of the House Subcommittee on Asian and Pacific Affairs, claiming that they were "under constant surveillance and harrassment by Kuomintang agents. Many of us live in fear of our safety and the safety of our family members."

The informality of these checks makes it difficult for U.S. authorities to detect and pursue informants through normal criminal procedures, *The Independent* noted. National attention was focused on the problem following the mysterious death of Carnegie Mellon University Prof. Chen Wen-chen in Taiwan last fall.

In 1978 an independent investigator appointed by the University of Hawaii concluded that "There is sufficient evidence, even though not of the type

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People

Presidents **Donald Kennedy** of Stanford, Charles Young of UCLA and James H. Zumberge of the University of Southern California are among 26 university presidents serving on a new American Council on Education committee seeking to correct abuses in intercollegiate athletics.

Headed by President Derek Bok of Harvard, the new group will hold its first meeting Sept. 26.

Ace President Jack W. Peltason noted that corrective measures were needed because "recent charges involving illegal payments to student athletes, transcript manipulations, and other alleged abuses are injuring the reputations of some of the nation's finest institutions."

Proposals from the Committee may be considered at the National Collegiate Athletic Association Meeting in January, 1983.



Myron Scholes

Myron S. Scholes, 41, University of Chicago professor of finance, has accepted a joint appointment from the Stanford Graduate School of Business and the Stanford Law School, effective Jan. 1.

Former director of the Center for Research in Security Prices at Chicago, Scholes has been a professor there since 1976 and was named to the Edward Eagle Brown professorship last year.

Most of his research so far has concentrated on the developing and testing of finance theory. He has recently started work on the frontier linking finance and law. Law scholars predict his work will have great potential for law and public policy.

His knowledge of the tax code has been described as legendary. He was the prime mover in developing the finance teaching program at Massachusetts Institute of Technology, which after nine years is still regarded as one of the most demanding programs in the Sloan School of Management.

Born July 1, 1941 in Timmins, Ontario, Scholes received his bachelor's degree at McMaster University in 1959. He obtained his MBA at Chicago in 1964 and his doctorate there in 1969.

His major publications include "Dividends and Taxes: Some Empirical Results," coauthored with Merton Miller in the *Journal of Political Economy*; "A Simulation of the Returns and Risk of Alternative Put Option Investment Strategies," coauthored with Robert Merton and Mathew Gladstein in the *Journal of Business*; and "Dividends and Taxes," coauthored with Miller in the *Journal of Financial Economics*.



John Moore

President Reagan announced his intention last month to nominate **John H. Moore**, associate director of the Hoover Institution at Stanford, to a six-year term on the National Science Board.

Three others were nominated, subject to Senate confirmation: Charles E. Hess, dean of the College of Agriculture and Environmental Sciences at UC-Davis; Norman C. Rasmussen, MIT professor of nuclear engineering; and Roland W. Schmitt, vice-president for corporate research and development at General Electric, Schenectady, N.Y.

Moore has been associate director of the Hoover Institution since August 1981.

Formerly professor of economics and associate director of the Law and Economics Center at Emory University, Moore was a national fellow at the Hoover Institution in 1975-76. Moore taught economics at the University of Virginia from 1966 to 1977.

Moore received B.S.E. and M.B.A. degrees from the University of Michigan and a Ph.D. in Economics from the University of Virginia. He is the author of *Growth and Self-Management: Yugoslavia and Industrialization, 1952-1975* (Hoover Press, 1980) and numerous articles on economic theory and comparative economic systems.

Bike lock stolen from...

Stanford Police Chief Marv Herrington, seen disembarking from his bicycle in front of the President's Office Monday, was asked why he was not locking his bike.

"Can't," he replied. "Someone took my lock."



Lewis Spitz

Prof. Lewis W. Spitz, of the History Department lectured at Heidelberg University on "Luther in America" at an international symposium on "Luther in Modern Times," held September 8-11.

The symposium, sponsored by the German Society for Reformation History, featured lectures by scholars from seven countries.

Profs. Walter Mischel and **Amos Tversky** of the Stanford Psychology Department have received distinguished scientific contribution awards from the American Psychological Association.

The awards, consisting of $1,000 each, cited Mischel "for outstanding contributions to personality theory and assessment" and Tversky for "providing innovative and incisive ways of studying and thinking about judgment and decision making." Tversky's award was shared with Prof. Daniel Kahneman of the University of British Columbia.

Mischel has been a Stanford faculty member since 1972. Born in Vienna in 1930, he holds degrees from New York University (B.A., psychology 1951), City College of New York (M.A., psychology, 1953) and Ohio State (Ph.D., 1956). His 1968 book on *Personality and Assessment* is considered a classic.

Tversky has taught at Stanford since 1978. He earned his B.A. in psychology at Hebrew University in 1959 and his Ph.D. at the University of Michigan in 1965. He and Kahneman have jointly authored 19 publications since 1971.

Both Mischel and Tversky have been fellows at the Center for Advanced Study in the Behavioral Sciences at Stanford, an independent, nonprofit organization overlooking Lake Lagunita.



Charles Lyons

Prof. Charles R. Lyons, chairman of the Drama Department at Stanford University, has attended a gathering at the Beverly Wilshire Hotel in Los Angeles hosted by Armand Hammer to celebrate the formation of The Shakespeare Globe Centre, North America Inc.

This organization, chaired by Hammer, will raise funds for the building of the replica of Shakespeare's playhouse on its original Bankside location. The building that will house the Old Globe will be a complex facility incorporating the reconstructed playhouse, an indoor theater built to the design of Renaissance architect Inigo Jones, a museum, and a cinema theater.

Support groups include two American organizations, the Shakespeare Globe Centre, North American Inc., and The Academic Advisory Council North America.

Lyons was present as a member of the Academic Advisory Council and also as a representative of his department, which is one of the 11 charter contributors to the Shakespeare Estate Royalty Fund.

Producing theater companies will contribute a percentage of their income from productions of Shakespeare. Half of the voluntary payments will go into the actual building fund, and half into a fund available to the contributing group to help defray the administrative costs when members of their own theater or university use the facility for research, study, or performance.



Gerald Gillespie

Professor Gerald Gillespie was reelected secretary general of the International Comparative Literature Association at its tenth triennial world congress held in New York, August 22-29.

Currently, 15 national and regional societies, including the American Comparative Literature Association, are affiliated with ICLA. The international group comprises some 2500 scholars working in 60 countries.

Gillespie joined the German Studies and Comparative Literature programs at Stanford in 1974.

Edward T. Fishwick, a library specialist in the Reference Department, has been admitted as one of six 1982 CLR Fellows to the University of Michigan School of Library Science's special program for the professional education of academic librarians.

The fellowships, financed primarily by a grant from the Council on Library Resources, cover all tuition and fees and provide each student with a stipend of $7,200.

Jon Jang, striking Campus Mail deliverer, will be guest artist with The United Front at the Asian American Jazz Festival, to be held 7:30-11 p.m. Saturday and Sunday, Oct. 8-9, at Lone Mountain Auditorium on the University of San Francisco campus.

Medical postdoctoral fellow sought

Postdoctoral fellowship available immediately in retinal physiology or electrophysiology located at the Palo Alto Veterans Administration Medical Center and the Division of Ophthalmology, Stanford University Medical Center.

Please contact Dr. Michael Marmor at VAH 497-6296.

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Tjeerd Van Andel

Severe droughts, floods and some very erratic weather lie ahead: Van Andel

BY DONALD STOKES

Today's children will live to experience an environment less favorable than now.

The earth's temperatures will rise significantly; the weather patterns will alternate more erratically than now; the oceans will rise.

In California, the danger of droughts will be a constant concern.

A foretaste of what is to come occurred during the severe droughts in California in 1975 and 1976. If there had been a third year of drought, tens of thousands of people would have had to be evacuated from the larger cities of California.

These disturbing thoughts come from Tjeerd Van Andel, professor of geology at Stanford, who has gained fame as an oceanographer, human biologist and geophysicist.

For many years Van Andel researched the geophysical changes of the past. During this work he revealed historic links between ancient Greece and its history as affected by climatic conditions. Now he is studying what is happening to the world's climate today, and what is likely to happen in the years ahead.

"It is possible that the late Bronze Age civilization in Greece was wiped out because the people were living at the limits of their environment, and the balance was tipped when they had several years of bad harvests in succession," he said.

"Similarly, several civilizations in South America, which had reached remarkable heights of civilization may have died out because of climatic changes.

"The worrying aspect is that it takes only a small margin of change to bring drastic changes in living conditions. Just a few degrees difference in temperature can do it.

"We are beginning to realize the reasons for the collapse of various civilizations in the past. But we are far less sure in trying to map the future.

"One thing is certain. The way we are burning fossil fuels means that we are steadily building up the 'greenhouse effect' in the upper atmosphere, so that there is a steadily greater accumulation of carbon dioxide floating up there which will have the effect of raising the earth's temperature. This has been going on ever since the Industrial Revolution began 200 years ago."

Asked whether the heat-building effect was increasing at an exponential rate, Van Andel replied, "No, because the oceans are absorbing a significant amount of the carbon dioxide we produce.

"At some point the oceans will reach their threshold of receptivity to all this carbon dioxide and they will not be able to absorb any more. Then all the carbon dioxide will be accommodated in the atmosphere.

"Nobody can forecast what will happen then, but it seems likely that the climate change will be very rapid."

Within 50 years, Van Andel believes, drastic changes will take place in the earth's atmosphere as a result of the "greenhouse effect." The arguments of scientists today range largely over how drastic the changes will be.

"The current phase of climate has really only been going on for about 15 years," he said. "Up till then it had been the preserve of a few climatologists and the odd geologist who was interested in climate history.

"When you realize that it takes only a few degrees difference in the earth's temperature to make dramatic changes, the 'greenhouse effect' has to be studied ever more seriously. There was a difference of only about 10 degrees Centigrade in the mean temperature of the earth between the Ice Ages and the semi-tropical periods.

"Many scientists believe that the mean temperatures of the earth will increase up to two or three degrees Centigrade in the next century."

Asked what was likely to happen in California, Van Andel said: "Probably it will become more dry. That would be symmetrical with the previous period of the Ice Age, when it was very wet.

"This will mean more and greater periods of drought. What we have seen in California during the last seven years—severe droughts alternating with bad flood conditions—is likely to continue in the next three or four decades."

What can be done to cope with these changing conditions?

"Water policy in California has been based on averaging the rainfall of many decades," he replied. "During most of that time there were few strong variations. That policy is falsely based. Rainfall patterns are going to be sharply different in the future, as they were in the late 19th century.

"What we are likely to see are several years of little rainfall interspersed with years of having heavy rainfall. We came very close to a crisis during the California drought which lasted during 1975 and 1976.

"If the drought had continued into 1977 there is little doubt that tens of thousands of people would have had to be evacuated from the major cities of California. Why? Because there would not have been sufficient throughput of water to remove the sewage.

If there had been a third year of drought (in 1977), tens of thousands of people would have had to be evacuated from the larger cities of California.

—Tjeerd Van Andel

California has no solid plans to deal with the highly probable state of emergency that will arise when we have more sustained droughts.

"My student team that researched the situation found that all the authorities had envisaged was to have tank-trucks to dole out water to people on street corners. They did not realize that there are not enough water-tank trucks west of the Mississippi to do the job.

"The fact is, politicians are not immediately interested in matters that don't worry the voters. Efforts to draw attention to the situation invariably get a ho-hum reception."

Van Andel was asked what the probable effect would be when the world ran out of oil and coal, and people had to use less polluting sources of energy. Would that halt the "greenhouse effect" and perhaps allow it to slowly disperse?

"No, if we continue to burn all the oil that we can get our hands on, the probability is that we shall have doubled the 'greenhouse effect' by about the year 2030.

"By that time, there will be nothing that can be done. The bad effects will be with us for several centuries. That is because the carbon dioxide divides into two receptors, the larger being the oceans and the rest goes into the atmosphere.

"The two are in equilibrium. The reason why we have not had much 'greenhouse effect' so far is that the oceans have taken in a very large share of the carbon dioxide. Eventually the oceans will take all they can hold, and after that *all* the carbon dioxide will pour into the atmosphere.

"Can the process be reversed? No. The situation will probably begin to get really bad about the year 2050."

Van Andel agreed that this meant today's children would live to see drastic changes in the earth's climate. It would be significantly warmer in many areas, particularly in the interior of large land masses, the upper atmosphere would be saturated with carbon dioxide, and the oceans would be rendered more acid.

"The problem in human terms is largely a political one. Now that the oceans are absorbing the carbon dioxide it is hard to convince the authorities that anything needs to be done. When the effects

continued on next page

Van Andel...

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become obvious it will be too late to do anything.

"Scientists argue about the probable extent of the changes but not about their reality. Most of us agree that the mean temperature of the earth will rise by two or three degrees, and up to eight degrees in some areas."

How would this affect living conditions?

"A main effect would be on precipitation, which should increase on the average. We cannot figure out at this stage the full effects of the distribution pattern.

"All we can say is that it will rain in many places where it rarely does today, but rain might decrease in many places where it is needed.

"We may have lots of rain where we can't use it, and not have enough where we now count on it.

"Probably those areas close to the oceans will get much more rain than they do now if the prevailing winds come from the sea."

Van Andel was asked whether the cutting down of trees on a vast scale, as is now happening in the Amazon basis, would have catastrophic effects on the world's climate.

"The effects will probably be mostly local," he replied. "Roughly half of the jungle areas have been cut down in modern times, and by the end of the century they will be further reduced by a factor of two. That will certainly have severe effects on the weather of the respective regions as large areas of forest usually attract rain. Probably it will mean that those lands will be much drier than they are now, and less usable agriculturally.

The long-term result of the 'greenhouse effect' will probably be that land temperatures will increase by a mean of two or three degrees. That may not sound like much, but such a change has always meant tremendous changes in the world's living conditions.

"Probably the changes will be greater in the polar regions than at the Equator. Overall it will mean more ice melt and higher sea levels."

Van Andel said that there were certain cycles in nature that affect climate, but the reason for the cycles is not known. One example is known as the 'Little Ice Age,' which lasted from about 1450 to 1850, when there were frequent severe winters, much colder and wetter than the present generations have experienced.

"Today we are entering a warmer period, and again we do not know the exact reason for it.

"During the last glacial period the oceans fell by about 100 meters. Today the waters are rising, on the average of a few centimeters every century.

"This rise of the oceans is of great concern to humanity, for a considerable number of people live close to sea-level. There are tens of millions in the Ganges delta, much of the Netherlands is below sea-level, and so on.

"Much of the valuable land in the world—the industrial areas, the harbors, and large cities, are less than 20 meters above sea-level.

"It is probable that if the 'greenhouse effect' continues the ice at the poles may start melting, and so makes the oceans rise possibly by six to ten meters."

Van Andel was asked which of the two main influences on climate was the stronger—that of Nature or man? Were the successive Ice Ages due to natural causes more powerful than mankind's pollution of the atmosphere and the consequent great climatic changes?

"We don't have sufficient data to answer that," he replied. "We don't even understand the natural causes of change. What is generally believed is that there are certain changes in the orbit of the earth round the sun which cause the Ice Ages. It is a very complicated model which is still being worked out, and it does not explain everything. In particular, it does not explain why the alternation between ice ages and warmer periods has occurred only occasionally during the earth's history."

Van Andel agreed that a combination of the two major factors—the 'greenhouse effect' and the cycle of warmer weather following the 'Little Ice Age' pointed to significantly warmer weather in the century ahead.

"However, there is considerable evidence that climate is resistant to change, and resists for a long time. Then comes a time when climate can resist no longer, it flips over and the change to the other side is comparatively rapid. Flip-flops between glacial periods and warmer periods have often been rapid, sometimes less than a few thousand years.

"With smaller climate fluctuations, like the Ice Ages, it may only take decades.

"It does not take much of a change in mean temperature to change from a little Ice Age to a warm one. Probably less than 2-3 degrees Centigrade.

"It would take a drop of only two degrees Centigrade in mean temperature in the northern hemisphere to change many wheat-exporting nations into wheat-importing ones—all except for the United States, which would be able to export a little, and Canada, which would remain self-sufficient.

"Alternatively, a rise of two degrees would have equally great results, but because the result would affect mainly the precipitation all that one can say is that we would be unpleasantly surprised. Not to mention the rising water over the lowlands, of course.

"You must keep in mind that a wide range of factors influences weather. Usually the picture shows considerable fluctuations from year to year. In the last seven years in California we have had two years of severe drought and one winter of record-breaking rains."

Van Andel is best known for his work in an entirely different area of geophysics. Together with scientists from other institutions he has done pioneer work in exploring by submarine the strange phenomena on the ocean floor.

He has found areas where volcanic eruptions on the sea-bed, and the emergence of hot springs, have led to the existence of sea creatures never before imagined.

"I like to change direction every few years," he said. "This new area of climate change is full of interest and challenge."

Van Andel is an extremely popular teacher, and his course evaluations by students are consistently at the highest levels.

"Great teamwork is possible in the study of climate change and we handle it in seminar form. The students can take a personal part in the research, and at the same time learn how to gather data on social and economic issues.

"In particular, they gain some skill in presenting their views and data to a skeptical public audience."

Van Andel was born in the Netherlands and received his education largely at the University of Gronigen, where he obtained his doctorate in 1950. He did graduate work at universities in Holland, Switzerland and Paris.

He came to the Scripps Institutions of Oceanography in 1957. Next he became head of marine geology and geochemistry at Oregon State University. After a visiting professorship at Stanford 1974/75, he became professor of oceanography, then of geophysics, at Stanford in 1976.

Of all the many honors and awards he has received, one that means much to him is his election to membership in the Royal Netherlands Academy of Sciences.

Flying carpets may be just over horizon, Physicist Little tells freshmen

Flying carpets could be just over our horizon, said William Little, professor of physics at Stanford, in a talk to incoming freshmen Sept. 24.

"There will be engines that can develop great amounts of energy but occupy only a very small space, trains that will float on a magnetic field and travel at over 300 m.p.h.



William Little

"All these can be achieved right now" he said, and have been in model form. But they are based on a form of super-conductivity that requires the creation of extremely low temperatures. This is not practical or large-scale use. Now we believe that the need for low temperatures can be dispensed with.

"As a result of work going on in Denmark and elsewhere, it is now probable that materials can be created that will allow the generation of high energy without the need for low temperatures. In fact it may be possible to do it at normal temperatures."

Little, a double Ph.D., has been experimenting with low temperature for 20 years. Fifteen years ago he suggested that it should be possible to create super-conductivity at ordinary temperatures, but his ideas were not taken up.

Working with physicists in various parts of the world he has experimented with compound polymers and certain metallic compounds. Little compared the difficulties of achieving super-energy in ordinary temperatures with trying to design a brick which has the ability to self-assemble with others to build a house.

"One curious effect, when these materials are finally created, will be that we shall be able to levitate things—people, structures, carpets, said Little.

Little gave a practical demonstration of how flying carpets are already possible, using superconductivity. He produced a model carpet on which sat a manikin. He passed the carpet through one magnetic field and laid it on a section of the floor which had been linked to a low-temperature source.

When the current was turned on the carpet, with the manikin on it, rose into the air and stayed there. Little passed a piece of paper under the carpet to prove that nothing was holding it up except the opposing fields of magnetism.

In a similar demonstration of the repulsion of magnetic fields, Little placed circular rings of copper and aluminum on a device which had been super-cooled by liquid nitrogen, then attached to electro-magnets. When the current was turned on the rings were violently ejected into the air.

Little explained that if a metal was cooled to the temperature of liquid helium, (an extremely low temperature) then the metal acquired a super-conductive state, a billion billion times that of the normal state.

Using this principle, extremely powerful magnets could be made. Not only that, but they could be made self-sustaining, and maintain their magnetic fields without any power source, so long as they were kept at low temperatures.

"It is possible to make highly efficient electric motors using these principles. Some are being built (for the U.S. Navy) that develop 3,000 h.p. This is only a start," said Little.

"Another use of superconductivity is the construction of huge generators which have 10 times the capacity of the most powerful one it is possible to build today."

"The most exciting developments however, rest with the creation of materials that superconduct electricity at normal temperatures. Considerable progress is being made in achieving this."

In an interview, Little said he believed that the search for super-conductors was an art form rather than a scientific search. "Those researchers in the U.S. and the Soviet Union who have been most successful," he said, "have done so through empirical extrapolation."

He touched on this theme in his talk to the freshmen. He urged them not to be confined by the apparent limits of their field, but to think broadly along independent lines.

EDGE: Helping engineers understand what they have wrought

Interdisciplinary course widens view

If an engineer helps dam a river, will that dam produce cheap energy and jobs, or will it eliminate more jobs than it produces, ruin agriculture downstream and disrupt the local ecological balance?

Prof. Malcolm McWhorter of the Stanford Department of Electrical Engineering believes that engineers in this situation, or ones like it, should be sensitive to the ethical and social consequences of their work. To help instill this awareness, more than 10 years ago he helped found a year-long course which has come to be called EDGE: the Ethics of Development in Global Environment.

In the late 1960s, McWhorter and some colleagues became concerned about engineers' ignorance of the ethical dimension of their work during a visit by Professor P.A. Ligomenides of the University of Maryland. Foreign engineering graduate students from developing nations were coming to industrialized nations for their education. Many of them were deciding to remain in more comfortable, stimulating positions here rather than returning home to help alleviate the problems of their home countries with their training.

"We wondered what you could do to. . .encourage the engineers to return home, and. . .what could you do to increase the relevance of their educations to their home countries," says McWhorter.

As a result of these discussions, McWhorter and his colleagues brought together a group of foreign students and asked them what they found dissatisfying about their education. McWhorter's group also sent questionnaires to engineering alumni in foreign countries asking them, among other things, what they were doing now and what they would have done differently in their education.

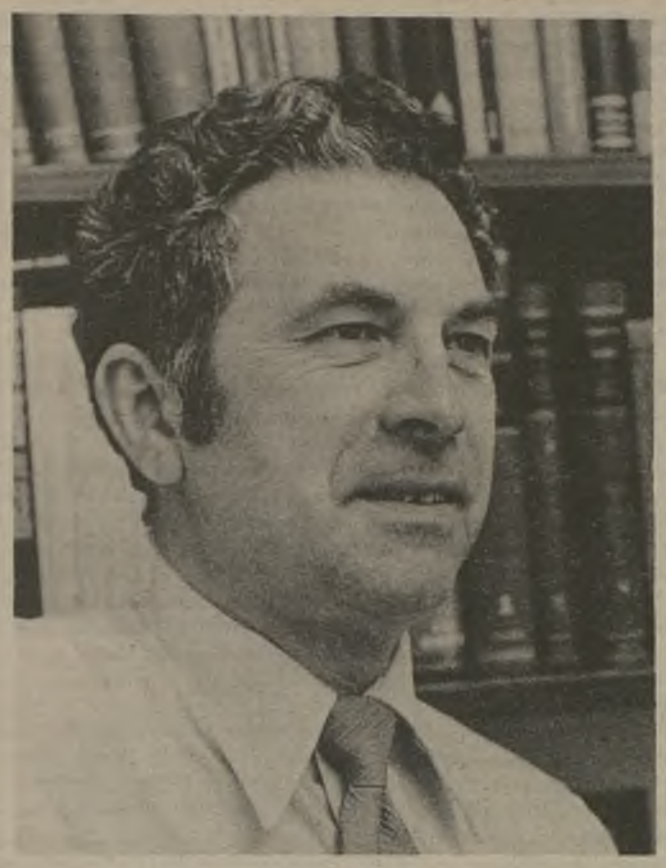
Broader studies

"Almost universally," relates McWhorter, "they said that they wished they had been broader in their studies. . . . What they were doing then, while perhaps technologically related, often had other overtones. Possibly, they were the head of a department in a university, and no one had ever taught them anything about education, for example, or they were in government and planning and no one had talked to them about planning and the interrelations of different disciplines. . . ."

It seemed hopeless to try to teach a course directly relevant to foreign students' home countries since what was relevant depended on the country, and this was not Stanford's prime mission, he adds.

"It seemed to be more desirable to try and make some kind of course that would bridge the gap between what they were getting, which is a very good technological education, and some other aspects of society."

At the same time, Ken Cooper, who had been director of the Bechtel International Center, left his post to take a journey around the world. Cooper, who is an engineer with a Ph.D. in anthropology, interviewed Stanford alumni around the world. By the time he had returned, he decided that Stanford needed a course concerned with ecology, world resources and the "preservation of the planet." Since different nations have different attitudes toward environmental problems, his course included a study of the political systems of the world.



The University... is very poor at answering the questions 'should you?' and 'who benefits?' from a more ethical point of view. —Malcolm McWhorter

Around 1973, McWhorter and Cooper decided to combine the courses since they were covering similar issues, and since ecological problems are closely related to technological ones. This is how EDGE was born.

The emphasis of the course has changed over the years. It originally stressed problems of natural resources and the environment. In recent years it has dealt with technology transfer and the economies of developing nations.

Funding difficulties have put its future in some doubt. The course has received temporary funding since its inception from the Office of the Dean of Graduate Studies, in addition to departmental support. This funding is now at an end. Also, Cooper, one of the cofounders and driving forces behind EDGE has left the University. McWhorter has stated that he will again give the course this year.

"I think that EDGE will pull through."

'How does the world look?'

Each quarter of the three-quarter sequence stresses a different theme. For example, last year, McWhorter and his colleagues tackled the question "how does the world look now?" during the first quarter. They looked at the world's resources and the effect of international sociopolitical processes on resource distribution.

During the second quarter, the question was "what are the different political systems in the world, and how do they manage their own problems of resources and development?

"The studies got into different political systems, ranging from Brazil which is a freewheeling capitalist society, to Sweden, which is a controlled capitalist and socialist country, to mainland China, which is communist."

During spring quarter, students discussed the question "what can an individual do?" drawing examples ranging from East Palo Alto to Mexico, with speakers having experience working in several developing countries.

EDGE is taught by a group of professors and students, most of whom are affiliated with Stanford, and a few guest speakers from Bay Area institutions and universities. The Departments of Anthropology and Political Science, and the Schools of Education and Engineering have all contributed support in the form of one or more teaching assistants.

Although EDGE is an interdisciplinary course, it is based within the departments that sponsor it. McWhorter's philosophy is that EDGE should stimulate the student to relate the different disciplines: "the place EDGE fills in is where. . .one discipline and another need to come together. For example, political scientists talk about how governments come and go, and yet technology and social institutions and so on have a great effect on this as well."

He also feels that EDGE should be a place where students and teachers of many different backgrounds meet to exchange their views on world problems. EDGE's other half, the in-depth, issue-oriented workshops, has given them this opportunity.

"The way we've organized the class in these last years is that for one unit, you go and listen to the lectures. If you want to take it in a deeper sense. . .you are asked to take a workshop. The workshops by and large are voluntarily run by different people, sometimes by students."

Topics of the workshops in recent years have ranged from the international problems of petroleum to the effect of industrialized nations on food supplies in developing countries.

McWhorter believes that the workshops are one of the few places in the University where students and teachers from different disciplines can exchange views on global problems and develop an ethical perspective.

"The University is very good at teaching students whether or not you can do something and how to do it; for example, how to build a new building or a new dam, where you can build it, etc., but it's very poor at answering the questions 'should you?' and 'who benefits' from a more ethical point of view.

"It's quite good at deciding issues from an economic point of view, but it doesn't usually bring in the issue of if it's an economic improvement, for whom is it an improvement?"

The course's teachers don't try to package neat answers to the ethical dilemmas of their students, but to open their conscience a bit. For example, "when you decide for economies of scale. . .that you will modernize farming in a developing country, what then happens to all those people who now have no job and who now must move to the city? The problem of Mexico City in growth is an outstanding example."

Questions, no answers

Students have complained that "you give us lots of problems but very few solutions." "Unfortunately," adds McWhorter, "I fear that's the way the world is.

"There is a certain naivete which is surprising. For example, the topic of multinationals doing things for their own good and not for the community where they're operating is taken almost as an inevitable fact by the foreign students, and on the other hand, I've seen freshmen and sophomores. . .who couldn't believe it; not that they wouldn't believe it, it's just that they were startled to find that someone wouldn't do something that would be in the best interests of the (host nation)."

McWhorter has had some experience teaching abroad, but his main motivation for spending time on EDGE is a feeling that the people of the world need to help each other to get along.

McWhorter did his undergraduate work at Oregon State University and finished his M.S. and Ph.D. in electrical engineering at Stanford. He has been a visiting professor at the Korean Advanced Institute for Science for a quarter each in 1974 and 1976. He also spent last summer at the Institute for Development Studies in Sussex, England.

"I have a personal feeling that I and the University are presumed in some sense to benefit mankind in some way. It's nice to think that you're doing something useful.

The longer view

"Part of this came about by asking, were we really doing something useful? If you ask if we make useful students for industry. . .that we can answer affirmatively very easily. On the other hand, if you take a longer—range view, which industries typically don't, and which governments typically don't because they're transient, you could ask if just preparing a good technician is sufficient.

"My. . .feeling is that it's not, and that in fact, even for the good of industry, the person should have a wider view, so that though he may have a job of limited use to society at least he has a perspective which tells him what he should be doing.

"I personally don't feel that there can be a world of extreme inequity between a half of the world and another half of the world. It's getting to be too close together."

—Allen Chen

Supervisors learn fundamentals, share experiences

Sometimes a Stanford office or lab staff functions like the '49ers on their way to the Superbowl. Everyone works well together, supports each other, and shares satisfaction for a job well done.

Then there are the times when an entire working group is disrupted by poor performance, misunderstandings, or personality conflicts.

Most of the time a staff group is somewhere between the two extremes, but wherever it is, the supervisor has most of the responsibility for its daily functioning.

The best supervisors may be born, not made, but Employees Relations is doing its best to tip the scales in Stanford's favor.

More than 150 Stanford staff members have taken the course in Fundamentals of Supervision, now in its third year. All of those interviewed by *Campus Report* were pleased, citing both short- and long-term benefits in the way they handled their jobs.

"The course on supervising gets people to focus on that particular relationship for a while," said a man from Encina Hall. He was in the class primarily to learn how to handle "one of the more difficult parts of being a supervisor—talking to an employee about his performance."

A woman from Inner Quad commented: "What impressed me was the approach—always value the employee's self-esteem. If you keep that in mind, you get good results."

"One of my employees said that after I took the course I was a lot easier to get along with," reported an administrative assistant in an academic department.

"I took the course to get a more structured approach to being in charge," she continued. "You don't always learn the best, the most efficient, or the most appropriate way of doing things from your own supervisor. My supervisors are faculty members—they don't want to supervise."

Why the course?

Director of Employee Relations Felix Barthelemy recalls the main reasons for initiating the course in 1979.

"We frequently had requests from supervisors themselves for training," he says. "They had ended up in supervisory positions without any training, or they wanted to test their skills.

"Some managers suggested it for their supervisors. It was their perception that some supervisors did not have skills as strong as they should be.

"And we at Employee Relations could see that it was needed from our own interactions with employees. A majority of our cases, when an employee initiates the interview, has to do with some interaction with a supervisor that hasn't gone well."

Staff Development Coordinator Judy Moss adapted the Zenger-Miller program for supervisor training for the University, and a pilot group took the course in November and December, 1979.

Since then it has evolved considerably, guided by feedback from each class. The goal is to train supervisors who are responsive to demands from their own supervisors for job performance and sensitive to the needs of employees for job satisfaction.

Now two groups of 10-12 meet each quarter for the first course, which concentrates on the active aspects of supervision: knowing and understanding a job and teaching it, setting standards, communicating about performance, and listening to and giving recognition to employees.

The second course centers on problem-solving—reaction and response to things that need to be changed, such as poor performance, problem behavior, or complaints.

After that, there are one-session classes on single subjects: change, delegation, listening, conflict management, etc.

Opportunity to share

One of the most valuable parts of taking the courses, for many, is the opportunity to share problems and solutions with supervisors from other parts of the University.

"We found that most departments have very similar problems," said a member of the pilot class.

Moss agrees. "People enjoy discussing issues together," she says. They are experts to each other. In the course, principles are talked about by people from their own experience. There are some wonderful trade-offs— we've had people who've been supervisors up to 20 years."

At the beginning of each new class, members are asked what their greatest supervisory challenges are. Later, one meeting is dedicated entirely to whatever is the most current issue for the group as a whole.

In the newest evolution of the course, prospective members will state their objectives when they apply. In time, Moss hopes, the result will be a supervisory system tailored specifically to Stanford's needs.

The course can be adapted to the needs of a particular school or department, too. The Graduate School of Business last spring graduated the first class in a course that included participants from every management level.

Course will evolve

Personnel Director Rob Parker sees Fundamentals of Supervision as changing to respond to whatever goes on at Stanford.

"There will always be some values and issues that endure over time and don't change much from year to year. But there are always new ideas and initiatives here—it would be really critical that supervisors understand, so that they can reinforce them. We need to make sure that the programs are updated to reflect that."

He also hopes that the courses will be able to tap a vital resource that already exists on campus—those supervisors who intuitively know what to do to maintain a happy working atmosphere.

The fall quarter courses in Fundamentals of Supervision have already begun. For information about the winter quarter courses, call Bea Tracy, ext. 7-0657. Other staff development courses were listed in the Sept. 8 issue of *Campus Report*.

—Pat Black

Below are comments on supervising at Stanford from some of the graduates of the Elements of Supervision course.

It's very interesting seeing different people in the same job bringing their different qualities and strengths and style to the job. No two people do a job the same way.

The most careful interview won't tell you how a person will perform on the job.

A key thing about supervising is choosing the right people to do the work. I have trouble working with slow people—I start feeling incompetent, nothing works. I really appreciate a good employee.

The staff is appreciated; their work is important.

Being a supervisor is a little like being a housemother. I've seen people positively blossom with constructive criticism.

I like input from employees. When we meet I have my say, then I open it up to them. I listen to what they say.

Poor supervising can go unnoticed for a long time. At Stanford, many people continue to do their work in spite of poor supervision. They are loyal, dedicated employees who do their work despite negative office situations.

Good supervising does not get rewards—the main sign of it is no problems, and it's problems and problem-solving that get the attention.

I don't expect employees to love me. What I want is respect for my position, and I will respect them, too.

Supervision is a challenge. Every day something new arises. You never know what's going to happen.



The History Department's Barbara Wawrzynski talks at the first meeting of H & S department administrators.

H&S department administrators meet

A new group of Humanities and Sciences department administrators had its first formal meeting Thursday, Sept. 23 in History Corner.

Those at the meeting included department secretaries, administrative assistants, and administrative service managers from about 30 departments and programs.

"A department administrator has no one to talk to," explained Barbara Wawrzynski, administrative assistant for the History Department. "We can't discuss problems with our staff or with the chairman."

The situation changed when administrators began to meet each other at staff development workshops and exchange problems and solutions. They started to spend lunch hours together from time to time.

Now all the H&S administrators have been invited to participate in the planned monthly meetings.

The biggest item on their agenda is communication—ideas, solutions, concerns, information, and mutual support. They'll share good travel agents, caterers, and candidates for clerical positions.

The administrators are thoughtful, articulate people, some of whom have worked in Stanford's academic departments for 20-30 years. For information about the group or to suggest topics for discussion, call Barbara Wawrzynski, ext. 7-2651, or Arlee Ellis, political science, ext. 7-1806.

Effective supervision can be key to employee morale

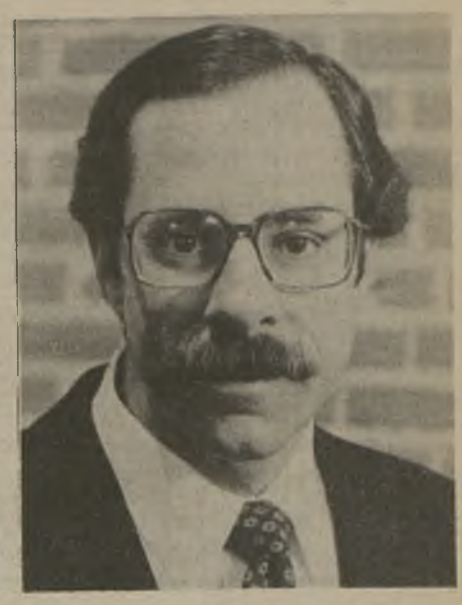
The staff supervisor—as motivating force, communicator, and instructor—plays a significant role in the lives of Stanford employees and in the University's success in meeting its goals.

Skillful supervision is a valuable contribution at Stanford; it is a role that deserves to be taken seriously.

—Donald Kennedy



Felix Barthelemy



Rob Parker

'I've been fairly constant in my belief that one of the most critical ingredients for successful employee experience at Stanford is the quality of supervision," says Personnel Director Rob Parker.

No Stanford staff member would quarrel with that statement; most could contribute a few stories to illustrate it. One woman who suffered under an insensitive supervisor said after leaving the job, "It was the most miserable five years of my life."

The supervisor has many possible roles: teacher, mentor, worker, guide, middleman, scapegoat, motivator, communicator. . . . How he or she fills these roles has much to do with the success of an employee's working life as well as with how the staff carries out the work of the University.

Yet until about three years ago, there was no regular training available on campus for supervisors who did not have the skills to carry out their duties effectively.

A major employer

Parker, who came to Stanford in 1974 as manager of employee relations, probably has done as much as anyone else to get the University to realize that it's not only an educational institution, but a major employer of staff personnel.

"In a place as diverse as Stanford is," he says, "it's very easy for people to feel isolated and not part of a larger organization. In many regards, the supervisor turns out to be the critical link between the staff member and the rest of the University.

"Whether that be a school, the University as a whole, or part of a vice-presidential area, the supervisor is called upon to interpret the University to the staff member—and vice versa."

Parker speaks not only of first-line supervisors, but all those who have the responsibility for directing and guiding others.

"While I think the quality of supervision at Stanford is good, by and large, we could focus on the role in many aspects—how work is assigned and evaluated, the attention given an employee's career development, or performance communication, for instance.

"The supervisor can convey whether the employee is seen as a whole person, with real needs and concerns outside of work as well as in the work place."

Parker stresses the effort to match people's skills and abilities with the University's needs in ways that are mutually beneficial.

"To the extent that we do that, the place is better for it," he continues. "The supervisor is essential in making that match work."

The good supervisor

What *is* a good supervisor?

Employee Relations Manager Felix Barthelemy responded to that question as follows:

A good supervisor 1) clearly states to staff the work that needs to be done and the standards of performance required, 2) gives recognition for work well done, and 3) addresses and assists employees in correcting problems as they occur.

"Most employees at Stanford are self-motivated and can be effective regardless of supervision," he says. "Supervisors need to know how to keep them motivated, how to avoid unmotivating them, and how to keep challenging them.

"If an employee does a good job even though supervision is poor, he or she ultimately leaves the job, because the supervisor does nothing to help develop his or her skills."

Supervisors needed

Stanford's self-motivated staff members may think they don't need any supervision, but they can't give themselves recognition, Barthelemy points out. In addition, the supervisor can keep the job in perspective.

"It's too easy to begin to see your job as an entity in itself, unrelated to the University," he observes.

This is particularly true in parts of the campus where employees have no contact with students or faculty.

"I'm amazed to run across staff members who have no understanding of what the role of the faculty is, or what their values are," says Parker.

"People in academic departments see the ebb and flow of students and faculty, course materials, and research, but staff who are not part of that can become estranged from what the primary mission of the University is, and they can feel resentful.

"There are many staff members whose only contact with a faculty member is when something goes wrong, and that's really unfortunate.

"Ultimately, our greatest success will be achieved when the whole staff supports and appreciates the faculty, and there's full recognition and respect of the staff by the faculty."

Communication important

Barthelemy sees the supervisorial role primarily as a relational one, with good communication the most important aspect.

"No communication leads to bad communication," he says. "If you're open, if the style of communication includes both good and bad, employees will feel comfortable with it."

Staff Development Manager Judy Moss agrees, and her courses in supervising reflect this.

"The supervisor's job is to communicate," she says. "It promotes security and makes the process of supervising a little more predictable. Often people think communication skills are magic, but they can be learned."

A few people, upon taking the course and finding out what being a good supervisor requires, have stepped down from their jobs.

"Some people get more satisfaction from the expertise of doing a job than from the relationships of supervising others," says Moss. "It can be frustrating as well as rewarding."

She and Barthelemy also encourage communication between supervisors and *their* supervisors.

"It's important that the manager should know what's going on," Moss says. "They should work out the department's objectives together. Stanford can offer courses in supervision, but the supervisor's manager must cooperate for the best results."

Some supervisors think that hostility from their charges is something they just have to live with. Not so, says Barthelemy.

"If hostility comes from employees, there's something else going on. It's probably that the employees think that the impact of decisions on them were not taken into consideration.

"When you make decisions, share the why of it or others will come to their own conclusion, and they all could be wrong. If they understand, they tend to be more positive. They should know the time and effort that goes into decisions."

A problem that leads many supervisors to sign up for the course is that of dealing with an employee whose work is not acceptable.

"Some supervisors tend to avoid unpleasant things, to procrastinate in doing something about them," says Barthelemy. "They hope the problem will correct itself.

"They think the employee won't appreciate being asked what the matter is, but frequently the opposite occurs. Most people know when they're not doing a good job, and often there's a sense of relief when it's brought up, particularly if the supervisor expresses a willingness to work with the staff member to improve performance."

Here's where the supervisor has to be *willing* to communicate, says Barthelemy—and that includes listening.

"Don't predetermine the cause of the problem," he counsels. "Go to the employee, bring it up, and ask why. If a person is doing poorly because he's ill, you can't cure a physical problem with disciplinary letters.

"Identify the real cause and look for possible approaches to correction."

The abusive supervisor

On rare occasions at Stanford, an employee is faced with a supervisor who is verbally or physically abusive. It may be that the supervisor doesn't know how to articulate work expectations, or there may be a deeper problem.

"It's important that the supervisor know it's not appropriate behavior," Barthelemy says. "Even if the employee leaves, the next one will have to deal with it."

In such situations the staff member should first make very sure he or she knows what the performance standards are or what is required. It is important that both supervisor and employee focus on work-related problems and not the personalities of the people involved.

In any case, an employee is not expected to put up with abusive treatment. The Employee Relations Office can help in trying to get people focused on the actual work problems involved.

Meanwhile, supervisory skills are used everywhere, on every level, at Stanford. Managers supervise their staffs, peers supervise each other, and often a supervisor learns something from a worker.

"The training is not a solution, it's a tool," Moss comments. "Its dual purpose is to get the work done well and give people job satisfaction. We aim for a general positive atmosphere on campus."

Balance necessary

Says Parker, "It's not sufficient just to make people feel good about the place if, in fact, the work's not getting done. And it's not sufficient to be taskmasters in a sweatshop if, in fact, you're burning the people out."

He would welcome demands from faculty and administration for even higher quality supervisory training.

Around 150 campus supervisors have taken the introductory course. They are the ones who keep reminding themselves to "focus on the problem, not the person"—a major part of the training.

There's a lot of leeway for personal style in supervising at Stanford, says Parker.

"But we want them all to keep in mind the common themes: the dignity and respect of the individual staff member: the belief that a person can grow; that the work will be done better if the employee gets attention; communication; and an emphasis on problem-solving."

—Pat Black

Campus Report welcomes ideas from staff members on what makes a good or poor supervisor. Do you have a particularly good one? Write or call Pat Black and suggest a story (News and Publications, ext. 7-2558.)

Strike. . .

continued from page 1

set for 10 a.m. Thursday at Rickey's Hyatt House in Palo Alto, will be held with federal mediator Dorothy Christiansen.

The proportion of bargaining unit members on the job has risen slowly from 27 to 36 percent.

Picketing activity was light Tuesday. Thirteen USW members and supporters were arrested Monday, Oct. 4, most of them while picketing the $36 million student housing construction site. Three others were arrested Friday, Sept. 30, including Michael Baratz, executive secretary of Local 715, for blocking traffic at SLAC and on campus.

The confidential University documents, reports from the compensation section of Personnel, show that Personnel recommended the University negotiate a contract with an 8 to 10 percent range adjustment for 1982-83. The documents also call for the addition of a new fourth step, 5 percent above step three and reallocations of certain job classifications to higher ranges. (See texts, this page.)

Asked how he obtained the documents, Baratz replied that they came from "Deep Throat."

The first document is a May 25, 1982, memorandum from compensation analyst Norma Starr to five personnel officials and University chief negotiator Priscilla Wheeler detailing comparisons she made between Stanford's bargaining unit salaries and those of local governmental agencies and corporations. She found Stanford's trades and crafts salaries lag the market at range maximum by 10 to 18 percent. Other job classifications also lag at range maximum, but several are competitive at mid-point or average salaries.

The second memorandum, based on the research compiled in May, contains final recommendations from Starr and Rosemary Monroe, assistant manager of compensation, on the bargaining unit salary package for University negotiators.

Wheeler said Tuesday that the University's final offer is "very consistent with the thrust of the Personnel proposals. But it is not identical because many recommendations are made concerning bargaining by different areas of the institution. All aspects of the University's position have to be brought to bear" in developing its offer, she added.

University President Donald Kennedy, speaking to the first regular meeting of the Faculty Senate Thursday afternoon, said the union's latest offer, made Sept. 17, was "simply not in the ballpark."

Kennedy estimated the USW proposal's cost, including compensation and benefits, at a minimum of 24 percent for the first two years. The University's final offer, made Sept. 7, was for a first year increase of 9.5 percent and increases of 7.5 to 10 percent in each of the succeeding two years. (See text, page 9.)

The union is demanding a two-year contract with a wage increase of 10.25 percent or $140, whichever is greater, the first year, and a 5 percent across-the-board increase plus a full new fourth step of 5 percent in the second year. The union also wants certain job categories reassigned to higher salary ranges and medical and dental benefits improvements.

In a union flyer issued Oct. 4, Baratz said USW offered to "submit the outstanding issues to advisory arbitration—an offer almost unheard of in labor relations. We took this risk because we are so confident of the fairness of our proposals. The University rejected this offer." **continued on next page**

Major portions of confidential compensation memos made public by USW

Following are two confidential memoranda concerning the University's position on the bargaining unit salary package which were obtained by United Stanford Workers and distributed publicly Oct. 1. The document dated May 25, 1982—excerpted extensively here—is a report from compensation analyst Norma Starr addressed to Felix Barthelemy, manager of employee relations; Douglas Dupen, SLAC personnel director; Paul Fearer, manager of compensation; Rosemary Monroe, assistant manager of compensation; Robert Parker, director of personnel; and Priscilla Wheeler, managing attorney for labor. The August 13, 1982, document—printed in full—was authored by Monroe and Starr, and is addressed to Barthelemy, Parker, and Wheeler. A check mark indicates the originals were sent to Wheeler.

May 25, 1982

In order to assess our market position for bargaining unit positions in preparation for upcoming negotiations we surveyed 16 positions that typify the broad range of BU classifications.

The surveys and ordinances we used were: SIRS (local companies), BASSC (Bay Area public and private sectors), UC, Lawrence Livermore Laboratory (LLL), Radford, City of San Jose, and the Livermore Survey. In addition we compared some local 715 contracts including San Mateo (City and County), Santa Clara County (S.C.), and the Cities of Palo Alto and Redwood City. Finally we compared LST positions with SRI, Syntex, and Alza, and compared Autopsy Room Attendent ranges with Palo Alto VA Hospital and Santa Clara Valley Medical Center.

In each case we looked at the average, or where not available the midpoint, and the range of salaries. In order to remove any extreme salaries we used the inter-quartile range for the BASSC and Radford data. In addition, we looked at the min-max spread as well as the number of steps in each range, in order to compare the length of time it takes to go through the steps of the surveyed ranges with Stanford's three-step ten percent ranges. It is important to note in this regard, that the majority of ranges (UC, San Jose, Palo Alto, Santa Clara) were five steps and they average 20-25 percent spread. However, both Santa Clara and San Mateo Counties had a one-step rate for several of their trades and crafts, which were not in the 715 contract. This rate was compared with our average salary rather than with the min or max, in order not to avoid skewed data.

In assessing this market data it is important to take into consideration the effective date of each ordinance or contract. Most of the organizations surveyed had July 1, 1981 effective dates, which compare with our November 1, 1981 salaries. It is presumed that they will have another salary increase on July 1, 1982 of 5-10 percent.

I. Overall Conclusions

In the trades and crafts, Stanford's averages generally lag the midpoints or averages of the market by 6-12 percent. However most of the ranges have a spread of 15-25 percent as opposed to our 10 percent. At the maxima, we lag 10-18 percent which is especially important since almost all our salaries are near range max. The exception is our strong market position with Stationary Engineers.

Our research/laboratory positions (Lab Mechs, S&E Techs, and LSTs) are generally mid-market, although we are 10-15 percent behind at range maxima. We do lead the average salaries for LSTs.

In service classifications our average salaries are competitive for groundskeepers and food service workers, while custodians lag 5-10 percent. Again we are behind the market 6-13 percent at the maxima.

Computer Operators and Senior Computer Operators average salaries lead all but S.C. County by about 12 percent; our ranges also lead the market except for S.C. County. Our Offset Press Operators II average salaries generally lead the market, although we lag slightly at the max. Graphic Tech II, III, IV, and Specialist are competitive on the average, but lag at the max 14-23 percent.

While selective reallocations in the trades and crafts and other selected classifications may help to improve our market position, there may be a need to increase the size of the ranges in almost all classifications to address our severe range maxima lag problem.

II. Recommendations

Objectives: Based on the preceding market information it is our intention to recommend a salary program which will attempt to improve our market position. Our proposal is for the first year of the contract. We will provide more information on other salary programs and contract settlements as they occur.

Recommendation No. 1: We recommend an 8-10 percent range adjustment for all classifications.

Recommendation No. 2: In addition we recommend adding a 5 percent Step 4 to increase the range spread to 15 percent. This would result in a total program of 13-15 percent the first year, in addition to the proposed reallocations described below.

Rationale: most of our Bargaining Unit employees are at Step 3, and many of them have been there for many years. We are lagging the market the most at range maxima. In addition, most 715 contracts have five steps and therefore, by adding an additional step we would be more responsive to long-time employees, as well as being more in line with other contracts.

August 13, 1982

After assessing our market position, Compensation prepared a proposal dated May 25, 1982, which summarized our market survey work and addressed outstanding salary issues related to the Bargaining Unit. The recommendations included: an 8 to 10 percent range adjustment for 1982-83, the addition of a 5 percent Step 4 and the reallocation of various classifications to address particular market lags.

During the past few weeks we consulted with representatives of various groups in the University including: Facilities and Services, SLAC, CIT, the Medical School, and DAPER to solicit their input on our recommendation and to inquire as to whether there were any additional Compensation issues which they believed warranted attention in the Bargaining Unit negotiations.

As we described in our proposal, our survey data shows that our most severe market lags are with the trades and crafts, specifically at range maxima. There are two ways to alleviate this problem within the constraints of the budget: increase the range maxima by adding a 5 percent Step 4, while providing greater in-hire flexibility or reallocate the pay ranges of most of the classifications. The operating units strongly support the first option, but do feel that a few select classifications lag the market so much that reallocations are necessary even with the other adjustments.

Section I represents our final set of recommendations. Section II describes those additional reallocations which Compensation and the operating units feel are necessary, if money is available, to preserve equity between the trades and crafts and to preserve or improve our longer-term market position.

I. Final Recommendations

A. Eight to 10 percent range adjustment for all classifications.

B. Additional 5 percent Step 4 to increase the range spread to 15 percent.

C. Greater in-hire flexibility.

D. Range Reallocations.

1. Move Principal S&E Techs from A39 to A41 to match the Lab Mechanician III range.

2. Move Principal Accelerator Operators from A39 to A41 since they track Principal S&E Techs.

3. Reallocate HVAC Mechanics, since both Facilities and Services and SLAC feel that this classification is their most serious recruitment and retention problem. In addition, HVAC is becoming more complex and may warrant a higher rate of pay.

	From	To
Journey-level	A35	A37
Specialist	A36	A38
Leader	A37	A39

4. Reallocate Greenskeepers since they are basically Maintenance Persons and the department feels that they should track the M.P. series.

	From	To
Greenskeeper	A18	A24
Greenskeeper Leader	A20	A26

5. Reallocate Book Warehouse Assistant to track Storekeeper and Deliverer, since the Press feels the people handling the books should be paid the same as those delivering the books.

	From	To
I	A12	A17
II—New level	—	A20

II. Additional Areas of Possible Reallocations

A. Reallocate Electricians and Plumbers to match the HVAC Mechanics reallocations.

We feel that reallocating one group without the other groups is somewhat short-sighted. The current depression in the building trades will not last forever; and we may end up lagging the market.

B. Reallocate Carpenters and Painters by 5 percent (two ranges) to correspond to the increases of other crafts. The rationale is the same as A.

C. Reallocate Maintenance Persons III-Premium and IV by 5 percent (two ranges) since they are journey-level crafts as well.

D. Reallocate Building Systems Technicians 2.5 percent (A37 to A38) to correspond with Plumber, Electrician, and HVAC Specialists.

We hope this information is helpful to you in negotiations and we would be happy to supply you with any additional information as you need it.

Strike. . .

continued from page 8

Wheeler said there was "no formal offer of arbitration, but had it been made the University would have rejected it." In arbitration, the parties "ask someone outside to make decisions," she said. "The University believes it is quite capable of doing that itself."

She criticized Baratz for his failure to maintain the confidentiality of the meeting, noting that "a number of things were said. . .that Baratz would not like to see repeated."

Pickets, who delayed entry of a skeleton crew Friday at the new student housing project, returned Monday in full force, keeping approximately 150 construction workers who were scheduled to work from doing so. Most construction workers had Friday off.

On Monday 45 pickets marched in front of the gate reserved for contractor Rudolph & Sletten. University officials contend such a picket line amounts to an illegal secondary boycott.

Several construction workers crossed the picket line in private vehicles, but most were content to honor the line. Pickets struck vehicles with their signs as the trucks and cars speed through.

Stanford police declared the gathering an illegal assembly, warned pickets they would be arrested if the remained, then moved in to arrest pickets who had sat down in front of the gate. Eleven Stanford police officers were on the scene. An additional seven officers from Palo Alto arrived as back-up, but did not take part in the arrests.

Five of the 10 arrested between 7:30 and 7:45 a.m. were Stanford employees, the others local labor leaders. Employees arrested were: Rhoda Love, radiology; Manuel Quesada, interdepartmental mail; William Devita, SLAC; Wouter Broers, SLAC; and John Quesada, operations and maintenance.

Labor leaders arrested were: James Potterton, director of labor studies, San Jose City College; William Twohey, board member of the Santa Clara County Central Labor Council; William Callahan, field representative of the American Federation of State and Municipal Employees; John Listinsky, senior field representative of Local 715; and Peter Cervantes-Gautschi, business manager of the Santa Clara County Central Labor Council.

Two additional arrests were made at the site in late morning: Edward Guthrie, SLAC, and Alfonso Dillard, who listed his occupation as unemployed USW member. Guthrie was charged with vandalism and Dillard with obstructing a police officer. Also in late morning, Enrique Bustamante, a laborer, was arrested at Bonair Siding for allegedly punching out a vehicle tire using nail spikes.

The dozen males were booked at North County Jail in Palo Alto. Love was taken to the sheriff's Elmwood facility for women in Milpitas for booking.

On Friday, Baratz and Charles Lacy, principal science and engineering technician at the Stanford Linear Accelerator Center, were arrested for allegedly blocking traffic at the SLAC entrance.

Early that afternoon, Linda Crouse, laborer at Tresidder Union, was arrested at Bonair Siding for allegedly obstructing traffic.

The University's strike information headquaters reported Monday that 839 out of 1,321 stayed away from work. When the strike began, 27 percent of the bargaining unit workers stayed on the job. As of Monday, 36 percent were working.

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Reply to vivid display of injustice

Editor, *Campus Report*:

Professors Rebholz, Drake, Ruotolo, Islas, Todd, and Winkler have done us a great service, in their recent letter *(Campus Report, Sept. 29)* to you, by publicizing the results of their "reading between and under the printed lines" of the current Stanford/USW dispute. The possibility that there might be, in this "informative" letter, an underlying presumption of Stanford's malicious designs on the union could certainly occur to no reasonable reader.

Even with a remarkable investigation to their credit, however, Professors Rebholz *et al* manage to outdo themselves in a fascinating discourse on "the nature of justice" and their professional obligation as teachers to wean the typical Stanford student away from his natural and graceless state of indifference to injustice.

Indeed, having now this vivid display of injustice poised before them (i.e., their own Stanford's unjust treatment of the union), it is all too clear that even those few remaining good Stanford students will certainly "cease to admire and strive for a just society" just as surely as night follows day. That, unfortunately, is their nature.

But the most profound insight in this remarkable letter lies in its analysis of the grim racial implications of the USW strike.

Knowing as we do that the average Stanford student is an uneducated, uneducatable, prejudiced, weak-willed, and self-indulgent ninny, we can only agree that he will, as a result of the strike, have drawn the necessary conclusion about certain minorities. It is alarmingly obvious: "Services are being denied to me by striking workers; many of these workers belong to minorities; *ipso facto* these minorities are to blame for my problems."

The notorious susceptibility of Stanford students to racism, to injustice, and many other unfortunate tendencies, almost makes one wish that it were possible to completely isolate them from the real world—to lovingly shelter them from all bad examples and enfold them instead only in good influences in a kind of warm and prolonged love-bombing. That would be true education.

Undoubtedly the grave questions raised by the writers of this letter will have already persuaded university officials (however belatedly and shamefacedly) into *finally* bargaining in good faith. Certainly many in the Stanford community at large have benefited from a number of revealing insights. I should imagine, too, that at least a few of the students who have read this letter will be carefully examining their plans for course selection in the coming quarters.

Robert Mayer
Jackson Library
Graduate School of Business

University 'stonewalling'—Rebholz

Editor, *Campus Report*:

I want first to correct two errors I made in a statement of opinion in a letter on page 21 of the September 29 issue of *Campus Report*. The USW are asking in the first year an increase of 10.25 percent or $140 per *month*, whichever is higher, not per *week*. And USW is not an "open" shop but an "agency" shop in which non-union members covered by the bargaining agreement have to pay "agency" dues.

I want secondly to respond to a collaborative statement "by several administrators" in the same issue of *Campus Report*. That statement, representing the administration's viewpoint on the current labor dispute, was virtually repeated by Donald Kennedy in his statement to the Academic Senate on Thursday, September 30.

It is designed to place responsibility for the strike on the shoulders of USW by claiming that the administration moved quickly to its "final offer" of September 7, beyond which they could not reasonably go, and that the union had therefore no reason to strike.

Now, with the union's recent publication of a recommendation by the administration's own Compensation Department, prepared by Norma Starr and Rosemary Monroe, we learn how dubious the administration's claim is. On August 13, Compensation reiterated its recommendation of May 25 that *in the first year* the administration offer an eight percent to 10 percent increase in addition to the immediate introduction of a new step 4 of five percent; that is, a first-year increase for most workers of between 13 percent or 15 percent.

Instead the administration made its "final offer" of 9.5 percent in the first year and a phasing in of a fourth step of 2.5 percent in the second and third years of the contract. In other words, the Compensation unit believed that the administration should move quite beyond the "ultimate point" which unnamed administrators and Donald Kennedy have announced.

I can reach only one conclusion. The administration is stonewalling in order to humiliate USW so that the Hospital workers, in addition to others who might unionize, will reject that option. That conclusion is in keeping with the administration's refusal of the union's almost unthinkably generous offer, made last Thursday, to go back to work and refer the dispute to advisory arbitration. It is in keeping with the refusal of Priscilla Wheeler to answer questions, raised by the residence staff at Trancos, about wages, medical benefits, and dental benefits received by comparable workers in Santa Clara County.

It is in keeping with the refusal of Priscilla Wheeler or her associate, Felix Barthelemy, to accept an invitation from the residence staffs of Madera and Trancos to address students on the issues and answer questions.

It is in keeping with the stony coldness of Donald Kennedy's tone in his address to the Senate on the issue—a tone I at least have never heard him use at Stanford.

Surely the time has come for the administration to make a move towards settling this dispute. If Priscilla Wheeler or Donald Kennedy would undertake a tour of duty as a Resident Fellow in an all-frosh dorm and try to plan evening and week-end meals for 80 hungry students, I think they might break through their cold, stone wall.

Ronald A. Rebholz,
Professor, English
Resident Fellow, Trancos

'Significant' union move needed in negotiations, Kennedy tells Senate

Following are comments by President Donald Kennedy to the Faculty Senate Thursday, Sept. 30.

Now let me talk just briefly on the matter of the strike. I want first to assure my faculty colleagues that I understand and deeply regret the inconveniences that have been caused to faculty members, to academic departments, and particularly to those who do the important work of residential education. For reasons that I shall explain, however, I do not believe the University administration can be held responsible for the strike or its various unpleasant sequelae.

As you know, negotiations were resumed yesterday, and continue today. There is, regrettably, little progress to report (from yesterday). I want briefly to tell you why we are where we are, and to state the conditions for future progress.

The article printed in the Stanford *Daily* Tuesday and in yesterday's *Campus Report*, which was a collaborative effort on the part of several of us, sets out our view of the history of the negotiations. Neither that history, nor the existence of a strike which, in our judgment, was both an inopportune and ill-advised move on the part of USW's leadership, supports the conclusion that we have been intransigient.

On the contrary, we began our negotiation from a realistic level, and made improvements in our offer in such a way as to signal clearly what our final zone of settlement would be. Surely it must be clear that we will end this process somewhere in the vicinity of the total compensation established last spring for the various nonunionized groups of Stanford University and Stanford University Hospital workers.

Since those increases were established there has been a substantial reduction in the inflation rate; I suspect that had there been more inflation instead of less, USW negotiators would be urging that it be taken into account. The point is that a final offer near, but not necessarily at, the improvement levels already established for other groups is quite clearly all our capacity will permit.

The strike was called after a University offer that included a 9.5 percent increase for the first year—quite close to the increases given the others last spring. USW, since the strike began, has made a counter-offer that they describe as involving major concessions.

Some of our colleagues, in a recently-published letter, have apparently accepted that characterization; they describe the positions now as "close." That is wrong. The union's latest offer involves increases, in compensation and benefits, a *minimum* of about 24 percent for the first two years. That offer is simply not in the ballpark.

I would reiterate that a significant move by USW now is required to get the bargaining process out of its present impasse. And I emphasize again that the University, having started at a reasonable level and having tried responsibly to settle at an early stage in this process, has very little flexibility left.

I need not tell you, I hope, that Stanford wants to be fair—but that we must also take a comprehensive view of fairness that includes in addition to bargaining-unit workers—principal investigators, tuition payers, and those who are responsible for academic programs. If we misallocate resources in this area to avert the inconvenience of a strike, we will damage other parts of the institution in these difficult times. I hope no one will mistake my own determination on this point.

Those experienced with labor negotiations, here and elsewhere, have had a good deal of difficulty in interpreting this strike. It is said to be about an unfair labor practice, yet actually deals with contract terms; and the union leadership, instead of using the process of collective bargaining seriously, has sought to settle it in every other way possible—on the picket line, in the media, by political pressure, and now finally by personal harassment. But it will be settled only at the table—and only through the introduction, by USW's representatives, of a note of realism in the bargaining process.

Kennedy: Science, liberal arts are deeply intertwined

Following are remarks by President Donald Kennedy to the University of Oregon fall convocation, Oct. 4, on "On Science and Culture."

Introduction

It is a great pleasure to be at the University of Oregon for this Convocation. And in particular it is a privilege to be able to bring greetings from Stanford—a friendly neighbor who shares much of your history, many of your strengths, and expect nearly all of your ideals.

The small handful of major research universities in the Far West, whether public or private, share some important roots. Because they had their origins late in the nineteenth century, and were accordingly unencumbered by a long history, they were able to draw from their very beginnings on two important traditions: the classical commitment to liberal learning, on which the older eastern institutions were founded; and the German-derived nineteenth century emphasis on independent study, graduate work, and training for the specialties.

At institutions like Oregon and Stanford, these were blended with a third stream — the uniquely western concern for applied knowledge that was embodied in the Morrill Act and in the strong science and engineering schools that developed in the west. Stanford and Oregon both have the diversity and the scientific strength that is characteristic of their growth from this multiple graft.

Perhaps, then, it is reasonable to suggest that our institutions ought to pay *special* attention to the bridges between the sciences and the humanities. People and places strong in the scientific tradition have infrequently undertaken that obligation. On the contrary, they have seemed awkward and diffident about the challenge to do so — as though they somehow believed that the traditions of the humanities were more powerfully "intellectual" and therefore ought be conceded the leading role.

As you will discover later, I do not accept that premise; indeed, I think there are good reasons why institutions like ours — in which science and "liberal culture" shared prominence from the begining — are the places in which they can best be brought together again.

The Nature of the Problem

Scientific Literacy

Why is this task worth our attention? Why is it important that all of us—scientists and humanists alike—understand the linkages between science and the humanities? I want to dispense rather quickly with two reasons, and then concentrate upon a third.

The first reason, to which a good deal of recent attention has been paid, is the straightforward problem of scientific and technological illiteracy. There are abundant signs that this is a national defect worth taking seriously.

We live in a high-technology society, and almost every public policy question with which we grapple is laden with technical and scientific content. To be an educated citizen increasingly requires a familiarity with the basic concepts and the vocabulary of science. But it is painfully obvious that we have difficulty bringing the most rudimentary scientific rules to bear even on the business of discriminating sense from nonsense.

Numbers of our fellow citizens can readily be persuaded that they can be made more powerful by pyramids, cured of cancer by eating apricot pits, lost forever in something called The Bermuda Triangle; able to pick cards or bend spoons by concentrating hard enough; and made svelte forever by a diet from Scarsdale this year, or Beverly Hills the next.

These are danger signals, all right, and I agree with those who say that among the obligations of scientists is the defeat, through the broadest kind of general education, of this vulnerability to scientific faddism and —even worse — our prediliction for uncritical scientific judgments about decisions facing our society.

The 'Specialness' of Science

A second reason is the degree to which science is separated artificially from other forms of human activity, and credited with rules, standards, and procedures that do not apply to other kinds of thought and analysis.

I claim to have received an advanced education about this phenomenon during the two and a half years I spent as head of a Federal scientific regulatory agency. What I found most startling there is the strength of the belief that something called *science* and something called *policy* can exist in absolutely water-tight compartments. It is, in my judgment, a dangerous fiction.

For example, the Congress regularly establishes desired social outcomes and sets scientific standards that it believes will achieve them. But when a scientific process so specified yields a result that makes voters unhappy, it is often the science that is attacked — under the mistaken impression that it is not really a part of the policy.

I arrived in Washington to take over the Food and Drug Administration about three weeks after the Agency had received the results of animal tests that required it to remove saccharin from the market under law. I received a number of challenges on that matter from members of Congress, mostly attacking the animal tests and their rationale.

By artificially isolating science from policy, I suspect they moved the argument to smoother ground. If you are running for reelection it is much more comfortable to discuss the question "are animal tests appropriate for estimating human cancer risks?" than the substantially more germane question "should weak carcinogens that people like be permitted in the food supply?"

Conversely, it was very difficult to explain that science is full of embedded "social policy." I repeatedly heard testimony before congressional committees in which the results of an experiment assessing the risk of some substance were stoutly represented as "significant" by one group, and equally stoutly as not "significant" by the other —one set of advocates claiming that a particular result *exceeded* the 95% confidence level, and the other arguing that it barely failed. Everyone seemed to accept that threshhold as deeply "scientific."

I regularly produced shocked disbelief by pointing out that this threshhold of statistical significance is a convention chosen to support a policy. Science is an activity in which reliability has high social significance, and accordingly scientists have declined to accept a result unless the probability is very low (e.g., 1 in 20) that it could be due to chance alone.

We selected that value through a social process entirely analogous to the one that established "beyond reasonable doubt" as the standard of proof in the criminal justice system. It is thus a social covenant, expressed in scientific notation.

Without the notation, it reads: "I want to base the scientific enterprise upon results that are nearly certain, not merely quite probable." That may or may not be the right standard for, say, the social determination of risk. In a similar way, we built our criminal justice system on the covenant that we much prefer to let the guilty go free than wrongly to punish the innocent. But that is not the standard we apply, for example, in the civil courts.

My point is simply that social policy and science are much more closely intertwined than is commonly thought. In the end, that was the most dominant theme of my period of exile in government.

Despite our affection for science and for scientific precision, these cannot help us decide what we want, or how much of it. They can only help us arrive at those decisions or to live by them. In the search for policies science thus may clarify and inform the discussion, but can never dominate it.



To be an educated citizen increasingly requires a familiarity with the basic concepts and vocabulary of science. But it is painfully obvious that we have difficulty bringing the most rudimentary scientific rules to bear even on the business of discriminating sense from nonsense.

—Donald Kennedy

Science as 'Culture'

But neither of those arguments for reintegrating the sciences and humanities is the one I want to concentrate upon today. There is another kind of isolation between the sciences and "liberal learning" that may be even more damaging in the long run. It is the failure to understand the powerful interpenetration of scientific and humanistic ideas — and the resulting loss of much of science *as* culture.

Perhaps as a consequence of the increasing public mystification about science, there is a troublesome tendency to regard science as providing a separate stream of intelligent thought about what human society is and what it can become. I said before that I think scientists have been shy about staking a claim to the broad intellectual significance of their own subject matter. They have been content to accept the label "pragmatic" or "practical," and humanists, in turn, have been too willing to take them at their own evaluation.

It is these fundamental interrelationships to which I want to devote the rest of this talk. It should already be evident that I think a crucial educational objective is to be sought here; it is the serious pursuit of the implications of scientific discovery for liberal learning. I regard it as a special contribution that institutions like ours — strong in science but committed to the full range of cultural exploration — can make.

Darwinist and 'Human Nature'

Nowhere can the case for elision between the sciences and the humanities be more compelling than in the area of evolutionary thought. Yet ironically, it was the Darwinian Revolution that probably created the "two cultures" problem in the first place.

As long as one could be confident about the static character of the universe, of the physical landscape of Earth, and of the nature of its inhabitants, a single and coherent system of natural philosophy could embrace the humanities and the sciences. But the triumph of dynamics over statics is an event we have seen repeated again and again in two centuries, from the Copernican revolution to plate tectonics and the instability of the genome. Of all these upheavals, the one Darwin produced surely had the greatest impact on the unity of human knowledge.

The last great period of confidence in the unity of human knowledge was the Enlightenment. That confidence rested largely on the dominant position of theology in natural philosophy. God the Creator oversaw a clockwork universe that moved according to a set of revealed principles; and within it was a Sacred Earth, whose land forms were reshaped only catastrophically for the purpose of punishment, and whose creatures were immutably set in the pattern of their own Creation.

The range of organic diversity and the intricacy of morphology thus became, in the hands of the great naturalists of the 18th century, at once sources of wonder and reassurance. Listen to William Paley:

"...in every nature and every portion of nature which we can descry, we find attention bestowed even upon the minutest parts. The hinges in the wings of an earwig and the joints of its antennae, are as highly wrought as if the creator had had nothing else to finish." Later Paley adds the homily:

"We have no reason to fear, therefore, our being forgotten, or overlooked, or neglected."

During the eighteenth century, and with accelerating force in the nineteenth, that view was challenged by a series of scientific revolutions.

The first was cosmological, and had the effect of making the Creator more and more a spectator in His own universe.

The second, much more troublesome, was geological. Hutton and then Lyell challenged and ultimately routed the notion of catastrophism, and substituted for it the gentle dynamics of erosion, sedimentation, and other gradual processes. That Lyell eventually went too far with uniformitarian doctrine is not very important; in the mid-19th century, his gradualism screamed out to be transplanted from the nonliving to the living world.

That, of course, was the contribution Darwin made in the *Origin:* the demonstration that slowly-acting selective forces in the environment changed the *nature* of living beings over time, just as erosion and sedimentation changed the landforms.

Darwin's laborious demonstration that biological species are not immutable was often represented as a theological revolution: but it was much more a philosophical one. No one supposed that Creation had been disproven, only Special Creation. God had not been denied, only forced to retreat still more into the spectator's role: instead of making creatures, He had made a Plan for their evolution.

Darwin himself saw no loss of divine majesty, but a gain:

"There is a grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms of life or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and wonderful have been, and are being evolved."

That does not sound much like religious heresy, but it *was* academic heresy. What Darwin had accomplished, for once and for all, was the demonstration that a single way of knowing was no longer possible. And as a consequence, the strongest reaction in the end came not from the pulpit but from the Dons of Cambridge and Oxford.

John Dewey later said:

"Although the ideas that rose up like armed men against Darwin owed their intensity to religious associations, their origin

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Kennedy speech...

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and meaning are to be sought in science and philosophy, not in religion."

After Darwin: Biological Determinism

In addition to overthrowing the unity of natural philosophy, Darwin launched a new and troubling vision of humankind. The shaping of form and function — the 'nature' of organisms — by natural selection raised the prospect of a phylogenetically determined human '*nature*.' That prospect, reinforced by twentieth-century genetics, has in turn reformulated some of the most profound social issues of our time.

The Darwinian view of natural selection was promptly seized, and promptly misapplied, by proponents of the world's great competing systems of political economy. Herbert Spencer, and a succession of clumsier imitators like Andrew Carnegie, employed 'survival of the fittest' as justification for the human competition in 'free enterprise.' In doing so they mistook economic fitness for reproductive fitness, an error occasionally repeated by foolish men and women even today.

The Marxists, on the other hand, found the vision of biological determinism so deeply threatening that they were driven to extraordinary inventions for getting political economy back in the drivers seat. So desperate were these that they reached back a century before Darwin to a failed doctrine that held inheritance to be under direct environmental control. The establishment of Lysenko's version of Lamarckianism as a state scientific religion in the Soviet Union for a third of the twentieth century was the result. Anyone who doubts the power of the connection between science and culture should examine that case as a cautionary illustration of its potential for mischief.

Today one would suppose, listening to the largely political debates between Right and Left over how much to attribute to Nature and how much to social forces, that the same issues are still dominant.

Surely they have found an acrid recent focus around the coined discipline of sociobiology. The key question claimed by the sociobiologists—how behaviors can be selected when they primarily influence the survival of others and not the behaving individual—is an important one. But it is hard to see it as the centerpiece of our understanding of cultural and biological co-evolution—let alone of how we should organize political economies. And in fact I think the focus on sociobiology has overshadowed some more interesting cultural consequences of post-Darwinian thought.

The World and the Self: Biological Determinism and Freedom

These, I would argue, involve our most basic notions about freedom, rationality, and equality. And the questions arise not out of genetics and evolutionary biology, but out of the human sciences themselves: psychiatry, psychobiology, and neurobiology.

In historic terms the real scientific successor to Darwin was Sigmund Freud. To Darwin's base of phylogenetic determinism, Freud added the mind as a part of what was determined; and he also added a powerful set of ontogenetic determinants to the phylogenetic ones. Human nature, in the Freudian view, was dominated by evolutionary shaping and by "early influences" upon the psyche.

In effect, Freud made the mind part of biology. Kant had recognized madness to be biological, but held all else in the mind to be moral and rational. Freud and the modern psychiatrists, biological *and* behavioral, put all mental process on the same continuum; they made mental illness part of the human condition or, perhaps even the reverse.

Alan Stone points out that "psychiatry, after declaring madness a biological disorder, is haunted by biology in its understanding of the rest of humanity." And he goes on to say: "All of the dominant conceptual paradigms of modern psychiatry, biological and behavioral, conflict with traditional ideas about free moral agents." One does not have to go *that* far to perceive the challenge that psychobiological determination poses for the notions of free will and moral obligation.

Indeed, in just a hundred years, the biological sciences have triggered a most extraordinary reordering of our concept of what it means to be human and to be free.

It is a view so new and so robust that it sometimes threatens to crowd out traditional choice and conventional morality. The focus on the individual is so powerful that the World shrinks as the Self swells.

If there is a defect in our behavior, if we fail in what we suspect may have been an obligation, there are a host of comforting explanations: selfish genes, oppressive early experiences, or defects in catecholamine biochemistry. Finding an ethical path within our new vision of self is one of the great tasks of contemporary humanism.

Perception and Reality

At the same time, our view of reality has been reshaped in a way that also tends to internalize and individualize it. One's perceptual surround, we now understand, is profoundly affected by patterns of neuronal connections that have been assembled over evolutionary time, and often refined during early development, to extract features of the world that are of particular relevance.

There is not one single objectively verifiable world; there is, rather, the cat's world, the bird's world. There is likely even a catraised-with-vertical-stripes world, and a bird-raised-with-foster-parents world. Each reflects a phylogenetic interaction between ancestral cats or birds and a set of antecedent "worlds," modified somewhat by early experience. And if these things are true what guarantee have we of the rationalist's fundamental assumption that *you* and *I* inhabit the same world?

These new propositions about reality and rationality are the more troubling because we are now being told that the process of perception may actually extend much further than we thought — that is, beyond sensory qualities like brightness and audibility to things we are more accustomed to call "values."

Psychologists and neurophysiologists have shown that various sensory systems exhibit "range compression" — that is, become less sensitive and able to discriminate as stimuli become more intense. Their observations, solemnized years ago as the Weber-Fechner law, explain why we can detect a difference of one gram between two relatively light weights, yet barely recognize a ten- gram difference if the weights are an order of magnitude heavier.

We once scoffed at the idea that such laws of perception could be applied to the measurement of more complex parameters, like value or risk. Yet some strikingly similar rules are emerging from tests of human preference that utilize choices between rewards or risks of different magnitude and probability.

It is a sobering thought that our biological endowment may actually fix and establish many of the parameters we thought belonged to an external world. It is even more sobering that we may be biologically — innately—committed to some qualities we thought we were choosing freely, on the basis of individual experience with our surroundings. Again, the Self swells and the World shrinks.

Equality

That brings us finally, to equality — or rather, it brings us *back*; for it was the impact of biological determinism on notions about equality that tempted Carnegie and the Marxists into their futile wrestling- matches with evolution.

Darwin's intellectual legacy is not merely that some individual differences are a consequence of biological endowment, nor even that they may involve the "mind" and perhaps perceptions as complex as value. It is that these individual differences are substantial enough to react to subtle selective forces, and give rise to large differences in reproductive fitness.

The *Origin of Species* and its twentieth century offspring —genetics, psychiatry, neurobiology — have brought us to an expanded view of what is within us, as opposed to what is without. As a consequence we are obliged to enlarge our respect for the degree of individual difference.

What does that say about equality? To many, it seems to damage the very notion. That view — held by many of those most repelled by the notion of biological determinism — seems to me quite wrong. Equal is not identical; different is not unequal.

Social equality, that is, equality of opportunity, is simply not on the same continuum of choice with biological similarity. To admit a degree of inherent difference does not constrain our views of equality. It would be tragic if it did, for we need more and not less respect for individuality, which *means* difference.

The great challenge for human society, it seems to me, is to abandon the denial of biological differences, and turn to the reformation of social opportunity so that it can fairly and gracefully accommodate these differences.

Conclusion

Where have we come? I have tried to show how just one branch of science—the biology of the past hundred years—has provided much of the substance for the most humanistic enterprise of all, that of deciding *what is human*.

It has, furthermore, irrevocably changed how we think about the most social activity of all, that of designing political economies. A direct outcome of the evolutionary paradigm and its successors has been a profound reorganization of our views about human freedom, human rationality, and human equality.

I would like to close by suggesting an emerging metaphor for the connection I have tried to demonstrate between science on the one hand and the humanities on the other.

Exactly that same kind of relationship, it is now clear, exists between biological and cultural evolution. Accelerating culture becomes the *milieu* in which the selection of biological capacities takes place; and the latter, in turn, stir further quickenings in the pace of cultural evolution.

So tight and so effective is this interplay that it has wrought the most rapid change in biological structure since evolution began — the growth of the human neocortex. And it has also produced, of course, a rate of change in the cultural *milieu* that is bewildering and sometimes frightening.

A result of the interplay between the two kinds of evolution, unexpected when it was first seen, is a convergence of cultural practice and biological nature, i.e., a matching between cultural and genetic fitness. This close coupling between the two kinds of evolution offers the optimistic suggestion that in time, there is likely to be a complementary relationship between our biological endowment and our social arrangements.

I hope that notion might be serve as a metaphor for our exploration of science and culture as human activities. We cannot be human and whole without reference to both. Uprooting the humanities from science robs us of a critical understanding: that they are joint products of a co-evolutionary process, just as surely as the brain and culture are. That unity is the brightest and most exciting academic vision we could possibly have.

Over half of MBA graduates declined highest salary offer

One-third of the MBA graduates from the Class of 1982 at the Stanford Business School again took jobs with manufacturing companies—sustaining a trend that began last year, the School's annual employment survey shows.

The number of MBA graduates who went to work for manufacturing companies stands at 35 percent this year, the survey shows. It increased from 28 percent in 1980 to 36 percent last year.

Almost half of those graduates who chose manufacturing firms went to work for manufacturers of electrical and electronic equipment.

However, this year's graduates found fewer opportunities with large energy firms and manufacturers of consumer goods, paper products and motor vehicles—the kinds of companies that have been particularly hard-hit by the nation's ailing economy. Only 10 percent of the class took positions with these industries, compared with 15 percent last year.

Among the two-thirds of the 1982 MBA graduates who took positions in non-manufacturing areas, 22 percent of them went to work for consulting firms and 15 percent took jobs with investment banking firms. Slightly fewer graduates took jobs in commercial banking and other financial services this year—13 percent this year, down from 15 percent last year.

Five percent of the graduates took jobs with the government or with nonprofit organizations.

In a reversal of a recent trend, fewer graduates were hired by firms that employ under 100 persons, according to Richard Johnson, director of the Career Planning and Placement Office at the Stanford Graduate School of Business. Citing the sluggish economy as the cause, Johnson said only 16 percent of the graduates took jobs with these very small firms this year, as contrasted with 23 percent who did so last year.

The economy was also apparently the reason for a five percent decline in the number of organizations that interviewed graduating students at the School. This year 202 firms completed over 3,600 campus interviews with graduates.

The 1982 employment survey again does not make public the average starting salaries for the graduating MBAs because of a policy adopted by the Stanford Business School last year. Johnson said the School wants to discourage the "exaggerated emphasis" that has been placed on the MBAs' starting salaries in recent years.

Johnson noted, however, that the survey shows that 51 percent of the graduates did not accept their highest salary offer.

He added that on the survey the graduates ranked salary as being only moderately important in choosing among job offers. They instead ranked an intellectually stimulating job, compatibility with people in the company, and the opportunity for early responsibility as the most important considerations in accepting a job offer.

The survey's breakdown of jobs by function indicates that the 1982 MBAs differed little from their counterparts in the class of 1981: 27 percent went into finance, up from 23 percent last year; 22 percent went into consulting, up from 20 percent last year; 18 percent went into marketing, same as last year; 9 percent went into line management, same as last year; 7 percent went into corporate planning, up from 6 percent last year; and 4 percent went into operations management, same as last year.

Employers hiring four or more graduates of the class of 1982 were Atari, Inc.; Bain and Co.; Booz, Allen and Hamilton Co.; Cummins Engine Co.; First Boston Corp.; Goldman, Sachs and Co.; Hewlett-Packard Co.; IBM Corp.; Lehman Bros. Kuhn Loeb Inc.; McKinsey and Co., Inc.; Morgan Stanley and Co.; and Rolm Corp.

Sustained effort needed on faculty affirmative action

Following is a report of the Committee on Faculty Affirmative Action, July 6, 1982:

Introduction

Late in 1980, President Kennedy and the Academic Senate formed this ad hoc committee to review the University's faculty affirmative action program and to make suggestions for its improvement.

The committee met through most of 1981, with a break during the summer quarter. In its initial meetings, the committee reviewed the University's search requirements as well as its hiring and retention statistics. In addition, members of the committee interviewed some departmental faculty affirmative action officers and others who have had special experience in either affirmative action or faculty recruiting, as well as some minority and women faculty.

As these meetings progressed, it became apparent that there was a consensus on several issues. These form the backbone of this report. In particular, this report contains:

a) A statement on why faculty affirmative action should be continued and strengthened at Stanford, even if external pressure is reduced or withdrawn.

b) Proposals for an organizational structure and other practices which are likely to increase the effectiveness of recruiting women and minority group members to the faculty.

c) Proposals for and restatements of policies which are likely to increase the probability of minority and women faculty being successful here and being retained with tenure.

d) Some observations about the special responsibilities of women and minority faculty.

Why Affirmative Action?

Three basic affirmative action concepts formed the context of the committee's discussions.

The first is that the University should seek the very best scholars and teachers for its faculty. Any implicit or explicit biases which tend to eliminate certain groups from serious consideration on the basis of race or sex must necessarily yield a faculty of lower quality than what might be achieved without such biases. This goal argues for a faculty affirmative action program which seeks to eliminate sexual and racial basis from the selection process.

The second is more subtle. It is clear that Stanford University's students are extraordinarily capable. Nevertheless, they share the uncertainties about themselves which are characteristic of young people who seek significant achievements. For many women and minority students, the uncertainties are enhanced by racial or sexual images which abound in the general society.

It is our belief that these students are much more likely to overcome their uncertainties, achieve their potential and make their contributions to society if they have contact with and identify with outstanding women and minority scholars and professionals. Stanford's faculty affirmative action program should insure that such contact-takes place through steady increases in the numbers of women and minority faculty.

Another significant benefit of an effective affirmative action program is that our majority students are less likely to accept pejorative racial or sexual stereotypes as a result of having studied with oustanding women and minority scholars and professionals.

Finally, we are all keenly aware that one of the deepest and most important outcomes of an undergraduate education is the developed awareness that different peoples view the world in quite different ways and with different values.

An effective affirmative action program is likely to enrich the intellectual atmosphere of the institution and this awareness by bringing to it outstanding scholars with quite different backgrounds, even if the process which leads people to become "outstanding scholars" tends to be a homogenizing process.

A retrospective view of the enrichment of American higher education by successive waves of immigrants from different parts of the world, bringing with them differing talents, emphases and values, must necessarily lead us to believe that this process will continue with the introduction to our University of more women and minority group members.

Review of Affirmative Action Procedures and Results

Our review of faculty hiring and retention statistics led us to believe that the University, for the most part, has hired women and minority group members over the past eight or nine years at a rate which is equal to or greater than what would be expected on the basis of national Ph.D. conferral rates. What's more, the junior faculty among them have been retained with tenure at a rate which is equal to or greater than that for white males. In spite of this, the situation is not a good one.

There are just not enough women, black or chicano faculty—tenured or nontenured—at this University to meet its perceived needs. The small number who are here are overburdened with justified requests from students for advice and leadership, from the University for special services ranging from multiple committee memberships to presence at a variety of special gatherings and from the local minority communities for a variety of contributions.

These requests, all too frequently, take the faculty away from the scholarship which makes them attractive to the University. Time and time again, the committee members heard minority and women faculty members speak of the fatigue which comes from serving so many years in this special role, and of the desire for the more normal roles of teaching and research which will come when there are more minority and women faculty to share the other advising and University service functions.

It seems essential, therefore, that the University take special pains to assure that it never fails to hire, through inattention to proper search procedures or inaction in the face of opportunity, a woman or minority group faculty member whom it should have hired.

Similarly, the University should never lose a talented person at the tenure decision because of poor planning, guidance, and leadership in the face of the various demands for his or her time and energies.

Finally, the University must recognize that faculty affirmative action should remain an active process for at least a decade, because hiring rates are low and we have a long way to go before we have sufficiently large numbers so that a woman, black, or chicano faculty member can devote his or her time almost exclusively to teaching and scholarship for a year or two and still assume that the other University needs, discussed above, are being met. Thus, in spite of the apparent "fairness" of the existing procedures, we propose improvements below.

Organization of Faculty Affirmative Action

There is little doubt that faculty affirmative action has been one of the most controversial issues of the last two decades related to American university policies and practices. Unless carefully considered, it may place various important University goals in conflict. It may enrich the institution through wise action, or weaken it through expedient action designed to meet political rather than academic objectives.

Because the need for affirmative action will be with us for a long time and because of the potential importance of its consequences, it is our belief that there must be a standing organization which regularly reviews and discusses thoughtfully the University's fundamental objectives in affirmative action, its progress in meeting those objectives, the appropriateness of various existing and potential search and selection procedures, the procedures and policies of other universities, any changes in the surrounding world which influence affirmative action and the University's response to those changes.

That organization should make recommendations for changes in policies and practices as they become appropriate and should also assure their implementation. That organization must, finally, come from and be intimately linked with those responsible for faculty affirmative action—the faculty.

It is the committee's belief that the University has gone part of the way toward achieving such an organization through the appointment of school and, in some cases, departmental faculty affirmative action officers (FAAO). We must now proceed to assure that these officers know, consider and understand University policies and practices, that they participate appropriately in departmental searches and that their experiences, in turn, influence University policies and practices.

The assemblage of departmental affirmative action officers should constitute a Faculty Affirmative Action Board which should have the University Committee on Faculty Affirmative Action (UCOFAA) as its executive committee. The UCOFAA, in turn, should have a good representation of departmental affirmative action officers among its members.

The full board should meet at least once each quarter to discuss University policies, procedures and departmental experiences, as well as its own role. UCOFAA should be responsible for the faculty affirmative action review and recommendations described above and for leadership of the meetings of the board. UCOFAA should assure that each departmental officer understands the responsibilities of the position, the University's search procedures and requirements, as well as the means by which candidates may be effectively sought. UCOFAA should assure, in addition, that the procedures and requirements are changed as the University's or the outside situation changes.

continued on next page

Kennedy: Educational goals are best served if institution reflects diversity of society

The foundation of all policy at Stanford University is the institution's determination to maintain itself as a university of the highest quality. Implicit in that tenet is the University's determination to provide equal opportunity for all employees and applicants for employment regardless of race, color, creed, religion, national origin, sexual preference, age or sex, except where sex or age is a bona fide occupational qualification. Similarly, individuals with physical limitations are evaluated on their ability to perform a specific job rather than on assumptions about their disability.

The plan for affirmative action described here is intended, in ways that are consistent with those premises, to increase the number and improve the relative position of minority group members and women on the Stanford faculty and staff. And while proportional representation by race and sex is not necessary in every institution in a pluralistic society, Stanford's educational goals are best served if the institution reflects the diversity of our society at all levels.

The University has frequently stated its policy of equal employment opportunity. Because we are committed to avoid discrimination in personnel decisions, we intend to remain an equal opportunity employer. But the mere avoidance of direct discrimination, even where that can be fully achieved, does not by itself guarantee the desired changes in the composition of the faculty or staff.

To achieve such changes requires affirmative action. Hiring decisions that appear to have been reached neutrally may in fact be discriminatory if the applicant pool does not include women and minority group members. The traditional "old boy" networks for establishing criteria, locating applicants, and making recommendations can perpetuate the problem. Positive recruiting is, therefore, basic, and the need for careful review of stated qualifications goes hand in hand with open recruiting. Overly narrow qualifications may artificially and improperly exclude from consideration members of minority groups and women who could assume the responsibilities of a vacant position.

The University is fully committed to an affirmative action program. It consists, in part, of the following elements: 1) a requirement for imaginative and serious search and recruiting; 2) administrative review of hiring practices; 3) analysis of faculty and staff units to determine problem areas; 4) identification of and response to undesirable practices; 5) facilitation of training where possible and consistent with the educational objectives, that permits personal development sufficient for entry to some positions and promotion to others.

Stanford's officers who are responsible for affirmative action believe that these procedures will make Stanford University an affirmative action employer in the best sense of that phrase and will improve the representation of women and minority group members in the faculty and staff.

Donald Kennedy
President

Faculty Affirmative Action/continued from page 12

Role of Departmental Faculty Affirmative Action Officers

The role of the departmental faculty affirmative action officer (FAAO) will, presumably, be refined by the faculty affirmative action board as organized experience develops further. Here, we provide an initial assessment of the FAAO's responsibilities.

Interaction with Search Committees—The primary role of the FAAO is to assure that the affirmative action aspects of the department's search and selection procedures are carried out effectively and with integrity. To achieve this, the FAAO should:

a) Meet with each search committee chairperson prior to the initiation of the search to discuss the University's affirmative action expectations, to provide guidance and to help develop strategies for the more effective inclusion of affirmative action concerns in the actions of the search committee. At that time, the FAAO should provide the chairperson with relevant rosters of women and minority candidates as well as the names of organizations and individuals who might enhance the affirmative action aspects of the search.

b) Meet with each search committee to review its affirmative action plans at a time which is early enough so that these may be altered, yet late enough so that the committee has had time to consider what actions are relevant to its particular search.

c) Meet with the search committee immediately after the search is narrowed to a "short list" and candidates are being invited to campus for interviews. At that time, the affirmative action possibilities should be assessed. The FAAO should review the qualifications of the best minority candidates identified and should seek to determine whether an outstanding woman or minority person has been dropped from the list because of a narrowly defined position. That is, the FAAO should be the affirmative action advocate at this point.

d) Meet with the search committee chairperson immediately after the committee has ranked candidates to assess the appropriateness of the selection procedure and its affirmative action impact.

Validation of Search—When the formal recommendation for appointment is submitted by the department to the dean, it should include a statement by the FAAO that the procedures discussed above were followed and that, in the opinion of the FAAO, the search and selection affirmative action procedures were carried out effectively and with integrity.

Maintenance of Rosters—The FAAO should maintain and update rosters of women and minority scholars identified as potential candidates for faculty positions within the department. The FAAO should also maintain a list of those people in the discipline who tend to know of promising women and minority scholars.

Compilation of Statistics—The FAAO should compile statistics on the hiring and utilization of women and minorities in the department or school. These should be related to national availability data.

Conduit for Information—The FAAO should serve as a conduit for information. It is our expectation that many search committees will have experiences which will influence the actions of other search committees or University policy. The FAAO should be responsible for passing these on to the UCOFAA. Similarly, the FAAO should assure that information or understanding obtained from board meetings is passed on to the department and dean.

Advice to deans and department chairpersons—Heads of departments and schools should consult with their FAAO prior to appointing chairpersons of search committees. FAAO's can provide their perspectives on the levels of sensitivity and consciousness toward affirmative action matters of any particular proposed chairperson.

It is imperative, at least for the short run, that every search conducted in the University be chaired by an individual who recognizes and values the importance of a strong faculty affirmative action thrust. Without commitment at this level, any other action will have limited effect. The chairpersons hold the key to change and, as a consequence, they must be selected with care so that they reflect, to the greatest extent possible, the most concern for affirmative action that we can muster.

Similarly, in recognition of the key role that department chairpersons play in the affirmative action process, we propose that deans consult the FAAO's when appointing new chairpersons. This consultation would enhance the possibility of selecting individuals who would be sensitive to affirmative action issues.

In summary, the duties of the departmental FAAO are several and demanding. If the role is to be performed effectively, the number of departments which the FAAO serves should be limited so that he or she faces a small number of searches each year. The FAAO should be a senior faculty member of considerable influence within these departments. Finally, it is apparent that without strong commitment and considerable relevant sensitivity, it will be impossible for the FAAO to function effectively and achieve the impact we all desire.

Appointments of Administrative Officers

No matter how great the capabilities and organization of the FAAO's, their effectiveness will be limited if they are not supported by department chairs, deans, and other administrators. It is imperative, therefore, that the University inquire carefully about attitudes toward affirmative action as part of every judgment about the quaLifications of a candidate for an administrative post.

It should be unthinkable to appoint as administrator anyone who does not wholeheartedly support the University's aims with regard to affirmative action. Furthermore, the search committee should not simply accept the claims of the candidates, but should look for evidence about what they have actually done in their present positions. A record of success will outweigh many platitudes.

It should be unthinkable to appoint as an administrator anyone who does not wholeheartedly support...affirmative action...A record of success will outweigh many platitudes.

Guidance to Faculty Search Committees

There are a variety of problems faced by many search committees which go beyond the instructions which accompany the faculty recommendation forms. It would be advantageous for the University to learn from its experience in dealing with them and to pass that learning on to new search committees. The best way, of course, would be some brief manual of guidance to the committees maintained and updated by either the Provost or the UCOFAA. In the sections which follow, we present some of the ideas which surfaced at our meetings.

Women and Minority Faculty on Search Committees– When possible, search committees should include women and minority group members. These committee members will frequently enhance the committee's ability to locate and attract minority and women scholars.

Campus Visits by Best Minority and Women Potential Candidates—The department will undoubtedly invite the best minority and women potential candidates to give talks at the University. Prior to the person's arrival, the search committee should consider what Stanford can do for them, in addition to what they can do for Stanford.

The committee should arrange for them to examine the University and the community, to discuss schools, shopping, theater, climate, recreation, etc. Each should have an opportunity to talk with one or more women or minority faculty members about what it might be like for them here.

At the same time, the search committee is likely to recognize other outstanding women and minority scholars during the search process. These scholars should also be invited to speak at departmental seminars.

Such visits will allow our students and faculty to come into contact with some of the best women and minorities in the field. The visits will also help the institution to establish relationships with people who could assist in our affirmative action processes through identification of promising young women and minority scholars and graduate students.

Funds for this purpose should be provided by the Faculty Affirmative Action Fund.

Linking with Women and Minority Networks– Some search committees have indicated informally that they don't know how to link up with the women and minority networks in their fields. Under such circumstances, the best procedure is probably to telephone senior women and minority scholars in the field and seek their advice as to who knows of or keeps track of the most promising young people.

The Dual Career Family—Search committees should recognize that dual career families are becoming increasingly prevalent, particularly among academics and that the University has informal means for attempting to meet the needs of both people. The search committee should, therefore, attempt to determine whether the spouses of its prime candidates will desire employment and work through the dean and provost to assist in the identification of positions. We note that search committees tend to take such a need for granted when their prime candidate is a married woman, but may tend to forget it when the prime candidate is a married man.

Redefinition of Search Goals—It is frequently true that goals of a search will change as candidates are screened and, as a result, the department comes to understand better what talents it might acquire and what are its actual needs. Under such circumstances, the search committee should review the list of candidates dropped from consideration in the initial screening because of mismatches between candidates' interests and the previous perceptions of the search goals.

Identification of Potential Women and Ethnic Minority Faculty

Some of the committee's thoughts on this section of its "charge" are contained in the section concerned with the roles of the faculty affirmative action officers. The committee also felt that the University can learn a great deal from the recruiting practices of some of the major industrial research laboratories such as the Bell Laboratories and the IBM Research Laboratories.

They follow the progress of graduate students at major education institutions from the time that these students initiate research. As a result, they are in a good position to identify outstanding young scientists and engineers, including women and members of ethnic minority groups. While such an undertaking may be beyond our capabilities, less extensive efforts would be helpful.

For example, it would be quite valuable for the provost to maintain a fund to assist faculty members who are concerned with affirmative action to attend appropriate national scholarly meetings for the purpose of identifying potential women and minority faculty. We may anticipate that some of our women and minority faculty will be particularly effective in this role. They should be encouraged to take advantage of this fund.

Similarly, we recommend that our faculty who are giving talks at other institutions have the means to extend their stays so that they can speak with promising graduate students who are close to finishing their Ph.D. theses. In this manner, we might identify outstanding women and minority groups members for our faculty. It is likely that we will, as well, identify "majority" group members who will enrich this institution.

In both cases, the faculty members should return with a list of women and minority graduate students, with addresses, topics of their scholarship, their major professors, people to contact and time of expected readiness for faculty position. This information should be maintained by the department office and by the relevant FAAO. The FAAO should, in turn, present these lists for consideration by each search committee.

The presence of long-term visitors (particularly women and minority visitors) to closely linked institutions like the Center for Advanced Study in the Behavioral Sciences or the National Bureau of Economic Research also offer other opportunities for increasing the effectiveness of our faculty recruiting. These carefully selected scholars are likely to know of outstanding young women and minority scholars. Some may also be potential candidates themselves.

Selection and Recruitment of Women and Ethnic Minorities for the Stanford Professoriate

Included in the committee's charge was the request for recommendations concerning "criteria for selection" of members of the Stanford professoriate. For the most part, these matters are covered by the University's guidelines and by the report of the committee on the professoriate. We urge each search committee member to read the guidelines plus that report at the beginning of a search.

One important consideration in appointing faculty members is an assessment of promising new directions in which research and scholarship may be moving. The history of American academia over the past 150 years illustrates that the quality of such assessments can be a decisive factor in the intellectual standing of a department, a school or a university a decade later. Two obvious examples of this are the responses of institutions to the development of Darwinism and the introduction of solid-state electronics into electrical engineering and computer science.

It is vital that Stanford make such assessments as well in emerging fields in humanities and the social sciences in which gender and racial/ethnic differences have become key categories of analysis. The study of race and gender in history, for example, has moved from the periphery of attention to an important role in understanding the development of society. Such inquiries have attracted many of the most eminent of established historians and the most talented of our graduate students.

Similar perspectives of gender and race have altered other fields in the humanities and the social sciences. Fresh and influential interpretations are emerging, in part, because women and minority scholars have questioned traditional topics and modes of explanation. It is important, therefore, that Stanford make assessments of these emerging fields and implement them effectively.

We note that Stanford has a fairly established pattern for the generation of successful new programs. In general,

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Faculty Affirmative Action/continued from page 13

they are started as collaborations by faculty who are strong in their individual disciplines, but who see a mutual intellectual advantage to the formation of an interdisciplinary group. As the group broadens its intellectual goals, new faculty are drawn into it.

At some point in this process, a dean or the provost makes a decision that faculty will be hired to further strengthen the endeavor. This may occur before or after the formal formation of a "program." In either case, the University has a department perform a search, in collaboration with the program, for an outstanding person within the discipline who will also strengthen the program. Occasionally, the appointment is joint between the department and the program. If this process continues, the endeavor may become a department. More often, it is appropriate to maintain it as an interdisciplinary program.

We believe this process, which appears to have evolved naturally, is a wise one. The departmental search tends to maintain the quality of the faculty involved. The choice of extremely good people tends, over the long run, to strengthen the interdisciplinary endeavor, even if the match is not ideal for the latter at the time the choice is made. Finally, the department develops a stake in the endeavor.

The various formal and informal grouping of scholars studying women and minorities are in differing stages of this general evolution. We have one formal program, the African and Afro-American Studies Program, and two research centers, the Center for Research on Women (CROW) and the Center for Chicano Research.

Other research and teaching collaborations abound in the institution. We believe that department and deans could make a very important contribution to faculty affirmative action by sitting down once or twice a year with relevant members of the faculty studying women and minorities to address the following questions:

1) Are there emerging scholarly activities related to women and minorities which are likely to have a significant intellectual impact, both within and outside existing departments, and which could be successful here at Stanford?

2) Are there outstanding or potentially outstanding people in these areas that might be brought to the Stanford faculty?

3) Are there outstanding or potentially outstanding people that might be brought to Stanford to strengthen the existing departments, programs, centers and collaborations discussed above?

After saying this, however, we must reiterate our belief that the University's goal of increasing the number of women and minority faculty throughout the institution is a wise one. Certainly, affirmative action should not be limited to the situations described above.

Retention and promotion of Women and Ethnic Minorities in the Stanford Professoriate

The most important statement that the Committee can present concerning the retention and promotion of women and ethnic minorities in the Stanford Professoriate is that these faculty members usually face many more demands upon their time than do most of our junior faculty.

Because of their small numbers at the University, compared to the large numbers of women and minority students, these faculty are asked to advise and assist on a scale that goes far beyond normal departmental advising, to be members of more committees than their majority colleagues and to meet with local and national minority groups.

At the same time, they must be faculty (in the teaching, advising and thesis supervision roles) for the majority students as well. Too often, they face the dilemma of attempting to meet these extensive but quite legitimate general University needs while also meeting important personal needs for development as scholars. In the long run, their contributions to the University depend on both being done effectively.

We believe, therefore, that the University should reinstitute the Junior Leave Program to allow junior faculty facing such special demands to also have time to develop their scholarly careers. Our examination of that program indicates that it was of considerable importance in providing opportunities for some of our most talented women and minority faculty to achieve their scholarly potentials, and that it made substantial contributions to the ranks of our tenured women and minority faculty.

Procedures for Advising and Aiding Women and Ethnic Minority Faculty Members

Because of the unusual, above-described responsibilities of women and ethnic minority faculty, the junior faculty members are particularly in need of mentering and monitoring by senior faculty. Too often, minority faculty must choose between perceived general University responsibilities and responsibilities for personal scholarly development.

It is extremely important that a sympathetic but demanding senior faculty member keep track of each junior faculty member's progress and provide informed advice. That faculty member should also assist the junior faculty member in the various activities associated with obtaining research grants.

All too often, graduate students do not learn of these activities prior to taking an academic position. It is to the faculty member's and the institution's advantage that they be taught. This direct relationship should be a supplement to information provided at meetings each autumn of the deans with their new junior faculty.

It is also important that department heads provide meaningful and carefully considered annual conferences, as recommended by the Committee on the Professoriate and by the Academic Senate. Too often, we have heard, these conferences do not take place or are superficial. These conferences are extremely important feedback to all junior faculty, but are particularly important to those women and minority faculty who are attempting to balance University service with teaching and research. The department head or designate should review the faculty member's teaching and research. The results should be discussed at a meeting of the senior faculty prior to the conference. It would probably be most helpful to all our junior faculty if one meeting of the senior faculty each year was devoted to a review of the performance of the junior faculty.

The Faculty Affirmative Action Fund

If the University is vigorous in its search for women and minority candidates for its regular positions and in its evaluations of academic opportunities, as discussed in the preceding paragraphs, it is bound to identify outstanding people who would add significantly to our academic programs, but who do not fill an existing billet.

It is essential that the Faculty Affirmative Action Fund be maintained so that we can respond in such circumstances. The small numbers of black and chicano graduate students in all fields, and the small number of women graduate students in many fields, imply that progress in increasing the numbers of these minority and women faculty will be slow, indeed, if our hiring of them is determined alone by the matching of existing positions with the best people.

Each truly outstanding person should be recognized as an important opportunity in itself. Only if the fund is maintained can this be done with a view toward an appointment being made.

Arthur I. Bienenstock, chairman professor, school of humanities and sciences; Barbara Babcock, professor, school of law; Cecilia P. Burciaga, ex officio, assistant provost; William R. Evitt, professor, school of earth sciences; Dora B. Goldstein, professor, school of medicine; Arturo Islas, associate professor, school of humanities and sciences; James G. March, professor, school of education (resigned from committee); Diane W. Middlebrook, associate professor, school of humanities and sciences; Susan S. Owicki, associate professor, school of engineering; Jerry I. Porras, associate professor, graduate school of business; two students: John Trasvina, Law school; Kendyll Stansbury, School of Education; Edgar O. Yhap, School of Medicine.

Student complaints about teaching, courses have declined, Goheen reports

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admissable in a court of law, to permit a reasonable conclusion that monitoring occurred."

In 1976, a university investigator at MIT reported there were "indications that the Republic of China. . .may operate a nationwide surveillance system to keep tab on Taiwanese students in the U.S."

National problem

Local and campus newspapers at the University of Minnesota, University of Wisconsin, Cornell, State University of New York, University of Chicago, and Iowa State University have reported similar activity in their communities, *The Independent* said.

Soon after its publication, Goheen said, "several Taiwanese students came to denounce these charges and to seek advice on how to counter what they claimed to be a false accusation, both with regard to their own conduct and that of the Taiwan government." While their request initially seemed reasonable, Goheen's investigation basically sustained the newspaper's account.

On other matters, Goheen said there was a decline in the total number of cases brought to the office, from 677 in 1980-81 to 555 last year. But the number of groups presenting a common problem or complaint increased.

The number of student complaints about teaching and course organization dropped (from 39 to 20), as did the number of complaints about grading (from 49 to 34). This probably reflects changes and improvements in courses where complaints about teaching have been common, such as chemistry and mathematics.

Two specific "problem areas" that need "serious attention" are the master's degree programs in broadcast journalism and print journalism, which have been "severely criticized" by participating students, Goheen said.

Behind this criticism is the need for greater financial support for both programs. "Current departmental concern with these problems is reassuring," he added.

The number of Honor Code problems brought to this office "continues to be high," totalling 70 in 1980-81 and 63 last year. Most concern students charged with a violation and those who suspect others of cheating.

Among academic staff members, there was "a considerable number" of difficulties expressed by lecturers in French and Italian concerning their status and and teaching conditions. Improved communication by the department head with the lecturers and the ceding of greater control of language teaching to the lecturers themselves "promise a resolution of these problems," Goheen said.

Library staffers

Some library staff members "have had difficulties that appear to derive from arbitrary decisions, lack of consultation and an insensitive disregard of their knowledge as experienced professional librarians," he added. "The administration is aware of these problems. There is, at least, hope of improvement."

The number of problems and complaints by non-academic staff "remains high," even though the total declined from 81 to 62. These problems are "extremely varied," but generally reflect discontent about job-related matters.

Goheen's office is responsible for helping resolve problems of sexual harassment on an informal basis. All eight cases brought to the office last year "appear to be resolved, which suggests that an informal procedure is effective and preferable to the formal procedure" provided in the University's official policy on sexual harassment.

Student volunteers now are working with the office, faculty, and student affairs staff members on a draft statement of student rights and responsibilities, bringing together a brief summary of information now scattered in several university publications.

Goheen, an emeritus professor of philosophy, describes the function of his office as trying "to analyze problems in terms of fairness and justice. . .an exercise in practical ethics."

Many issues requiring thought and analysis are thoroughly discussed with his colleagues, Allen Barbour, Linda Northway, Leah Kaplan, and Sarah Stephenson.

DOE extends SLAC contract

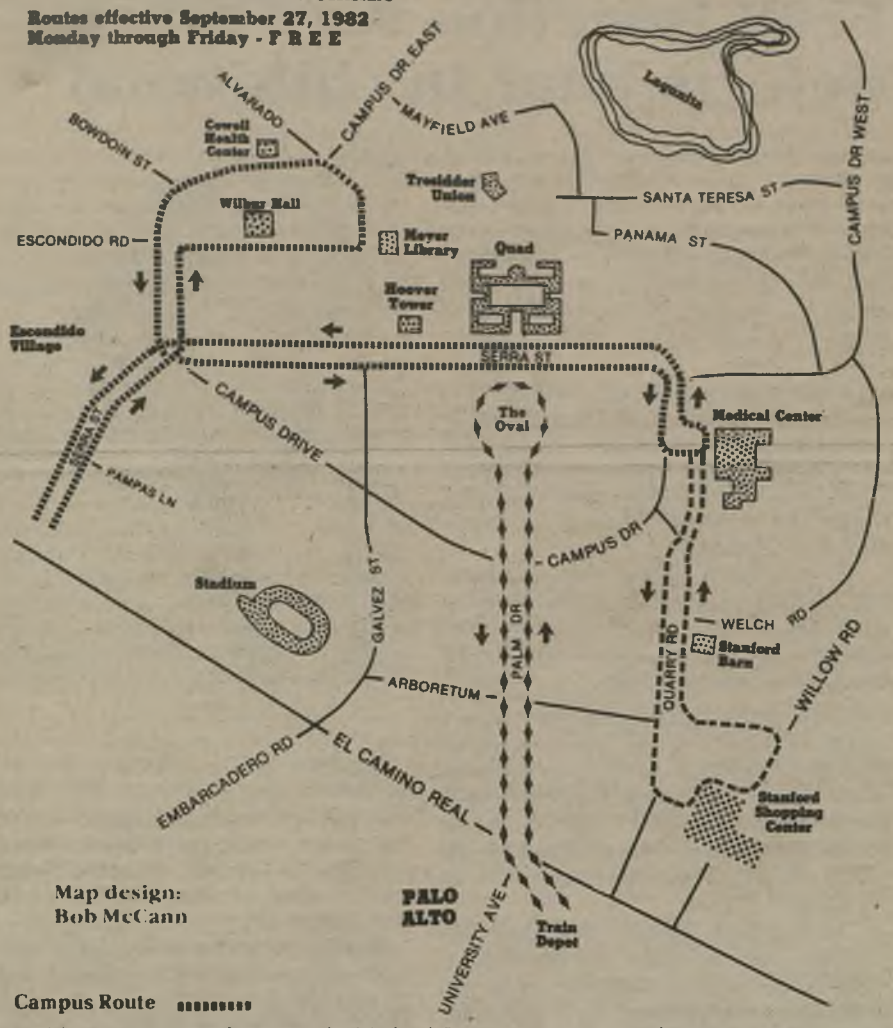
A five-year extension of its contract with Stanford University—for the operation of the Stanford Linear Accelerator Center—was announced Friday, Oct. 1, by the San Francisco Operations Office of the U.S. Department of Energy.

The contract provides a budget, at about a $100 million annually, for continuation of basic research programs at the Laboratory in elementary particle physics.

The current contract ended Sept. 30.

The research program at SLAC, directed from its inception by Wolfgang K. H. Panofsky, has been funded by the federal government since 1962.

Marguerite Shuttle routes changed



Campus Route ▪▪▪▪▪▪▪▪

The campus route begins at the Medical Center at 7:25 a.m. and runs every 10 minutes until 5:15 p.m. The route follows Serra Street directly to Escondido Village and returns, including a loop on Campus Drive to Escondido Road for access to Meyer Library and the Law School, then back to Campus Drive at Cowell Health Center.

Shopping Center ▬▬▬▬

The shopping center route begins at 11:30 a.m. and runs every 10 minutes until 1:40 p.m. The route is the same as the campus route, except that on the return to the Medical Center, it continues on to the Shopping Center via Quarry Road and returns via Willow to Arboretum to Quarry Road.

Train Depot ◆◆◆

The train depot route runs from 6:05 a.m. to 9:37 a.m. and 3:08 p.m. to 6:22 p.m.

In the morning the bus boards on the northbound side of the train depot. The route is a continuous circle from the train depot to the Oval. Passengers may transfer at the Oval to the Campus Route. This schedule coincides with the incoming trains.

In the evening the bus stops on the southbound side of the train depot. Wheelchair lifts are available.

For further information call The Housing Programs Office at 497-3027.

Personnel update

Life insurance forms needed soon

Jeannie Thomas, the University's manager of benefits and records, advises that the last three open meetings for the new life insurance plan will be held this week. The schedule of meetings is as follows:

Wednesday, Oct. 6, 9-10 a.m. in CERAS 112, and 2-3 p.m. in Fairchild Auditorium; Thursday, Oct. 7, 9:30-10:30 a.m. in SLAC Auditorium.

Thomas reports that although the employee response to the new plan has been positive and many enrollment forms have been completed and returned, many more need to be received by November 10 (the last day of the enrollment period).

Employees are encouraged to complete their enrollment forms as soon as possible and forward them to the life insurance center at the Office of Benefits and Records located in the Old Pavilion. (Employees located at SLAC should return completed enrollment forms to the Benefits Office at SLAC.)

Thomas once again encourages employees who have questions about the new life insurance plan to call the life insurance center at 7-0757 between the hours of 9 a.m. and 4:30 p.m., including the lunch hour. Also, employees may come by the life insurance center located in the Old Pavilion during the same hours.

350 CONTEXT users face computer withdrawal pangs

Stanford will phase out Context, a campus-wide DEC-2060 computer text editing system, by Dec. 1.

Finding suitable alternatives for more than 350 users of the advanced scholarly writing system will be the top priority of the Center for Information Technology, according to CIT Director Edward Shaw.

The Center hopes to accommodate the handful of full-time Context staff members through existing vacancies and normal turnover, according to Deputy Director Mike Roberts.

"We've heard nothing but appreciation and enthusiasm for the hard work of Context staff members," he said.

Rapidly changing technology, including strong competition from new generation microcomputers, and continued economic constraints, both nationally and within the University, led to the decision, Roberts said.

"Context was not started as a service to replace an existing function. It was new from the ground up, entirely dependent on faculty decisions to allocate discretionary resources for its support.

"Context began just as the economic recession hit the University hard. Many faculty making decisions at the margin said 'gee, this looks nice' but faced very strong competing demands for resources.

"The economic signals that caused this decision were very evident in June, but the enormous effort and dedication of staffers and the hope for a turnaround resulted in delay. In the last 90 days, income has been less than half our projected target."

The phaseout will cut a projected deficit of $200,000 to $500,000, Roberts said. Approximately $250,000 in startup expenses will not be recovered.

"With the increasingly difficult financial condition of the University in general, it simply is not possible to allocate the several hundreds of thousands of dollars necessary to retain the service," Shaw said.

The University now plans to sell the DEC-2060.

Some current Context users may go to personal computers. Others may try VAX machines or other DEC-2060s on campus. Some may switch to the IBM 3081 at CIT

Users already have received a previously published CIT booklet, *Evaluating Your Text-Handling Alternatives* and soon will receive a questionnaire concerning their needs.

Four meetings have been scheduled at Turing Auditorium (Polya Hall, Room 111), starting at noon Friday, Oct. 8, with a general question and answer session. Text processing alternatives on the 3081 will be discussed starting at 10 a.m. Tuesday, Oct. 12; Commercial Word Processors and Office Information Systems at 10 a.m. Thursday, Oct. 14; personal computers at 10 a.m. Thursday, Oct. 21; and special needs of TEX users at a date to be announced.

Written summaries of these sessions will be available at the Context office, 115 Pine Hall (Ext. 7-4376).



Our campus would look so much better if ALL OF US WOULD PICK UP LITTER.

Many hands make light work.

Peter Coutts lottery set Nov. 1; applications deadline is Oct. 29

Twelve condominium units at Peter Coutts Hill will be made available for purchase to all active members of Eligibility Pool 1 who already own homes within a 15-mile radius of Hoover Tower. Retired individuals are, however, not eligible to purchase units at this time.

Units will be assigned through a lottery drawing. Applications for the lottery are available at the Housing Programs Office in 105 Encina Hall. Deadline for application is 5 p.m. Friday, October 29. Lottery results will be announced on Monday, November 1.

Applicants should understand that, if they are assigned a unit, they will be required to make an immediate $1,000 reservation deposit. Further, an additional sum equal to two percent (2%) of the purchase price of their unit less $1,000 will be due and payable 45 days prior to close of escrow. Escrow must close within 30 days following completion of construction of the assigned unit. Since all units are expected to be completed by the end of April, 1983, only those individuals who would be able to complete the purchase by the end of May, 1983, should apply.

All units at Peter Coutts Hill must be owner-occupied, and may not be purchased for investment purposes.

University policy prohibits individuals from owning more than one residence on the campus at any time. Those who already own campus residences will be required to sell their present homes before purchasing at Peter Coutts Hill. No bridge financing will be available from the University.

Individuals with questions concerning their eligibility to purchase an on-campus residence, prices and financing for Peter Coutts Hill units, or their ability to afford the units should make an appointment to see Robin Hamill, director of housing programs, by phoning 497-1964.

Those desiring to tour the units should make an appointment with Barbara Rockwell, sales manager of Peter Coutts Hill, at 497-3649.



Philip Berger



Dominick Purpura



Ronald Merrell



Robert Baldwin



Peter Kim

S*M*A*S*Hing lectures open new series this week

This fall's lecture lineup marks the beginning of a new S*M*A*S*H series at the Stanford School of Medicine.

The series—whose full name is "Stanford Medical and Scientific Highlights"—was initiated in 1980 by the Medical School's faculty senate, which now cosponsors it with the Stanford Medical Students Association.

The organizing committee hopes to encourage a wide exchange of ideas, and to provide a forum by which the Medical Center community may be informed of significant medical research and developments at Stanford.

Given by both faculty members and students, the Friday presentations are geared towards all those with basic scientific understanding.

This season's lectures are as follows:

• Oct. 8: "The Biochemistry of Mental Illness (Do Twisted Molecules yield Twisted Thoughts?)"—Dr. Philip Berger, associate professor of psychiatry and director of the Mental Health Clinical Research Center;

• Oct. 22: "Cellular Neurobiology of Mental Retardation"—Dr. Dominick Purpura, dean of the School of Medicine and associate vice president for medical affairs;

• Nov. 5: "Transplantation of Islets of Langerhans"—Dr. Ronald Merrell, assistant professor of surgery;

• Nov. 19: "Experimental tests of the Prediction of Protein Folding"—Dr. Robert Baldwin, professor of biochemistry, and Peter Kim, a fourth-year student in the Medical Scientist Training Program.

All presentations will take place at 4:30 p.m. in Fairchild Auditorium, with TGIF gatherings afterwards in the lobby.

Symposium to focus on infancy

"Infancy: New Research and Clinical Implications" is the theme of the second annual symposium on Advances in Developmental Knowledge to be held at the School of Medicine Nov. 13 and 14.

Key-note speaker for the symposium will be Dr. Daniel Stern, from the Cornell Medical Center and the Columbia University Center for Psychoanalytic Training and Research.

Major presentations will be made by Dr. Thomas Anders, head of Stanford's division of child psychiatry, Dr. Anneliese Korner, research psychologist, and Isabel Paret, child analyst.

To be held in the Fairchild Auditorium at Stanford, the symposium will consider the research and clinical aspects of biological and psychological development in early infancy. Scientific papers and discussions will address both normal development and the possible pathologies arising from this period. Small discussion groups will be held as part of the program.

Included among the participants will be Dr. Jeree Pawl, from the Frailberg Project at San Francisco General Hospital, and child analysts Drs. Joseph Afterman, Philip Spielman, and Calvin Settlage. Professor Colin Pittendrigh of the Hopkins Marine Station, an authority on biological rhythms, will also be present.

The symposium is sponsored by Stanford's division of child psychiatry, Children's Hospital at Stanford, and the extension division of the San Francisco Psychoanalytic Institute. It is intended for researchers, clinicians, mental health professionals, nurses, pediatricians and academicians.

Early enrollment is recommended. The registration fees will include a box lunch and reception Saturday afternoon. For program and registration information, call 563-5815.

Fetal infection may cause defects later in childhood

An infection acquired during pregnancy that is responsible for more birth defects than herpes, rubella and syphilis combined may be even more common and insidious than researchers first thought, according to studies by scientists at the Palo Alto Medical Research Foundation and Stanford Medical School.

Toxoplasmosis, a disease triggered by a parasite that passes across the placenta to cause blindness, deafness or mental retardation in more than 3500 developing fetuses in the United States each year, may lie dormant in some children, according to Dr. Jack S. Remington.

These children appear normal at birth but as many as 90 percent will develop symptoms of the disease in their first decade of life, he said. Yet the disease, he emphasized, is preventable.



Jack Remington

Remington, chairman of the department of immunology and infectious diseases at the Foundation and professor of medicine at Stanford University, will present his findings at a world conference on the "Prevention of Physical and Mental Congenital Defects," October 10-16 in Strasbourg, France.

"Most people thought that these apparently normal babies (whose mothers contracted the infection late in pregnancy) were normal the rest of their lives," Remington said.

"Now we know that there may be a long latent period before the disease becomes apparent. Thus, there is a tremendous iceberg beneath the surface. If we could detect these babies early enough, there is some evidence to suggest that treatment early in life could prevent the damage that otherwise follows."

Parasite abounds

Nearly 50 percent of U.S. residents are chronically infected with the parasite *Toxoplasma gondii*, Remington said, though only a fraction of those suffer serious symptoms from their infection. Women who harbor the organism before they become pregnant (approximately one-fourth of all women of child-bearing age) pose no danger to their unborn child.

But when a woman contracts the disease during her pregnancy, her child stands a 45 percent chance of acquiring an infection that can cause significant damage to vital organ systems, Remington said.

Currently no vaccine exists to inoculate women against the disease, though a simple blood test can detect the infection. While some countries require that blood tests for the infection be performed at least once during each trimester of pregnancy, most American women—and many of their physicians—don't even know the disease exists, Remington said.

"The message is that this is a major, preventable disease that is not appropriately appreciated by the public at large," Remington said. "You can't find a woman in Paris who doesn't know what toxoplasmosis is, but physicians in this country are not informing their patients. Women here don't even know about it so they can't prevent it."

Undercooked meat, unwashed vegetables, and cat feces are common transmitters of the parasite. If women take a few simple precautions while they are pregnant, they can greatly reduce their chances of acquiring the infection, Remington said.

Such precautions include avoiding raw and rare meat by smoke-curing or cooking above 151 degrees Fahrenheit, washing hands after handling raw meat or unwashed vegetables, avoiding contact with stray cats, letting someone else change the cat litter, and wearing gloves while gardening or working in the soil.

If a pregnant woman contracts the infection, she has several options which she should discuss with her doctor, Remington said, depending on the seriousness of her infection. The choices include antibiotic therapy, therapeutic abortion, or risking infection of the fetus.

Results are still not in from all the international studies following children whose mothers were exposed to the parasite late in pregnancy, Remington said, but preliminary data indicate that such children who are identified and treated with antibiotics in the months after birth fare better than untreated children.

"We know that in animal models, (the drugs given after birth) will eradicate the destructive form of the organism and cure the disease," said Remington.

"The important point that I wish to emphasize is that this is a preventable infection and a treatable infection," he said, suggesting that pregnant women insist upon the blood test and get additional information about the disease from their doctors.

—Deborah Franklin

Wrong bell rang!

In the Sept. 22 issue of the *Medical Center Memo*, Donald B. Tower's phone number was incorrectly listed. His actual number is 497-6641.

We regret the error and any inconveniences it may have caused.

Ombudsperson urges action on expressed concerns

Formal grievances represent only "the tip of an iceberg" of problems requiring solution at the Medical School, stated a report released recently by the Associate University Ombudsperson.

The report focused critically on problems between the relationship of medical students and faculty, and the oftentimes conflicting demands of patient care and scientific achievement.

The document noted that while "major strategic resolutions" are needed to solve some problems involving such areas as faculty-student relations, staff personnel and academic scheduling, other problems may be solved more easily by providing basic information to settle misunderstandings quickly.

The nine-page report comes one year after Allen B. Barbour, professor of clinical medicine emeritus, was appointed to the newly created post of associate University ombudsperson. (See full text of the report on page 23.)

His jurisdiction is Medical School faculty and staff, medical and other graduate students, as well as house staff and postdoctoral fellows.

Seventy formal grievances from all segments of the Medical School community were presented during the year, and more than half—37—came from medical students. The problems facing that student group drew perhaps the strongest words in the report.

Barbour noted that the 86 students selected from an applicant pool of 4,800 "are then treated too often like children."

"The students describe a pervasive anxiety and bewilderment about the difficulties of preserving their human values in a competitive intellectual environment," the report said.

Among problems cited was "the use of intellectual one-upmanship and exposure of students' ignorance as learning incentives as opposed to positive help with the learning process, esoterica at the expense of common sense and basic approaches, (and) science and disease model of illness without sufficient attention to a psychosocial understanding of the human needs of patients. . . ."

Barbour said a "shift in emphasis along these lines would go a long way toward restoring a more positive and joyous attitude of students toward medicine in general and their education in particular."

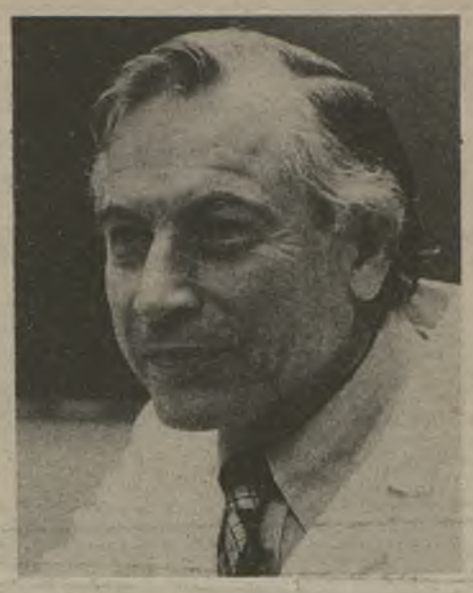
"The solution to the basic problem of student alienation lies with the rank and file faculty as learning facilitators, role models, colleagues and friends of students," the report said, noting that dialogue between students, senior faculty and administration has helped ease some of the tension.

The Committee on Student Performance (CSP), which reviews unsatisfactory performances by medical students, drew criticism in the report.

About one-third of all medical students face the CSP at least once during their career, and the body is viewed by students "as more disciplinary than helpful."

"Why should one of the finest medical student bodies on earth have such an inordinate number of failures? The system is obviously failing, but the students get the F's," the report stated.

Barbour said a gap exists between some students' bias toward a clinical education and many faculty members' emphasis on research, and this leads to "discordance between student selection and faculty expectations."



Allen Barbour

Barbour said the institution's present research emphasis should be retained. "But there needs to be a somewhat better balance between student needs for medical practice and course content along with a more extensive support and counseling program to help students in the learning process."

In a specific area, Barbour recommended that more courses be taught in the summer to avoid schedule jamming during other quarters and to avoid wasting student time and money during the slow summer.

The faculty, Barbour said, can be frustrated by a heavy emphasis on research over teaching and patient care when evaluating tenure appointments. In addition, faculty members "are frustrated by pressures to produce Faculty Practice Plan (FPP) income at the expense of research and teaching, coupled with major FPP financial losses from an inadequate billing system and Medi-Cal restrictions," the report noted.

Staff members, including supervisors, are often unaware of University personnel policy despite "a truly excellent Human Resources Group headed by Rosemary Hornby. . .who should be consulted for advice early and much more often during the incipient stage of personnel problems."

A major problem, Barbour said, is a tendency of supervisors to wait until an imminent firing before warning an employee of unsatisfactory performance. This has left many workers needlessly confused, angry and without adequate understanding of their work deficiencies, he said.

Four formal grievances were filed with the ombudsman by non-academic staff during the year.

Other areas of concern include the approximately 400 medical post-doctoral fellows who fit in no easily definable group and have a wide spectrum of administrative difficulties, Barbour said.

The house staff, Barbour said, would benefit from more feedback from their departmental leadership, but "by and large, the house staff brings few grievances to this office," the report said.

Barbour credited chief of staff James Silverman and house staff office director Helen Rantz for providing responsive leadership and active support.

Relaxation therapy for high blood pressure gets boost

Studies over the past few years have shown that muscle relaxation training can, at least for a period of time, successfully supplement medical treatment of high blood pressure.

A new set of findings at Stanford has led researchers to believe that patients' *expectations* influence the outcome of this therapy.

Hypertensive patients randomly assigned to two groups received three relaxation training sessions. Half were told to expect blood pressure lowering immediately; the other half were told that benefits would come gradually, after the first three sessions.

Dr. W. Stewart Agras, professor of psychiatry, reported in the Sept. 27 issue of *Psychosomatic Medicine:* "Participants given the expectation that the blood pressure lowering effects of relaxation would be delayed showed significantly less (initial) reduction in. . .blood pressure than those who were told that relaxation would produce an immediate effect."

Moreover, Agras concluded that cognitive processes have an "obscure" power to promote, or interfere with, relaxation techniques for hypertensives.

These techniques, which require mental focusing, are taught to about ten patients sitting quietly in a group. They breathe deeply and slowly, sequentially tensing and relaxing all the major muscle groups of the body, while imagining pleasant scenes.

"It's amazing to me," said Agras, "how many people are not used to relaxing. I hear people say they've never felt like that before!"



W. Stewart Agras

The major predisposing factors for high blood pressure, he explained, are heredity and overweight. "But now, chronic stress is also widely suspected as a contributing factor."

Agras said that the main dangers associated with high blood pressure are increased risks of stroke, heart attacks, and heart failure.

He recommends the relaxation procedure as an adjunctive method of treatment for hypertensives who respond poorly to pharmacological treatment. "But relaxation is not a replacement treatment," he emphasized. "Medication is still a must for most hypertensive patients."

Training in muscular relaxation, Agras said, usually takes about eight separate hour-long group sessions. Patients also practice at home for about 15 minutes a day, five days a week, with the help of therapist-prepared audiotapes.

Participants, he added, are taught to detect their tension levels during the work day, and eventually can bring on relaxation instantaneously.

The effects of relaxation training on hypertensives were first observed by researchers as far back as 50 years ago, Agras explained.

"Perhaps due to the discovery of effective pharmacological measures to reduce blood pressure, this method was largely ignored until the mid-60's when reports of the effects of meditation and biofeedback rekindled interest in the psychological treatment of hypertension."

In studies since then, relaxation training has been proven superior to placebo procedures in working with medication to help reduce high blood pressure. (Relaxation effects have not yet been directly compared to those of salt restriction, weight loss or exercise.)

"At Stanford we've been researching relaxation's effects on blood pressure since about 1975," Agras said. Once convinced of the training's immediate benefits, Agras and his team went on to demonstrate that they last around the clock, even under stressful work environments.

In Stanford's longest published follow-up study so far, Agras and his associates found that the blood pressure lowering effects of relaxation therapy on hypertensives persist for at least six months after the initial training series.

"These were people who continued practicing three to five times a week with audiotapes, and whom we met with monthly to retrain," he said.

Beyond that period, however, the effects remain to be seen. "Whether relaxation therapy affords long-term benefits is now the big question," Agras added.

Researchers also want to determine who benefits the most from the treatment. Agras suspects that those with hypertension most out of control or who've had the condition a long time will reap the most, with borderline patients benefiting little.

Besides helping to lower blood pressure, relaxation training has been found to effect dramatic drops in anxiety, depression, and "high-strung" behavior. Other investigators, Agras said, have discovered that relaxation therapy reduces insomnia and the pain of tension headaches. "So we're seeing the beginnings of a general stress reduction approach," he said.

"Although relaxation training is not yet an established form of treatment, it's to the point where there's enough evidence—at least of its adjunctive merit—that we're beginning to see its applications," he added.

Agras' study on expectation and the blood pressure lowering effects of relaxation was supported in part by a grant from the National Institutes of Health.

—Lisa Ames

Computer comes to rescue of medical record keeping

A mound of 750,000 index cards was one of the first challenges facing SUH after the Board of Hospital Directors approved a Medical Information System (MIS) last June.

Ultimately, MIS will make sweeping changes in the way patient treatment data are handled throughout the Hospital, said Lee Cort, director of the MIS program.

Physicians and other medical personnel, working in front of one of many video display terminals to be installed during the next three years throughout the Hospital, will be able to review test results and other information commonly contained on patient charts.

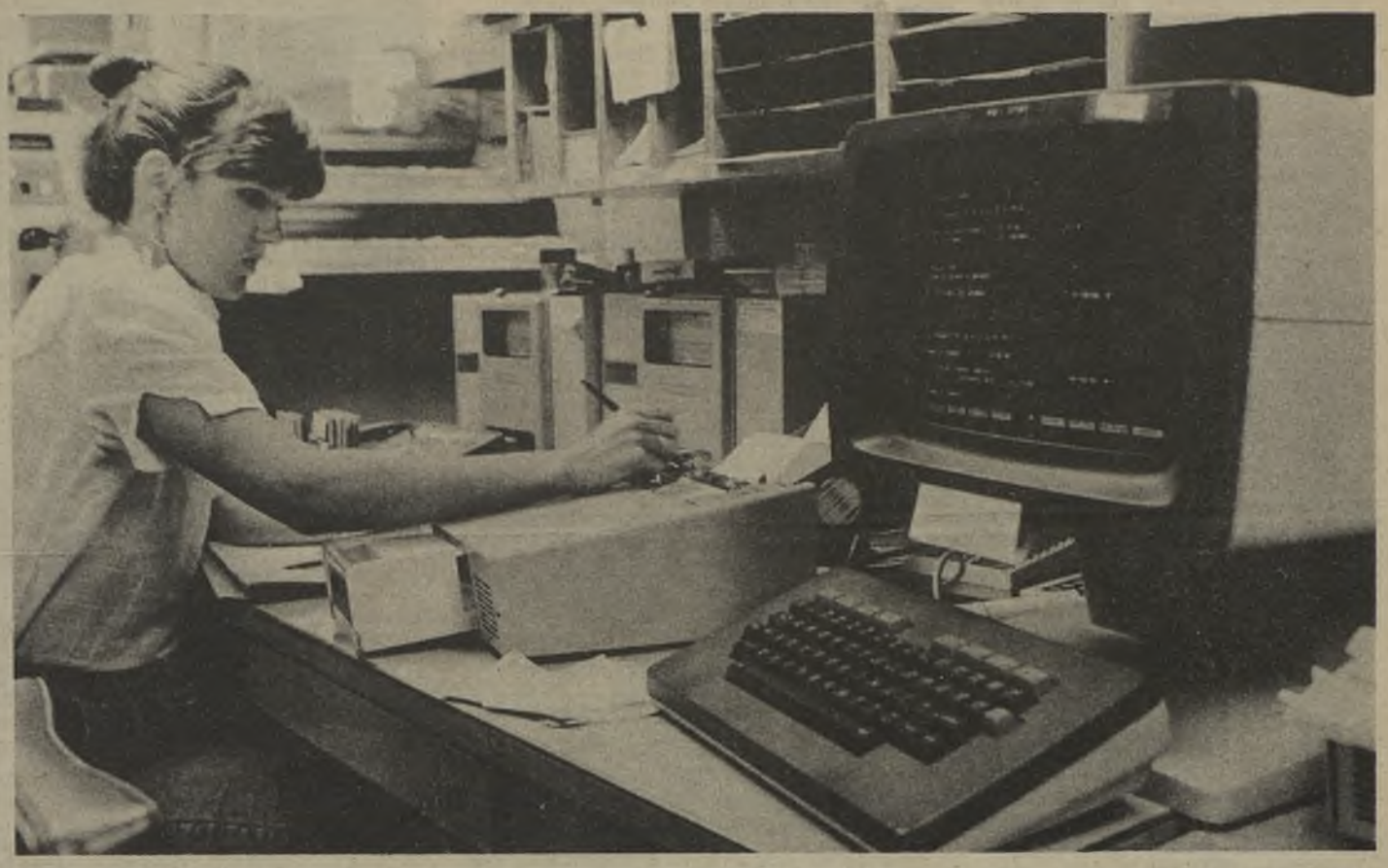
Doctors then will be able to enter their instructions for patient treatment by pointing a light pen at data elements displayed on the screen. That information will be available to nurses or other patient treatment personnel in the form of medication schedules, service requisitions, patient treatment profiles, and more.

As an added safety feature, the system will provide reminders if medications are not given on schedule.

Capital costs for the system, Cort said, are about $3.5 million. Most of the cost, he added, will be offset by increased efficiency.

The first step, Cort noted, will become fully operational in October and involves computerizing the mini-histories of each of the 750,000 patients who have visited SUH or the Clinics since the Medical Center moved to Palo Alto from San Francisco in 1959.

"What we are accomplishing," said Carole Price, SUH associate administrator, "is to weave together state-of-the-art computer technology with the continuous need for medical record keeping. We blended the skills and effort of persons from Hospital Administration and Medical Records, as well as a variety of highly skilled persons from the Center for Information Technology (CIT) on main campus, who worked closely as a team."



Computer terminals are replacing slower, less efficient methods of transmitting identification information between patient entry points and Medical Records. Using the new system is Kathy McGovern, lead clerk.

The task at hand

Whenever a patient shows up at Hospital Admitting, the Emergency Room, or the Clinics, the staff are faced with the task of determining whether he or she had visited Stanford before, and if so, matching the patient with his or her number so that a patient record or chart can be pulled from storage.

Marion O'Brien-Adineh, director of Medical Records, explained how the old system works:

"After the patient arrives at Admitting, the Clinics or the Emergency Room, he or she is asked basic questions. We then need to look up or at least verify the patient I.D. number.

"The patient's name and other identifying facts are transmitted by the Admitting personnel via a writing transmitter to the Medical Records office. Then the clerk who receives the information here must often wait for a turn at the revolving index file which contains the 750,000 index cards.

"Physically the cabinet containing the revolving trays is so limited that we cannot have more than two people looking up information no matter how busy we are.

"Considering that we can have several hundred people an hour arriving here, we can be pretty busy.

"Sometimes the patient's number and master index card are found quickly, but often the clerk must do some detective work.

"The patient may have forgotten she was here before under her maiden name. Other times an address is wrong, and we have to send a message back to verify with the patient whether he or she lived at a certain address before.

"Or more urgently, someone may have arrived in the Emergency Room unconscious and may not be able to communicate. Treatment begins immediately, but sometimes there is vital information contained on the chart, so it becomes crucial to locate the record as quickly as possible.

"Eventually we will find the number, and we transmit the information back. Then we go and pull the patient's file and send it to the unit.

"A typical wait is about a half hour."

With the new computerized system, personnel in Admitting, the Emergency Room, or the Clinics will be able to call up on their screen a name or several names of similar spelling and verify the patient number on the spot. In the initial installation phase already in use and expected to be fully operational this month, the Medical Records clerk enters the patient's name into the terminal, which immediately responds with the patient number.

Officials estimate that the average wait before a patient's file can be pulled will be reduced to one-third of the work time presently required. Making the switch from paper to computer involved a lot of work, Cort said. The information contained on all 750,000 cards had to be microfilmed and then transferred by keypunch operators onto tapes. That job took three months.

Advantages undoubted

Efficiency is cited as a key benefit of the master patient index, according to O'Brien-Adineh.

"A positive benefit of this system is the improved morale we've experienced here, beyond the novelty of learning a new system which many of our people find enjoyable to operate. Many of our clerks had been frustrated with the previous system, and I think they feel good just knowing something has been done, some attention has been paid to them and their function."



O'Brien-Adineh pulls a medical chart. The new system will not eliminate the need for written records, though much of the data will be available via computer during a patient's Hospital stay or clinic visit.

Instrumental in developing the master patient index were Lynn Schatek, the University's manager of medical information systems for the CIT, and Paul Irwin, the programmer/analyst whom Schatek assigned to develop the index. Cort has overall responsibility for developing computer applications for use in the Hospital, while O'Brien-Adineh is in charge of implementing the finished product in her own area. She reports to Price.

"One of the most satisfying results of this project is that we brought it in faster than expected—three months instead of six—and for about $60,000 instead of the $100,000 originally budgeted. This was accomplished by the teamwork shown by a variety of Hospital and University people from widely differing areas," Price said.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, October 6

Dept. of Genetics: "Repressor Structure and the Mechanism of Positive Gene Control"—Dr. Mark Ptashne (Harvard). 4 p.m., M104.

Div. of Orthopedic Surgery Grand Rounds: "Articular Cartilage and Embryology of Musculoskeletal System"—Drs. David Schurman and Lane Smith. 7:30 a.m., M114.

Div. of Orthopedic Surgery Grand Rounds: "Continuous Passive Motion"—Dr. R. Coutt (UCSD). 8:30 a.m., M114.

Dept. of Neurology Grand Rounds: "Nuclear Magnetic Resonance Imaging in the CNS. Comparison with CT Scanning"—Dr. Michael Brant-Zawadski (UCSF). 5 p.m., C364.

Nursing Educational Services: "Basic EKG Interpretation Workshop." Enrollment limited to 20. Fee required. Continuing education credit available. 7 till 9 p.m., W005. For further information, call 497-6366.

Dept. of Structural Biology: "Structure of Membrane-Bound Cytochrome C Oxidase by Electron Microscopy of Vesicle Crystals"—Dr. James Deatherage (Cambridge). Noon, Fairchild Bldg., D102.

THURSDAY, OCTOBER 7

Dept. of Medicine Grand Rounds: "Acute Myelogenous Leukemia—Analysis of Recent Therapy"—Dr. Peter Greenberg. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology: "Regulation of Calmodulin in Animal Cells"—Dr. Anthony Means (Baylor). 4:15 p.m., R358 library.

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Uncommon Infections in the Head and Neck"—Drs. Lee Smith, Judith Green, Steve Denenberg and Clough Shelton. 6 p.m., Wang Library R117.

FRIDAY, OCTOBER 8

First SMASH Lecture of Autumn, 1982: "The Biochemistry of Mental Illness (Do Twisted Molecules Yield Twisted Thoughts?)"—Dr. Philip Berger. 4:30 p.m., Fairchild Auditorium.

Dept. of Pediatrics Grand Rounds: "Clinical Review of Near-Miss Sudden Infant Death Syndrome"—Dr. Ronald Ariagno. 8 a.m., M106.

Nursing Educational Services: "The Law and Nursing Practice." 8:30 a.m. till 4:30 p.m., Sweeney Hall 120, San Jose State Univ. For further information, call Hedy Dumpel, R.N., J.D., at 497-5981.

Dept. of Gynecology and Obstetrics Grand Rounds: "Calcium Blockers"—Dr. John Schroeder. 8 a.m., A336.

Div. of Child Psychiatry Grand Rounds: "A Psychological Approach to the Ontogeny of Coping"—Dr. Seymour Levine. 11 a.m., Faber Auditorium, Children's Hospital at Stanford.

SATURDAY, OCTOBER 9

Dept. of Hematology, Stanford-UCSF Combined Grand Rounds: Three cases, research presentation. Lunch will be served. 9:30 a.m., M110. For further information, call Lynda Spencer at 497-5007.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



Ross makes "rounds" in the intensive care nursery.

Bill Ross: troubleshooter, manager, man behind scenes

When a call summons Stanford's emergency critical care transport team to pick up a seriously ill infant 500 miles away, there is little time to fix a broken isolette or gather together the medications that might be needed.

The best skills of highly trained physicians, nurses and therapists on the transport team are useless if equipment and medical supplies aren't well stocked and ready to move at a moment's notice.

Bill Ross, regional operations manager for the nursing units that deal with the care of newborns, as well as for critical care transport, orchestrates the preventive maintenance necessary to keep his units running smoothly.

Designing and managing a budget for each unit, addressing patient complaints, and supervising a staff of 35 clerks and technicians are just a few of the additional roles Ross plays as a man behind the scenes in patient care.

"Probably the most important aspect for the managers is financial management," said Ross, who governs the $5.2 million annual budget of the intensive care nursery. He also monitors budgets for the neonatal, delivery, and critical care transport units.

"One of the biggest pushes in the Hospital now is for cost containment," he said. "As a manager, I monitor the budget month by month to see what influences the variance of the prices over the year. We have to stay on top of it. If there's an increase someplace, I try to figure out where and why in order to keep costs down."

Ross said he likes to spend as much time as possible in the nursing units troubleshooting potential problems.

"I like to make rounds so that I can talk to the people I supervise and find out what's going on on the floor," he said. "There are problem boards located on every unit. I'll check the problem boards to see if there's anything that needs to be addressed, and get the technicians to take care of it.

"I try intentionally to get out there at least three times a day," he said, "just to say hello and to be accessible."

Ross left Mt. Zion Hospital in San Francisco six years ago to join Stanford's administrative team. But he gained his first managerial experience outside the hospital environment, working for Kaiser Aluminum in his native Pittsburgh, Penn.

A history teacher in a high school for delinq ient boys for several years after he graduated from college, Ross said he enjoyed working with young people but found jobs scarce and frustration high.

Because he is "people oriented," Ross said he prefers the hospital environment to working in industry. "Industry is profit-motivated," he said. "That's the driving force. I understand that, sure, but I could never get the satisfaction there that I have to get in what I'm doing."

Though administrative duties demand most of his working day, Ross said he likes to maintain contact with patients. "Sometimes, instead of delegating responsibilities when there's been a theft or other incident, I will get involved and go talk to the patient," he said.

"My experience has been that the fact that you will actually come in and talk with patients and listen to them makes a difference. Usually by the time you leave, they're thanking you for just being there."

—Deborah Franklin

A pick of top ten hospitals

"If I were sick and had to go to a hospital, there are only a few places in the country I'd trust myself to. You could almost count them on both hands."

If this statement came from a patient, one might think he was neurotically fearful. But it was made by the late Dr. John H. Knowles, general director of one of the best hospitals in America, Massachusetts General in Boston.

Since America's 6,965 hospitals make up the largest and costliest system in the world, why are so few acceptable to one in the know? asked the *Ladies' Home Journal* in 1967. To find the answer, the *Journal's* editors picked a panel of 10 of the best-qualified hospital judges in all parts of the country and posed the following question:

"If you or your family required major hospital services—diagnosis or treatment—which twenty-five hospitals in the United States would you select as representative of the best? Which hospitals would you put in the top ten?"

The results of the 1967 poll showed surprising agreement, with the experts picking teaching hospitals as their choice. Stanford University Hospital was then picked among the top 10. It has continued to maintain this rank ever since.

The latest poll on the best hospitals was conducted by *Money* magazine and appeared in its September issue. Although most hospital experts hardly think that hospitals can be chosen like beauty queens, here in alphabetical order are the hospitals that in the jury's opinion provided the best care in a broad range of services:

Barnes Hospital, St. Louis; Brigham and Women's Hospital, Boston; Columbia-Presbyterian Medical Center, New York; Duke University Medical Center, Durham, N.C.; Johns Hopkins Hospital, Baltimore; Massachusetts General Hospital, Boston; New York Hospital-Cornell Medical Center, New York; Stanford University Medical Center, Stanford; University of California at San Francisco Hospitals; Yale-New Haven Hospital, New Haven, Conn.

Stanford was particularly noted for its program in cardiology and cardiovascular surgery.

Librarians offer suggestions on improving course reserve list process

As of August 16, the requested due date for the Meyer Library to receive course reserve lists from the faculty, only approximately 25 percent of the expected lists had been received.

Because the operation of searching, acquiring and processing reserve materials is a time-consuming one, the closer course reserve lists are received to the beginning of each quarter, the less likely materials will be available when classes begin.

On an average, each quarter Meyer Library receives about one-third of the reserve lists on their due date, another third between that due date and registration, and the remainder usually during the first two weeks of each quarter. Both Green Library and the branches receive over half of the graduate reserve lists after registration day.

Faculty are asked to give high priority to submission of reserve lists so that library staff, who process the lists in the order received, can do so as expeditiously as possible. However, delays and student inconvenience are inevitable so long as a majority of the lists are not in hand six weeks before the quarter begins.

Some 20-25 percent of the items requested for reserve are never checked out; processing time could be greatly reduced if reserve lists were restricted to required items only. Recommended reading should not be placed on reserve, although library staff do search these items for availability if requested.



Frustration for students also can be caused by an insufficient number of copies of a reserve item. Contributing to this are underestimates of class enrollments, items lost or charged out and not returned in a timely manner, or subject to borrowing restrictions which make them unavailable for reserve use.

Much reserve material gets extremely heavy use and can simply disintegrate from wear in a short time and requested items may go out of print. Thus material on reserve one year may not be available the next year. Mutilation and destruction of reserve materials, while rare, does occur in larger courses or those with heavy reading lists, with consequent frustration felt by other students.

Returning reserve copies

Even when sufficient numbers of copies are initially placed on reserve, some students choose not to return them in accordance with the assigned loan period. The resulting fines simply do not deter this practice.

Students who leave assignments to the last minute usually find that many others are also waiting for the same material, creating multiple circulation holds and an apparent shortage of copies.

While there are no easy answers to the question of insufficient copies, the Libraries' staff are working with faculty to find solutions to these problems and to improve the course reserve system as a whole. Faculty members are encouraged to communicate with the reserve units which serve their courses as suggestions, questions, and problems arise.

Often a student's first introduction to Stanford University Libraries comes when an instructor uses the term "course reserves."

Course reserves, those items which faculty expect their students to use in conjunction with a particular course, may be books, pamphlets, journal articles, reports, problem sets, exams, cassette tapes, videotapes, recordings, or other materials.

The Libraries' reserve system pulls together all the required readings for a particular course, collected into a central location, a convenience and time-saver for students.

It allows many students brief access to a number of very heavily used library materials as well as faculty members' personal copies of items not in the Libraries collections.

Without such a system, required materials would likely be borrowed by the first person to locate them, thus making the items unavailable in timely fashion to others needing them. While all libraries maintain course reserves, some have an "open reserve" system providing direct public access to shelves for reserve materials and others employ a "closed reserve" system with copies supplied to users by library staff. Several libraries utilize both systems.

Computer catalog

The J. Henry Meyer Memorial Library houses the majority of undergraduate reserves, supporting lower division courses in the humanities and social sciences and selected courses below the 100 level in the physical sciences. The Library's Audio/Visual Services Section handles sound recordings, films, videotapes, and lecture tapes which are placed on reserve.

Meyer processes reserves for approximately 250 courses each quarter, involving some 4,000 titles or an average of 6,000 individual volumes. Reserve circulation reaches 100,000 items each year.

In order to deal more effectively with such a large volume, Meyer Library has developed an online reserve catalog using SPIRES. The reserve catalog is produced on microfiche, and updated each weekday during the early part of each quarter and as needed in the following weeks. Access to reserve holdings is possible by author, title, and course name and number.

The Cecil H. Green Library is responsible for graduate level course reserves in the humanities and social sciences. While the principle users of graduate reserves are Stanford doctoral candidates and other graduate students, 25 percent of its users are faculty, staff, and undergraduates.

Both graduate and undergraduate course reserves for the departments and schools which they serve are maintained by nine of the 10 branch libraries; the Cubberley Education Library reserves materials only for graduate courses. Each library maintains a complete list of its reserve items by class name and number.

Audio-visual materials

An increasing number of reserve items is produced in audio/visual formats. For example, approximately one-fourth of the Engineering Library's reserves are cassettes or reel tapes. The ratio of tapes to available machines is low, which may produce a long wait for some students.

Six weeks before each quarter begins, faculty are asked to submit lists of materials to be placed on reserve for that quarter, to suggest a loan period for each item, (which usually ranges from two hours to three days), and to recommend the number of copies to be placed on reserve based on projected class enrollment and amount of material assigned.

Library staff locate needed items in the stacks or recall those charged out; articles are photocopied in accordance with the terms of existing copyright restrictions. Rush orders are placed for items not owned by the Libraries. Titles purchased from the Stanford Bookstore or other local bookstores normally require a minimum of two to three weeks to be placed on reserve. Titles not available locally, however, even when on a rush basis, require an average of six weeks to purchase, receive, catalog, label, and make available for student borrowing.

Correction: Chemistry ranks fifth

Last week's *Campus Report* erroneously stated that the Stanford Chemistry Department ranked sixth nationally in perceived quality of its faculty, according to the recent national survey of the Conference Board of Associated Research Councils.

Chemistry also was inadvertently omitted from the detailed data published by the department in *Campus Report*. This includes two figures for faculty quality: the first is a raw score ranging from 1 to 5 on a scale where 4 was "strong" and 5 "distinguished"; the second transposed the raw scores onto a scale of 1 to 99, with 50 representing the average and about two-thirds clustering between 40 and 60.

Those figures for chemistry are as follows: California Institute of Technology, 4.9, 74; UG-Berkeley, 4.9, 74; Harvard, 4.9, 74; MIT 4.9, 74; Stanford 4.5, 70; University of Illinois, 4.5, 69; University of Chicago, 4.4, 69; University of Wisconsin, 4.4, 69; Cornell, 4.4, 68.

Strike slows plant improvement work

Several plant improvement projects scheduled to be completed by the beginning of school remain unfinished because of the strike by United Stanford Workers, according to Construction Manager Don Hoppe.

Alvarado Row and Mayfield Avenue are still torn up while new sewers are installed underground. The water return line in the University steam system is being replaced at Florence Moore Hall.

Paving of the Roble/Lagunita parking lot was finished in September and striping is in progress.

Installation of new path lighting near Wilbur Hall and near Lasuen Mall has been delayed. At Escondido Village, a path lighting project also has been delayed, but it would not have been completed prior to the start of school anyway, Hoppe said.

Work on all plant improvement projects stopped at the beginning of the strike as construction workers honored USW's picket lines. Work on several has since restarted. Hoppe said trenches will be marked and protected.

Neiman Marcus comes to Stanford

Stanford University has announced plans to proceed with the final phase of the Stanford Shopping Center renovation project approved by the City of Palo Alto in 1976.

The plans contemplate the addition of a Neiman-Marcus store at the west end of the main shopping center mall. If negotiations with Neiman-Marcus proceed favorably, construction could get under way next summer and the store be opened in the fall of 1984, said Frank Morrow, Director of Real Estate.

Stanford has also applied for Palo Alto Architectural Review Board approval of a 400-car parking deck at the Center to maintain floor-space-to-parking ratios stipulated in contracts with major tenants, and to replace parking that will be lost with the expected addition of Neiman-Marcus. The one-level structure will be built in the existing shopping center parking lot at the corner of Quarry and Arboretum Roads.

"We have estimated that we need an additional 780 spaces," Morrow said. "Construction of a 400-car deck and restriping the existing lots will go far toward closing the gap."

Palo Alto's Architectural Review Board will review the project on Oct. 7, Morrow said. Construction could begin in January and be completed by July of 1983.

The deck will be constructed around a 29,000 square foot atrium preserving three large oak trees on the site. The work will be funded by revenues from the Shopping Center.

Computer support system speeded registration process

Following is an Oct. 4 memo to Provost Albert Hastorf from Registrar Sally Mahoney on fall quarter registration:

On Monday and Tuesday, Sept. 27-28, 11,206 students registered, 349 more than the comparable dates in 1981. Students registering late may do so through Oct. 19. Our traditional "three week" statistics will be based on registration through Tuesday, Oct. 19, and will be available during the week of Nov. 1.

Caption writers notwithstanding, no students were registered by computer this autumn. Eligible students were given registration materials (PTR's) in an outdoor procedure behind Maples Pavilion. Registrar's staff used standard manual procedures to authorize tuition commitment revisions for students eligible to enroll at less than full tuition.

The Controller's collection procedures were unchanged except that those deferring tuition and other fees did so according to the new arrangements about which they had been informed in August. Students will continue to commit their courses by submitting official study lists no later than the second Friday of the quarter, specifically, Oct. 8.

What did change was an ancillary registration procedure involving the means by which students may reserve space in courses limiting enrollments or otherwise requiring "sign-up."

The changes were two-fold. First, we adapted to the Pavilion the "bankers' queue" approach we have been using for several years during Advance Registration at the Old Union. The single queue giving way to multiple stations is a widely recognized method of moving large numbers of people through what otherwise would be single lines moving at highly variable rates. As part of that general approach we also adopted the express line, for use by individuals with single transactions.

Second, we expanded to all courses requiring sign-up the computer support we had used in 1981 to enable freshmen to reserve space in Western Culture courses or to modify the summer assignments they had been given in such courses.

We have yet to conduct a comprehensive evaluation of the procedure, an evaluation which will include the departments involved and some sampling of students as well as the staff who have been directly involved in the procedure. My initial impressions are these:

First, the system of expanded computer support worked remarkably well. Second, especially during the first morning we learned to make needed adjustments in our handling of the bankers' queue, principally by asking ushers to be more assertive to insure that people who did not need to reserve spaces in the relevant courses did not join the line, secondarily by establishing a second express line to handle the flow of single transactions, and finally, by moving pairs of students to each terminal station. In 1981 a student who needed to sign three class lists (typically a freshman) stood in three lines, each involving a 20-25 minute wait. At Monday's morning peak, the clocked and verified waiting time was about 85 minutes. By Tuesday afternoon, a period involving about the same flow, the waiting time had dropped to under 30 minutes to complete the full range of transactions any student required.

Overall the course reservation system involved 19 departments or programs and 483 courses or (in the case of History 1) course discussion sections. 14,000 spaces were available for reservation, and additional transactions created waiting lists.

As we began the procedures, the courses for which sign-up was required already reflected the reservations made last Spring by continuing students and the Summer assignments made for Freshman Writing and Western Culture courses.

Throughout Monday and Tuesday approximately 6,000 students used the system, creating 13,500 transactions. Of the 6,000 students, 30 were students reserving space *in absentia* primarily because of religious obligations. Their names were placed in the system at the hour they would have been permitted to reserve space in person.

Separating out the single transactions, predominantly in physical education courses attracting graduate students as well as undergraduates from all classes, we find that students in the multiple transactions queue averaged a little more than three (3) course reservations each. Some freshmen who had not taken advantage of Summer assignments reported five transactions, in short, their entire programs (e.g., Western Culture, writing, math, chemistry and p.e.).

At each terminal station, a student had information about the status of all courses available for sign-up, making it easier than the prior system, involving separate lines for separate courses, for students to juggle personal plans among a range of courses. We expect that this improved the quality of the reservation lists departments and programs received at Tuesday's close.

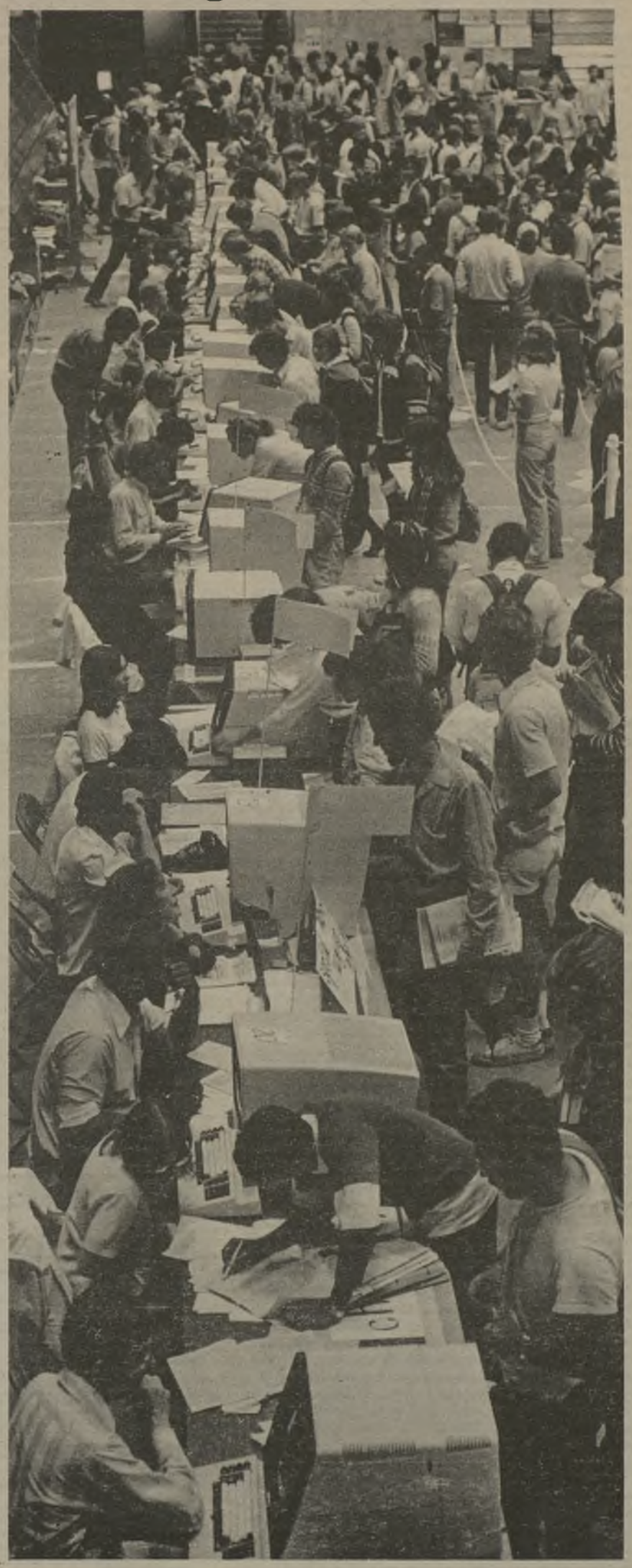
In contrast with the results of the manual course reservation procedures of past years, these lists alphabetized the names of students for whom places initially were available and ordered (according to letter time of reservation) the waiting lists of students. In addition, the reservation data base leaves us with tools for comparing "sign-ups" with course commitments students will submit on official study lists by this Friday, Oct. 8. For the first time we shall have basis for assessing the efficacy of the course sign-up system itself.

Assistant Registrar Gloria Garing was responsible for the functioning of this system as she is responsible for all other aspects of the registration procedure. Bill Witscher of the Office of Management and Financial Planning was responsible for conceiving the SPIRES supported system in 1981 and expanding it for this registration. Both received substantial help from our NSI (Network for Student Information) staff at CIT, as the result of which the system now is fully integrated with our other systems efforts.

The entire CIT organization turned its attention to the support of this effort securing and installing, with the cooperation of our local IBM marketing representative, the bank of 22 terminals (including new IBM 3279 color display terminals). They organized the training of the largely student staff who worked the terminal stations and monitored the impact of this procedure on others using the University's 3081 mainframe.

On Tuesday the mainframe experienced hardware problems, twice affecting the course reservation system for a total of approximately 45 minutes. Our manual backup procedures were ready to go into place but were not needed because we were able to sustain the highly satisfactory student flow we had achieved by Tuesday.

Both we and CIT staff are examining the procedure with attention to how we might make improvement in the future and with concern for what other University officers interested in similar applications might learn from our experience. I shall report again when our systematic evaluation is complete. For the present, we're pleased and grateful, not only to the staff but to our student and departmental clientele for their cooperation and suggestions.



Ombudsperson's report for 1981-82

Student complaints about teaching, courses decline

Following is the report of the University Ombudsperson, 1981-82.

"The Ombudsman's task is to protect the interests and rights of members of the Stanford Community from injustices or abuses of discretion, from gross inefficiency, from unnecessary delay and complication in administration of university rules and regulations, and from inconsistency, unfairness, unresponsiveness, and prejudice in the individual's experience with university activities. The Ombudsman exists to receive, examine and channel the complaints and grievances of members of the Stanford community, and to secure expeditious and impartial redress." (From the Charge to the Ombudsman, August 1973).

Use of the Ombudsperson's Office

During the past year the office of the Ombudsperson has carried out its mandate with the additional strength of the new office of Associate Ombudsperson at the Medical School. As shown in the accompanying report from Dr. Allen Barbour, the problems of medical school students, house staff and faculty are, as compared to other parts of the university, peculiar to that institution and need special attention. It is very gratifying that the extension of this office to the Medical School has had and will continue to have the knowledge and skill of Dr. Barbour and his Administrative Assistant, Linda Northway.

The total number of "cases" brought to the campus office has declined as compared with previous years (from 677 in 1980-81 to 555 in 1981-82). There was a similar decline in complaints brought to the campus office by undergraduates and graduates (1980-81: 474; 1981-82: 371). However, medical students seeking help from the Associate Ombudsperson of the Medical School numbered about 38, bringing the total number of students seen by both offices to approximately 409. (The term "case" is ambiguous and fails to reflect an increase in groups presenting a common problem or complaint. There has been a significant increase in the number of such group cases this academic year, 1981-82.)

Student Academic Complaints

Student complaints about teaching, course organization and the like have declined from 39 in 1980 to 20 in the past year. There was also a significant decline in problems about grading, from 49 in 1980-81 to 34 in 1981-82. This office interprets these changes as reflecting improvement in courses where complaints about teaching and grading have been common, i.e. chemistry and mathematics. Both departments have been very responsive to information from this office that something was wrong or appeared to be wrong.

The cluster of general "academic" complaints by both undergraduates and graduate students rose from 87 to approximately 157 (including medical students). These are extremely varied but may be described in general as complaints about university regulations and requirements. For example, in the case of the expulsion of the Zeta Psi fraternity, the administration charged the membership with violating their "collective responsibility agreement." There is no question that under that concept Zeta Psi was guilty. Students and others found the notion of collective responsibility objectionable because, in application, it involved punishing the innocent as well as the guilty. Clearly, collective responsibility modifies individual rights, and may be defended, as Professor John Kaplan has pointed out, on the grounds of a group dynamic which creates an entity transcending the participating individuals. Needless to say, this is not an easy conception for students and others to accept and to understand.

Hidden in this large figure of academic complaints are two specific problem areas that need serious attention. Both concern graduate programs in the Department of Communication. Master degree programs in Broadcast Journalism and Print Journalism have both been severely criticized by participating students. One phrase used by the Journalism students expresses the deficiencies in both programs: "organization and communications problems." Criticism from both groups imply or express positive suggestions for improving the situation in the future. No great insight is needed to recognize behind these criticisms the need for greater financial support for both programs. Current Departmental concern with these problems is reassuring.

Two Special Problems

1. *Academic—Industrial Relations*

Early in December, 1981, students, undergraduate and graduate, and post doctoral students, brought to this office their concerns about actual and potential conflict of interest posed by persons with academic appointments in some relations with industry. The problem had, of course, long been recognized by faculty and researchers, but this office was surprised to find students keenly concerned about how faculty relations with industry affected their education.

Among student concerns two were perhaps the most pervasive: fear that some of their research was skewed toward some industrial purpose; and fear that student research results might be used without proper acknowledgement by a "principal investigator" or research director. Another more general point was the feeling that academic relations between faculty and students were weakened by the diversion of faculty energy and attention away from the classroom or laboratory toward industrial interests.

This office held a number of meetings with a group of graduate students expressing these concerns which resulted in a plan, sponsored by the Graduate Student Organization and SWOPSI, to publicize and examine the issues involved by a series of public programs. These were opened by a keynote address by President Kennedy; the ideas and proposals advanced in these programs have been fully reported elsewhere.

2. *Taiwanese Students*

As a consequence of an article in the *Stanford Independent*, this office became aware of a strange and disconcerting situation. The article charged Taiwanese students with spying on each other and reporting dissident views to the Kuomingtang. Soon after the publication of the article several Taiwanese students came to denounce these charges and to seek advice on how to counter what they claimed to be a false accusation both with regard to their own conduct and that of the Taiwanese government. On the surface this seemed to be a reasonable request and, if their objection was sustained, a public apology by the *Stanford Independent* seemed to be in order.

On investigating the bases for the *Independent* article it was evident that there is here at Stanford and in other institutions nationwide a system of Taiwanese student spying on each other and referring their findings to the Taiwan government. The objective is to suppress any criticism of the Taiwan regime or dissent from its totalitarian principles. The documentation is extensive, including calls in the United States Congress for an investigation of Taiwanese "intelligence surveillance" in this country. It is only fair to add that the active Taiwanese informants appear to be a limited group, involving some but not all Taiwanese students. Furthermore, some Taiwanese nationals other than students have been involved in these activities.

The Honor Code

As a member (ex officio) of the President's Honor Code Commission, the Ombudsperson has the opportunity to discuss problems of the application and interpretation of the Honor Code as they are reflected in this office. A most serious problem, of which the Honor Code Commission is fully aware, is the lack of knowledge by faculty of the Honor Code's provisions and its interpretation. This is evident, for example, from the frequent inquiries to this office concerning the procedure by which Honor Code violations are to be processed.

As has been pointed out in previous reports, the "third person" responsibility is extremely difficult for many students to fulfill. There needs to be some description of conditions under which it is viable for a student to report a violation by another student. This is partly a matter of strength and kind of evidence which is nowhere clearly discussed and explained. It is hoped that the 1982-83 Honor Code Commission will address this matter.

The number of Honor Code problems that come to the attention of this office continues to be high (70 in 1980-81, 63 in 1981-82). It should be noted that by no means all Honor Code violations or charges of violation are known to this office. (When established procedures are followed they go directly to the University Counsel, John Schwartz.)

As suggested above, inquiries by faculty concerning the Honor Code, how to proceed with a charge of violation, and the judicial process itself, are fairly frequent. The most substantial part of Honor Code cases dealt with in this office are those students who have been charged with a violation and those who suspect others of having cheated. In these instances, the office serves as a source of information and advice and gives those concerned an opportunity to air a troublesome situation.

Academic Staff Problems

1. *Lecturers*

Problems among academic staff and nonacademic staff remain numerous. In the former a considerable number were difficulties that lecturers in French and Italian expressed concerning their status and teaching conditions. This is not new; for the past several years there have been many grievances voiced by this group and publically referred to in previous reports. At this writing, after numerous consultations with the chairman of the department (initiated at his request), it appears that improved communications by the chairman with the lecturers and the ceding of greater control of language teaching to the lecturers themselves promise a resolution of these problems. It is hoped that the incoming chairman will implement the same policies.

2. *Librarians*

As reported before, some members of the library staff have had difficulties that appear to derive from arbitrary decisions, lack of consultation and an insensitive disregard of their knowledge as experienced professional librarians. Substantial evidence to this effect has come not only from some librarians but from other sources. To what degree this will be reflected in the recent survey of the library system is

continued on next page

Case summary, 1981-82: Office of the University Ombudsperson

	UNDERGRADUATES	GRADUATE STUDENTS	FACULTY	ACADEMIC STAFF	NON-ACADEMIC STAFF	OTHERS	TOTAL
ACADEMIC	70	50	5	2	2	2	131
GRADING	30	3	1				34
HONOR CODE	36	8	13	4	2	1	64
TEACHING	17	2			1		20
REGISTRATION/CREDITS/UNITS	9	7				1	17
ADMISSIONS							
STUDENT SERVICES/AFFAIRS	25	11	1		5	3	45
FINANCIAL	11	12	1		1	1	26
FOOD SERVICE	4				1		5
HOUSING	32	11	1		1	2	47
LIBRARIES	2	4			2		8
FACULTY/ACADEMIC STAFF AFFAIRS			14	35		1	50
DISCRIMINATION							
SEXUAL HARASSMENT	3	2	1	1		1	8
PARKING/TRAFFIC/BICYCLES	4	7			4		15
PERSONNEL/STAFF AFFAIRS	3	1	4	2	51	1	62
MISCELLANEOUS	1	6	1		3	12	23
TOTAL	247	124	42	44	73	25	555

Associate ombudsperson for Medical School reports

Pervasive student anxiety in competitive environment

Following is a report of the associate University Ombudsperson for the Medical School, 1981-82.

The office of the Associate University Ombudsperson was established in September, 1981. The Associate University Ombudsperson, Allen B. Barbour, was appointed by the President of the University, Donald Kennedy, on the recommendation of the Vice-President of Medical Affairs, Lawrence G. Crowley. The decision to provide an extension of the University Ombudsperson Office in the Medical School was based on reports of the Committee for the Well-Being of Medical Students and its Chairperson, C. Peter Rosenbaum, the Executive Committee of the Medical School, and the University Ombudsperson, John D. Goheen. The consensus of these recommendations was that such an office was deemed necessary in order that problems unique to individuals in a medical setting could be addressed by a member of this community who had knowledge of its special circumstances. The jurisdiction specified for this office was all Medical School employees (faculty and staff), medical students, graduate students in programs at the school, the hospital house staff (M.D. interns and residents in post-graduate training), and post-doctoral fellows. Hospital employees other than the house staff were excluded, although it is understood that any members of the Stanford community, not otherwise represented, have access to the office of John D. Goheen and staff.

It appears that the office has served a real need for the Medical School. The formal grievances, numbering 70, are but the tip of an iceberg in that many grievances reflect on-going school problems which call for major strategic resolutions. Other problems can be solved by providing information. Sometimes solutions to problems are stimulated by the existence of an Ombudsperson or the sound of his voice on the phone. The office also serves as a sounding board for a spectrum of concerns, both general and specific, from all sectors of the school. From this source the office is often active in addressing school problems which did not necessarily surface as personal grievances.

The office has discovered that many clients have misconceptions of their rights as employees or students and express fears of reprisal, loss of confidentiality, etc. Prospective clients are assured that confidentiality is indeed respected and no case is carried any further than the client wishes. The airing of a grievance is often helpful in itself. Nothing is lost in a preliminary interview. The office is specifically enjoined *not* to be agents of the administration but to be as impartial as possible. That is precisely why the office can often be effective in resolving problems.

Case summary, 1981-82
Office of the Associate University Ombudsperson

	UNDER-GRADUATES	GRADUATE STUDENTS	MEDICAL STUDENTS	HOUSE STAFF	POST-DOCTORAL FELLOWS	FACULTY	ACADEMIC STAFF	NON-ACADEMIC STAFF	TOTAL
ACADEMIC			12	5	2	7			28
GRADING	1		1						1
HONOR CODE			1						
TEACHING			6						6
REGISTRATION, CREDITS/UNITS			2		2				4
HOUSING					1				1
FINANCIAL		1	4						5
STUDENT SERVICES/ AFFAIRS			6						6
FACULTY/ACADEMIC AFFAIRS									
SEXUAL HARASSMENT							1		1
PERSONNEL/STAFF AFFAIRS							2	4	6
MISCELLANEOUS			5	3	1	1		2	12
TOTAL	1	1	37	8	6	8	3	6	70

For helping in the work of the novice year, special thanks is expressed for the support and cooperation of Linda Northway, the assistant in this office; John D. Goheen, Sara Stephenson, and Leah Kaplan in the University Ombudsperson's office; John P. Steward, associate dean for student affairs; Lawrence G. Crowley and our new Dean, Dominick P. Purpura; Rosemary Hornby, manager of the Human Resources Group in the School; John L. Wilson, associate dean and chairperson of the Committee on Student Performance; James Silverman, chief of the medical staff; and Helen Rantz, director of the house staff office. And many thanks and appreciation to the many loyal medical students who have inspired this office with their hearts and thoughtful appraisals.

This report will first address some general problems pertaining to medical students.

1. **The learning atmosphere.** Of 4,800 applicants the school admits 86 superlative students each year whose average age is 25, many with Ph.D.s. These mature graduate students are then treated too often like children. The students describe a pervasive anxiety and bewilderment about the difficulties of preserving their human values in a competitive intellectual environment, the mass of information to be learned, the fear of mistakes, and the overwhelming task of becoming a truly effective physician. This is a complex problem with multiple factors. Medical students feel generally that the faculty places an inordinate emphasis on:

* Scholastic achievement over the process of learning.
* Competition over cooperation.
* The knowledge more than the personal qualities of the student.
* Facts and procedures, getting the work done, over the care of the patient.
* The use of intellectual one-upmanship and exposure of students' ignorance as learning incentives as opposed to positive help with the learning process.
* Esoterica at the expense of common sense and basic approaches.
* Science and the disease model of illness without sufficient attention to a psychosocial understanding of the human needs of patients.
* Faculty-student polarity in lieu of a more collegial relationship.

A shift in emphasis along these lines would go a long way toward restoring a more positive and joyous attitude of students toward medicine in general and their education in particular. There is a need to listen, weigh, and respond to the concerns of students about their own education, to insure their basic rights as members of the Stanford community, to include them in deliberations which determine their fate whenever possible, and to clarify mutual goals and expectations.

The school has an elective curriculum and a no grades evaluation system which attracts creative students; unfortunately, these advantages are nullified to some extent by the requirement of passing the National Board examination, Part I, at the end of the second year, and by

continued on next page

Nonacademic staff complaints high...

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yet to be seen, but it is clear that the administration is aware of these problems. There is, at least, hope of improvement.

Nonacademic Staff Problems

The number of problems and complaints by nonacademic staff remains high (1980-81: 81, 1981-82: 62). The range of problems is extremely varied, and may be characterized in general as concerns and discontents about job-related matters. Requests for information and advice are often addressed to this office, and many cases are referred to appropriate departments or administrative officers such as personnel and affirmative action officers. Others are dealt with directly whenever that is the most effective means.

Sexual Harassment

The Ombudsperson's office is charged with the responsibility of resolving informally problems of sexual harassment. This it has attempted to do in eight cases during the past year. In all instances these appear to be resolved, which suggests that an informal procedure is effective and preferable to the formal procedure as outlined in the statement, "Policy on Sexual Harassment."

Sexual harassment is defined as follows: ". . .it may be described as repeated and unwanted sexual behavior, such as physical contact and verbal comments or suggestions, which adversely affect the working or learning environment." This office is quite aware that this definition raises problems of interpretation: what appears to one person as offensive behavior may not to another.

Student Participation in the Ombudsperson's Office

For several years students have volunteered to participate in the functions of the Ombudsperson's office. They have performed in two basic ways: as persons sensitive to various student problems and to issues concerning the Honor Code. During the past year this group turned its attention to rights and responsibilities of students. This interest arose because of the need for a clarification of some of these matters, and the need to bring together in a single short statement the scattered information in various university publications. To achieve this objective the students involved formed a "task force" of themselves, several members of the faculty, a member of the staff of the Dean of Student Affairs and the staff of the Ombudsperson's office. A number of meetings were held for the purpose of formulating a draft of "rights and responsibilities." This will be continued next year and, it is hoped, the final formulation of the document will be carried out by an ASSU task force. This will be widely discussed with relevant administrative officers in the course of reaching the final formulation. The following students should be congratulated for their interest and initiative in organizing the task force: Raga Elim, Nick Gault, Tim Hussey, and Mike Reeds.

Concluding Remarks

The accompanying table is useful as an indication of the range of problems and complaints reaching the campus office. Since a great variety of cases is grouped under a given category, their particularity is hidden. The selected problems discussed in the report are, for the most part, not explicit in the table, but are reconstructed from detailed records of a particular case or a small subclass of cases.

The selection of problems discussed is a product of much discussion with various persons in the university about issues of interest to students, faculty, and staff. They have also been thoroughly discussed by the persons immediately connected with the functions of the office, Allen Barbour, Linda Northway, Leah Kaplan, and Sara Stephenson. Many issues needed thought and analysis are shared by all the staff. Difficult as it often is, the attempt is always to analyze problems in terms of fairness and justice. The work of the Ombudsperson's office becomes an exercise in practical ethics.

John D. Goheen
Ombudsperson

Medical Ombudsperson...

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the need to secure strong letters of recommendation during the fourth year for appointments as interns. The problem of National Boards may be eased by the proposed revision of the basic science curriculum if it results in improved and better coordinated teaching, combining clinical relevance with cutting edge science, fewer lectures, and better attendance. In regard to intern letters, students express concerns about the participation of house staff in clerkship (supervised patient care) evaluations when they feel badgered by what they consider to be a difficult and threatening resident. This could be corrected by having the students evaluate the residents so that the faculty can learn where the difficulties lie. Also, students, concerned about the need to appear knowledgeable in terms of their evaluations, express fears of exposing what they don't know and need to know, and this interferes with the learning process.

Student concerns are being offset by responsive meetings with Dean Purpura, by Associate Dean Steward and his staff, the Committee on the Well-Being of Medical Students, the preceptor groups sponsored by Robert W. Cutler, and by student support groups with coordination by this office, but all of these responses need to be broadened and intensified. The solution to the basic problem of student alienation lies with the rank and file faculty as learning facilitators, role models, colleagues, and friends of students.

2. **The Committee on Student Performance (CSP).** In the past academic year a more stringent set of rules and guidelines came into effect regarding remedial actions for academic failures. This was followed by a series of student grievances about committee actions, although there was only one grievance about a course failure, the student complaining about the rigidity of grading "on the curve." The concerns of the students were evaluated, summarized, and transmitted by this office to the committee. The CSP and the Office of Student Affairs (OSA) have been responsive to these concerns, clarified many points, and issued a more explicit protocol. Meanwhile, unrelated to the above, the committee has been reduced to five members with a new chairperson, Ruth T. Gross. All these changes will help expedite the work of this important committee.

About one third of all medical students come before the CSP at one time or another for academic failures. Why should one of the finest medical student bodies on earth have such an inordinate number of failures? *The system is obviously failing, but the students get the F's.* There should be few if any failures along the way in a graduate program of select students. The CSP is confronted with an immense problem not of their making. Although the remedial actions proscribed by the CSP are thoughtfully considered and uniform, it is not surprising that such actions are often viewed by the students as more disciplinary than helpful. The problem lies not in the capacity or dedication of the students. Individual remedial actions provide no more than symptomatic relief. The basic problem demands preventive action at its roots. One reason for this complex problem is a discordance between student selection and faculty expectations. Although we have a distinct research emphasis, we nevertheless select many students for promise of excellence in clinical care and community leadership. The discord develops between such students and their capacity to master basic science courses charged with an enormous amount of research details at the expense of clinical relevance. This is not to suggest a major change in course emphasis which is indeed unique and appropriate for Stanford. But there needs to be a somewhat better balance between student needs for medical practice and course content along with a more extensive support and counseling program to help students in the learning process.

The CSP also handles most violations of the Fundamental Standard and Honor Code but with marginal protection of defendants for due process. The office has analyzed this issue in some detail recently and has suggested a review by the school. Corrective actions are now under way to establish a more clearly defined protocol of due process.

3. **Summer Courses.** Only one basic science course, biostatistics, is given during summer quarter. The result is that students, already beset by monumental debt, waste the summer quarter of each year while high cost of living expenses go on, and some lose one fourth of an annual scholarship stipend not offset by course work. Furthermore, schedules for core courses are correspondingly tighter the remainder of the year, and students find it necessary to omit other important courses such as genetics. Robert W. Cutler, chairperson of the committee on courses and curriculum, and the student body have tried but failed to elicit a positive faculty response for the provision of summer courses. The faculty has never granted credit for a basic science course taken during the summer (or any other time) at another medical school, after admission of the student to Stanford Medical School. Thus the summer quarter lies relatively barren. This problem awaits resolution by the faculty.

4. **Clerkships.** Changing guidelines for clerkships: adding, dropping, substituting; which clerkships count most in specific recommendations for internships; the timing of dean's letters, etc., also provoked grievances during the year. Most of these problems have been resolved.

5. **Financial Aid.** Delays in expediting loans, etc., related in part to changing personnel, prompted a series of grievances in the fall. The Financial Aid Office and the OSA responded quickly to this situation, and the office has since stabilized under the direction of Kathy Krause and Stuart Rosse.

FACULTY:

The problems of the students described above may reflect to some extent corresponding problems for the faculty. The Medical School has an outstanding faculty that strive hard for the best in teaching, patient care, and research, but the emphasis is strictly on the latter when it comes to tenure. So the faculty functions in its own competitive atmosphere with serious problems of recognition, promotion, tenure, salaries, interdepartmental and sometimes intradepartmental rivalries. They are frustrated by pressures to produce Faculty Practice Plan (FPP) income at the expense of research and teaching, coupled with major FPP financial losses from an inadequate billing system and Medi-Cal restrictions.

These problems will not be addressed specifically in this first report. The coordinated leadership of the Vice-President of Medical Affairs, Lawrence G. Crowley, and Dean Dominick P. Purpura is expected to provide the ethos necessary to unify the faculty with a more collegial spirit toward common goals of the school.

HOUSE STAFF:

By and large, the house staff brings few grievances to this office. This is probably due to the responsive leadership of James Silverman, chief of the medical staff, and the active support of Helen Rantz, director of the House Staff Office. Our office can, however, complement these offices in helping resolve problems whenever appropriate.

1. *Departmental feedback.* A known problem in the past has been inadequate ongoing departmental feedback to house staff re quality of performance. Supportive critical actions along the way are obviously better than hatchet-like actions at the end. This problem may well have improved as no such grievances surfaced during the year.

2. *Counseling.* This office together with the House Staff Office, the Committee for Well-Being of House Staff and its chairperson, Kenneth S. Peters, has initiated a continuing support for spouses arranged through the Stanford Help Center. However, the interns and residents themselves, although subject to inordinate stresses during these training years, have neither special support groups nor any facility for counseling when this seems appropriate. The Psychiatry Department does provide a useful but limited evaluation, but the individual is then referred for private counseling if continued care is warranted. The residents are bureaucratically hospital employees and not graduate students, and for this reason they are not entitled to Cowell counseling services on campus. Private counseling is inadequately covered by their health insurance and this is a deterrent to ongoing care.

3. *Psychiatry Department.* The regular faculty in this department have major research and scientific commitments. A good share of the clinical teaching is done by clinical faculty in their private offices, apart from the Stanford clinics where the residents actually see the patients. Residents attracted to Stanford by its research facilities are presumably quite content with their training, but several grievances emerged during the year from residents devoted to patient care careers about the limited teaching by the regular faculty as well as about certain administrative decisions. These problems were discussed in detail with the department chairperson who has taken certain steps to improve faculty-house staff liaison, and the current junior residents are more content with the program.

STAFF PERSONNEL:

1. *Job descriptions, expectations, evaluations, and terminations.* This is a frustrating area with many grievances. Neither supervisors nor employees understand University personnel policy, generally speaking. We have a truly excellent human resources group headed by Rosemary Hornby, with equal concerns for departmental needs and the welfare of employees. *They should be consulted for advice early and much more often during the incipient stage of personnel problems.* A major problem is the tendency of employers to write overly generous, uncritical evaluations during the early stages, sometimes years, of employment, even though the employer has serious reservations, then to about-face when termination is desired with a super-critical evaluation demanding radical changes which could not possibly be accomplished by the dismayed employee in the limited time remaining. Often there has been little or not informal, person-to-person discussions, with clarification of expectations, helpful suggestions, etc. Sometimes the reason for termination given at the end is not the real reason. The victims of this process range from new clerks to long established research personnel and sometimes faculty. The offices of Ombudsperson and Human Resource Group are placed in the difficult position, after investigating both sides, of explaining to the employee the real deficiencies that should have been disclosed by the employer long before, of helping the employee through the termination with as much grace as possible, or of facilitating a formal grievance procedure.

It behooves us all to learn to be straight-firm but helpful—with our employees. The Human Resource Group has always been available for help by finding a better job placement, career planning, etc., but these positive steps are next to impossible at the end during a tumultuous termination.

POST-DOCTORAL FELLOWS:

This group comprises about 400 of the 500 University postdoctoral fellows (nonmatriculated students who have completed Ph.D. and M.D. degrees, now involved in postgraduate specialty training in a research lab or patient care specialty). Fellows provide important patient care and research responsibilities at the Medical School. They have administrative support but no internal or external leadership except for individual faculty and department chairpersons. As a group they have problems re salaries, benefits, University housing, etc. Many of this group have completed previous educational degrees from Stanford and may continue their affiliation as members of the School of Medicine faculty.

It is the hope of this office that the problem of high echelon representation in the school, missing in the past, will be addressed, in order that the fellows will be more positively identified and integrated as essential and valuable members of the Stanford community.

The Associate University Ombudsperson's charge is to protect the interests and rights of members of the Stanford Medical School community and to act on his own initiative when he perceives over-all problems which compromise the well-being of the school. There are many ways an Ombudsperson can be helpful in detecting and offering solutions to problems of the school and its faculty, staff, students, house staff and post-doctoral fellows. We have common goals, and need to work together more closely. Your suggestions are welcomed. The office at 800 Welch Road, Suite 221, 497-6494, is open Monday through Friday.

Allen B. Barbour
Ombudsperson

Campus crime report

COMMUNITY CRIME INFORMATION
Sept. 27-Oct. 4

Burglary/residence	2	Phone harassment	0
Burglary/nonresidence	0	Controlled substance	0
Burglary/Vehicle	9	Felony arrest	2
Theft/under $200	2	Misdemeanor arrest	12
Theft/over $200	3	Adult booking	10
Bicycle theft	17	Adult cite/release	4
Vehicle accident	4	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	7
Assault	0	Driving under influence	2

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
10/3	Night	600 blk Mayfield	Tape recorder	Open window
10 2-3	Night	500 blk Mayfield	Cash	Unknown

Full indirect cost reimbursement appears assured—Kennedy

Universities apparently will continue to receive full reimbursement for indirect costs of research funded by the National Institutes of Health during fiscal 1983, Stanford President Donald Kennedy told the Faculty Senate Thursday, Sept. 30.

NIH and the Alcohol, Drug Abuse, and Mental Health Administration had proposed to pay only 90 percent of negotiated indirect costs on research, a change that would have cost Stanford alone $2.2 million in fiscal 1983, including $1.2 million at the Medical School. Nationally, the cut would have amounted to nearly $70 million for expenses incurred on NIH-funded projects, mainly at universities.

Indirect costs include the proportionate share of such pooled costs as utilities, administration, libraries, shared equipment, depreciation, and building maintenance charged to research projects. Direct costs, such as salaries, are charged separately to each project.

Congress included the funds for full payment of indirect funds in its Continuing Resolution and directed the Department of Health and Human Services, which includes both NIH and ADAMHA, to continue supporting research under current terms and conditions. President Reagan subsequently signed this resolution.

Committee action

The House Appropriations Committee directed the Department to pay full indirect costs, but also called for a review of these expenses by the Department in consultation with universities.

"We welcome that review and will participate actively in it," Kennedy told the Faculty Senate. During the summer, he and several other major university presidents deeply concerned by the NIH proposal met with major administration officials and key members of Congress.

While recent Congressional actions are "encouraging," Kennedy cautioned that "The political situation in Washington is highly volatile. The Continuing Resolution is in conference (committee Sept. 30); it could be vetoed by the President.

"The appropriations process is still under way, and will not be complete before the lame duck session of Congress, if then."

The House Appropriations Committee report notes that "University administrators contend that the distinction between direct and indirect costs reflects accounting methodology, not a difference in the reality or the necessity of the costs for the research, whereas many scientists perceive rising indirect costs as making an unwarranted claim on the total funds available for research. . . .

"The Committee is persuaded that indirect costs are a legitimate component of the costs incurred in performing biomedical research and should be adequately reimbursed.

"The Committee is also concerned by the widespread perception that federally sponsored research may be bearing more than its fair share of these costs. The indirect cost level as a percentage of the total costs of research grants has increased from 15 percent in 1966 to 20.5 percent in 1972 and 29.5 percent in 1981. In 1980 and 1981, reimbursements for indirect costs grew faster than the inflation rate, while direct costs of doing research did not.

"The Committee requests the Secretary of Health and Human Services, in cooperation with the NIH director, to make a careful review. . .including consultation with the universities and other research organizations most directly affected, and to submit. . .recommendations. . .for discussion in advance of hearings on the 1984 budget request.

"The Committee also intends to ask the Comptroller General to make another independent review of this subject."

Institutions are reimbursed retrospectively for indirect costs after they have been incurred and paid. Each institution is reimbursed at a rate calculated by federally prescribed methods, using federally audited costs, and negotiated by federal auditors.

Between 1981, and 1982, Stanford and federal auditors determined which University expenses were allowable indirect costs under the terms of Circular A-21, a directive of the federal Office of Management and Budget.

The University recovers its indirect costs through a surcharge on each contract or grant. The percent surcharge—or indirect cost recovery rate—is negotiated periodically by the University and federal government. The rate is determined by dividing the dollar value of total projected research volume into the total of all allowable indirect costs. The 1982-83 rate is 69 percent, up from 58 percent in 1981-82. Eight points of the increase are attributed to increased energy and facilities maintenance costs.

Stanford requires full reimbursement for both the overhead (indirect) and actual (direct) costs of research it performs for the government and other parties. Stanford's policy of full recovery is not always matched by other, especially public, institutions.

Most universities calculate indirect cost recovery rates using the same method, but the actual rates vary widely, partly due to differences in how universities are organized and managed.

Some institutions charge research projects directly for utility costs, janitorial services, police or security, and other allowable costs instead of figuring them as overhead, for example. Such accounting differences do not change the total costs of conducting research, but do make rate comparisons among universities difficult.

Most of the money recovered through reimbursements for indirect costs goes to the University's operating budget.

If the University fails to receive projected payments for indirect costs, the impact is felt directly on the operating budget. Indirect cost recovery currently accounts for about $50 million in the 1981-82 operating budget of $178 million.

Had the NIH proposals been adopted on a government-wide basis, Stanford would have lost as much as $5 million during the current fiscal year. An NIH proposal to reimburse indirect costs for the current year at last year's rate and to limit reimbursement of expenses for departmental administration could have cost Stanford as much as $20 million, if adopted by all government agencies.

Fire alarm loop serving dorms deliberately cut Monday

One of five main fire alarm loops serving the Stanford campus was deliberately cut Monday night, Oct. 4, temporarily leaving five campus dormitories without an automatic link to the Fire Department, according to Campus Police Chief Marvin Herrington.

He called the vandalism "very serious. . .potentially life threatening." Service to the dorms was restored by 3:30 p.m. Tuesday.

Most fires are reported through the automatic alarm system.

While hand-pulled alarms will make a noise in their local area, they will not automatically report the location to the Fire Department until the loop is repaired, Herrington said. Repair crews were routinely summoned Monday night when the system showed a short-circuit in the loop. The cuts were found near Encina Hall and Bonair Siding, Tuesday noon, Oct. 5.

"There's no question it was deliberate," Herrington said. "Wires were cut in several places." As a precaution, any fires should be reported to the station by dialing 911.

Dormitories on the affected loop include Toyon, Branner, Crothers, Wilbur, and Stern.

Other facilities affected include Centrex, Plant Services, the Credit Union, Food Services, Maples Pavilion, Stores, Stanford Stadium, Encina, Meyer Library, Center for Education Research, Old Union, Education School, Main Library, Hoover, Memorial Auditorium, Graduate School of Business, President's Office, History Corner, Math Corner, Psychology, Terman, the Press Building, Applied Electronics Laboratory, High Energy Physics Laboratory, Carnegie Institution, Sherman Fairchild, Cancer Research, and Hemodialysis.

A criminal investigation is under way, Herrington said. Anyone with information may contact him at 497-9633, or dial 911 after normal business hours.

University audiovisual supervisor Bill Cleveland Monday night found the basement of Memorial Auditorium flooded with 2½ to 3 feet of water. A garden hose apparently was used to fill the area. There was no damage to the auditorium itself.

Strike. . .

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University operations continued without serious impairment, but with many managers, supervisors, and other employees growing increasingly tired from long hours of work. Police officers continue working 12-hour shifts. Police Chief Marvin Herrington said that with the exception of strike-related vandalism, crime on campus is unusually low.

At the Food Service, director Maxine Anderson reported managers were joined by volunteers and paid student hashers in serving approximately 1,300 students per meal. Normally 3,300 students would eat in Food Service operated dorms. Beginning this week, dinner is being served in Florence Moore Hall. Breakfast and lunch only are served at Wilbur Hall.

At SLAC, managers, job-shoppers, and others are working long hours so the accelerator can be turned on and experiments run beginning Oct. 10. The project is on schedule, despite daily picketing at the main entrance that sometimes delays entry of employees and deliveries.

Responding to faculty questions at Thursday's Senate meeting, Kennedy indicated that the allocation of funds in the University's offer between wages and benefits might be modified, if the union so desired, and that union interest in "moving money between the years" also could be discussed. "We've about run out of room, but I think some things can be done," he said.

"A significant move by USW is now required to get the bargaining process out of its present impasse," he added. "The union leadership, instead of using the progress of collective bargaining seriously, has sought to settle it in every way possible—on the picket line, in the media, by political pressure, and now finally by personal harassment. But it will be settled only at the table, and only through the introduction, by USW's representatives, of a note of realism."

The personal harassment Kennedy referred to was a USW vigil outside his home, the University-owned Lou Henry Hoover house. By 6:15 a.m. Tuesday the vigil had dwindled to one protestor in a sleeping bag watched over by one Stanford police officer in a car.

Thursday afternoon more than dozen people participating in the vigil stood on the sidewalk observing a reception Kennedy hosted on the large lawn for new graduate students.

On Monday Baratz said the University's compensation documents showed the union had won its battle against an administration he termed "arrogant and ruthless."

"No matter what happens from here on out, we've proven the union was right. Breaking the union was the point. There's no other agenda."

Asked what could possibly end the current stalemate between the union and University, Baratz replied: "I don't know how to offer a settlement anymore."—**Karen Bartholomew**

Authoritarian economies assessed

The most successful Third World economies are "uniformly authoritarian, with strong governments moderated by fairly consistent adherence to legality and a constitutional order," a Hoover Institution scholar contends.

Prof. Robert Wesson, UC-Santa Barbara political sciences and senior research fellow at Hoover, reaches this conclusion in a new Hoover Institution Press collection of essays on Communism in Central America and the Caribbean.

In the American hemisphere, those economies most successful in raising their total national product include Mexico "where the governing party is completely dominant but observes democratic forms"

Senate report

Senate approves MA in International Policy Studies

TO MEMBERS OF THE ACADEMIC COUNCIL FIFTEENTH SENATE REPORT No. 2

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, September 30, 1982 beginning at approximately 3:30 p.m., in Room 180 of the School of Law, with Chairman Alexander L. Fetter presiding.

On this occasion the Senate took a number of actions, as follows:

1. Conferral of Bachelors' Degrees

On the recommendation of the *Committee on Academic Appraisal and Achievement*, the Senate, by unanimous voice vote, conferred bachelors' degrees on candidates who had met the various requirements for those degrees.

2. Conferral of Advanced Degrees

On the recommendation of the *Committee on Graduate Studies*, the Senate, by unanimous voice vote, conferred advanced degrees on candidates who had met the various requirements for those degrees.

3. Revocation of Master's Degree

On the recommendation of the Committee on Graduate Studies, the Senate revoked a Master's Degree awarded in April by clerical. Confidentiality was preserved in the matter, but it was established that the student involved recognized the error and that the revocation was not controversial.

4. Senate XV Photographs for University Archives

The Senate, by consensus, gave assent to the taking of official photographs of its first annual meeting for the University Archives and for the *Daily*.

5. Election of New Member to Steering Committee XV

By ballot, the Senate elected Professor H. Craig Heller to replace Professor Carolyn Lougee on the Steering Committee of the Fifteenth Senate.

6. Ex Officio Representation for Undergraduate Education

On the recommendation of the Steering Committee, the Senate by unanimous voice vote, retained the Vice Provost for Undergraduate Education (currently Professor Herant Katchadourian) as an *ex officio* member of the Senate. The Associate Dean of Humanities and Sciences for Undergraduate Programs (currently Professor Carolyn Lougee) is presently a voting member of the Senate, but will not normally be an *ex officio* member.

7. Annual Report of C-UAFA

The Senate, by unanimous voice vote, accepted the Annual Report for the academic year 1981-82 of the Committee on Undergraduate Admissions and Financial Aids. The report was presented by Professor T.H. van Andel, Chairman of C-UAFA.

In presenting the report, Professor van Andel called attention to the portion of the report that commends highly the "excellence and personal warmth of the entire personnel" who deal with admissions and financial aid.

> We note that not only the admission and aid policy, but also its very personal implementation are at the heart of the quality of the Stanford student body in which we all take delight. Such performance deserves the respect and gratitude of the entire Stanford community, as well as the necessary resources, financial and otherwise, to make the task possible at all.

The Committee also reaffirmed the policy of admitting undergraduate students without regard to their ability to pay although it noted the worsening prospects for outside financial support and the weakening of such need-blind policies in several of the universities with which Stanford is customarily compared.

The success, or yield rate of students (their persistence to graduation) was of interest to the committee as a possible criterion for evaluating the quality of the admissions and aid policy. Persistence rates at Stanford were among the highest for comparable institutions (nearly 95 percent), but limitations of sample size, inadequate data for comparison, and the number of significant variables involved all delay conclusions on this matter until more information becomes available.

In the current year, the committee intends to take a closer look at changing patterns of distribution of students in various disciplines and their impact on growing and shrinking departmental enrollments.

The committee is also concerned about the growing problem for middle-income families in financing education at Stanford, as well as the problem of devising appropriate financial aid plans for those who find the practice of borrowing unacceptable or against cultural ethic.

In the discussion which followed the report, interest in the relationship of yield rate to various disciplines, ability levels, and financial need groups prompted a number of questions which cannot now be answered. Chairman van Andel expressed the hope that more information on these matters will be available after the Committee completes its work during the current year.

The practice of obtaining information on parental occupations for Stanford applicants was questioned as being potentially demaging to truly need-blind admissions, or as unnecessary if it is, in fact, not used. Chairman van Andel reaffirmed that this information in no way enters into admissions decisions, and explained how admissions practices prevent that possibility. Others defended the collection of such data as necessary for monitoring the balance of admissions over time, useful in other regards, and very expensive to obtain at some later date.

8. Proposal for MA in International Policies Studies

After defeating a motion to recommit the proposal to the Committee on Graduate Studies for reconsideration, the Senate, by divided voice vote, approved the proposal to establish an MA program in International Policies Studies to begin this year, 1982-83, and to be reviewed after four years in 1986-87.

Professor Robert Ward outlined the history of the development of this multidisciplinary proposal and discussed its nature and its requirements in language, economics, history, political science, business, and quantitative skills. He emphasized its strong vocational element and its focus on internships with private international businesses, indicating that both business and student interest had been systematically explored.

The discussion which followed the presentation brought both commendations of the proposal and criticism of what some perceived to be inadequate attention to basic philosophical foundations for ethical judgments in policy making, and also in the traditional historical backgrounds which should underlie international dealings with other cultures. These reservations were of serious concern to several members of the Senate. Professor Ward acknowledged that the proposal's sponsors are sensitive to these needs and open to suggestions for improving the program.

There were also comments from the floor about the degree of flexibility already allowed within the program. The hope was expressed that typical students would range beyond the required courses to pursue studies in greater depth in the recommended areas. It is expected that the program will be improved as it develops in the four years before it is to be reviewed.

The Senate also heard a number of reports on which action was neither taken nor sought.

1. Report of the Steering Committee

In the Report of the Steering Committee, Chairman Fetter reminded the Senate that the Autumn Quarter meeting of the Academic Council has been set for 4:15 p.m. on Friday, October 8, 1982 as a special convocation in Dinkelspiel Auditorium. It is to be followed by a wine and cheese reception hosted by the President and the Provost.

The Chairman welcomed the members of the Fifteenth Senate newly seated either as alternates for elected members on sabbatical leave, or as new *ex officio* members. He invited all Senate members to inform the Steering Committee of any items they wish brought before the Senate and announced several items which would come before the Senate at its next meeting, including an interim report from the *Ad Hoc* Committee to Study the Length of Academic Terms, the Annual Report of the Committee on Graduate Studies, and a proposal for a graduate degree program in Medical Information Sciences.

2. Report of the Committee on Committees

The Chairman of the Committee on Committees, Professor Anne Mellor, began her report with a welcome to the new Academic Secretary and a request that the following paragraph be recorded in the minutes of the Senate meeting:

> The Committee on Committees of the Fifteenth Senate concluded by expressing our hearty and deep-felt gratitude to Eric Hutchinson for his perennial good humor; his truly remarkable memory for all committee deeds and doers, past and present; and his untiring and entirely efficient efforts to arrange our schedules, carry out our suggestions, and see to it that our business gets done. When he ends his term of service as Academic Secretary in the autumn, we will miss him sorely and wish him well in every future endeavor.

The Chairman reported that the Committee on Committees of the Fifteenth Senate, whose members include Professors Albert Cohen, Sarah Donaldson, Walter Falcon, Nathaniel Gere, James Yere, and H. Craig Heller, met three times during the summer and again last week. It appointed sixteen faculty members to seven Academic Council committees and nominated sixty-seven faculty members for possible appointment to eight University committees, eleven University panels and eleven Trustee committees. The Preliminary **ROSTERS** have been distributed; the final version of **ROSTERS** will be sent to the printer by late October when the student members and presidential appointments have been determined. It is expected to be available in mid-November.

3. Report of the President

President Donald Kennedy, after welcoming returning colleagues, reported on two matters.

First, he reported on the dispute over indirect cost recovery on research grants from the Department of Health and Human Services. That dispute was apparently resolved September 30 in a manner satisfactory both to the admistration and the universities. The policy earlier advocated by the Department (to pay only 90 percent of the negotiated indirect cost rates) would have cost Stanford, in the 1982-83 fiscal year, $2.2 million in foregone reimbursements for expenses already committed. It now appears the 10 percent cuts will not be implemented. Congress has explicitly directed the payment of full indirect costs and specified that a review of indirect costs be conducted in consultation with universities. Stanford will participate in that review and welcomes it, though it will be a painful process.

The President praised the work of Robert Rosenzweig, Larry Horton, Jacyn Mitchell, Robert Freelan and others in making Stanford a leader in this fight. The Association of American Universities Health Committee, which President Kennedy co-chairs this year, also worked actively on this matter.

He cautioned, however, that the political situation is very volatile and the resolution is still in conference. It could be vetoed by the President. The appropriations process is still under way and won't be complete before the lame duck session—if then. Informal word has come from the Department that there will be full payment of indirect costs for fiscal 1983 but President Kennedy warned that Stanford can't be sure of that until written confirmation is received. Even so, he concluded, things look a lot better than they did even forty-eight hours ago.

The second report item was the strike. President Kennedy expressed his understanding and deep regret for the inconveniences to colleagues, to programs, to departments, and "particularly to those in the important work of residential education." He emphasized his opinion that the administration cannot be held responsible for the strike and cited articles which appeared in the *Daily* on Tuesday September 28, and in the *Campus Report* of Wednesday, September 29, as fair statements of the real history of the negotiations. He reasserted his position that the University began its negotiations from a realistic level and made improvements in its offer so as to indicate clearly its final zone of settlement, intending it to be somewhere in the vicinity of the total compensation established last spring for the various non-unionized groups of University and University Hospital workers. He further noted that there had been a significant reduction in the rate of inflation since those increases were established. An offer at or near those levels, he stated, is clearly all that Stanford's financial capacity will permit.

President Kennedy took exceptions to recent claims that the strike leaders have made major concessions and that the positions of the University and union negotiators are close. The latest union offer involves increases in compensation and benefits for the first two years of a minimum of 24 percent which is, he said, "not in the ballpark." He expressed the view that a significant move by USW is required now to get out of the impasse and reiterated his determination not to damage other constituencies of the University by misallocating funds because of strike pressures.

He questioned the claim of an unfair labor practice as the basis of the strike and also the sincerity of strike leaders in using collective bargaining rather than other tactics to effect a solution.

Following the President's report, he was asked to clarify the administration's position on the charge made against Stanford by the National Labor Relations Board. This

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Senate Report/ continued from page 26

charge resulted, President Kennedy said, because the University refused to comply with the union's request two years ago for extremely detailed data on contract and non-union workers employed by Stanford. The University judged the request to be unreasonable, prohibitively expensive to fulfill, and of little utility to the union in the bargaining process. The refusal to comply will ensure judicial review because the Board has no enforcement powers. Courts have dismissed similar charges before, and Stanford insists on judicial review of this charge. In addition, he noted that the union could have called a strike over this charge anytime during the two years it has been at issue. The fact that it has not, and the union's failure to mention the charge in the negotiations now confirms the administration's belief that contract matters, not unfair labor practices, are the true basis of the strike.

Asked why the University doesn't give the information to the union, President Kennedy responded that it's very difficult and expensive to compile, and that giving it will concede a precedent the University doesn't wish to concede. Stanford would rather have a legal test. If the court decrees the University should comply, substantial resources will have to be allocated in order to collect the information.

To the suggestion that a request for information about non-unionized workers doing comparable work was indeed of reasonable utility to the union, President Kennedy responded that, though it would seem so in the abstract, that particular request was not. This matter can be settled either by University compliance to a court order or, if the court decides for Stanford, by negotiation, with the union adjusting its request to suit the University's or the court's criteria for reasonableness.

Other questions were asked about the University's use of the words "final offer" (which seem to imply no flexibility for negotiation), and also about its refusal to concede anything on medical and dental benefits.

President Kennedy responded that final offers are commonly understood to signal some limited financial capacity. Benefits can yet be discussed if the union wishes to reallocate amounts within a total increase between compensation and benefits. He stated his belief that progress can be made if USW makes a significant move approaching the "zone of agrement" indicated by Stanford's last offer.

President Kennedy denied the suggestion that more University resources are going into the strike than would have gone into complying with the union's request for information, especially, he said, since complying would have set the precedent and established a "rolling liability." He also resisted the suggestions that he had been unfair in describing the union's last move as no significant improvement, or that the University's definition of a "reasonable zone" was unilateral. With the slowing of inflation, comparison with the spring quarter level of increases for other university groups defines the zone. The University's offer is in that zone, he said; the union's is a long way from it.

4. Report of the Provost

After some preliminary remarks, the Provost began his report by announcing that Vice-Provost Herant Katchadourian would be on leave Autumn Quarter to complete a book. He also reminded the Senate that there would soon be a Memorial Service for James T. Watkins IV, Professor Emeritus, Political Science, who died recently in France.

Provost Hastorf supported Chairman Fètter's remarks about the October 8th Academic Council meeting in Dinkelspiel Auditorium. He emphasized that he plans to remind the Council of the substantial honors granted to faculty members in 1981-82 and that the seven School Deans will make announcements of special teaching honors awarded to members of their faculties during the past year.

Though not welcoming their reappearance, Provost Hastorf drew attention to the publication in recent newspapers of the first of a new series of Cartter-type" reports, this one ranking leading university departments in Physical and Quantitative Sciences. He commented on how the local newspaper reports were slanted by the allegiances of their writers, and also noted that Stanford's Chemistry Department had been inadvertently omitted from the list printed in *Campus Report*.

The Provost pointed out that for Physical and Quantitative Sciences together, there is a clear "Big Four": Berkeley, Stanford, Harvard, MIT. Excluding the quantitative sciences (Computer Science, Statistics, Mathematics), there is a very big fifth: Cal Tech.

Since these reports continue to appear, Provost Hastorf congratulated our colleagues in these departments for their fine showing. Four more reports will appear, ranking departments in other disciplines. The Provost will comment on those briefly.

Legislation on uncapping the retirement age (the Heinz-Pepper Bill), with no exceptions for educational institutions, will probably be considered seriously by Congress in the near future (though probably not in the present session).

In an unusual event, Professor John Dunlop, Lamont University Professor at Harvard, testified before a Senate Sub-Committee on behalf of both the American Association of University Professors and the Association of American Universities about this bill. Provost Hastorf quoted Professor Dunlop's closing remarks:

> One closing point: At the outset I indicated that several associations, representing higher education institutions, and the American Association of University Professors, representing faculty, were in agreement in seeking a permanent exemption from an uncapping of the mandatory retirement age for tenured faculty and tenured administrators. In other industries I would say simply that labor and management are in agreement on this proposal. I believe this fact should be a serious consideration in the deliberations of the Congress.

The Provost also drew attention to the September 29 issue of the *Chronicle of Higher Education* which has an interesting summary of excerpts of the AAUP report on uncapping the retirement age. The summary statement of that committee is that, with institutions with tenure, uncapping the 70-year retirement age would be decimating in terms of budgetary issues, and/or the bringing in of new faculty, or to the tenure system itself. The provost urged faculty to read this material because there will be serious issues to face if one form of that bill, total uncapping with no exceptions, goes forward.

In the discussion following the Provost's Report, the question was raised about how the AAUP position was arrived at, the point being made that not all of the members of the AAUP concurred with the organization's position. The belief was also stated that there was no cause for panic; that other institutions have uncapped retirement voluntarily and there has been no problem.

President Kennedy added two final points: First, there's an article on the AAUP position by William van Alstyne. There is no suggestion of irregularity. Some members may not agree with the official position, but there is no evidence of anything wrong with the way the decision was made.

Second, it seems politically quite likely that there will be ultimately the passage of something quite like Heinz-Pepper with an exemption that is not an exemption but a temporary (7-8 year) moratorium for institutions with tenure. So that faculty members can begin to plan their own views on this legislation and decide on personal investments, it's only fair for Stanford to emphasize that its capacity to treat the people in the window in a more favorable way than is required under the law was exhausted with the last 5-year window when mandatory retirement was moved to age seventy. Stanford must approach the new legislation with the firm idea that it is not going to be possible to generate special treatment for people in that window. Stanford will continue to use seventy as the retirement age until required by law to do otherwise.

As the meeting drew to a close, a final suggestion was made from the floor that the Steering Committee should schedule reports and proposals from guests at some earlier point in the agenda to avoid unnecessarily long waits for the guests and to ensure the presence of a quorum for action.

There being no Unfinished Business and no New Business being raised, the Senate adjourned on a motion made and seconded at approximately 5:20 p.m.

Clara N. Bush
Academic Secretary

Faculty Senate debates the pros and cons of ending 'retire at 70' rule

continued from page 1

women, and minorities.

"At Stanford, we estimate that there would be a 20 percent decrease in (faculty) openings between 1985 and 1990 if two-thirds of the eligible faculty chose to stay for life," instead of retiring at 70, Kennedy wrote.

"A significant decrease in available appointments will have a disproportionate impact on the large number of women and minorities recruited in recent years. Our data indicate that 62 percent of the women and 40 percent of the minority faculty at our university do not have tenure. These persons comprise about 32 percent of all nontenured faculty at Stanford.

"In the long term, it would be very difficult to maintain a system of tenure without mandatory retirement. We do not have to reach as far back as the McCarthy era to realize that tenure is essential to free inquiry in colleges and universities."

Don't panic

In the Faculty Senate, Prof. Bernard Roth, mechanical engineering, said the University should "get out of the panic mode" on this issue.

"The world has not collapsed where retirement has been uncapped," he said. Especially at an institution like Stanford, eliminating mandatory retirement should be "no problem at all."

In a recent report on "uncapping" retirement age, Committee A of the American Association of University Professors (AAUP) said: "Tenure is not a commitment for the duration of the incumbent's working life, but only until a reasonably late retirement age. . . .It is the tenure commitment that distinguishes the professoriate from other employees. . . .

"The proposal. . .poses a serious threat to academic freedom.

"In addition, uncapping legislation upsets existing contractual relations otherwise thought to be fair within the academic community, upsets the institution's ability to plan, and—far more importantly—imposes a heavy cost upon junior and prospective faculty."

If the legislation is adopted, Hastorf said, "we all face very, very serious issues." He already has discussed it with the Advisory Board, the seven tenured faculty members elected by the Academic Council to consider all faculty appointments.

Roth, former president of the Stanford AAUP chapter, said he and several colleagues "don't hold that there's doom around the corner" if the law passes.

The American Federation of Teachers, whose membership includes 80,000 professors nationally, supports the proposal.

Robert Nielson, assistant to the president of the AFT, told *The Stanford Daily*: "We don't think that tenured college faculty should be singled out from other capable elderly workers.

"An older faculty member's income needs are comparable to a younger scholar's, and his desire to achieve is the same."

At Stanford and elsewhere, faculty salaries tend to increase with age, reflecting experience.

Effect on junior faculty

In its report on "uncapping" retirement age, the AAUP national committee noted that junior faculty must indirectly bear the brunt of higher salaries paid older professors through 1) a reduction in their already low salary levels, 2) further reduction in their already tight promotion prospects, or 3) both.

"In the association's understanding," the committee said, "tenure is not a commitment for the duration of the incumbent's working life but only until a reasonably late retirement age."

When Congress adopted the Age Discrimination Act in 1978, colleges and universities received a four-year exemption permitting mandatory retirement of tenured faculty before age 70. That exemption expired July 1.

Previous studies of faculty retirement policy at Stanford have warned that "uncapping" retirement would have a serious impact on tenure.

What the faculty thinks

A campus survey published in November 1980, showed that nearly all Stanford faculty aged 60 through 65 believe that age 70 or no fixed age is appropriate for mandatory full retirement.

Four out of five faculty in this age group favor individual evaluation every year or every three years past the normal retirement age of 65, the study revealed.

Only one in 10 said there should be no such evaluation. A similar group favored evaluation every five years.

In 1977, a national survey of faculty aged 55 to 62 showed those of the highest scholarly standing and performance were the ones most desirous of late retirement.

"It is emphatically not the 'deadwood' who wish to retire late," according to Profs. Everett Carll Ladd and David D. Palmer of the University of Connecticut, who conducted the national study with Prof. Seymour Martin Lipset, a senior fellow at Stanford's Hoover Institution.

"We find an exceptionally strong association between a vigorous research commitment and a commitment to late retirement," they said. —**Bob Beyers**

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

27284-JB (JCC:1472) STU SERV OFFICER II: Fixed term 12/15/82-12/15/84; principal respon of Asst Dean are recruitment, grad stu programs & genl admin; recruiting Chicano applicants to Stanford's Grad Programs, incl extensive recruiting trips, establishment of Natl network of Chicano faculty administrator contacts, follow-thru w/ potential applicants, assisting depts w/ development of recruitment strategies, prep of recruiting mat'ls; convey concerns & needs of Chicano grad students to the Dean & his staff; prov advice & informa about Univ services; offer counsel about academic & professional matters to grad students incl financial aid; participate in planning, develop't, coord, & evaluation of Affirmative Action Program, etc; QUALIFICATIONS: understanding of grad & prof edu in major res univs & issues relating to edu of Chicanos; advanced degree required; admin exp in post-secondary edu highly desirable; effective commu, oral & written; initiative human sensitivity, organ'l ability, & ability to understand & work w/ others.; C06; $1854-2312.

SLAC

95035-JM (JCC:8940) MISC CLERICAL: Offc Sys Spec; input & format corresp, reports, forms, on-line User Notes, VM Notebooks & VM Memos; develop, institute & maintain a training program for staff on use of various computer terminals; add, modify & delete accts, etc in SPIRES; prep computer sys graphs on monthly basis; asst in testing new sys features; route calls to approp staff; update on-line documentation files (DOCTEXT, INDICES & VTOC using XEDIT); QUALIFICATIONS: typ 55-60; several yrs job-related exp or equiv edu/training; exp interfacing w/ a variety of persons; knowl of English spelling, punctuation, syntax; comprehensive knowl of data processing terminology; ability to use & understand WYLBUR, XEDIT, SCRIPT & TOPDRAW; ability to use VM & SVS; some programming training desirable.; B14; $1440-1593. SLAC

95049-JM (JCC:6680) S&E TECH MECH: TMS Unit: all shifts; assemble ultra vacuum (UHV) chambers, valves & gauges, & test components in a clean room area; prep UHV chambers for pumpdown, bakeout & installation into storage rings; maintain inventories; QUALIFICATIONS: expected to complete vacuum technology course; have good mechanical skills; ability to read engrg drawings; prev related exp; knowl of algebra & trig useful; able to qualify for gov't driver's License.; A28; $1539. SLAC

Nonexempt

33503-PM (JCC:1747) LIBRARY SPEC I: 60%, Mon, Tues, & Wed, 2-11pm; asst in reglstering new borrowers & maintaining in accurate up-to-date file of users; asst in circulation of all lib mat'ls incl Reserves; handle renewals, recalls, notifications, overdues, bills; asst in maintaining an orderly collection thru regular shelf reading & cleaning; prov direct'l & holdings informa during hrs worked before 6pm; after 6pm prov assistance in using collection, verification of holdings & ready reference w/ systematic referral to professional staff of all difficult or unanswered questions; search for missing mat'ls; file cards in main catalog, etc; QUALIFICATIONS: typ 40; Public serv orientation; prov serv to users; ability to stay on your feet & shelve for extended periods & move heavy book trucks; good alphabetic & numeric sorting & filing skills; good telephone commu skills; reliability in attendance; prev lib exp; ready reference sources in med/biological literature desirable; contact: B. Vadeboncoeur, 497-6691 or 497-7198.; B10; $713-748.

25861-PM (JCC:2454) OFFICE ASST. II: Processing of admssns applications; assmble file into finished prodt for committee review; typ letters, some form; label, mail appls & sch'l bulletin; answer phones, must be discreet because of admis'n decision & financ'l matters; computer inputting of appl data; QUALIFICATIONS: typ 50+; college bkground helpful in reading grade/college transcrips; checking appl credentials; assumes heavy pressure during admission peak periods; accuracy very imporant; must like detail; willingness to learn computer inputting; send appl/resume to Dena Landsman, Rm 113, Crown Quad, Law School; B09; $1130-1189.

24210-BP (JCC:2454) OFFICE ASST II: Prep partic-ipants' officials passes & credentials, sample boards for game operation for Football, Basketball, Track & all charge events for Minor Sports; prep ticket sellers' bags, charging out tickets & money, assigning genl admission tickets, etc. by price & color; process ticket applications on computer terminal (no programming) & balance sales to cash received on 10-key adding machine; sell tickets to faculty, staff, students, etc. over counter; QUALIFICATIONS: typ 40; knowl of basic acctg procedures & ability to use 10-key; prev exp on computer terminal helpful; prev exp in ticket sales; good verbal commu skills; able to work accurately w/ cash & prep ticket reports; send appl/resume to Bette Robertson, Ticket Manager, Athletic Dept, Stanford University.; B09; $1130-1189.

27409-BP (JCC:2454) OFFICE ASST II: Alphabetizes, checks in, & files various recommendation forms, transcripts, test scores, & corresp into applicants' folders; opening & distributing incoming & outgoing mail; xeroxing; simple proofreading, etc; able to follow instructions as established in credentials area; QUALIFICATIONS: accuracy highly important; respect for confidentiality required; judgment concerning hand-written names, plus work completed on both high sch'l & college transcripts is essential; send appl/resume to Helen Kmetovic, #236 Old Union Bldg, Stanford University.; B09; $1130-1189.

30966-PM (JCC:2454) OFFICE ASST II: Performs duties in Central Circulation Dept; conducts effective patron interview to determine eligibility for privileges; prov informa regarding loan privileges options; issues lib cards; prov genl informa; collects lib fees & charges for lost & overdue books; takes reservations for Gutenberg Express; oversees & keeps statistics; prep & maint Invalid Card List; prov genl clerical support to Loan Div & Central Circulation Dept; processes records using computer terminal as required; QUALIFICATIONS: typ 50; prev serv exp; good commu skills, both orally & in writing; ability to learn the use of automated sys; ability to learn a variety of offc procedures; prev clerical exp; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B09; $1130-1189.

36204-BP (JCC:2554) SECRETARY II: Prov sec'l support to Asst & Assoc Deans in Grad Studies & Research; schedule mtgs & make appts; make travel arrangements; prep Univ forms; type corresp & reports; filing; working on large mailings; answer phones; greet visitors; open/distribute mail; QUALIFICATIONS: typ 60; sec'l exp; accurate typing; knowl of English grammar & spelling; knowl or willingness to train on micro-computer type word processor; good interpersonal skills & ability to interact well w/ faculty, staff & students; exp relating to ethnic minorities; no smoking in work area; contact: Jacqueline Peterson, 497-2496.: B11; $1246-1310.

30554-BP (JCC:2562) SECRETARY III: Sec to Asst Dean for Development & Asst Development Officer of Sch'l of Humanities & Science; heavy contact w/ faculty & Univ offcrs, incl President & Provost as well as w/ donors & prospective donors; doing res on donors & prosp donors; editing rough drafts; composing responses to routine inquiries; prep expense reports; handling confidential mat'l in sensitive & mature manner; prov full range of sec'l services; QUALIFICATIONS: excel sec'l skills; accurate typing; proficiency in spelling, grammar, punctuation; familiarity w/ dictation equip't helpful; exp in drafting & editing; knwol of word processor or ability & willingness to learn quickly; Stanford bkground or exp in academic setting highly desirable; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305,; B14; $1440-1514.

29956-BP (JCC:2562) SECRETARY III: Prov sec'l serv to 2 Chemistry Professors; prep of manuscripts, proposals, corresp; prep grant proposals, develop proposal budgets, admininster res expenditures; maintain schedules; arrange travel; prep requisitions; monitor budgets & prep requisitions for grant accts; use of word processor; QUALIFICATIONS: typ 75; 3-5 yrs of sec'l exp; exp w/ acctg helpful; knowl of SU forms, procedures helpful; knowl of word processor helpful, but willingness to learn a must; good English skills; send appl/resume to D.M. Haskin, Chemistry Department, Mudd 121A.; B14; $1440-1514.

33310-PM (JCC:2588) SECY I-SPEC: 8-4:30; receptionist for Cardiology Div; channel incoming calls to Faculty dir lines & fellow offcs; page as nec; prov phone bkup on 3 lines for admin group & 2 lines for in-patient rep; receive, sort & distribute mail for Div; operate postage meter; typ & mail form letters relat-ing to fellowships; order supplies & maintain inventory; QUALIFICATIONS: typ 50-60; requires accurate typing; ability to typ fr dictaphone tapes; ability to follow instructions; pleasant phone manner, patience; familiarity w/ med terminology preferred; excel English skills nec; requires some editing; contact: Gale Pickering, 497-5635.; B10; $1189-1246.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Oct. 12, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

—Bargaining unit—

33233-PB (JCC:5778) LAB GLASSWARE WASHER: TMS Unit; pick up glassware daily; keeping tissue culture & biochemical glassware separate; machine wash biochemical glassware; keeping glassware for each lab separate; hand-wash large cylinders, homogenizers, plastic tubes & other items too delicate to be washed in machine; acid wash pipettes as needed; bring distilled water to labs as needed; clean large distilled water bottles; process tissue culture glassware according to written protocols which requires compulsive cleanliness; multiple rinses & sterlization procedures; QUALIFICATIONS: able to read & adhere to protocols; keep simple records; be conscientious; have manual dexterity; able to learn to operate dishwasher, autoclaves, etc; learn the principles of sterile tech; no prior exp required.; A11; $5.96.

17991-AW (JCC:6680) S&E TECH MECH: TMS Unit; 7:30-4pm; fabricate & install impedance matching coax connection for Ethernet Commu Net work & maintain same; install coax multipoint sys for SNA commu & maintain same; build & install Decnet commu peripherals enhancements using multiple cable & P.C. connections & equip't; install commu links using Telco standard termination codes, trunk cables & other standard commu protocol procedures & equip't; modify & repair CIT owned/built/leased modems to meet w/ CIT protocols; install links to Gandalf Paxc IV, 11/44, Memorex 1270's IBM 3704 & various other minicomputers; QUALIFICATIONS: skilled in soldering all forms of assorted cable termination proficient in use of hand tools, drill press & oscilloscopes; understand digital & analog transmission; familiar w/ RS-232 Telco color code, coax & network requirements.; A28; $8.88.

30965-PM (JCC:1747) LIBRARY SPEC I: Tue, Wed, Thur, 9-6; Fri, 8-5; Sat, 9-5; during intersession: Mon-Fri, 8-5; performs duties in Art Lib; staffs the circulation desk; pages books; answers informa'l & direct'l requests; enforces visitor & stack-use regulations; checks book bags; filing; shelving books; prep mat'ls for forwarding to bindery; checks in new books & periodicals; searches book catalogs, etc; QUALIFICATIONS: typ 40; atten to detail; good organizational & clerical skills; prev public serv exp required; reading knowl of a Western European lang desirable; contact: Bob Johnson, Green Library, Rm 223 (497-3152).; B10; $1189-1246.

131927-BP (JCC:2194) ACCOUNTING ASST I: Accurately, efficiently & independently prepare for recording & acknowlm't gifts received for Univ; serv as both a resource & as a reference to other resources for gift related inquiries; upon completion of training & as expertise develops, employee will become totally respon for independently performing all tasks accurately & w/in specified time frames; good promotional opportunities; QUALIFICATIONS: typ 35; accurate & rapid use of 10-key adding machine; understanding of/aptitude for genl acctg procedures; legible hand-writing; aptitude to handle large volumes of work under constant pressure; overtime often necessitated by workload fluctuation & monthly, fiscal & calendar yr-end deadlines; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford Univ.; B10; $1189-1246.

27408-BP (JCC:2446) OFFICE ASST I: Respon for receiving, opening & distributing incoming mail & for sorting outgoing mail into various categories; take outgoing mail to central mail room in same bldg 3 times a day; also helps to prep large outgoing mailings at various times throughout the yr; skills to alphabetize & file credentials for admissions applications; able to type labels w/ names & addresses accurately; respect for confidentiality required; send appl/resume to Helen M. Kmetovic, #236 Old Union, Stanford University.; B07; $1026-1078.

24655-BP (JCC:2596) SECY II-SPEC: 50%; 1-5; prov full range of sec'l serv; typ corresp & tech manuscripts fr longhand & transcription; answer phones; screen & route calls; maintain files; schedule mtgs for supvr; make extensive travel arrangements for supvr, visitors; initiate formalities of appts of foreign visitors; prep purchase requisitions, expense reports, & other forms; compose responses to routine corresp, etc; QUALIFICATIONS: typ 65-70; fast, accurate typing; exp'd tech typist; familiarity w/ SU forms desirable; proficient in English grammar & spelling for careful proofreading; well organized; send appl/resume to Evelyn Boughton, S.G. Mudd, Room 133.; B12; $655-687.

24128-TC (JCC:6810) SOC SCI RES ASST I: 50%; fixed term 11/1/82-8/31/83; Tue, Wed, 8-5; Thur 8-4; research asst to one prof. & the res staff of Social Ecology Lab, Dept of Psychiatry; administer questionnaires to res subjs & prep forms for computer analysis; collect & compile bibliographic mat'ls relevant to ongoing res projs & asst in prep of manuscripts; will make short, local trips in completing these duties; QUALIFICATIONS: BA in soc sci or human sci preferred; familiarity w/ scientific literature search & retrieval tech; exp in data collection w/ psychiatric patients; access to own transportation for short, local trips.; B12; $655-687.

Ph.D. oral exams

TUESDAY, OCTOBER 12

Hal B. Heaton, business, "Corporate Taxation and Leasing Presentation Outline," 2:15 p.m., GSB 243. **Philip M. Wala**, electrical engineering, "Amplitude Companded Sideband Modulation," 4:15 p.m., McCullough 128.

WEDNESDAY, OCTOBER 13

Philip Leslie Varghese, mechanical engineering, "Tunable Infrared Diode Laser Measurements of Spectral Parameters of CO and HCN," 2:15 p.m., Bldg. 540, Room 541.

THURSDAY, OCTOBER 14

Murray W. Hitzman, geology, "The Geology of the Cosmos Hills, Alaska and its Relationship to the Ruby Creek Copper Deposit," 2:15 p.m., 326, Geology Corner, Bldg. 320.

FRIDAY, OCTOBER 15

Manuel Figueroa, education and communication, "Methodological Explorations on Schooling and the Reproduction of the Social Division of Labor: A Case Study in Mexico City, Mexico," 2:15 p.m., e114 Education Bldg. (Cubberley). **Rebecca Mark**, English, 2:15 p.m., Bldg. One, Room 2N. **G. Jeffry Paton**, education, "Correlates of Successful College Fund Raising," 2:15 p.m., e5, Education Bldg. (Cubberley).

Carpools

Established carpool, Oakland to Stanford, Hours 9-6. Non-smokers. George Gianopoulos, 7-6856.

Carpool/rider, nonsmoker, SF to Stanford, 9-5, M-W, F. Call Paul Turner, 497-4275 or 497-3404, or David, 497-2727.

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Need rider from Los Gatos/Saratoga area arriving at Stanford 7:30 a.m., leaving 4:30 p.m. Call Gloria, 497-4970.

Want to join or form carpool from Sunset Dist., S.F. (near 19th Ave.) to Stanford, T-F, 9-5 or 6. Robert, 753-3860 or ext. 7-4116.

Schools victims of crisis of confidence in government, Weiler contends

"The problems of public education are in large measure not its own, but rather reflect a much wider problem that is endemic to modern societies in general and to this country in particular," says Prof. Hans Weiler of Stanford's Institute for Research on Educational Finance and Governance (IFG).

"The decline of public confidence in education is but a reflection of a much more encompassing and pervasive erosion of confidence in public authority and public institutions, and this general erosion may well 'spill over' into the realm of attitudes toward specific institutions which, like schools, are sponsored and sustained by public authority."

According to Weiler, scholars debate whether the level of cynicism should cause concern about basic support for the American political system.

The dramatic decline in people's trust in the government over the past 20 years seems to reflect a more general orientation toward the state and its institutions, he says, "one which is characterized not only by a conspicuous lack of confidence, but also by serious and increasing doubts as to whether the state is either willing or capable of adequately responding to the needs of society."

The principal finding from a number of opinion polls surveyed by Weiler in a study recently published by IFG is stark and simple. Americans trusting in their government declined consistently and dramatically from 58 percent in 1958 to 19 percent in 1978; those considered "cynical" toward government have increased from 11 percent to 51 percent of the population over the same period.

At the same time, people's confidence in education has shown a consistent decline. In the regular annual Gallup Poll, the American public has graded their schools on a scale from A through F in recent years, and the pattern is clear. Good grades had the advantage over bad grades in 1974 by 16 percentage points, but by 1981, bad grades outweighed good grades by 18 percentage points.

Since other measures of trust, confidence, and satisfaction at a personal and interpersonal level show little if any decline over the years, Weiler concludes that "dissatisfaction and loss of confidence are focused on the state and its institutions, and tend to reflect an increasingly skeptical and disillusioned citizenry in its perception of public authority."

Weiler, a professor of education and political science, is interested in the connection between public confidence in education and trust in public authority. Surveys indicate that concerns over education rank at or near the top in five western nations, and share first place with crime control in the U.S.

"After all," he says, "given the importance of education as the prime societal mechanism not only for the socialization of the young, but also for the allocation of social status and of the rewards that go with it, it seems reasonable to suggest that the state's involvement in sponsoring and sustaining public education is seen as a particularly crucial and central function."

In his research, which is supported by the Spencer Foundation, Weiler argues that public education may well be a particularly likely candidate for sharing the state's problems of credibility and legitimacy. Dissatisfaction with public education may be a reflection as well as a contributing factor to a broader crisis of confidence in public authority.



Hans Weiler

"To be sure, people, especially parents, are bound to be preoccupied over declining SAT scores and vandalism in schools; but the point is that even if SAT scores rose and the vandals started behaving themselves, it would be very unlikely to make much difference in the overall public assessment of the public education enterprise," concludes Weiler.

"It is just not conceivable that, at a time when cynicism about public authority is at an all-time high, and for all we know rising, as central and political an institution as education could bounce back to new heights—or even modest elevations—of public confidence and esteem."

Rental housing

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

HOUSING AVAILABLE

□ **Nov. '82 to Mar. 15 (flex):** SHARE half 4BR/2BA fully furn hse, incl linens, dishes, w/fac. cpl. Bike to campus. No smoking, no pets, child ok. $500/mo + util. Call 326-4316 (morn. or eve).

□ **NOW thru spring qtr.:** 4BR/2BA, den, patio raised bed garden, Mayfield area of Mt. View. 25 min. bike to Stanf., 15 min. by car. $1100/mo, unfurn. Call Barbara (415) 941-5151 or (415) 948-5342.

□ **NOW:** FREE rm & brd for resp female in exchnge for hsekeeping & very limited childcare of 2 elem. sch. age girls. Sep. furn rm. San Carlos w/breath-taking view of bay. Easy walk to Samtrans. Call Dave, (415) 859-5047 (day), (415) 593-2936 (eve, wknd).

□ **Jan. 1 to Sept. 15 '83 (flex):** Fully furn. 4BR/2BA spac. campus hse, view of hills. No pets. $1600/mo, incl. gardener. Call Peter Hammond, 494-0362, or 497-3987 (day).

□ **NOW:** TAHOE DONNER HSE RENTAL. 4BR/3BA hse w/hot tub. Overlook natl forest. Frpl, wd stove. $150/wknd, $375/wk. Call 497-6421 (day), 324-8559 (eve).

□ **NOW:** Woodside. Tranquil 5BR/4½BA hse. Furn. optional. Library, DR, 3 frpl, all appl. kitchen, indry. Pool, cabana, 5-horse barn. 15 min. to Stanf. Lease or lease option. Portola Valley schls. $3000/mo. Call (415) 851-2323.

□ **April thru Sept. '83:** Furn. 3BR/2BA hse in Palo Alto. Frpl, FR, all appl., swim pool w/solar heat, solar hot water. 1 min. to campus, on bus rte. Children fine, smoking not. Call Sladen, 858-0494.

□ **Jan. thru June or July '83:** Fully furn. 4BR/2BA hse, all appl., nr shops, bus, mid-twn Palo Alto. 1.5 mi. to campus. Nonsmokers, lease & dep. req. Lease of car poss. Call Robert Schreiber, 497-1923 (day) or 325-2709.

□ **Beg. Nov. 1 for 1 yr:** Atherton hse, 3BR/2BA, den, frpl, patio in rear yd. Unfurn., carpets, drapes, stove, frig. Call Wells Fargo, 855-7631.

□ **Beg. Oct. 11, '82:** Beautifully renovated 3BR hse to SHARE in old Palo Alto. Frpl., built-ins, fully equip. DR, prefer female, nonsmoker, Stanf. fac. or staff. Call Robbie Weinman, 855-2663 or 326-3497 (eve).

□ **Now:** Gracious Atherton hse. Unfurn, 2BR/2BA, lge LR, sep. DR, frpl., hardwood flrs. Spac. grounds, oaks & redwoods. $1750/mo, incl. pool maint. & gardener. Call 328-7721 (day), 328-2330 (eve).

HOUSING NEEDED

□ **Jan. & Feb. '83:** Single woman would like to hsesit for these 2 mo. Call 854-2658.

□ **Jan. to Mar. '83:** Visit Prof & wife seek 1 or 2 BR furn apt for hse within 1 mi. of campus. Homeowners, nonsmokers, local refs. Call (212) 260-8221, or write: R. Lipsey, 70 E. 10th St, #3A, NYC, 10003.

□ **Jan. to Mar. '83:** Retired cpl seeks furn. 1 or 2 BR apt., condo, or hse. on campus., Palo Alto, Menlo Pk. Close to shops, campus. Pkge deal to incl. car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Nov. & Dec. '82:** Faculty visitor seeks hsesit or pay modest rent. Dates flex. Will care for pets. Call 327-8160 after 7 pm.

□ **NOW:** Female grad. stud. seeks rm w/lite kitchen priv. for fall qtr., nonsmoker, neat. Finishing MA in Art Hist. $200 to $300/mo. Call Suzanne (415) 365-6274.

□ **Feb. 15 to July 1, '83:** Swedish Post-doc Fellow seeks furn. hse in Stanf. or Berkeley area. EXCHANGE hse in Lund, Sweden as of Jan. 15. Call (415) 851-2345 or write: Dr. Erik Wallin, Sparnogaton 14, 222, 52, Lund, Sweden.

□ **XMAS SEASON:** HSESIT. Fac. mbr Pa. prep sch. seeks hsesit opportunity Stanf. area during holiday break. Call Phil (415) 965-5404 (day) (415) 369-6130 (eve).

□ **Jan. to June '83:** Visit Prof & wife from Oxford, no children, seek 2 or 3 BR furn hse or apt. on or nr. campus. Call (415) 857-9263.

□ **HOUSESITTING:** Established prof. cpl. seeks long term hsesit position. Nonsmokers, no pets, no children, neat, quiet, local ref. avail. Call 326-6425, 328-5344.

□ **Nov. to Mar. '83:** Visit. prof, Chem. Dept., seeks 2-3BR furn. hse or apt on or nr campus. 3 children (10, 18, 20). Call Lydia, 497-3507 (day), or write: Prof. Th. Dorfmuller, Univ. of Bielefeld, Dept. of Chem., POB 8640, 4800 Bielefeld 1, West Germany.

□ **Beg. Oct. '82, long term:** Prof. woman, 34, full-time Stanf. empl., seeks unfurn. 1BR apt. or cottage. Very resp., quiet, neat, stable. No pets or children. Local refs. Call Julia, 497-3811 (day).

□ **Jan. '83 to Aug. '83:** Visit. prof, wife & 2 children (11, 8) seek 2-3BR furn. hse or apt. nr. good public sch., easy commute to Stanf. WILL SWAP 3BR/2BA hse on 2 acres! 10 min. to U. Mass. Amherst. 1 hr to Vermont ski slopes, 1½ hr to Boston. Call collect, John Collura, (413) 253-3287.

Health and safety report

Accidents and Injuries Occurring Sept. 17-30

Cause of accident or injury	Number of incidents	Days Lost
Impact with object	1	0
Other contact caused (crushed)	1	0
Exposure to chemical vapors	1	0
Insect bite	1	0
Lifting	3	10
Radiation exposure	1	0

During the past six months, nearly 70 percent of the accidents or injuries reported to the Department of Health & Safety were caused by impact with objects, falls from same level or height, contact with sharp objects, and improper lifting. A summary of these figures is shown in the table below.

Most Frequent Causes of Injury
January to June 1982

Cause	Number	Percent of All Types of Injuries Reported
Impact with object	28	12%
Fall from same level	21	9%
Fall from height	33	14%
Contact with sharp object	44	19%
Lifting improperly	34	15%
	160	69%

Most of these injuries can be traced to one of two things—unsafe conditions or unsafe acts.

Unsafe conditions can be eliminated through careful planning and periodic inspection of the work environment. If an accident occurs due to unsafe conditions, questions must be asked to determine what the unsafe condition was, and then appropriate action should be taken to correct the condition. For example, consider the four causes of injury mentioned in the paragraph above. Questions to ask with respect to related unsafe conditions might be:

* Are objects precariously placed on top of file cabinets, etc?
* Have the edges of metal shelves been taped or filed smooth?
* Are wet or waxed floors posted for employee safety?
* Do stairs have adequate lighting? Hand rails?
* Is the workspace uncluttered so as to allow proper lifting?

Unsafe acts can be prevented through training in the proper use of equipment and, on an individual level, through greater concentration on the task at hand. Again considering these frequent causes of injury, questions to ask regarding related unsafe acts might be:

* Was the employee reaching for something which was too high?
* Was the employee using a knife or sharp object properly?
* Was the employee's vision obstructed (i.e., by carrying something)?
* Was the employee using a ladder properly?
* Was proper lifting technique being used?

Only by asking questions like these about every accident can you find the actual causes and then take action to prevent similar ones in the future.

Preparedness Week shows how to cope with 'quake danger

Five free public programs are planned at Stanford during Earthquake Preparedness Week, sponsored by the Department of Public Safety Monday through Thursday, Oct. 11-14.

In addition, displays are planned from Wednesday, Oct. 6, through Friday, Oct. 22, in the lobby of Meyer Undergraduate Library and from 11 a.m. to 3 p.m. Monday through thursday, Oct. 11-14, on White Plaza.

Scheduled events Monday include a showing of the film "Earthquake Don'ts, and Do's" starring John Ritter, and a San Diego State University slide show on "Earthquake Safety" at noon in Room 282 of Tresidder Memorial Union.

"Earthquake Hazards in the San Francisco Bay Area" will be discussed by Prof. Robert Kovach, geophysics, at 7:30 p.m. Monday in Geology 320.

Blume Earthquake Engineering Center will hold an open house from 1 to 5 p.m. Tuesday, Oct. 12, in Building 540. Prof. Haresh C. Shah, civil engineering, co-director of the Blume Center, will discuss "Coping with Earthquakes" at 7:30 p.m. Tuesday in Geology 320.

Public Safety Director Marvin Herrington will talk on "Earthquake Preparedness at Stanford" at noon Wednesday and Thursday, Oct. 13-14, in the Meyer Library Forum Room.

In a letter to deans and department heads, President Donald Kennedy said: "It is important for us to maintain a good preparedness program, since the earthquake (danger) at Stanford becomes more severe as additional time elapses."

Kent Peterson, associate vice-president for business and finance, heads a new committee responsible for developing and implementing a program of earthquake preparedness. It includes representatives from the Hospital, SLAC, student residences, risk management, and the Provost's Office. Individuals from Public Safety, Health and Safety, and Facilities and Services also are involved.

Individuals seeking information on how they can prepare their households for possible earthquakes may call the Earthquake Safety hotline at (415) 329-1800.

'Career Faire' to be held on Friday, will feature 80 employers

Despite some indications of a sagging economy, more than 80 corporations, non-profit organizations, and government agencies will be sending representatives to the fifth annual Stanford Career Faire, on Friday, Oct. 8, in White Plaza.

"We changed the name this year (from Job Faire) for several reasons," said Deborah Duncan, assistant to the director of the Career Planning and Placement Center." 'Career Faire' reflects more accurately the focus of the day.

"It is intended to be an opportunity for students to talk informally with employer representatives about careers in a variety of organizations. We've also introduced five special tables at the faire this year—advertising, entrepreneurship, health, law, and the media. Panels at these booths will represent several organizations in career fields of considerable interest to Stanford students.

"And finally, we were concerned that some employers would be reluctant to attend a 'job faire' if their organization had no immediate openings to fill.

"We've been extremely pleased with the employers' response," noted Melinda Kaewert, supervisor of recruitment activities at the CPPC and coordinator of the program with Duncan. "We did lose some organizations that have come in the past, including a few banks and high-technology companies. But other recruiters tell us that they don't want to miss out on the Stanford faire, even if they don't now anticipate hiring in the near future."

There are more organizations interested in talking with liberal arts students at this year's faire: six of the Big Eight accounting firms will be represented, as well as the Bank of America, United Airlines, Apple Computer, and the Peace Corps.

The Alliance of Motion Picture and Television Producers (offering an assistant director's training program), Genentech, and the Environmental Intern Program should again attract a large number of students to their booths. And Atari is expected to be an especially popular newcomer to the faire.

Incoming Career Planning and Placement Center Director Christopher Shinkman noted that the program enjoys a reputation among college recruiters as being one of the best in the country.

"Continuing interest in Stanford students, even in a difficult economy, reflects the very considerable quality and energy of the student body. The Stanford Career Faire is an excellent way to kick off the CPPC's career-planning and recruiting year.

Showcase of what campus can offer

Information and entertainment are the themes of Harvest '82, a showcase of student and University organizations, from noon to midnight Friday, Oct. 15, on Stanford's campus.

The event, sponsored by the Associated Students, Tresidder, and the Office of Student Activities (OSA), is designed to introduce the Stanford community to the various programs and services offered by University and student groups.

The program features an informational faire in White Plaza from noon to 3 p.m. with booths in which organizations can display information and discuss their programs with members of the public.

Why banks offer less for more money

Wells Fargo Bank, located in Tresidder Memorial Union, still offers low cost checking services despite the recent discontinuance of the student checking account program. Effective Sept. 15, 1982, all student checking accounts at Wells Fargo were automatically converted to Special Checking Accounts.

This is part of a trend seen in banks across the country. In a comparison of 10 banks offering similar services in this area, only one had retained the student checking account program.

This discontinuance of the accounts is part of the move to higher fees and declining service in the banking industry. These changes have been brought on by inflation, increased competition and deregulation. Also contributing to the problem is the flight of money from banks to the high-paying money market funds. In order to make up for the loss of funds and increasing costs, banks have begun to charge more for their services.

If students want to keep service charges to a minimum they may want to use the Wells Fargo Express Stop more often to get cash, since this service offers a lower fee and 24-hour convenience.

Those with questions may contact the Wells Fargo Bank in Tresidder Union at 855-7601.

Eco, Gabbrigiani to speak this week

Elio Gabbugiani, the mayor of Florence, will talk on "P.C.I. and International Politics" at 3 p.m., Thursday, Oct. 7 at Casa Italiana. A question period and reception will follow.

Umberto Eco, a well-known author who publishes in English and Italian, will lecture on "Fish and Buttons: What is Semiotics About?" at 8 p.m., Wednesday, Oct. 6 in Room 2 of the History Corner. A reception will follow.

Both discussions are sponsored by Casa Italiana and the Italian Cultural Institute of San Francisco. Eco's lecture is also sponsored by several other Stanford organizations.

Contact Leda Mussio at 7-4185 for further information.

The way it was....

75 YEARS AGO (1907)

Encina men were asked to pay their room rents in cash only in order for the University to pay its employees' salaries, to whom checks would be of little value during the banking holiday declared by the Governor. Palo Alto and Mayfield banks were refusing to cash checks on outside institutions during the stringency of the New York money market. The interest offered in the large commercial centers was so high that money was being withdrawn from local banks and sent to the large cities.

Several members of the Stanford Faculty applied to purchase lots in the new town of Los Altos, with a view to building homes as soon as the interurban electric line could be extended from the campus, making a ten-minute service.

U.S. Vice-President Charles W. Fairbanks addressed the first student body assembly of the year. He was accompanied by Governor Gillett of California and U.S. Senator Flint. He did not discuss the political reasons which had brought him to the Coast but did praise Stanford for its recovery from the earthquake. The entire party took lunch at the Phi Gamma Delta fraternity house.

As a result of the trip to the Antipodes by President Jordan and Instructor P.J. Treat of the History Department, a large number of volumes dealing with Australia and New Zealand were donated to the University Library. Notable among the gifts were 600 volumes from Thomas Welton Stanford, 500 volumes from Herbert C. Hoover, '95, of London and 125 volumes from Deane P. Mitchell, '96, of Melbourne.

50 YEARS AGO (1932)

Registration decreased by nine percent from the previous year for which the Depression was blamed. Some universities on the Coast suffered greater decreases. Oregon State lost 29 percent. Oregon 18 percent. Washington 10 percent and Washington State 12 percent. Cal and UCLA experienced no decreases.

The Board of Athletic Control sold its 300 sheep to Theodore Hoover, dean of the School of Engineering, who had a sheep ranch on the coast. From then onward Stanford's athletic fields were to be clipped by lawn tractors in accordance with the machine age. The chief reason for the change was the illness of Billy McClintock, the Scottish ancient who had herded the University's sheep in Highland style for 30 years.

Revolting against what they termed the "empty phrases" of the two major political parties, a Stanford Norman Thomas for President Club was formed in accordance with Dr. Wilbur's expressed wish that students take an increased interest in politics. The cooperation of non-Socialists was welcomed. Track star Abe Hables organized a Hoover for President Club. No group had yet been formed to aid in the election of Governor Franklin Roosevelt. The results of a straw vote on campus were: President Hoover 828, Governor Roosevelt 251, Norman Thomas 216, Upshaw (Prohibition) 3, and Foster (Communist) 6.

25 YEARS AGO (1957)

1,157 members of the Class of 1961 entered the University and were described by President Wallace Sterling as the most selective class yet at Stanford.

Undergoing complete reorganization, the School of Mineral Sciences established five new departments—geology, geophysics, petroleum engineering, metallurgical engineering and mineral engineering. Dean of the School Charles F. Parks, Jr., named Ben M. Page to head the geology department.

On the recommendation of former President Herbert Hoover the name of the Hoover Institute and Library on War, Revolution and Peace was changed to the Hoover Institution on War, Revolution and Peace to emphasize the dynamic character of its work. About 73,000 persons had toured the building and its tower during the previous year. Among its recent acquisitions were the first documents from Peking released by the Chinese Communists, prints of German Foreign Office documents covering the years 1937-1945 and Palestinian Arab propaganda materials presented by the Mufti of Jerusalem.

Stanford Research Institute, using the Doppler effect, was leading the field of institutions in the U.S. in attempts to establish the orbit of the Russian satellite, "Sputnik." Stanford scientists were trying to get radio reflections from the satellite with the giant radar antenna in the hills behind the campus.

Catherine Peck
The Stanford Historical Society

I-Center films begin with Japan

The fifth year of the International Center's Other Cultures film series will begin tomorrow (Thursday, Oct. 7) with a showing of a six-part film series, "The Human Face of Japan."

The series on Japan, premiering in the Bay Area, shows the character of the nation through the lives of a few Japanese people.

Tomorrow night's films will be "Lifetime Employment," "Tomorrow and Yesterday," and "Raw Fish and Pickle."

"Lifetime Employment" examines the nature of industry in Japan through the life of a worker at a Mazda assembly plant.

"Tomorrow and Yesterday" contrasts tradition with the modern world as it affects child rearing, social relations and spiritual training.

"Raw Fish and Pickle" explores life in Iwate, a rural province, by examining the lives of the vice-Governor and a fisherman.

The remaining films, "The Career Escalator," "A Working Couple," and "The Rice Ladle," will be shown as part of next Thursday's (Oct. 14) program.

The Other Cultures films series is an ongoing weekly film program featuring informative and entertaining films on different aspects of the international community. Admission to all films is free, however, a 75 cent donation is requested at the door. Show time is 7:30 p.m.

For more information about the Other Cultures film series or any other program at the I-Center, call 497-2981.

Nigerian to speak I-Center lunch

Gafar Adamola Olaniyan, a Nigerian journalist, will be the featured speaker at the International Center's Tuesday Luncheon-Lecturer for October 12.

Olaniyan, the night editor for the Nigerian Herald in Ilorin, Nigeria, and a Professional Journalism Fellow at Stanford will speak on "The Legacy of Colonialism from an African Point of View."

Olaniyan's lecture will counterpoint Prof. David Abernethy's talk on the colonial legacy on October 5. Olaniyan's discussion will focus on the specific problems facing Africa in the post-colonial era.

Tickets for the luncheon are $2.50 and limited to 40. Sales begin one week prior to the event at the International Center. Brown baggers are welcome at no charge.

The Tuesday Luncheon-Lecturer series this quarter will concentrate on the effects of colonialism throughout the world.

For more information, phone the I-Center at 497-1831.

Staffers go aerobic

The Stanford Staffers will be led in aerobic dance by Barbara Frey of the Health Improvement Program (HIP) for their noon meeting on Wednesday, Oct. 13.

The Staffers organization and meetings are open to all Stanford members, male and female. Those who attend the Oct. 13 meeting should wear comfortable clothes.

Meeting place is at Tresidder Upper Deck or, in case of rain, the Chemical Engineering Gazebo.



U-Zulu Dance Theater performs the dances and music of South African peoples at 8 p.m. Saturday, Oct. 16, in Dinkelspiel Auditorium

U-Zulu Dance Theater to present master class, performance next week

The U-Zulu Dance Theater of South Africa will perform at 8 p.m. Saturday, Oct. 16, in Dinkelspiel Auditorium at Stanford.

Tickets for the event, which is sponsored by the Committee on Black Performing Arts, are on sale at the Tresidder ticket office. General admission is $7 in advance, $7.50 at the door; students and seniors $5 in advance and $5.50 at the door.

The troupe utilized traditional songs and dances from the Zulu, Xohaf, Shagaan, and Sohoto peoples to present a dance-drama about a young man's trek from his village to the teeming Johannesburg metropolis. The pride as well as the pain of black life in South Africa come alive through a series of powerful dances, moving songs, and vibrant rhythms.

The company consists of four men and three women, all of whom were born and raised in South Africa. They have been careful to maintain the authenticity of their presentation, so that the style of their dances is identical to that performed on ceremonial occasions in South Africa. The costume designs are representative of clothing worn by Zulu warriors over 400 years ago.

Master class

Members of the troupe will also conduct a master class at 9:30 a.m. Saturday, Oct. 16, in the Clubhouse (Old Union) on campus. They will teach traditional dance movements as well as the songs which usually accompany them.

Tickets for the master class alone are $3 and will be sold at registration which begins at 9 a.m. Combined master class and performance tickets are also available at $6 for students and $8 general.

For further information call 497-4317 or 497-3781.

Y gives overview of martial arts

"Self-Defense for Women: A Range of Options," is an evening of brief demonstrations of a variety of martial arts to be presented by the Stanford YWCA at 7:30 p.m., Tuesday, October 5, at Roble Gym dance studio.

Observers will have the opportunity to compare the special characteristics of such diverse self-defense strategies as aikido, karate, and judo.

The program is offered to the public free of charge, as a part of a series of programs for Rape Awareness Week.

Music Guild's "Learn To Listen" series begins

Enriching appreciation and understanding of music is the theme for the 1982-1983 "Learning To Listen" lecture series sponsored by the Music Guild at Stanford.

The series of four lectures by Stanford music professors will be held at 8 p.m. Tuesdays in Annenberg Auditorium on campus, starting Oct. 12.

Emeritus Prof. Wolfgang Kuhn will speak on "Creative Listening." A reception will follow.

"An Introduction to Mahler: Does Music Tell a Story?" will be the topic of Prof. George Houle on Oct. 19.

Prof. Albert Cohen will talk on "Spanish music in the Golden Age-16th Century" on Feb. 1. A reception will follow.

"Computers and Music: A Rich Interaction" will be discussed by Prof. John Chowning on Feb. 8.

The series is open to the public. Tickets will be available at the door or from The Music Guild at Stanford. Call (415)497-1780 for further information.

Lipset to chair roundtable talk on representation

Prof. Seymour Martin Lipset of Stanford University, senior fellow at the Hoover Institution, will chair an international roundtable of political scientists on "Does representation still work? Citizens, parliaments, and the state in Western democracies" at 4:15 p.m. Thursday, Oct. 14, in Annenberg Auditorium. Sponsored by Stanford's Committee on Western European Studies and the Center for Research in International Studies, the roundtable will include:

Klaus von Beyme of the University of Heidelberg (Germany), newly elected president of the International Political Science Association and a visiting professor at Stanford in 1978-79;

Dennis Kavanagh, chairman of the Department of Politics at the University of Nottingham (England) and an authority on parliamentary politics in Western Europe and the U.S.;

Johan Olsen of the University of Bergen (Norway), an expert on the organization of representation in government; Leo Panitch (Carlton University, Canada), a specialist on the politics of labor relations in Western democracies; and

Alan Wolfe (Queens College, C.U.N.Y.), author of "The Limits of Legitimacy: Political Contradictions of Contemporary Capitalism."

The panelists, together with some 20 other scholars from Western Europe and North America, will be on campus for a week-long workshop on "Representation and the State," which is chaired by Prof. Hans N. Weiler of Stanford and funded by a grant from the Volkswagen Foundation.

Roble Pool open

Roble Pool is open again, after its scheduled opening last week was postponed because the strike delayed necessary maintenance.

Pianist Bella Davidovich to play Haydn, Prokofiev, Chopin in season opener

Soviet-emigre pianist Bella Davidovich will open the Lively Arts at Stanford's 1982-83 season in the newly refurbished Memorial Auditorium at 8 p.m. Friday, October 15.

Davidovich's program will include: Haydn's "Sonata No. 21 in F Major, HOB. XVI/23" and "Sonata No. 7 in D Major, HOB. XVI/37"; Prokofiev's "Selections from Romeo and Juliet"; and Chopin's "Variations Brillantes in B Major, Op. 12," "Nocturne in E Major, Op. 62, No. 2," "Barcarolle in F sharp Major, Op. 60," "Three Mazurkas," and "Ballade No. 3 in A flat Major, Op. 47."

Davidovich emigrated from the Soviet Union to the U.S. in 1978, following her son's emigration to study at the Juilliard School in 1977.

Within one month after settling in New York with her mother, sister and son, violinist Dimitri Sitkovetsky, Davidovich set out on a European tour. The tour included concerts in Amsterdam, Sweden, Switzerland, and recitals in Antwerp and Munich.

In October, 1979, Davidovich made her recital debut at Carnegie Hall, which marked the beginning of her career in the U.S.

In the 1982-83 season, Davidovich will appear four times with the New York Philharmonic and with the Atlanta, Dallas, Toronto, Vancouver, and Vienna orchestras. She will make her debut with the National Symphony (Rostropovich conducting), the Los Angeles and the Berlin Philharmonic. In addition, she will perform with the Israel Philharmonic (Tennstedt conducting) and will also appear in recital at Carnegie Hall and in Berlin, Brussels, Paris, Stockholm and Amsterdam.

Born into a family of musicians in Baku, Russia, Davidovich showed her rich musical talent at the age of three and began formal training at the age of six. A child prodigy, she performed a Beethoven concerto at age nine and a Schumann concerto at age 11.

Davidovich entered the Moscow Conservatory at age 18 and studied with Professors Igumnov and Flier. Three years later, she won the first prize in the 1949 Chopin Competition in Warsaw (the last Russian to be so honored). Davidovich appeared with every major Russian conductor and performed as soloist with the Leningrad Philharmonic for 28 consecutive seasons.

Davidovich records exclusively for Philips Records. Her latest recording of Chopin's Four Ballades will be released sometime this fall.

Davidovich has recently been appointed to the faculty at the Juilliard School in New York City.

For ticket information call Tresidder Ticket Office, (415) 497-4317.



Bella Davidovich

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next Calendar deadline is Wed., Oct. 6 to cover the week of Mon., Oct. 18 through Sun., Oct. 24.

LATE ANNOUNCEMENTS

Fri., Oct. 8. Music Dept. Concert: Alma Trio & Guests. Andor Toth, violin; Gabor Rejto, cello; Adolph Baller, piano. Beethoven—Trio in D Major, op. 70, No. 1 "Ghost"; Kodaly—Duo for violin and cello, op. 7; Dvorak—Quintet in A Major, op. 81. 8 p.m. Dinkelspiel Aud. $4/$2.

Sat., Oct. 9. Music Dept. Master Class: Eric Hoover, flute, visiting from Arizona State Univ. 2 p.m. Annenberg Aud. Free. Music Dept. Concert: Flute recital by Eric Hoover. 8 p.m. Annenberg Aud. Free.

Sun., Oct. 10. Martin Stoner, violin, with Artis Wodehouse, piano. Vitali—Chaconne; Beethoven—Sonata No. 5 in F Major, op. 24, "Spring"; Brahms—Sonata No. 3 in D minor, op. 108. 2:30 p.m. Tresidder Lounge. Free.

Music Dept. Concert: Diana Peterson, flute, with Jeff Williams, piano. Works by Handel, Mozart, Hindemith, Damase, Bartok. 8 p.m. Tresidder Lounge. Free.

MONDAY, OCTOBER 11

Men's and Women's Cross Country: Stanford High School Invitational. 11 a.m. Stanford Golf Course.

Biological Sciences Dept. Seminar: "Natural Transplantations in Colonial Protochordates and the Evolution of Vertebrate Immunity" with Dr. Virginia Scofield, SUMC. 4 p.m. Herrin Lab, Room t175. Open to the public.

Fulbright Scholarship Deadline: Applications for graduate Fulbright grants are due at 4 p.m. at the Overseas Resource Center, 2nd floor, I-Center. For further information, please call 497-0856.

Numerical Analysis Seminars: "The Use of the Computer in the Asymptotic Expansions of Integrals" with Gerald Hedstrom, Lawrence Livermore Laboratory. 4:15 p.m. Math 380C.

Energy Policy Seminar: "Post-Reagan Energy Planning" by Denis Hayes, UC-Santa Cruz. 4:15 p.m. Skilling Aud. Public invited.

Stanford Film Society: "Four Hundred Blows." 7 p.m. Kresge Aud. $1.50.

Radioscience Seminars: "Acceleration of Particles at the Earth's Bow Shock" with Kinsey Anderson, UC-Berkeley. 4:15 p.m. McCullough 127.

TUESDAY, OCTOBER 12

I-Center Tuesday Lecture/Lunch Series: "The Legacy of Colonialism from an African Perspective" by Gafar Adamola Olaniyan, editor, *Nigerian Herald*. Noon. I-Center. $2.50 includes lunch. Brown baggers also welcome.

Fluid Mechanics Seminar: "Skin Friction Measurements with a Nonintensive Laser Interferameter" with Daryl Manson, NASA-Ames Research Center. 4:15 p.m. Skilling Aud.

Communications Design Seminar: "Amplitude Companded Sideband (ACSB) in Mobile Radio" with Philip Wala, S.U. 4:15 p.m. McCullough 128.

Music Guild "Learning to Listen" Lecture: "Creative Listening" by Prof. Wolfgang Kuhn, Music Dept. 8 p.m. Annenberg Aud. $4 general, $3 Music Guild members, $2 students and seniors.

WEDNESDAY, OCTOBER 13

CROW Women at the Top Lecture Series: By Margaret Burbidge, professor of astronomy, UC-San Diego. Noon. Terman Aud. Open to all.

UCCM Lunch Discussion: "The U.S. Economy and Third World Employment" with Dick Solis. Noon. Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata. Directed reading credit available.

Varsity Soccer: Vs. Santa Clara Univ. 2 p.m. Maloney Field.

Field Hockey: Vs. Chico State. 3 p.m. Roble Field.

Electronics in Medicine Seminar: "Biological Acoustic Microscopy" with John Hildebrand, Applied Physics Dept. 4:15 p.m. McCullough 134.

Colloquium of the Dept. of Chemical Engineering: "Fluidized Bed Pyrolysis of Bitumen Impregnated Sandstone" with Prof. F. V. Hanson, Univ. of Utah. 4:15 p.m. Chemical Engineering Conference Room.

Women's Volleyball: Vs. UC-Berkeley. 7:30 p.m. Maples Pavilion.

THURSDAY, OCTOBER 14

Western European Studies Symposium: "Does Representation Still Work?: Citizens and the State in Western Democracy." With speakers Klaus von Beime, Dennis Kavanagh, Alan Wolfe, Leo Panitch, Johan Olsen. Chairman is Seymour Martin Lipset. 4:15 p.m. Annenberg Aud. Public cordially invited.

Solid Mechanics Seminar: "Non-Specular Reflection from Layered Media" with Prof. David Bogy, UC-Berkeley. 4:15 p.m. Skilling Aud.

I-Center Other Cultures Film Series: More segments of "The Human Face of Japan." "The Career Escalator" features a student and a senior executive; "A Working Couple" shows the life of a clerk and his shopkeeper wife; "The Rice Ladle" contrasts traditional and contemporary women's roles. 7:30 p.m. I-Center. 75 cent donation at the door.

FRIDAY, OCTOBER 15

International Student I.D. Card Scholarship Deadline: Applications for travel grants for research projects or volunteer work in developing countries are due at the Overseas Resource Center on the 2nd floor of the I-Center. Undergraduate applications will be given preference. Further information at 497-0856.

Women's Golf: Vs. San Jose State and Sacramento State. Noon. Stanford Golf Course.

Biological Sciences Dept./Developmental Biology Training Program Special Seminar: "Immunocytochemical and Ultrastructural Studies of Nerve Fiber Formation in *vitro*" with Dr. Paul Letourneau, Univ. of Minnesota. Noon. Herrin Lab., Room T-175. Open to the public.

Applied Mathematics Lectures: "The zero dispersion limit of the KdV equation" by Prof. Stephanos Venakides, Mathematics Dept. 3:15 p.m. Room 380C (Math Corner Basement).

Materials Science & Engineering Dept. Colloquium: "Materials for Fluidized Bed Combustors" with Dr. J. Stringer, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Water Polo: Vs. Long Beach State. 3 p.m. deGuerre Pool.

The Lively Arts at Stanford: Bella Davidovich, piano. Haydn: Sonata No. 21 in F Major, Sonata No. 7 in D Major; Prokofiev: Selections from Romeo and Juliet; Chopin: Variations Brillantes in B Major, Op. 12, Nocturne in E Major, Op. 62, No. 2, Barcarolle in F sharp Major, Op. 60, Three Mazurkas; Ballade No. 3 in A flat Major, Op. 47. 8 p.m. Memorial Aud. $11.50, $10.50, $9.50, $8.50; students $3 off these prices.

STARTS Great Directors Film Series: "Days of Wrath" plus short, "Vampyr" by Danish director Carl Dreyer. 8 p.m. Geology Corner, Room 380. $3.75 general, $2.75 students. Reception follows sponsored by the Grad. Students Association.

Archaeological Institute of America Lecture: "Flint and Obsidian, Tools and Trade" by Curtis Runnels, S.U. 8:15 p.m. Room 370 (opposite the Physics Tank). Guests welcome. Refreshments. Please contribute to the housing and entertainment of our speakers.

SATURDAY, OCTOBER 16

Water Polo: Vs. USC. 11 a.m. deGuerre Pool.

Field Hockey: Vs. San Jose State. 11 a.m., 2:30 p.m. Roble Field.

Varsity Football: Vs. USC. 1:30 p.m. Stanford Stadium. Ticket information at 497-1021.

SUNDAY, OCTOBER 17

University Public Worship: Student Worship Service, 8:30 a.m.; Wendy Smith, assoc. dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.; Communion in Memorial Church Round Room, 6 p.m.

ASSU Sunday Flicks: "Cat People." 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

The Stanford Museum is closed until the strike is resolved. After that, there will be **Paul Harris—Still Life**. Through January 2.

The Stanford Art Gallery is also closed. After the strike is resolved, there will be **Venice in the 18th Century**. Paintings, drawings, prints and decorative arts. Through December 19.

The Map as Landscape. Familiar and new aspects of Western landscapes by Donna Van Dijk. Reception, Fri., Oct. 8, 5-7 p.m. Bechtel International Center. Month of October.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Thirty Miles from Stanford. Photographs by Paul Berger. Tresidder 2nd floor gallery. Month of October.

Paintings on Canvas by David Cusic. Coffee House Gallery. Month of October.

CAMPUS REPORT

Volume XV, Number 4 | A publication for Stanford University faculty & staff | October 13, 1982

420-100 vote ends longest campus strike

United Stanford Workers Saturday, Oct. 9, voted 420 to 100 to return to work, ending the longest strike in Stanford history.

The new three-year contract calls for wage and step increases totaling 24.5 percent, with a cost of living escalator in the third year.

Michael Baratz, executive secretary of Local 715, Service Employees International Union, AFL-CIO, said: "The vote was to return to work. The agreement is ratified.

"Nobody accepts this proposal in any sense of the word as fair or just.

"The University continued to bargain in bad faith, to lie, to not provide justification, to continue doing what they had done to the end.

"This was a vote to go back to work, nothing else. . .I'll be back Monday dealing with Stanford University again. We have a hospital election coming up, and we'll have to deal with the trash that gets put out there. We'll take that one on, too."

Stanford President Donald Kennedy said: "We're very happy to welcome the Stanford workers back and look positively toward the future."

More than 800 went on strike Sept. 10.

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Things were a little different for scores of bicyclers this week. As usual, they went through stop signs in droves, and Stanford police officers flagged them down for tickets.

Willow Road link sought to El Camino

The Stanford Board of Trustees Tuesday, Oct. 12, approved "in principle" an administration proposal to extend Willow Road across University lands from Arboretum Rd. to El Camino Real in Palo Alto.

William Massy, vice-president for business and finance, said that the Board approved a study of ways to finance and construct a two-lane road along the western edge of the Stanford Shopping Center.

The extension would be built by Stanford at its cost and would end at El Camino Real, Massy said.

Massy gave several reasons for the recommendation to the board.

"More than 5,000 cars a day are now using the Shopping Center parking lot as a through route to El Camino Real, and many others use campus roads such as Palm Drive, Galvez, and Arboretum. The situation that results is dangerous, inefficient, and burdensome. This is, of and by itself, sufficient reason to want to build the extension."

Council hears Kennedy on faculty outlook

"Uncapping" retirement poses a major threat to Stanford's very successful practice of appointing young faculty with good opportunities for tenure, President Donald Kennedy told the fall quarter meeting of the Academic Council Friday, Oct. 8. Nearly 200 attended.

If legislation removing the present practice of mandatory retirement at age 70 passes next year with no exemption for faculties, "every major research university in this country will have to undertake an agonizing review of its tenure policies," Kennedy warned. *(See text, p.8.)*

"The almost certain result will be the substitution of something else—likely a term contract—for appointments without limit of time.

"A grace period of seven or eight years, which seems a likely compromise, would allow us some opportunity for finding new ways of living with the situation while we continue to require retirement at age 70.

"But at best we will be significantly worse off. And even with no new legislation whatsoever, the effects of the age 70 rule and of economic stagnation will cause the average age of our faculty to continue to rise."

Reduced opportunities for junior level faculty is "a significant impediment to progress" in affirmative action, he noted. "Last year one third of the 68 new appointments to the Academic Council were women. In the School of Humanities and Sciences, nearly half the new appointments and more than half the promotions to tenure went to women.

"Overall, it was the most successful year in Stanford's history in increasing the number of tenured women and in appointing new women to the faculty. There is still much work to do, however; only 117 of Stanford's 1,270 Academic Council members are women, and only 48 of the 836 tenured faculty.

"Our success with ethnic minority groups was less encouraging; but still, 15 percent of the new total Academic Council appointments went to members of minority groups. The School of Humanities and Sciences had an especially strong record, with four new minority group faculty appointed.

During the past 10 years there has been an "imposing improvement" in the caliber of Stanford's faculty, Kennedy noted. Membership in the major academies has more than doubled since 1971.

Total Stanford faculty in The American Academy of Arts and Sciences

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CIR urges fewer proxy votes

To become more effective as an ethical investor, Stanford should be more selective in voting on stock proxy issues, the Commission on Investment Responsibility believes.

In a unanimous report to the Board of Trustees, the advisory group of faculty, students, staff and alumni makes these recommendations:

1) Trustees normally should not vote any shareholder proxy involving social issues;

2) The commission should consider allegations of substantial social injury resulting from corporate behavior only by majority vote;

3) After research, study and deliberation, any recommendations for action by the trustees should be made only by two-thirds vote of the commission, or eight of its 12 members; and

4) The recommendations may call for voting Stanford's shares, making representation to management, divestment, or any other action the commission regards as appropriate. *(See text, p. 15.)*

Last year, the commission recommended a one year moratorium on stock proxy votes, saying present practices are "too hurried and too limited to do justice to the issues involved." A majority said "as a method of influencing corporate behavior, the proxy process seems very weak indeed."

Prof. Alexander Dallin of the History Department headed the commission study during the one-year moratorium. The

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Nine receive Pew support

Nine humanities scholars at Stanford have received Pew Foundation grants for support at critical points in their work, Humanities and Sciences Dean Norman K. Wessells has announced.

Recipients and their scholarly interests are:

Arnold Davidson, philosophy, researching ways in which psychiatric diseases were classified in the 19th-century;

Lewis Spitz, history, continuing study of Luther and German humanism;

Arnold Rampersad, English, completing biography of Langston Hughes, a black American writer;

Gregory Freidin, Slavic languages and literatures, continue investigation of poetry of Osip Mandelstam;

Suzanne Lewis, art, study medieval in illustrations of biblical apocalypse manuscripts;

Stephen Ferruolo, history, study relationship of Pope Innocent III and St. Francis of Assisi;

Peter Stanksy, history, study English culture in World War II;

William Leben, linguistics, Study of Chadic intonation systems (involves tone levels); and

John Felstiner, English, study of poetry, in all different languages, that grew out of the Holocaust.

The grants, amounting to several thousand dollars each, were awarded by the School for projects to be conducted in the first nine months of calendar 1983. They may be used for such purposes as supplementing a sabbatical leave; supporting travel to a library, archive, museum, or other important center of learning; or providing other forms of research assistance needed by a faculty member after other funding sources have been exhausted.

The Pew Foundation grant to the School will support about 10 awards annually for the next five years. An advisory committee on the selection of recipients includes Profs. Michael Bratman, philosophy, Carl Degler, history, and Albert Elsen, art, with Profs. William Chace, English, and Albert Gelpi, English, serving ex officio. Chace is associate dean of humanities and sciences; Gelpi is associate dean of the Graduate Division. The next deadline for applications is May 1.

Susan Gould administers GSB program

Susan B. Gould, 45, secretary and treasurer of MJB Co., San Francisco, has been appointed administrative director of the Public Management Program at Stanford's Graduate School of Business, effective September 13.

She replaces Jan Orloff, who has joined Planned Parenthood International.

Gould, who received an MBA degree in public management from Stanford in 1977, joined MJB in 1980 as assistant treasurer. Prior to that, she was director of administration and development for the San Francisco Conservatory of Music from 1977 to 1980, where, among other things, she was instrumental in the Conservatory's sponsorship of fundraising events including the Bay Bridge Run and the "Sing-It-Yourself-Messiah," a popular sing-along of Handel.

Gould returned to studies at Stanford after raising three children. She was for eight years a member of the board of trustees of the Las Lomitas School District in Menlo Park, serving as board president for two of those eight years. She has been highly active in the League of Women Voters, serving on the board of directors of the League's Bay Area and South San Mateo chapters, and has operated her own publishing company.

In addition to her MBA degree, Gould holds a bachelor's degree in history from Connecticut College and a master's degree in history from Tufts University.

The Public Management Program established in 1971 as an option within the MBA program for students planning careers in government, not-for-profit organizations, and business-government relations.

Peter Coutts Hill condominiums

Stanford University is accepting applications now for rental of the new Peter Coutts Hill Condominiums.

Rental units will be available in December, 1982. Rental agreements, are month-to-month.

Preference in rentals will be given to members of the Stanford community (faculty, staff, students, etc.) and its affiliates. Families with children are welcome.

Floor plans of the various unit types and rental applications are available from the Peter Coutts Hills rental office, 138 Peter Coutts Circle, Stanford, Calif. 94305; (415) 493-1471.

The unfurnished average rents for the various types are as follows:

A-1	(2br/2ba)	$930
A-2	(2br/2ba/study)	$1,010
A-3	(2br/2ba/study)	$930 (handicapped unit)
B	(2br/2ba/study)	$985
C-1	(3br/3ba)	$1,095
C-2	(3br/3ba/study)	$1,200
D	(3br/3½ba/study)	$1,260

These are average monthly rents. The actual rent on any particular unit may vary slightly according to unit location. Additional rent of $50 per month will be charged for each unrelated adult in excess of one per unit.



Jon Cosovich

Cosovich to become Michigan V.P.

Jon C. Cosovich, 47, director of development for major gifts at Stanford University, will be recommended to the University of Michigan Board of Regents as vice-president for development and university relations, effective Jan. 1, 1983.

Michigan President Harold T. Shapiro, who will recommend the appointment, said Cosovich is "regarded as one of the nation's foremost academic development professionals."

Cosovich called Michigan "a magnificent public university with a great future."

One of six vice-presidents at Michigan, Cosovich will be responsible for public relations and fund raising, providing counsel to the president, the regents, and other segments of the university community.

He will succeed Michael Radock, who retired last year. Cosovich's appointment followed a national search by a faculty-staff-alumni committee headed by Dean Ara G. Paul of the U-M College of Pharmacy.

Cosovich received his Bachelor of Arts in political science from Stanford in 1957 and has been a staff member here since 1961. Since 1977, he has been director of development for major gifts, amounting to $25,000 or more, from living individuals, certain private foundations, and closely held corporations.

Cosovich is a member of the management committee for development at Stanford, a university which has ranked second only to Harvard among private institutions in gift support averaged over recent five-year intervals.

Cosovich married his Stanford classmate, the former Katharine Getchell of San Marino, Calif. They have three children: Charlie, a Stanford freshman; Peter, a high school student; and Sarah, a junior high school student.

Ten emeriti back in the classroom

Ten more emeritus professors have been recalled to active duty at Stanford during 1982-83, bringing the total for the current year to at least 27.

As approved by the Board of Trustees Oct. 12, those recalled include Marvin Chodorow, the Barbara Kendall Browning professor of applied physics and professor of electrical engineering; Jon Eisenson, professor of speech and hearing sciences recalled in the sophomore seminar program; Bert A. Gerow, professor of anthropology and anthropology curator.

Also: Arthur Giese, professor of biological sciences,, recalled in the sophomore seminar program; John D. Goheen, professor of philosophy; Frank G. Miller, professor of petroleum engineering.

Also: John L. Mothershead, professor of philosophy; Norman A.D. Parlee, professor of applied earth sciences; Philip H. Rhinelander, the Olive H. Palmer professor of humanities and professor of philosophy; and Arthur I. Samuel, adjunct professor of computer science.

Pick up parking stickers or else get tickets Oct. 19

Many Stanford faculty and staff members have not picked up their new parking stickers, according to Ramona Kelley of Police Services.

The office is open from 8 a.m. to 6 p.m. for pickup of stickers, and Kelley recommends that it be done soon, because citing of automobiles with outdated parking permits will resume Oct. 19.

Those who signed up for payroll deductions for parking stickers will find that no money has been taken out of their paychecks yet. The payroll deductions will begin in November, with a double payment coming out of the Nov. 22 paycheck: $12.50 for A stickers and $3.34 for C.

Carolyn Walker elected

Carolyn Walker, director of Stanford's Learning Assistance Center, has been elected to the board of directors of the Western College Reading Association. She will serve as chief financial officer for 1982-83.

The Association is a national professional organization for college and university learning centers.

CAMPUS REPORT
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Paul Goldstein sees new legal idea— 'right of publicity'

BY DONALD STOKES

A firm markets a sweatshirt blazoned with the image of Count Dracula, as played by a movie star who made the character famous.

The heirs of the now-deceased star sue, claiming breach of the star's rights in his likeness.

Nonsense, says the defending lawyer.

Pay up, say the heirs.

This is an example of an issue that is arising with increasing regularity in the law. It concerns a right that is only just beginning to take shape in the minds of lawyers and of those in the entertainment and merchandising industries.

Prof. Paul Goldstein, of Stanford Law School, regarded as a leading academic in the field of intellectual property, is now at work on this newest addition to the field, called "the right of publicity."

Goldstein is 39, has a neatly barbered beard, and blue piercing eyes that make him look like the good guy in a prime-time courtroom drama.

The issue, says Goldstein, boils down to this:

Should people who have made reputations by doing something remarkable, or becoming known by playing certain roles, or by being in the public eye for any reason, have the right to protect themselves against those who wish to capitalize on their publicity value?

He gave various examples:

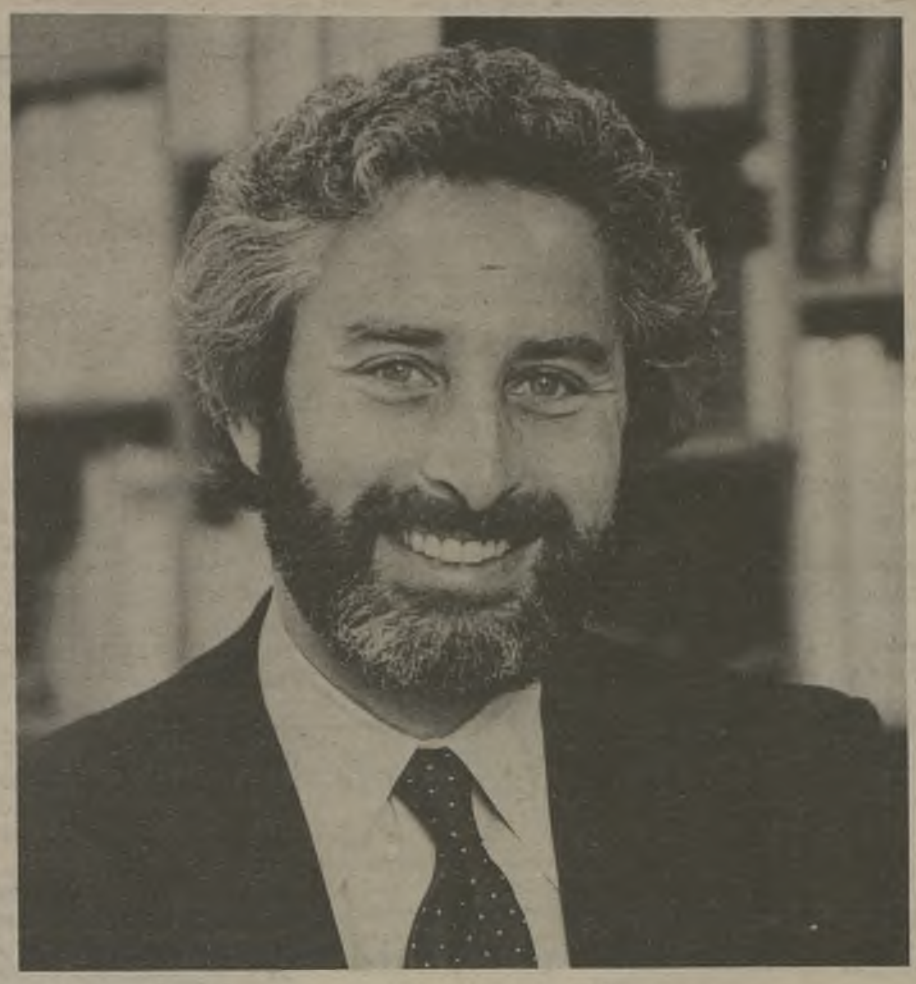
"Recently there was a Supreme Court case involving the videotaping, without his permission, of a circus performer, 'The Great Zacchini,' being shot out of a cannon. Several cases involved the marketing of Elvis Presley memorabilia, and another was the case of a group that acted in a take-off of some Marx Brothers routines.

"It is hard to find a doctrinal thread running through all these, but in essence they all concern rights in publicity.

"Other possible examples range from the astronauts' right to sell their story of their experiences in space, to convicted Watergate criminals—and indeed, other criminals—who have a special vantage-point in an event of great public interest, and want to capitalize on it.

"We are on the threshold of a new area of intellectual property law. It will be interesting to watch it develop, and I plan to pay considerable attention to it.

"While courts speak loosely of a 'right to publicity,' there is really no such right at all, only a congeries of traditional doctrines—trademark, copyright, privacy—that can variously be used to protect publicity values."



We are on the threshold of a new area of intellectual property law. It will be interesting to watch it develop, and I plan to pay considerable attention to it.

—Paul Goldstein

Goldstein gave various examples of how the law had tried to fit these new values into existing doctrines. A famous football player, Wisconsin's "Crazylegs" Hirsch, sued a company that put out a shaving gel called "Crazylegs." The court held for Hirsch, both on privacy and trade name grounds, even though the two theories are often at cross-purposes.

The intellectual property that might be claimed could relate to whatever about an individual had become famous—it might be his personality, his deeds, or even his property. One dispute concerned a media commercial depicting a car that a celebrated racing driver had made famous; the driver sued and won.

"Bert Lahr once sued for an imitator's use of his distinctive manner of speech in a television commercial.

"Intellectually, the excitement for me is in seeing new values emerging, and watching how the law absorbs these new values and rationalizes them," said Goldstein. "The economic interests at stake are enormous, as are the public policy implications."

Goldstein teaches a basic course on Intellectual Property Law. He has written a book, *Copyright, Patent, Trademark and Related State Doctrines* (Foundation Press, 1981) that is widely considered the leading text in the field. He has also published a service of articles that represents a comprehensive treatment of major themes in copyright law.

He is also very interested in the ways in which the new technologies intersect with copyright. "I focus specifically on the positive aspects in this interplay," he said. "Much of the writing about this in recent years has been on the negative side, for example on how photocopying is infringing on authors' copyrights. I prefer to look at the ways in which technological and institutional innovation can preserve authors' rights.

"We hear it said that free photocopying will destroy the copyright system, and that home videotaping is going to destroy the motion picture industry. I think that these claims are essentially correct, and that new techniques are needed to control these newly dispersed uses of copyrighted materials.

"The real problem with controlling dispersed uses is transaction costs. The present concern on the part of researchers who photocopy articles in their work is that it would take so long to negotiate permission from copyright owners that is simply not feasible. Very few people would object to paying a few cents for the right to include copyrighted material in their own work.

"Congress and the courts have been reluctant to bar photocopying. The thought is that if everybody had to negotiate in the present way for copyright clearance, the world of photocopying and to some extent that of research, would come to a halt. It would be far too time-consuming. It would mean correspondence, phone calls and executing letters of permission, perhaps on a massive scale.

"Now, however, the technology exists for swift and efficient means for negotiating clearance. For example, a fairly simple, computer-based copying system could be devised in which copyright holders tell the system either how much they wish to charge for copying each of their titles, or give their phone number if they want to haggle over the price.

"The researcher would summon up the title at his or her keyboard and, if wishing to make a copy, would do so at the indicated price, or would telephone the copyright negotiator to negotiate the price. The system would then make the copy and administer the billing and payments.

"Institutional innovations, like copyright clearinghouses, are also possible. ASCAP has been operating as a clearinghouse for musical copyrights for more than half a century. Also the Copyright Clearance Center has recently been set up to facilitate licensed copying from technical journals."

Goldstein is interested in proposals being made for a public lending right which would enable authors to secure a royalty every time one of their books is borrowed at a public library.

"It is a fine idea, for it would mean that for the first time in this country authors would be compensated in proportion to the use of their work," said Goldstein.

"All the system would need would be a simple coding method for the transaction to be recorded and for both publisher and author to receive appropriate shares.

"Under the present system, publishers get little information about which books lent by libraries are the most popular. This proposed system would enable publishers to keep in touch much more closely with the interests of the borrowing public. It would be an enormous aid to authors and publishers."

An interviewer asked whether this was not a recipe for encouraging still more the trendy and shallow type of best-sellers.

"That is a separate issue," Goldstein replied. "I understand the concern about the quality of what the American public reads. Yet historically—and properly—the solution in this country is not to tamper with the mechanism for supplying books. It would be far preferable to alter demand, most probably by upgrading the public education system."

Goldstein is also an expert in real property law. He teaches an introductory course on property, and also an advanced course in real estate transactions. He published a book called *Real Estate Transactions, Cases on Materials on Land Transfer, Development and Finance* (Foundation Press, 1980). He is completing a textbook for the introductory course.

Goldstein spends a good deal of time in class

continued on next page

Strike...

continued from page 1

Tentative agreement was reached early Friday, following more than 18 hours negotiation with federal mediator Dorothy Christiansen. The bargaining unit totals 1,350. By Friday, about 37 percent of the bargaining unit was working. The union sought increases totaling more than 24 percent in a two-year contract.

The new contract calls for across-the-board increases of 7 percent, retroactive to Sept. 1, in the first year, with additional across-the-board increases of five percent in both the second and third years.

In addition, it creates a new fourth step, with increases of three percent in the first year and two percent in the second year, and adds a fifth step, with an increase of two and a half percent in the third year.

The principal effect of these provisions will be that longer service employees will receive more money earlier than would have been the case with the University's final offer Sept. 7.

Under the terms of the new agreement, the combination of normal step increases, across-the-board increases, and new fourth and fifth steps in the wage structure would result in bargaining unit employees receiving increases totaling 10 to 12 percent in the first year, 7 to 10 percent in the second year, and 7.5 to 10 percent in the third year.

In addition, the University agreed to pay $5 more per month toward medical insurance for dependents, effective Jan. 1, 1983, and to a cost of living adjustment of up to 25 cents per hour in the third year of the contract, if the consumer price index for urban wage earners and clerical employees rises more than 20 percent.

Raises of 10 percent

At present, 85 percent of the bargaining unit is at step three of the wage range. During the first year of the contract, they will receive increases totaling 10 percent. This includes seven percent retroactive to Sept. 1 for all time actually worked and three percent after they complete their first year on step three.

Those on the first and second steps of the range will receive increases totaling 12 percent in the first year. This includes the seven percent increase across-the-board and a five percent step increase when they become eligible for the next step in their range during the year.

In the second year of the contract, bargaining unit members would receive increases of seven to 10 percent. This includes five percent across-the-board, plus an additional two percent for those in the fourth step or an additional five percent for those progressing to the second, third, or fourth step in the year.

In the third year, the increases would range from seven and a half percent to 10 percent. This total includes five percent across the board, plus two and a half percent for those moving into the fifth step and a regular five percent step increase for those moving into the second, third, or fourth step.

Employee paychecks Oct. 22 will reflect the across the board increase and, where appropriate, the new step increase.

Retroactive pay, covering increases for all work performed since Sept. 1, will be included in paychecks Nov. 7.

Further discussion

Priscilla Wheeler, the University's chief negotiator, said Sunday, Oct. 10, she was prepared to meet with Paul Supton, the union's attorney, to discuss possible disposition of charges filed by both sides earlier with the National Labor Relations Board.

The union contended the strike was based on an unfair labor practice, the University's refusal to disclose detailed information concerning temporary and contract work. On Tuesday, Oct. 5, a USW leaflet agreed to a University proposal to deal with this issue in a sideletter.

"Our proposal is made based on our understanding, expressed by management, that their intent is to have discussion in good faith regarding the union's concerns about work preservation," the leaflet said. "It is clear to us that Stanford will not comply with the NLRB order and it will be many months before the court will require Stanford to turn the information over."

The University had filed two unfair labor practice charges against the union for its failure to notify the Federal Mediation and Conciliation Service of the contract dispute and for the union's failure to provide proper notification to FMCS in advance of striking a health care facility.

At least 24 persons were arrested in a variety of picket line incidents during the strike. Wheeler said resolution of these cases is "in the hands of the district attorney" and outside the scope of the agreement. "The union said it could not condone violence; neither can the University," she said.

She said both sides agreed all workers should return to their jobs. The University has 30 days to decide whether individual workers should be subject to discipline for any acts of vandalism, violence, or other gross misconduct during the strike.

Any resulting grievances would be subject to arbitration under a new, expedited process in the new agreement, she said. "Neither the union nor the University intends any retaliation for participating or not participating in the strike."

Summary of changes in USW agreement

Following is a brief summary of the principal changes, except for wages, made in the new agreement between United Stanford Workers and the University:

Grievances

Permanent umpire will hear job classification grievances and other grievances mutually agreed to. Hearings will be scheduled more quickly. All discharge and permanent layoff grievances have priority. Layoff grievances must be filed within 35 days of receipt of layoff notice.

Vacations

Employees 60 and older who have 10 years or more service may accumulate 60 days of vacation. At retirement, worker may take terminal vacation or a lump-sum payment.

If University alters worker's vacation schedule (which can only be done for operational needs), the worker may request a meeting with the supervisor and have a steward present.

Early vacation payment may be requested only twice in a calendar year.

Discipline

Worker may have steward present during the investigatory interview that precedes decision to discipline worker.

Written warnings and reprimands cannot be used against a worker after 18 months of satisfactory performance (formerly two years).

Personal Time Off

Up to 8 hours of personal time may be taken in one month. Maximum personal time off in any two-month period is also 8 hours. Personal time off is still limited to 24 hours per year.

Retirement

Employee has option of working beyond normal retirement age of 65. Revised to reflect changes in federal law.

Insurance

Replace death benefit gratuity with group life insurance effective 12/1/82. Worker may purchase insurance for one, two, or three times annual salary. Otherwise, employee is provided $5,000 insurance at no cost.

Effective 1/1/83, the University will contribute an additional $5 per month toward dependent coverage on medical insurance.

Layoffs and Reductions

Workers reduced to below 75 percent time (who previously worked 75 percent to 100 percent) may choose to be permanently laid off or remain employed on reduced time. If worker is re-employed in the same reduced-time position after electing to be laid off, all severance must be repaid to University.

University and union will attempt to identify alternate work that could be performed without training by workers on temporary layoff.

For certain categories of workers, seniority governs the order of layoff if skill and ability are *relatively* equal. For other categories of highly skilled jobs, seniority is only considered when skill and ability are *substantially* equal.

Hiring Preferences

For certain categories of workers, those on layoff are given preference for positions over transfer and other candidates if they are *qualified*. For the more highly skilled including most research jobs, those on layoff are given preference if qualified, unless another applicant for the position is better qualified. In both cases, a worker may refuse two job offers before losing layoff preference.

Candidates for promotion or transfer are given preference if qualified, unless another applicant is better qualified.

The University will encourage posting of vacancies within operational units in which vacancies occur.

New Committee

The Committee for Union-University Concerns (CUUC), is established to consider issues of mutual interest and concern, including safety, affirmative action, and training.

How the Three Positions Compare

First Year

Agreement	Union	University
7.0 wage increase	10.25 wage increase	9.5 wage increase
3.0 new step four	no new step	no new step
University pays $5/month more toward medical coverage of dependents 1/1/83	1.0 benefit increase	no benefit increase

Second Year

Agreement	Union	University
5.0 wage increase	5.0 wage increase	5.0 wage increase
2.0 add step four	5.0 new step four	2.5 new step four
no benefit increase*	2.0 benefit increase	no benefit increase*
no range reallocation	3.0 range reallocation	no range reallocation

Third Year

Agreement	Union	University
5.0 wage increase	No third year	5.0 wage increase
2.5 new step five	2.5 add step four	
Cost/living max. 25 cents/hr.	Cost/living max. 15 cents/hr.	

*Under present contract provisions, which would continue, University will offer union any benefit improvement offered non-unit workers in benefit plans which are common to both.

Goldstein/continued from page 3

dealing with the highly topical issue of financing real estate transactions. At a time when prices for residential real estate are high, and finding funds for purchase is difficult, Goldstein runs over various methods of broker-engineered "creative financing."

"What many people think of as new ideas in financing residential property, such as 'wrap-arounds,' have been a part of commercial real estate financing for many years," he said.

"It is interesting to watch the gradual infiltration of commercial finance techniques into residential transactions. For example, it was regarded as a marvelous innovation when equity sharing was suggested. This is the sharing of property between a homeowner and a financial institution, and in its appreciation, if any, when sold, or after a specified period.

"In fact, equity sharing had been around for years in commercial ventures such as shopping center developments.

"I think it would be far more creative to see real estate techniques introduced into more removed areas, such as aiding the formation of human capital through the financing of college and professional educations."

* * * *

Goldstein was reared in Mount Vernon and Scarsdale, suburbs of New York City. He went to Columbia Law School on the advice of his honors adviser at Brandeis. He had planned to do graduate work in history, but his adviser's comment on this idea was, "The best Egyptologist I know spent a year at law school—why don't you?"

He followed this advice, and enjoyed law so much that he decided on it as a career, and that he would teach it. This he did at the State University of New York at Buffalo, where he stayed for five years before coming to Stanford as a visiting professor in 1972-73.

He spent a further two years at Buffalo as full professor and then joined the faculty at Stanford Law School as professor in 1975.

His wife, Jan Thompson, is also an academic. She is an art historian teaching at the University of Santa Clara.—**Donald Stokes**

Electron beam lithography: the cutting edge in electronics

The new machine may be EE's major investment



Scientists wear protective "bunny suits" at the electron beam system at the Center for Integrated Systems.

"Possibly for the first time we have a facility as advanced as any in industry," says Prof. Fabian Pease about Stanford's new $2 million state-of-the-art electron beam lithography system.

It may constitute the largest single purchase by the Electrical Engineering Department ever.

The machine will be the technical cornerstone for research work done at Stanford's new Center for Integrated Systems (C.I.S.) a unique cooperative venture between the University and industry.

The lithography system will help build ever more densely-packed integrated circuits—more circuits on a chip.

"In the old days manufacturers brought separate electronic components together and wired them up," explains Pease. "Each wire was put in individually at the cost of about $1 a wire."

People soon realized that circuits could be made much faster and cheaper by depositing a thin film of metal and other materials and then engraving them to define individual components and wires in one quick step.

Engraving is achieved using a light-sensitive polymer (photo-resist) covering the surface of the film. Where the photo-resist is exposed to intense light it either makes or breaks chemical bonds and desired areas of the polymer can be dissolved away. The film is then dipped in acid which etches the metal parts away in the areas where the photo-resist has been removed.

Unfortunately nature imposes a lower limit on the size of structures which can be patterned with this technique. The limit is roughly the same size as the wavelength of light—about half a micron (there are a thousand microns in a millimeter).

Like a TV beam

An alternative is to use an electron beam instead of light to pattern the resist. With electrons much tinier structures can be defined "for the same reasons that an electron microscope is superior to a light microscope.

"To build up the electron pattern you build it up point by point as does the beam in a TV set."

This is very convenient for controlling with a computer, Pease says, but is very slow.

"A three-inch wafer can take 20-30 minutes to pattern (with an electron beam) while it would take less than a minute with photolithography."

One question which Pease and his students are trying to answer is: "Can you speed up the beam?" There are several ways to do this. One approach taken by researchers at Bell Laboratories and in Japan, is to develop more sensitive polymers which will respond faster to the beam. Unfortunately, as you make the resist more sensitive you lose the ability to define really tiny structures with it, so ultimately you strike a compromise between the two.

The emphasis at Stanford has been on the electron beam itself. Pease's funding comes generally from Defense Advanced Research Projects Agency (DARPA) and the National Science Foundation.

"One alternative is to get more current into the beam, but there is a limit on the electron sources and on the mutual electron repulsion"—the negatively charged electrons repel each other.



Fabian Pease

One project, just begun, uses a matrix of beams (up to 8 by 8). Controlling such a beam is difficult, but micromachining techniques developed by a team led by James Angell should make it possible.

Another technique focuses the beams in a way that permits the researchers to slow them down. The slower electrons are more effective in exposing resist and the exposure process can be speeded up.

Pease says another problem that must be tackled is the function of very tiny circuits. "Transistors made with sub-micron features behave in ways which are only beginning to be understood," he says.

Superconductors

The shortcomings of the sub-micron "wires" may be even more serious.

"A tenth of a micron wires wouldn't work—we may have to cool the chips with liquid nitrogen. . . ." he says. At those temperatures (-196 Celsius or -321 Fahrenheit) electrical resistance essentially disappears.

This difficulty with the wires may lead to a totally new design of chip as the operating speed will be controlled by the time a signal takes to travel along a wire.

"Traditionally, chip architecture was based on minimizing the number of gates (transistors), not minimizing the number of wires," he says. Now the situation is reversed.

Pease speculates that what is needed is an architecture in which one part of a circuit only talks to its neighbor.

"One possibility is to exploit the third dimension and make taller chips."

At present the system sits in a room in the basement of the McCullough building in a strictly controlled environment. The temperature has to be held constant to within a tenth of a degree Celsius or thermal expansions and contractions would blur the patterns made.

The room must also be dust free and the people working in the room have to wear cover-all "bunny suits" to keep them from contaminating the work.

Pease believes the purchase of the system will open research into a far wider choice of approaches to solving the problems of shrinking electronics. The machine will also keep Stanford researchers at the cutting edge of this technology, an investment worth the money, he thinks.—**Simon Bending**

No shortcuts in college education—Fred Hargadon

Most college guidebooks "tend to treat both students and institutions as fixed objects, when the very point of college education is change," says Stanford Admissions Dean Fred Hargadon, national chairman of the College Board.

Having worked both at Swarthmore and Stanford, Hargadon says "colleges don't have a single academic milieu, and don't have a single social milieu; they have several," changing even during students' four years there.

Guidebooks and ratings based on a handful of anonymous personal opinions may reinforce the notion that students should go to college with students just like themselves, rather than institutions where they will find people of more diverse backgrounds.

Guidebooks "reinforce the wrong notion that college is something you go to and passively receive whatever it is they give, instead of actively pursuing the resources they have to offer," he adds.

Hargadon emphasizes that there are no shortcuts when it comes to selecting colleges to apply to or obtaining admission to any of them, despite the money people spend on popular treatments of both.

"There is no substitute for both hard work and planning, which should begin much earlier than the senior year of high school," he declares. Peterson's Guide, Cass and Birnbaum, and the College Board Handbook serve as useful guides for basic information.

"The problem with students in selecting college is that they don't do the homework," he adds. "I think it makes far more sense to read our 135-page bulletin about Stanford rather than a two-page writeup anywhere, whether it's glowing or not. At least you know who wrote it."

About nine percent of this year's freshman class at Stanford is black and about nine percent Chicano, compared to about seven percent for each group last year. Hargadon says: "I think they tend to come here after thoroughly reviewing factual information we provide.

Unlike many Eastern universities, Stanford had record numbers of minority applications, admissions, and enrollments in its freshman class (141 blacks and 137 chicanos in a class of 1,617). Stanford remains one of the few institutions nationally to admit students without regard to financial need.

Letters to the editor

Cohn takes Kennedy to task: the 'home truths' are being lost to gimmickry

Editor, *Campus Report*:

"What Darwin had accomplished, for once and for all, was the demonstration that a single way of knowing was no longer possible." "There is not one single objectively verifiable world: there is, rather, the cat's world, the bird's world" (Donald Kennedy, "Speech to the University of Oregon," published in the Oct. 6 *Campus Report*).

One could conceivably dismiss these remarks as expressions of "Donald Kennedy's world," which has no bearing on anyone else's. But precisely I do not agree with him on this point and since he is supposed to be our intellectual leader I take his remarks seriously and will try to show why he is wrong.

This sort of relativism did not originate with Darwin or our era but goes back to the Sophists, whom Socrates deplored and fought (we may yet have to resort to lacing our Dr. Pepper with hemlock). Nor do our *very* best modern thinkers succumb to this feckless pluralism: Einstein himself declared that "Science without religion is lame."

Mallarme, whom Edmund Wilson and Hugh Kenner and even Sartre have compared to Einstein for pivotal importance, told a young poet who was tinkering *scientifically* with his art, "You can't do without Eden." Camus has spoken similarly of the "hidden sun" and the "sacred" which are indispensable, as he learned from Hitler and Stalin, to avoid mass suicide and murder.

Clearly, then, there is something gravely amiss with the following concluding statement: "That unity (of humanities and science) is the brightest and most exciting academic vision we could possibly have."

A modest example of what is lacking in this vision is provided by the byzantine development which has all but wrecked the study of literature in our time, through precisely a tinkering over-scientization. Again, some of our finest thinkers warned against this trend and went unheeded: Lionel Trilling, Harry Levin, Rene Wellek and our own Richard Lyman.

Mind you, it is not a question of reversing the movement of reasoning in the humanities (even very rigorously), which began, say, with Descartes and his project for a universal grammar.

Mallarme himself has led strongly in this direction. But he didn't stop there, unlike those swarms of sorcerer's apprentices who always take over and run hog wild in time. In these circumstances, one has to "go to the top man" and think things through with an ever-heavier challenge and ultimate responsibility commensurate with the "excitement."

In Nazi Germany, in My Lai, in Beirut, there was no substitute for deep instinct, belief, faith. Computers, even at Stanford, cannot make our moral decisions for us. If the pressures are increased by phenomena we have discovered, such as "range compression," we also have discovered, thank heaven, that there are stalwart souls who can always resist those pressures. That used to be called "spiritual strength" and has nothing to do with the marriage of science and the humanities, desirable though that may be for all sorts of reasons (as well as dangerous, as Dante surely knew). The spiritually weak may always be very numerous, as in the time of Hitler and, alas, our own, but in this matter of moral truth, quantity is far from being the essence. Precisely in such crises we need a clairvoyant few in high or low places.

Obviously, instinct can err, and it is not a question of knowing *the* truth but then neither is it a question of throwing it out, giving up on it! That is a subtle but all-important point: the great thinkers I mentioned all kept striving toward an elusive distant "star" of meaning which they could not see—could "glimpse," at most, as Bellow said in his Nobel speech—but knew was "out there."

That, they were aware, was the *sine qua non* of their humanity, which is not the same thing as a "cat's world" or a "bird's world." And as one of my best students put it to me a few days ago, we really do *know* far more than we can articulate in this respect; he cited a passage from the *Divine Comedy* in which two people in purgatory touch, like ants' antennae, with a secret understanding. Yes, we do rendezvous in space-time, *sub specie aeternitatis*, and *know* without saying anything, at times.

A humane leader of a great university owes it to us to remind us of these home truths occasionally, especially in an era of peril and severe disorientation.

How did we come to this pass? At one time in this country our universities, stemming from religious movements, had a core of belief in the "higher things," the "ideal." Often the prexies were sons of ministers, diverging from strict dogma to a culturally-interesting extent. But at some juncture they went a step too far toward pluralism, "do your own thing," modish emptiness. In this they went along, in limp compliance, with a dispirited period, showing very little of the creative vitality of the Tolstoys, Brahms, and Cezannes.

To get into presidential or other administrative office, as everyone knows, you have to be a politician, inclined to mouth the fashionable shibboleths, and flatter the abandoned and psychically deprived youth with their inchoate myths and opportunism.

Did we err in picking a scientist for our president? Although Lyman at times uttered heartenningly idealistic sentiments, even he had trouble articulating them publicly: chances are we would have gotten another crowd-pleaser even in a humanist.

Let's face it, we are in deep trouble.

The humanities, which were supposed to get a big boost, have not improved, on the contrary. Some more strong figures have left and enrollments drastically dwindled. All we have been given is a showy parasite "Institute" which will do practically nothing for the organic host except suck its substance. Foundation money, expensive press-agentry and gimmickry aren't going to do it. . . And yet it is singularly the humanities which have the best chance of keeping some hold on those "home truths."

This is not to say "Despair, along with the Muggeridge and the other doomsayers." The world has seen worse. We will survive and flourish again, no doubt. The best of the future will be built on the foundation of the best of the past, with due modifications, and not all the stoneless, graceless, apocalyptic tripe of the "emptier than thou" types. Mostly it will be built on a renewed faith, that of our fathers (and mothers) and ourselves.

Robert Greer Cohn
Professor of French

Ombudsperson's report confirmed

Editor, *Campus Report*:

One of my Ph.D. students from Taiwan whom I came to know well several years ago told me of exactly the kind of surveillance of Taiwanese students recently reported by the Ombudsman, carried out by other Taiwanese students and nationals who convey information back to the Taiwanese government.

Surveillance of this kind is particularly felt by students who are native Taiwanese rather than members of the ruling Kuomintang class originally from the mainland. This student also asked me not to raise discussion of this issue in any open forum, because of fears that he could then be indirectly identified through me, putting his family and relatives who remained in Taiwan at risk.

I'm very glad to see this issue brought into the open by someone with the stature of Prof. Goheen, though I feel that I must still protect my student's privacy by asking that my name not be published with this letter.

A Stanford Faculty Member

Dog sniffer finds hashish, cocaine; Alpha Delt arrested for possession

In what may be the first West Coast case involving drugs imported from the People's Republic of China, Stanford student Neil David MacAvoy was arrested Wednesday, Oct. 6, for possession of hashish and cocaine.

Police officers kicked in his door at Alpha Delta Phi fraternity to make the arrest, according to Stanford Police Capt. Raoul Niemeyer.

No other students have been implicated, although police will continue investigating the case, Niemeyer said. MacAvoy, 20, is a junior from Corning, New York.

According to Niemeyer, a package addressed to MacAvoy from China was found by customs officials to contain drugs. Their suspicions were aroused by a dog specially trained to recognize the smell of drugs.

Postal inspectors subsequently assisted Stanford police in seeking a search warrant. It was signed by Judge Edward Scoyen Tuesday afternoon, paving the way for Wednesday's bust.

Joining Stanford police shortly after noon at the Alpha Delt house, 375 Campus Drive, were agents of the Santa Clara County Narcotics Bureau, the Federal Drug Enforcement Agency, and the U.S. Postal Service. A dozen officials took part in the arrest, which climaxed a two-week investigation.

A postal service employee delivered the package, then the dozen-member arrest team moved in, according to Niemeyer. Police announced their presence, ordered MacAvoy to come out of his room, then kicked in the door when after 20 seconds he failed to open it.

Niemeyer said the dog who sniffed the drugs, a German shepherd named Lightfoot, has "600 to 700 successful sniffs" to his credit.

Alpha Delt fraternity has a reputation among students for drug involvement, Dean of Student Affairs James Lyons said Wednesday.

"Many students in the house have tried to rid the house of this reputation. This incident obviously won't help their cause one bit."

Lyons also said the University "cannot and should not provide students with a refuge from the law. If one deals on campus with cocaine, hashish, or other drugs, one does so with considerable peril.

"Inevitably lots of students know about it and consequently there is a heightened chance of law enforcement agencies knowing about it as well. And when caught, a student will need lots of money and a very good lawyer for a defense."

Asked if MacAvoy would be subject to the University's internal disciplinary provisions, Lyons said the University has "tended to see drugs as a medical problem, not a disciplinary problem.

"Major sale and distribution of drugs is bound to be a matter of concern to the University but ordinarily public law takes care of this quite well," he added.

Lyons said he was not surprised by Wednesday's drug raid. "The availability of drugs in the Bay Area is known to be widespread and law enforcement agencies themselves have said it's beyond their capacity to provide adequate enforcement.

"There is nothing new about student being presented with the choice of using drugs when they go to this or any other college. These days, most of them confronted that choice when they were in junior high or high school," Lyons said.

Lipset wins two posts

Prof. Seymour Martin Lipset of Stanford, a senior fellow at the Hoover Institution, has been chosen president-elect of the World Association for Public Opinion Research and vice-president of the International Political Science Association.

President of the American Political Science Association, he will serve two years as president elect of WAPOR (1982-84) and two as president (1984-86). His vice-presidency of the IPSA runs for three years, 1982-85.

Two arrested in ticket scam

Stanford police arrested two Oakland men, George Hightower and Derrick Barbosa, Saturday, Oct. 9, on charges of sale, possession, and forgery of tickets for the Grateful Dead concert in Frost Amphitheater.

About 50 of the forged tickets were recovered, mainly from individuals who purchased them and tried unsuccessfully to gain admission.

Stanford Police Chief Marvin Herrington said the forgeries were "excellent. . .very professional." They were made with blank ticket stock stolen from Ticketron. A total of 16,000 blanks were taken in separate thefts in San Diego and the East earlier this year, he said.

A blue van, believed to contain the ticket supply and several more suspects, got away.

"I don't imagine they'll be back here. They know we're looking for them," Herrington said Sunday, Oct. 10, before a second Grateful Dead concert in Frost.

Once the forgery was discovered, tickets were checked very carefully. "It looks pretty well organized," Herrington said. "They would have to have access to fancy printing gear."

The suspects were booked at North County jail. Hightower, 32, was released late Saturday on $3,000 bail, while Barbosa, 30, was released on his own recognizance.

'Serious shortage' of music teachers imminent, says Kuhn

Teacher education programs in music may prove necessary within a few years, says Prof. Wolfgang Kuhn of the Stanford Department of Music, who helped Stanford get started in this field nearly a quarter century ago.

Kuhn retired Aug. 31, but has been recalled to active duty to teach two basic music courses during fall quarter.

Kuhn was recruited by the Music Department in 1958 to start and direct a teacher education program in music, administered through the School of Education. That he did and very successfully. "Most of the people who graduated from Stanford with D.M.A.'s in music education are now chairing music departments," he notes.

"The number of music education students peaked in the mid '60's. For the last 10-12 years I haven't been doing much teacher education because there hasn't been much demand for it. I've been teaching general courses and developing computer-assisted instruction programs for music students. In a way, though, I feel I'm teaching more people something about music through these general music courses than I ever did teaching methods courses.

"For example, I taught at three of the Stanford Overseas campuses—Tours, Beutelsbach, and Vienna—where I developed courses which were coordinated with local concerts, performances, and opera.

"Of course I'm sad about the demise of teacher education. It's really a sad commentary on our times.

"Projections show that in six to eight years there will be a serious shortage of teachers, so it's probably essential for Stanford to gear up a workable teacher education program, but it will be entirely different from what we had in the '60's and '70's, I'm sure of that."

Many hats

Kuhn came to Stanford with an impressive record in teacher education and music. He began the study of violin in his native Germany, graduating in violin and music education from the University of Illinois in 1937. He then spent 12 years teaching music in public elementary and secondary schools in Illinois.

"In the Depression you didn't think of becoming a professional violinist. . .it just wasn't done. You had to make a living.

"I taught all the instruments, conducted bands, orchestras, choirs, directed operettas—you name it, I did it! It was great training for a music educator. . .it gave me the practical experience that came in so handy when I went on to teach music education on the college level."

In 1953 Kuhn received his Ed.D. in music education from the University of Illinois and became chairman of the Division of Music Education there.

Kuhn wore many hats at Illinois. He was in charge of recording all concerts, including those by the many illustrious conductors and musicians who performed at Illinois, among them Leopold Stokowski, Myra Hess, Paul Hindemith, Benjamin Britten, Georges Ansermet and Igor Stravinsky.

"I've always been interested in technology," says Kuhn. "The music department at Illinois bought a rudimentary home-recording device in 1943 and the chairman asked if anyone knew how to operate it. Since I'd been using tape recording devices as a school teacher for diagnostic purposes, I volunteered.



Kuhn: 'Plans for the future should be in the hands of the younger faculty.'

"Eventually I had my own technical staff. I helped develop stereophonic tape recording in the early '50's with Russ Tinkham of Ampex. We were actually the first people to make a stereo tape recording, released by Ampex—Monteverdi's *Vespers*, conducted by Stokowski. I worked closely with Stokowski editing the master tapes and preparing for a pressing.

"I also reviewed concerts for local papers in Illinois. As a school teacher I'd had to do my own publicity for concerts—music education is partly PR, you know—so I'd picked up the knack of writing reviews.

"When I left Illinois I was doing three jobs—producing records, radio and television programs, taking charge of the teacher education program, and teaching violin. When you're a young and eager faculty member, you tend to take on too much."

From 1955 to 1958 Kuhn chaired the Department of Music Education at the University of Colorado in Boulder. In 1958, chairman Crosten asked him to come to Stanford. At the time, Crosten noted that he had been searching for someone who was both a performer and a scholar and felt that he now had that combination in Kuhn's appointment.

Besides starting the teacher education program in music at Stanford, Kuhn started and conducted the Stanford Summer Youth Orchestra, which eventually attracted talented youth from all over the country. He also conducted the San Jose Youth Symphony in the early '60's.

In 1970, Kuhn brought the Hungarian composer Zoltan Kodaly to Stanford, together with Hungarian composer and educator Erzsebet Szonyi. Together, they conducted the first workshop in the U.S. of Kodaly's Hungarian Music Education Program. Attended by 350 music educators from the U.S. and Canada, this workshop sparked the development of Kodaly's program in the U.S.

"I have always been interested in music for young people," says Kuhn. In 1964 he was instrumental in bringing Dr. Suzuki and his Japanese child- pupils to the Peninsula on their first American tour. Since then, he has hosted a one-week Suzuki workshop on campus every summer. Masses of tiny kids with tiny violins swarm around the Knoll, Kuhn's tall figure moving serenely among them.

Kuhn has served on the editorial board of the *Journal of Research in Music Education*, and has published extensively. He has written textbooks on instrumental and string pedagogy and is also known as an arranger of string ensemble music.

Kuhn has also been acting chairman of the Music Department at Stanford a number of times: in 1966-67, 1972-73, several summers, and again in 1979-80 when chairman Cohen went on sabbatical.

"I enjoyed my times as acting chairman," he says. "I felt I had a grasp of the department as a whole, its direction, where it should go. But I don't think I ever had the temperament to be a full-time chairman. You have to be able to withstand stress, and that's hard for me to do.

"The department hasn't changed much since I came. It's like a shopping center, where you have specialty shops under one roof. Everyone here does his own thing, and is a leader in his field with a national reputation. Sometimes this makes it difficult for the department to act cohesively."

Retirement

Kuhn is retiring just before the department moves into Braun Music Center. "I think plans for the future should be in the hands of the younger faculty. . .it has to be that way. The department needs to decide what it wants to do about teacher education, and they should decide that without me."

Retirement will allow Kuhn to spend even more time developing computer-assisted instruction programs in basic musicianship. His workshop is set up at his campus home.

"I have felt very fortunate in the years I've been at Stanford because I have been allowed to continue my research, do my publishing, and everyone, including the dean's office, has been very supportive of my work. Stanford will always be my home."

The Music Department has also been fortunate. Its chairman, Prof. Albert Cohen, says: "Kuhn has served the University superbly in varied assignments over many years—as director of our music education program, innovative researcher, gifted teacher, and perceptive administrator. We have valued his contributions highly, as well as the collegiality, wisdom, and sensitivity he has brought to his work in the department."—**Julia Sommer**



From left, Laurie Binder, Duncan McDonald, and President Donald Kennedy

McDonald, Binder win Great Race

Dr. Duncan MacDonald of Menlo Park was the first place finisher at the 5th Annual Great Race at Stanford on October 3. His time was 29:04.

The women's division winner was Laurie Binder with a time of 34:08. Nancy Ditz of the Stanford Alumni Association came in second with 34:28.

The race, which attracted more than 2,500 runners, is an annual fund-raising event sponsored by Western Federal Savings to benefit the Cardinal Club, which provides athletic scholarships for Stanford women.

More than 60 volunteers from various athletic departments on the campus helped the Stevens Creek Striders handle the finish line under the supervision of John Law of Portola Valley.

Race communications were handled by a volunteer group of eight men from the Southern Peninsula Communications System. SPECS NET, established 20 years ago, normally responds to local disasters. The group ranges from Menlo Park through Cupertino and has close to 100 members.

President Kennedy's Academic Council talk

Upward shift in faculty age, tenure ratio 'alarming'

Following is the fall quarter report given by President Donald Kennedy to the Academic Council Friday, Oct. 8:

Let me begin by joining my own welcome to that of the Provost. We are, as you can see, attempting something of an experiment here. I want to scotch an unkind rumor by stating that this is *not* a response to the sense of loneliness I feel while reciting my quarterly report to the sparse but loyal two-dozen colleagues that show up for regular Academic Council meetings. On the contrary, I regard the low turn-out as clear indication that the Senate is working the will of the professoriate, and that my colleagues are absent only because they feel their oversight is not needed. At least, not right now!

Instead, the Provost and I *wanted* to launch the year with a convocation that focuses on the Stanford faculty — because what we are as an institution is very much what *you* are.

So in my own report this quarter I will briefly discuss the state of the faculty, and try to indicate what we shall have to do to maintain and even to improve its quality. No task can possibly carry a higher priority for the administration of a university, and Al and I firmly expect our own time in office to be judged in terms of the quality of the Stanford faculty in the Centennial year, or if we are real survivors — at the turn of the century.

Our predecessors deserve high marks on that standard. Over the past ten years, there has been imposing improvement. Just to take a few indicators, in the ten years between 1971-82 Stanford's membership in the major academies has more than doubled: our representation in the American Academy of Arts and Sciences has grown from 52 to 114, in the National Academy of Sciences from 38 to 75, in the National Academy of Engineering from 9 to 37 and in the National Academy of Education from 4 to 9. We now have three Pulitzer Prize winners compared with two, ten Nobel Laureates compared with six, and 11 National Medal of Science winners compared to three.

It is my impression that the care and the standards Stanford employs in searching out and in retaining and promoting faculty are superb. It is important to realize that we do not do those things in the same way they are done by many of the institutions with whom we are often compared. At some institutions of great distinction, most tenured faculty at any given moment have been appointed from the outside at tenure level.

That is not the way it is done here. In the past year only fifteen percent of our appointments were at tenure rank, and 85% were at the level of assistant or non-tenured associate professor. The corresponding figures five years ago were 25% and 75%, and ten years ago 13% and 87%.

Searches for non-tenured faculty are conducted with great care, and we expect to retain and promote between a third and a half of them. That is still our experience; if one compares the percent of assistant professors promoted who were appointed in 1973-74 with the percent promoted who had their first appointments in 1963- 64, ten years earlier, the proportion for the University as a whole has not changed very much. The most recent figure stood at 46% retention; a modest ten-year drop (from 48% to 37%) in the non-medical areas was balanced by an increase in the promotion rate for medical school faculty.

What are the advantages of this strategy? In my judgment there are three.

First, the average quality of the faculty at any given moment is higher, because of the care we have invested in selection of a junior professoriate for which we have high hopes.

Second, non-tenured faculty members sense that they have a solid chance of staying, and as a consequence feel more obligation to the institution and are more interested in building durable programs of teaching and research.

Third, more of our senior faculty will have had their productive research years at Stanford, with all the advantages that continuity and stable affiliation can confer.

Other trends, however, are going to make this practice more and more difficult to sustain. Over the past decade the slackening of federal support for research and scholarship, the rapid inflation of costs, and the failure of private gift sources to keep up with either, have forced an equilibration of faculty size.

After two decades of rapid growth, the tenure line faculty at Stanford during the past ten years has increased at the rate of only about one percent per year. That effect has been augmented by the legislated increase in mandatory retirement age from 65 to 70.

The result has been a significant and alarming shift in the tenure ratio and in the average age of the Stanford faculty. In 1971 we were 42.7 years old, and 65% of us were tenured. Five years later the average age was 43.5, and the tenure proportion up to 68%. Now the average age stands at 45.8, and the proportion tenured to 72%. An extrapolation of those trends suggests how very difficult it will be to keep our promotion rate for non-tenured faculty above one- third.

And the situation will become very much worse, of course, if present legislation to uncap mandatory retirement altogether should succeed. If that legislation were to pass next year without any exemption for university faculties, I think every major research university in this country will have to undertake an agonizing review of its tenure policies.

The almost certain result will be the substitution of something else —likely a term contract — for appointments without limit of time. A "grace period" of seven or eight years, which seems a likely compromise, would allow us some opportunity for finding new ways of living with the situation while we continue to require retirement at age 70. But at best we will be significantly worse off. And even with no new legislation whatsoever, the effects of the age 70 rule and of economic stagnation will cause the average age of our facutly to continue to rise —though perhaps not at the rate of one year for every three¡

The demographics of our faculty also relate to the efforts we make, through affirmative action, to alter its composition while continuing to improve its quality. We are continuing to make some gains in this area, but the closing- off of opportunities at junior levels is a significant impediment to progress.

I think we are making good use of what opportunitie we do have. This last year, for example, one-third of the 68 new appointments to the Academic Council were women; and in the School of Humanities and Sciences nearly half the new appointments, and over half of the promotions to tenure went to women. Overall, it was the most successful year in Stanford's history in increasing the number of tenured women and in appointing new women to the faculty. There is still much work to do, however; only 117 of Stanford's 1,270 Academic Council members are women, and only 48 of the 836 tenured faculty.

Our success with ethnic minority groups was less encouraging; but still, 15% of new total Academic Council appointments went to members of minority groups. Again the School of Humanities and Sciences had an especially strong record, with four new minority group faculty members appointed. The Report of the faculty Committee on Affirmative Action, which we will be implementing this year, should allow us to give renewed emphasis to the important business of making such considerations central in every new departmental search.

The difficult situation we are likely to face in the future will put an even higher premium on our capacity to select and attract the very best young people to membership in this faculty. We will need to make extremely good judgments, and follow these up by persuading the highly desirable people we select that membership in the Stanford faculty is an attractive and. financially feasible prospect. There is little doubt we can manage the first of these, but I suspect we all have continuing worries about the second.

Faculty salaries here have improved somewhat relative to our competition over the past five years; and although we need to be concerned about the gradual erosion in compensation for the professoriate relative to other professions, I do not think we are at a disadvantage except perhaps for one or two special situations.

The matter of housing, however, will require continuing attention. Since I began my term as Provost, we have installed a co- investment mortgage program that now has $12 million out in faculty loans, and should soon have its ceiling adjusted to $20 million. We've built an attractive townhouse and condominium development that is now being occupied, and written down mortgage interests rates there. We have adopted a program of extra compensation to allow for the difference between Peninsula and national housing prices for new faculty, and started work on a large new development on Willow Road that will include rental and sale units available to faculty and staff. Despite all of these ventures, housing continues to be a discouragement for some, and we need to continue to look for imaginative solutions.

I mentioned all of these potential sources of worry not to discourage you about the future, but to indicate our awareness that it poses formidable challenges to the wise management of this institution.

But the challenge is for all of us, because in the end it is the faculty that decides who is to be on the faculty. It is the faculty that recruits, retains, and promotes its new members; and the faculty that sets the intellectual and social conditions for colleagueship that will determine how attractive an environment this is. It is up to us administrators to make sure nothing gets in the way¡ Stanford has extraordinary advantages—vastly improved resources and environments for scholarly work, a superb student body, a splendid location, and an increasingly powerful tradition of accomplishment.

I have been here now 22 years, and I started as an assistant professor. Watching the quality of this faculty grow and then pull along behind it all the wonderful things that have happened here, has been a truly extraordinary experience. I am deeply impressed with the quality of the young people we are now attracting to Stanford. We have come a long way together, my friends—far enough to know there is still more to do and that we can do it.

Text of 1981-82 report from Committee on Graduate studies

Guidelines for Dismissal of Graduate Students for Academic Reasons

CGS recommended the adoption of a set of guidelines for dismissing graduate students who are failing to make satisfactory academic progress. The guidelines call for a precise system of consultations, warnings, reviews, and departmental discussions and decisions, as well as the careful maintenance of records of such discussions and decisions. They also specify the rights of students to examine their departmental files and to appeal under the Student Academic Grievance Procedures.

(The guidelines were approved by the Academic Senate on May 13, 1982, and the Dean of Graduate Studies distributed copies to all schools and departments.)

Photocopied Journal Articles as Dissertation Texts

Certain departments permit the incorporation of photocopied journal articles (sometimes of joint authorship) into dissertations, and even the submission of several such photocopied articles as the full text of the dissertation. Prof. Dale Kaiser, biochemistry, and Prof. Robert Schimke, biological sciences, defended this practice before CGS on the grounds that it was appropriate in scientific fields.

CGS recommended that the contribution of the individual submitting the dissertation be clearly and fully indicated in a foreward or preface. The committee also advised the Graduate Program Office that it saw no intrinsic objection to the use of reprints in the final dissertation copy.

Dissertations in English

CGS reaffirmed the policy of the Graduate Division requiring that dissertations be written in English unless an exception has been approved by the Dean of Graduate Studies prior to the commencement of work. The Committee asked the Dean to make more explicit the conditions under which exceptions will, or will not, be granted.

Validation for Residence Credit

CGS clarified the policy for awarding residence credit for course work done elsewhere. Currently, residence credit was being granted only for courses validated by departmental faculty as comparable to courses the student would take at Stanford, whereas the original intent was that residence credit would also be allowed for courses that, though not exactly comparable to Stanford courses, nonetheless contribute directly to the program of study here.

Standards of Progress and Continuous Registration

CGS approved the following addition to the Standards of Progress and Continuous Registration: ". . . All students must be registered in the quarter in which the degree is conferred. The sole exception to that rule shall be that a student may, without being registered, submit the official thesis or dissertation or apply to receive a Master's degree in the quarter immediately following a quarter in which the student was enrolled."

Program Reviews

CGS reviewed and recommended the continuation of the following graduate programs:

1. *The Biophysics Program.* A subcommittee chaired by Prof. William Little, physics, reviewed the Biophysics Program. The subcommittee concluded that the program was of excellent quality and recommended renewal. CGS accepted the subcommittee's report.

2. *Honors Cooperative Program.* A subcommittee chaired by Prof. J. Michael Harrison, Graduate School of Business, reviewed the University's Honors Cooperative Program, which provides off-campus graduate instruction by closed-circuit television. In particular, the subcommittee considered the possible liabilities of non-California residents taking part in the program, as well as the appropriateness of granting credit to students who have not been admitted to degree programs (an arrangement known as Non-Registered Option, or NRO). It found no serious cause for concern in either respect and recommended the program's continuation. CGS accepted the subcommittee's report.

3. *Cancer Biology Program.* A subcommittee chaired by Prof. Allan M. Campbell, biological sciences, reviewed the Program in Cancer Biology. The subcommittee reported

continued on next page

Jim Angell wanted both engineering and carillon in his life

Bells need constant maintenance

"Professors are all hams, aren't they?" says the professor of electrical engineering who, for over 20 years, has received more than the average share of attention.

His name is Jim Angell, and he is, as he likes to point out, the "angel" behind the Hoover Tower bells.

Angell is the university carillonneur.

Appointed in 1960 by then-President Wallace Sterling, Angell enjoys the attention he receives.

"The thing I enjoy mainly is that the carillon is sort of a special opportunity to share my interests with people, and certainly the great majority of people seem to enjoy it very much."

Scheduling his carillonning around his teaching, Angell performs a large repetoire of compositions. He plays for such official functions as Commencement; he plays for official but informal events like the Big Game against Cal, as well.

He also performs over the lunch hour or after work at 5 p.m., when strollers are likely to hear renditions of Angell's favorite compositions from modern musicals such as "Fiddler on the Roof" or "The Sound of Music."

That Angell does his own transposing is a testament to his extensive musical background. His first musical lessons were on the piano at age four. The organ came next, becoming Angell's "true love" and providing a means of support during graduate school as a church accompanist. By the time he learned to play the carillon, Angell was considering a career in music.

Holder of undergraduate, master's, and doctorate degrees from MIT, Angell is currently associate chairman and chairman of the Graduate Admissions Committee of the department. His area of specialty is in the field of solid state circuitry. He teaches both lecture and lab classes and supervises graduate research.

An added attraction

Angell says that the carillon was a critical factor in his decision to accept a teaching position at Stanford.

"Music has always been a big part of my life and for a long time I wasn't quite sure whether I wanted to pursue music or something technical," he explains. "But I decided somewhere in my mid-high school years that I would probably survive better if I followed a career of engineering with music as a semiprofession rather than the other way around."

Stanford's carillon was donated to the University in 1941 by Belgium in honor of Herbert Hoover's war relief work. A 35-bell, three-octave carillon, it is one of 150 in North America, of which approximately half are situated in university bell towers. The majestic sound of the bells easily conjures up an image of frenetic bell-pulling; however, the instrument is played somewhat like an organ.

Angell explains: "The keyboard consists of a set of broomstick-diameter wooden pegs, which we call batons, which are pressed or struck with the side of the fist. The overall keyboard is about 4½ feet long. The foot pedals really just double for the lower half of the batons, so in effect you have four fists instead of two."

Each baton or foot pedal connects to a mechanism which rings the corresponding bell. Rather than playing a single tone, however, the bell is tuned such that it plays an entire chord. The sound is full and harmonious, but knowing which bell-chords can be played with which can get tricky.

"You have to be a little careful about the way you choose to play bells together," says Angell. "If you're not careful, you'll have quite a clash of the tones of one bell and those of another."

A rare opportunity

Angell's considerable musical talents aren't limited to transposing and playing; over the years he has had numerous students as well. Among the small "club" of carillonneurs, Angell's patient and encouraging instruction is well represented by former students.

Stanford junior Chris Halsted, a prospective carillonneur, is an example of Angell's influence. He became interested in the carillon through his mother, Margo Halsted. A former student of Angell's, she is currently the carillonneur at UC-Riverside, and was influential in the recent expansion and endowment of the UC-Berkeley carillon. That carillon is played by another Angell associate, Ron Barnes.

Berkeley is one of the fortunate few to have an endowed position for the carillon; Angell says that all too few of the existing carillons are played regularly, "simply because there's no money to pay anyone to play them." Not only is there a shortage of funds to pay for a carillonneur, but often the carillons themselves are inadequately maintained because of the expense involved.



James Angell

A carillon is a large capital investment—bells cost about $10 per pound. The smallest bells, weighing 20 pounds, at a cost of $200, are inexpensive when compared to the large bells at the lower end of the range. Weighing up to several tons, these bells ring up a whopping $14,000 bill apiece!

The original investment is far from the last one; constant maintenance is needed to keep the bells in tune. As the bells age, pollution and natural erosion make the bells thinner, thus distorting the tune. According to Angell, Stanford's carillon is badly in need of tuning.

As part of his interest in carillonning, Angell is working toward raising money to improve the Stanford carillon mechanics, and endow "perhaps a third of a faculty position" for a carillonneur (the position is currently without compensation).

To help initiate a fundraising campaign, the Stanford Alumni Club of Washington, D.C. is holding a reception at the Belgian Embassy in Washington on Oct. 8.

Angell sees this as a preliminary effort which he hopes will culminate in enough money to restore, augment, and endow the Stanford carillon. Says Angell, "I want to make darn sure that it's played after I retire."

—Amy Bernhard

Graduate dismissal...

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favorably on the program, although it noted that some students in cancer biology had not received sufficient attention in formulating dissertation proposals. CGS accepted the recommendation for renewal, with the stipulation that students' dissertation proposals be approved by the Cancer Biology Committee as a whole.

4. *Neurosciences Program.* A subcommittee chaired by Prof. Robert F. Kallman, radiology, reviewed the Neurosciences Program. The subcommittee found the program "admirable" and urged its renewal. CGS accepted the subcommittee's report.

New Graduate Programs

CGS recommended the creation of the following new graduate programs:

1. *Medical Information Sciences.* An *ad hoc* committee headed by Prof. Edward Shortliffe, medicine, presented a proposal for an M.S./Ph.D. program in medical information sciences. The program aims to prepare students in the application of computer technology to various aspects of medical science and medical care.

After considerable discussion, (over the course of three separate meetings) and a substantial strengthening of the proposed program's course requirements, CGS voted to recommend its establishment, subject to outside review during the fourth year.

2. *Terminal A.M. in International Policy Studies.* An *ad hoc* committee headed by Prof. Robert Ward, political sciences, submitted a proposal for a coterminal A.M. in International Policy Studies. The new program is in some respects an extension of the undergraduate International Relations Program, but with greater career orientation. CGS voted to approve the program, subject to outside review in four years.

Graduate Specials

Prof. John T. Gill, chair of the Subcommittee on Graduate Special Declarations of Intention, recommended that three students be allowed to work for Ph.D.'s under the Graduate Special rubric:

1. Peter Meffert, in comparative economic systems;
2. Marian Elaine Smith, in acoustics;
3. Palle C. Henckel, in psychoacoustics.

CGS accepted all three recommendations. Two applications were not recommended.

Miscellaneous Actions

1. CGS admitted Shahar Ben-Menahem to candidacy to work for a Ph.D. in physics, even though he had officially studied with only one Stanford professor, Sidney Drell, deputy director of SLAC.

2. The committee recommended revoking the Master's degree of a student who received the degree in June 1980 as part of a coterminal program. The student's bachelor's degree was being suspended for irregularities, making the student ineligible to receive the Master's.

3. CGS recommended revoking the degree of a student who received an A.M. in communications April 1, 1982. The name had been left on the departmental Winter Recommending list by clerical error.

Admissions to Candidacy, Conferrals

During the past year (Summer 1981 through Spring 1982) CGS admitted a total of 2,196 students to candidacy for advanced degrees (in contrast to 1,887 in 1980-81 and 1,820 in 1979-80).

CGS recommended that advanced degrees be conferred on a total of 2,493 students. Of these, 460 were Ph.D.'s.

Paul Robinson
Chair

Shumway to receive Gold Heart Award

Heart surgeon Norman E. Shumway, professor and chairman of Stanford's department of cardiovascular surgery, has been chosen to receive the American Heart Association's 1982 Gold Heart Award.

The award is the highest honor conferred by the AHA for contributions to its national program and to cardiovascular medicine.



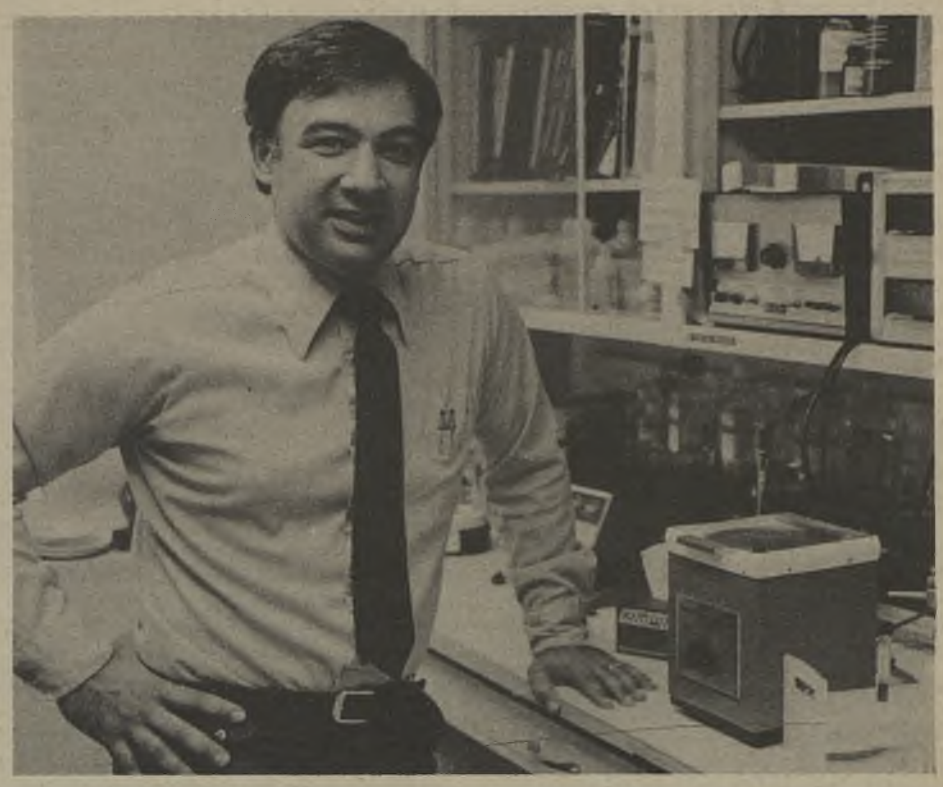
Norman Shumway

Shumway's "pioneering efforts in behalf of terminally ill heart patients have gained him international recognition as the leader in heart transplant surgery. His work in measuring and treating rejection of the transplanted heart has prolonged many lives and broadened the field of multiple organ transplants. His gift for training has influenced many others now making their own impact on cardiovascular medicine," noted the AHA.

In January, 1968, Shumway performed the first human heart transplant in the United States. Since then, he and his associates have performed more than 240 heart transplants. Ninety-seven patients have survived.

In March, 1981, Shumway's team performed the first heart-lung transplant. In all, his team has performed seven heart-lung transplants, with four survivors.

Shumway will receive the award Nov. 13 during the AHA's annual meeting in Dallas.



Roland Ciaranello: ***"Students come to Stanford for the caliber of the faculty, and they should be exposed to it. If not, we're no different from any other institution. . ."***

Hospital occupancy low, unit closed

A lower patient census than expected has forced Stanford University Hospital officials to close a nursing unit in the Hoover Pavilion last week.

The drop in patient census at the 663-bed hospital began in June. Normally during the summer months Hospital occupancy remains at about 75 percent or more. This year it dropped to about 66 percent in July and 69 percent in August.

"We are not the only hospital facing a low census, probably due in part to the overall economic recession," said Duane Walker, R.N., M.S., director of Nursing Services. "This is happening throughout California, the western states, and most of the country."

Sheldon King, executive director of SUH, said that the situation is parallel in many private doctors' offices. "With high unemployment nationwide, I would guess that many people have used up their medical insurance and are simply not seeking medical care unless absolutely necessary."

Another cause of the unusually low census, King said, is the Department of Health and Human Services' guidelines which approve the admission of Medi-Cal patients only in cases of emergency or function-threatening conditions.

Nursing Administration, Walker said, is working closely with the union, CRONA, to keep all of Stanford's permanent nursing staff employed. The clinical nursing coordinator and staff of the closed unit (N2A) have moved to other nursing units at Hoover and the main center. Surgical patients usually admitted to N2A will be accommodated elsewhere.

In closing N2A, a surgical unit specializing in sports medicine, Hospital administrators hope to allow other nursing units to provide cost efficient patient care by maintaining a fuller census.

King said that Hospital and Nursing Administration would examine whether another nursing unit should be closed in the near future. "Our reaction to the low census," he said, "must be to reduce resources to match patient needs." He explained that the first step taken on N2A was to reduce its operations to a five-day week.

Walker said that most of the nurses have responded well to the uncertainty that's prevailed throughout the underpopulated units. "One unfortunate aspect is that we're simply unable now to use most of our relief nurses, who have in the past provided a pool of people available to fill in and work certain hours as needed. Until recently we've always been able to utilize them."

Both King and Walker declined to predict when the situation might reverse itself, returning the patient census to expected levels. They think improvement in the economy, when that happens, will probably be the best indicator. Said King, "The number of Hospital reservations has increased again slightly, but not to any significant degree."

—Lisa Ames

DNA bill vetoed

A bill that would have extended the applicable National Institutes of Health guidelines on recombinant DNA research to private high tech companies in California was vetoed by Governor Edmund G. Brown Jr. last week.

The bill had been opposed by recombinant DNA research and development firms as redundant and unnecessary.

NIH guidelines now apply to academic and research institutions doing sponsored research in molecular cloning. The guidelines were scaled down in recent years as further research has shown that initial fears about genetic engineering research were unfounded.

Chairman of Faculty Senate sees necessary changes ahead

Admission procedures, curriculum, and student scholarship are the Medical School Faculty Senate's priorities for the coming year, said the new chairman, Dr. Roland Ciaranello, associate professor of psychiatry.

Ciaranello succeeds Dr. Avram Goldstein, professor of pharmacology, as head of the Senate and of the Committee of Five, the Senate's executive committee. Goldstein held the chair for three consecutive years.

"I have a clear mandate from the faculty to continue in the direction they want to go—educating leaders in academia," Ciaranello said.

In order to do so, however, changes are and must continue to be made, he noted. Admission procedures, for example, must be streamlined to speed them up and cut cost.

"We're losing good candidates to other schools because we're not quick enough in processing and accepting the best applicants," Ciaranello explained. "This is especially true with minority applicants. Students get frustrated with our slowness and settle for another school."

Steps have already been taken to streamline the procedure. This year, for the first time, a computer will screen all applicants—almost 6,000—and narrow the pool to 2,000. These 2,000 will be processed by the admissions committee in the usual manner.

Critics of the computerized system are reacting "psychologically," Ciaranello said. "The personal process is still there, it just starts later on. By screening out the less qualified applicants by computer, we have more time to spend reviewing the cream of the crop."

Ciaranello stressed the need for active recruitment, and said Dean Dominick Purpura is considering hiring a minority admissions recruiter.

"We have to be aggressive in our recruiting. If we aren't, we'll be left with a passive admissions process that will not get the best to come to Stanford."

The Medical School should also recruit Stanford undergraduates more actively, Ciaranello said. "We don't recognize the quality of our own students."

Once the students come to the Medical School, they should face a more streamlined curriculum, Ciaranello continued. The Senate favors the return to a basic medical science core curriculum. Elective courses interfere with the time students have to get involved in research, he said. "Students come to Stanford for the caliber of the faculty, and they should be exposed to it. If not, we're no different from any other institution."

Not only should students have the time to get involved in research, but faculty should be encouraged to employ students and use grant funding to pay them, Ciaranello said. In light of declining federal support, he explained, this would help students financially. "We have a good, untapped source of funds that's already here.

"We have to attract the best students quickly, give them a good curriculum allowing them enough time to participate in research, and offer the opportunities to do so," Ciaranello concluded.

The Senate, formed in 1968 to represent all departments of the Medical School, meets monthly. Besides Ciaranello, Committee of Five members include Drs. Robert Lehman, professor of biochemistry; Frances Conley, assistant professor of surgery; Bruce Parker, associate professor of clinical radiology; and Errol Friedberg, associate professor of pathology.

—Shirley Kraus

Special events and films planned for second annual safety faire

Ever wish you knew more about preventing crime in your home, or that you were better prepared for accidents and earthquakes?

The Hospital's second annual safety faire, to be held the week of Oct. 18-22, should help answer these questions and more. All members of the community are invited to attend the specially planned activities.

A different presentation will take place each day of the week, in the corridor outside the main center cafeteria:

• Monday is "Health Awareness Day," 10 a.m. till 4 p.m., with exhibits by the Pharmacy and Dietetics Department. The American Red Cross and Stanford Heart Disease Prevention Program will present exhibits on their specialties.

• Tuesday is "Attack on the Back Day: The Stanford Back Trak," 7 a.m. till 5 p.m., to consist of a self-guided exhibit made up of several stations. These will include: question and answer board, anatomy, posture, body mechanics, lifting, self-analysis, and handouts.

• Wednesday will feature "Patient, Employee, Chemical, Radiation Safety," from 10 a.m. till 4 p.m. Presentations will be made on radiation and chemical safety, hazardous wastes, and safety with sharp objects.

• Thursday is "Disaster Preparedness Day," from 10 a.m. till 4 p.m., with exhibits covering the 1906 earthquake, HAM radio operations, laboratory disasters, numerous handouts on earthquake preparedness, plus a presentation by a renowned luncheon speaker.

• Friday will feature "Fire/Electrical/Rape Awareness/Protection in the Home," from 10 a.m. till 4 p.m. Displays by the Palo Alto Fire Department will include use of fire extinguishers, smoke detectors, and fire hazards at home. Fire extinguishers will be available for purchase. The Security and Clinical Engineering Departments will have displays pertaining to their services. "Blow the Whistle on Crime" is the personal security theme for the day.

Film presentations during the week will include "Hospitals Don't Burn," "Rape: Preventive Inquiry," "Look Before You Eat," "Heimlich Maneuver," "Code 101," "CPR," "Code 10—Bomb Threat," and "General First Aid."

Showings will be continuous from noon till 8 p.m. on Wednesday, Oct. 20, in the Hoover Pavilion, room NC09; and from 10 a.m. till 8 p.m. Friday, Oct. 22, in the main center, room W003.

The faire is presented by the Hospital's Environmental Health/Safety Committee. Training sessions meet the in-service requirements of the Joint Commission for the Accreditation of Hospitals.

Department heads and supervisors are encouraged to allow their staff time to attend the week's events and films. For further information call Hilary Ryniewicz, at 497-7224.



Dr. Scott Wood, the third and newest member of the Stanford Medical Group (SMG) gives an injection to patient Betty Lovelace, recreation therapist in Pediatrics. SMG, a practice group under the Department of Medicine, recently accepted the medical contract for Personnel Health Services. Wood came to Stanford from a position as instructor of emergency medicine at The Johns Hopkins Hospital, Baltimore, and is working half of each day in Personnel Health. He said his half-time duties include physical screening of new SUH employees, urgent treatment of workers on the job, and screening of work-related health absences. Afternoons will be spent seeing patients at SMG, which last month celebrated its first anniversary. Co-founder Dr. Michael Jacobs said the group, intended to serve "people who want to be treated at Stanford without direct student contact" in outpatient care, currently serves about 300 patients each month. The third physician is Dr. Armand P. Gelpi.

NCCP symposium on drug resistance

A symposium on the mechanisms of resistance to anticancer drugs will be held from 9 a.m. till 3 p.m. Saturday, Oct. 23, in the Fairchild Auditorium at Stanford University Medical Center.

The second in a series of one-day symposia sponsored by the Northern California Cancer Program, the day's discussion will focus on alkaloids, antibiotics, and alkylating agents. Advance registration is encouraged.

Specific topics addressed will be "Overproduction of a plasma membrane glycoprotein in multi-drug resistance," "Multiple drug cross-resistance in mouse neuroblastoma cells," "Alkaloid resistance and cross-resistance in human leukemia cells," "Mechanisms of resistance to bleomycin," and "Mechanisms and modulation of resistance to alkylating agents."

Dr. Branimir Ivan Sikic, assistant professor of medicine (oncology and clinical pharmacology), will co-chair the event with Dr. George Stark, professor of biochemistry, and Dr. Victor Levin, associate director of the Brain Tumor Research Center at U.C.S.F.

Speakers will also include Drs. J.R. Riordan (visiting from University of Toronto, biochemistry), Fred Baskin (University of Texas), William Beck (St. Jude's Children's Research Hospital), and J. Martin Brown, associate professor of radiology at Stanford.

A box lunch, courtesy of NCCP, will be served. The symposium is supported in part by a grant from Adria Laboratories. For further information contact Martha Kaplan, at 497-7431.

Dying girl to go home soon

A fund raising effort to help a 12-year-old Sri Lankan girl who is dying of a malignant brain tumor and her family return home for her death has been largely successful, according to SUH social worker Susan Weisberg.

"We think now that sufficent funds for the patient's transportation have been raised," Weisberg said at press time.

Approximately $14,000 was needed for the girl's trip back home, which will include one or two attendants' rountrip fares, a stretcher, and ambulance fees.

The youngest of seven children, Ayesha Cader will remain bedridden in the Hospital until she is transported home, which has been her family's greatest wish since her cancer was declared inoperable.

The money to allow Ayesha's return home was raised from various sources, including the family's severely dwindling resources and about $2,000 to $3,000 from the Sunshine Foundation.

Last week the McDonald Owner/Operators Association of the Bay Area agreed to match dollar for dollar public contributions towards the remaining amount of money needed, estimated at approximately $7,000. In other words, $3,500 donated by the public would be matched by an equal amount from the burger mavens.

Weisberg said that the public's response to a media drive on behalf of the Cader family has been extremely generous.

Ayesha Cader arrived in the U.S. Aug. 23 with her mother and father, Khyre and Hanza. A doctor in her native Colombo, Ceylon, felt that she could be cured here with surgery, radiation, chemotherapy, or a combination of these.

However Dr. John Hanbery, professor of neurosurgery, found that the girl's tumor was too advanced for successful treatment, though radiation therapy was given for two weeks. Ayesha was taken comatose to the Emergency Room on Sept. 18 and admitted to the Hospital.

Though the necessary funds have been raised to transport Ayesha home, contributions are still being gratefully accepted to help with expenses. Anyone interested in making a contribution should contact Joan Marinaro, at 327-4800, ext. 500.

Medical Faculty Opening

Stanford is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The department of neurology at Stanford University School of Medicine is recruiting faculty members in both adult and child neurology for positions available in the coming academic year.

Candidates should be qualified for examination by the Board of Neurology and Psychiatry in adult or child neurology. Preference will be given to individuals with significant skills as teachers and clinicians who have had sufficient training and experience in clinical or basic research areas to function as independent investigators.

Particular areas of interest might include clinical neurophysiology (EEG-EMG); neuropharmacology; neuroanatomical studies in relation to neurological disorders; or others. Appointments will be made at the assistant professor or more senior level, depending upon qualifications.

Interested individuals should send a curriculum vitae and the names of three referees to: David A. Prince, M.D., professor and chairman, Department of Neurology, Stanford University School of Medicine, Stanford, CA 94305.

Wanted: Research Subject Volunteers

The Sleep Disorders Research Center is seeking five to ten volunteers aged 55 to 70, with sleep problems, to participate in a study.

The purpose of the experiment is to compare sleeping medications in regard to their effects on daytime alertness.

Research assistant Sue Cohen said participants must be willing to take sleep medication and remain a total of nine nights and eight days in a lab. The session will run from Oct. 18-30. Participants will be compensated.

Insomnia sufferers are particularly sought, Cohen said, while persons with narcolepsy, apnea or other long-term chronic disorders will not be accepted.

For further information, physicians and interested persons should call 325-4697.

Anesthesia staffer 'foolhardy' enough to enjoy busy life

Mary Davis Smith, assistant to the manager of the Medical School's department of anesthesia, believes she works in "one of the better departments," making the commute from her home in south Sunnyvale worthwhile.

"If there were awards to give, my boss would get one," she said.

Her boss, Dick Davis, administrative service manager of the department, thinks she's an ideal employee also. "She does a fine job. She's helped the department a lot, and she's helped me a lot also," he said.

So when Smith asked Davis if she could work half-time following the birth of her first child about a year ago, Davis was more than willing to accommodate her.

As such, Smith spends her mornings doing the accounting for the department. Her work at the office, however, which handles all the administrative, monetary, and non-academic areas for the department, is just one of many activities that fill Smith's days.

One of the third generation of her family born and raised in Redding, Smith didn't move to the Bay Area until 1970.

"I came to visit my brother who works at SRI," she said. "I liked the area and the weather, so I stayed."

She started working at Stanford in another office, but a year later she transferred to the Anesthesia Department. At just about the same time she learned how to ski.

"I went gangbusters," she said, laughing.

And sure enough, two years later she joined Heavenly Valley's ski patrol, which requires superior skill and extensive, rigorous training. "I was one of the first women on the patrol," she said. "But the men watched out for me."

Not that she needs watching out for. Smith said she "pulls her own weight" up on the mountain, where she spends many of her weekends each year, especially during the winter. Long before each season begins, however, Smith joins her fellow patrollers for refresher courses in cardiopulmonary resuscitation (CPR), advanced first aid, mountaineering, and more.



On the ski patrol: "It's not all fun and games. . .we're the first ones up the mountain in the morning and the last ones down at the end of the day."
—Mary Davis Smith

"Its not all fun and games," she said. "Often the weather's not as nice as we'd like it to be. Some people are ungrateful. Regardless, we're the first ones up the mountain in the morning and the last ones down at the end of the day."

But the hardships don't discourage Smith from skiing, nor does the time commitment discourage her from doing other things.

She and her husband, a fellow native of Redding whom she met a few years ago during a ride home to visit family, are renovating a 50-year-old house in which they've lived for two years. They're doing everything, from replacing the plumbing and the windows to rewiring the electric system, by themselves.

"We're learning as we go," she said. "We've always dreamed of redoing a house, but I'll never do it again."

The house is on a quarter acre of land, which gave Smith ample room to grow a vegetable garden. "I grow pumpkins every year," she said. "I used to bring some vegetable into the office too."

When she isn't working on the house or in the garden, Smith works in the house, doing stitchery. "I've made baby quilts for just about all my friends who have had babies," she said.

Smith gave birth last year to her boy, Andrew Tyson, nicknamed 'J.K.'. "When I was pregnant I had amniocentesis so I knew it was going to be a boy," she explained. "Everyone wanted me to have a name for him. I had no idea, so we just started calling him J.K. for 'just kid.' And it stuck."

J.K. already keeps Smith company on bicycle rides around town, and will most likely soon join her in other activities like backpacking, hiking, snow camping, abalone diving, and water skiing.

Often the only woman in her circle of friends who is involved in some of these activities, she explained, "I'm the only one who's foolhardy enough. But I'll attempt anything."

—Shirley Kraus

Parking reminder

Medical Center employees who have mailed in their parking applications but not picked up their stickers are requested to call the parking office (E015) at 497-6678, or to promptly pick up their stickers there.

Ramona Kelley, business manager of the Department of Public Safety, said that stickers will *not* be individually delivered through interdepartmental mail. And last year's stickers have already expired.

Those who have never received an application should go to E015, located across from the Credit Union in the basement of the Hospital, and purchase their parking stickers.

Citation will begin on all lots Tuesday, Oct. 19, Kelley said.

...News Notes...

Ken Jensen is resigning from his position as Controller of the Faculty Practice Program effective Oct. 28, announced Donald B. Tower, FPP executive director.

Jensen will assume the position of director of finance for Children's Hospital at Stanford.

* * * *

Windell K. Smith has been appointed supervisor, regular accounts receivable/follow-up, announced John C. Sidun, manager of regular accounts receivable, patient accounting. Smith comes to Stanford from the University of Missouri, Columbia, where he was supervisor of the insurance department.

He will be working with the patient accounting representatives and financial counselors, and will be assisting with the conversion of the patient accounting system. He can be reached in F06, and his phone number is 497-5511.

* * * *

If one of the paintings on the walls of the Hospital's hallways has caught your eye, you'll have the chance to bid for it at the Palo Alto Art Club Harvest Sale and Auction, Sunday, Oct. 17.

Aside from the paintings, there will be pottery, antiques, and other goods up for sale. A preview is scheduled from 1-2 p.m., and the auction from 2-4 p.m.

* * * *

Tom Rindfleisch, who has been director of SUMEX since its inception in 1974, has been appointed director of the Heuristic Programming Project. He will also become more involved with research. He is currently a member of a new project team working on Advanced AI Architectures.

Ed Pattermann is the new director of SUMEX. He came to Stanford from Lawrence Livermore Labs, where he worked on local area networks. He also worked as head of computing resources in the Texas Instruments AI group.

* * * *

John Silva, of the Transport Service, has retired from the Hospital after 13 years of service. Silva is known to most employees as the friendly courier driver who shuttled passengers back and forth between Hoover Pavilion and the main center.

Silva, who was recently on a leave of absence, received the first "safe driver award," issued by Dr. Thomas Gonda in 1972. In 1977 he was nominated for the Gonda Employee of the Year award. In 1980 he was again nominated, and received a special award and formal congratulations for his ongoing contributions to the Hospital.

* * * *

Hospital employee Marge Smith handled the Nursing Department paychecks and timecards for the last time Oct. 1, ending a 15-year career at SUH. During her tenure the Nursing Department nearly tripled in size and complexity.

Now that she's retired, Smith and her husband Bill will be moving from Palo Alto to a home in Mi-Wuk Village, near Sonora, which they have been building for 16 years.

Dr. Robert Cody, a clinical associate professor of medicine at Stanford, has been named vice chief of staff at Mills Memorial Hospital in San Mateo.

* * * *

Recently appointed director of the regional burn unit at Valley Medical Center in San Jose is Dr. Ronald Sato, an assistant professor of surgery at Stanford.

* * * *

SUH emergency room physician Michael Bresler, clinical assistant professor of surgery (emergency medicine), has been elected secretary of the California Board of Directors of the American College of Emergency Physicians.

* * * *

"Sam Cooper's Capers," an original musical review written and directed by Dr. Bradford Young, a Stanford Medical School alumnus (class of 1945), will be presented at the Bohemian Club in San Francisco, Nov. 13-14.

The review is part of a centennial celebration of the historic Clay and Webster Street site in San Francisco that housed Stanford's medical school until 1959. It is now Pacific Medical Center.

Cooper's Capers humorously looks at the last 100 years of health care, medical education, and other events at Clay and Webster Street—through the eyes of Dr. Elias Samuel Cooper. Dinner and cocktails precede the show.

Ticket information is available from the sponsor, Pacific Medical Foundation, at 931-5528, the public relations department, 563-4321 ext. 2231, or from Stanford's medical alumni office at 497-5064.



Young (right) rehearsing one of his past productions, "Clay Street Blues."

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Three prominent figures in physical therapy, alumnae of Stanford's division themselves, visited a Stanford class of P.T. students last week to address the topic "Historical Perspectives on Physical Therapy." Catherine Worthingham (right), who served as director of Stanford's P.T. division from 1939 to 1946, was responsible for starting the first advanced degree program in P.T. in the country. Lucille Daniels (left) succeeded Worthingham as director of Stanford's division, a position she held for about 25 years. An annual award in her name is given to whomever P.T. students select as having contributed greatly to their education at Stanford. Sarah Semans (center) taught full-time in the Stanford program for about 25 years. She still teaches one course in the division, and has written several articles on the treatment of cerebral palsied children and adult hemiplegia. Incidentally, this week of Oct. 11-17 is Physical Therapy Week in the state.

Average tenured faculty member is now 45.8 years old

continued from page 1

has risen to 114 from 52; in the National Academy of Sciences, to 75 from 38; in the National Academy of Engineering, to 37 from nine; in the National Academy of Education, to nine from four.

During the past decade, the total Pulitzer Prize winners has risen to three from two, Nobel Laureates to 10 from six, and National Medal of Science recipients to 11 from three.

Where several other major universities appoint tenured faculty from outside their institution, Stanford tries to identify, train and promote more of its own young talent, Kennedy noted.

Last year, only 15 percent of the Stanford faculty appointments were made at the tenure rank—85 percent were assistant or nontenured associate professors. The corresponding figures five years ago were 25 percent tenured, 75 percent nontenured; 10 years ago, 13 percent of the appointments were tenured, 87 percent nontenured.

"Searches for nontenured faculty are conducted with great care, and we expect to retain and promote between a third and a half of them," he noted. Among those appointed in 1973-74, for example, 46 percent were retained. Compared to those who received their first appointments in 1963-64, there was a modest drop (to 37 percent from 48 percent) in the proportion retained in non-medical areas, balanced by an increase in the promotion rate for medical faculty.

By making careful appointments of young faculty, "the average quality of the faculty at any given moment is higher," Kennedy said. Nontenured faculty sense they have a solid chance of staying, and become more interested in building durable programs of teaching and research.

In addition, "more of our senior faculty (have) their productive research years at Stanford, with all the advantages that continuity and stable affiliation can confer."

This practice may prove "more and more difficult to sustain," he warned.

"Over the past decade, the slackening of federal support for research and scholarship, the rapid inflation of costs, and the failure of private gift sources to keep up with either, have forced an equilibration of faculty size.

"After two decades of rapid growth, the tenure line faculty at Stanford during the past 10 years has increased at the rate of only about one percent per year. That effect has been augmented by the legislated increase in mandatory retirement age from 65 to 70.

"The result has been a significant and alarming shift in the tenure ratio and in the average age of Stanford faculty. In 1971, we were 42.7 years old and 65 percent of us were tenured. Five years later, the average age was 43.5 and the tenure proportion up to 68 percent. Now the average age stands at 45.8 and the proportion tenured at 72 percent.



"An extrapolation of those trends suggests how very difficult it will be to keep our promotion rate for nontenured faculty above one-third. And the situation will become very much worse if present legislation to uncap mandatory retirement altogether should succeed."

During the past five years, Stanford faculty salaries have "improved somewhat" relative to competing universities "although we need to be concerned about the gradual erosion in compensation for the professoriate relative to other professions," Kennedy said.

Housing requires "continuing attention," he said. The University's coinvestment mortgage program, which now has $12 million out in faculty loans "should soon have its ceiling adjusted to $20 million," he declared.

Besides being responsible for the recruitment, retention and promotion of professors, "the faculty sets the intellectual and social conditions for colleagueship that will determine how attractive an environment this is," he said.

"It is up to us administrators to make sure nothing gets in the way. Stanford has extraordinary advantages—vastly improved resources and environments for scholarly work, a superb student body, a splendid location, and an increasingly powerful tradition of accomplishment."

Typifying Stanford's record of "growing its own" faculty on the Farm, Kennedy joined the University 22 years ago as an assistant professor.

Med Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, OCTOBER 13

School of Medicine Basic Science Research Colloquium: "Development of Functional Synaptic Connections Between Eye and Brain"—Dr. Carla Jo Shatz. 5 p.m., Fairchild Auditorium.

THURSDAY, OCTOBER 14

Dept. of Pharmacology Seminar: "Characterization and Identification of ACTH Receptors"—Dr. J. Ramachandran (UCSF). 4:15 p.m., R358.

FRIDAY, OCTOBER 15

Dept. of Gynecology and Obstetrics Grand Rounds: "Continuous Non-Invasive Measures of Multiple Fetal Blood Gases in Labor"—Dr. Gary Sykes (Oxford). 8 a.m., A336.

Dept. of Pediatrics Grand Rounds: "Group B Streptococcus Infection in the Newborn"—Dr. Anne Yeager. 8 a.m., M106.

Dept. of Physiology: "Renal Glutamine Metabolism"—Prof. Daniel O'Donovan (University College, Galway, Ireland). 5 p.m., M110.

Dept. of Dermatology Medical Science Education Lecture: "Inherited Disorders of the Skin as Studied by Electron Microscopy"—Dr. Ingrun Anton-Lamprecht (University of Heidelberg, W. Germany). 8 a.m., Dermatology Library, R136. Sponsored by The Upjohn Pharmaceutical Company.

OCTOBER 18 THROUGH 22

Second Annual Safety Faire: Sponsored by the Hospital Environmental Health/Safety Committee. See related article in this issue for details.

TUESDAY, OCTOBER 19

Dept. of Biochemistry Colloquium: "Molecular Mechanism for Nitrogen Regulation in Enteric Bacteria"—Dr. Sydney Kustu (UC Davis). Noon, M114.

WEDNESDAY, OCTOBER 20

Dept. of Pathology Basic Research Colloquium: "Cloning of DNA Repair Genes from Caccharomyces Cerevisae"—Dr. Errol Friedberg. 5 p.m., Fairchild Auditorium.

SATURDAY, OCTOBER 23

Fifth Annual Conference on Child Development: sponsored by Dept. of Pediatrics. 8 a.m. till 5 p.m., Kresge Auditorium.

WEDNESDAY, OCTOBER 27

Puberty Education: "What's Happening to Me." Course for boys and girls (ages 10-12) and their parents. First of two sessions, 7:30-8:30 p.m., Children's Hospital at Stanford. For registration and information, call Dr. Paula Duke at 327-4800, ext. 538. Series repeated beginning Wednesday, Nov. 3.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

CIR...

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resulting recommendations will be considered by the trustees at their December meeting.

While unanimous in their basic recommendations, the commission members held "different and incompatible positions on. . .underlying principles and perspectives," the report notes. As one CIR member put it "we are dealing with problems of both theology and finance," as well as education and public relations.

Seven members, mainly students and faculty, argued that the proxy process has "distinct, if often intangible influence on corporate behavior and on public education on the issues involved."

But the large number of shareholder resolutions and the limited time available for their analysis do not permit analysis needed for "an informed and thoughtful judgment."

Careful consideration of allegations is "vital," they added. "Thorough research, thoughtful analysis, and adequate deliberation deserve greater weight than reaching for a large scope of proxy activity."

Letters, visits

Direct representations to management, either by letter or by visit, "tend to yield more information and may provide opportunities for more substantive dialog" than proxy voting, the majority said. "It may produce a greater and more direct impact on corporate management. It may also provoke a more intense reaction. . . .

"If experience is any guide, the actual impact of divestment—other than in terms of publicity—tends to be minimal. This is particularly likely to be the case where—as is true of virtually all of Stanford's holdings—an investor owns only an insignificant fraction of a company's stock.

"Divestment remains the simplest, most direct, and final action to be taken. It clears the university of moral complicity with 'substantial social injury.' It also precludes further effort to alleviate the harm done. It is therefore bound to appeal to those concerned with the standards of a 'clean portfolio,' not to those interested in exerting their influence on behalf of desired change.

"The case for divestment is bound to be strongest where the injury caused is severe, and has been persistent over time, and where efforts to induce change have failed or promise no success."

Besides Dallin, who heads the international relations program, those joining in this view were Profs. W. Bliss Carnochan. English, and Lincoln Moses, statistics; students Wayne E. Cooper, E. Glynn O'Donnell, and Kenneth E. Perez; and staff member Ellen Oppenheim. University Treasurer Rodney H. Adams, an ex-officio, nonvoting member, also agreed.

Adams also joined with three alumni—Peter S. Bing, former trustee president, James Ware and Marian Zentmyer—in a minority statement favoring the elimination of proxy voting by Stanford and substituting "very selective divestment in those unusual cases in which continued corporate actions result in substantial social injury.

"We believe proxy voting has unwisely entangled the university in social issues on which it is inappropriate to take an institutional position, and has required Stanford to participate in a proxy process that is both political in nature and ineffective in result. . . .

"Moral and political issues are not matters for institutional doctrine established in the trustee board room, but rather the subjects for individual study and expression. Trustees must remove any obstacle to free debate, no matter how small, and certainly must avoid creating one.

"They must particularly protect those who, due to lack of tenure or firm base of support, may hesitate to express a view contrary to established university doctrine.

"An official trustee position on extraneous political and social matters may have a chilling effect on the very expression of views by faculty and students that the university is organized to protect. Such a risk, however small, is unacceptable."

The majority report, in contrast, said that while the university should strive to avoid taking political positions "we find it entirely proper for the university to acknowledge that it has a social responsibility—and that it must practice it—which flows from its moral foundations.

"We find the trustees' choice of 'substantial social injury' a wise criterion to apply to corporate behavior; whatever the problems in its application, it provides a uniform foundation which is ethically unassailable and as remote as possible from political partisanship."

Considering a response to shareholder proposals, the minority said, the CIR should focus on the actions of a corporation, rather than the social importance of the issue. "The CIR should only evaluate charges that a company has willfully or knowingly, and directly, caused substantial social injury and failed to take any action to eliminate or reduce it."

In cases where this is shown, "representations to management or nonbinding votes by less than 10 percent of the stockholders are not likely to be effective," the minority said.

"Divestiture itself, if carefully carried out, will not violate fiduciary responsibility or harm the university." Where this was once viewed as the ultimate shareholder weapon against management, "as it turned out, in those instances in which universities did divest, even with publicity, there was no effect on either the price of the stock or the corporate practice in question.

Use of divestiture

"Stanford should not use divestiture as a political tool intended to change corporate behavior, but rather as a means of eliminating an investment that no longer meets the university's standards of profitability, ethics, etc.

"Stanford owns less than one one-half of one percent of any corporation in which it holds stock." The portfolio balance could be preserved simply by replacing the stock with a more responsible company in the same industrial group.

"Divestiture without publicity would not make Stanford legally liable for intentionally hurting a corporation, nor would it allow the university's investing practices to be used for partisan social purposes," the minority said.

Oppenheim and fellow staff members Iris Brest and Larry N. Horton, joined in a second minority statement that the commision's primary function should be "screening putative instances of substantial social injury."

They said the proposed procedures were well designed "to select the few situations calling for fuller investigation that may lead to recommendations for action. . . .

"The activity of the commission will be limited to issues truly involving substantial social injury. . .not a forum for consideration of the popular political and social issues of the day."

University Trustee Frank Lodato served ex officio on the commission, while Stephen Peeps provided staff support. Prof. Otis Pease of the University of Washington History Department, a former Stanford faculty member, now heads the Trustee Special Committee on Investment Responsibility, which will review the commission's recommendations.

During the moratorium, the commission held 16 meetings, including one with six former heads of the commission. It reviewed extensive literature on investment responsibility, including *The Ethical Investor*by John G. Simon, Charles W. Powers, and Jon F. Gunnemann and policy documents produced on other university campuses in the 1970s.

Despite repeated advertisements in three campus publications soliciting opinions, expressions of concern or questions from the campus community, it received no responses.

The Board of Trustees adopted an initial statement on investment responsibility in 1971 and a revised document in 1977. That same year, 294 students were arrested in a peaceful protest against investments in South Africa, the first major demonstration of its kind on that issue nationally.

The main portion of the commission's recommendations will be published in *Campus Report*, the University's weekly newspaper for faculty and staff members, on Oct. 13.



STANFORD STAFFERS' 1982-83 officers are (l. to r.) bottom, Jean McMillan of Chemical Engineering, first vice-president; President Betty Hummer of the Anthropology Department; top, Medical Center staff member Lynn Halpern, recording secretary; and Elizabeth Rafferty of Political Science, treasurer. The Staffers, with monthly lunchtime meetings on Tuesday (usually), is open to all Stanford employees. A variety of activities is planned for meetings this year—speakers, campus tours, and even aerobic dancing, which is happening today (Oct. 13) in a rare departure from the Tuesday meeting day.

Commission says Stanford usually should not vote on shareholder proxies

Following is a report of the Commission on Investment Responsibility, Sept. 15, 1982:

Introduction

On September 15, 1981, the Board of Trustees modified the charter of the Commission on Investment Responsibility (CIR) to permit a one-year moratorium on its normal consideration of shareholder resolutions, and to have it under take instead a "comprehensive review. . .of the goals, procedures, and mechanisms for ethical investment by the university." The present report is the result of this review, conducted during the past academic year.

Recommendations

The Commission reaffirms Stanford's commitment to be an ethical and responsible investor; believing that the University should do only that which it can do well, the Commission favors limiting the scope of its consideration of shareholder resolutions to a number on which informed and responsible judgments can be made; and submits the following recommendations:

1. The Commission on Investment Responsibility shall continue in existence, with its composition remaining as now defined. Within the framework of its charter, the CIR shall have sole determination over its workload and agenda.

2. The CIR shall consider only instances in which there are allegations of substantial social injury resulting from corporate behavior. The CIR may consider written allegations against any firm in which Stanford has long-term investments, whether from shareholder resolutions or from any other source.

3. Before any recommendation may be submitted by the CIR to the Trustees, the Commission must have gone through the following decision-process: 1) a screening process to determine that the instance being considered is one of substantial social injury and that the Commission wishes to pursue it further. An affirmative vote of the majority, a quorum being present, will be required for a matter to be considered further; and 2) a matter that has passed the screening vote may be considered by the CIR. In this case, after such research, study, and deliberation as is deemed appropriate by the CIR, a recommendation can be made to the Trustees, provided that no recommendation can be made by the CIR unless it is approved by two-thirds of the entire voting membership of the Commission. Recommendations may call for voting Stanford's shares in shareholder resolutions, making representation to management, divestment of securities, or other action as the CIR deems appropriate.

4. In the absence of a recommendation by the CIR, the Trustees shall normally not vote any shareholder proxy involving social issues.

Peter S. Bing, alumnus
Iris Brest, University staff
W. Bliss Carnochan, faculty
Wayne E. Cooper, student
Alexander Dallin, faculty *chair*
Larry N. Horton, University staff
Lincoln Moses, faculty
E. Glynn O'Donnell, student
Ellen Oppenheim, University staff
Kenneth E. Perez, student
James Ware, alumnus
Marian E. Zentmyer, alumna
Rodney H. Adams, treasurer *ex officio*
Frank Lodato, University trustee *ex officio*
Stephen Peeps, commission staff

Statements by Commission Members

Introduction

The members of this Commission adopted the recommendations contained in the body of this Report by unanimous vote. While we are gratified by this result, it must not conceal the fact that members of the Commission came to occupy different and incompatible positions on a number of underlying principles and perspectives. We believe that these differences are indicative of the complexities involved in coming to grips with the problems of investor responsibility. As one member of the CIR put it, we are here dealing with problems of both theology and finance (and, it might be added, of education and public relations as well). We are challenged to take positions on the social responsibility of the university, on the application of ethics to shareholder resolutions, on the propriety of symbolic action, and many difficult problems more.

Under the circumstances, it is entirely natural that members of the University community would disagree. Indeed, we are grateful that Stanford provides a hospitable environment in which to air such competing visions of the university.

Wishing to convey something of the range of alternative views and the richness of the discussions this past year, the CIR decided that it was preferable to have its members express their several points of view in signed statements, rather than manufacture a single, bland and necessarily inadequate "compromise" document.

Statement I

I. The University: Neutrality and Morality

Is it proper or necessary for the university to act as an ethical investor? How to answer this question will depend in large part on our view of the nature of the university and its social role. Enough has been said and written on this subject in recent years to recognize that different positions regarding it may legitimately be held.

The place of the university in society has changed remarkably over the course of this century. For better or for worse, the contemporary American university has become a major institution interacting in a great variety of ways with society and other major institutions—including those of government and the corporate worlds. It has moved irreversibly (to quote the title of a superb analysis by a Stanford alumnus) "beyond the ivory tower."[1]

Yet recognition of this trend does not provide the answer regarding the university's social responsibility—the answer to the dilemmas inherent in the tension of town and gown—in Kingman Brewster's apt phrase, the tension "between the imperative of university neutrality and the imperative of university morality" in regard to the society within which it operates.

On the one hand, institutional neutrality has properly been seen as a precondition for the practice of academic freedom by members of the university community. On the other hand, the claim to university autonomy from the society at large has rung more and more hollow as campuses have accepted government funds for training, research, and construction; have abolished ROTC; have practiced affirmative action; have invested in scores of corporations; have solicited funds from individuals, foundations, and companies; have been landlords, employers, and tax payers.

Education and research must remain the primary functions of the University. It is by promoting these purposes that it can best serve society. Training and research have both benefited from the protected and privileged status that society has (often) granted the university.

The dangers and costs of converting the campus into a service station for outside interests —whatever their nature—have been amply recognized. But we do not believe that the university's pursuit of socially responsible behavior and, in particular, the unavoidable exercise of its obligations as a responsive and ethical investor requires a forfeit of the essential neutrality of the university environment.

Academic traditionalists seeking maximum detachment from the world beyond our gates and social activists striving to marshal the university's resources on behalf of social change—as well as those who occupy the many intermediate positions—have competing visions of the university, which reflect different values, choices, and trade-offs.

While we acknowledge that (except in most unusual circumstances) the university should strive to avoid taking political positions, we do find it entirely proper for the university to acknowledge that it has a social responsibility—and that it must practice it—which flows from its moral foundations. Some of us find that responsibility both essential in its own right and also important as part of the values we would wish to see shared by the university community. The principle and the practice of ethical investment responsibility follow from this approach.

And while we recognize the possibility of confusion at the margins, the distinction between ethical and political choices is clear: we find the Trustees' choice of "substantial social injury" a wise criterion to apply to corporate behavior; whatever the problems in its application, it provides a uniform foundation which is ethically unassailable and as remote as possible from political partisanship.

Compared to individual owners of stock, the trustees of a university are under obvious constraints in the use of the institution's resources. The purposes to which investments may be put are circumscribed by the primacy of fiduciary responsibilities; by law, the trustees must follow what has been called the "prudent man rule" and its aim of preserving for future generations the assets of the institution. Nonetheless we are satisfied that competent legal opinion has assured the University that it is proper for the Trustees to give independent weight to ethical considerations in corporate behavior, both in shaping their investment policies and in voting shareholder resolutions.

We do not share the view that the University has no business involving itself in corporate management by voting proxies (lest it open itself to similar scrutiny and involvement by corporate officers); not only is this argument logically faulty, but it assumes a segregation between the university and the world around it which, if it ever existed, has passed.

And insofar as the university has entered the marketplace in quest of profit, to that extent it can no longer lay claim to innocence. Its participation, like any other investor's, in the regular process of communicating with management is a necessary and legitimate outgrowth of its activity in the marketplace. To refuse to vote proxy resolutions is as much of a statement as voting them.

If there are costs involved in such an orientation, they strike us as much less substantial than the costs of the opposite course, namely, of the University's turning its back on questions of substantial social injury ostensibly caused by corporations in which the University has long-term investments. As a matter of its own integrity, such a position would be intolerable.

We are thus comfortable with a reaffirmation of Stanford's commitment to be an ethical and responsible investor.

II. The University and Voting Shareholder Proxies

The 1970s saw an unprecedented growth of citizen concern with the effects of corporate behavior on social issues. One form this interest has taken is what has been labelled "the resurgence of shareholder participation."[2]

Non-profit institutions have played a particularly active part in introducing resolutions to be voted on, if not at stockholder meetings, then by proxies mailed to all stockholders.[3] Virtually all private universities have moved to establish procedures to regularize their responses to such shareholder proxies. Stanford's policy was set by the 1971 and 1977 Statements reproduced in an enclosure to this Report.

Why should we vote shareholder proxies? We find that essentially the motive is a moral one. We are not impressed by the assertions of the futility of the enterprise. First, we do not believe that the evidence concerning its ineffectiveness is so clear or so sweeping as some critics of proxy-voting have averred it to be. On the contrary, it would appear that the process has had a distinct, if often intangible, influence on corporate behavior and on public education on the issues involved.[4] And second, a calculation of effectiveness of Stanford's participation is ultimately not germane to the determination of university policy.

To be sure, there are differences among those who favor the application of such a moral criterion.

Some, focusing on the impact of ethical investment within the university community, would be primarily concerned 1) with the need for Stanford to have (and to appear to have) "clean hands": not be tainted by a putative complicity in inflicting "substantial social injury"; or 2) with the educational impact of applied social concerns and with setting an example.

Others, on the contrary, would argue that the recognition of such a university-centered orientation must not exclude objectives external to the university (such as the wish to see the safe disposal of hazardous wastes or an improvement in racial conditions in South Africa). The latter group might argue that, since the university inevitably has an impact on the world beyond its gates, it has not only the right but an obligation to be concerned with the impact of its presence—including its ownership and investments—beyond the campus.

Normally, we believe, the two lines of argument just outlined are not mutually exclusive. We might think of the internal focus as constituting a minimum standard and the external one as a more comprehensive criterion, in both instances validating continued concern with corporate behavior and share holder resolutions relating to it.

There is no legal responsibility associated with ownership of stock that requires shareholders to vote their proxies. After extensive discussion, we have concluded that there should be a predilection to consider cases of alleged "substantial social injury" (such as those raised in certain share holder resolutions) but not an obligation to vote all proxies involving such allegations.

The major reason for the distinction between considering and voting is a practical one. The experience of the last several years shows clearly that the large number of shareholder resolutions, and the limited time in which they can be considered prior to voting, do not permit the CIR to research and analyze them well enough to make an informed and thoughtful judg ment, and accordingly to make a timely recommendation to the Trustees for the Board to consider. (Indeed, it was this circumstance that last year's CIR stressed in advocating a moratorium to review the entire process.)

We believe that careful consideration of allegations is vital here, as it must be in other parts of the University's enterprise. As a rule, we believe, the requirements of thorough research, thoughtful analysis, and adequate deliberation deserve greater weight than reaching for a large scope of proxy activity.[5]

The CIR should therefore not be bound to complete its consideration of particular allegations, nor to decide upon its response to questions of inves tor responsibility, by a particular deadline if adequate consideration has not yet been completed. It should be obliged neither to react within the limited time available for proxy consideration, nor to wait until the annual cycle repeats itself, if it wishes to make a response of its own. It is self- evident that, given the integrity of those serving on the Commission, such a procedure will not (as it must not) lend itself to procrastination nor to the evasion of difficult decisions.

We devoted some effort to elucidating the notion of "substantial social injury": we could not improve on the formula. The concept proved to be inherently elusive; and because the notion of hazard—a probabilistic construct—is sometimes central, it seems necessary to accept some ambiguity about it. (The thought-experiment of a nuclear plant being deliberately sited on a geological fault is illuminating: substantial social injury may be involved, although if an earthquake never comes there will never be any actual injury.)

We explored the possibility of clarifying the need for rigor and adequacy of evidence required for a finding of corporate responsibility for substantial social injury. We conclude, on balance, that while there is a need for conclusive evidence, the CIR's deliberations cannot take the form of judicial proceedings and the Commission should limit itself to customary academic canons of evidence.

More specifically, four questions have been asked in this connection. 1) Must the injury in question have occurred or may

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it be prospective? While the serious likelihood of a future occurrence obviously needs to be shown, it would make no sense to require substantial harm to have actually been done rather than to act to forestall it (thus it would be sensless to require the occurrence of a nuclear explosion rather than to act to prevent it). 2) Must the injury be intentional or may it be accidental? While the case is clearest where intent is manifest, the concepts of "criminal negligence" and "sins of omission" suggest that accidental occurrences need not always be ruled out, especially if the evidence prompts a finding that a pattern of neglect or recklessness was present. 3) Must the injury be inflicted on a collectivity or does a single individual victimized provide a sufficient cause for consid eration? The number of casualties scarcely determines the judgment: a serious violation of regulations, say, governing the disposal of radioactive wastes may not have caused a single victim (or at least none as yet so identi fied), without thereby reducing the company's culpability. And, 4) must "substantial social injury" be the direct consequence of corporate behavior or may it include indirect participation and passive acquiescence in a system found to be socially injurious? This is a bothersome question, as controversy over the role of U.S. corporations in South Africa illustrates.

It can be argued that passive acquiescence may materially nourish and prolong the maintenance of an unjust system. We recognize that opinions may properly differ on this question, and we believe that direct responsibility constitutes a minimum ethical standard, whereas indirect complicity sets a higher one. Future CIRs will wish to examine these questions further.

III. Other Activities

a. Educational Effects and Activities. Some of us believe partici pation in the proxy process and in the consideration of proxies by the CIR provides educational benefits to those in the university community who take part and to those who observe.

It is assuredly part of the business of education to help people engage in ethical judgments. The analysis of the issues raised in the proxies and the evaluation of alternative remedies, where indicated, are instructive in weighing different response strategies when dealing with complex issues.

It is beyond the scope of this Commission's function to make recommendations relating to curricular or extracurricular activities. As a matter of principle the CIR must not urge the Trustees to promote mechanisms that might impinge on the freedom of the University, and its faculty, to set curriculum.

However, most of us believe that it is proper for the CIR to encourage and facilitate the gathering of data, and their analysis and interpretation by members of the University community. For such a purpose future Commissions may wish to associate student interns with the CIR, to have members of the CIR supervise and direct student research (for credit, if appropriate), and to assist appropriate campus organizations (ASSU, SWOPSI, and others) if they wish to sponsor informational meetings, debates, and other essentially educational activities related to the subject of the CIR's consideration.

b. Other Action Strategies. Past experience. both at and on other campuses, has focused heavily on shareholder resolutions as the vehicle to express, when appropriate, concern with or disapproval of corporate behavior. It may well be that this experience has unduly constricted our perspective on the possible range of alternative action strategies. It will be proper to leave to future Commissions the choice among such actions to recommend to the Trustees.

Experience suggests that representations to management, with or without proxy-voting, by either letter or visit, tend to yield more information, and may provide opportunities for more substantive dialogue about the ostensible injury and possible methods of alleviating it. As a more active approach than proxy-voting, it may produce a greater and more direct impact on corporate management. It may also provoke a more intense reaction from management.

Finally, divestment has been envisaged as an important response available to stockholders, ever since investment responsibility emerged as a subject of campus debate—initially, over South Africa. Those favoring divestment saw it as the most effective, and dramatic, action calculated to influence corporate behavior and public opinion. Those opposing it saw divestment as an example of irresponsibility in that the stock sold in such an instance would be pur chased by another investor who was, at best, indifferent to the presumably reprehensible corporate activity that had led to divestment.

If experience to date is any guide, the actual impact of divestment (other than in terms of publicity) tends to be minimal. This is particularly likely to be the case where (as is true of virtually all of Stanford's holdings) an investor owns only an insignificant fraction of a company's stock.

Divestment remains the simplest, most direct, and final action to be taken. It clears the university of moral complicity with "substantial social injury." It also precludes all further effort to alleviate the harm done. It is therefore bound to appeal to those concerned with the standard of a "clean portfolio," not to those interested in exerting their influence on behalf of desired change.

We believe that there is merit in both approaches and we recommend that future CIRs, rather than settling on either course of action, determine in each situation in which investor action is warranted, what course appears to be the most promising. The case for divestment is bound to be strongest where the injury caused is severe, and has been persistent over time, and where efforts to induce change have failed or promise no success.

W. Bliss Carnochan
Wayne E. Cooper #
Alexander Dallin
Lincoln Moses
E. Glynn O'Donnell
Ellen Oppenheim *
Kenneth E. Perez
Rodney H. Adams **

*Ellen Oppenheim provides the following comment:

'I can support and endorse both Statements I and III, with the caveat that I find their respective prescriptions of "a predilection to consider cases of alleged substantial social injury" and selection for consideration of "only those cases in which the allegations, if true, are morally intolerable" to be so loose as to allow too many issues into consideration (Statement I), and so rigorous as to cause some significant issues of substantial social injury to be dropped without consideration (Statement III). My personal preference with regard to the circumstances in which the CIR should investigate allegations of substantial social injury falls somewhere between these two positions.'

**Rodney H. Adams also endorses Statement II.

Wayne Cooper approved a draft of this statement but could not be reached for approval of the final text.

NOTES

1. Derek Bok, *Beyond the Ivory Tower: Social Responsibilities in the Modern University* (Harvard University Press, 1982).

2. David Vogel, *Lobbying the Corporation: Citizen Challenges to Business Authority* (Basic Books, 1978), esp. ch. 3. The classic discussion is John G. Simon, Charles W. Powers, and Jon P. Gunnemann, *The Ethical Investor: Universities and Corporate Responsibility* (Yale University Press, 1972). For a series of case studies, see e.g., S. Prakash Sethi, *Up Against the Corporate Wall: Modern Corporations and Social Issues of the Seventies* (Prentice Hall, 1971, 1977).

3. The Investor Responsibility Research Center (IRRC) provides an annual compilation of "How Institutions Voted on Shareholder Resolutions" in a given year.

4. Instances of positive impact include the infant formula controversy; the adoption of the so-called Sullivan Principles by a number of corporations doing business in South Africa; a change of policy on giving loans to South Africa by banking institutions. Others support the record of proxies as "keeping their corporate feet to the fire" and as vehicles of public educa tion. See also Bok, *op. cit.*, and Vogel, *op. cit.*

5. We are agreed that once a security passes from Stanford's ownership, so does end our concern for any proxy tied to that security. Most of us are also agreed that the initiation of proxy resolution by the University, while not unthinkable, exceeds any obligations the University may have as a shareholder and, moreover, would be apt to raise a more serious challenge to the maintenance of institutional neutrality.



6. It goes without saying that the taking of positions as expressed in proxy- voting in no sense pre-empts or circumscribes the liberty of any member of the University community to act in a fashion contrary to that taken by the University.

7. We are here leaving out of consideration the legality of divestiture action taken by fiduciaries. While the fiduciary responsibilities of univer sity trustees do permit them to give independent weight to instances of "substantial social injury," they may not buy or sell stock in furtherance of a particular social or political philosophy. This rule also precludes giving serious consideration to the suggestion that Stanford (or other institutions) "reward" certain companies for praiseworthy performance in areas of controver sial social policy, by acquiring their stock.

STATEMENT II

Introduction

The members of this year's CIR had remarkable unanimity on the ethical and moral responsibilities of the university as an investor. No one wished to see Stanford automatically vote shareholder ballots in favor of management, without a thorough consideration of the proposals they contain.

The members disagreed, however, on the best course of action in those cases in which a corporation causes substantial social injury. That disagree ment, and its expression in this and other commentaries, underscores the importance of the university as a neutral forum for debate,.and the need to avoid any actions that might compromise the freedom it permits.

We support the Commission's recommendations because they take a step in the right direction by requiring a more careful scrutiny of a much smaller number of proxy issues. We would, however, have supported elimination of proxy voting, and the substitution instead of a very selective divestment in those unusual cases in which continued corporate actions result in substantial social injury. We believe proxy voting has unwisely entangled the university in social issues on which it is inappropriate to take an *institutional* position, and has required Stanford to participate in a proxy process that is both political in nature and ineffective in result. The Trustees' goal for the university, as an ethical investor, should not be to influence corporate behavior as a means to a perceived social good. Rather, it should be to insure that Stanford does not profit from irresponsible actions, either of its own or of corporations in which it has invested. Considered divestiture accomplishes that objective.

The Nature of the University and the Role of the Trustees

The *raison d'etre* of the university is teaching and research. This is best accomplished in a neutral forum in which students and faculty may openly examine conflicting views, and bring their full talents to bear in making choices among the alternatives. Faculty and students are often at the cutting edge of important debates on political and social issues, and are free to engage in action, as well as expression, in support of their convictions as individuals or as members of voluntary associations.

The university, in which all this can take place, is a unique institu tional form in our society; it is also a highly vulnerable one. It has a minimal hierarchy of authority, and does not present a single, coherent and forceful view on any issue. Academic freedom is granted by society to a uni versity on the understanding that, as an institution, it is not partisan, although individuals within it are free to espouse any cause, Under this social contract, and partly in consideration for its neutrality on political and social matters, members of the university are exempted from outside con trol, and the university itself is granted unique privileges (such as special tax exempt status) and is accorded widespread respect and support.

Preservation of the university, and its character as a neutral forum, is entrusted to Trustees. Their fiduciary responsibility requires them to pro tect the character of the institution and, at the same time, preserve it in perpetuity for future generations. As a minimum, Trustees must:

Exercise prudence in the management of the university's resources and use them only for purposes related to the university's stated mission. Trustees have a legal responsibility to maximize the financial return on the university endowment. They may not buy or sell in order to further a political or social philosophy.

Prevent outside influence, whether political or financial, that would compromise the internal freedoms for faculty and students.

Preserve the integrity of the academic process. Accordingly, the Trustees do not interfere with the determination of student admissions (who is taught), faculty selection and promotion (who does the teaching and research), and curriculum development (what is taught). Equally, the Trustees do not take institutional positions on political or social matters unless they directly affect the educational or research mission of the university. They do not, in the name of the university, participate in any of the political activities in which students and faculty are free to engage as individuals.

While the Trustees are compelled by the university's academic mission to remain neutral on political and social issues, they

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university's conduct that are socially responsible. Trustees would not knowingly make an investment in a company which flagrantly violates the law, or causes substantial social injury in stubborn disregard of the welfare of society.

In this regard, university policy states that "When the Trustees judge that corporate policies or prac tices cause substantial social injury they, as responsible and ethical investors, shall give independent weight to this factor . . ." Such considera tions take place each year when the Trustees, as shareholders of corporations in which the university has permanent endowment investments, receive their ballots on questions of corporate management.

The Nature of the Proxy Process

Annual meetings of corporations provide to each shareholder, in proportion to the size of his investment in the company, an opportunity to approve or disapprove the activities of the corporation's management by voting a series of proposals on a stockholders ballot. The overwhelming proportion of items submitted to the stockholders for ratification are placed there by the corporation's management and relate to normal business activities. Only a very small percentage of stockholders attend annual meetings. Instead, most endorse their proxies in favor of management, giving it the right to represent them and vote their shares as management has recommended.

In recent years, the opportunity afforded a shareholder to vote on matters of corporate management has been used by those concerned about the social effects of corporate actions. In addition to voting, they have also placed upon the ballot resolutions on broad social questions for which they believe changes in corporate behavior would be helpful. These resolutions are constructed of two main parts: a series of "Whereas" clauses in which the social issue is delineated and allegations are made as to the actions of the corporation that cause or exacerbate the social problem; and a "Therefore" section that proposes changes by the corporation that the proponent of the resolution believes will ameliorate or elimate the social problem.

Shareholder-originated resolutions must be approved by the Securities & Exchange Commission (SEC) to get on the ballot. Part of that approval process involves presentation of the shareholder proposal to management. If manage ment agrees with the proposal, and takes steps in conformity with it, the request to place it on the ballot is withdrawn or not approved. Thus a share holder proposal that does appear on the ballot is opposed by management, and management is fully aware of the allegations it contains.

Shareholder-originated proposals relating to social issues usually receive between three and eight percent of the shareholders' votes. A handful have received as much as ten percent. In any event, the resolutions are advisory to management and non-binding.

The proxy process itself has characteristics that are particularly disavantageous to an academic community:

Ballots, as a medium for expression of opinion, must condense any question to be voted upon, and restrict the solicited opinion to a "yes" or "no." Complex and controversial social issues, such as nuclear power or repression of different types in different countries, cannot be reduced to simple questions on which a meaningful yes-or-no vote can be taken. Similarly, no action by an individual corporation can correct a broad social problem in its various manifestations throughout the world. It is particularly inappropriate for an academic institution to align itself with simplistic judgments.

Recognized experts disagree on both the nature of, and the solutions to, complex social problems. A proxy vote must side, without qualification, with one particular view point. Thus by taking an institutional position through widely publicized proxy voting, Stanford reduces or precludes the opportunity for knowledgeable individuals within the institution to contribute their opinions and data to the public debate.

There is insufficient time to understand the questions and evaluate the proposed solutions. Shareholder proposals are made available to stock holders only a few weeks before the annual meeting at which time they must be voted upon. Thorough and responsible consideration is an indispensable element of academic process. The superficial investigation and hasty conclusions necessitated by the timing of proxy votes oblige Stanford to make judgements based on inadequate study.

In addition to the logistical problems, proxy voting establishes a *defacto* university position on all sorts of social issues unrelated to education in general or Stanford in particular. Precedent is created by Stanford's accumulated voting record and is, in fact, referred to in its own letters to corporate management justifying its vote in certain instances (e.g., letter to International Harvester dated February 26, 1981). And the votes themselves, although cast in the name of the Trustees, are viewed as representing a con sensus of the university community.

Through the CIR, Trustees are advised by a broadly representative, campus-based group. Trustees explain, by means of a public statement that is printed in the *Daily*, any vote that deviates from a recommendation of the CIR. The understandable tendency to view a vote in Stanford's name as representing more than the Trustees' view is reinforced by the representative way in which advice on proxy votes is conveyed to the Trustees.

Proxy Voting and the University

The voting of shareholder ballots as Stanford has done for the past five years, and the publicity releases that accompany each have a duty to establish policies and practices with respect to the vote, are intended to influence other institutions in society (in this case corporations) on issues unrelated to Stanford's basic purposes of teaching and research. The proxy process thus allows the university to be used for political purpose. This is wrong, even if the political purpose is a good one. Such actions are incon sistent with, and threatening to, the basic construct of the university as a neutral forum. People do not come together in a university for political pur poses, as the same individuals may do in other organizations. And the individuals within a university do not give to the Trustees or to the university officers a proxy to express their political or moral views. When the university takes an institutional political position, it abuses the relationship between the university and each of the individuals within it. It implicitly speaks on behalf of all members of the community, including those who don't share those views. Further, it removes from the university its cloak of nonpartisanship, and invites other institutions in society in turn to attempt to exercise influence over the university, and to seek changes in those aspects of university behavior thay have tolerated up until now.

Moral and political issues are not matters for institutional doctrine established in the Trustee board room, but rather the subjects for individual study and expression. Trustees must remove any obstacle to free debate, no matter how small, and certainly must avoid creating one. They must particularly protect those who, due to a lack of tenure or a firm base of support, may hesitate to express a view contrary to established university doctrine. An official Trustee position on extraneous, political and social matters may have a chilling effect on the very expression of views by faculty and students that the university is organized to protect. Such a risk, however small is unacceptable.

There is little similarity between the actions which may be taken by individual owners of securities, and those available to Trustees as owners of the university's stock. Individuals are free to purchase, sell or vote their shares arbitrarily, constrained only by the dictates of their personal beliefs and values. By contrast, University Trustees must not only act prudently, they must assure that their personal views give way to their overriding duty to preserve institutional neutrality.

An Alternative to Voting Proxies

Stanford, as an investor, must conduct itself in ways that are consistent with the moral standards it applies to the rest of its activities. Continued investment in an enterprise that flagrantly violates the law, or stubbornly ignores public policy, and thus causes substantial social injury, constitutes an implicit endorsement by the university of those policies. That is morally intolerable.

A stern test should be imposed for making such a judgment about the conduct of a corporation in which Stanford invests. Once that judgment is reached, Stanford's response should be chosen for its consistency with the internal standards of the university, and not for political reasons of influencing corporate behavior or taking public postures. If the standards and process of judgment have been rigorous, and the allegations against a corporation are sustained, divestiture will be the appropriate action in almost all cases.

In deciding how to respond to shareholder proposals, the focus of the CIR should be on the actions of the corporation, rather than the social importance of the issue to which they apply. The CIR should only evaluate charges that a company has willfully or knowingly, and directly, caused substantial social injury, and failed to take any action to eliminate or reduce it. Although such a rigorous standard might at first seem to preclude virtually any CIR activity, this is not the case.

The very fact that a charge appears as a stockholder resolution means that management is aware of the concern about its corporate activity, has discussed the issue with the SEC (and probably with the resolution's proponents as well), and has decided to oppose it. Management's opposition may arise from a disagreement about the accuracy of the charges, the nature of the proposed remedy, or both. But in any event, management cannot be unaware of either its own actions or the charges brought against them.

The addition criterion that the corporation's actions directly cause substantial social injury eliminates the speculative question of secondary effects. Prior CIRs have wrestled with this question, especially in cases in which beneficial products are put to a bad use. But any product can be used for good or evil, and therefore evaluation of substantial social injury cannot be based on the use to which a corporation's product may be put by a purchaser. Rather, it is the conduct of a corporation, related or unrelated to the use of its products, that should be the subject of the CIR's judgment.

A temporal sense of the criterion "directly" raises a more difficult prospect: the likelihood that a corporate practice will ultimately lead to substantial social injury although it has not yet done so. It is difficult to evaluate the potential risk of any social injury. It is virtually impossible to do so when all of the available data, and the experts who produce them, are themselves in disagreement. Still, we cannot ignore corporate behavior that the CIR believes will *inevitably* cause substantial social injury, and perceived inevitability would meet the tests proposed here.

All of these criteria should be applied to the *ongoing* behavior of a corporation. Even though some charges may be based on a single episode, such as a spill of toxic chemicals, a company should be evaluated by what it does to ameliorate the damage, and what changes it makes in policy and practice to avoid a repetition. Ongoing behavior cannot, by definition, be assessed at only one point in time (although a retrospective look may go a long way). Relieving future CIR from the time constraints of a quick decision (in order to vote a proxy by a corporation's annual meeting) will enable it to evaluate a company's behavior over a reasonable time and, if the charges against the corporation are sustained, then to take appropriate action without waiting for another year's cycle of proxy voting.

Stanford's presumption should be that the appropriate action will be divestiture. If a company is fully aware that its practices or policies cause, or will inevitably cause, substantial social injury, if it does not make changes to ameliorate or eliminate that injury, and if management has opposed shareholder proposals that would do so, then representations to management or non-binding votes by less than ten percent of the stockholders are not likely to be effective. In unusual circumstances, Stanford might wish to postpone divestiture until other means were tried to change corporate practice. If there were a lack of clarity about an actual corporate policy, if Stanford had data unknown to corporate management, if the corporate action in question were not an ongoing practice, or if it resulted from sudden changes in technology, regulation etc., Stanford might wish to make an additional effort at correction. But Stanford should not continue to profit from ownership of a company that causes substantial social injury while predictably ineffective means are attempted to change its recalcitrant corporate management.

Divestiture itself, if carefully carried out, will not violate fiduciary responsibility or harm the university. Five years ago, divestiture (or the threat of it) was seen as the ultimate shareholder weapon against corporate management. The sale of stock by a prominent institution, accompanied by widespread publicity, was expected to induce other investors to do likewise, and thus drive down the price of the stock. It was thought that in order to avoid this, corporate management would change corporate practice. As it turned out, in those instances in which universities did divest, even with publicity, there was no effect on either the price of the stock or the corporate practice in question.

Stanford should not use divestiture as a political tool intended to change corporate behavior, but rather as a means of eliminating an investment that no longer meets the university's standards of profitability, ethics etc. Stanford owns less than one-half of one percent of any corporation in which it has stock. The daily volume of trading is often more than Stanford's total investment, and gradual divestiture would therefore not affect the market price or the value of our portfolio. Stanford could replace the stock with that of a more responsible company in the same industrial group, and preserve the portfolio balance. And divestiture without publicity would not make Stanford legally liable for intentionally hurting a corporation, nor would it allow the university's investing practices to be used for partisan social purposes.

If all of the facts on which Stanford presently votes a proxy against management were known at the time a stock was considered for purchase, that purchase would not have been made. Confirmed charges of substantial social injury to which a corporation does not make adequate response are, in and of themselves, sufficient reason for the university not to own that stock.

Peter S. Bing
James Ware
Marian E. Zentmyer
Rodney H. Adams

*Rodney H. Adams also endorses Statement I

STATEMENT III

The essential purposes of Stanford University are teaching and research. Ancillary activities of the University are either necessary (practically, legally, and/or morally), or optional. For example, many of the administrative activities of the University are perceived as necessary to its functioning; compliance with applicable statutory and regulatory requirements of the Federal and State governments is legally necessary, and adherence to internal policies of non-discrimination, even when they go beyond legal requirements, is morally required, in the University's view, of any individual or institutional functioning in society. Optional activities, such as providing housing for faculty, maintaining a student union, holding a license to operate an educational FM radio station, and maintaining a department of police services, should be engaged in only when they contribute to and further the essential purposes of the University.

We believe that to a certain extent, the exercise of investment responsibility is morally required of us as it is of every investor, but that beyond that extent — that is, in the broader discretionary field —the University should refrain from taking positions because doing so does not further its essential purposes. Taking institutional positions on issues not directly related to our stated purposes of teaching and research may indeed impinge on our essential purposes, and in any event diverts energy and resources from them. Individual members of the university or voluntary associations of such members are free to take whatever position they wish on any issue.

The essential task of this year's CIR, as we understand it, has been to define as best we might the boundary between what is necessary and optional, and to suggest procedures that will efficiently separate out and focus attention on the former.

Affirmatively, the CIR should assist the Board of Trustees, as the body through which the University acts, to identify any

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among its investments that are so pernicious that it is manifestly immoral for the University to retain them. We note in passing that the legal obligations upon Trustees are in no way compromised by this policy: No just law can require individuals acting as trustee for any purpose, however favored, to participate in an obnoxious enterprise merely because the trust will benefit financially, and no law pur ports to do so — although obviously, if it becomes necessary to divest of some investment, this should be done in a way that will avoid, or minimize, harm to the University.

We support the Commission's recommendations because the proposed modifications to the existing guidelines add procedures appropriate to the task of discerning, studying, and making recommendations to the Board about, cases where the University owns securities in companies whose activities do significant, unredeemed injury, or create an unjustifiable risk of such injury. These cases will be rare. The securities identified should be those which no informed and concerned member of society would be willing to hold. Where the views of morally intelligent people may differ, taking a position is optional and the University should therefore refrain.

But though cases in which action is called for will be rare, it is important that the CIR continue in existence, to assure that when they occur, the University is aware of them. We view the screening of putative instances of substantial social injury as the Committee's primary function, and believe that the proposed procedure is well designed to select the few situations cal ling for fuller investigation that may lead to recommendations for action. As we envision it, the screening process will not be inordinately time-consuming or burdensome for the members of the Commission since only cases in which the allegations, if true, are morally intolerable need be passed for further con sideration.

While we support the continuation of the Commission on Investment Responsibility, we do so in the belief that the activity of the Commission will be limited to issues truly involving substantial social injury, which is the standard set forth in the existing Trustee guidelines for the Commission. The Commission should not be a forum for the consideration of popular political and social issues of the day.

Iris Brest
Larry N. Horton
Ellen Oppenheim*

* Ellen Oppenheim also endorses Statement I and provides the comment which appears following the signatures above.

History

The formation of the Trustees' Ad Hoc Committee on Investment Responsibility (including trustee, faculty, and students) and the adoption, on April 13, 1971, of a "Statement on Investment Responsibility" by that Committee, reflected the upsurge of social consciousness across the land. Students, consumer activists, and others sought to impress on nonprofit institutions, such as churches and universities, the social responsibilities stemming from their role as major corporate investors. Until then, Stanford and other universities had generally followed the traditional practice known as the "Wall Street Rule," which held that institutional investors should normally support management's position when questions concerning management's conduct of business were called to the attention of shareholders. The new activism reflected concern over the corporate contribution to a variety of social problems at home and abroad — from environmental pollution to racial discrimination in South Africa — and found expression, among other ways, in a wave of shareholder resolutions intended to draw attention to, and often to provide remedy for, such problems. The universities were challenged to respond to the new and growing practice of shareholder resolutions.

The 1971 Statement on Investment Responsibility reaffirmed the Trustees' legal "primary responsibility" to invest the University's endowment "so as to maximize the financial return on those resources." It went on to recognize that it was proper for the Trustees to give "independent consideration and weight to the possible social, economic and political implications of University investment policy" in certain specified classes of cases.

In the summer of 1977, a second Ad Hoc Committee on Investment Responsibility (consisting of trustees, faculty, students, alumni and staff) was given the task of re-examining the premises and procedures of the 1971 Statement. Its conclusion, contained in a report to the Board of Trustees dated November 11, 1977, was that the 1971 document, "however well motivated at the time of its drafting, was inadequate to the present situation." The Committee went on to note that "in the intervening seven years, the concepts of ethical investment and corporate social responsibility have become substantially accepted . . . The debate today is over the degree, rather than the propriety, of such considerations." The "present situation" and the "debate" referred to were, in fact, reflective of intense new concern on university campuses over the role of American corporations in South Africa. The Committee concluded that, due to inexperience, the 1971 Statement had been too tentative about affirming ethical investment responsibilities. It identified a finding of "substantial social injury" as the factor to which the University should give independent weight in its investment policies and in voting stockholder resolutions.

The Trustees adopted most of the Committee's recommendations in their "Statement on Investment Responsibility Concerning Endowment Securities," dated December 27, 1977 (Enclosure D), which remains operative to this day. While reaffirming their primary fiduciary responsibility, the Trustees recognized their role as "responsible and ethical investors" and provided guidelines for the practice of investment responsibility. The Statement called for the establishment of a new Commission on Investment Responsibility (CIR) that would make recommendations to the Trustees concerning the implementation of the new guidelines. The Board subsequently created a Special Committee on Investment Responsibility of Trustees (SCIR), to which the CIR has since been making its recommendations on proxy voting and other matters relating to investment responsibility.

The major operational effect of the 1977 Statement was to engage the revamped CIR in an ever-heavier examination of shareholder proxies. Pressure to make a recommendation on every shareholder resolution related to Stanford stockholdings — and do so knowledgeably and thoughtfully —mounted steadily as the number, scope and complexity of resolutions increased. The experience of the 1980 and 1981 proxy seasons led the outgoing Commission in June 1981 to the conclusion that careful thought should be given to the relative costs and benefits of proxy-voting by the University. It expressed its concern that perhaps the effort "simply isn't worth the time and the labor of the faculty, alumni, students, and staff involved in the process," stressing the seeming disparity between the effort expended and the apparent lack of tangible resuits in changing corporate behavior. Indeed, in 1980-81, even limiting its active consideration to proxy resolutions which were related to allegations of "substantial social injury," the CIR spent over fifty hours in meetings, each attended on the average by more than ten of its members; in addition members spent over 1,000 hours in preparation between meetings. Ninety-five percent of the shareholder resolutions demanding action had to be dealt with between the first of April and the middle of May.

The range of topics under consideration is illustrated by the following categories, taken from this year's listing of proxy resolutions by the Investor Responsibility Research Center (IRRC): nuclear weapons production; infant formula code; investment in South Africa; energy conservation; drug sales abroad; investment in Chile; no trade with communist countries; genetic engineering; nuclear plant conversion; foreign military sales; compliance with Sullivan Principles; pesticide exports; no investment in Namibia; disposal of radioactive wastes.

It was this sense of pressure and complexity that led the CIR of 1980-81 to recommend that the Trustees modify the charter of the CIR to permit a one-year moratorium on its normal consderation of shareholder resolutions, and to have it undertake **instead a "comprehensive review...of the goals, procedures, and mechanisms for ethical investment by the university."**

The Commission's Work

The 1981-82 Commission on Investment Responsibility held sixteen meetings. It reviewed the literature on the subject, including the influential primer, *The Ehical Investor,* by John G. Simon, Charles W. Powers, and Jon P. Gunnemann (Yale University Press, 1972), as well as the major studies and policy documents produced on other university campuses in the 1970s. Members of the Commission contacted counterparts at other academic institutions and foundations to survey current practices and policies. The Investor Responsibility Research Center, as the major single source of research and information on shareholder proposals, was consulted in some detail, as were a number of individuals, both in universities and in industry, who are knowledgeable about or concerned with problems of investment responsibility.

The CIR held an extraordinary meeting at which six former CIR chairs, members and university officials presented their diverse views — a meeting which the current members found valuable indeed and which, in retrospect, foreshadowed the fundamental division of opinion among this CIR's membership. Finally, the Commission placed repeated advertisements in three campus publications soliciting opinions, expressions of concern or questions regarding ethical investment from members of the university community. It received no responses.

STARTS shows films by great directors

Student Arts at Stanford (STARTS) and the Graduate Student Association continue this fall to provide the community with high quality films of both artistic and historical interest through the Great Directors Film Series. The series runs through Dec. 10 and features the films of Carl Dreyer, Jacques Rivette, Jean Marie Straub, and Marguerite Duras.

The films will be screened at 8 p.m. every Friday in Room 320, Geology Corner. Admission is $2.75 for students and $3.75 for the general public. Following the Oct. 15, 29, and Nov. 12 showings, there will be a reception sponsored by the Graduate Student Association. Refreshments will be served.

The schedule is:

Oct. 15: *Day of Wrath* and *Vampyr* (Carl Dreyer).

Oct. 22: *Paris Belongs to Us* (Jacques Rivette).

Oct. 27: *The Nun* (Rivette).

Nov. 5: *L'Amour Fou* (Foolish Love) (Rivette).

Nov. 12: *Chronicle of Anna Magdelena Bach* (Jean Marie Straub).

Nov. 19: *Moses and Aaron* (Straub).

Nov. 26: *History Lessons*: *Not Reconciled* (Straub).

Dec. 3: *Destroy, She Said* (Marguerite Duras).

Dec. 10: *India Song* (Duras).

Seven classes to reune at USC game

Seven Stanford classes will hold reunions this weekend in connection with the Stanford-USC football game. The program will include lectures by a number of faculty members, tours of the campus, and a variety of social events.

The classes participating in the festivities are '42, '52, '57, '62, '67, '72, and '77.

On Friday morning all classes will have the opportunity to attend the "Rediscovering Stanford" program with lectures by Clayborne Carson, history; Dr. Richard Coleman, Sleep Disorders Clinic; Robert Horn, political science; and Jerry Talley, sociology. President Donald Kennedy will speak at a noon luncheon at Bowman Alumni House.

The Class of '57 will have two separate luncheons: an athletic/admissions luncheon at Sharon Heights Golf and Country Club and a ladies' lunch at the Meyer-Buck estate.

The Class of '42 will have a lunch at the Menlo Country Club, followed by golf and tennis, and the Class of '62 will gather for no-host hamburgers at the Alpine Beer Garden.

At 2 p.m. there will be tours of the Medical Center, the Linear Accelerator Center, the Stanford Museum, and the historical area.

The Friday evening program for the various classes:

Class of '42: Wine reception beginning at 5:30 at *Sunset* magazine.

Class of '52: Cocktails and dinner at Hyatt Rickeys, Palo Alto Room, beginning at 7 p.m.

Class of '57: Dinner/Dance at Palo Alto Hills Golf and Country Club, with a special social hour for singles beginning at 6 p.m.

Class of '62: Cocktails and dinner at the Golden Spike Restaurant in the Stanford Barn, beginning at 6:30 p.m.

Class of '67: Cocktails and buffet at the Menlo Circus Club, beginning at 6:30 p.m.

Class of '72: Cocktails and buffet at the Holiday Inn, Palo Alto, beginning at 7 p.m.

Reunion class members will hold pregame tailgate parties beginning at 10:30 a.m. on Saturday. All will be held on Angell Field except '57, which will gather in the Sunken Diamond.

Following the game, '57 will reassemble at the Holiday Inn; '62 at its tailgate site on Angell Field, and '72 at Alpine Beer Garden. The Class of '42 will hold a dinner-dance at the Menlo Circus Club beginning at 7 p.m.

Venture capitalists regarded as new kind of hero—Brandt

A practicing entrepreneur, who teaches entrepreneuring and has now written a book on the subject, says entrepreneuring is now having a rebirth in the United States and a new type of entrepreneur is emerging.

That is the belief of Steven C. Brandt, senior lecturer in management at Stanford University's Graduate School of Business, author of *Entrepreneuring: The Ten Commandments for Building a Growth Company* (Addison-Wesley publishing Co. Inc., 190 pages, $12.95 cloth).

"Venture capitalists are suddenly national heroes, capital gains are respectable, even patriotic," says Brandt. "Terms like innovation, technology, productivity, and startup are already a part of everyday conversation and the political world is finding out that the real source of new jobs is new businesses."

In the entrepreneurial revival, the "Lone Ranger" entrepreneur of yesteryear who started a business, built it up and then sold out when it got too big, its giving way to the "professional entrepreneur" who, with a broader base of management skills, stays with the company, adjusting as the firm becomes larger and more complex.

What makes the difference between the traditional and the new is that the new entrepreneur is "able to put sufficient distance between the company and himself to see what has to be done to take the firm past its infancy." That ability to put sufficient distance between the entrepreneur and the company is the ninth of Brandt's ten commandments for building a growth company.

Classic stereotype

In the classic stereotype, the entrepreneur is pictured as an intuitive, hard-driving, fix everything, "sweet equity" firgure, he says. "A lot of people like that got rich, but staying rich often meant having to sell out and start over again."

The professional entrepreneur arrived on the scene in the 1960s at about the same time that management came into its own as a separate, distinct discipline. The rise of the professional manager coincides with the national boom in interest in MBA training, although Brandt points out that "one is not a corollary of the other."

Having an MBA degree is desirable but not necessary for professional entrepreneurs, in his view. "If a person doesn't have an MBA, he or she, in any case, understands the kinds of things that are taught in MBA programs. It is not necessary that people have knowledge in all areas of business but they know how to get that knowledge."

Relying on teamwork to get the knowledge you need is particularly important in building a high-growth company, he adds. "I've wrestled with that problem myself," says Brandt, who this year started Cdex, a Los Altos-based producer of computer-based training materials.

New entrepreneur

Brandt's new entrepreneur is a far cry from the "boom or bust" individual of legend. "The new breed tend to be calculated in their approach to risk," he says. "They are not apt to walk tightropes. They take reasonable risks and if they lose, they haven't bet everything on it."

Growing awareness that the growth of new business means the growth of new jobs has legitimized entrepreneuring, Brandt believes. "The new-breed entrepreneur is seen as doing something for society, not just running around making a fast buck and driving a Rolls Royce."

The increasing numbers of business school graduates wanting to join small companies is an indicator of the legitimizing of entrepreneuring, in Brandt's judgment. Approximately one-fourth of Stanford's MBA class of 1982 conducted its own search for jobs in small business through a variety of marketing techniques including student-hosted meetings for area entrepreneurs and development of a special book of student resumes. Twenty-three percent of the class of 1981 joined firms with fewer than 100 employees and, despite the shrinkage in job offers from smaller firms this past year, 16 percent of the class of 1982 took jobs with firms of this size. This compares with nine percent of the class of 1978 who joined such firms.



Professional entrepreneur succeeds the Lone Ranger, who built and sold firms.

Steven Brandt

"These MBA students are, after all, stable, conventional people by and large," says Brandt. "When they make the decision to come back to school and spend a great deal of money getting an education, they are not likely to do something too far out."

Brandt sees turbulent times ahead between now and the year 2000, but adds that "change favors entrepreneuring." To be successful in the 1980s and 1990s, entrepreneurs must be in harmony with inflation, population dynamics, communications technology, major political and social trends, computers in the home, economic gyrations, floating exchange rates, and "a world in which each country aggressively rubs elbows with most others."

Drawing on the thinking of futurist Alvin Toffler, Brandt talks of a "third wave" of human progress, one focused on expanded opportunities for individualism. Unlike the first and second waves—the agricultural and industrial revolutions, which he calls collective movements—the third wave is a dispersing or decentralizing movement toward individualism.

"With the microcomputer and closed circuit television, you have people being able to order what they want from their living rooms. Look at the growth of specialized magazines. There is now a publication for virtually any group you can think of. You can also see this in the energy area, where as we move from dependence on fossil fuels to solar supremacy, virtually everyone can obtain the energy he wants and needs on his own.

"This is all giving tremendous leverage to the individual, and there is good and bad, blessing and threat, in all of it. For some, this is going to be very scary because it is an intensification of choice or freedom, and may be more freedom than people want or feel they can handle. At the same time, it is a potential gold mine for the entrepreneur, who finds opportunity in the midst of such change."

—Herb Blanchett

Extension could cure bottleneck...

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He also cited the increased amount of construction traffic that will be generated during the next several years as the Stanford West housing project, the Hospital Modernization Program, and the Neiman-Marcus store addition to the Shopping Center are implemented. The only truck routes to those sites are from Willow Road on the south and Palm Drive, Galvez, and Arboretum on the north.

"Finally, the land now being used by through traffic in the Shopping Center can be converted into badly needed parking," Massy said.

Stanford has proposed a 423-car parking deck at the Center to help meet the need for 700 spaces as the Neiman-Marcus store is built.

Massy said the Trustees would take action on the proposal at their December meeting after hearing a report from the University staff.

"I would like to emphasize as strongly as I can that we are interested only in a connection with El Camino Real. We have no interest whatsoever in crossing the highway, and we stand ready to do whatever we can to help prevent such an action."

Willow Road has been called "the worst traffic bottleneck in the area" by the Palo Alto city staff. An extension has been a controversial subject for decades, mainly because it lies along a route once proposed for an expressway across the Peninsula.

Menlo Park voters rejected the expressway in 1971, and the state has dropped the route from its plans and has sold the right of way it had acquired.

Menlo Park and Palo Alto later approved the concept of an extension to El Camino Real on four occasions, but the Palo Alto Council fell one vote short of approving an assessment district in 1978 after three Council members abstained from voting.

Palo Alto approval is needed to build the road, and to connect it with Willow Road and Arboretum, both city streets. Approval will also be required from the State Division of Highways for a tie with El Camino Real.

The Palo Alto Planning Commission will begin its review of the Stanford West E.I.R. Wednesday night, Oct. 13.

Visiting scholars room at Green

Scholars visiting Stanford who need to use the collections in Green Library now have access to the Visiting Scholars Room.

Furnished with tables, chairs and shelving, the room is intended to provide space for uninterrupted research and writing requiring the use of adjacent library collections. Space will be assigned for one to 12 months, depending on the scholar's need and the pressure of requests.

Just as the Stanford faculty uses libraries world-wide during research leaves, so other scholars find Stanford's research collections of value to their work.

Faculty members from institutions outside the Bay Area who are conducting research at Stanford will receive preference in assignment, although other nonstudent scholars will also be considered.

The monthly fee for use of the room and eligibility requirements are outlined in the "Policy for the Assignment and Use of the Visiting Scholar's Room in the Cecil H. Green Library," available from the Privileges Division, Green Library.

STOPS to start at Tresidder soon

STOPS (Stanford-Tresidder Outdoor Programs, an organization which aims to help people make their outdoor adventure fantasies come true) will hold an organizational meeting at 7 p.m. Thursday, Oct. 21, in Room 270 of Tresidder Union.

STOPS offers a variety of resources and some wild and woolly adventures—and a chance to plan new and exciting trips with other members.

For more information, call the Tresidder Recreation Center, 497-4311.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

28540-AW (JCC:5042) PROGRAMMER SYSTEMS II: Respon for the maintenance of operating sys on Integrated Circuits Labs computer sys; sys incl 3 Hewlett-Packard 1000 series CPUs running the MAGUS-IV operating sys, a Hewlett-Packard 3000 Series III computer running an MPE-III operating sys, & a DEC VAX-780 computer running UNIX; determining sys software needs & either developing or acquiring the nec software; keeping current sys & users manuals & documentation; instructing new users in use of various sys; supv part-time & student help; QUALIFICATIONS: ability to program in Hewlett-Packard Assembly Lang, FORTRAN, RATFOR, BASIC, PASCAL & C; familiarity w/ HP 1000 & 3000 series computers & w/ DEC VAX-780 computers; exp in use of MPE-III, RTE-IVB Magus-IV, & UNIX; exp in writing I/0 drivers & w/ distributed sys helpful.; C06; $1854-2312.

27173-TC (JCC:5588) LIFE SCI RES ASST I: Work in a cardiovascular res lab in div of Cardiology; projs incl animal surgery, instrumentation w/ physiologic recording devices, & animal care; involve both basic physiology experiments & drug research; other projs will incl in vitro work exploring mechanisms of drug/receptor binding; collect data & perform extensive analysis; QUALIFICATIONS: baccalaureate degree or equiv exp in cardiac res; exp w/ handling large & small lab animals; exp w/ animal anesthesia, surgery, & post-op care; exp w/ regular binding experiments, basic pharmacology methodology; exp w/ electronics/drug assay, analytical equip't desirable.; C05; $1670-2086.

27141-TC (JCC:5588) LIFE SCI RES ASST I: Work w/ principal investigator in field of toxicity of anesthetic agents; collection, preparation & analysis of animal tissue & fluids using equip't for gel chromatography, thin layer chromatography, gas chromatography, subcellular membrane fractionation, density gradient ultracentrifugation, liquid chromatography & radiolabeled ligand binding studies; record-keeping; analysis of data, troubleshooting & the ability to recognize unusual reactions & determine source of problem; sole respon will be organization of lab schedule & performance of tech procedures; QUALIFICATIONS: have lab exp; bkground in biochemistry as well as tech skills relating to animal health care & surgery for an anesthesia res lab; BS degree or equiv edu & exp mandatory; 12 mos lab work exp during or after college.; C05; $1670-2086.

27284-JB (JCC:1472) Stu Serv Offcr II: Principal responsibilities of Assistant Dean are recruitment, graduate student programs and general admin; recruiting Chicano applicants to Stanford's Graduate Programs, includ extensive recruiting trips, establishment of natl network of Chicano faculty administrator contacts, follow-thru w/potential applicants, assisting depts w/dvlpmt of recruitmt strategies, prep of recruiting matls; convey concerns & needs of Chicano grad students to Dean & his staff; prov advice & informa about Univ svcs; offer counsel about academic & professional matters to grad students incl financial aid; participate in planning, dvlpt, coord, & evaluation of Affirmative Action Program, etc; QUALIFICATIONS: understanding of grad & prof edu in major res univs & issues relating to edu of Chicanos; advanced degree reqd; admin exp in post-secondary edu highly desir; effective commu, oral & written; initiative human sensitivity orgn'l ability, & ability to understand & work w/others; C06; $1854-2312

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Oct. 19, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Hospital

Submit applications to the Hospital Personnel Department, 770 Welch Road, or call 497-6361.

MANAGEMENT ENGINEER—Management Systems—#5046—(G-178): Responsibilities: Responsible for conducting various projects which are requested of the Department. Theses projects involve application of management engineering techniques to achieve improved management systems and/or cost reduction. Under the direction of the Director of Management Systems, the Management Engineer will work independently in planning and conducting projects as well as implementing study results; Qualifications: BSIE or equivalent required. MSIE, MBA or equivalent preferred. Minimum of 3 years experience required (at least 2 in a health care setting). Permanent, Fulltime, M-F, $11.32-$14.71 hourly.

Nonexempt

26974-PM (JCC:2470) OFFC ASST IV: To aid administrator of Sleep Disorders Ctr: receive and screen calls and visitors for supvr; alert supvr to personnel and staffing problems; field staff requests and problems; maintain Sleep Ctr files; process orders for Clinic and Ctr; interact w/ Univ and Hospital depts as nec to expedite reqs; asst in prep of grant proposals and all fundraising efforts; asst in cost analysis and planning space utilization in 4 separate facilities, etc; QUALIFICATIONS: typ 60; able to understand and facilitate the purposes and long-range goals of Ctr; excel judgment; strong organizational skills; ability to adjust in the face of continually changing prior; good interpersonal skills; contact: Lynn Hassler, TD114, 497-6601; B14; $1440-$1514.

26973-PM (JCC:2630) SPECIALIST TYPIST: 75%; fixed term 10/25/82-4/23/83; 8:30-3:30; typist/word processor to Sleep Disorders Ctr; typing of corresp, scientific manuscripts, and grant proposals on Apple Pascal and typewriter; edit draft for style, format, bibliographic accuracy and completeness; respon for proofreading for accuracy and grammatical correctness; xeroxing; filing; mailings; order supplies, etc; QUALIFICATIONS: typ 60 accurately; word processing exp preferred; able to interact w/ a variety of personalities; ability to follow instructions and give careful atten to detail; contact: Pam Tondreau/Lynn Hassler, TD114, 497-6601; B12; $982.50-$1,029.75.

Carpools

Looking for carpool, Fremont to Stanford, approx. 7 a.m. to 5:30 p.m. Call Steve at 7-9583 or 792-1486.

Established carpool, Oakland to Stanford, Hours 9-6. Non-smokers. George Gianopoulos, 7-6856.

Carpool/rider, nonsmoker. SF to Stanford. 9-5, M-W, F. Call Paul Turner, 497-4275 or 497-3404, or David, 497-2727.

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Need rider from Los Gatos/Saratoga area arriving at Stanford 7:30 a.m., leaving 4:30 p.m. Call Gloria, 497-4970.

Want to join or form carpool from Sunset Dist., S.F. (near 19th Ave.) to Stanford, T-F, 9-5 or 6. Robert, 753-3860 or ext. 7-4116.

Nonexempt

30968-PM (JCC:1747) LIBRARY SPEC I: 50%; 8-12; performs duties in Catalog Dept; filing in Main Catalog of approx 5000 trays; editorial work for validating access points; performs authority work for heading changes in SUL catalogs; files in Shelf Lists; files in Spec Collections & Reference Room catalogs; QUALIFICATIONS: typ 40; demonstrated clerical & organizational skills; ability to learn filing rules & file structures of a large, complex catalog sys required; prev exp in cataloging desirable; some bkground in foreign langs, preferably Western-European; able to stand for long periods of time & lift heavy catalog trays; contact Bob Johnson, Green Lib, Rm 223 (497-3152); B10; $595-623.

30885-PM (JCC:1747) LIBRARY SPEC I: Mon, Tues, Fri, 9-6; Sat, 9-5; Sun, 10-6; check ID's; charge & discharge books & maintain stack areas; issue ID's; process reserv mat'ls; search for missing books; prov informa & dir'l help to lib users; work at a very busy Circulation Desk; update mat'ls; answer phones; page books; open Lib on wkends, etc; QUALIFICATIONS: ability to handle several patrons/tasks simultaneously; be flexible enough to change work schedule temporarily during intersessions, holidays, & emergencies; interpret & carry out lib policies; accomplish procedures involving extreme detail; send appl/resume to Heidi Quitman, Room 250E, Law Library.; B10; $1189-1246.

31932-BP (JCC:2210) ACCOUNTING ASST III: Accurately, efficiently & independently prepare for recording & acknowlmt all gifts & pledges made to Univ; prov assistance in, & assume respon for, the coverage of any desk w/in the dept, as dictated by workload and/or available personnel; prep, reconcile & maintain various logs, records & reports; prep agenda & minutes for dept mtgs; share in assumption of supervisory respon in supvr's absence; QUALIFICATIONS: typ 35-45; strong acctg aptitude or bkground; familiarity w/ SU acctg procedures extremely helpful; supvry skills; good written & verbal commu skills; legible handwriting; detail oriented; exp in working w/ large volumes, constant pressure & frequent deadlines & interruptions; able to use 10 key adding machine; send appl/resume to Liz Trujillo, 301 Encina Hall.; B14; $1440-1514.

30616-BP (JCC:2454) OFFICE ASST II: 50%; prov bkup support on phones & genl offc duties; require at least 2 hrs a day of simple data entry at CIT connected terminal; will train; position may expand to full-time in the future; QUALIFICATIONS: accuracy important; knowl of typewriter or computer terminal keyboard, offc machines, & standard offc procedures; send appl/resume to Alain Decleve, Encina Annex.; B09; $565-595.

29438-PM (JCC:2454) OFFICE ASST II: Fixed term 11/15/82-8/15/83; assembly of application mat'l for MBA Program into file folder; work w/ confidential mat'ls daily; verifying requested mat'ls to be accurate, authentic & complete in folder; retrieving GMAT scores; completing data processing form; calculating GPA's; notifying applicants of missing credentials or completeness of folder; help to answer 4-line phone sys; prov assistances for other desks in 5-person offc as work load demands; QUALIFICATION: typ 40; accuracy & atten to detail essential; good math skills & ability to use calculator; command of oral & written English essential; knowl of Stanford & college admissions helpful; send appl/resume to Cecilia Strickland, GSB or call 497-2766.; B09; $1130-1189.

29437-PM (JCC:2454) OFFICE ASST II: Fixed term 11/15/82-8/15/83; assembly of application mat'l for MBA Program into file folder; work w/ confidential mat'ls daily; verifying requested mat'ls to be accurate, authentic & complete in folder; retrieving GMAT scores; completing data processing form; calculating GPA's; notifying applicants of missing credentials or completeness of folder; help to answer 4-line phone sys; prov assistances for other desks in 5-person offc as work load demands; QUALIFICATION: typ 40; accuracy & atten to detail essential; good math skills & ability to use calculator; command of oral & written English essential; knowl of Stanford & college admissions helpful; send appl/resume to Cecilia Strickland, GSB or call 497-2766.; B09; $1130-1189.

30608-BP (JCC:2462) OFFICE ASST III: 50%, 8-12; fixed term for 6 mos; will be trained to operate WANG word processing equip't; produce accurate finished form typing of geni corresp, reports, proposals & forms fr typed, dictaphone or longhand drafted mat'l; proofread for accuracy & edit for correct spelling & punctuation; QUALIFICATIONS: typ 50+; knowl of transcription & word processing equip't helpful & willingness to learn essential; ability to set prior & meet deadlines; willingness to work occasional overtime; ability to proofread & edit your own typed mat'l for approp spelling, syntax, grammar & vocabulary are important; send appl/resume to Katriena Youmans, Old Pavilion, Personnel, Stanford University.; B11; $623-655.

29957-BP (JCC:2462) OFFICE ASST III: 50%; supv 10 dept shop acct budgets; asst w/ maintenance of dept budgets; process mat'ls used to reconcile budgets; maintain key sys records & distribute keys; prep reqs & other Univ forms; misc typing, filing, photocopying; answer phones; act as intermediary between dept & students & between dept & greater Univ community; QUALIFICATIONS: typ 65; deal well & efficiently w/ people; pay great atten to detail; flexible in working arrangements; send appl/resume to Sally Tremaine, Chemistry Dept, Mudd 121A.; B11; $623-655.

27086-PM (JCC:2554) SECRETARY II: Fixed term for 1 yr; full range of sec'l support for Sr. Fellow working on economics of public finance (50%) & to Sr. Research Fellows & Scholars (50%); typ corresp, articles, & manuscripts in draft & final form, primarily on word processor & often fr taped dictations; travel arrangements & calendar; phones & mail; setting up & maintaining files; expense reports & other univ forms as required; QUALIFICATIONS: typ 60; excel typing skills; high-level ability to use word processing equip't & heavy transcription (for taped dictation); send appl/resume to Dr. Charles E. McLure, Jr., Hoover Institution, Stanford, CA 94305; please do not telephone.; B11; $1246-1310.

28212-PM (JCC:2596) SECY II-SPEC: Sec/Offc Asst for Stanford Arthritis Ctr & assoc'd projs; sec'l support for health professional, as well as support for a four person offc; involve daily interaction w/ Data Bank Network Sec in order to ensure smooth offc function; typ corresp, proposals, manuscripts, reports, Univ forms, etc. fr handwritten copy; answer phones & greet visitors; run errands; maintain files; schedule arthritis self-mgmt classes; computer enter & verify arthritis edu proj data; QUALIFICATIONS: typ 65+; some familiarity w/ med terminology & text editing, using Wylbur, preferable; 2-3 yrs prev offc exp or equiv; good English grammar, spelling, punctuation; good commu skills; non-smoking offc; send appl/resume to Kay Metteauer, 701 Welch Road, Suite 3301.; B12; $1310-1373.

29463-PM (JCC:2596) SECY II-SPEC: Sec to several full-time faculty members in different GSB teaching areas; typing of course mat'ls, drafts, manuscripts, genl corresp; transcribing of tapes; making travel arrangements; setting up mtgs; keeping calendars, & other routine sec'l duties; high percentage of the required typing is tech (equation, use of mathematical & Greek symbols); QUALIFICATIONS: typ 60-70; good sec'l working exp, some of it in edu'l environ preferred; good typing skills, spelling & grammar essential; exp w/ MUSE 1 W.P., or willing to learn; heavy tech typing load; send appl/resume to Katherine Bostick, Rm 248-K, GSB, or call 497-2187.; B12; $1310-1373.

31719-PM (JCC:2672) MED SERV ASST III: Fixed term 10/16/82-4/30/83; 7:45-4:30; respon for identification of remittances to patients accts; involves batching remittance, balancing batches, entering batches on a CRT & correcting errors; also respon for the entry of adjustment & insurance request forms; daily logging of clinic batches & distribution of error listing to clinics; QUALIFICATIONS: clerical & terminal work exp; basic acctg training of or exp; contact: Patti Barber, 525 University Ave. Suite 400.; B11; $1246-1310.

31720-PM (JCC:2672) MED SERV ASST III: 7:45-4:30; respon for researching remittances to patients accts; involves researching requests submitted fr other FPP billing areas; filing cash batches in strict order; prep medicare EOB's for filing; book monthly claims & wkly reports; QUALIFICATIONS: basic acctg & clerical training or exp; requires accuracy & flexibility for the variety of duties; send appl/resume to Patti Barber, 525 University Ave., Suite 400.; B11; $1246-1310.

20098-JB (JCC:6810) SOC SCI RES ASST I: Planning experiments under the direction of the Prof.; typ stimuli for questionnaires; run experiments; schedule subjs, record data, debrief subjs; perform standard statistical tests by calculator & computer using some original programs; prep tables & graphs; lib res, etc; QUALIFICATIONS: knowl of statistic & statistical programs; familiarity w/ computer ctr facilities; ability to use calculator; knowl of PASCAL, FORTRAN, or 'C' computer lang; bkground in Psychology desired w/ some familiarity w/ Psycholinguistics.; B12; $1310-1373.

Bargaining unit

30967-PB (JCC:1728) PORTAL MONITOR: TMS Unit; 50%; Sun-Thurs, 7-11:15pm; performs duties in Central Circulation Dept at the entrance portal; checks patrons' identification for access to lib; enforces lib regulations w/ regard to pets, smoking, food & beverages; prevents access by potentially disruptive persons & refers security problems to supvr on duty; examines book bags, briefcases & other belongings for lib mat'ls at the exit portal; maintains statistics; shelving & sorting discharge cards as needed; QUALIFICATIONS: prev public serv exp; ability to commu clearly in spoken English; ability to learn & apply lib regulations tactfully & courteously; dependability & punctuality.; A09; $5.68.

33119-PB (JCC:5644) LIFE SCI TECH II: TMS Unit; biological lab tech for small animal pharmacology/-physiology lab; study tolerance & physical dependence to various psychotropic drugs; weigh, feed, water lab animals, & adminster drugs by various routes; keep detailed records on each animal; collect blood & tissue samples & assay them for drugs in question, using assays developed by more exp'd personnel; operate & maintain a high pressure liquid chromatograph; do treadmill tests, rotarod test, use of activity meters, & detailed observation of behavioral responses in rats & mice; QUALIFICATIONS: ability to handle lab animals, particularly rats & mice; knowl of various lab equip't; elementary knowl of computer programming & statistics, preferably BASIC, in order to perform analysis of data.; A24; $8.08.

29752-JB (JCC:7654) CUSTODIAN: TMS Unit; 7:30-4pm; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial equip't; spot clean, shampoos, waxes, dusts & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in light cleaning; knowl of related safety procedures.; A13; $6.24.

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the month of September:

FEDERAL

New Contracts

Robert H. Cannon, Thomas O. Binford, James D. Meindl, aeronautics and astronautics, "Center of Excellence in Aerospace Automation," $3,100,000 from the Department of the Air Force for 3 years.

George Herrmann and David M. Barnett, mechanical engineering, "Energy Changes in Transforming Solids," $665,000 from the Department of Energy for 4 years.

Martin Morf and John T. Gill, Stanford Electronics Laboratory, "Algorithms for Locating and Identifying Multiple Sources and Receivers by a Distributed Sensor Network," $916,392 from the Defense Advanced Research Projects Agency for 2 years.

Richard M. Swanson, Stanford Electronic Laboratory, "Investigation of Metallic Impurities Introduced into Silicon," $308,199 from the Defense Advanced Research Projects Agency for 2 years.

Contracts—Amendments

Jack D. Barchas and Patricia R. Barchas, psychiatry, "Neuroregulators and Stress: Studies of Peptide and Catecholamine Responses to Stress," $395,000 from the Department of the Navy for 1 year.

New Grants

Craig T. Bowman and Ronald K. Hanson, "Gas Phase Reaction Kinetics of NOx Formation from Fuel Nitrogen in Fossil Fuel Combustion," $203,437 from the Environmental Protection Agency for 2 years.

Stanley S. Hanna, physics, "Research in Nuclear Science," $260,000 from NSF for 1 year.

Grants—Amendments

Paul Berg, biochemistry, "Mechanisms and Regulation of Gene Expression," $333,815 from NIH for 1 year.

J. Martin Brown, radiology, "Combined Modalities: Cell, Tumor and Tissue Effects," $280,058 from NIH for 1 year.

Luigi L. Cavalli-Sforza, genetics, "Human Population Genetics," $281,669 from NIH for 1 year.

Robert F. DeBusk, Department of Medicine, "Objective Evaluation Early After Myocardial Infarction and Heart Surgery," $331,597 from NIH for 1 year.

Edward A. Feigenbaum and Edward H. Shortliffe, Department of Medicine, "Stanford University Medical Experimental Computer Resource (SUMEX)," $1,629,190 from NIH for 1 year.

Rex L. Jamison, Department of Medicine, "Micropuncture Studies of the Mammalian Renal Medulla," $206,645 from NIH for 1 year.

Henry S. Kaplan, radiology, "Radiobiology-Oncology Research Program," $891,301 from NIH for 1 year.

Arthur Kornberg, biochemistry, "Mechanism and Control of DNA Replication," $374,585 from NIH for 1 year.

I. Robert Lehman, biochemistry, "DNA Replication in Pro-and Eukaryotes," $256,607 from NIH for 1 year.

Seymour Levine, psychiatry, "Developmental and Behavioral Neuroendocrinology," $279,217 from NIH for 1 year.

James D. Meindl, Stanford Electronics Laboratories, "BME Center for Integrated Electronics in Medicine," $983,580 from NIH for 1 year.

Lyle M. Nelson, communication, "Fellowships in the Humanities for Professional Journalists," $264,313 from the National Endowment for the Humanities for 1 year.

John D. Wirth, Center for Research in International Studies, "Joint Stanford-Berkeley National Resource Center and Fellowships in Latin American Studies," $228,325 from the Department of Education for 1 year.

NON-FEDERAL

New Contracts

Donald C. Harrison, Department of Medicine, "Long-Term Encainide Therapy for Patients with Cardiac Arrythmias," $207,360 from Bristol-Myers Pharmaceutical Research and Development Division for 2 years.

New Grants

Donald Kennedy and J. Myron Atkin, School of Education, "Study of Stanford and the Schools," $200,000 from the Lilly Endowment for 2 years.

Rental housing

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

HOUSING NEEDED

□ **Jan. & Feb. '83:** Single woman would like to hsesit for these 2 mo. Call 854-2658.

□ **Jan. to Mar. '83:** Visit Prof & wife seek 1 or 2 BR furn apt for hse within 1 mi. of campus. Homeowners, nonsmokers, local refs. Call (212) 260-8221, or write: R. Lipsey, 70 E. 10th St, #3A, NYC, 10003.

□ **Jan. to Mar. '83:** Retired cpl seeks furn. 1 or 2 BR apt., condo, or hse. on campus., Palo Alto, Menlo Pk. Close to shops, campus. Pkge deal to incl. car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Nov. & Dec. '82:** Faculty visitor seeks hsesit or pay modest rent. Dates flex; Will care for pets. Call 327-8160 after 7 pm.

□ **NOW:** Female grad. stud. seeks rm w/lite kitchen priv. for fall qtr., nonsmoker, neat. Finishing MA in Art Hist. $200 to $300/mo. Call Suzanne (415) 365-6274.

□ **Feb. 15 to July 1, '83:** Swedish Post-doc Fellow seeks furn. hse in Stanf. or Berkeley area. EXCHANGE hse in Lund, Sweden as of Jan. 15. Call (415) 851-2345 or write: Dr. Erik Wallin, Sparnogaton 14, 222, 52, Lund, Sweden.

□ **XMAS SEASON:** HSESIT. Fac. mbr Pa. prep sch. seeks hsesit opportunity Stanf. area during holiday break. Call Phil (415) 965-5404 (day) (415) 369-6130 (eve).

□ **Jan. to June '83:** Visit Prof & wife from Oxford, no children, seek 2 or 3 BR furn hse or apt. on or nr. campus. Call (415) 857-9263.

□ **HOUSESITTING:** Established prof. cpl. seeks long term hsesit position. Nonsmokers, no pets, no children, neat, quiet, local ref. avail. Call 326-6425, 328-5344.

□ **Dec. '82 to Mar. '83:** Want to rent 2BR or more, furn. condo or hse. Call collect (714) 752-7870.

□ **Jan. to July '83:** Johns Hopkins Prof., visiting SLAC, seeks hsng. for self, wife & 12-yr-old child. 2 or more BR hse or condo nr campus & schls. Will EXCHANGE spac. 5BR hse in Roland Pk., Baltimore, walk dist. excl. priv. schls. Call collect (310) 366-1892 or Gwen Bowen, SLAC, (415) 854-3300, ext. 3111.

□ **Jan. to June '83:** Visit. Fac. Grad. Sch. of Bus., wife, son, and obedience trained standard poodle seek hse or apt, 3BR, in Palo Alto Sch. Dist. Call collect (203) 387-4010.

□ **NOW:** Resp. prof. cpl. seek rental hse, 1 yr. lease. No children. Palo Alto, West Menlo, Mt. View. Call between 6 & 9 pm, (415) 349-9794.

□ **NOW thru end of Jan. '83:** Chief exec. officer of loc. corp. seeks 4-5BR furn. hse. immediately. Call J. Lange. Stanf. Alum. Assoc. 497-2021 or 321-4961.

□ **Winter Qtr:** Short term rental for parents of Stanf. prof. Any time during qtr.—Jan.-Mar. Nonsmoking, no children or pets. On or nr. campus. Call Mary or John Felstiner, 322-7727.

□ **Jan. to Aug. '83:** Visit. prof., wife, 2 children (11, 8) seek 2-3BR furn. hse or apt. nr public schls, commute dist. to Stanf. WILL SWAP 3BR/2BA hse on 2 acres, 10 min. to U. of Mass Amherst. 1 hr. to Vermont ski, 1½ hr to Boston. Call COLLECT (413) 253-3287.

HOUSING AVAILABLE

□ **Avail. NOW:** College Terr. Twnhse, fully furn. to SHARE. 2BR/1BA, 2 story, frpl, lge. patio deck, cozy bckyd. Prof. empl. lesbian, 38, nonsmoker, seeks empl. lesbian hsemate. $385/mo + util + deposit. Call 327-3141 (day), 494-2292 (eve).

□ **Regularly avail.:** 1 & 2BR furn & unfurn. apts. & twnhses in Palo Alto & Menlo Pk. in good neighborhoods, close to campus. $525 to $800/mo. Call Shirley (415) 493-2321 or Jane at (415) 968-4957.

□ **NOW: HAWAII:** rustic hse in Haena, Kauai. 2BR/1BA, loft, indry, fully furn., sleeps 7. $280/wk. Call Nancy Scholl, 321-4407.

□ **Oct. 15, '82 to Jan. 10, '83:** Luxurious 2BR/2BA condo dwntwn Los Altos. 10 min. to Stanf. Fully furn., TV, all appl. $950/mo. Call (415) 948-1240.

□ **NOW, to share:** Lovely, quiet hse w/frpl, gardener, & priv. yd in So. Palo Alto. Female, nonsmoker. $300/mo. plus util. Call 493-9089 (eve), 966-3985 (day).

□ **April 1 to Aug. 31, '83:** Fully furn. 4BR/3BA campus hse. Contemp. style, 2 frpls, extensive patios, FR, gardener incl., fully sprinklered. 10 min. walk to campus center. Call (415) 857-9298.

□ **Feb. 1 to Sept. 1, '83:** 3BR/1BA fully furn. hse incl. linens, dishes, all appl. Gardening service, fenced bckyd. 2 car gar. 6 mi. to campus. Nr. shops, pub. schls. Call (415) 368-6722.

□ **NOW:** Alpine Meadows, Tahoe. 3BR/1½BA cabin, W/D, frpl. Sleeps 10. $200/wknd, $70/wk.night. Call 493-4139 (eve).

□ **Beg. Nov. 1 for 1 yr:** Atherton, 3BR/2BA, den, frpl, unfurn. hse, carpets, drapes. Patio, backyd. Call Wells Fargo Bank, (415) 855-7631.

□ **NOW:** Female roommate wanted to SHARE 2BR apt. in Menlo Pk., nonsmoker, no pets. W/D, 15 min. bike to campus. Call 497-3639 (day) or 321-4592 (eve).

□ **Nov. '82 to Mar. 15 (flex):** SHARE half 4BR/2BA fully furn hse, incl linens, dishes, w/fac. cpl. Bike to campus. No smoking, no pets, child ok. $500/mo + util. Call 326-4316 (morn. or eve).

□ **NOW thru spring qtr.:** 4BR/2BA, den, patio raised bed garden, Mayfield area of Mt. View. 25 min. bike to Stanf., 15 min. by car. $1100/mo, unfurn. Call Barbara (415) 941-5151 or (415) 948-5342.

□ **NOW:** FREE rm & brd for resp female in exchnge for hsekeeping & very limited childcare of 2 elem. sch. age girls. Sep. furn rm. San Carlos w/breathtaking view of bay. Easy walk to Samtrans. Call Dave, (415) 859-5047 (day), (415) 593-2936 (eve, wknd).

□ **Jan. 1 to Sept. 15 '83 (flex):** Fully furn. 4BR/2BA spac. campus hse, view of hills. No pets. $1600/mo, incl. gardener. Call Peter Hammond, 494-0362, or 497-3987 (day).

□ **NOW:** TAHOE DONNER HSE RENTAL. 4BR/3BA hse w/hot tub. Overlook natl forest. Frpl, wd stove. $150/wknd, $375/wk. Call 497-6421 (day), 324-8559 (eve).

□ **NOW:** Woodside. Tranquil 5BR/4½BA hse. Furn. optional. Library, DR, 3 frpl, all appl. kitchen, Indry. Pool, cabana, 5-horse barn. 15 min. to Stanf. Lease or lease option. Portola Valley schls. $3000/mo. Call (415) 851-2323.

Health and safety report

Accidents and Injuries Occurring Oct. 1-8

Type of accident or injury	Number of incidents	Days Lost
Impact with object	1	0
Non-impact; pinched; squeezed, crushed	2	0
Animal/Insect caused	1	1
Fall from same level	1	0
Lifting	2	0

Ph.D. oral exams

THURSDAY, OCTOBER 14

Eytan Bercovitch, anthropology, 12 noon, 111J.

FRIDAY, OCTOBER 15

Jerome Huck, electrical engineering, "Comparative Analysis of Computer Architecture," 10 a.m., ERL 401.

WEDNESDAY, OCTOBER 20

David John Kavanagh, psychology, "Mood, Self-Efficacy and Goals," 2:15 p.m., 358 Jordan Hall. **John Charles Reis,** mechanical engineering, "The Suppression of Turbulence in Combustion-Driven Magnetohydrodynamic Flows," 4:15 p.m., Room 300, Bldg. 300. **Danny Yeung-Foh Wang,** applied physics and electrical engineering, "Bunching of Relativistic Electron Beams at Optical Frequencies by the Stimulated Cerenkov Interaction," 2:30 p.m., Applied Physics 200.

THURSDAY, OCTOBER 21

Karen Maria Kosydar, chemistry, "Polymer-Bound Substrates: A System to Distinguish Between Homogeneous and Heterogeneous Catalysis," 2:15 p.m., Chemistry Gazebo.



Pauline Newman-Gordon

French faculty in local lectures

Five Stanford French professors will participate in a six-month program of lectures entitled "Dream Versus Reality: French Author Series," coordinated by Prof. Pauline Newman-Gordon of the Department of French and Italian.

The series will open with Prof. Leo Weinstein speaking on Honore de Balzac at 2:30 p.m. Sunday, Oct. 17 at the South Peninsula Jewish Community Center, 830 East Meadow Drive.

The rest of the lectures, all at 2:30 p.m. Sundays at the Community Center, are:

Nov. 21—Prof. Marc Bertrand speaking on Gustave Flaubert; Dec. 19—Prof. Pauline Newman-Gordon speaking on Marcel Proust; Jan. 16—Prof. Raymond Giraud speaking on Jean-Paul Sartre; Feb. 20—Prof. Yolanda Patterson of Hayward State University speaking on Simone De Beauvoir; and Mar. 20—Prof. Robert Cohn speaking on Albert Camus.

Mother's Club sets annual boutique

Members of the Stanford Mothers' Club have been busy since January preparing items for sale at their annual Chrysanthemum Party and Golden Boutique, this year to be held from 1 to 5 p.m. Sunday, Oct. 24, at Syntex, 3401 Hillview Ave., Palo Alto.

The $6 admission charge (pay at the door) provides scholarships for Stanford students. Last year the Club gave three full scholarships to deserving students.

Champagne, punch, and hors d'oeuvres will be served while guests browse among the many items for sale—Christmas ornaments, decorations, and centerpieces, etc.; handknits and crochets, embroideries and quilts from around the world; linens, books, purses, garments, and lots more.

Entertainment will include a fashion show by Saks Fifth Avenue, vocal music by the Stanford Mendicants, and tea dancing to the music of the Stanford Jazz Band. Television sets will be available for football fans to watch the day's pro football games.

Christine Egan of Los Altos Hills is chair of the event; Anne Hopkins is Club president.

SSRL users' meeting

The ninth annual Stanford Synchrotron Radiation Laboratory user group meeting will be held from 8 a.m. to 5 p.m. Thursday and Friday, Oct. 21-22, at SLAC.

The meeting will be devoted to scientific exchange—presentation of papers and discussion.

Sunrise Exercise group wants you too—at 6:45 a.m.

"Exercising three times per week will contribute to weight loss and improved cardiovascular health as well as provide many psychological benefits," says Lindy Birkel, coordinator of exercise for the Health Improvement Program (HIP) and co-instructor of Sunrise Exercise.

A group of Stanford Faculty and Staff (men and women) have been meeting together at Roble Field for Sunrise Exercise at 6:45 a.m. on Monday, Wednesday and Friday. They warm-up briskly and then walk-jog for approximately 30 minutes. They will walk less and jog more with the goal of eventually jogging continuously.

"The level of commitment is high in this group," says Birkel. "We have one member, Judi Anderson, who travels in from San Jose by 6:45 each morning."

The group also periodically enjoys coffee cake and orange juice after a workout.

Stanford faculty, staff and their families are invited to join the group for $5 per quarter. It is sponsored by the Health Improvement Program and is led by experienced exercise instructors Lindy Birkel and Cathlin Milligan.

For more information, call the HIP office at 497-7940.

Chances to dance abound on campus

Space is still available in some of the Dance Quorum classes offered during fall quarter at Roble Gym.

Faculty/Staff Noon Hour Dance (aka Dance for Lunch Bunch): Beginning group meets Monday and Wednesday and the continuing group Tuesday and Thursday in Studio 42; Joy Weston, instructor.

Ballet: Beginning at 6-7:30 p.m. Monday and Wednesday, intermediate 7:30-9 p.m. Monday and Wednesday, and all levels 12:30-2 p.m. Saturday in Studio 33; Elizabeth Larkam, instructor, and Bill Sorenson, pianist.

Floor Barre: 6-7 p.m. Tuesday and Thursday in Studio 42; Lisa Burnett, instructor.

Jazz: 6-7 p.m. Monday and Wednesday in Studio 42; Elizabeth Gustafson, instructor.

For further information on classes, call 497-4254.

Rho to teach mime and improvisation

The nature of physical movement, the meaning of gesture and expression and quite a bit more will be explored in a class series called Movement Improvisation, beginning at 7 p.m. Wednesday, Oct. 13, in Tresidder's Room 132.

Instructor Jong Rho, who founded and directed the Yale Mime Troup, offers a keener awareness of and greater facility in body movement and a heightened sense of creativity and self-confidence, plus the history and techniques of mime. His students can expect to contribute a great deal of energy and find freedom from their nasty physical and mental blocks.

The course costs $20. For more information, call Rho at 326-4121 or 327-3258.



Fourth-year medical student Paul Berger, born and raised in New York City, has found that photographing the natural beauty of this area is the perfect therapy to cope with the stresses of medicine. "Twenty Miles from Stanford," a selection of his work taken within biking distance of the campus, will be shown on the second floor of Tresidder Union through October.

Davidovich first in refurbished hall

The Lively Arts at Stanford will open its 1982-83 season in the newly refurbished Memorial Auditorium with Soviet-emigre pianist Bella Davidovich at 8 p.m., Friday, Oct. 15.

For the first time since Memorial Auditorium opened in 1937, it has acquired new seating.

"The 1,694 seats in Memorial Auditorium have been replaced by 1,721 deep red all-wool plush seats. The backs of the chairs are rosewood," said Vicky Holt, director of University Events and Services. "The carpet is also a deep red."

"A computer was used to plot a new seating pattern so that no one will sit directly behind anyone else. Each audience member can then have an unobstructed view of the performance.

"The first two rows of chairs can be pulled out to accommodate wheelchairs and allow the stage to be extended over the orchestra. There will also be a removable section of seats in the center section which will allow for a sound console to be placed there when needed.

"For the past five years we've been slowly bringing our performing facilities up to first-class standards. Considering the artists we have using them, it's about time," Holt said.

In addition to Davidovich, the following artists and ensembles also will perform in Memorial Auditorium this season: the Bella Lewitzky Dance Company, pianist Emanuel Ax, the Newport Jazz Festival All-Stars, violinist Oscar Shumsky, Paul Taylor Dance Company, Philip Glass, the New England Ragtime Band, violinist Charles Treger and pianist Andre Watts, the Oberlin Dance Company, and pianist Murray Perahia.

"it's indicative of Stanford's investment and commitment to the performing arts that money is being put into its performing facilities. The upgrading makes them easier to maintain and more efficient to operate," Holt said. "But the university also realizes that providing attractive theaters is a good way to attract more audiences and to sell more tickets to its shows."

Bowlers—join Tresidder leagues now

The Recreation Center at Tresidder Union is seeking members for its faculty and staff bowling leagues, now getting underway for fall quarter.

Leagues with current openings include the "Bowl for Lunch Bunch" leagues on Tuesdays and Fridays at noon, the four-person mixed handicap league on Mondays at 6 p.m., the intra-department league on Tuesdays at 6 p.m., the Wednesday Trios league at 8:30 p.m., and the Faculty-Staff Mixed Fours offered on Thursdays at 7:30 p.m.

The noon leagues consist of two-person teams bowling two games over lunch. The evening leagues on Monday, Tuesday and Thursday consist of four person, coed teams. Discount cards are also available for all league bowlers. Prearranged teams or individuals desiring placement with a league may sign up at the Recreation Center, located on the first floor of Tresidder Union, or by calling 497-4316.

For practice or some good family fun try the Sunday Night Special, from 6 p.m. to midnight for only 45 cents per game.

Patrons of the Recreation Center should also be aware that the entrance has been moved to the corner of the building next to the faculty club facing the back patio.

Art and book fair helps Museum programs

The Committee for Art at Stanford will hold its third Annual Art and Book Faire between 10 a.m. and 4 p.m. Saturday, Oct. 23 at the Gallery Bookshop and the Stanford Art Gallery.

A wide variety of good quality used hardbacks and paperbacks will be for sale at reasonable prices on the Art Gallery veranda. Attractive and inexpensive posters and art reproductions as well as picture frames will also be for sale.

New books, cards, calendars and other gift items will be available in the Gallery Bookshop for Christmas shopping.

Art Gallery docents will conduct tours of the current exhibit *Venetian 18th Century Art* at 1 and 3 p.m.

Proceeds from the Faire are used to support the education program of the Stanford Museum.

International Center offers varied calendar of events

Pacific Peacemaker crew to speak

Two crew members of the Pacific Peacemaker, a 54-foot ketch which sailed over 11,000 miles in a journey to protest nuclear proliferation, will speak at the International Center at 4:30 p.m. Tuesday, Oct. 19.

Skipper Bill Ethell and crew member Win Olive will show slides and speak of their journey from Australia to San Francisco and their efforts to promote greater public awareness of nuclear policy in the Pacific basin.

The Pacific Peacemaker stopped in New Zealand, French Polynesia, Hawaii and Seattle to voice protest over such policies as land rights, underwater nuclear testing, military bombing maneuvers and the Trident submarine.

The Peacemaker arrived in San Francisco today (Oct. 31). The boat is owned by many groups and individuals from all over the Pacific basin.

The I-Center and the United Campus Ministry are cosponsoring next Tuesday's presentation.

Lunch lecture features Kirk Hanson

Kirk Hanson, a lecturer at the Stanford Graduate School of Business will speak on "Corporations and World Poverty" at the October 19th Tuesday Luncheon-Lecture at the International Center.

Hanson will speak on the specific influence of major corporations on world poverty and the responsibilities of those corporations.

Hanson received his bachelor and master degrees from Stanford and has been a fellow at Yale and Harvard Universities. He also does extensive work in management consulting for major corporations. He also plays a leading role in many business organizations such as the Business Roundtable and the National Alliance of Business.

Luncheon tickets for Hanson's lecture went on sale yesterday at the I-Center. Only 40 luncheon tickets are available, at a cost of $2.50 each. The lecture is free and brown baggers are more than welcome.

Lewitzky Dance Company to include premiere in performance Oct. 22

The Bella Lewitzky Dance Company, "the dance company that put modern dance on the California map," will be presented by Lively Arts at Stanford at 8 p.m., Friday, Oct. 22, in Memorial Auditorium.

The program will feature a premiere of Lewitzky's newest work, "Continuum," performed to Stravinsky's "Duo concertant," for violin and piano. In addition, the company will perform Lewitzky's "Changes and Choices" and "Spaces Between."

The company will also present a free lecture-demonstration at 8 p.m., Wednesday, Oct. 20, in Memorial Auditorium. It will focus on "Continuum" and on dance in the west.

Lewitzky is a West Coast based choreographer, dancer, lecturer, and educator. Her early training was with Lester Horton. As his colleague, she co-founded the Dance Theater in Los Angeles in 1946, then one of the few institutions in the nation with both a school and performing theater of dance in a permanent house.

In 1951 Lewitzky founded Dance Associates with both a school of modern dance and a performing concert group. Lewitzky formed her present 10-member group in 1966. It is actively engaged in the National Endowment for the Arts dance touring program and has toured extensively in the U.S. and Europe.

In 1978 Lewitzky shared the most prestigious award in the dance field, bestowed by *Dance Magazine*, with Mikhail Baryshnikov.

Her philosophy is that "art is an ongoing process, and that the only constant is change." Her philosophy is reflected in the company's versatility in all its facets including the concerts; in its repertory, from conventional to experimental; and in its sounds, from classical to electronic.

The company has achieved international acclaim for its innovative and individualistic choreography—a uniqueness of style that reflects its California base and amplifies the tradition that "California has been the fountainhead of some of the strongest indigenous influences in American dance."

She believes that motion is a basic tool of education, that it should be as much a part of the learning experience as reading and mathematics.

Coffee House adds new back patio

After more than a year in planning, the Coffee House has expanded its service to include an outdoor back patio, providing approximately 130 additional seats as well as beer and wine service.

While construction has not been finished, additional stone walls and planters have been added to help provide better control of alcohol (which is not permitted outside the area).

With the addition of the new seating and the usual noon and dinnertime rushes, partial table service is now provided in order to reduce the amount of time spent waiting in line.

Customers will place their orders with any cashier on printed menu order cards. After paying and receiving any ready-to-go items such as cold beverages or pastries, they may then proceed to a table either inside or out. The order will be delivered as quickly as possible.

All hot food items will be prepared fresh by the kitchen staff along with the new chef's salad and wide array of sandwiches.

Customers wishing only pastry or beverage items need not fill out order cards, but may proceed directly to the express registers in the center of the Coffee House. Orders to go outside the Coffee House and the patio will be expeditied and delivered to a specifically designated area.

Japanese films slated Thursday

The second part of the film series, "The Human Face of Japan," will show at the I-Center tomorrow night (Thursday, Oct. 14) as part of the Other Cultures Film Series.

The three films slated for tomorrow night deal with social issues in modern Japan, focusing on the struggle between tradition and modernization.

"The Career Escalator" contrasts the lives of a Japanese student studying for University entrance exams and that of a fast-paced senior executive with the Mitsubishi Corporation.

The second film of the evening explores the different aspects and ramifications of the lives of dual-career couples in Japan. "The Working Couple" features the lives of a Tokyo pharmaceutical clerk and his shopkeeper wife.

Finally, "The Rice Ladle" depicts the role of women in Japanese society, featuring women in both modern career and traditional homemaker roles.

The films begin at 7:30 p.m. at the I-Center. Admission is free but a 75-cent donation is requested at the door. The Other Cultures film series is a continuing program at the I-Center. For more information about the film series or any other I-Center program, phone 497-1831.

Writer Roch Carrier due next week

Quebecan author Roch Carrier will speak on his work and his life in literature at the I-Center beginning at 3:30 p.m., Wednesday, Oct. 20.

Sponsored in cooperation with the French Department and La Maison Francaise, Carrier's visit will include the showing of a short film and a discussion of his literary work.

A noted author, Carrier is en route to Salt Lake City, Utah, to speak at the Rock Mountain Modern Language Association convention about modern literature. Carrier will address a conference entitled, "One day, literature met me, she was not afraid" about his work in literature and his life experiences.

Born in 1937, Carrier first published in 1964. Much of his work has been for theater or film. Carrier has translated from French to English many of his plays, which have been performed outside of Quebec. Some of his works include, "War, Yes Sir!" and "Is it the Sun, Philibert?"

As one of Quebec's foremost film critics, Carrier contributes to the magazine and newspaper literature of the province. In addition, in 1973 he also served on the panel of the Canadian Film Awards.

Carrier's discussion will be in both French and English, and the ensuing question period will be in both languages.



Charles Ferguson

Guitarist Ferguson to perform Oct. 23

Charles Ferguson, Stanford's lecturer in guitar, will perform at 8 p.m. Saturday, Oct. 23 in Dinkelspiel Auditorium.

Presented by the Music Department, his concert will include transcriptions of harpsichord, violin, and piano works by Couperin, Bach, and Albeniz. Spanish composers Fernando Sor, Regino and Eduardo Sainz de la Maza will be represented, as well as Venezuelan composers Rodrigo Riera (Ferguson's teacher in New York and Venezuela), and Raul Borges.

Tickets for Ferguson's concert Oct. 23 are $4 general and $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Ermeler Duo set for Oct. 22 concert at Stanford

The Stanford Music Department will present the Ermeler Duo—Rolf Ermeler, flute, and Maria Ermeler-Lortzing, piano. The husband-and-wife team from Lubeck, Germany, will perform early Romantic and contemporary works at 8 p.m., Friday, Oct. 22 in Dinkelspiel Auditorium.

The first half of their program will be early Romantic: Hummel's *Sonata in D* for flute and piano; Beethoven's *32 Variations in C minor* for piano; Kuhlau's *Duo brillant* for flute and piano; and two works from Mendelssohn's *Sieben Charakterstücke*.

Contemporary works will be featured after the intermission: Otto Luenig's *Suite No. 1* for flute; Gerhard Brand's *Pantomimes* for flute and piano; excerpts from *Prole do Bebe* by Villa-Lobos for piano; and Alexandre Tansman's *Sonatina* for flute and piano.

A *Washington Star* review said: "They are artists of the first rank. I. . . heard Rolf Ermeler in Lubeck with his famous baroque ensemble. . . the playing of this superb flutist remained a glowing memory."

Tickets for the Ermeler Duo are $4 general, $2 students and senior citizens, available from Tresidder Ticket Office (497-4317) or at the door.

Open house for Berry

The Stanford Mid-Peninsula Urban Coalition, 860 Escondido Road, will hold an Open House from 4 to 6 p.m. Friday, Oct. 15, to welcome Sarita Berry as their new executive director.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Oct. 13 to cover the events of the week of Mon., Oct. 25 through Sun., Oct. 31.

LATE ANNOUNCEMENTS

Wed., Oct. 13. Stanford Staffers Aerobic Dance Demonstration: By Barbara Frey. Participation encouraged (wear comfortable clothes). Noon-1 p.m. Tresidder Upper Deck. (In case of rain, Chem. Engineering Gazebo.) Brown bag lunch.

Physics Dept. Colloquium: "The Dwarf Nova Outburst—A Hot Dam Instability" with Prof. J. Falkner, UC-Santa Cruz. 4:15 p.m. Physics Lecture Hall, Room 101.

EE 380 Computer Systems Laboratory Seminar: Topic TBA. Speaker, Werner Trattnig, S.U. 4:15 p.m. Terman Aud.

Roble Political Action Committee Debate: Between Victor H. Palmieri, chairman, Californians Against Street Crime, and Paul Stone, consultant for Citizens Against the Gun Initiative. 7 p.m. Roble Lounge. Open to all.

Thurs., Oct. 14. SACDF Political Speech: "The Nuclear Freeze and Related Defense Issues" by Tom Lantos, rep. from Congressional Disrict 11, running against Bill Royer. 7:30 p.m. Kresge Aud. Public invited.

Condensed Matter Physics Seminar: "Molecular Beam Epitaxy and Its Application to New Electronics Devices" with Prof. James Harris, S.U. 4:15 p.m. Applied Physics 200.

Sat., Oct. 16. Stanford Black Performing Arts Presents: "U-Zulu Dance Theater of South Africa." 8 p.m. Dinkelspiel Aud. $7 general, $5 students and seniors.

MONDAY, OCTOBER 18

Varsity Soccer: Vs. Westmont College. 1 p.m. Maloney Field.

Biological Sciences Dept. Seminar: "Regulation of the Cell Cycle in Early Amphibian Development" with Dr. Marc Kirschner, UC-San Francisco. 4 p.m. Herrin Lab, T175. Open to the public.

Numerical Analysis Seminar: "Multigrid Methods" with Randolph Bank, UC-La Jolla. 4:15 p.m. Math 380C.

Radioscience Seminars: "Introduction to the New Radioscience Computer Facility" with Calvin Teague, S.U. 4:15 p.m. McCullough Bldg., Room 127.

Stanford Film Society: "The Big Sleep." 7 p.m. Kresge Aud. $1.50.

Stanford Hillel Foundation: Kiddush L'Vanah Service, and Rosh Chodesh Cheshvan Celebration. 7 p.m. Hillel Lounge, Old Union Basement. Open to the public.

TUESDAY, OCTOBER 19

Transcendental Meditation Program: Learn about the current research into consciousness and the practical benefits of the TM and TM-Sidhis Programs. Noon in the Meyer Library, room 144, and at 7:30 p.m. in the Meyer Library, Room 147. Open to all.

I-Center Tuesday Lunch/Lecture Series: "Corporations and World Poverty" by Kirk Hanson, Grad. School of Business. Noon. I-Center. Lunch tickets available the week before, $2.50. Brown baggers also welcome.

Professional Opportunity Program for Ph.D.'s: "An Inside Look at the Academic Job Market." 3:15-5 p.m. CERAS, Room 204.

Applied Physics Colloquium: "Observation of the 2-Photon Doppler-Free 1^3S_1-2^3s_1 Transition in Positronium" with Dr. Steven Chu, Bell Laboratories. 4:15 p.m. Applied Physics 200.

Computer Science Colloquium: Speaker and topic to be announced. 4:15 p.m. Jordan 040.

Communications Design Seminar: "A Visit to the Chinese Telecommunications Industry" with Bruce B. Lusignan, S.U. 4:15 p.m. McCullough 128.

Fluid Mechanics Seminar: "How a Mermaid Washes Her Hair; Hydrodynamic Spreading of a Hank of Fiber" with Prof. Hilary Ockendon, Oxford Univ. 4:15-5 p.m. Skilling Aud. Public invited.

Music Dept. "Learning to Listen" Lecture: "Introduction to Mahler—Does Music Tell a Story?" by Prof. George Houle. 8 p.m. Annenberg Aud. $4 general, $3 Music Guild members, $2 students and seniors.

I-Center/Ecumenical Ministries Talk: The crew of the schooner, Pacific Peacemaker, which travelled from Australia and New Zealand to Fiji and nuclear testing sites in the Pacific and Puget Sound will speak of the voyage and their vision of a nuclear-free Pacific. 4:30 p.m. I-Center. Public invited.

WEDNESDAY, OCTOBER 20

Ecumenical Ministries Wednesday Lunch Discussion: "The Mental Health of Workers" by Lee Shore. Noon. Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata. Directed reading credit available.

CROW Women at the Top Lecture Series: Marion Sandler, president and chief executive officer, World Savings and Loan Association, will speak. Noon. Kresge Aud. Open to all.

Physics Dept. Colloquium: "Fundamental Nuclear Oscillations and Electron Scattering" with Prof. Karl Van Bibber, S.U. 4:15 p.m. Physics Lecture Hall, Room 101.

EE 380 Computer Systems Laboratory Seminar: "Design for Testability" with Prof. Ed McCluskey, CSL. 4:15 p.m. Terman Aud.

Electronics in Medicine Seminar: "Data Sources for Digital Radiography" with Dr. Paul Scheibe, ADAC, Inc. 4:15 p.m. McCullough 134.

Colloquium of the Dept. of Chemical Engineering: "Mechanisms of Foam Flow in Porous Media—Apparent Viscosity in Smooth Capillaries" with Dr. George Hirasaki, Shell Development Company, Houston. 4:15 p.m. Chemical Engineering Conference Room.

The Lively Arts at Stanford Lecture/Demonstration: By members of the Bella Lewitzsky Dance. 8 p.m. Memorial Aud. Free.

THURSDAY, OCTOBER 21

Transcendental Meditation Program: See details for Tues., Oct. 19. Noon. Meyer Library, Room 144.

Solid Mechanics Seminar: "The Mechanics of Dynamic Crack Propagation in a High Strength Steel" with Prof. Ben Freund, Brown Univ. 4:15 p.m. Skilling Aud.

Water Polo: Vs. Pepperdine. 4:30 p.m. deGuerre Pool. $2 adult, $1 child.

I-Center Other Cultures Film Series: "Cities of the World." "Melina Mercouri's Athens," and "Peter Ustinov's Leningrad." 7:30 p.m. I-Center. 75 cent donation at the door.

Stanford Synchrotron Radiation Laboratory: Ninth annual User Group meeting. 8 a.m.-5 p.m. SLAC. (Meeting continued tomorrow, same details.)

FRIDAY, OCTOBER 22

Stanford Synchrotron Radiation Laboratory: See Thurs., Oct. 22 for details.

Water Polo: Vs. UCLA. 3 p.m. deGuerre Pool. $2 adult, $1 child.

Applied Mathematics Seminar: "Some Aspects of Fracture Mechanics" by Prof. George Herrman, S.U. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Materials Science & Engineering Dept. Colloquium: "Zircaloy Core Materials in Light Water Reactors" with Dr. J. T. A. Roberts, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Women's Volleyball: Vs. UCLA. 7:30 p.m. Maples Pavilion. $2 adult, $1 child.

Music Dept. Concert: Ermeler Duo. Rolf Ermeler, flute; Maria Ermeler-Lortzing, visiting from Lubeck, Germany. Early romantic music by Hummel, Mendelssohn, von Weber, F. X. Mozart, John Field, and Kuhlau. 8 p.m. Dinkelspiel Aud. $4/$2.

The Lively Arts at Stanford: Bella Lewitzsky Dance. "Changes and Choices," "Continuum" (working title), a premiere, and "Spaces Between." 8 p.m. Memorial Aud. $10.50, $9.50, $8.50, $7.50; students $3 off these prices.

STARTS Great Directors Film Series: "Paris Nous Appartient (Paris Belongs to Us)" dir. by Jacques Rivette, prime mover of the New Wave Cinema. 8 p.m. Geology Corner, room 320. $3.75 general, $2.75 students.

SATURDAY, OCTOBER 23

Ecumenical Ministries Conference on the Arms Race and National Security: At 9 a.m., a panel with Dr. Robert North, Dr. Phil Farley, Dr. Condi Rice. At 10:30 a.m., "Nuclear Weapons Policy and National Security" with Dr. Bob Parker, Dr. Gloria Duffy, Mr. Dave McFadden. At noon, workshops. At 2 p.m., the Soviet Peace Delegation. At 2:45 p.m., a reception at the I-Center. Meetings in Dinkelspiel Aud. and reception open to all.

Art and Book Faire: Art work and good quality used books for sale 10 a.m.-4 p.m. The Gallery Bookstore and Stanford Art Gallery.

Water Polo: Vs. UC-Irvine. 11 a.m. deGuerre Pool.

School of Education/SIDEC Lectures: "Higher Education and the Limits of Relative Autonomy: The Transformation of the Community College" by Jerome Karabel, Huron Institute, Cambridge, Mass. 9 a.m. "Education, Socialism and Struggle in Mozambique" by John S. Saul, Univ. of York, Canada. 1 p.m. "Education and Social Transformation: La Crusada de Alfetizacion in Nicaragua" by Ernesto Vallecillo, Ministry of Education, Nicaragua. 4:30 p.m. Three lectures all in Bishop Aud. Public cordially invited.

Varsity Soccer: Vs. St. Mary's College. 1 p.m. Maloney Field. $2 adult, $1 child.

Women's Volleyball: Vs. Arizona State. 7:30 p.m. Maples Pavilion.

Music Dept. Concert: Charles Ferguson, guitar. Works by Couperin, Bach, Albeniz, Sor, Riera. 8 p.m. Dinkelspiel Aud. $4/$2.

SUNDAY, OCTOBER 24

University Public Worship: Student Worship Service, 8:30 a.m.; Robert G. Hamerton-Kelly, dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.; Evening Communion in Memorial Church Round Room, 6 p.m.

School of Education/SIDEC Lecture: "Class, Gender and Curriculum Control" by Michael W. Apple, Univ. of Wisconsin. 11 a.m. Bishop Aud. Public welcome.

Women's Volleyball: Vs. Arizona. 3 p.m. Maples Pavilion.

ASSU Sunday Flicks: "Rocky III." 7 & 9:30 p.m. Memorial Aud. $1.50.

Mothers' Club Chrysanthemum Party and Boutique: Children's toys, Christmas ornaments and fireplace decorations, baby items, etc. 1-5 p.m. Syntex Corp., 3401 Hillview Ave., P.A. Proceeds to the Club's student scholarship fund. Public cordially invited.

EXHIBITS

The Stanford Museum is closed until the strike is resolved. After that, there will be **Paul Harris—Still Life.** Through January 2.

The Stanford Art Gallery is also closed. After the strike is resolved, there will be **Venice in the 18th Century.** Paintings, drawings, prints and decorative arts. Through December 19.

The Map as Landscape. Familiar and new aspects of Western landscapes by Donna Van Dijk. Bechtel International Center. Month of October.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Thirty Miles from Stanford. Photographs by Paul Berger. Tresidder 2nd floor gallery. Month of October.

Paintings on Canvas by David Cusic. Coffee House Gallery. Month of October.

VISITORS FROM OTHER COUNTRIES

Oct. 18: The Hon. Kenneth Baker, minister of State for Industry and Commerce, United Kingdom.

Mr. Mario Nordio, foreign affairs "Il Piccolo" Triste Daily, Italy.

Mr. Mustafa Awad Allam, director of telecommunications, Sudan.

Mr. Bengt Wennerberg and Mr. Alf Olofsson, Trade and Industry, City of Gothenburg, Sweden.

Dr. Helga Koernig and Dr. Helmut Sauer, Fulbrighters, min. of science of North Rhine-Westphalia, Duesseldorf, West Germany.

Oct. 20: Author Roch Carrier—writer, poet, playwriter from Quebec. Film, talk on Canadian Quebec literature, readings, discussions at 3:30 p.m. at the International Center.

Dr. Klaus Brockhoff, dean of the Graduate School of Business, Albrechts University in Kiel, West Germany. (20, 21, 22)

Oct. 22: Group of 15—Helsinki School of Economics, Finland.

Oct. 25: Kohji Okamoto, political science, Ehime Univ. Japan.

Dr. Ivan Grossi, CINECA, Inter-univ. Computer Center, Italy.

For further information, please call 497-1984, International Visitors, Maria Bun.

CAMPUS REPORT

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NAS panel suggests bar on foreigners

Proposals to bar selected foreign nationals from direct participation in unclassified research on campus are troublesome, says Stanford Vice-Provost Gerald Lieberman, dean of graduate studies and research.

The proposals are contained in a newly published report by a National Academy of Science panel. It concluded there had been substantial and serious leakage of U.S. technology to the Soviet Union but said open scientific communication and exchange, especially by universities, played "a very small part" in this process.

"In general, the NAS report is a thoughtful document which attempts to balance the interests of the universities and the federal government," Lieberman says.

Instead of imposing the International Traffic in Arms Regulations (ITAR) and Export Arms Regulations to academic activities, it suggests that direct participation in government-sponsored projects by nationals of designated foreign countries be prohibited in certain "grey areas" of research. No attempt would be made to limit physical access to university space or enrollment in any classroom course of study.

Where direct participation in research is prohibited by an individual's visa or contractually agreed upon by the university, the NAS panel said, it is not inappropriate for the contracts to permit the government to ask a university to report those instances where stipulated foreign nationals seek participation in research, however supported. While some

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Better the arrow should point in the proper direction than the sign should read correctly, the Kappa Alpha brethren decided. It's a topsy turvy world anyway.

Stanford may stay with quarter system–Good

Stanford probably will stay with an academic calendar based on the quarter system, as it has since 1916, a preliminary report to the Faculty Senate indicated Thursday, Oct. 14.

The University of California at Berkeley has announced plans to change to the semester system next year. A recent national survey showed more than half America's colleges now are on the early semester calendar, with classes running from August through May. More than 25 percent have calendars based on the quarter system.

Prof. Edwin M. Good, religious studies, head of the Ad Hoc Committee to Study the Length of Terms of Academic Instruction, said this 13-member group "came to realize. . .that each system is very good for certain educational values. . .(but) no system is good for all of them."

He said the committee report "probably will encourage experiments in individual departments in overcoming the limitations of the quarter system," such as offering more two-quarter course sequences in the humanities. In general, a great deal more thought needs to be given to the articulation of curriculum—how various courses join one another.

While personally favoring the semester system, Good said the committee deliberations covered a wide range of alternatives, including the possibility of having six five-week terms per year. The complexity of this alternative would result in an "excessive" load on the academic advising system, Good said.

He emphasized that the committee

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Rosenzweig named president of AAU in D.C.



Robert Rosenzweig

Robert M. Rosenzweig, 51, Stanford vice-president for public affairs, will become president of the Association of American Universities in January, 1983.

The Washington-based association includes 52 leading American and Canadian research universities.

Rosenzweig coauthored a major AAU study on "Research Universities and their Patrons," an examination of university-industry-government relations published earlier this year by the University of Califoria Press.

His selection was announced at the AAU's fall meeting in St. Louis Monday, Oct. 18, by Indiana University President John Ryan, chairman of the AAU.

Rosenzweig will succeed Thomas A. Bartlett, who was named chancellor of the University of Alabama last July.

Harvard President Derek Bok headed a national search committee whose members included Stanford President Donald Kennedy, University of California President David Saxon, University of Michigan President Harold Shapiro, Ryan, and Jack Peltason, president of the American Council of Education, who served ex-officio.

In recent public comments, Rosenzweig has sharply criticized legislation linking student financial aid to draft registration. He also has suggested that California's public institutions should adopt "realistic" tuition levels to maintain their educational quality, while expanding financial aid for needy students. He is immediate past president of the Association for Independent California Colleges and Universities.

Colleagues at Stanford have credited him with the "Rosenzweig rule" for integrity in decisions—that policy makers

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People

Wellbery, Sag, Mellor, Boxer, Schupbach receive dean's award for teaching

Five faculty members in the Stanford School of Humanities and Sciences have received the 1982 dean's award for superior teaching, Dean Norman K. Wessells has announced.

They are: Assistant Profs. David Wellbery, German; Ivan Sag, linguistics; Associate Prof. Steven G. Boxer, chemistry; Profs. Anne Mellor, English; and Richard Schupbach, Slavic languages and literatures.

Each will receive a salary increase of $750 above and beyond that normally given.

The recipients were chosen by the dean and an ad hoc faculty committee who used recommendations and evidence presented by individual departments.

Items considered were peer evaluation of the faculty member's teaching; peer evaluation of course planning, organization, and development; students' response to classroom instruction; teaching activities and contact with students outside class; and effectiveness in directing dissertations and other special projects.

Wellbery joined the faculty in 1975. His scholarship concerns the history of German thought. His course on this topic deals with texts that are philosophic and esthetic in orientation. His current work concerns the poetry of Goethe. His is known both for the intensity of his intellectual concerns and for his ability to convey these to a broad spectrum of undergraduates.

Sag came to Stanford as an Andrew Mellon postdoctoral fellow in 1978. He has devised several new courses in linguistics, played a key role in the new linguistics major, and developed new courses for both the master's and Ph.D. programs. He has involved students in conference organization, publication, and research. His primary research area is formal syntax, semantics, and pragmatics.

Boxer joined the faculty in 1976 and was promoted to tenure this fall. He received a Henry Dreyfus teacher-scholar grant in 1980. An Alfred P. Sloan Foundation fellow, he combines high intellectual standards with strong enthusiasm for his students' development.

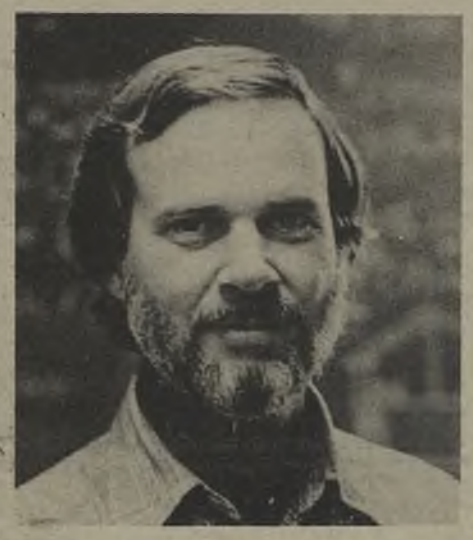
He has organized new courses and revised old ones, making them available to a wide variety of students. His main research interest is understanding photosynthesis, how plants use the sun's energy to convert carbon dioxide and water into organic compounds.

Mellor has directed undergraduate studies in English for the past three years, serving as the principal academic adviser for more than 100 students. She has directed the new program in feminist studies and recently became head of the Faculty Committee on Committees. A Stanford faculty member since 1966, she often has been a guest lecturer in her colleagues classes. She is the author of *Blake's Human Form Divine* and *English Romantic Irony*.

Schupbach, a Stanford faculty member since 1971, has developed computer-aided instruction programs for first- and second-year Russian and created a videotaped program in third-year Russian, showing how the language is used in living situations. He also has a third-year program to make students "free readers" of Russian. He trains teaching assistants for the first-year course through weekly conferences and frequent classroom visits. By developing instructional material suitable for use on Apple computers, he has been able to use more time with students for the introduction and explanation of new material.



Warren Hausman



Gilbert Masters

Kays appoints Masters, Hausman

The appointments of Prof. Gilbert M. Masters as associate dean of engineering and Prof. Warren H. Hausman as chairman of the Department of Industrial Engineering and Engineering Management have been announced by Engineering Dean William Kays.

The appointments were effective Sept. 1.

Masters was the 1981 recipient of the prestigious Walter J. Gores Award for excellence in teaching. He was cited by a senior class at Stanford as one of three professors having the most significant impact on their undergraduate program.

After receiving his B.S. and M.S. in electrical engineering from UCLA and his Ph.D. from Stanford in 1966, Masters decided in 1970, at age 30, that his real interest was civil engineering, particularly solar energy. He has taught several classes in energy and resource management, including the popular CE 176, "Small Scale Energy Systems."

Hausman, who joined the Stanford faculty in 1977, received his B.A. in economics from Yale in 1961 and his doctorate in industrial management from MIT in 1965. His area of expertise is production and operations management and analysis, to which he has made major contributions in the analysis of multi-stage, multi-product scheduling, and the incorporation of forecasting in sequential decision problems.

Hausman won two teaching awards when he was on the faculty of University of Rochester.—**Amy Bernhard**

Trustees elect John Packard to board

John T. Packard, San Francisco investment counselor, has been elected to a five-year term by the Stanford Board of Trustees, effective immediately.

University alumni elected Packard to a four-year term in 1978. He served as chairman of the Committee on Investments and as vice-president of the board before completing his first term in office last July.

Under his leadership, the Committee on Investments formed subcommittees on real estate, policy, and venture capital to facilitate its work. Packard also served on the Trustee Committee on Finance and Administration, the Special Committee on Investment Responsibility, and the Subcommittee on Venture Capital.

Packard graduated from Stanford in 1956, received his MBA here in 1961, and was honored with a Golden Spike award from the University in 1975. His wife and daughter are both Stanford alumni.

Sports line: 497-1111

Call the new Cardinal Sports Line (497-1111) for the latest scores and schedules in Stanford sports.

Prof. Charles Yanofsky of the Stanford Department of Biological Sciences has received the V.D. Mattia award of the Riche Institute of Molecular Biology.

Named for the former president and chief executive officer of Hoffman-LaRoche, the award citation said "Our present understanding of gene structure, arrangement, function, and regulation owes as much to Charles Yanofsky as any other individual.

"His work bears the stamp of originality; it is elegantly and thoroughly executed and brilliantly interpreted. His discoveries provide the foundation upon which developments in egnetic chemistry of higher organisms and man are being built."

The award was presented to Yanofsky Oct. 4, at the Roche Institute in Nutley, N.J.

Wall hangings by **Kirsten Andresen Seaver** will be shown at the **Victoria Emmons** Restaurant Oct. 26 to Dec. 18.

Both Seaver and Emmons are Stanford faculty wives with European backgrounds. Seaver, a native of Norway, is a writer and translator as well as an accomplished needlewoman. Emmons, who was born in Nice and met her husband in Moscow, recently opened her restaurant at 2699 Middlefield Rd., Palo Alto.

Stanford's Board of Trustees has named six faculty and five students to committee membership, and approved two observers from the Associated Students to committees.

The appointments are as follows:

Committee on Investments: **Prof. James C. Van Horne**, Graduate School of Business; **Craig Albright**, student.

Committee on Academic Affairs and Development: Profs. **John Freccero**, French and Italian, and **Theodore H. Geballe**, applied physics; **Jerusha A. Stewart** and **Steven P. Westly**, students; **Rod A. Beckstrom**, ASSU observer.

Committee on Finance and Administration: **Profs. Richard H. Jahns**, applied earth sciences and geology; and **Lyle M. Nelson**, communication; **Robin A. Cooper** and **Susan Mensinger**, students; **R. Mark Epstein**, ASSU observer.

Committee on Nominations: **Prof. Eleanor Maccoby**, psychology.

Two former Stegner Fellows in Stanford's Creative Writing Program have won the top prizes in the prestigious *Transatlantic Review* Fiction Awards, established by the Henfield Foundation.

Program director Prof. John L'Heureux said **Harriet Doerr**, currently a non-matriculated graduate student, won the first prize of $2,500, and **Dennis McFarland**, now a Jones lecturer in fiction writing, won the second prize of $1,000.

The foundation invited 21 colleges and universities to submit work by no more than three students. From the 63 entries, 10 prizewinners were selected. Stanford's was the only program to have both a first and second prizewinner.

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To produce more we must save and reinvest more: Pencavel

BY DONALD STOKES

A key to revival of American industry is an increase in the amount of savings and investment.

Labor and management have a common interest in seeing more profits allocated to new machinery and research, so that productivity can be increased, and both sides subsequently will have a bigger cake to enjoy.

So says John H. Pencavel, professor of economics at Stanford, who has gained a national reputation for his studies of labor-market economics.

"Most U.S. labor leaders are aware that reinvestment is the path to more jobs and higher pay. However, they also know that they look better to their rank and file if they concentrate on wage issues" said Pencavel, in a campus interview.

"The way most contract negotiations are reported in the media suggests the metaphor of a pie which is being divided, with each side trying to get the bigger slice. There is some truth in that, but a more relevant issue is not the size of the pie, or even how it is divided, but how it is growing in size.

"The truth is that the interests of both sides are in seeing the pie grow. In other words, the greater the rate of change in productivity and profitability, the more there will be for each side.

"If all corporate net profits in the U.S. in 1981 were sequestered and distributed equally among all the wage and salary workers in the economy, then the average compensation of those employees would rise by less than seven percent, and this would be a once and-for-all increase.

"It would probably be far better for all concerned if these profits were ploughed back into investment, in activities with high rates of return.

"Look at how that process benefited Germany and Japan. Though back in 1950 the per capita income of both those countries was low, by investing a large fraction of their national income they have caused their respective national pies to grow enormously.

"Japan's savings ratio, the proportion invested and put back into research and development is on the order of 30 percent. The savings rate in the U.S. has been lower than that of almost every other industrial country.

"This is one of the major reasons why America has fallen behind Japan and Germany in the rate of growth of productivity.

"Unfortunately, if an American labor leader were to suggest to a mass meeting of his members that instead of increases in wages the profits of the company should be ploughed back into better machinery, so that productivity could be increased, a typical worker would say 'To hell with that, I want the money now.'

"Labor and management in the U.S. are not natural enemies. By agreeing to put more into reinvestment rather than increasing dividends or wages, they would create bigger pies for tomorrow.

"The common impression that labor-management relations in this country are adversarial, while those in Japan are cooperative, is not accurate.

"The way that working conditions in Japan are often described is true only of a certain number of firms. It is widely believed in America that Japanese workers and managements sit down together and jointly make their decisions. Also, we think that Japanese workers are more or less guranteed lifetime jobs.

"These beliefs are true of many of the largest corporations in Japan, but they are not true of the whole country. In fact there are a large number of Japanese workers who are subject to the whims of market conditions in much the same fashion as in the U.S.

"Many Japanese companies subcontract work, and it is these subcontracting firms that feel the effects of variations in the demands for products of major firms.

"So, in the event of a reduction in the demand for the products of a firm, though all the workers at many major Japanese corporations remain employed, the workers at the various smaller firms that supply parts under subcontract may be severely affected."

Nor is it true, says Pencavel, that there is a constant fight in the U.S. between management and labor. "That is sometimes true of certain firms, or even industries, but it is wide of the mark for the country as a whole."

But hasn't nearly every major industry in the U.S. been rocked by strikes at some time during the last two decades?

"No, many have not," said Pencavel. "For example, the agricultural, distributive trades, service, real estate, insurance, and finance industries. All these industries together account nowadays for almost half of total employment in the American economy.

"For all industries taken together, less than point two percent of total working time (that is, less than two out of every 1,000 hours) were estimated to have been lost because of strikes in 1977 and 1978.

"Fundamentally, a primary reason why, for the economy as a whole, strikes are so unimportant is that only 20 percent of the American labor force belong to trade unions, and virtually all strikes are organized by unions.

"Even in those areas where strikes do take place, most union members work under contracts which run about three years, and the strikes usually take place, if at all, at the end of the contracts. Few industries of any importance have strikes except at these three-year intervals, and even then by no means always.

"There is one major exception, the coal-mining industry during the last decade, which has had strikes during the lives of its contracts—but these strikes have reflected not struggles between labor and management, but between factions within the union.

"We are inclined to think of the U.S. as a much more unionized and strike-prone economy than is actually the case. When the United Auto Workers sign a new contract, for example, it is big news, as it should be, but we should not lose sight of the slow inexorable wage increases that nonunionized workers get continuously.

"The proportion of union members out of the whole body of workers has been going down for the last 30 years," he noted. "At one time 25 percent of the labor force was unionized, but today it has gone down to below 20 percent.

"The unions have really been on the defensive since about 1953."

Part of Pencavel's research has been to try to measure the effect of trade union activity on the course of wages.

"If we look at the historical record, the wages paid to workers change at different rates over time and they also change at different rates for different classes of workers.

"What is the reason for this? Why is one industry increasing wages by, say, seven percent, while another gives half that? One obvious conjecture is that it has something to do with trade union activity.

"Surprising as it may seem to a noneconomist, it is very difficult to show with any confidence that there is a relationship between the change in wages over time and trade union militancy.

"Considerable research has gone into this question. There are some examples of wages being pushed up by union militancy, but by and large there are not many indications that wages move very closely with union militancy.

"What really determines the rates of change of money wages, and also the rate of change of real wages (that is, the purchasing power of wages) is the rate of growth of productivity."

Pencavel agreed this meant that if people worked harder they stood a better chance of being paid more. He added that another important factor was that, if capital equipment were increased, more

The savings rate in the U.S. has been lower than that of any other industrial country. This is one of the reasons why America has fallen behind Japan and Germany in the rate of growth of productivity.

—John Pencavel



could be produced, and that the workers would share in the returns from increased productivity.

"Many workers are reluctant to accept this notion," said Pencavel. "In many countries, a certain number of companies have been owned and managed by the workers, and in such cases the rates of capital investment tended to be low.

"The tendency in such cases was for profits to be put into wage packets rather than into reinvestment, so the rate of change in productivity was often sluggish. This has been true in all countries where there are labor-managed firms—in the U.S., Britain and Yugoslavia.

Pencavel was asked what happened when a corporation such as Sears Boebuck either allocated shares in the company to workers, or offered attractive terms for them to purchase shares, the objective being to raise the commitment of the workers and so boost productivity.

"It's not clear," said Pencavel. "Insufficient studies have been done on that issue. What appears to be the case is that the workers simply sell their shares soon after receiving them.

"Again, we have to look to Japan for a method that seems to work out better. Most Japanese workers receive their pay in two parts. The first is a flat sum which is given irrespective of the condition of the company. The other part is a bonus, typically received twice a year, which reflects in part the profitability of the company.

"This second part constitutes a large fraction of the worker's earnings, something like 25 percent.

"This method means that in effect a Japanese company can reduce its workers wages if sales are not going well, and can increase them when things are going well. It is sometimes very difficult for an American company, when it hits bad times, to reduce wage costs."

Asked to compare the results of the American

continued on next page



Italy came to la Casa Italiana last week in the person of Elio Gabbuggiani, mayor of Florence, who spoke on the Italian Communist Party and international politics and then fielded questions from his audience. With him were San Francisco's Italian Consul, Alessandro Vattani, and several members of the Florence city council. Gabbuggiani is in California to return the visit of San Francisco Mayor Dianne Feinstein to Florence in September.

Alumni schedule tax seminars

A four-evening seminar on preparation of income tax reports will be held at Stanford beginning Tuesday, Nov. 9.

"A Practical Guide to the Income Tax," will be taught by Noelle Allen, a certified public accountant and instructor in taxation. Sponsored by the Stanford Alumni Association, the program will be held on Tuesday evenings, from 7:30 to 9:30 p.m. Nov. 9, 16, 23, and 30.

The Nov. 9 session will cover basics such as itemized deductions, special tax computations, and the IRS audit process. The second session will look at 1981 and 1982 tax law changes to assist in tax planning. Subjects covered will be individual retirement accounts, marriage penalty deduction, tax rate changes, and stock dividend reinvestment programs.

On Nov. 23 there will be a discussion of the mechanics of the capital gains computation, and long- and short-term transactions. The final session on Nov. 30 will focus on the treatment of real estate and business assets, including Accelerated Cost Recovery System, investment tax credits and recapture of depreciation.

Participants may attend all sessions or select those in which they have a particular interest. Fee for individual sessions is $30; for the entire seminar, $100.

Further information may be obtained by contacting the Continuing Education staff at the Alumni Association, 497-2021.

Rosenzweig...

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should make judgments that they would feel comfortable explaining to reporters from *The New York Times* or 60 Minutes.

In comments to the Faculty Senate at Stanford, President Kennedy has repeated praised Rosenzweig and his staff for "extraordinarily effective" representation of the University's interests in Washington.

Besides federal, state and local relations, Rosenzweig oversees the University's Events and Services Office and News and Publications Service. He worked closely with Kennedy on the Pajaro Dunes conference of university and business leaders concerning biotechnology last spring.

In Congressional testimony last June he said there was "substantial convergence" on five principles for university-industry relations:

1) "Openness is to be preferred to secrecy;

2) "The educational experience of students and postdoctoral fellows has priority over the need to fulfill commercial obligations;

3) "University policies should protect the role of the institution and its faculty as credible and impartial resources in debates on scientific and technological policy;

4) "The choice of scientific questions to investigate must reside with the faculty who will do the research; and

5) "The primary obligations of faculty members are to their teaching and research."

In his recent AAU study, Rosenzweig concluded that public demand for rapid solutions to problems in defense, space exploration, health care "and now industry productivity and innovation" can be "so overpowering" that it distorts institutional purposes, unbalances programs and compromises high standards of quality.

"The key to returning stability to graduate education lies in avoiding sudden, sharp shifts in enrollment. Changes occur naturally enough over time as individual career choices respond to changing intellectual currents and economic realities," he said.

Rosenzweig argued for an expansion in federal funding of exisiting programs for portable graduate fellowships.

In Congressional testimony last March, Rosenzweig argued that America's security, health and prosperity all reflect the benefits of an open society, particularly where scholarly research is concerned. While other countries may benefit from this openness, it is a key factor in maintaining America's scientific advantage. "We tamper with it only at our peril. The cure could be worse than the disease. . . .

"It has always seemed risky to run an open society; perhaps that is why there are so few of them. But when citizens and leaders alike have been willing to take the risk, as ours have been willing to do throughout history, the most marvelous engine of creativity is set in motion.

"That is our real advantage. Why should we want to give it away?"

A former Congressional fellow of the American Political Science Association, Rosenzweig was special assistant to the U.S. Commissioner of Education before coming to Stanford in 1962.

A graduate of Michigan (B.A., 1952; M.A. 1953) and Yale (Ph.D., 1956), he taught at Yale and Amherst before coming here as associate dean of the Graduate Division and lecturer in political science. In 1967, he was named first director of the Center for Research in International Studies. In 1971 he was named vice-provost and in 1974 became Stanford's first vice-president for public affairs.

Born in Detroit Aug. 27, 1931, Rosenzweig lives in Palo Alto with his wife, Adelle, and their children, Kathryn and David. They plan to move to Washington in the spring.

Pencavel...

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system of management with that of the Soviets, Pencavel said that in the U.S. the risk is that labor might secure gains at the expense of capital investment. In Russia the unions are rubber stamps for middle management which is often preoccupied with cooking the books so as to make the results look as good as possible to the all powerful political hierarchy.

In spite of the wealth of statistics about labor turnover in the U.S. there are no clear answers about several quite basic questions, Pencavel went on. "There are two categories of explanations in understanding why people change jobs, why some people have a repeated pattern of switching jobs while others seem to stay put.

"One explanation is simply that individuals are intrinsically different, there are 'movers' and there are 'stayers.' The other explanation is that *intrinsic* differences among individuals are insignificant, but that they *become* different by experiencing different circumstances and by being subject to different (and random) shocks.

"These two categories of explanations are at the heart of a great deal of research into human behavior, not merely the research into labor turnover, but also that into criminology, work behavior and demography.

"In studies of labor turnover we try to allow for the particular characteristics of the work involved—the wage rates, the pace of work required, and so on. It is well known that young people are more likely to quit than older ones. Manufacturing work tends to have a higher rate of turnover than many service industries. The building industry, for example, has a high rate of job-changing."

Much of Pencavel's research in recent years has been in seeking explanations for differences in wages, not only among various classes of workers, but also among different geographical locations. He has also conducted research into differences in hours of work among individuals.

Pencavel was born in a London suburb just after a bombing raid during the Nazi blitz. The family also survived a V2 rocket which exploded nearby.

He went to the University of London, where he gained his M.Sc (Economics). At the age of 21 he was given a fellowship to Princeton, which he developed into doctoral studies, and he obtained his Ph.D. in 1969. His thesis was on labor turnover. He came to Stanford in that same year and has been here ever since.

Pencavel recently started to work with the *Journal of Economic Literature*, the prestigious publication of the 20,000-strong American Economic Association. It is edited at Stanford by Moses Abramowitz, emeritus professor of economics at Stanford, who is president of the Association.

Pencavel is married to Louise Smith, who is a freelance photographer. As this goes to press they are expecting their first child. **FLASH: It's a boy!**

Early career counseling helps students make better choices

Early involvement with undergraduates by college career counselors helps students make more thoughtful and intellectual career choices, according to Christopher Shinkman, new director of the Stanford's Career Planning and Placement Center.

And it may even help students get more out of college.

"A major task for career counselors, and one that is crucial in the early years of the student's college experience, is to establish links between career development and what goes on in the classroom," he declares.

"On a very basic level, it should be easy to see the connection between the kind of information gathering, research, and analysis required in the classroom and that called for in the job search.

"The development of the ability to understand other people (is) central to the academic mission and particularly to the role of the liberal arts. Instead of being in opposition to that kind of learning, the career development process is dependent upon it."

Shinkman, whose thoughts on the importance of career development in the early college years are included in an anthology of writings by leading career development theorists and practitioners from education and business, is a former director of career counseling at Trinity College in Hartford, Conn.

More than 30 practitioners and theorists contributed to *Career Development in the 1980s; Theory and Practice*, (Charles C. Thomas; Springfield, Illinois) a 450-page volume designed both to serve as a text for graduate level counseling programs and to provide material for practitioners of career development activities in higher education, business and other settings like non-profit organizations and government agencies.

Shinkman edited the volume, along with David H. Montross, coordinator of career planning at Holy Cross College in Worcester, Mass.



The development of the ability to understand other people (is) central to the academic mission and particularly to the role of the liberal arts. Instead of being in opposition to that kind of learning, the career development process is dependent upon it.

—Christopher Shinkman

In an article entitled "Career Development in the Early Years," Shinkman asserts that there are several "natural enemies" confronting career counselors in their efforts to reach underclass students.

"Working against the counselor is the warm, comfortable, protective, nurturing (some would say womblike) environment that exists on college campuses, particularly residential ones. . .sensational stories of Ph.D's driving taxicabs or grilling hamburgers for a living tend to increase anxiety and to discourage positive action on the part of students."

Even parents holding unrealistic standards or expectations hinder the work of career counselors, he states.

Shinkman offers 10 suggestions to career planning centers seeking to attract undergraduates soon after they arrive at the college or university. These include; 1) publicizing the center at orientation functions; 2) helping students clarify interests and encourage self-assessments; 3) utilizing resident advisers who, while not trained professionals, "should be trained by the Career Counseling Office staff to be effective sounding boards and sources of information and referral."

Shinkman also encourges 4) peer involvement, by including freshmen and sophomores on student advisory committees to provide input on student perceptions.

Additionally, Shinkman favors 5) integrating faculty and 6) curriculum programs with career planning: "A system of faculty career advisers can be created whereby one or more faculty members from each department or major field of study on campus are designated, preferably with the advice and consent of the department chairman, to serve as a liaison or coordinator between the Career Counseling Office and that department.

"Faculty members are generally jealous of their classroom time. However, some may be inclined to allow career counseling staff members to appear, particularly in social science classes where employment, work satisfaction, leisure pursuits, problems facing women and minorities, etc. are discussed."

Shinkman also lists 7) teaching courses and offering workshops relevant to the needs of young undergraduates—"not resume writing, interviewing, and job search strategy, but rather the content should deal with the prerequisite questions of values, attitudes, goals, interests, aptitudes, and relations between vocational and leisure activities; 8) involving extracurricular activities as part of a value clarification and interest identification process; 9) taking advantage of alumni contacts off campus; and 10) making full use of campus publications to deliver messages to underclass students.

Shinkman acknowledges that, indeed, some disagreement does occur regarding the timing, readiness or maturity of undergraduate students in regard to career counseling, but insists "A thoughtful and systematic exploration of values, interests and skills, combined with an understanding of graduate study, employment options, and work settings, and the ability to make effective decisions, can lead to a positive outcome at the end of the four-year undergraduate period."

Life not primarily choice, but interpretation, James March suggests

Life is not primarily choice, but interpretation.

Such a perspective may help clarify decision-making in human organizations, according to Prof. James G. March of the Stanford Graduate School of Business.

"The reason that people involved in decision-making devote so much time to symbols, myths and rituals is that we care more about them," he declares.

"Decision-makers and organizations gather information and don't use it; ask for more, and ignore it; make decisions first and look for the relevant information afterwords."

Scanning for solutions

But there are several "sensible reasons" why decision-makers deal with information this way:

"First, decision-makers operate in a surveillance mode more than they do in a problem-solving mode.

"Instead of gathering information to resolve a choice among alternatives, decision-makers scan their environment for surprises and solutions. They monitor what's going on.

"Such scanning calls for gathering a great deal of information that appears to be irrelevant to 'decisions.' They characteristically do not 'solve' problems; they apply rules and copy solutions from others.

"Second, decision-makers seem to know, or at least sense, that most information is tainted by the process by which it is generated. . . . Most information is likely to be presented by someone who is trying to persuade a decision-maker to do something. . . . (It) is rarely innocent.

"Third, highly regarded advice is often bad advice. . . . Much highly regarded advice and much generally accepted information is misleading. . . . Decision-makers seem to act in a way that recognizes the limitations of 'good' advice and 'reliable' information.

"Fourth, information is a signal and symbol of competence in decision-making. Gathering and presenting information symbolizes and demonstrates the ability and legitimacy of decision-makers.

"A good decision maker is one who makes decisions in a proper way, who exhibits expertise, and uses generally accepted information. The competition for reputations among decision-makers stimulates the overproduction of information."

Viewed in this light, useful management information systems are:

* "Less tied to the prior specification of a decision or class of decisions than to a wide spectrum of possible decisions, impossible to anticipate in the absence of information;

* Less likely to show the consequences of known alternatives for existing goals than to suggest new alternatives and new objectives;

* Less likely to test old ideas than to provoke new ones; and

* Less pointed toward uncertain futures than toward interpreting ambiguous pasts."

Information management

Such a view of information is "associated classically with literature, art, and education," March says. "To describe information management in such terms is, of course, to glorify it.

"It suggests that office memoranda might be viewed as forms of poetry and staff meetings as forms of theater. We may perhaps wonder whether it would be better to admit a distinction between a sales chart and a Picasso painting—if only to assure that each may achieve its unique qualities.

"Yet the vision has a certain amount of charm in it. At least, it seems possible that with a little imagination, here and there, educational philosophy and literary criticism might be used to help management information systems achieve a useful level of irrelevance."

March's views on "Theories of Choice and the Making of Decisions" recently drafted in text form, were originally given in a public talk at the American Association for Advancement of Science meetings in Washington in January.

Supported by grants from the Spencer Foundation, the Graduate School of Business, and the Hoover Institution, March's research draws heavily from work done jointly with others, including Michael Cohen, Richard Cyert, Martha Feldman, Johan Olsen, Guje Sevon, Zur Shapira, and Herbert Simon "but they should be exempted from blame," he notes.

March holds the endowed Fred H. Merrill professorship in the Graduate School of Business and is a senior fellow at the Hoover Institution. He teaches courses in political science and sociology.



Life insurance? Take another look, name beneficiary

Most Stanford faculty and staff are cheating their beneficiaries!

Stanford has provided $5,000 of free life insurance for each employee, and a family member could receive it within a day or two after the staff or faculty member's death—if he or she has bothered to name a beneficiary.

To date, the majority has not bothered.

Information on the new life insurance plan was mailed around Sept. 1, and it may be reasonable to assume that many people have misplaced the packets by this time.

Those who would like to name a beneficiary or have a second chance to consider the new life insurance options may visit the special office in the Old Pavilion or call ext. 7-0757 between 9 a.m. and 4:30 p.m., including the lunch hour.

The open enrollment period will end Nov. 10, with new coverage becoming effective Dec. 1. The Benefits Office understandably hopes that everyone won't wait until the last minute to do their duty by their beneficiaries.

Free consulting on statistics

Stanford has a new, free statistical consulting service available to any member of the campus community. The Statistics Department now operates a drop-in consulting service run by graduate students under faculty supervision.

All faculty, staff and students on Stanford business are encouraged to stop by for statistical advice at any stage of research. Advice in the early stages of a project is especially encouraged, so that the consultants may be helpful at the design stage.

The service is open from 1-3 p.m. Tuesdays and Wednesdays, and from 10 a.m.-12 p.m. on Fridays. All hours are held in Sequoia Hall, Room 107.

For further questions, call Trevor Hastie at 497-2623, or 497-2620.

Vice presidents adopt SPIRES data base system

Stanford's Vice-Presidents, at a meeting on Sept. 28, approved Ed Shaw's recommendation that Stanford adopt SPIRES as its principal administrative data base management system. Shaw is the associate provost for information technology, and director of the Center for Information Technology.

SPIRES, the Stanford Public Information Retrieval System, was developed at Stanford over the past two decades for managing library automation information and physics data, and was eventually seen to have general data base applicability. It is a data base management system that allows one to create, own, and manage one's own collections of data, known as data bases.

Unlike some data base management systems, SPIRES is very generalized; it is designed to handle all types of data efficiently, from compact, numerical information typical of administrative and scientific data to lengthy, textual information such as bibliographic data.

SPIRES is designed to permit easy access to information. It uses commands in simple English, much as the WYLBUR text editor at CIT does. The user does not have to be a computer programmer or know any other computer language to use SPIRES.

Specially designed SPIRES applications for general use are already well-known in the Stanford community. These are, for instance, EMS (Electronic Message System), EMAS (Expenditure Management and Analysis System), RLIN (Research Libraries Information Network), the procurement system (PRESS), the online stores ordering system, the leave tracking system, and others.

Campus Report's October 6 issue described three other SPIRES supported systems: the online course reservation system, the Medical Record Index System for patient chart control, and the online reserve catalog system in Meyer Library.

The impact of the decision to adopt SPIRES as the administrative data base management system will be seen in the increased demand for training in the use of SPIRES on the part of administrative line officers.

In addition, certain existing non-SPIRES data bases will need to be converted to SPIRES, such as the GRADS system of the Office of Development, which manages information on gifts, records, alumni, donors, and special-interest volunteers. CIT is already in the process of organizing resources to meet these needs.

"The SPIRES choice is a decision in favor of a fourth-generation data base management system," says David Ernst, CIT's director of administrative information systems.

"This means that Stanford line offices will have more and better tools to utilize automated data to support their functions. Also, the Center's Administrative Information Systems division can move toward building systems more suited for use and control by personnel in both administrative and academic departments."

Get football tickets now

Football tickets are still available to all faculty and staff for the Washington and Arizona home games at $12.50 per ticket.

Personnel update

Retiree work program a success story

Both retirees and campus departments have been happy with a program started in July by the Employment section of the Personnel Department.

The program serves departments interested in hiring Stanford retirees to do temporary or part-time work on campus by providing (on request) lists of available retirees and summaries of their experience and qualifications.

While Employment cannot guarantee that qualified retirees will be available to meet all departmental needs, departments which have taken advantage of the program indicate that it has been very helpful to them.

Departments that would like a copy of the list summarizing information regarding the retirees available for work should contact Janelle Sumida at 7-1888. Updated lists will be available by Nov. 15.

Retirees interested in the program should call Sumida, too.

Letters to the editor

A 'hollow victory' for Stanford

Editor, *Campus Report*:

Stanford University may believe it has won a battle against its workers, but it will prove to be a hollow victory.

Its objective was to undermine and break United Stanford Workers' union in order to prevent its expansion to hospital workers who are soon to vote in an election. As with office and clerical workers, in last year's election, it gave increases to hospital workers above those offered to unionized workers.

For its purpose, it had to demonstrate its power over workers by refusing to meet and negotiate a contract acceptable to union workers. Its hard inflexible policy left many issues important to workers unresolved.

Union members return to work with bitterness, anger and resentment against the university. Gone is any vestige of illusion that Stanford cares about those who serve it. Stanford's anti-union tactics are on a par with the largest union busting corporations in the country.

The union has won notable achievements in the past which benefited nonunionized workers. Obviously just the threat of unionization brought substantial increases to university office workers as well as hospital workers. Everyone, including faculty, benefited by increases in medical benefits for dependents, the dental plan, pension, etc., won by the union previously. But Stanford remains far below the benefits given workers by the large industrial corporations of the area.

Despite extreme financial hardship, the union members held fast for four long weeks before being forced back to work without conditions vital to their welfare. But the union, United Stanford Workers, Local 715 of the Service Employees International Union, remains intact. It will consolidate and build its organizational forces to meet and overcome the overwhelming economic power of the university.

Organized labor, which helped bring us the eight-hour day, the right to collective bargaining, unemployment insurance, social security, and medicare will continue to build its power in order to extend economic democracy to all people.

Julia Harvey
Retired staff

Visiting scholar doubts 'spy story'

Editor, *Campus Report*:

As a visiting scholar who has recently arrived at Stanford from the Republic of China, I was shocked by a story published in the *Campus Report* on October 6 under the headline "Goheen says Taiwanese spy on students."

Having been a resident in Taiwan for 35 years, I know only too well that the government of the Republic of China has been quite politically tolerant and especially that the government, in face of the threat from Communist China, has exerted itself to befriending overseas Chinese, including American-educated students. My impression has been confirmed by my personal interviews of some leading political figures in the government of Taiwan.

All the more indicative of the political atmosphere of the ROC is the presence of at least 10 dissent journals in Taiwan and the growing voice of politicians opposing the ruling Nationalist Party. These political figures, despite their harsh criticism of the government, claimed the mayorship of four cities in Taiwan last year.

It is therefore beyond my imagination that students here will be persecuted simply because they hold views different from those in power. Those who embrace the spy story without second thought should learn the ABCs of my country.

Being suspicious of the validity of the report by Goheen, I arranged an interview with Professor Goheen and to my disappointment failed to obtain any evidences which could convince myself of the truthfulness of the spy story. In an attempt to do my own checking, I talked with 10 students from Taiwan, none of whom are aware of the alleged spying activities.

I personally believe that radical groups who have sabotaged the Republic of China engineered the plot to tarnish the image of my country. Their purpose is threefold. First, they attempt to estrange the Chinese students from their government and build up their own strength. Second, they attempt to tarnish the image of the Republic of China and thus make Americans hostile to the government of Taiwan. Third, they attempt to affect the policy toward the ROC.

There are two sides to a coin. I sincerely appreciate your effort to show your readers the other side of the spy story, which Goheen failed to reveal.

Liu Sheng-chi
Visiting scholar
East Asian Studies

American Studies has a 'Jewish mother' from Calcutta

All they wanted was a chef, but they also got a Jewish mother.

Now, as just about everyone knows, Jewish mothers are universal figures, coming in all sizes, shapes, and colors. (Some even are male.)

This particular one, now the resident chef at American Studies House, happened to be born in Calcutta and has spent the past 23 years as a psychotherapist.

The switch from professional counseling to professional cooking was not that much of a jolt, because 60 young people living together in almost any Stanford residence always are delighted to have someone there who resembles mother, who won't make them feel guilty, and who knows how to listen.

It was pure chance that brought Juthica Stangl together with 60 students in American Studies House.

"I was thinking of changing my life, doing something different," she says. "I suppose you could call it a mid-life crisis, except it wasn't any kind of a crisis. But I didn't want to go back to school or retrain myself. Then I thought, wouldn't it be fun to capitalize on something I enjoy?"

Superb cook

Stangl's friends knew what a superb cook she is, and one asked her, just a year ago, if she would cater an office party. "Certainly," she replied. "How many people?" She gulped when the response was "200,' but the party was a big success and she since has developed a catering business.

Then last spring she saw a newspaper ad: American Studies House needed a chef.

"I phoned my husband to say I intended to apply, and he said, 'Cooking for 60 people? Are you cracking up?' "

Although her first tryout meal involved recipes from her native India and drew mixed reviews, she was hired and her first regular meal was beef stew, peas, noodles and home-made chocolate cake. It was a success, and at the end of spring quarter she was hired permanently.

But when she was growing up in Calcutta, she never cooked; servants were hired for that job. Her goal was to work in villages and "save the world."

Her father, an engineer, was remarkable for his time: he didn't discriminate against girls, and valued education. "If I give you money, you could just blow it, but an education is something you'll have forever," he told his seven children.



Juthica Stangl

All seven graduated from college, and four earned graduate degrees.

Juthica earned her master's degree at University of Delhi's School of Social Work, and at age 21 was named director of a YWCA center in a village, where she ran a training program, nursery school, clinic, adult education classes, and raised money.

After a year at University of Toronto, she went to Yale, where over several years, she completed all work but a dissertation toward a Ph.D. For three years, she worked in black and Puerto Rican ghettos in a New Haven community program.

"I had a sense of accomplishment, but it was so frustrating because of the red tape," she says. She adds that having brown skin was helpful: "There was constant conflict between black, white, and Puerto Rican residents, but somehow they could relate to me because I was brown."

She also worked at Yale's Mental Health Center as a psychotherapist, mainly with drug addicts, and ran groups for adolescents.

Eleven years ago she, her husband, and their two children came to Stanford (Peter Stangl is director of the Lane Library at the Stanford Medical School). She began working for the Family Service Agency (where she also had worked at New Haven) and eventually increased her participation to 30 hours a week, plus having a private practice.

Now she prepares lunches and dinners Sunday through Thursday at American Studies House, and gets home on working nights about 6:30 p.m. in time to have dinner with her family (her husband is an expert cook, too.)

International dishes

"I try occasionally to do different international dishes, and hope they learn to like them," she says. "One student complained once and said he preferred hamburgers. I told him, 'Some day you'll be president of a company, maybe president of the United States, and when you go out you won't want to order a hamburger.'

"I can't stand wasting food—I still have images of famines in India. So I talk with the students about taking only what they want, and coming back for seconds.

"I love these kids. They're bright, motivated, and kind, and always asking, 'Is there anything we can do to help?' They built me a stool, because I'm so short, only 4'11" and they help lift the big pans and pots."

All the students take turns working in the kitchen and dining room, so they soon found out about Stangl's professional background.

"She is working out unusually well," says Resident Fellow Jay Fliegelman, an associate professor of English. "She is a very good listener, youthful (she is 49), and current. When we were interviewing applicants for the job of chef, we looked for an experienced and dependable cook. We got that and much more in Juthica Stangl."

Suzanne Smith, a sophomore living in American Studies, says "Food Service in dorms is okay, but there's just no comparison with Juthica's cooking. And she's very nice to talk to."

"I'm really high and very happy with this job," says Stangl, who also has time for dancing classes and for work as a volunteer at Bechtel International Center. She has had all the students in her home twice for informal barbecues, plus a special cocktail party last June for graduating seniors and their parents. She still remembers what one parent told her:

"You make a difference in my child's life."

—Harry Press

Despite financial difficulties, ASSU Recycling continues its rounds

Despite financial difficulties, ASSU Recycling will continue to collect paper, glass, aluminum, and cardboard from all student residence and administrative buildings.

In order to reduce staff sorting time, the operation has discontinued collection of mixed paper from student residences. This year only newspapers, bottles, aluminum cans, and cardboard will be collected there.

All office programs remain unaffected. (A recent photo caption in *The Daily* mistakenly reported that newspaper was the only material which the ASSU would accept.)

The student-run recycling group was hard hit by the recession. Paper prices tumbled as much as 66 percent, while the price of aluminum fell by 30 percent. The decline in revenues was largely responsible for recycling's worst-ever loss of $18,000, despite a 9 percent increase in volume recycled to more than 700 tons per year.

Project comanager Leslie Young remarked that recycling is mistakenly evaluated as a profit-making business, rather than as a service to the community: "We take away the trash for less than half the unit cost of the university garbage service, and we don't even throw it away!"

The perennial deficit of the recycling service has been covered in the past by the student government. Last year's record loss and tight budget has forced the ASSU to examine its support for the organization. An ASSU senate spokesperson said that no draconian changes in the operation were under consideration at the present time.

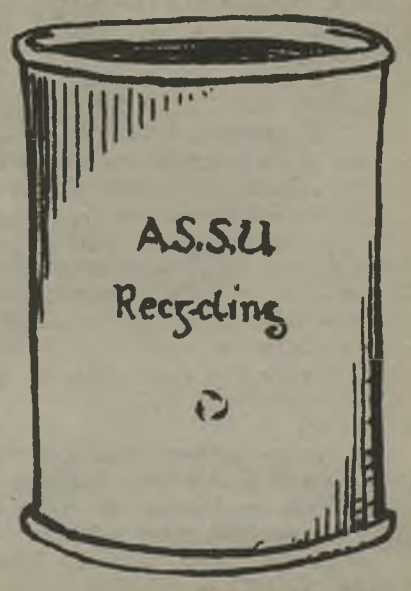
"Our worst problem right now," said manager Young, "is our usual autumn quarter task of educating thousands of new students about our program, while still providing consistent services to administrative offices."

Young said that the financial difficulties could be overcome if the Stanford community recycled more conscientiously: "Give us all your paper, but please—not your trash."

YES
Newspaper
White paper
Computer paper

NO
Colored paper
Coated paper
Styrofoam cups

For information, call 497-0915



Electrical Engineering: the entrepreneurial connection...

The line running between Stanford's Department of Electrical Engineering and the entrepreneurs of Silicon Valley is a long one. Companies such as Hewlett-Packard, Varian Associates, Fairchild Camera and Instrument, and Shockley Transistor all were associated with Stanford "Double E" alumni and professors.

Those companies were founded decades ago, leaving a void when they expanded. That void is being filled by a new generation of Stanford entrepreneurial talent.

MicroSensor Technology is one of the youngest members of this generation. Having been financed by a combination of private and venture capital just this year, the relatively informal Fremont, California headquarters betrays MST's youth.

There is no security guard at the front door, but an open reception area instead. The thirteen employees are dwarfed by the 36,000 square feet of space. The extra room doesn't appear to bother anyone, least of all Steve Terry, the chief technology officer and cofounder. As he cheerfully explains, while pouring his own cup of coffee, "This gives us room to expand."

Terry has reason to be optimistic about the future of MST. Makers of a computerized gas analysis instrument, MST has already sold 12 units even before production began. At current price estimates of $20,000 apiece, Terry's projection of 250 employees in two to three years seems conservative.

The idea that started MST was conceived at Stanford, where Terry and two of MST's other founders, Soheil Sadat and Hal Jerman, were working toward their doctorates in electrical engineering. As part of a research grant from NASA, Terry was developing a capillary column tube in silicon. However, he needed components such as valves, tubes, and a gastrograph. The work culminated in a device called a gastromatograph, capable of making a gas analysis almost instantly.

Other gas analysis instruments have been around for a while, but MST's innovative advantage is its size. Because it functions on a silicon wafer, it can be placed into a component that is a fraction of the formerly oven-sized unit. Currently the dimensions of a small portable TV, MST hopes to produce a pocket-sized version soon.

First prototype

The first working prototype was produced in the Stanford labs in 1980. By the following year, when five additional prototypes were produced, Terry and Jerman were convinced of the gastromatograph's marketability. A local optics firm, looking to diversify, saw potential in the first few samples. Two men from the optics firm joined the three Stanford engineers, bringing capital and marketing expertise. With the addition of a chemist from Hewlett-Packard, the six incorporated MST in early 1981.

Terry readily acknowledges Stanford's role in encouraging innovative technologies, like the one that founded MST.

"As IC design has developed, Stanford has kept pace. It's a real advantage to have Stanford nearby. There are the contacts with the IC lab, the library, and in the future, contacts for future employees.

Terry saw an advantage when he was a graduate student too. "When a piece of equipment was broken, there was always somewhere to go, someone willing to lend their facilities."

Jim Clark, associate professor in electrical engineering, at Stanford, agrees that the proximity of the University to Silicon Valley is a boon to the industry. "The students are brilliant here," says Clark. "In industry you don't tend to run into that kind of fresh, fertile attitude, people open to trying new things regardless of what their past experience tells them they can or cannot do. I guess it's just the openness of this environment, of trying new things."

According to Clark, the University benefits just as much from this synergistic relationship.

"It's the fact that you have creative people, who by virtue of the fact that they're pushing state of the art in an industrial business sense, they create opportunities for students. In addition, they bring ideas.

"There are a lot of things that I, by wanting to get this design working, have learned by talking to people in industry and just learning the tricks of the trade. And we share those tricks of the trade with the community here. There's a cross-fertilization."

Clark is speaking from first-hand experience; he is founder of Silicon Graphics. Manufacturers of the Iris work station which produce high-speed, high-resolution graphics, the company utilizes an innovative technology called the Geometry Engine. It is a silicon chip with built-in graphics ability, enabling it to perform such tasks as taking a three-dimensional object and rotating it dynamically every 1/30th seconds. Actually 12 chips in a series, the Geometry Engine performs such as color, high speed, high resolution computer graphics 48 times faster than a general chip, and eliminates much of the need to write lengthy programs.

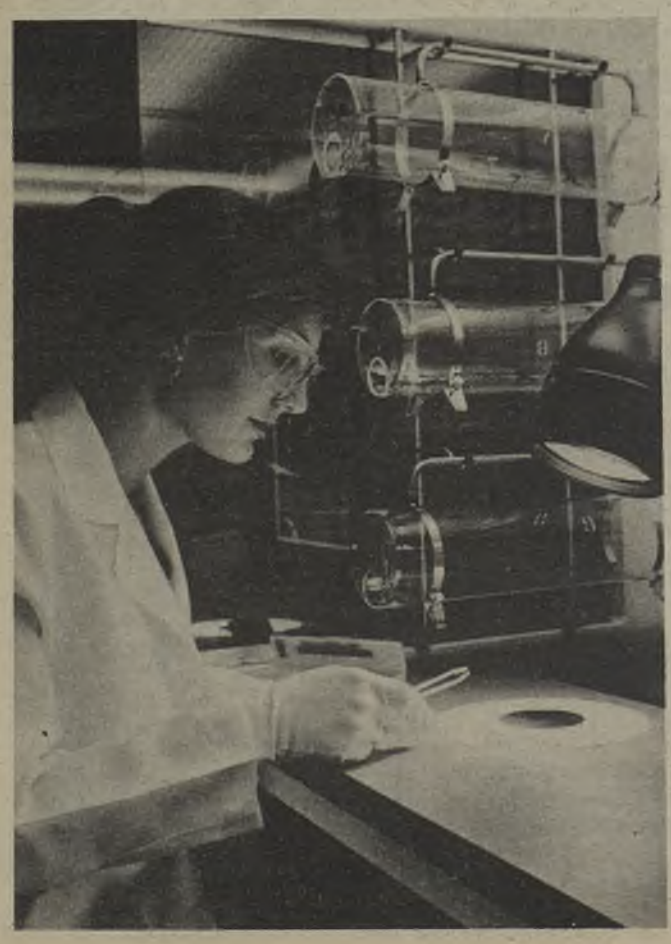
Although the prototype is playful—the screen shows Snoopy in his World War II Flying Ace outfit twirling around—the applications are practical and wide-ranging.

"All sorts of people will use the system composed of this chip, architects, computer science majors and engineers—industrial, civil. It's especially great for electrical engineers, designing integrated circuits, transistors, and so forth," says Clark.

Like MST, Silicon Graphics is young. It incorporated in November, 1981, and received the first round of financing in late June, 1982. The company is similarly optimistic about the future: their customers already include three of the top computer companies in the world and their business plan reveals a goal of sales in excess of $100 million within five years.

Has this sudden success interrupted any long-term teaching plans? "There were certainly many years that I wanted to be a

continued on next page



Lab technician studies silicon chip.

New computer graphics generates

The one thing computers can do better than humans is manipulate large amounts of data at high speed. But people are better at looking at patterns and relationships in that data.

A group of mathematicians and computer scientists at the Stanford Linear Accelerator Center (SLAC) have devised a computer graphics system that takes advantage of the abilities of both systems, the human and the computer, in a way that permits statisticians to see things in statistics they could never see before.

The result is not only useful, it is quite beautiful.

Clouds of data points, in a myriad of colors, twist, turn, and swarm across a dark screen. Even nonexperts can find patterns in the clusters that would not be obvious to a trained statistician looking at standard scattergraphs and cross-tabulations.

The computer hardware is modified off-the-shelf equipment; the software is unique.

"The idea is to graphically display the data so that the patterns in the data appear as geometrical entities in 'point clouds' as opposed to just a series of numbers, says Prof. Jerome Friedman, who has a joint appointment at SLAC and Stanford's Department of Statistics. "You use the human gift for perception and pattern recognition."

The genesis of the system goes back 10 years when Princeton statistician John Tukey, working on a sabbatical at SLAC, investigated the use of computer graphics for statistics. Along with SLAC's Mary Ann Fisherkeller, Tukey developed PRIM-9 for the graphical display of statistical data.

It was very expensive and used only black-and-white graphics which limited its uses. Nonetheless, because the data points were in motion, the clusters appeared to be three-dimensional. This enabled human observers to see previously-hidden patterns in the data. One researcher at the Palo Alto Veterans Administration Hospital used the technique for a study on diabetes.

A year and a half ago Friedman and Werner Stuetzle, of SLAC and the Stanford Statistics Department, began working on a new system, making use of some of the techniques and hardware developed since Tukey's work.

"We've made extensive use of microprocessor technology which didn't exist before," Friedman says. "Before, we were connected to a very large mainframe computer, and you had to have an expensive fast link to that computer.

"Now. . .we do it basically in a stand-alone work station. All the requisite computer power is right there. We can devote a much larger amount of computer power to the user and do things that we couldn't do before."

The main microprocessor technology was developed at SLAC by Paul Kunz who used it to analyze particle physics data.

Most of the software was written in PASCAL by a graduate student, John McDonald, as his Ph.D. thesis.

The program and data are still housed in SLAC's IBM 3081 main frame, but the actual processing takes place on what looks like jerry-rigged equipment on a table in a room next to the terminal.

Friedman, McDonald, and Stuetzle are using 1970 census from Boston as a test.

"It's not being used for anything of a serious nature yet. . ." he explains. "The reason is that it's still very new. We've been developing the hardware, the software, the methodologies."

The data they are using concerns housing patterns in the Boston Metropolitan Statistical Area—the city and its suburbs.

All 506 observations for a certain variable—for instance the value of the houses—are put on the screen and combined with another variable such as crime rate forming a two-dimensional point cloud. McDonald can then add a third variable to the screen—the number of rooms in each house extending the cloud to three dimensions.

Relationship benefits all concerned, particularly students

continued from page 8

normal, just ordinary professor teaching and so forth," Clark admits, "but I suppose I recognized that my style of work is one of carrying things from concept and idea all the way to some form of embodiment or implementation, and the pressures of the academic world really require that you stop somewhere along the way in that course, and let someone else or something else take care of reducing it to an embodiment.

"I enjoy getting a lot of very state of the art research done, and somehow those things seem to conflict. If the demands of one place or the other are such that they are incompatible, then I'd probably leave Stanford."

That choice faced Roger Melen six years ago; his decision was the same, and the result is Cromemco, Inc., manufacturers of microcomputers. "It seemed to be the thing to do," says the Stanford Ph.D. and vice-president.

Unambiguously successful, and a role model for younger entrepreneurs, Cromemco has accumulated some impressive statistics. Claiming to be the world's biggest manufacturer of the sophisticated S-100-based microcomputers (40 percent of the market share), the company's 195,000 square foot, 27-acre Mountain View facility generated more than $50 million in revenues in fiscal year 1981. *Inc.* magazine has estimated Cromemco's past rate of growth at 216 percent annually.

The office headquarters live up to the statistics. In contrast to the informality at MST, Cromemco's reception area has yielded to the conventions of the business world. All visitors must sign in and receive a numbered visitor pass. On the door there is a sign acknowledging the realities of the easily-smuggled product: "Notice: All packages, including briefcases, toolboxes, ARE SUBJECT TO INSPECTION before being removed from the building. Your consent to such inspection is given by entering facility."

The only evidence of Cromemco's humble origins is the name, which is a compression of Crothers Memorial Hall, the name of the Stanford dorm where it all started.

Melen and co-founder (now president) Harry Garland, having received their doctorates from Stanford in 1972 (Melen's was in electrical engineering; Garland's was in biophysics with a minor in engineering), were part of the University faculty. They used their salaries to finance the production of small computers, adapting the S-100 bus to modular "add-on" circuit cards of their own design.

The operation was, quite literally, "home-grown": the research lab was a room in Melen's apartment; the production facility, Garland's garage.

Only half-facetiously does Melen suggest that the California climate is responsible for the growth of the computer industry, saying, "When so many entrepreneurs start out, literally in garages, as we did, it's no wonder that there are more companies out here than at Route 128 (near MIT in Massachusetts). When you only have half a year," he smiles, "It could restrict you."

Best in their field

Melen cites Stanford as a catalyst of industrial innovation. "Stanford's role is that of a major world-class University," says Melen. "Its purpose is to train highly talented individuals to be more productive in their chosen profession."

There is, in fact, a need to have a good relationship between the industry and the University because meeting the needs of an industry based on innovation and meeting the needs of a University committed to training individuals to be the best in their fields is "difficult unless teaching is profession-relevant."

Melen continues, "Stanford is unique in that it is a hotbed of entrepreneurial activity. It has a unique cross-section of the population, a long-history of hands-off, laissez-faire attitude to entrepreneurship, no directly stifling policies, a large engineering and scientific program from which these groups come.

Does Melen see any conflict of interest? "The system's not perfect yet, but it's the best we have. There are greater abuses in the welfare system."

These new engineering firms are financially independent.

Clark elaborates: "Stanford has a nice lenient policy (on patents). If you're simply an employee at Stanford, there's a policy that the inventor owns the invention."

When asked if that was different than most universities, Clark responded, "Quite different. It's one of their calling cards.

"One of the nice things about Stanford is that they can attract people who can use that. In the end, Hewlett-Packard, or Varian, or Rolm, or name any company, decides to donate a building. I think in the end it all balances out. It's a way of having a certain amount of trust that by being lenient, or versatile, in a policy, they encourage people to be inventive here. That just might not happen elsewhere."

In all of this, there is an enormous "windfall" to the student, in the form of lucrative, state of the art jobs. Cromemco counts approximately 20 percent of its technical staff from Stanford. A few engineers do come from Berkeley, but "somehow a lot fewer," winks Melen.

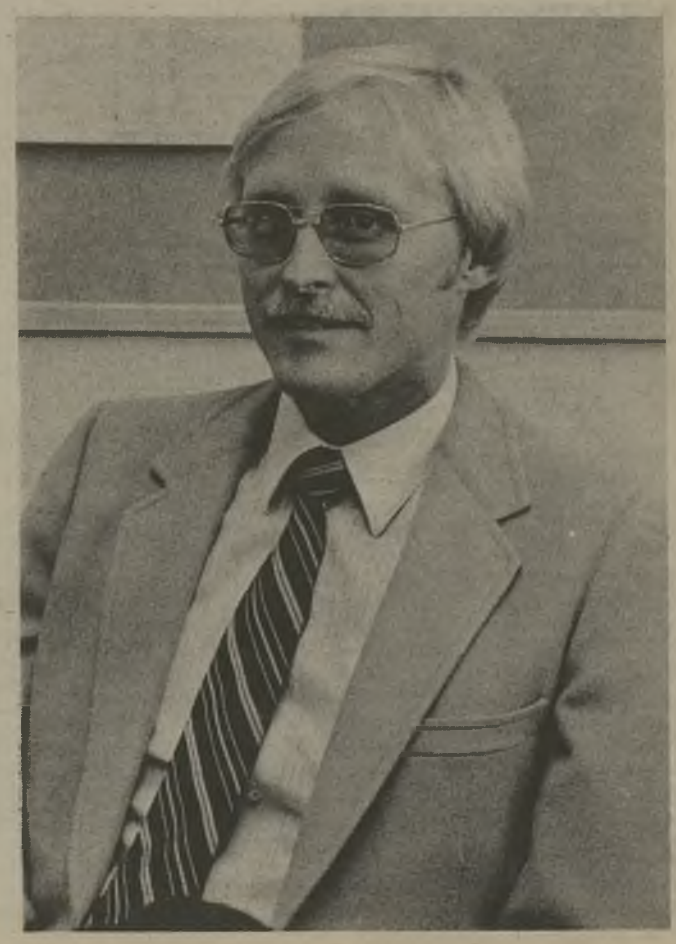
Although presently both MST and Silicon Graphics are too small to be expanding their staffs, they look to Stanford graduates as a natural source of manpower in the future.

"I came from this environment, so students who have worked with me, or have been real excited about it—there's some of them who are going to join us," says Clark. And importantly, both Clark and Melen are making every effort to maintain close ties to the University.

Melen, although no longer a full associate professor at Stanford, does teach a class every winter quarter. Appropriately titled, "The Entrepreneurial Engineer," it is a popular series of seminars led by different Silicon Valley entrepreneurs.

He teaches it as a service to the students of Stanford, as well as to expose to interested students that special spark of entrepreneurship.

—Amy Bernhard



It's the fact that you have creative people...they create opportunities for students. In addition they bring ideas.

—James Clark

lovely, clouds of data for statisticians

Each variable can be given a different color (the computer can produce 256 colors.) Using a tracker-ball, McDonald can make the cluster of data points rotate in three-dimensions.

"You can see the points in three dimensions although you are never looking at anything but a two-dimensional picture. . .the reason you see it in three dimensions is the paralax effect. Because of the apparent continuous motion, your brain has no trouble connecting points," Friedman explains.

The way the points for the three variables cluster can tell statisticians many things. But when the points are rotated in their positions relative to each other, new patterns and relationships are obvious to the human eye and brain.

The computer can identify each data point in the same way a flight controller can identify aircraft on his radar screen. In this case McDonald rotates the tracker-ball and an X appears on the screen, and moves around, identifying census tract numbers as it goes.

The screen can spot Beacon Hill and the Back Bay, affluent areas in the heart of the city surrounded by slums. By adding the variable of air pollution it is easy to see that pollution is high although, unlike other parts of the city, it does not seem to affect property values very much.

A trained statistician may have spotted this using conventional methods, but the SLAC technique can go farther. Colors can be assigned values, and then those colors can be kept as new variables are added and the "clouds" are rotated.

Researchers can even split the screens to handle around 12 or 14 different variables. They can set a certain parameter in the data and then have the computer, using hues of color, tell how far the data point is from the parameter.

"Another way to see connections between the 14 variables at once is to try to make connections between a sequence of plots, or to somehow relate structures you see in one picture with another picture," McDonald says. The computer, using color, motion, and the split screens makes that possible.

The device could open a whole new field of statistical analysis, Friedman says.

"Most classical statistics was developed in the 1930s and 1940s, and it was intended for smaller data sets, 10, 20, 30 observations. There, the primary importance of such small data sets is, is your result significant? Is there anything there at all?

"Usually with data sets of 500 or 1,000 or more, that's not the question. The question is usually, what is going on, not is there something going on."

"My guess is," McDonald adds, "in this like everything else, you have to gain experience. After you've looked at a lot of data you begin to figure out what patterns tend to be flukes and what patterns tend to be real."

So far outside researchers have used the system (which does not have a name) but it is difficult to operate.

It is not what computer people call "user friendly."

"So far we've concentrated in the beginning on developing the methodology. . . . We have not concentrated on the human engineering aspect, how do you make that comfortable and easy to do for a researcher, which is very important," Friedman says.

"People who do come up with data. . .sort of work with us in the sense we have to look over their shoulder and help guide them."

The hardware costs about $40,000 but it is possible to put together a system for about half that hardware cost that will do most of what the SLAC system does.

Friedman thinks the software may be in the public domain. There have been no thoughts to commercially distributing the system, he says.

Funds for the research have come from SLAC, the Office of Naval Research, the Army Research Office and the Department of Energy's Applied Math Sciences Department.

—Joel Shurkin

Lieberman reviews panoply of restrictions on research

Following are remarks by Vice Provost Gerald Lieberman on "Barriers to the Exchange of Information" given Oct. 5 to the Association of Graduate Schools:

I welcome this opportunity to speak to my colleagues about a most important issue facing American colleges and universities today—that is, recent actions by the federal government to apply export restrictions to university research and scholarly activities. I'd like to begin by describing the two relevant Federal Acts and their corresponding regulations and the problems they pose for the future progress of American science and technology.

The American system of peacetime export controls in roughly its current form dates from 1949. The system includes controls administered by numerous agencies under many statutes, but the two most broadly applicable sets of laws and regulations are the Arms Export Control Act and its associated International Traffic in Arms Regulations (ITAR), and the Export Administration Act with its associated Export Administration Regulations (EAR).

The Arms Export Control Act authorizes the President to control the export of any items he designates as "defense articles and services." Those items so designated constitute the "U.S. Munitions List," and their export is permitted only with a license issued by the Department of State. The term "defense articles and services" includes technical data that can be "used, or be adapted for use, in the design, production, manufacture, or reconstruction of items on the U.S. Munitions List." "Technical data" also includes a vague category of "technology which advances the state-of-the art or establishes a new art in an area of significant military applicability in the United States." The International Traffic in Arms Regulations, or ITAR, implements the Arms Export Control Act. ITAR defines "export," as it pertass by any foreigner, here or abroad, via oral, visual or documentary any items on the U.S. Munitions List, as, "accemeans." ITAR regulations specifically exempts from control any "technical data" which is published or is otherwise freely available. Clearly, he original intention of ITAR regulations was focused on hardware ather than "know how."

The second major federal Act is called the **Export Administration Act,** which authorizes the President to control the export of goods and technical data for three purposes: 1) to protect the national security, 2) to protect goods in short supply, and 3) to further foreign policy objectives. The Export Administration Regulations, or EAR, which implements this Act, restricts export of, among other things, goods and technology which "would make a significant contribution to the military potential of _____ other countries which would prove detrimental to the U.S. national security."

The EAR contains a "commodity Control List" of items restricted for export. This List includes a category called "critical technologies." However, precisely what constitutes a "critical technology" is unknown to those without a security clearance because the government is afraid that a detailed list in itself would provide our adversaries with a "blueprint" of what our Defense Department considers critical, thereby permitting the enemy to focus their research and espionage efforts in those areas. Indeed this is a Catch 22.

EAR restrictions explained

EAR specifically does not restrict 1) data generally available to the public; 2) dissemination of scientific or educational data which is not "directly and significantly related to the design, production, or utilization in industrial processes," or 3) instruction in academic institutions and academic laboratories, EXCEPT information that involves "research under contract related directly and significantly to the design, production, or utilization in industrial processes." Thus, as is suggested by the above, the EAR restricts export of not only military technology, but also some goods and services which may have non-military commercial use. EAR also differs from ITAR in that it specifies which countries may have access to which technology.

I think it is fair to say that both the EAR and ITAR are poorly written regulations. Many of the terms are overbroad with definitions unclear and open to interpretation. They fail to give clear notice as to what precisely is to be controlled, although traditionally specific goods or hardware were the objects of concern.

In the past universities were blissfully unaware of export regulations and their problems since no attempts had ever been made to restrict unclassified university research activities. Then, about two years ago, the Departments of State and Commerce began to expand the traditional interpretations of the export regulations, shifting from their concentation on specific goods or hardware to the control of dissemination of technology or "know how." This was done without any change in the wording of either the Export Control Acts or their regulations or without any evidence of "technology leaks" from American universities to our adversaries. There may be several reasons for this shift. First, efforts by the Russians to obtain, both covertly and openly, US technology have become well known. Also, commercial competition from Japan, Germany, and other industrialized countries has diminished America's leading edge in technology advances, thereby contributing to our economic problems. With the challenge on this nation's military and commercial comptetive positions, there has been a growing tendency of the government to try to restrict the flow of critical technology at all levels.

Let me now outline a series of interactions between the government and universites which highlight the seriousness of the problem. In the fall of 1980, the Defense Department tried to insist on language in selected DOD-sponsored research agreements at universities which would give DOD the right to censor technical reports before they could be published. Most universities reacted by refusing to accept such awards.

About the same time, the Department of Defense issued a directive which said that certain DOD-sponsored unclassified research results dealing with the utilization of Very High Speed Integrated Circuits (VHSIC) could not be published nor be presented at meetings or open symposia. Using ITAR as their justification, Defense informed selected faculty at various universities that both the interim and final technical reports of DOD-sponsored research dealing with the utilization of VSHIC technology were subject to prior DOD approval before they could be disseminated, even though such a requirement did not appear in the provisions of the governing research agreements. Further, DOD required security clearances of personnel attending selected DOD-sponsored conferences at which unclassified university VSHIC research results were to be presented.

Again, at the same time, the Department of Commerce, which is responsible for implementing the EAR, began to send letters to various universities regarding proposed visits to those campuses of specified foreign scholars from communist countries. Commerce told the universities that they were responsible for restricting the visitors' access to certain (undefined) technology which was "highly sophisticated, proprietary to specific companies and capable of potential military application." Further, the universities were instructed that they were responsible for monitoring the visitors' activities both on and off campus. The host faculty were asked to fill out questionnaires describing the scope of the visitors' access to research projects and the "specific results of the visitor's study.

Unwarranted restrictions by DOD

Here have been numerous attempts by government agencies, particularly the DOD, to place unwarranted restrictions on government contracts and grants. In fact, the problem became so acute that on May 21, James Wade, Jr., Deputy Undersecretary for Research and Engineeringin the DOD, issued a memorandum which said Contract Officers should "avoid new or unnecessary restrictions added to university research contracts." He indicated that restrictions should not be placed on publications of basic research results or on the involvement of foreign nationals in unclassified basic research.

The likely long-term consequences of the Government's application of ITAR and EAR to scientific exchanges are dire indeed. First, restricting the free flow of information among scientists and engineers will alter fundamentally the system that produced the scientific and technology lead that the government is now trying to protect. Such restrictions will leave us with nothing to protect in the very near future. The way to protect that lead is to make sure that the country's best talent is encouraged to work in the relevant areas, not to try to build a wall around past discoveries. The restrictions represent the worst possible direction: they fail to protect the status quo and virtually guarantee that there will be no future.

A second problem for universities posed by such restrictions is a practical one: it would be virtually impossible for most of us to administer such restrictions given the necessarily decentralized and fluid nature of most campuses. Because it is so inconsistent with their character, universities are neither structured nor staffed to police the flow of scientific visitors to a given laboratory or the dissemination of information by their faculty at international conferences, or indeed even in an American campus classroom where foreign students happen to be present.

A third kind of problem which would result from application of the export controls to scholarly activities is the chaos and uncertainty posed by the nonspecific and all-encompassing wording of the regulations. For example, the implication in the wording of the EAR is that any research which is "directly and significantly related to the design, production, or utilization in industrial processes" is subject to restriction. That could apply to the entire research of schools of engineering.

The concern of universities should not be simply that of academic freedom, although I must say that the restictions as currently interpreted by many federal officials do raise serious questions of Constitutionality with respect to freedom of speech. But the most critical problem in this whole issue is the inevitable damage to the fundamental process of science itself and to the development of new technology, which would result from application of EAR and ITAR to scholarly pursuits and exchanges.

Universities have appealed to the government to work jointly with federal officials in developing alternative measures to best serve the interests of American economic development and security without jeopordizing the progress of science. I am happy to report that the government has responded to this offer: a Forum has been formed under the leadership of DOD's Undersecretary Richard Delauer and Stanford's President Donald Kennedy to study university - DOD relations. A sub group of this Task Force, of which I am a member, is specifically studying the issue of export controls. This Task Force, composed of government and university representatives, has already met several times. Most of the meetings have been of a fact-finding nature, and has served to inform each side of the problems the other faces. The last meeting took place on Thursday, October 7, 1982 when the main topic for discussion was the Report of the National Academy of Science Panel on Scientific Communication and National Security which was released on Thursday, September 30th. At the same time that the Forum was established, Frank Press organized a Panel consisting of 19 distinguished scientists with experience in industry, universities, and government to study the problems of export controls.

NAS panel conclusions

The panel concluded that there has been substantial and serious leaking of American technology to the Soviet Union, but concluded that open scientific communications and exchanges, particularly the activities of universities, played "a very small part" in the leakage. The Panel made several recommendations concerning the control of university research activities, which can be grouped into three categories: 1) restricted areas of research, 2) classification and 3) gray areas.

1) Unrestricted Areas of Research: "The Panel recommends that no restrictions of any kind limiting access or communication should be applied to any area of university research, be it basic or applied, unbless it involves a technology meeting ALL of the following criteria:

a. The technology is developing rapidly, and the time from basic science to application is short;

b. The technology has identifiable direct military applications; or it is dual-use and involves process or productionrelated techniques;

c. Transfer of the technology would give the U.S.S.R. a significant near-term military advantage; and

d. The United States is the only source of information about the technology, or other friendly nations that could also be the source have control systems as secure as ours. "All of these criteria are important, but whether or not a technology meets these criteria is subjective, and universities may find themselves in constant disagreement with the government.

2) Classification: " The Panel recommends that if government-supported research demonstrably will lead to military products in a short time, classifications should be considered. It should be noted that most universities will not undertake classified work, and some will undertake it only in off-campus facilities." This is a very reasonable recommendation together with an important warning.

3) Gray Areas: "The Panel recommends that in the limited number of instances in which all of the above four criteria are met but in which classification is unwarranted, the values of open science can be preserved and the needs of government can be met by WRITTEN AGREEMENTS no more restrictive than the following:

a. Prohibition of direct participation in government-supported research projects by nationals of designated foreign countries, with no attempt made to limit physical access to university space or facilities or enrollment in any classroom course of study. Moreover, where such prohibition has been imposed by visa or contractually agreed upon, it is not inappropriate for government-university contracts to permit the government to ask a university to report those instances coming to the university's attention in which the stipulated foreign nationals seek participation in any such activities, however supported. It is recognized that some universities will regard such reporting requests as objectionable. Such requests, however, should not require surveillance or monitoring of foreign nationals by the universities.

b. Submission of stipulated manuscripts simultaneously to the publisher and to the federal agency contract officer, with the federal agency then having 60 days to seek modifications in the manuscript. The review period is not intended to give the government the power to order changes: The right and freedom to publish remain with the university, as they do with all unclassified research. This does not, of course, detract from the government's ultimate power to classify in accordance with law any research it has supported.

Recording restrictions

The Panel recommends that in cases where the government places such restrictions on scientific communication through contracts or other written agreements, it should be obligated to record and tabulate the instances of those restrictions on a regular basis. The provisions of EAR and ITAR should not be invoked to deal with gray areas in government-funded university research."

I do not see any serious problem with the restriction on publication but are universities prepared to accept a "prohibition of direct participation in government supported research projects by nationals of designated foreign countries,"? At the same time the Panel recommends that "the process of ITAR and EAR should not be invoked to deal with gray areas in government-funded university research." Is this a reasonable trade-off? Is the carrot worth the stick? This is an issue over which we all will have to begin a dialogue on our campuses. In general, the National Academy report is a thoughtful document which attempts to balance the concerns of universities and the federal government.

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Computer scientist Yao joins faculty; mathematician Caffarelli due in 1983

Prof. Andrew C. Yao, computer scientist at the University of California at Berkeley, and Prof. Luis Caffarelli of the Courant Institute of Mathematical Sciences at New York University have been appointed to the Stanford faculty.

Final action was taken by the Board of Trustees Tuesday, Oct. 12.

A world leader in the application of mathematics to the study of computer models, Yao was named professor at Berkeley last year. He was an assistant professor at Stanford during 1976-81. His new appointment became effective Oct. 1.

Caffarelli's research has been concerned largely with problems of regularity or smoothness that arise naturally in the mathematical description of physical phenomena—such as the boundary between a jet stream and surrounding still air or the interface between melting ice and surrounding water as a function of time.

Born Dec. 8, 1948, in Buenos Aires, Argentina, he received his Ph.D. from the Universidad de Buenos Aires in 1972. The following year he became a postdoctoral fellow at the University of Minnesota, where he rose through the ranks to become a full professor in 1977. He went to NYU in 1980 and will join the Stanford faculty Sept. 1, 1983.

His most recent major publications include "A Problem in the Calculus of Variations with a Free Boundary" (1982) and "Compactness Methods in Free Boundary Problems" (1981).

Yao, the author of approximately 50 technical publications, was born Dec. 24, 1946, in Shanghai, China. He received his bachelor's degree at National Taiwan University in 1967, then a master's and doctorate in physics at Harvard in 1969 and 1972. He then obtained a Ph.D. in computer science at the University of Illinois in 1975. The following year he was an assistant professor of mathematics at MIT, before coming to Stanford.

His major achievements have been to discover the best way to carry out certain tasks and to prove that there is no better approach. For example, he has obtained definite results about searching for an entry in an ordered list and about doing arithmetic with silicon chips.

He also has made significant contributions to the analysis of algorithms, discovering the average amount of time that a computer needs to perform various important functions, like sorting.

He teaches introductory courses in theory and discrete mathematics to upper-level undergraduate students and to entering graduate students. He also teaches advanced courses about "lower bounds"—proofs that certain tasks are inherently difficult—and about probabilistic methods.



The Bella Lewitzky Dance Company will perform Continuum (a premiere), Duo Concertant, Changes and Choices, and Spaces Between at 8 p.m. Friday, Oct. 22, in Mem Aud.

Openness vs security perennial problem

continued from page 1

universities may regard these reporting requests as objectionable, they should not require monitoring or surveillance of foreign nationals by the universities.

An outspoken critic of the application of ITAR and EAR to campus activities, Lieberman asks, "Is this (restriction on selected foreign nationals) a reasonable trade-off? Is the carrot worth the stick?

"This is an issue over which we all will have to begin a dialogue on our campuses."

The NAS panel recommended that no restrictions of any kind limiting access or scientific communication should be applied to any area of university research, basic or applied, unless it met all four of the following criteria:

1) The technology is developing rapidly and the time from basic science to application is short;

2) The technology has identifiable direct military applications; or it is dual-use and involves process or production-related techniques

3) Transfer of the technology would give the Soviet Union a significant, near-term military advantage; and

4) The U.S. is the only source of information about the technology, or other friendly nations that could also be the source have control systems as secure as ours.

"All of these criteria are important, but whether or not a technology meets these criteria is subjective," Lieberman observed. "Universities may find themselves in constant disagreement with the government."

The panel recommended that "if government-sponsored research demonstrably will lead to military products in a short time, classification should be considered. It should also be noted that most universities will not undertake classified work, and some will undertake it only in off-campus facilities."

Lieberman calls this "a very reasonable recommendation together with an important warning."

Open science invaluable

The panel recommended that in certain gray areas, where all four of the criteria were met but classification was not warranted, the value of open science could be preserved and government needs met by written agreement.

Besides restricting direct participation in government supported research, such agreements could call for submission of stipulated manuscripts (reporting results) simultaneously to the publisher and to the federal agency contract officer, with the agency then having 60 days to seek modifications in the manuscript.

The panel said the review period is not intended to give the government power to order changes—the right and freedom to publish remain with the university, as they do with all unclassified research. This would not detract from the government's ultimate power to classify, in accordance with law, any research it has supported.

The NAS panel indicated that national security is more apt to be enhanced through a policy of open scientific communication that promotes scientific accomplishment rather than through a policy of secrecy controls that yield limited and uncertain benefits. "I fully subscribe to this conclusion."

Lieberman's views were developed in an Oct. 6 speech to the Association of Graduate Schools meeting in Lincoln, Neb., and in a campus interview.

Lieberman text...

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In summary, research universities operate on the assumption that unclassified research should be freely available to all members of the scientific community. I firmly believe that since most university research is "publicly available," and meant for the open literature, the government is straining the intent of the export regulations in applying them to university research. Any concern of the government about access by foreign scholars should be taken into consideration by the State Department when they issue visas. The regulations are so broadly drawn that it is difficult to know precisely what activities are covered. Thus, although one wants to cooperate in protecting the nation's security, I believe that the current government attempts to apply export restrictions to university activities are overbroad, likely to be ineffective, and of doubtful Constitutional soundness. In my judgement they would significantly damage the progress of American science and technology, and thus, actually be detrimental to the national security. The National Academy Panel indicated that national security is more apt to be enhanced through a policy of open scientific communication that promotes scientific accomplishment rather than through a policy of secrecy controls that yield limited and uncertain benefits. I fully subscribe to this conclusion.

Calendar...

continued from page 1

deliberations were "not simply a squashing of minority views by the majority. . . .

"There's no way of making everybody happy when it comes to the calendar."

Humanities and Sciences Dean Norman K. Wessells told the Senate he personally favored a change to six terms of five weeks each, an alternative the committee dubbed "Golub units." It was suggested by Prof. Gene Golub, computer science.

Provost Albert Hastorf said "it bothers me hugely" to see students take as many as seven different courses for a total of 16 units per quarter. Good noted that this was not normally possible, since most academic courses currently carry a minimum of three units credit.

In a memo published last April, the committee sought campus reaction to three possible alternatives: an early semester calendar, a combination of quarters and semesters, and the combination of a fall quarter, followed by an intersession in January and a semester for the remainder of the year.

When Stanford was founded in 1891, the University calendar was based on the semester system, then the norm for U.S. colleges. The change to academic quarters came in 1917.

During 1954-56, two committee studies recommended no change. After surveying 90 institutions, one Stanford study found no empirical evidence favoring the educational superiority of one calendar over another. "The supposed advantages of either (semester or quarter) lie in the realm of opinion reinforced by familiarity," it said.

In 1969, the Faculty Senate voted 16-10 against a recommendation for changing to the semester system, developed during the three-year Study of Education at Stanford.

In the mid-1970s, during the Budget Equilibrium Program, another Stanford faculty committee study concluded that "we have been unable to detect possible cost savings of any significant magnitude which would result from a reorganization from quarters to semesters."

Prof. Henry Breitrose, communications, who headed that study and now sits in the Senate told his colleagues Thursday that the calendar question, "like the locusts," comes back every eight to 10 years.

New degree program to combine medicine and computers

A graduate program integrating medicine and computer science has been established at Stanford University.

The melding of medicine and computer science has led to such recent innovations as helping doctors diagnose patient ills by using computers to analyze their symptoms and medical history.

The new Ph.D. and master's degree program in Medical Information Sciences (MIS) was approved Thursday, Oct. 14, by the Faculty Senate. University President Donald Kennedy praised Dr. Edward H. Shortliffe, assistant professor of medicine and computer science, for a "thoughtful, thorough, impressive" defense of the program before the senate.

Shortliffe is chairman of the interdisciplinary Committee on Medical Information Sciences which proposed the program.

Shortliffe said the normal pattern has been for M.D.s interested in MIS to get a Ph.D. in computer sciences after medical school. He told the senate that such an approach provided the physician with a "highly theoretical" computer orientation often failing to relate effectively to the clinical environment.

Although Stanford has been training a handful of students in the dual discipline of medicine and computer science for several years, Shortliffe explained "that one of the big problems was meeting the numerous requests from students who want to study medical information sciences at Stanford. While the expertise exists here, previously there was no formal program for them to apply.

"Perhaps equally important, there was no structured curriculum to channel students' efforts once they arrived here with an interest in the field."



Shortliffe hopes the MIS program will attract students committed to the medical computer field.

Shortliffe said about 45 potential students, mostly M.D.s, have inquired about the program since its development was made known several months ago.

The new program will be oriented toward persons interested in research and an academic environment, Shortliffe said. During the first year, he said, the program expects to attract two Ph.D. and two master's candidates.

Transfer students can start the program this year, with new admissions to begin in the fall of 1983.

Among potential students are physicians who wish to enhance their knowledge of computer science or of formal medical decision-making ability. Other students could be computer science majors with a background in biology or a related field who wish to make a commitment to medical information.

Ph.D. and two-year M.S. programs, according to the committee, are intended primarily for persons who are medical students or who already have an M.D., as well as other students seriously interested in MIS as a career.

A limited one-year master's program is intended, Shortliffe said, as supplemental training for researchers who want a background in computer decision-making to facilitate their work.

"We are hoping to develop a small cadre of students who will enter this program with a commitment to stay in the medical computer field.

"Without the specialized degree which this program offers, students who combined the two disciplines on an informal basis often were enticed into other areas of the rapidly expanding computer science field," Shortliffe said.

Members of the committee, in addition to chairman Shortliffe, include Drs. Bruce Buchanan, adjunct professor of computer science; Edward Feigenbaum, professor of computer science; Michael Genesereth, assistant professor of computer science; Richard Popp, professor of medicine; Allen Ream, associate professor of anesthesia; Harold Sox, associate professor of medicine (clinical); Gio C.M. Wiederhold, assistant professor of computer science; and Leslie Zatz, professor of radiology.

—Mike Goodkind

Weekend fire in Fairchild serves as safety reminder

A $20,000 fire in a Sherman Fairchild Research Building laboratory points to the need for safety committees and posting lists of chemicals outside labs, the University's director of health and safety said this week.

The Sunday morning blaze caused no treatable injuries and did not destroy critical research, officials have said.

The safety director, Alain Decleve, said that while all chemicals appeared to have been safely stored in the lab of Dr. Roger Kornberg, professor of structural biology, constant vigilance and some modifications are needed throughout the University.

"We are currently promoting a system in which small metal (fire resistant) boxes are placed outside all laboratories listing the location (and content) of all potentially hazardous material in the lab as well as the names and phone numbers of principal contacts, who could answer questions about material for firemen."

DeCleve said the University recently received 1,000 boxes which could be installed within six months.

Overall, Decleve pointed to the need for departmental or unit fire safety committees to constantly review what steps need to be tailored for each area.

"Some departments—including Pathology and Dermatology—already have establised fire safety committees. But unfortunately, safety has not been the most important thing in the mind of (some) researcher(s)," Decleve added.

A short circuit in an electric motor was cited as the apparent cause of Sunday morning's fire.

Thirteen Palo Alto firemen responded after an alarm was pulled at 9 a.m. by a lab assistant who saw smoke emanating from a broken window in the Fairchild building. The worker, Jonathan Hardy, said he spotted the flames while riding his bicycle to work in a neighboring lab in the same building.

Batallion Chief Don Shaw said the small blaze had had been extinguished by the building's sprinkler system before the first of his men arrived about seven minutes after the alarm was pulled.

A Stanford security supervisor, Pedro Guzman, received a minor cut on his finger while manipulating a fire extinguisher through the window of the lab moments before the firemen arrived. Guzman, who did not require treatment, said the blaze was already out by the time he used the extinguisher.

Heated plastic

The laboratory was being used by Kornberg to conduct DNA research. The source of the blaze, said Kornberg and Shaw, was the electric motor heating an approximately one-square foot plastic water bath, a device used to house small quantities of water in which biology experiments on the molecular level are conducted.

Shaw said plastic creates a large amount of smoke relative to volume.

Kornberg said he expects within several days "to clean that mess up and get going again with experiments." He said the water dish was being heated to body temperature but contained no experimental biological materials—cellular cultures—at the time.

He has been working in research on how hereditary information is encoded in cells.

Kornberg estimated the cost of replacing equipment burned in the fire at $10,000, and said it included mostly small paraphernalia. The water dish, he said, was the most expensive item, valued at about $200.

Shaw said damage to the building, mostly flooding from the sprinkler system, was estimated at about another $10,000.

No dangerous chemicals or radiation were released in the fire, although Kornberg said some common lab chemicals, including phosphoric acid, were stored in metal containers near the fire.

Firemen observed extremely low doses of radiation—about the equivalent of a watch dial—in the room. Kornberg said tiny amounts of radioactive tracers were used in test tubes which might have broken in the heat of the blaze.



Dominick Purpura

Dean to deliver SMASH lecture

This Friday's S*M*A*S*H lecture will feature Dr. Dominick Purpura, dean of the School of Medicine and associate vice president for medical affairs.

Purpura will discuss "Cellular Neurobiology of Mental Retardation," at 4:30 p.m. Oct. 22 in Fairchild Auditorium, with a TGIF gathering afterwards in the lobby. All interested members of the Medical Center community are invited to attend.

Device aids mild hearing loss as well as a cupped hand

A new non-electronic hearing aid, which provides as much improvement as listening to speech or music with one's hand cupped behind the ear, was unveiled by Stanford University School of Medicine researchers Monday, Oct. 18.

"The device, called an Earesonator, can be an answer for mild hearing loss affecting more than a million Americans," said Dr. Richard L. Goode, professor of surgery. *(See promotion story below.)*

Goode and his colleague, Richard O'Keefe, worked on the Earesonator for the past four years to perfect it.

"So far 30 patients with mild hearing loss have been fitted with the tiny plastic device," Goode reported. "The patients studied with pure tone audiometry have shown improvement of 10 to 20 decibels at key speech frequencies."

The new device, designed to be custom-fitted and worn within the ear, was introduced as part of a scientific exhibit at the annual meeting of the American Academy of Otolaryngology and Head and Neck Surgery in New Orleans, LA.

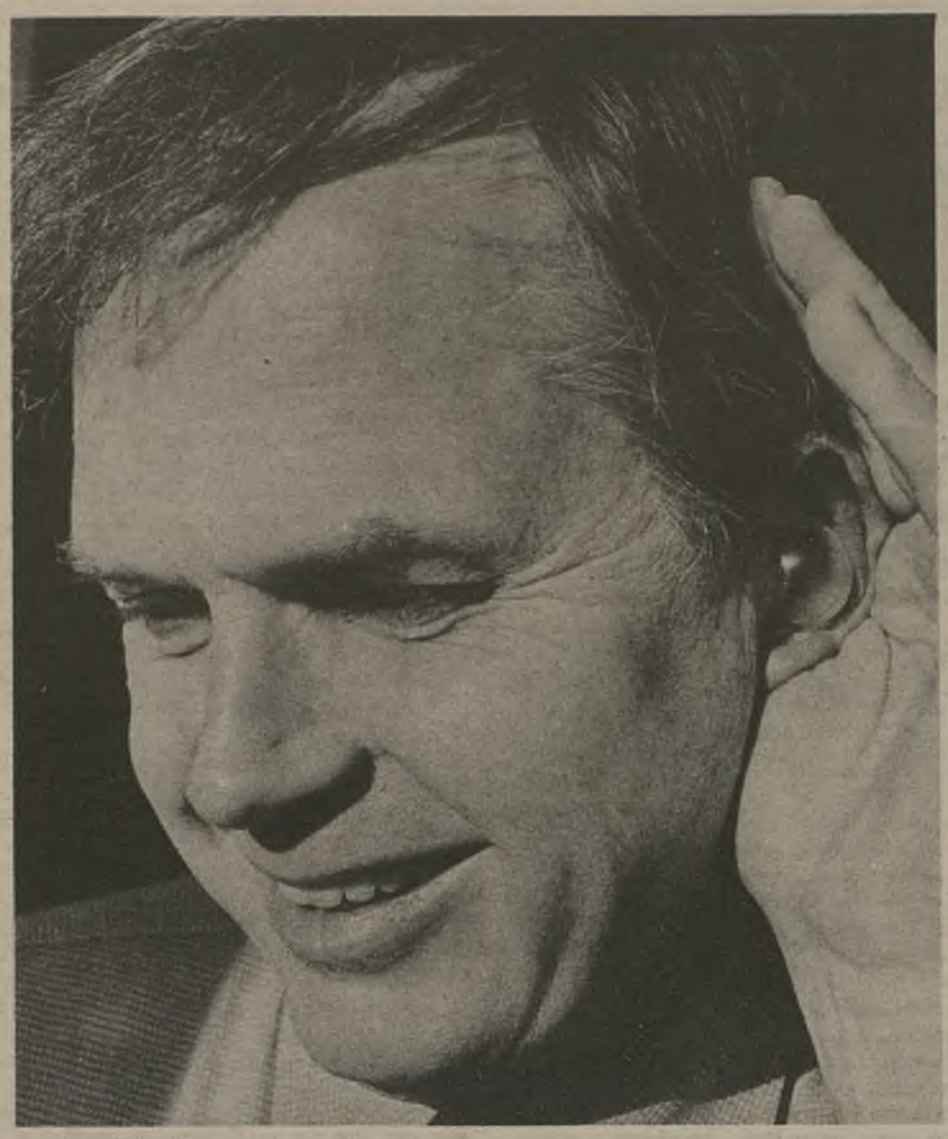
The average external ear only resonates at the high frequencies between 2800 to 4000 Hertz producing 10 to 15 decibels of sound amplification, Goode explained in an interview. A hertz, or Hz for short, is a unit of sound frequency measurement.

"Essentially, the external ear provides no amplification for the middle frequencies of 1000 to 2500 Hz, which comprise a very important speech range," he said.

"When the Earesonator is inserted into the ear, it changes the opening size and volume of the ear cavity, shifting the resonant frequency downward. This provides a sound boost of 10 to 15 decibels in the important 1000-2500 Hz speech frequency range."

By adjusting the size of the opening in the plastic device, the Earesonator can be fine-tuned to provide maximum amplification at the frequency the patient needs most.

"Potential users," Goode said, "can get some idea of the improvement that can be obtained by listening to speech or music with their hand cupped behind the ear—something many people do regularly."



Here, Goode demonstrates a new inexpensive, non-electronic hearing aid, capable of boosting sound in the key speech frequencies. The device, called an Earesonator, can provide an answer for more than a million Americans with mild hearing loss, according to Stanford University medical researchers. It is custom-fitted and fine-tuned to meet the patient's individual needs.

Goode said anyone with mild unilateral or bilateral hearing loss should be helped by the device. Most people would require two, one for each ear.

For binaural fittings, each device is tuned to a slightly different resonance peak to expand the useful bandwidth of amplification.

Goode said the Earesonator cannot provide the same amount of amplification as an electronic hearing aid. But in cases of mild hearing loss only a small amount of amplification is needed.

"These people don't feel they need a conventional electronic hearing aid since they only have trouble hearing at certain times, such as when background noise is present or the speaker's voice is soft or high pitched," Goode said. "At other times they may get along quite well. They don't want to bother or spend as much as $300 for an electronic hearing aid. Now there's a choice."

Goode said the Earesonator, estimated to cost $50, is actually an extension of acoustical in-the-ear devices that have been around since the mid-1800s.

"But none of these earlier models provided adequate amplification for a variety of reasons," Goode said. In fact, he obtained some of the old devices from the hearing aids museum at Kent State University in Ohio and tested them.

"They made wonderful earplugs," Goode commented. "This is because the earlier inventors did not fully understand acoustical principles and did not have the sensitive sound measuring instruments now available."

This is how a patient is fitted with the Earesonator at the Stanford Ear, Nose and Throat Clinic:

First, a pure tone audiogram is made to determine the patient's thresholds in the mid-range sound frequencies. Next an impression is made of one ear or both, and impressions and audiogram are mailed to a laboratory.

In three weeks, the finished devices made of butyrate (clear) plastic and methyl methacrylate, a material used in dentures, are mailed back to be fitted and fine-tuned.

For the time being the Earesonator is available for research purposes at Stanford and the affiliated Palo Alto Veterans Administration Medical Center only. But Goode hopes they will be eventually mass produced if a manufacturer is interested.

—Spyros Andreopoulos

School of Medicine faculty promotions, appointments

The Board of Trustees last week promoted two School of Medicine physicians to professor, while two other faculty members were appointed associate professors.

Drs. David Clayton, pathology, and Richard Goode, surgery, are the new professors.

Dr. Michael Hendrickson was appointed associate professor of pathology (clinical), and Dr. Norman Lewiston was named associate professor of pediatrics (clinical).

Clayton, who has served since 1977 as program director for the Medical Scientist Training Program, has focused his research on DNA cloning. He came to Stanford in 1970 as an assistant professor of pathology after receiving his Ph.D. in biophysics from the California Institute of Technology, Pasadena.

Goode, whose surgical specialty is otolaryngology, has been an innovator in the use of lasers for treating recurrent ear infections in children. Recently he spearheaded development of an inexpensive acoustic resonator to treat mild hearing loss. *(See story above.)*

A 1961 graduate of the University of Southern California, Goode completed his residency in otolaryngology at Stanford in 1966 and then joined the faculty as an instructor. He has been chief of the division of otolaryngology at the Palo Alto VA Medical Center since 1966.

Hendrickson received his M.D. from Stanford in 1971. He served his residency at Stanford and was then appointed to the faculty as an acting assistant professor of pathology in 1975.

He has done research in the role of pathology in cancer treatment and in cancer of the uterus.

Lewiston, who received his M.D. from the University of Iowa, has authored or co-authored numerous articles and book chapters on cystic fibrosis and pulmonary function testing, particularly in a pediatric setting.

Lewiston completed his residency at Stanford in 1971. He currently serves as chief of allergy and pulmonary diseases and director of the pulmonary function laboratory at Children's Hospital at Stanford.



David Clayton



Richard Goode



Michael Hendrickson



Norman Lewiston



Loren R. "Yank" Chandler

Former dean Chandler dies after brief illness at 88

Dr. Loren R. "Yank" Chandler, noted surgeon and dean of Stanford University School of Medicine from 1933-53, died Saturday, Oct. 16, in Palo Alto following a brief illness. He was 88 years old.

"Defying the average term for deans of five years, Chandler remained dean for 20 years. He graduated 21 classes of physicians from the San Francisco campus, many of whom have since gained national prominence," said Dr. Lawrence G.Crowley, vice president for medical affairs at Stanford University Medical Center.

Chandler saw the Medical School through the Depression and WWII. He was a favorite of both faculty and students. He believed a good faculty was the key to a good medical school.

"You can have all the buildings you want, but you must also have the experts—the masters who can make a thing so simple that the student wonders why he didn't think of it himself. You need experts who can teach. And good teachers will produce others, who at the same professional age, will be better than they were," he believed.

"As former dean of Stanford Medical School in San Francisco and one of the most beloved members of the Stanford community, Chandler leaves a legacy of committment and responsibility to superb medical education. Although all will be saddened the news will stimulate warm memories in the minds of the hundreds of physicians who knew him well and whom he knew individually," said Dr. Dominick P. Purpura, dean of the Medical School.

"Chandler was just as likely to have been the attending faculty member on surgical wards of a hospital as one to whom students turned to when they needed a friend to provide warm encouragement and guidance about future careers," said Purpura.

Wrote the *San Francisco Chronicle* when Chandler retired from the deanship in 1953, "Yank Chandler has been a notable dean and his administration has lent distinction to Stanford's place in medicine."

Considered a leader in the development of medical education, Chandler was president of the Association of American Medical Colleges from 1941-42, and president of the California Academy of Medicine in 1942.

His leadership exceeded the boundaries of medical education, however. He was on numerous federal commissions, and in national, state, and local organizations. He was president of the Pacific Coast Surgery Association in 1954-55; president of the San Francisco Surgical Society in 1948; and a fellow in the American College of Surgeons. He was also associated with the San Francisco Medical Society, the California Medical Association, the American Medical Association (AMA), and the Americal Surgical Association.

In 1950, Chandler was one of three men appointed to a commission of the AMA to study the effects of the British National Health Science Act. He concluded that it would be a "folly" to institute such a plan in the United States.

During a sabbatical in 1955, Chandler organized the staff and was chief surgeon at the Albert Schweitzer Hospital in Deschappelles, Haiti.

Chandler was an advocate of prepaid medical care, and was instrumental in developing the California Physicians Service and Blue Cross.

Born in Fresno, Calif. in 1895, Chandler received his A.B. degree from Stanford in 1920, and his M.D. degree in 1923. He was a surgery intern and resident at Lane Hospital from 1923-25, and then went into private practice. He maintained his association with the Medical School as clinical professor of surgery. He was appointed associate professor of surgery in 1933, and full professor of surgery in 1938.

From 1959 until his retirement, he served as chief of surgery at the Palo Alto Veterans Administration Hospital, of which he was a key planner.

In 1959 Chandler was made honorary fellow of Stanford University, the highest and seldom bestowed honor of the University.

Chandler is survived by his wife, Elvia Beal; son Craig; daughter Loran McIvor; and grandchildren.

At Chandler's request, there will be no memorial services. According to the family, memorial contributions can be made to the Loren R. "Yank" Chandler Memorial Fund, c/o Stanford University Medical School, or to any preferred charity.

HMP gets associate director

Gerald R. Moller has been appointed associate director of the Hospital Modernization Plan effective last Friday, Oct. 15, SUH director Sheldon King has announced.

Moller, who holds a B.S. in engineering from the U.S. Merchant Marine Academy, has had extensive experience in hospital construction management, said HMP Director Elvia Garwood. Moller's most recent job was associate administrator for building projects at Children's Hospital of San Francisco, where he has worked in various capacities since 1949.

In his new role, Moller will be responsible under Garwood's direction for supervising the construction of the HMP. He will also be involved in the design and approvals for the project, a five-year program intended to modernize SUH's facilities. Also planned is the consolidation of the Hospital's pediatric facilities and those of Children's Hospital at Stanford in the new construction.



Gerald Moller

The approved cost of the project and financing is $124 million, although adjustments to its scope could be made based on projected need and available finances. A Certificate of Need application, detailing the Hospital's proposal, is expected to be filed with state and regional agencies in about a month, Garwood said.

Barchas to talk on mental illness

"Psychobiology: New Approaches to Mental Illness" is the topic of a public lecture to be held 8 p.m., Thursday, Oct. 28, in the Sherman Fairchild Auditorium at Stanford University Medical Center.

Speaker for the special program will be Dr. Jack Barchas, Nancy Friend Pritzker Professor of Psychiatry and Behavioral Sciences at Stanford and director of the Nancy Pritzker Laboratory of Behavioral Neurochemistry. Dr. Thomas Gonda, professor and chairman of the Department of Psychiatry and Behavioral Sciences, will serve as moderator.

Admission to the lecture is free, and there are no reserved seats. The program will be sponsored by the Friends of Psychiatry and Behavioral Sciences at Stanford. For further information and to help the organizers plan for adequate seating, please call 497-6376.

Letters to the editor

Why exclude elderly from research?

Editor, *Campus Report:*

I was alarmed to read (Aug. 25) that Stanford cardiologists are using "age greater than 75 or a severe life-limiting medical condition" as grounds for refusing emergency streptokinase therapy to halt heart attacks in progress.

Do the doctors have hard evidence that such treatment won't work on these cases (the only morally decent justification)? Or have they just taken it upon themselves to decree that the lives of the old and the chronically ill aren't worth saving?

Diana Ackerman
Visiting Scholar, Philosophy

Campus Report approached Dr. Edwin Alderman for a response to the above letter, referring to the article "New Heart Attack Drug given Two Ways, Compared by Study," on page 13 of the indicated issue. His reply follows:

Emergency Streptokinase therapy is indeed relatively effective in "dissolving" clots responsible for blocking blood flow through coronary arteries. However, it has not yet been established that relief of this obstruction can be accomplished sufficiently promptly to prevent heart muscle damage from occurring. A substantial portion of the heart muscle involved may already have been irreversibly damaged by the time the clot lyses. Therefore, until there is conclusive evidence that lysis of coronary blood clots is effective therapy, I am reluctant to expose elderly patients to the hazards of lytic drugs which include a risk of prolonged and excessive bleeding for a period of 36 hours following drug administration. It seems unwise to expose elderly individuals who have a substantially higher mortality rate associated with heart attacks to the risk of bleeding complications without substantial proof that the therapy is beneficial. Moreover, the considerable effort involved in doing emergency procedures of this sort and giving Streptokinase requires that patients be enrolled who have a better chance of survival with their heart attack.

The age of 75 is indeed an arbitrary demarcation, but is considered reasonable for the purposes of this study. This protocol has been reviewed by Stanford's Institutional Human Subjects Review Committee, and it is customary practice to exclude elderly patients from research studies for whom the risk of complication is higher and ability to tolerate adverse drug side effects is lessened.

Edwin L. Alderman, M.D.
Associate Professor of Medicine
Cardiology Division

'Selling' safety at work requires much effort, says Perez

Ruben Perez helps keep employees safe.

For example, one morning in October he received a call from a Medical School department where "one individual had felt very, very sick because some kind of gas was coming into his office through his window."

Perez, the assistant director of Facilities Protection for safety, explained that the office worker, an athlete, had complained of flu-like symptoms suffered after inhaling the fumes. Perez examined the area and found that a chemical irritant was infiltrating the man's office ventiliation from a laboratory below. Perez was able to find the source and take remedial action.

"In this job," Perez said, "there is an atmosphere of immediate job satisfaction.

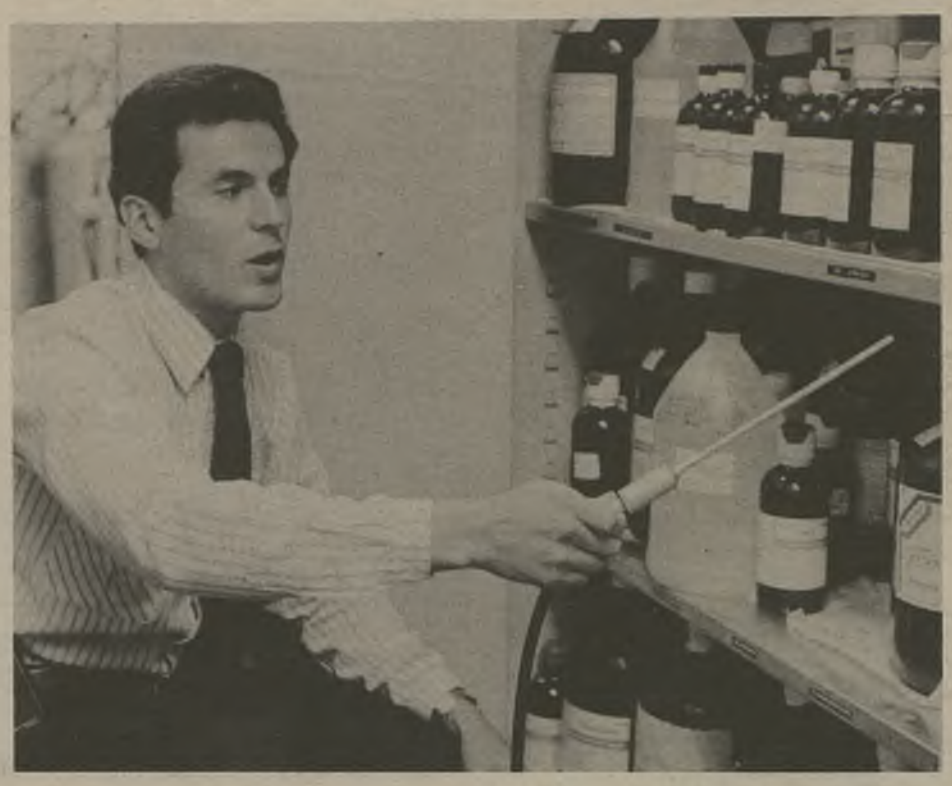
"Our office is responsible for the occupational health and safety of employees. We're additionally responsible for the fire safety of the entire Medical Center.

"For example, in a laboratory fire safety is critical. We would be concerned with the proper storage of chemicals."

As assistant director, Perez reports to Hilary Ryniewicz, the director of Facilities Protection. Another assistant director in the department, Larry Jordan, directs security.

Perez came to Stanford as an occupational health and safety assistant after graduating from California State University-Hayward in 1979 with a B.S. in occupational health and safety. About a year ago he was promoted to his present job.

"I have always been interested in health," Perez said. "When I started college I worked for a physical therapist for about one year. I felt it was a good profession to get into, but not for me. It was a little too restrictive. The doctor would give a prescription and the therapist would have to follow it. It didn't seem right to me that the therapist was not included in the loop for the prescribed treatment."



Perez, assistant director of Facilities Protection for safety, uses a combustible gas indicator to check for a possible leak in chemicals stored in a laboratory cabinet. (He didn't find any.)

It was during his junior year that "things started falling in place." After two years of pre-med courses, "I decided I wasn't disciplined enough, not hungry enough to go into medicine."

And about that time he heard a lecture at school indicating that job prospects would be expanding in industrial hygiene because of burgeoning legislation requiring careful monitoring of occupational safety.

The opportunity and his background "fit perfectly," Perez said. "I'd be dealing with people's health, I'd be doing something I'd feel I'd be getting some worth out of, and I'd be getting out of school with what looked like pretty good job prospects."

And conveniently, the prerequisites for the B.S. degree in occupational health and safety which Perez ultimately received were the same as those for pre-med. Now Perez is working on his masters in the field via an extension program offered by the University of Southern California.

Perez' workday is varied.

He conducts regular inspections throughout the Medical Center for safety violations. He is responsible for compliance with a variety of codes and laws. At the halfway point of each remodeling project, he reviews the plans to ensure that safety standards are met.

Perez coordinates and sometimes teaches in-service safety classes for employees ranging from such topics as back safety to the proper handling of gas cylinders.

Providing a direct leadership role, he is *ex officio* chairman of the environmental health and safety committee.

Even though a lot of emphasis is focused on technical expertise, "the work is almost like a selling job," Perez believes.

"You have to have a continuous effort to make people aware of safety. It usually isn't something people think about until after they have had an accident or injury.

"When you have something like the safety committee, you have to give it constant attention, or three months after it is started it could die."

Perez said he attends meetings of the departmental safety committees and keeps in touch with key members of these groups.

The effort to convince employees and management of the importance of a safety program can be frustrating, Perez said, but he would recomend his career "to a person who likes working with people.

"You have to be somebody who can deal with frustration but at the same time it's really rewarding, because what you're doing is helping people—you might be saving someone's life, you might be saving someone's livelihood."

To relieve frustrations—and sometimes just for enjoyment—Perez said he jogs about three miles a day, often with a recently organized University-sponsored running club.

He is a B racquetball player, and enjoys skiing, tennis and a variety of sports. Perez also plays guitar ("mostly folk and easy listening music") and had his own nine-piece combo while attending high school in Hayward.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, OCTOBER 20

Dept. of Pathology Basic Research Colloquium: "Cloning of DNA Repair Genes from Caccharomyces Cerevisae"—Dr. Errol C. Friedberg. 5 p.m., Fairchild Auditorium.

Dept. of Neurology Grand Rounds: "Sleep Autonomic Nervous System Dysfunction"—Dr. Christian Guilleminault. 5 p.m., Palo Alto Veterans Administration Medical Center, B108, Bldg. 7.

Div. of Hematology Conference: "Molecular Mechanisms of Oncogenesis by Retrovirus"—Dr. Philip Tsichlis (National Cancer Institute, NIH). Noon, S102d.

Hospital's Second Annual Safety Faire Display: "Patient, Employee, Chemical, Radiation Safety." 10 a.m. till 4 p.m., corridor outside main center cafeteria.

THURSDAY, OCTOBER 21

Dept. of Pharmacology Seminar: "Structure, Function, Analysis of Globoside-Binding *E. coli* Pili"—Dr. Gary Schoolnik. 4:15 p.m., R358.

Dept. of Medicine Grand Rounds: "Acquired Immunoregulatory Dysfunction Syndrome"—Dr. Paul Volberding (UCSF). 8:30 a.m., Fairchild Auditorium.

Hospital's Second Annual Safety Faire Exhibit: "Disaster Preparedness." 10 a.m. till 4 p.m., corridor outside main center cafeteria.

FRIDAY, OCTOBER 22

Second SMASH Lecture of Autumn, 1982: "Cellular Neurobiology of Mental Retardation"—Dr. Dominick Purpura. 4:30 p.m., Fairchild Auditorium.

Dept. of Pediatrics Grand Rounds: "Febrile Seizures Experimental and Clinical"—Dr. David Holtzman. 8 a.m., M106.

Hospital's Second Annual Safety Faire: "Fire/Electrical/Rape Awareness/Protection in the Home Display"—with Palo Alto Fire Department. 10 a.m. till 4 p.m., corridor outside main center cafeteria.

Surgical Pathology Conference: "Oxford: Sabbatical and/or Science?"-Dr. Roger Warnke. 8 a.m., L201.

SATURDAY, OCTOBER 23

Fifth Annual Conference on Child Development: Sponsored by the Dept. of Pediatrics. 8 a.m. till 5 p.m., Kresge Auditorium.

Northern California Cancer Program Symposium: "Mechanisms of Resistance to Anticancer Drugs, II: Alkaloids, Antibiotics, and Alkylating Agents." Advance registration required. 9 a.m. till 3 p.m., Fairchild Auditorium. For further information, call Martha Kaplan at 497-7431.

MONDAY, OCTOBER 25

Dept. of Biochemistry Seminar: "Human Tubulin Genes and Pseudogenes—Their Structure and Expression"—Dr. Deborah Wilde (NYU). Noon, M316.

WEDNESDAY, OCTOBER 27

Basic Science Research Colloquium: "Mechanisms of Interferon's Actions"—Dr. Thomas Merigan. 5 p.m., Fairchild Auditorium.

Dept. of Neurology Grand Rounds: "Reaction of Substantia Nigra to Massive Basal Ganglia Infarction"—Dr. Lysia Forno. 5 p.m., Palo Alto Veterans Administration Medical Center, B108, Bldg. 7.

Div. of Hematology Conference: "Expression of Oncogene in Normal and Transformed Lymphoid Cells"—Dr. William Schubach (Fred Hutchinson Cancer Research Center, Seattle). Noon, S102d.

Puberty Education Course: "What's Happening to Me—Learn About Your Changing Body." For boys and girls aged 10 to 12 and their parents. 7:30 till 8:30 p.m., Children's Hospital at Stanford. Series also offered starting November 3. For further information, call Dr. Paula Duke at 327-4800 ext. 538.

Div. of Orthopedic Surgery Grand Rounds: "Traction Techniques"—Dr. Norman Kane, 7:30 a.m., M114, and "Mini Total Hip Replacement"—Dr. Steven Woolson, 8:30 a.m., M114.

THURSDAY, OCTOBER 28

Friends of Psychiatry and Behavioral Sciences: "Psychobiology, New Approaches to Mental Illness"—Drs. Thomas Gonda, moderator, and Jack Barchas, speaker. 8 p.m., Fairchild Auditorium. For further information, call 497-6376.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

...News Notes...



Duane Walker

Duane Walker, R.N., M.S., director of Nursing Services at SUH, will serve as chairperson of the interim executive committee of the National League for Nursing's new Council of Nursing Service for Hospitals and Related Facilities.

The council was formed earlier this year for nursing service departments. Membership is open to all organizations, divisions, and departments that are engaged in providing nursing services.

Initial council projects under study involve development of a nursing administrative manual and of innovative institutional cost allocation systems that would help establish nursing service departments as revenue-producing units.

* * * *

Mary Catherine Krawec, associate director of SUH, is the Medical Center person to call with questions about earthquake preparedness, reminded Stanford President Donald Kennedy in a recent memorandum to deans, department heads, and principal investigators.

Krawec is responsible for the earthquake preparedness of buildings, utility systems, and major equipment in the Medical Center. Kennedy's announcement explained the University Committee on Earthquake Preparedness' recommendations of steps to further Stanford's readiness.

He added, ". . .it is up to each of us to find out what the risks are in our own University working environments and to take sensible, practical steps to deal with them." Department safety committees conduct periodic inspections of all areas and make recommendations on ways to improve earthquake preparedness. They should be consulted whenever questions arise.

"It is important for us to maintain a good preparedness program, since the earthquake hazard at Stanford becomes more severe as additional time elapses," noted Kennedy.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Course to teach meeting management

Do you attend meetings, week after week, with no idea of what will be discussed? Do some meetings drag on and on until someone finally says, "Let's continue this at our next meeting"? Or, have you found that all too often in your meetings, people digress to issues which are not relevant to the topic at hand?

"Frustrations like these are common for almost all managers," said Dale Ironson, training specialist in the Hospital's human resources development department.

"A recent study showed that, on the average, a manager spends approximately 30 percent of his or her time in meetings. How much more effective our time would be if these meetings were only 50 percent more productive, not to mention less frustrating and time-consuming," Ironson added.

Committed to helping managers at Stanford improve the effectiveness of their meeting time, the HRD department is offering a special course on Meeting Management skills, the Thursday mornings of Nov. 4 and Nov. 18.

Some hints managers might find useful, said Ironson, are:

- Ask if this meeting is really necessary. Can it just as well be handled by a phone call or memo?
- Phone or send a memo to participants in a meeting to let them know what will be discussed;
- Post an agenda on the wall at the beginning of a meeting;
- Make certain the end results of the meeting are clear in everyone's mind at the outset;
- Specify what the ending time of the meeting will be as well as its starting time.

Managers interested in learning more about these and other techniques should register for the course by calling HRD at 497-5233.

Medical Faculty Opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The division of orthopaedic surgery at Stanford University School of Medicine is seeking a physician to fill an academic position at the rank of assistant professor of surgery, to be based at the Veterans Administration Hospital.

The position requires an individual well trained in all clinical areas of orthopaedic surgery, particularly adult reconstructive surgery, with interests and training in the care of the spinal cord injured patient.

This individual will function as assistant to the chief of the orthopaedic service at the VA Hospital, with additional clinical and academic responsibilities within the Stanford University School of Medicine teaching program.

Letters of inquiry and curriculum vitae should be sent to: E.E. Bleck, M.D., Dept. of Surgery, Div. of Orthopaedic Surgery, Room R-169, Stanford University School of Medicine, Stanford, CA 94305.

Rosse tells why local phone rates will rise while long distance costs fall

Stanford economics Prof. James N. Rosse predicts "protracted warfare" before the Federal Communications Commission over long-distance telecommunications policy in the wake of recent court cases and regulatory decisions against American Telephone and Telegraph.

In recent informal remarks to associates of Stanford's Center for Economic Policy Research, which he directs, Rosse said: "It took a hard knock to shift AT&T out of its comfortable regulatory rut, but it's out now.

"The industry is being reorganized on a somewhat more rational basis than might have been expected, and the most important values have been preserved.

"Competition in terminal equipment markets has been firmly established, perhaps even enhanced. . . .

"Although the job isn't done yet, it looks like the local operating companies (like Pacific Telephone and Telegraph) are being put on a fairly firm base.

"More importantly, they are being put in a more nearly one-to-one relationship with state regulators (like the California Public Utilities Commission). This is a healthy situation, although it will take some of the fun out of being a regulator.

"The foremost industrial producer of technology and science—the combination of Bell Labs, Western Electric, and AT&T Long Lines—has largely been preserved. . . . The creation of American Bell, the unregulated—subsidiary, provides an outlet. I have high expectations for this no longer sleeping giant."

Where long-distance rates formerly subsidized local telephone costs, "now we'll get higher local access rates," Rosse says. "But then we should get higher local access rates.

"(But) we have created a regulatory monster in long-haul markets. Barring unexpected technological change, the market outcome would be continued AT&T dominance. I don't think the regulators are prepared to accept that outcome. Instead, I expect protracted warfare among the long haul carriers, which now include General Telephone and Electric, since it acquired the Southern Pacific Sprint system.

"The warfare will not be in the marketplace, but before the FCC. Ultimately, the commission will settle down to administering the problems of market division in the unstable, regulated oligopoly that has been created.

"There will be significant economic loss and social cost, but all in all, it is probably a better outcome than we deserve. . . .

"Regulatory agencies can be awfully poor mediators of change, even with the best will in the world. No one can accuse the FCC of not having tried."

Regulations rigid

Historically, he notes, "once in place, regulatory institutions are extremely rigid and resistant to change. . . .

"The Communications Act of 1934 set an objective of universal service offered at fair rates. Over the years, 'fair' came to mean uniform rates for all, and universal service came to justify the existence of cross-subsidies to carry service to those who couldn't or wouldn't pay for it."

With the introduction of microwave technology, regulators in the 1950s and 1960s began to load more and more of the



James Rosse

cost burden on long-distance service, even as long-distance rates themselves declined.

But the averaging of rates required by "fairness" meant that customers located in dense, lower-cost markets failed to benefit from lower costs.

As the gap between microwave transmission costs and regulated rates grew, large users like the Defense Department and General Motors threatened to build their own systems. By the late 1960s, specialized customers like MCI and Sprint started long-distance microwave systems competing with AT&T for business customers.

"You can't make butter if someone else skims your cream," Rosse observes, "The loud noise you heard at the settlement was AT&T finally abandoning the public utility band wagon and jumping to the chariot of competition."

Bell's transistor

Besides advancing microwave technology, Bell Labs invented the transistor which made "equipment for the phone system far more reliable.

"In the early days, AT&T could make a 'no foreign attachments' rule stick because of the potential harm to an integrated system," Rosse says. The integrity of a rather fragile system was maintained by keeping it Bell from end to end.

"As good electronics became cheaper and more reliable, that justification became harder and harder to maintain. . . . Now anyone can own the terminal equipment they use. More importantly, anyone can make it as long as it lives up to minimum engineering standards.

"This has created a large and burgeoning industry, supplying everything from answering machines to fairly large telephone systems. For instance, Stanford, with its thousands of telephones, may very well become the owner and operator of a non-Bell system within a few years."

Rosse has been a consultant to the Federal Communications Commission, the Federal Trade Commission, American Telephone and Telegraph, among others.

He has done research in such areas as the future of mass communication, communications technology and public policy, and economic policy and regulated industries. His monographs include one on social welfare, pricing policy, and income redistribution in telephone service.



These are the buildings at 64-70 High Street, Oxford which Stanford will remodel.

Trustees approve 1984 move to Oxford

Stanford's Board of Trustees has approved moving the overseas studies program in Britain from Cliveden to Oxford at an estimated cost of nearly $2.2 million.

Approximately 50 undergraduates will be accomodated in renovated facilities at 64-70 High Street, across from Magdalen College in the heart of the Oxford University complex, starting in the fall of 1984.

The new center, now a collection of three- and four-story, 200- to 300-year old buildings, would be leased for 75 years, starting Nov. 1. Approval for the lease is currently being considered by Oxford.

Stanford will borrow funds for the renovation. The Cliveden campus, housed in the Astor estate, will close next September. Stanford studies indicate that costs at Oxford will be significantly lower than those at Cliveden by 1985-86.

A report considered by the trustees Tuesday, Oct. 12, noted that Oxford offers "distinct academic advantages," combining courses by British scholars paid honoraria with Stanford professors assigned to Oxford for three to six months.

The resulting curriculum will be characterized by "breadth of subject matter and excellence of faculty." Stanford students will have access to Oxford University lecture courses, to opportunities for tutorial and directed reading (limited only by budgetary considerations and individual academic needs), and to the broad range of extracurricular academic activities associated with a major university—lectures, libraries, museums, galleries, and bookstores.

Magdalen College will help Stanford obtain access to Oxford's libraries, which are primarily reading rather than lending libraries, and will provide a large lecture hall for Stanford's use in its "Wayneflete" building, about a two minute walk from the new Stanford site.

"There could be no better location in Oxford for a Stanford center," the report noted.

Since its creation in 1958, the Stanford overseas studies program has become the largest undertaking of its kind by any major American university. Before graduation, between 35 and 40 percent of Stanford's undergraduates spend six months or more studying overseas.

Directed by Prof. Mark Mancall, history, the program also operates in Austria, Germany, France, Italy, Spain, Peru, Kenya, and Israel.

Overseas teaching applications open for 1984-85 year

The Overseas Studies Office, on behalf of the Academic Program Committee of Stanford Overseas Studies, is now accepting applications for overseas teaching assignments in 1984-85: for the autumn, winter, and spring quarters in Berlin, Florence, Tours, Vienna; and the Paris Program for autumn and winter quarters.

A limited number of positions may be open in England for autumn, winter, spring, and summer quarters.

Applications for Haifa will be accepted for a full year, beginning in summer quarter of 1983-84.

The deadline for applications is December 15, 1982. Faculty from all schools in the University are encouraged to apply.

Only limited funds, however, are available at this time to support non-Humanities and Sciences faculty. Applicants from non-H&S schools may contact the dean of their school or Mark Mancall, director of Overseas Studies, to discuss the issues involved. Funding limitations preclude consideration at this time of faculty who will have emeritus status in 1984-85.

Courses proposed which take advantage of the unique resources that are immediately accessible in the overseas setting will be accorded a high preference by APC/SOS, which will make selections for teaching assignments during the month of February. Announcement to faculty nominated will be made shortly thereafter.

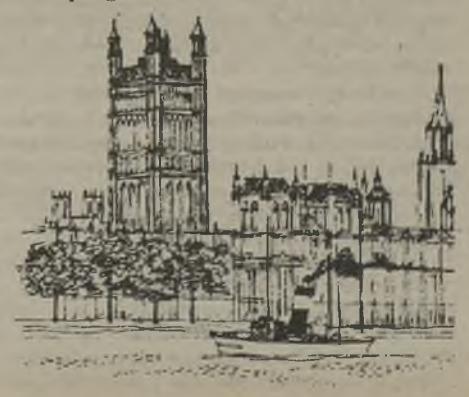
For application forms and more information about teaching overseas, contact Daryl Sawyer, Amy Sims, or Mark Mancall in the Office of Overseas Studies, room 112 of the Old Union, 497-3555.

The Academic Program Committee of Stanford Overseas Studies reports nomination of the following home campus faculty to teach overseas during the 1983-84 academic year: Berlin—Profs. Leonard Ortolano, civil engineering, and William S. Eddelman, drama.

Nominated for England are faculty from the English Department—Anne K. Mellor, Thomas C. Moser, W. Bliss Carnochan, and Diane Middlebrook; from the Medical School, Bruce R. Parker; and from the School of Education, Elliot Eisner.

Faculty nominated to the Florence program are: Prof. Beverly Allen, Italian; Philip Zimbardo, psychology; Michael Jameson, classics; Leonard Ortolano, civil engineering; Stephen Ferruolo, history; and Solomon Feferman, mathematics.

In Tours, nominees are Prof. Albert Guerard, English; and in Vienna, Prof. Walter Lohnes, German studies; and Wolfgang Kuhn, music. Prof. Alphonse Juilland ha been nominated to teach in the Paris program.



Campus crime report

COMMUNITY CRIME INFORMATION
Oct. 11-18

Burglary/residence	14	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	5	Felony arrest	1
Theft/under $200	2	Misdemeanor arrest	14
Theft/over $200	3	Adult booking	8
Bicycle theft	9	Adult cite/release	7
Vehicle accident	8	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	2
Assault	0	Driving under influence	4

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
10/11	Night	600 blk Lomita	Wallets	Open window
10/8-11	Unkn.	600 blk San Juan	Jewelry	Unknown
8/25-9/20	Unkn.	600 blk San Juan	Harp	Forced entry
9/26-28	Unkn.	600 blk San Juan	Camera	Locked room
10/12	Night	500 Campus	Misc.	Unknown
10/11	Night	500 Campus	Wallet & watch	Unlocked window
10/13-14	Night	Manzanita Park	Bikes, TV	Unlocked res.
10/14	Day	Roble Hall	Calculator	Unknown
10/16	Night	Lagunita Court	Wallet	
10/16	Night	Lagunita Court	Jewelry	
10/16	Night	Lagunita Court	Wallet & jewelry	
10/16	Night	Lagunita Court	Wallet & jewelry	
10/16	Night	Lagunita Court	Misc.	
10/16	Night	Lagunita Court	Wallet	

Senate approves Medical Information Sciences program, hears interim report on academic calendar

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT No. 3

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, Oct. 14, 1982, beginning at 3:15 p.m. in Room 280 of the School of Law, with Chairman A.L. Fetter presiding.

On this occasion, the Senate took a number of actions, as follows:

1. Annual Report of C-GS

The Senate, by unanimous voice vote, accepted the Annual Report for the academic year 1981-82 of the Committee on Graduate Studies, after agreeing by consensus to consider later in the meeting the proposal to establish a new graduate program in Medical Information Sciences and after deciding, on a divided voice vote, to defer action on the reviews of the Biophysics and Neurosciences programs pending the receipt of documentation on those reviews from C-GS.

Professor Paul Robinson, chairman of the Committee on Graduate Studies, presented his report (which was published in the *Campus Report* on Wednesday, Oct. 13, 1982) in three sections: report items, actions already taken by the Senate on the recommendation of C-GS, and items being presented for action at the current Senate meeting.

The C-GS report was commended for being admirably concise and to be emulated in that respect. Questions for clarification were asked and answered concerning certain of the policy recommendations, but Dean Lieberman pointed out that the policy matters reported by C-GS were not action items for Senate approval but, rather, matters within the purview of C-GS itself.

Discussion then turned to the programs which had been reviewed and recommended for extension by C-GS. The Honors Cooperative was reviewed at the initiative of C-GS and is not considered to be a program like the three other academic degree-granting programs. Of those three, only the Cancer Biology program had a Senate-stipulated review date. That review was acted on by the Senate last spring when it voted to extend the Cancer Biology program until 1984-85. The Biophysics and Neurosciences programs had no stipulated review dates when first established and have been functioning as continuing programs for a number of years.

Information was sought about the procedure followed in these program reviews, and particularly about whether or not the committee considered the legislative history of the program and the questions raised in C-GS and in the Senate at the time the program was established. Dean Lieberman responded that he felt all interdisciplinary graduate programs, even those established without a stipulated review time should be put on a formal review cycle. Review committees are formed, he said, from faculty essentially outside the program, and are charged to take a fresh look at its purposes, practices, and success. Such committees may or may not go back into Senate history. The final review report is discussed in a C-GS meeting in which the Director of the program and the Chairman of the review committee participate. After those guests depart, C-GS discusses the report and makes a decision.

Following Dean Lieberman's explication, there was discussion of the Senate's role in the review and in the extension of such programs. If the Senate's role is a serious one, it was argued, and Senate endorsement is required periodically for the continuation of a program, then Senate decisions must be made on the basis of more complete information than a simple recommendation of renewal. On the other hand, if reservations expressed when a program is initially authorized or reviewed are lost in time and not considered in a later review, then such discussions are futile and important concerns are ignored.

The Senate was reminded by President Kennedy and Chairman Fetter that the mechanism to prevent that loss of information is available. The chair of C-GS in the future need only request from the Academic Secretary a legislative history of the program's initial authorization and any subsequent review by the Senate. It should be standard operating procedure to start a program review with the questions raised in the Senate whenever that program was discussed in the past. It was pointed out, however, that the success of such an institutional memory depends critically on records which are sufficiently detailed to trigger the right questions.

Discussion resumed on the role of the Senate in reviewing interdisciplinary graduate programs. It was made clear that such programs, in recent years, have been mandated by the Senate with "sunset" clauses, i.e., a stipulated date for review. Programs established earlier do not have mandated review schedules, and the Senate is now being asked to assume an oversight function for them as well, since all such programs are expected to come under periodic review in the future.

Chairman Fetter pointed out that this procedure parallels that being followed now by C-US as it reviews interdepartmental undergraduate programs. There the intent is to provide sufficient documentation to give the Senate some sense of what was done in the review along with the C-US recommendation concerning that program.

Discussion followed concerning the type and amount of information most useful to the Senate in acting on these projected graduate program reviews. It was agreed that the same review summaries provided the C-GS, together with the appropriate "expert witness" guests (e.g., the Director of the program and the chairman of the review committee) should provide adequate background for Senate action. The further suggestion was made that in the future such reviews should ideally come before the Senate in some ordered fashion so that the Senate retains an impression of the total picture of graduate interdisciplinary programs. Such a procedure would help to monitor possible overlap in programs overlaid across disciplines.

2. Proposal for Graduate Degree Program in Medical Information Sciences

The Senate approved, by unanimous voice vote, the proposal to establish a new graduate program in Medical Information Sciences, to begin in 1982-83 and to be reviewed in its fourth year, 1985-86.

Dr. Edward Shortliffe, assistant professor of medicine and computer sciences, presented the proposed, outlining the history of Medical Information Sciences (MIS), the history of the proposal, and the nature of the proposal curriculum. He emphasized the strong interest in MIS and the need for a formal curriculum, as well as the impressive range of MIS research already identified with Stanford. The five major categories of course work in the program highlight some of Stanford's particular strengths. These include: 1) basic medicine and clinical enviromments. 2) computer science. 3) decision-making. 4) medical computing, and 5) health policy and social issues.

In the discussion that followed, it was made clear that the MIS courses were intended to attract nonmajors as well as majors, while at the same time having as the primary focus the training of specialists to integrate the disciplines of medicine and computer sciences. To the suggestion that information sciences intersect a great many disciplines without necessarily justifying separate degree programs, Dr. Shortliffe responded that the intensity of the traditional medical training prohibits the acquisition of these information sciences skills en route. This program specifies the crucial computer science theory courses as taught at Stanford and supplements them with medical applications and other integrating courses. To the comment that the program was very attractive for a dual degree, but seemed inflexible and prohibitively heavy, Dr. Shortliffe replied that it was indeed rigorous, but similar programs had been completed by himself and others. He added that a seven-year MD/PhD program, which this is expected to be, is now common.

It was pointed out that the required courses listed for curriculum category five would not satisfy one of its intents, i.e., to become familiar with key issues in. . .ethics. In order to be truthfully represented, a program should require the courses which would develop the required skills, in this case, for example, a course in medical ethics. Optional courses indicate recommendations, not requirements.

Three other caveats were given: increasingly narrowed specializations for PhD programs represent a dangerous trend; the endorsing letters from outside Stanford cannot all be read as supporting the establishment of a degree program since most were written to endorse the need for a coordinating committee; one faculty member listed as contributing to the program is no longer at Stanford. Dr. Shortliffe agreed that the outside letters were obtained early in 1981 before the formal curriculum was developed and, to the last point, responded that a faculty replacement had already been arranged for, both on the committee and in the course offerings.

In response to a question from Chairman Fetter, Dr. Shortliffe replied that the sponsors would prefer to have the program begin in 1982-83 to accommodate transfer majors within Stanford. Outside applicants would not be enrolled until 1983-84.

3. Senate Resolution for C-GS Proposal

Professor R. Street moved the following resolution, as amended by Professor K. Arrow:

Resolved: That C-GS consider drafting sunset legislation for graduate interdisciplinary programs which proposes the review procedure, specifies the Senate's role in the review, and sets the future schedule for those reviews. That proposal should be submitted to the Senate for approval.

The resolution was approved by unanimous voice vote.

The Senate also heard a number of reports on which action was neither sought nor taken.

1. Report of the Steering Committee

In the Report of the Steering Committee, Chairman Fetter began with a plea that members of the Senate come to Senate meetings on time so that the meetings can begin promptly. This should ease the problem of unduly long waits for invited guests before they can present their reports, and will help to ensure a quorum if action is to be taken later in a meeting. He reported that the Steering Committee is currently drawing up *Guidelines for Reports and Proposals to the Senate* with the intent of assisting the chairs of committees to provide in concise form only that information necessary to the Senate for arriving at a decision. He called attention to the items tentatively scheduled for consideration on future Senate agenda. These include reviews of interdepartmental undergraduate programs and of the Overseas Studies Program, Annual Reports of Academic Council committees for 1981-82 (C-AAA, C-CIT, C-Lib, C-Res, and C-US), the Long Range Financial Forecast (12/2/82) and the Operating Budget Guidelines (3/3/83), and a report from the Dean of Humanities and Sciences which will be scheduled for spring quarter.

2. Report of the President

President Donald Kennedy reported on matters related to the strike. The text of his report appears on page of this issue of *Campus Report*.

In comments made following the report, the administration was both commended for respecting the conflicting needs of all constituences in the University and cautioned not to forget the crucial contributions made by workers in freeing the students to learn, especially in their services to residential education.

3. Report of the Provost

Provost Albert Hastorf reported that, since the Director of the Stanford University Press, Leon Seltzer, plans to retire at the end of this academic year, a search committee has been appointed to nominate his replacement. The Committee will be chaired by Professor G.L. Bach; other members will include Professors W.P. Falcon, P. Suppes, G.J. Lieberman, T. Grey, and W.M. Chace.

He also reported that the Mellon Foundation had given Stanford a grant of $50,000 to support the publication of books by young scholars in the Humanities. The Humanities Center, now in its temporary quarters, is beginning to flourish, and the Mellon Foundation has granted Stanford $250,000 to be matched by the University through fund-raising so that the total half-million can be used for fellowships at the Humanities Center for junior faculty. The University had already converted an unrestricted gift of $500,000 by the Weeks family to be a half-million-dollar expendable fund over ten years to provide support for the Center, which is directed by Professor Ian Watt.

The Mellon Foundation has also recently announced the establishment of a fund to provide 100 fellowships per year for graduate students in the Humanities. These are portable fellowships which will pay tuition plus approximately $7,000, and may even include the possibility of one year of study as a "guest student" at another institution.

In concluding his remarks, the Provost reported that the Board of Trustees has approved the move of Stanford's campus in England from Cliveden to Oxford. The new campus quarters will need to be refurbished, a process which will not be completed until the fall of 1984, one year after the Cliveden contract expires, so there will necessarily be a one-year gap in the program. Even so, the move promises to be rewarding, providing a more stimulating academic environment for both students and faculty.

4. Interim Report of the *Ad Hoc* Committee to Study the Length of Academic Terms

Professor Edwin Good, chairman of the Committee, presented the interim report, announcing that the final report can be expected soon. Although the committee was established in Oct. of 1981, the first student members were not appointed until late Nov. and the committee began its work in Jan. of 1982.

The final report will recommend no revolutionary changes. Several alternative academic calendars have been studied, including the quarter system, the traditional semester, and the early semester system more recently developed (now in use in over 50 percent of U.S. institutions of higher learning, including UC-Berkeley next year). The committee also studied a system proposed from inside

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Senate/ continued from page 18

Stanford, principally by Professor G.H. Golub, chairman of computer sciences: a system of six five-week terms.

Each system is good for certain educational values and no system is good for all. This accounts for the decided split within the committee, principally along disciplinary lines. The committee of thirteen represented virtually all viewpoints. The size and diversity of the group seemed to foster the fragmentation of opinion.

Since it could not agree, the committe worked at possible combinations of term lengths, but found them too complicated. The Golub units particularly are conducive to such combinations, but they also seemed to result in excessively complicated systems that would weigh too heavily upon the advising system. Such combinations seemed likely to cause the proliferation of courses when consolidation and better articulation of courses is a more pressing need.

The committee may well recommend that more thought be given to articulation of the curriculum, to the various kinds of learning that must take place in different disciplines, and to the ways in which those kinds of learning can be enhanced.

The committee will probably urge departmental experiments to overcome the shortcomings of the quarter system, e.g., the greater use of two-quarter sequence courses that continue into but not necessarily through a second quarter.

In the discussion which followed the interim report, it was determined that the lack of a proposal for academic calendar change stems not so much from a majority of the committee overwhelmingly favoring the quarter system as from failing to find a viable alternative among the possibilities considered. Professor Good reported that the committee had studied the UC-Berkeley report on the academic calendar carefully, but noted that the situations here and there are different in that UC-Berkeley is switching back to the semester system after a forced shift to quarters. Such a move is obviously easier to make than it would be if semesters had never been the accepted system there.

In response to a question, he reported that the committee had not examined the problem of students taking too many courses with too few units each under the quarter system since, at least in principle, academic courses are to be offered for no fewer than three units each. He also replied to a question concerning the effect of the choice of academic calendar on the budget. It appears that the differences in costs would not be sufficiently great to tip the scales in favor of less frequent registrations.

Some evidence to support the Golub system was offered from the floor. It is apparently now in effect in at least part of the university system at Carnegie-Mellon. Others who have examined it closely have found it a very promising possibility for sciences and humanities alike. The recommendation was made that the committee describe the Golub system carefully in the final report so that the community can examine its potential.

As the discussion drew to a close, several comments were made about the perennially—recurring nature of the academic—calendar question and the need to retain good records of discussions and decisions for the benefit of those who must confront the problem when it reemerges at some future time.

There being no Unfinished Business, and no New Business being raised, the Senate adjourned on a motion made and seconded at 5:25 p.m.

Clara N. Bush
Academic Secretary

Kennedy comments on USW strike

Following are comments to the Faculty Senate by President Donald Kennedy.

As you know, the strike is over, a contract has been reached, and bargaining unit employees have returned to their jobs. While the hard work of contract negotiations is over, an equally important task remains: we must focus our efforts to restore the *quality* of our continuing, daily working relationships with bargaining unit employees at the University.

That is what ordinarily happens when a strike ends, and it is what I expect to happen now. There were, however, some particular characteristics of this conflict that might make the process of reconciliation more difficult than it ordinarily is. I want to talk about one in particular—because it seems to me central to an understanding of what actually happened here and why it happened.

In the course of this strike (and even before), U.S.W. in its leaflets and in the media criticized the University's contract offers by accusing the University of not bargaining in good faith. Obviously, our offers were not what the Union leadership hoped for. But they were realistic and fair, and were made in a determined effort to reach an agreement that would respect the needs of bargaining members without jeopardizing the University's responsibility and accountability for fiscal management or diminishing its ongoing and paramount commitment to academic excellence.

U.S.W. made numerous allegations in the media. For the most part we chose not to respond to those charges in kind. Nor did the University move significantly from its last offer. I was keenly aware during the strike that because of this the University's position was perceived by some to be unyielding. We said and we believe that contract terms must be negotiated at the bargaining table, not in the media. We also said and believed that our last offer, made before the strike was called, contained essentially all that the University could responsibly give. We are convinced that the same agreement would have been reached even earlier had the U.S.W. leadership continued serious negotiations at the bargaining table instead of calling a strike.

I am also convinced that it was more important to adhere to these principles than to avoid some risk that our conduct would be misperceived. By having said what we meant, and by having respected the bargaining table as the proper forum for settling contract terms, the University has set a good foundation for restoring quality working relationships to the campus, and I am confident we will be able to do so.

With contract negotiations behind us, we are now able to concentrate our energies on a separate matter of equal concern. These are troubled and unpredictable economic times, particularly for universities. In such times, extra care must be taken to manage the University's resources and affairs in a responsible manner. Contract negotiations concentrate on the short run, but the overall economic and academic concerns of the University reach into the long run. We tried responsibly to achieve a balance. I don't believe that any other course is possible and it is the course that I expect to guide us in the future, as well.

Board of Trustees report

Trustees approve relocation of Stanford's British campus at Oxford

The Board of Trustees took the following actions at its meeting on October 12, 1982:

1. Approved actions already taken by the Office of the Vice Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of August, 1982, totalling $19,414,685. The monthly average of such awards for the twelve-month period ending August 31, 1982, was $13,290,070 compared with $13,689,730 for the corresponding period the year before.

2. Accepted gifts received during the month of September, 1982, totalling $3,845,306.

3. Accepted statements that.

a. The Operating Budget for 1981-82 has been adjusted by offsetting equal items of income and expenditure totalling $1,167,000.

b. The Operating Budget for 1982-83 has been adjusted by equal items of income and expenditure primarily because of implementation of planned budgetary reductions of 1 percent.

c. The balance of the Operating Budget Reserve was $2,695,000 on August 31, 1982, and is projected to remain that at the end of the fiscal year on August 31, 1983.

4. Elected John T. Packard to a five-year term as Trustee.

5. Authorized the investment of $1,000,000 in Continental Capital Ventures B.

6. Authorized the investment of $3,000,000 in Kleiner, Perkins, Caufield and Byers IV.

7. Authorized the investment of $2,000,000 in Charles River Partnership IV.

8. Received the annual report on outside properties.

9. Received the annual report of the University's portfolio of securities.

10. Heard a report on improvements in parking and in the circulation of traffic at the Stanford Shopping Center.

11. Approved the transfer of the balance in the Meyer-Buck Maintenance Fund from funds functioning as endowment to expendable funds.

12. Authorized the Vice President for Business and Finance to execute an unsecured note to one or more banks for an amount not to exceed $10,000,000, the proceeds from which will be applied to capital acquisitions which support sponsored agreements.

13. Established the Marta Sutton Weeks Fellowships at the Stanford Humanities Center.

14. Authorized the transfer of funds in the Tarweed-Stanford Fund to an expendable fund to be used for a new field for field hockey.

15. Approved the Budget for 1982-83 of the Stanford University Faculty Practice Program.

16. Regarding the relocation of Serra House:
a. Approved the concept, project, and site.
b. Authorized a total budget of $696,000.
c. Authorized the Vice President for Business and Finance to complete documents for design, put the work to negotiated or competitive bids, and proceed with construction provided costs are within budget and funds are available.

17. Approved the relocation of the Stanford Study Center in Great Britain from Cliveden to Oxford.

18. Heard an oral report on the capacity of the University to carry debt.

19. Received a status report on all construction on campus.

20. Regarding Stanford West:
a. Approved the concept of and site for the residential development known as Stanford West.
b. Approved an increase of $1,115,000 in the total budget, from $1,250,000 to $2,365,000.
c. Approved funding the $1,115,000 as an interim advance against future income from the project, with backstopping by proceeds from the project at Peter Coutts Hill if Stanford West does not go forward.

21. Heard a report on planning for fundraising connected with the University's centennial year.

22. Heard a report from Arthur I. Bienenstock, professor of applied physics and director of the Stanford Synchrotron Radiation Laboratory (SSRL), on development of the laboratory and the research being performed there.

23. Heard a report from Ferdinand A. Geiger, director of athletics, physical education, and recreation, on "Athletics at Stanford."

Faculty appointments, promotions

On October 12, 1982, the Board of Trustees made the following appointments, effective September 1, 1982, unless indicated otherwise:

PROMOTIONS:

David A. Clayton, professor of pathology, effective 11/1/82; Richard L. Goode, professor of surgery, effective 11/1/82.

REAPPOINTMENTS:

Malcolm F. Anderson, assistant professor of radiology, 9/1/83; Paula M. Duke, assistant professor of pediatrics; Michael P. Link, assistant professor of pediatrics; Alan M. Litke, assistant professor of physics; Ronald C. Merrell, assistant professor of surgery; David K. Stevenson, assistant professor of pediatrics; Karl A. Van Bibber, assistant professor of physics.

APPOINTMENTS:

Karol Berger, associate professor of music; Luis Caffarelli, professor of mathematics, effective 9/1/83; Michael Hendrickson, associate professor of pathology, 11/1/82; Norman J. Lewiston, associate professor of pediatrics, 11/1/82; Gregory J. Lynch, assistant professor of art, 10/1/82; Ernst W. Mayr, assistant professor of computer science; Michael F. Ramsaur, associate professor of drama, effective 10/1/82; Debraj Ray, assistant professor of economics, 10/1/82; Stephanos Venakides, assistant professor of mathematics; Andrew C. Yao, professor of computer science, effective 10/1/82.

REPORT MATTERS:

Frederick S. Hillier, professor of operations research, appointed associate chairman of the Department of Operations Research, 9/1/82 to 8/31/85.

Charles S. Williams, associate professor of electrical engineering, appointed associate chairman of the Department of Electrical Engineering, 9/1/82 to 8/31/83.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

29253-JB (JCC:2120) ACCOUNTANT I: Manage resources (funds & equip't inventory) for both a set of res projs & an academic dept; meticulous real-time budget acctg, budget setting & reliable projections very important; timly mgmt of funding requests & delivery of results both budgetary & technical; prov quantitative basis for, & take part in, continuing decision making on resource allocation; manage all interactions w/ off-campus financial support organizations & w/ on-campus res coord groups & academic budget people; QUALIFICATIONS: formal acctg training; college degree in business (or engrg) desirable; several yrs exp involving resource acctg, preferably related to mgmt of tech projs; track record of prompt & accurate proj status keeping & projection; willingness to develop & maintain effective means for mgmt use of projections.; C05; $1670-2086.

33697-VW (JCC:2160) ACCOUNTANT II: Act as Credit Collection Mgr; respon for the credit & collection functions of Faculty Practice Program; plan, organize, dir & evaluate credit & collection activities; represents FPP Asst Dir for Patient Accts in credit & collection matters & performs other duties as required; supv a staff; coord w/ physician & other FPP mgrs; QUALIFICATIONS: bachelor's degree desired; 1-3 yrs supvry exp nec; exp in credit & collection activity also required; prior exp in either hospital or physician group practice setting desirable; must possess the ability to function in a highly complex & dynamic environ.; C06; $1854-2312.

32936-TC (JCC:5050) PROGRAMMER SYSTEMS III: 50%; work for Day Care Ctr (Clinic) in Div of Oncology; handles a large patient volume & active clinical protocols; respon for maintenance & development of UNIX PDP-11 Sys Software; design data base applications software to users specification retaining integrity of operating sys; optimize the performance of appl programmers embedded in UNIX; respon for large oncology data base; ability to make decisions w/out peer support; ability to advise non-computer oriented physicians & physicists; QUALIFICATIONS: Master's degree desirable and/or applicable exp.; C07; $1057-1362.

27086-PM (JCC:2554) SECRETARY II: Fixed term for 1 yr with possibility of extension; full range of sec'l suport for Sr. Fellow working on economics of public finance (50%) & to Sr. Research Fellows & Scholars (50%); typ corresp, articles, & manuscripts in draft & final form, primarily on Word processor & often fr taped dictations; travel arrangements & calendar; phones & mail; setting up & maintaining files; expense reports & other univ forms as required; QUALIFICATIONS: typ 60; excel typing skills; high-level ability to use word processing equip't & heavy transcription (for taped dictation); send appl/resume to Dr. Charles E. McLure, Jr., Hoover Institution, Stanford, CA 94305; please do not telephone; B11; $1246-1310.

29437-PM (JCC:2454) OFFICE ASST II: Fixed term 11/15/82-5/31/83; assembly of application mat'l for MBA Program into file folder; work w/ confidential mat'ls daily; verifying requested mat'ls to be accurate, authentic & complete in folder; retrieving GMAT scores; completing data processing form; calculating GPA's; notifying applicants fo missing credentials or completeness of folder; help to answer 4-line phone sys; prov assistances for other desks in 5-person offc as work load demands; QUALIFICATION: type 40; accuracy & atten to detail essential; good math skills & ability to use calculator; command of oral & written English essential; knowl of Stanford & college admissions helpful; send appl/resume to Cecilia Strickland, GSB or call 497-2766.; B09; $1130-1189.

25868-PM (JCC:2596) SECY II-SPEC: work as faculty sec for law professors as assigned to handle all classwork needs corresp, expense reports & travel arrangements; answer phones, xerox, & at time, cut & paste for pre-publication; QUALIFICATIONS: typ 70+; excel typing skills; familiarity w/ dictation/transcription sys essential (s/h a plus); some prev business exp or law offc exp preferred; able to work under extreme pressure, esp related to publishing deadlines; must be detail-oriented & have shown demonstrated ability for making respon judgments & setting own work prior; will train on computer/-word processor equip't as needed; send appl/resume to Dena Landsman, Rm 113, Crown Quad, Law School.; B12; $1310-1373.

SLAC

94633-JM (JCC:2562) SECRETARY III: Perform a wide range of sec'l & admin duties incl but not limited to typing letters, maintaining file sys, screening mail, handling periodic heavy corresp related to hiring of Res Assocs; prov support for spec lab committee mtgs; typ tech mat'ls using Physics terminology; record data on word processor; schedule appts; arrange travel, etc; QUALIFICATIONS: several yrs appl exp; typ 50-60 w/ excel knowl of spelling, grammar & punctuation; some exposure to use of word processor; ability to do tech typing or willingness to learn; exp w/ dictaphone and/or s/h helpful; excel admin/organizational skills; ability to commu w/ large number & variety of people.; B14; $1440-1593. APPLY AT SLAC

95159-JM (JCC:6612) PR S&E TECH - ELECTRO MEC: TMS Unit; construction & testing of experimental equip't in clean rm area; develop't of procedures & equip't nec to manufacture Planar Spark counters; supvn of others during manufacturing phase; design, construct & troubleshoot electronic circuitry; quality control of components; interface w/ vendors; QUALIFICATIONS: AA degree or equiv; excel mech skills required at both design & fabrication level; requires highest standards in precision; some exp in clean rm area; supvry exp desirable; familiarity w/ modern control sys & ability to apply them as an integral part of mech sys & equip't being developed; exp using standard fast electronic test equip't.; A39: $2148. APPLY AT SLAC

Nonexempt

29441-PM (JCC:1747) LIBRARY SPEC I: 75%, nights/wkends flexible as needed; charges outreserve books & other circulating mat'ls; prov genl informa to lib users; issues lib cards, registers patrons, monitors eligibility of the public for access to lib & for borrowing; interprets & carries out lib policies & procedures; answer phones; searches for mat'ls for Public Services use; collects fees & fines; opens & closes lib as assigned; may asst w/ simple computer files & machine memory sys; QUALIFICATIONS: ability to work w/ public in an efficient, calm, mature & always courteous manner; ability to follow specific procedures & carry out instructions; exp in interpreting & carrying out detailed, written policies; phone answering skills; able to remain on feet for better part of the day; lib exp major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib, GSB, Rm 119, 497-2162.; B10; $892-935.

30970-PM (JCC:1747) LIBRARY SPEC I: 75%, 8-3; performs duties in Catalog Dept; files in Main Catalog; validates access points while filing; does authority work for heading changes in SUL catalogs; files in Spec Collections & Reference Room catalogs; pulls catalog records for cancelled books & changes location stamps for transferred books; QUALIFICATIONS: typ 40; require atten to detail; ability to learn filing rules & file structures of a large, complex catalog sys; ability to learn guidelines for authority work; prev cataloging exp in filing & searching; some bkgound in foreign langs, preferably European; prev proof or other editorial work exp; send appl/resume to Bob Johnson, Green Lib, Room 223, 497-3152.; B10: $892-935.

30886-PM (JCC:1763) LIBRARY SPEC III: Supvn & continuous training of 3 lib specs; monitoring daily input of cataloging records in RLIN; organization of work flow for tech processing; final respon for tech correctness of database records & catalog cards & distribution of them to approp files; final respon for accuracy of filing in lib's public catalog; maintenance of shelflist records for continuing publications; collection & compilation of monthly bibliographic statistics; QUALIFICATIONS: prev lib exp in tech serv; typ 60; ability to follow & learn new elements introduced in lib's automated sys as well as lib's procedures; ability to work effectively & commu clearly; knowl of any Western European lang useful; contact: Eliska Ryznar, Law School Lib, Rm 258B.; B14; $1440-1514.

30972-PM (JCC:1771) LIBRARY SPEC IV: Performs duties in Gov't Documents Dept; respon for day-to-day mgmt of tech processing activities; acquisitions of federal documents, both manually & on-line; processes federal monographs & serials using LC & superintendent of Documents classifications, both manually & on-line; claims mat'ls; processes invoice; does binding; supv 3.5 FTE lib specs in tech processing activities; prov min of 5 hrs/wk of reference assistance to patrons, etc; QUALIFICATIONS: typ 40; require prev lib exp, prev exp in tech processing, incl cataloging & searching; prev supvry exp; prev exp w/ automated sys, preferably RLIN; ability to commu clearly, both orally & in writing; lib reference exp; knowl of or exp w/ govt. organizations & publishing activities; contact: Bob Johnson, Green; B16; $1593-1671.

44398-BP (JCC:2454) OFFICE ASST II: 50%; fixed term 11/1/82-7/31/83; gradually increase to full time before/during commencement; respon for very detailed activities in prep of diplomas & the Commencement Bulletin; coding data & data entry on IBM terminal; ordering & checking lists & reports fr Commencement Computer file; proofing diplomas & assisting in production of Commencement Bulletin; mailing out diplomas; sorting & distributing diplomas for dept'l ceremonies, etc; QUALIFICATIONS: typ 45; prev data entry exp desired; atten to detail; high degree of accuracy; good organizational abillty; ability to work under pressure & w/in strict deadlines; send appl/resume to Glenda Greer, Rm 133, Old Union, 497-1550.; B09; $565-595.

30409-BP (JCC:2462) OFFICE ASST III: Act as bkup receptionist; heavy traffic; must explain & interpret grad div procedures & interpret financial aid, registration & other policy matters; respon for approving all student res & teaching assistantships; confers w/ depts & interprets for them regulations & policies dealing w/ problem cases; respon for processing Postdoctoral Fellows folders; asst in College Work Study program; determine student's eligibility to be included in FISAPP grid; maintain file on available outside awards; write to foundations for update; asst in ordering all fellowship stipends; QUALIFICATIONS: accuracy in math & typing; work under pressure & w/ many interruptions; use of computer terminal, typewriter & xerox machine; may not smoke in offc; send appl/resume to Karlene N. Dickey, Bldg 590,; B11; $1246-1310.

44400-BP (JCC:2462) OFFICE ASST III: Respon for coord all spec registrations & act as interface w/ students, faculty, & staff regarding registration information; an informa'l source on Univ policy & procedures; prov informa on grad student registration status to students & staff; organize & coord w/ depts for Advance Registration & Class List Sign-up; respon for the Summer Session registration; act as registration liaison for spec student programs; handle late registration for Post-docs & TGR students; hire & supv temporary hrly employees, etc; QUALIFICATIONS: typ 40-50; requires strong organizational ability & accuracy; ability to commu well w/ people; some college work or exp in academic setting helpful; ability to work effectively under pressure; send appl/resume to Glenda Greer, Old Union, Rm 133.; B11; $1246-1310.

30782-BP (JCC:2470) OFFICE ASST IV: Prov sec'l, clerical & admin support to Energy Program Offc staff; handle all details of day-to-day running of the offc; answer phone; screen calls; sort mail; order equip't & supplies; type letters, memos & reports using typewriter & word processor; maintain informa file on computer; maintain records of expenditures & accts for offc budgets & reconcile monthly budget statements; res facts on energy conservation, etc; QUALIFICATIONS: typ 60; good oral & written commu skills; able to work w/ numbers & detail accurately; knowl of Univ procedures & forms desirable; knowl of or willingness to learn word processing & Wylbur, SPIRES computer commands; send appl/resume to Nancy Teater, 127 Encina Commons.; B14; $1440-1514.

30971-PM (JCC:2554) SECRETARY II: Performs duties in Spec Collections Dept; type corresp, reports, guides, memos & exhibit texts; maintains files; orders supplies; picks up mail; keeps selected statistics; greets visitors & patrons; supvs the registration of patrons; monitors the Lurie Rotunda & gallery area; serv as dept chief's sec; answer calls; QUALIFICATIONS: typ 50; require prev sec'l exp; prev public serv exp; ability to use transcribing machine; ability to learn Wylbur or another text-editing sys; thorough knowl of and/or accuracy in use of English grammar, spelling & syntax; good commu skills, both orally & in writing; some knowl of libs' structures & operations; send appl/resume to Bob Johnson, Green Lib, Rm 223, 497-3152.; B11; $1246-1310.

33778-BP (JCC:2562) SECRETARY III: Prov full range of sec'l duties for 2 Financial Mgrs w/in Real Estate Dept; rec & scr calls & visitors; arrange mtgs; open & scr mail; typing of corresp, reports, forms; compile financial reports, data on sales; loans, interest; set up & maintain filing sys; make travel arrangements; prep expense reports; may require maintaining records pertaining to expenditures for budgets & reconciling budget statements; heavy volume of work on Datapoint word processing sys; QUALIFICATIONS: TYP 65; min 3 yrs' sec'l exp; detail oriented; excel commu in writing & orally; knowl of Datapoint word processing desirable; able to use 10-key calculator; excel math skills; send appl/resume to Pauletta Sypert, Investment Mgmt Organization, 209 Hamilton Ave., Palo Alto, CA 94301.; B14; $1440-1514.

Bargaining unit

14294-PB (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; W, Th, F, 6-2pm; Sat & Sun, 11-8pm; prep fruits & salads for buffet, a la carte salads or sandwiches during lunch, hors d'oeurvres for spec parties; food prep for banquets on Sat; food prep for buffet on Sun; QUALIFICATIONS: 2 yrs exp in restaurants, hospitals, hotels or w/ a catering serv required.; A12; $6.54.

14295-PB (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; Mon, Tues, 6-2pm; Fri, Sat, Sun, 11-8pm; prep fruits & salads for buffet, a la carte salads or sandwiches during lunch, hors d'oeuvres for spec parties (makes jello molds, fruit & relish trays & various salads & dressings); food prep for banquets on Sat; food prep for buffet on Sun; QUALIFICATIONS: 2 yrs cooking exp in restaurants, hospitals, hotels or w/ a catering serv required.; A12; $6.54.

14296-PB (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; Mon-Fri, 11am-8pm; works fry station during lunch, broiler and/or saute station during dinner; grill steaks, prep hot & cold food for table serv; in afternoon helps prep of Ala Carte & banquet foods; 2 yrs cooking exp in restaurants, hospitals, hotels or w/ a catering serv required.; A12; $6.54.

32392-PB (JCC:5835) ANIMAL CARE ASST I: 50% TMS Unit; Mon/6 hrs, Wed/8 hrs, & Fri/6 hrs; respon for animals (rats, mice) housed in the animal care facilities; clean cages, feed & water, perform genl cleaning of areas; sterilizes cage equip't, bottles, & sawdust; QUALIFICATIONS: ability to follow very detailed verbal & written instructions; habits of cleanliness & neatness; willingness to handle animals; familiar w/ animal facility & use of autoclave; has to handle 25-30 lb bags of feed; able to work where there is sawdust.; A12; $6.54.

Ph.D. oral exams

TUESDAY, OCTOBER 26

Philippe R. Spalart, aeronautics and astronautics, "Numerical Simulation of Separated Flows," 4:15 p.m., Skilling Auditorium.

WEDNESDAY, OCTOBER 27

Mark Nunan, French and Italian, "The Poetic Genesis of Francis Ponge," 2:15 p.m., 274, Bldg. 260 (French Dept).

THURSDAY, OCTOBER 28

Radley Wahl Olson, chemistry, "Spectroscopic Studies of Molecular Interaction Dynamics in Mixed Molecular Crystals," 2:15 p.m., Chemistry Gazebo.

FRIDAY, OCTOBER 29

James Harris, English, "American Poetry, 1850-1960," 2:15 p.m., Bldg. One, Room 2N. **Christine Sierra,** political science, "The Political Transformation of a Minority Organization: The Case of the Council of La Raza, 1965-1980," 10 a.m., Political Science Faculty Lounge.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Oct. 26, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.



Mid Schubert and Terre Harris with their stuffed gingerbread men.

Staffers, coaches strut their finest

Stanford staff members and coaches, Dollies and other students, and assorted alumni will serve as models for the Saks Fifth Avenue fashion show which will be part of the Chrysanthemum Party and Golden Boutique, scheduled for 1-5 p.m. Sunday, Oct. 24, at Syntex (401 Hillview Ave., Palo Alto).

Among the models are: David Voss, house manager at 623 Mirada; Mark Olson and Carolyn Manning of the Alumni Association; associate athletic director David Glenn, coaches George Haines, Chris Harpell, Skip Kenney, and Jean Helliwell, and trainer Cathy Egan of the Athletic Department.

The day's events will also include a tea dance with the Stanford Jazz Band and a boutique sale featuring items made during the year by Mother's Club members worldwide.

There will also be singing by the Mendicants and television sets for football fans to watch the day's games.

The Chrysanthemum Party is the Club's main fundraiser for its scholarship fund. Tickets are $6 at the door.

Peter Coutts Hill condominiums

Stanford University is accepting applications now for rental of the new Peter Coutts Hill Condominiums.

Rental units will be available in December, 1982. Rental agreements, are month-to-month.

Preference in rentals will be given to members of the Stanford community (faculty, staff, students, etc.) and its affiliates. Families with children are welcome.

Floor plans of the various unit types and rental applications are available from the Peter Coutts Hills rental office, 138 Peter Coutts Circle, Stanford, Calif. 94305; (415) 493-1471.

The unfurnished average rents for the various types are as follows:

A-1	(2br/2ba)	$930
A-2	(2br/2ba/study)	$1,010
A-3	(2br/2ba/study)	$930 (handicapped unit)
B	(2br/2ba/study)	$985
C-1	(3br/3ba)	$1,095
C-2	(3br/3ba/study)	$1,200
D	(3br/3½ba/study)	$1,260

These are average monthly rents. The actual rent on any particular unit may vary slightly according to unit location. Additional rent of $50 per month will be charged for each unrelated adult in excess of one per unit.

Flu vaccinations offered staff

Stanford will provide influenza vaccinations again this year at no charge to all employees who wish them.

Immunization will be available from 1:30 to 4 p.m. Fridays at Cowell through Nov. 12.

The vaccine is recommended only for certain high-risk individuals—those with heart disease of any kind, chronic lung disease, chronic kidney disease, diabetus mellitus or other chronic metabolic disorder, chronic severe anemia, and conditions which compromise the immune mechanism, including cancer therapy.

Older persons, especially those over 65, should get the immunization.

This year the flu vaccine will include three types: A-Brazil, A-Bangkok, and B-Singapore. It will not contain swine flu. Adults and children over 13 will require only one dose.

Rental housing

HOUSING NEEDED

□ **Dec. '82 to Mar. '83:** Want to rent 2BR or more, furn. condo or hse. Call collect (714) 752-7870.

□ **Jan. to July '83:** Johns Hopkins Prof., visiting SLAC, seeks hsng. for self, wife & 12-yr-old child. 2 or more BR hse or condo nr campus & schls. Will EXCHANGE spac. 5BR hse in Roland Pk., Baltimore, walk dist. excl. priv. schls. Call collect (310) 366-1892 or Gwen Bowen, SLAC, (415) 854-3300, ext. 3111.

□ **Jan. to June '83:** Visit. Fac. Grad. Sch. of Bus., wife, son, and obedience trained standard poodle seek hse or apt, 3BR, in Palo Alto Sch. Dist. Call collect (203) 387-4010.

□ **NOW:** Resp. prof. cpl. seek rental hse, 1 yr. lease. No children. Palo Alto, West Menlo, Mt. View. Call between 6 & 9 pm, (415) 349-9794.

□ **NOW thru end of Jan. '83:** Chief exec. officer of loc. corp. seeks 4-5BR furn. hse. immediately. Call J. Lange. Stanf. Alum. Assoc. 497-2021 or 321-4961.

□ **Winter Qtr:** Short term rental for parents of Stanf. prof. Any time during qtr.—Jan.-Mar. Nonsmoking, no children or pets. On or nr. campus. Call Mary or John Felstiner, 322-7727.

□ **Jan. to Aug. '83:** Visit. prof., wife, 2 children (11, 8) seek 2-3BR furn. hse or apt. nr public schls, commute dist. to Stanf. WILL SWAP 3BR/2BA hse on 2 acres, 10 min. to U. of Mass Amherst. 1 hr. to Vermont ski, 1½ hr to Boston. Call COLLECT (413) 253-3287.

□ **Jan. 1 to Mar. 18, '83:** Winter qtr. Visit. prof. seeks furn. 2BR hse or condo. Call COLLECT after 6 p.m. (303) 444-1979, or write: Dr. Paul Swartztrauber, 4496 Dallas Pl., Boulder, Colo. 80303.

□ **Jan.-Mar. '83:** Visit. prof. seeks furn. 1BR apt. Nonsmoker. Call 497-9745 (day) or 328-7064 (eve).

□ **Beg. Oct. 17, '82:** Resp. professional woman, no pets, seeks hsesit. Loc. refs. Call 497-3425 or 854-1543.

□ **Beg. Mar. '83 for 1 yr. (flex):** Finnish-French fam. w/2 daughters seeks 2-4BR hse/apt in Bay Area. Local refs. Will care for pets/garden. EXCHANGE 3BR/2BA apt. & 2 cars in beautiful area 5 mi. from ctr. Paris. Wkly. cleaning incl. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Nov. & Dec.:** Visit prof. & wife seek furn. apt. or hse. Call 857-5068 (day) or 856-0249 (eve).

□ **Jan. 1 to summer '83:** Family seeks 3BR furn. hse in Stanf. area. Will EXCHANGE 4BR hse w/pool on lge water-ski lake in suburb. Miami, Fla. Call (415) 322-0902.

□ **Spring qtr, Mar. 25 to June 10, '83:** Resp. female student (Jr.) nonsmoker, seeks rm. in fac/staff hse, on campus or nrby (bike dist.). Exchange hsehold help &/or payment for rm & brd. Local refs. Need to arr. now, overseas Winter qtr. Call Julie, 327-7951.

□ **NOW:** Stanf. staff & fam. seeks 2-3BR unfurn hse in rustic area anywhere betw. Palo Alto-Redwd City. Call Jeanette, 497-5798 (day) or (415) 364-6289.

□ **Jan. 1 thru Apr. 1, '83:** Visit prof. Radiology seeks 2-3BR furn. apt. or hse. for self, spouse, 2 daughters (13, 16) nr. campus. Nonsmokers. Call Jane, 497-6748 (day) or call COLLECT Dr. Gardiner, (312) 666-5365, or write: 831 So. Loomis, Chicago, IL 60607.

□ **Jan.-Mar. 83:** Retired cpl. seeks furn. 1-2BR apt., condo or hse. On campus or in PA or Menlo Pk. Conv. to shops, campus. Package deal to incl. car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

HOUSING AVAILABLE

□ **Avail. NOW:** College Terr. Twnhse, fully furn. to SHARE. 2BR/1BA, 2 story, frpl, lge. patio deck, cozy bckyd. Prof. empl. lesbian, 38, nonsmoker, seeks empl. lesbian hsemate. $385/mo + util + deposit. Call 327-3141 (day), 494-2292 (eve).

□ **Regularly avail.:** 1 & 2BR furn & unfurn. apts. & twnhses in Palo Alto & Menlo Pk. in good neighborhoods, close to campus. $525 to $800/mo. Call Shirley (415) 493-2321 or Jane at (415) 968-4957.

□ **NOW: HAWAII:** rustic hse in Haena, Kauai. 2BR/1BA, loft, indry, fully furn., sleeps 7. $280/wk. Call Nancy Scholl, 321-4407.

□ **Oct. 15, '82 to Jan. 10, '83:** Luxurious 2BR/2BA condo dwntwn Los Altos. 10 min. to Stanf. Fully furn., TV, all appl. $950/mo. Call (415) 948-1240.

□ **NOW, to share:** Lovely, quiet hse w/frpl, gardener, & priv. yd in So. Palo Alto. Female, nonsmoker. $300/mo. plus util. Call 493-9089 (eve), 966-3985 (day).

□ **April 1 to Aug. 31, '83:** Fully furn. 4BR/3BA campus hse. Contemp. style, 2 frpls, extensive patios, FR, gardener incl., fully sprinklered. 10 min. walk to campus center. Call (415) 857-9298.

□ **Feb. 1 to Sept. 1, '83:** 3BR/1BA fully furn. hse incl. linens, dishes, all appl. Gardening service, fenced bckyd. 2 car gar. 6 mi. to campus. Nr. shops, pub. schls. Call (415) 368-6722.

□ **NOW:** Alpine Meadows, Tahoe. 3BR/1½BA cabin, W/D, frpl. Sleeps 10. $200/wknd, $70/wk.night. Call 493-4139 (eve).

□ **Beg. Nov. 1 for 1 yr:** Atherton, 3BR/2BA, den, frpl, unfurn. hse, carpets, drapes. Patio, backyd. Call Wells Fargo Bank, (415) 855-7631.

□ **NOW:** Female roommate wanted to SHARE 2BR apt. in Menlo Pk., nonsmoker, no pets. W/D, 15 min. bike to campus. Call 497-3639 (day) or 321-4592 (eve).

□ **Jan. '83 for 6-8 mos.:** Furn. campus hse. 2-3BR/2½BA. $950/mo. incl. grdnr & mo. hsecleaning. Call 857-9384 or 497-2065 (day).

□ **Beg. Jan. 1, '83:** College Terr. unfurn. family home, 4BR/2BA, carpets, drapes, AEK, fenced yd., 5 min. bike to campus, W/D nego. Refs. req, nonsmokers. $1250/mo. incl. grdnr. Call 858-0247.

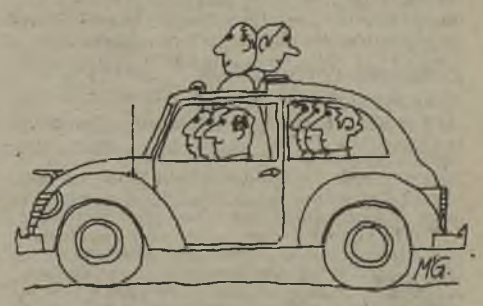
□ **NOW:** Exceptionally lovely campus hse. Unfurn. 3BR/2½BA, study, all appl. Avail. for faculty or staff. $1100/mo. incl. garbage, water. Call Helen Meyer, 497-3453 (day).

□ **NOW:** Lge. family hse. Crescent Pk. Woods, nr Cult. Ctr & main lib. 2BR/2BA w/conv. den, DR, FR, alarm syst., W/D. Children, small pets welcome. Mo.-to-mo. or lease. $1650/mo. Call (415) 328-1339 after 4.

□ **NOW:** Fully furn. 2BR/1BA 4-plex in Palo Alto. 4 mi. to campus. Incl. W/D, linens, dishes, carport w/storage. Children welcome. Walk to schls. Call Jane, 968-4957 or Jack, 494-2827.

□ **NOW:** Prof. bus. woman w/fully furn. apt. seeks permanent, mature, neat, clean hsemate to SHARE, who likes cat. Call 329-1225 (day) or (415) 364-3742 (eve).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Carpools

Looking for carpool, Fremont to Stanford, approx. 7 a.m. to 5:30 p.m. Call Steve at 7-9583 or 792-1486.

Established carpool, Oakland to Stanford, Hours 9-6. Non-smokers. George Gianopoulos, 7-6856.

Want to join a carpool from S.F. (22nd Ave. and Balboa area) to Stanford Medical Center 3-4 days a week, 8-5. Call Jackie Bertoletti, ext. 7-5955.

Carpool/rider, nonsmoker. SF to Stanford. 9-5, M-W, F. Call Paul Turner, 497-4275 or 497-3404, or David, 497-2727.

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Need rider from Los Gatos/Saratoga area arriving at Stanford 7:30 a.m., leaving 4:30 p.m. Call Gloria, 497-4970.

Bowen to conduct Jazz Band Friday

The Stanford Jazz Band will begin its 1982-83 series with a concert on Friday, Oct. 29, at 8 p.m., in Dinkelspiel Auditorium.

The program, billed as "The Big Band Era," will offer an evening of favorite melodies from such jazz immortals as Count Basie, Duke Ellington, Woody Herman, Les Brown, and Glenn Miller.

Under the supervision of Professor Arthur Barnes, the band will be conducted by its new student director, Jose Bowen.

Bowen, a native of Fresno, is a junior in history and biology who manages in his spare time to maintain an active musical schedule as both conductor and composer. This past spring he was awarded the $1,500 Bill T. Ritchie Scholarship from the Fresno Musical Club, enabling him to spend the summer completing his Concerto for Flute and Strings, op. 34. The work received its premiere performance at Fresno State University in September.

Tickets to the Jazz Band concert are $4 general admission and $2 for students and senior citizens, and are available at Tresidder ticket office, 497-4317 or at the door.

Animals topic of Raubitschek talk

Emeritus Prof. Antony Raubitschek of the Stanford Classics Department will give an illustrated lecture on the exhibition, *Animals in Ancient Art from the Leo Mildenberg Collection*, at 3 p.m., Sunday, Oct. 31 in Annenberg Auditorium.

The Mildenberg Collection consists of approximately 200 ancient works of art depicting animals, created by artists in the near East, Egypt and the Classical World. Included in the exhibition are miniature animal figures in gold, terra cotta and glass, and small earthenware vessels shaped like animals or decorated with animal designs.

This unique, private collection of exquisite objects has been assembled by Dr. Mildenberg, a director of Bank Lev in Zurich and one of the world's foremost authorities on ancient coins. The exhibition may be viewed at the University Art Museum, Berkeley, from Oct. 13 through Dec. 5, 11 a.m. to 5 p.m., Wednesday through Sunday.

This lecture, sponsored by the Committee for Art at Stanford, is open to the public at no charge.



Michele Marieschi painting in Art Gallery exhibition

Painting and drawing, furniture, and crafts of Venice shown at Gallery

Venice of the 18th century as reflected in the work of its artists and craftsmen is the theme of an exhibition to be held at the Stanford University Art Gallery through Dec. 19.

Drawn largely from the important collections of Venetian art of the Stanford Museum, the exhibition features works by Guardi, Canaletto, Bellotto, Piranesi, and the Tiepolos, as well as a selection of the arts of decoration, furniture, glass, and lace for which Venice was famous.

The connection between art and life was especially close in Venice during that period of its final glory when it rivaled Paris as a center of elegance. The city itself was considered a work of art, and the painters of Venice untiringly represented it in all its aspects, as the section of the exhibition devoted to views of Venice demonstrates.

But the life of Venetian society, considered the most liberal and self-indulgent in all Europe, gave an almost equal opportunity for the amusement and observation of artists. The pageantry and lively drama of the great sea-borne city, played out on an incomparably beautiful stage, inspired a form of art that was at once grandly monumental and intimately suggestive of enjoyment. It found its culmination in the work of the Tiepolos, father and son, of which the exhibition contains notable examples.

The diversity of the exhibition, ranging from painting and drawing to the characteristic painted furniture of 18th century Venice, and including a sampling of Venetian mirrors, decorative glass, and lace, is designed to illustrate the unity of style and spirit that marked Venetian civilization in its last flowering, before the Revolution, Napoleon, and Austrian occupation put an end to the independence of the city and to its culture.

A manuscript page, in Mozart's hand, of a passage from *The Marriage of Figaro* is a reminder of the rich musical life of Venice and of the fact that the opera's librettist, Lorenzo da Ponte, was a Venetian.

The Art Gallery and Museum are open Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday from 1 to 5 p.m.; closed on Mondays.

Translators to meet at Stanford

The American Literary Translators Association will hold its fifth annual meeting Friday through Sunday, Oct. 29-31, at Stanford University.

Registration will be held from 5-7 p.m. Friday, Oct. 29, at Tresidder Union, followed by a poetry reading by Robert Duncan. Further readings will be given at 2 p.m. Sunday by Nobel Laureate Czeslaw Milosz, Robert Hass, and Robert Pinsky.

Panels and informal discussions have been scheduled on reviewing, translation as interpretation, creating an audience for translation, translation theory and practice, sound in poetry, translating for the theater, a women's roundtable, and workshops in Spanish, German, French, Swedish, Hebrew, and Yiddish, and bridging in Chicano literature.

The various programs will be free and open to the public. Consult the posters around the campus for the detailed schedule.

The Pocket Opera of San Francisco, directed by Donald Pippin, will perform at 9 p.m. Saturday, Oct. 30.

Prof. John Felstiner of the Stanford English Department is host for the meeting. Other sponsors and organizers are Prof. Gabriel Berns of UC-Santa Cruz and Joanna Bankier of UC-Berkeley.

For further information call Joanna Bankier, Department of Comparative Literature, UC-Berkeley, 526-8662.

Frankel to speak on world crises

Glenn Frankel, assistant foreign news editor for the *Washington Post* and a professional journalism fellow at Stanford, will speak on "How the Media Treat World Crises" during the Oct. 26 Tuesday luncheon-lecture at the International Center.

Frankel joined the *Washington Post* in 1979 after working on the staffs of various newspapers on the East Coast. .Until recently Frankel has been the *Post's* correspondent in Richmond, Virginia.

Frankel moved to the assistant editorship during a period of intense media scrutiny of major world events, such as the war in Lebanon and the Falkland Islands crisis. He will discuss the role of media in world events by examining press treatment of those two recent events.

The Tuesday luncheon-lecture series is a weekly program designed to bring speakers from various backgrounds and of wide expertise into contact with interested listeners. Tickets for the luncheon, limited to 40, are $2.50 each. Admission to the talk is free, and brown baggers are more than welcome.

For more information, call the I-Center, 497-1831.

HIP aims to help with stress and other problems

The Health Improvement Program (HIP) is offering four health improvement courses this fall for Stanford faculty/staff and their families.

The courses, listed as Classes for Healthy Living, focus on increased awareness of individual health habits and methods of changing those habits to maximize personal health and well-being.

Funded by the Office of Benefits and Records and administered by the Stanford Heart Disease Prevention Program, HIP offers a unique opportunity for SU faculty and staff to participate in activities on campus which allow and encourage individuals to take control of their health. Learning the kinds of changes we can make in lifestyle can help us look and feel healthier.

In addition to the classes listed below, HIP offers an extensive exercise program suitable for the nonexerciser and experienced exerciser alike. For more information, call 497-7940.

Stress management: A variety of methods for eliminating or coping with stress; Mondays at 5:15-7:15 p.m., starting Nov. 8, at the Stanford Heart Disease Prevention Program, 730 Welch Rd., Suite B. Fee, $25.

Hypertension self-management: Skills for self-management of high blood pressure; 5:15-7:15 p.m. Thursdays, beginning Nov. 4, at Medical Center Room A-126. Fee, $25.

Weight management: Individualized strategies modifying eating habits; 5:15-7:15 p.m. Thursdays, beginning Nov. 4, in Roble Gym, Room 33. Fee, $25.

Q.U.I.T. smoking: Strategies for resisting the urge to smoke; 5:15-6:45 p.m. Tuesdays and Thursdays, beginning Nov. 9 at 730 Welch Rd., Suite B. Fee $30.

To register send the following information along with a check payable to Stanford University through interdepartmental mail to HIP, 730 Welch Road, Suite B: your name, department, campus mailing address, campus extension, and the name of the class in which you wish to be enrolled.

Bronzes, pastels by Harris on view

An exhibition of small bronze sculptures and pastel drawings of still-lifes by Bay Area artist Paul Harris may be seen at the Stanford Museum through Jan. 2, 1983.

Harris's work has been included in many group exhibitions, among them exhibitions at the Museum of Modern Art, New York, and the Kunsthalle, Dusseldorf.

In 1967 his cloth sculptures were a feature of the exhibition Sculpture of the Sixties, held at the Los Angeles County Museum of Art, and in 1977 he was a contributor to the exhibition The Object as Poet in the Renwich Gallery of the National Collection of Fine Arts, Washington, D.C. A one-man show of his work was presented at the San Francisco Museum of Art in 1972. Harris was awarded a Guggenheim Fellowship in 1979.



Boaz Sharon

Koechlin subject of talk, recital

Boaz Sharon will be the guest of Stanford's Music Department in a free lecture-recital at 8 p.m. Tuesday, Oct. 26, in the Large Lounge of Tresidder Union.

Sharon, an associate professor and chairman of the Piano Department at the University of Tulsa, will speak on rediscovering a unique, forgotton French composer—Charles Koechlin. The lecture will be illustrated at the piano with selections from Koechlin's works.

Charles Koechlin was a French composer whose life span of eighty-three years began in the age of Impressionism and ended in the dawn of the electronic era in 1950.

A pupil of Faure and teacher of Poulenc, Koechlin produced on opus of over 220 works, largely unpublished and unperformed today. In addition to composing music in every genre he was also a distinguished music critic, aesthetic journalist, theorist, and teacher.

Koechlin was a close friend and biographer for Satie and Debussy and taught such other composers as Milhaud and Cole Porter.

Sharon, a native of Israel, was educated at Boston University, the University of Texas, and the Royal Conservatory of Mons, Belgium. He also taught at Duke. He has concertized and lectured widely throughout the United States, Britain, and Belgium.

World cities on film

"Cities of the World" will be the featured program at tomorrow night's (Thursday, Oct. 21) showing of the International Center's Other Cultures film series, beginning at 7:30 p.m. at the I-Center.

Greek actress Melina Mercouri narrates "Melina Mercouri's Athens." The film is a moving picture-post card of the beauty and chaos of the city of Athens, spiced with Mercouri's comments about modern social problems in the ancient city.

"Peter Ustinov's Leningrad" features the British actor and author narrating the story of the city of Peter, the city of Lenin and the birthplace of the Russian revolution.

The Other Cultures film series is an ongoing program which shows informative and entertaining films about all parts of the globe. Admission to the films is free, however a 75 cent donation is requested at the door.

William Eddelman to speak on scene design for Brecht

The first lecture in the Drama Department's drama forum series will be "Contemporary Brechtian Design: Productions in East and West Germany," by William S. Eddelman at 4:30 p.m. Thursday, Oct. 28 in the Forum Room of Meyer Library.

Eddelman is a scenic designer and theater historian. Admission is free.

The lecture is given in connection with the Drama Department's upcoming production of Bertolt Brecht's *The Good Soul of Setzuan*; performing Nov. 9-13 in Little Theater.

Eddelman, a member of the Drama Department faculty at Stanford, is a scenic designer and theater historian. He has been a participant in the Warsaw International Scenographic Congress, and a recipient of a Fulbright Award for a study on 17th and 18th century Italian scenography.

He has travelled extensively in Europe investigating aspects of theater design and experiments in theatrical spatial arrangements. His lecture will include a slide presentation featuring outstanding examples of experimental and innovative scenic design collected during his 1978-79 stay in East and West Germany, and will compare the contemporary trends in Brechtian productions with the earlier classic work of the Berliner Ensemble in the 1950s and 1960s.

Eddelman is a prolific and prizewinning designer for theaters throughout the Bay Area. He received the Bay Area Critics Award in 1981 for his set for *Three Acts of Recognition* at the Julian Theatre in San Francisco. Other local credits include designs for the Berkeley Stage Company, the Magic Theatre in San Francisco, West Bay Opera and Scholar Opera on the Peninsula.

Eddelman has designed the setting for *The Good Soul of Setzuan* using a textured fabric collage of bamboo, burlap, erosion netting and other natural materials to create a drab, colorless environment of a Chinese industrial city. His study of German productions has been an influence on his designs.

Free bubbly at Tresidder Monday

Tresidder Union Catering wants the faculty and staff to come over for champagne and canapes (on the house) from 4-6:30 p.m. Monday, Oct. 25, in Room 281.

The open house will help celebrate the new academic year, and at the same time give faculty and staff an opportunity to sample the kinds of goodies that are available all year long for department functions.

So, Catering suggests, forego the rush hour traffic and come to Tresidder for good food and drink *and* good company.

Do your laps at SCRA

Stanford Campus Recreation Association, 875 Bowdoin, plans to offer a five-month winter lap swim from Nov. 1 to the end of March 1983.

Daily swim hours are anytime between 7 a.m. and dusk. There is a fee.

Members of the Stanford community may call 857-0414 for more information.



Beverly Hoch



Daniel Phillips

Varied program of voice, violin by three young artists this Sunday

Soprano Beverly Hoch and violinist Daniel Phillips will be presented by the Lively Arts at Stanford at 2:30 p.m., Sunday, Oct. 24, in Dinkelspiel Auditorium. They will be accompanied by pianist Margo Garrett.

The program will include: Handel's "Meine Seele hoert," "Venere Bella" from "Guillio Cesare"; Bach's "Sonata in C minor, S. 1001 for the unaccompanied violin"; Biggs' "Soliloqui" from "Planet Earth"; and Bellini's "Come per me sereno" from "La Sonnambula."

Also Ravel's "Tzigane"; Alabiev's "The Russian Nightingale"; Rachmaninoff-Kreisler's "O Cease Thy Singing" and two pieces by Kreisler, "Caprice Viennois" and "Tambourin Chinois."

In addition, the following pieces, by Brahms will be sung: "Geheimnis," "Standchen," "Es traumte mir," "Das Madchen Spricht," and "Meine Liebe ist grun."

Hoch made her Carnegie Hall debut with Pinchas Zukerman and the Saint Paul Chamber Orchestra in three appearances at the Bartok/Schubert Festival in June 1981. She has also appeared with Zukerman and the Saint Paul Orchestra at the Kennedy Center.

In September, 1982, Hoch was a featured guest artist at the Chamber Music Society of Lincoln Center's Haydn/Stravinsky Festival.

Daniel Phillips, violin, was the winner of the prestigious Michaels Award of Young Concert Artists in 1978. He is recognized as one of the extraordinary violinists of his generation.

Phillips has appeared with many orchestras throughout the United States, including Pittsburgh, Hartford, St. Louis, the Florida West Coast and the Yakima Symphonies, and the Boston Philharmonic.

For more information about the Hoch/Phillips recital, call Tresidder Ticket Office, 497-4317.

Latest Miller film benefits ski team

While much of the Stanford campus reluctantly approaches winter, the Stanford Ski Team is eagerly fundraising for the upcoming racing session with the Warren Miller ski film, "Snowonder."

The 90-minute film, to be shown at 8 p.m. Saturday, Oct. 23 in Memorial Auditorium, is Miller's newest, and reputedly his "greatest." Ski bums will recognize his name, synonymous in the ski world with daredevil stunts, flashy freestyle footage, and generous coverage of remote, yet glamorous ski resorts.

"Snowonder" features fresh photos from the Squaw Valley 1982 speed trials, cross-country skiing in Yosemite, and Portillo, Chile—the course where Jean-Claude Killy won the 1966 World Alpine Championships with an average speed of 74 miles per hour.

The film recaptures the familiar gaiety of the annual Steamboat Springs, Colorado, Carnival and the luster of Sun Valley, Idaho.

For pros and novices alike, the movie is an enjoyable way to support a Stanford club sport. The 50-member, non-profit team competes winter quarter against teams from Northern California and Nevada in the National Collegiate Ski Association.

Tickets are $5 in advance and $6 at the door. General admission tickets for Stanford students are $4 in advance and $6 at the door. They are available at Oshman's Sporting Goods store on University Avenue in Palo Alto, and in White Plaza from 10 a.m. to 3 p.m. Mon.-Fri.

Help Center offers aid for disabled

"Being Disabled—Learning to Cope," a one-and-a-half-hour seminar presented by Help Center counselor John Preston, Jr., will be given from 12 noon to 1:30 p.m. Thursday, Nov. 11, at the Help Center in Galvez House (use the rear entrance).

Calls to 497-4577 should be made to reserve a place in the workshop before Thursday, Nov. 4.

Preston will speak candidly on what it is like to become disabled at the age of 16 and the strategies he uses to cope.

His discussion will focus on initial reaction, impact on family and friends, sexuality and self-image, and attitudinal and architectural barriers.

Parking is available near Angell Field.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Oct. 20 to cover the events of Mon., Nov. 1 through Sun., Nov. 7.

LATE ANNOUNCEMENTS

Wed., Oct. 20. Latin American Studies Bag Lunch: "The Mexican Economic Crisis of 1982" with Jaime Serra-Puche, vis. prof., Dept. of Economics, and recent adviser to the Secretary of the Treasury, Mexico. Noon. Bolivar House, 582 Alvarado Row.

Thurs., Oct. 21. AIESEC Seminar: "U.S. Business in an International Environment." Exploring questions on the survival and profitability of the country's business in today's integrated economies. Informed speakers from SRI, Stanford GSB, and Bank of America. 1-5 p.m. Rickey's Hyatt House, P.A. Open to all.

Condensed Matter Physics Seminar: "Chaos in Nonlinear Circuits" with Carsen Jeffries, UC-Berkely. Applied Physics 200.

Sun., Oct. 24. The Lively Arts at Stanford: Music by Three. Beverly Hoch, soprano; Daniel Phillips, violin; with Margo Garrett, piano. Works by Mozart, Brahms, Biggs, Bach, Bellini, Kreisler, Rimsky-Korsakov, Alabiev, and Ravel. 2:30 p.m. Dinkelspiel Aud. $7.50, $6.50; students $3 off these prices.

MONDAY, OCTOBER 25

Tresidder Union Catering Service Open House: Featuring free champagne and canapes. 4-6:30 p.m. Tresidder, Room 281. All faculty and staff welcome.

Biological Sciences Dept. Seminar: "Darwin's Botany" with Dr. Robert Ornduff, UC-Berkeley. 4 p.m. Herrin Lab, T-175. Open to the public.

Radioscience Seminars: "Observations of Electron Beams in Space" with Peter Banks, S.U. 4:15 p.m. McCullough Bldg., Room 127.

Numerical Analysis Seminars: "Numerical Methods for Singular Perturbation Problems" with David Brown, Caltech. 4:15 p.m. Math 380C.

English/History Depts. Lecture: "Oscar Wilde and Lord Alfred Douglas" by H. Montgomery Hyde, legal historian and former member of Parliament. 4:15 p.m. Room 51A, Bldg. 50.

Roble Political Action Committee Talk: By Dan Dougherty, Libertarian candidate for governor. 6:30 p.m. Roble Lounge. Open to all.

Stanford Film Society: "Duck Soup" with the Marx Brothers. 7 p.m. Kresge Aud. $1.50.

The Jean and Bill Lane Lecture Series: Grace Paley will read from her work. 8 p.m. Annenberg Aud. Public cordially invited. Further information at the Stanford Writing Program, 497-2637.

TUESDAY, OCTOBER 26

I-Center Tuesday Lecture/Lunch Series: "How the Media Treats World Crises, e.g., the Middle East and the Falklands" by Glenn Frankel, asst. foreign news editor, *Washington Post*. Noon. I-Center. Lunch tickets for $2.50 available the week before. Brown baggers also welcome.

Stanford Museum Art Tours: "The Artist Chooses Paper." A lunch hour tour beginning at 12:15 p.m. Stanford Museum. Open to all. (Tour repeated tomorrow, same details.)

Professional Opportunity Program for Ph.D.'s: "The Curriculum Vitae and Cover Letter." 3:15-5 p.m. CERAS, Room 204. For further information or to arrange an advising session, phone 497-2009.

Fluid Mechanics Seminar: "Numerical Simulation of Two-Dimensional Separated Flow" with Phillippe Spalart, NASA-Ames and S.U. 4:15 p.m. Skilling Aud.

Communications Design Seminar: "An International Data Network" with Enrique Melrose of Intergov. Bureau of Informatics. 4:15 p.m. McCullough Bldg., Room 128.

Roble Political Action Committee Talk: On election and post election problems, by Tom Lantos, Congressional representative from District 11. 4:30 p.m. Roble Lounge. Open to all.

Music Dept. Lecture/Recital: By Boaz Sharon, pianist, visiting from the Univ. of Tulsa. "Rediscovering a unique, forgotten French composer, Charles Koechlin." 8 p.m. Tresidder Lounge. Free.

WEDNESDAY, OCTOBER 27

Ecumenical Ministries Wednesday Lunch Discussion: "Workers' Rights for Men and Women and Corporate Responsibility" by Sydney Brown. Noon. Casa Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata.

Latin American Studies Bag Lunch Series: "Chile from Democracy to Dictatorship: A Writer's Perspective" with Poli Delano, Chilean novelist and regent's lecturer, UC-Irvine. Noon. Bolivar House, 582 Alvarado Row.

Physics Dept. Colloquium: "Laser Spectroscopy in Helium Rydberg States" with Dr. Harald Gerhardt, Free Univ. of Berlin and S.U. 4:15 p.m. Physics Lecture Hall, Room 101.

Electronics in Medicine Seminar: "Spectral Analysis of Doppler Ultrasound" with Dr. Frank Ingle, Medasonics, Inc. 4:15 p.m. McCullough 134.

EE380 Computer Systems Laboratory Seminar: Topic TBA. Tom Rolander, Digital Research, Inc., Pacific Grove, is the speaker. 4:15 p.m. Terman Aud.

THURSDAY, OCTOBER 28

Solid Mechanics Seminar: "Optimum Structural Design in Dynamics Systems" with Prof. Hiroshi Yamakawa, Waseda Univ., Japan. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Deep Level Transient Spectroscopy" with Prof. Max Schulz, Univ. of Erlangen. 4:15 p.m. Applied Physics 200.

Drama Dept. Forum Lecture Series: "Contemporary Brechtian Design: Productions in East and West Germany" by Prof. William S. Eddelman, scenic designer and theater historian. 4:30 p.m. Meyer Library Forum Room. Free. (Given in connection with the upcoming production of Brecht's *The Good Soul of Setzuan*, Nov. 9-13.)

I-Center Other Cultures Film Series: "Amish: A People of Preservation" examines their religious beliefs, sense of community and closeness to nature; and "Spend it All"—the colorful lives, romantic spirit and boistrous folk music of the Cajun people of southwest Louisiana. 7:30 p.m. I-Center. 75 cent donation at the door.

The Friends of Psychiatry & Behavioral Sciences Special Program: "Psychobiology—New Approaches to Mental Illness" by Jack D. Barchas, M.D., Nancy Friend Pritzker professor of psychiatry. Moderator, Thomas A. Gonda, M.D. 8 p.m. Fairchild Aud. Public cordially invited.

FRIDAY, OCTOBER 29

Latin American Studies Bag Lunch Series: "On Translating Infante's *Inferno*" with Asst. Prof. Jill Levine, Dept. of Romance Languages, Tufts Univ. Noon. Bolivar House, 582 Alvarado Row.

Applied Mathematics Lectures: "A stochastic upper bound for the Jackson network" by Dr. William A. Massey, Bell Laboratories, NJ. 3:15 p.m. Room 380C (Math Corner Basement).

Materials Science & Engineering Dept. Colloquium: "Materials for Generator Retaining Rings" with Dr. R. Viswanathan, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Women's Volleyball: Vs. Fullerton. 7:30 p.m. Maples Pavilion.

Music Dept. Concert: Stanford Jazz Band. The Big Band Era. An evening of your favorite melodies from the bands of Count Basie, Duke Ellington, Woody Herman, Les Brown, and Glenn Miller. Jose Bowen, student director. 8 p.m. Dinkelspiel Aud. $4/$2.

STARTS Great Directors Film Series: "La Religieuse" (The Nun) 1965, dir. by Jacques Rivette. Rivette explores the problem of individual liberty in this adaptation of a Diderot novel about the claustrophobia imposed by religious order. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

SATURDAY, OCTOBER 30

Field Hockey: Vs. UOP. 11 a.m. Varsity; 12:30 p.m. Jr. Varsity. Roble Field.

Varsity Football: VS. Univ. of Washington. 1:30 p.m. Stanford Stadium. $12.50 reserved, $7/$5 endzone. Ticket Office, 497-1021.

Chaparral Film Series: "Alien." Space-fiction. "No One Can Hear You Scream." 7 & 9:30 p.m. Kresge Aud. $1.50.

Women's Volleyball: Vs. San Jose State. 7:30 p.m. Maples Pavilion.

The Lively Arts at Stanford: "The Golden Age of Jazz." Ellington, Goodman, and other favorites presented by The Newport Jazz Festival All-Stars. Jazz impresario/pianist with Slam Stewart, bass; Ruby Braff, cornet; Oliver Jackson, drums; Phil Bodner, saxophone; and Eddie Hubbel, trombone. 8 p.m. Memorial Aud. $10.50, $9.50, $8.50, $7.50 general; students $3 off these prices.

SUNDAY, OCTOBER 31

University Public Worship: Student Worship Service, 8:30 p.m.; Canon Bryan Green, England, 11 a.m.; Catholic Mass, 4:30 p.m.; Evening Communion in Memorial Church Round Room, 6 p.m.

Varsity Soccer: Vs. USF. 11 a.m. Maloney Field.

Committee for Art Lecture: "Animals in Ancient Art from the Leo Mildenberg Collection" by Prof. Emeritus Antony Raubitschek, Classics Dept. A slide presentation. 3 p.m. Annenberg Aud. Public cordially invited.

ASSU Sunday Flicks: "Poltergeist." It knows what scares you. 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

The Map as Landscape. Familiar and new aspects of Western landscapes by Donna Van Dijk. Bechtel International Center. Month of October.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Thirty Miles from Stanford. Photographs by Paul Berger. Tresidder 2nd floor gallery. Month of October.

Paintings on Canvas by David Cusic. Coffee House Gallery. Month of October.

Photographs by Marianne Skogh. Gold Lounge, both entries, and other locations. Stanford Faculty Club.

Grace Paley to open Lane lecture series

As the first of three readings in the 1981-82 Jean and Bill Lane Lecture Series, author Grace Paley will read from her work at 8 p.m., Monday, Oct. 25, in Annenberg Auditorium.

Paley has long been recognized for her sophisticated and compassionate wit. Her short stories, which first appeared in *Atlantic*, *Esquire*, *Fiction* and the *New American Review* have been collected into two volumes: *The Little Disturbances of Man* (1959), and *Enormous Changes at the Last Minute* (1975).

Her stories, set most often in New York, have been said to "capture the itch of the city, love between parents and children, the cutting edge of combat."

Paley has taught at Columbia University, Syracuse University and Sarah Lawrence College. Her awards for writing including grants from the Guggenheim Foundation (1960), the National Endowment for the Arts (1966) and the National Institute of Arts and Letters (1970).

The Lane Lecture Series, sponsored by the Creative Writing Program, will host two other lectures during the year: Wallace Stegner in February, and E. L. Doctorow in April. For further information, call the Stanford writing Program at 497-2637.

Siguan to discuss bilingual education

"Bilingualism and Bilingual Education in Spain" is the topic of a talk by Prof. Miguel Siguan at 12 noon Friday, Oct. 22, in Cubberley 334.

Siguan is associated with the Institute of Sciences of Education, University of Barcelona. The session is sponsored by the Stanford Second Language Association.

CAMPUS REPORT

Volume XV, Number 6 | A publication for Stanford University faculty & staff | October 27, 1982

Slow research growth leads to belt-tightening

Stanford faces a new four-year belt-tightening effort due mainly to slower than expected growth in research volume.

Provost Albert Hastorf says the University will have to take "extraordinary measures" to offset a projected $3 million shortfall in the current year and to restore balance to the Operating Budget by 1985.

Anticipating some of the present problems, the University last spring trimmed one percent of its budget base for the current 1982-83 fiscal year. But now the problem "clearly exceeds our ability to correct it quickly or with a small number of measures," Hastorf told a joint meeting of the Administrative Council and Dean's Council Oct. 20.

Speaking at the same meeting, Budget Director Raymond F. Bacchetti suggested the projected 1982-83 deficit would be eased somewhat through a targeted $1 million in "expenditure holdbacks," deliberate underspending by University departments this year. Decisions already made will reduce the University's facilities reserve, which helps fund renovations, remodeling, and construction of some new buildings.

Budget cuts will "likely bear the largest burden in the long-term strategy for rebalancing the operating budget," Bacchetti told the vice-presidents and deans. A one percent cutback previously targeted only for 1983-84 will need to be increased, and extended into 1984-85 and 1985-86," he added.

Stanford's operating budget currently totals $207 million.

Since the late 1960s, through the early identification of changes in its fiscal outlook and open discussion of remedial actions, Stanford has gained the time and consensus needed to make appropriate adjustments with minimum disruption of its basic academic programs. In the early 1970s, it made adjustments totaling $16 million in its operating budget, which has been in balance since 1977.

In the budget as proved in March 1982, Stanford projections assumed research volume would grow around eight percent annually. A year earlier, the growth estimate was 11 percent. Both figures

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Health care cost limits hurt teaching hospitals—Kennedy

Federal attempts to limit health care cost reimbursement are having "disastrous consequences" on the nation's major teaching hospitals, Stanford University President Donald Kennedy warned Friday, Oct. 22, in Cambridge, Mass.

He spoke at ceremonies marking the 50th anniversary of the Harvard Biological Laboratories, where he studied as a student. *(See text, page 14.)*

"If government paid the full cost of care for Medicare and Medicaid patients, it would be possible to reduce overall patient charges by 14 percent tomorrow" at Stanford University Hospital, he declared.

"We are now rapidly returning to a two-tiered system, one for privately-supported and one for publicly supported patients. It will not take much of this to end the notion of health care democracy in this country. Nor will it take much of it to put the teaching hospitals out of business and to make enormously more difficult the doing of biomedical research. . . .

"The total financial threat to research activity now looks larger from this source than from all others combined."

Former commissioner of the Food and Drug Administration, Kennedy was a national leader in opposing small business "set-asides" from research funding adopted by Congress this year. He and several major university presidents have strongly opposed proposals to cut indirect cost reimbursement by the National Institutes of Health by 10 percent across-the-board.

Federal limitation on health care cost reimbursement "shifts the burden of caring for the medically indigent from society as a whole—that is, the taxpayers—to those. . .who happen to be sick and their insurers.

"It is a scheme so bizarre that it is hard to believe that it could have been invented by a civilized nation," he said.

While competitive contracting for hospital care has a "certain appealing, free-enterprise" ring to it, he added, "in any straightforward price competition, the routine—and, it turns out, profitable—business will go away from the academic health centers to county hospitals or even to proprietary institutions. . . .

"A number of recent studies—notably one at Johns Hopkins—have shown clearly that the added costs associated with health

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Kennedy urges self-regulation of scientists

Unless scholars become more outspoken in regulating their own activities, the public may soon view "scientific objectivity" with the same skepticism attached to such terms as "express mail" or "easy credit," Stanford University President Donald Kennedy warned Wednesday, Oct. 20, at Yale University in New Haven, Conn.

A biologist who formerly was chairman of the Food and Drug Administration, Kennedy criticized the "appalling lack of restraint" by "some biomedical scientists" in responding to commercial opportunities based on their research.

Without naming individuals or institutions, Kennedy said that the following incidents have occurred "at major universities within the past three years:"

1) University facilities have housed "the back-contracted spillover from an outside commercial venutre;"

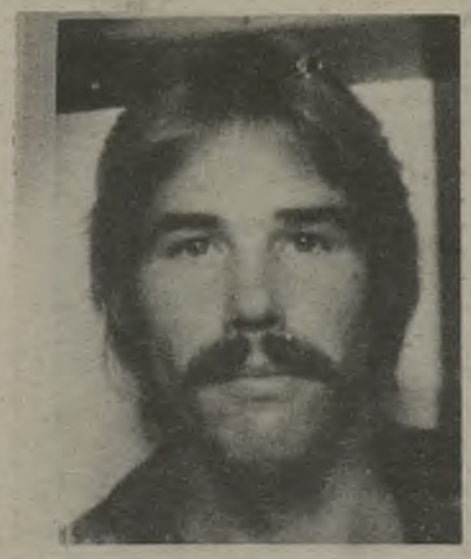
2) A university position and laboratory "have been used to promote corporate commercial claims for a new venture;" and

3) There has been "coercive inducement of graduate students to 'join in' on an outside operation."

"Surprisingly, there has been little criticism of the researchers involved from within the scientific community," Kennedy said. "I find that shocking, given the willingness of scientists to engage in

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San Jose deliveryman sought with no bail murder warrant



Donald John Amos

Santa Clara County Municipal Court Judge Miriam Wolfe Tuesday, Oct. 26, issued a no-bail murder warrant for the arrest of Donald John Amos, 29, wanted in the killing of Stanford student Angela Dee Arvidson on campus Friday, Oct. 22, Stanford University has offered a $10,000 reward for information leading to the arrest and conviction of her killer.

Santa Clara County Sheriff Robert Winter Monday described Amos as a male Caucasian, six feet three, 210 pounds, with dirty blond hair, and green eyes.

He is believed to be with his wife, Gwendolyn, and three children, ranging from infancy to age four.

Winter described Amos' car as a 1976 Mercury Monarch coupe with a dark blue top, a lighter body color, California license 304 NEO with a missing grill and missing front license plate. The left tail

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Admiral and Mrs. James Stockdale with the new bust

Bronze bust of Stockdale presented

Secretary of the Navy John F. Lehman, Jr., participated in the presentation of a Felix de Weldon bronze bust of Senior Research Fellow James Bond Stockdale to the Hoover Institution, Friday, Oct. 22.

De Weldon, a prolific sculptor known particularly for his large heroic figures such as the Iwo Jima Memorial in Washington, has produced works of art for many countries throughout the world over the past 40 years.

Stockdale posed for the bust in the sculptor's Newport, Rhode Island studio in 1979.

At the Hoover Institution, Stockdale is co-authoring a book of memoirs of the 10-year Vietnam era with his wife Sybil, founder of the National League of Families of American Prisoners and Missing in Southeast Asia.

He is also writing monographs on leadership, terrorism, and modern history. He will teach Stanford undergraduate seminars in the winter and spring quarters of the 1982-83 academic year.

People

Patricia Brandt has been selected as the new director of Escondido Village and assistant dean of students and will begin her appointment on January 3, 1983.

Escondido Village consists of approximately 1,300 apartments housing more than 3,000 graduate students, spouses, and children. The community is international in character, with about 40 percent of the residents from foreign countries.

As director of the Village, Brandt will supervise residence programming and housing assignments and will act as a liaison with various other offices, including the Bechtel International Center, Counseling and Psychological Services, and Escondido Village Maintenance.

Working closely with the Office of Residential Education, she will be responsible for developing and implementing housing policies affecting the Village and for communicating these policies to residents. She will also be responsible for the development of programs which support and enhance the quality of life in the Village.

For the past four years, she has worked in the Office of Student Activities. As assistant dean of student affairs and assistant director of the Office of Student Activities, Brandt was responsible for the general health of the more than 250 registered student organizations, the hiring and supervision of staff, budgets, policy formulation, funding and space review, and the Student Directory.

Responding to the needs of students, she has also presented several panel discussions for graduate students, served as chair for the Committee on the Status of Graduate Women and for the Dean of Student Affairs Committee on Women's Affairs, and worked with the Rape Education Project, which sponsored Working Against Rape Week last fall.

The Exploratorium in San Francisco will honor **Prof. Carl Djerassi**, chemistry, at the Sixth Annual Awards Dinner, to be hosted at the museum at 7:30 p.m., Monday, November 15.

The tribute to Djerassi is in recognition of his groundbreaking scientific research in the fields of organic chemistry, pharmacology and medicine. He is best known for his contributions to the development of oral contraceptives, antibiotics, antihistamines and steroidal anti-inflammatory agents and biorational pest control.

Guest speaker at the Awards Dinner will be Dr. Lewis Thomas, chancellor of the Memorial Sloan-Kettering Cancer Center and the noted author of best sellers, *The Lives of a Cell* and *The Medusa and the Snail*. His topic will be "Medicine: the Youngest Science."

For information on attending, call 563-7337.

Sequoia Travel Center at Tresidder Union announces the appointment of **Jane D. Barrett** as director of marketing.

Barrett comes to Sequoia with 26 years experience in the travel industry. Her background includes airlines sales and ticketing, tours and group travel, in addition to management and marketing.

Stanford offers $10,000 reward in search for killer

continued from page 1

light is clear plastic, painted red.

Lt. Ron Conway of the Sheriff's Department said Tuesday, Oct. 26, "numerous phone calls" have been received since news media were informed Amos was wanted for questioning in the case. "We're fairly certain his family is with him," Conway said. "As far as we know, he acted independently."

Individuals with information should call the Sheriff's Department at (408) 299-2211 (days) or 299-2622 (nights).

Funeral services for Arvidson are planned at 1 p.m. Thursday, Oct. 28, at St. Andrews Presbyterian Church, 3228 S.W. Sunset Blvd. in Portland with Charles Brown and John Nastari officiating. Her close friend, Stanford student Danny Child, will play piano.

The killing occurred at the residence of Prof. and Mrs. Laurence Kedes at 856 Allardice Way, where Arvidson did housecleaning work.

Winter said he had no reason to think Amos knew the victim.

Winter said: "Amos had reason to be there. He is a delivery man." The sheriff did not disclose the company for which Amos works. Stanford Police Chief Marvin Herrington said that so far as Stanford police know, "he had not been there before." Winter said the killing "appears to be a crime of violence with possible sexual assault." The coroner's office reported Saturday that an autopsy showed no obvious evidence of sexual assault. "We're clearing that up," Winter said.

"The evidence includes clothing with possible blood stains. We don't have a weapon yet." Winter said he was sure Amos' wife knows her husband is wanted, but may not be aware of the magnitude of the case.

Arvidson, a junior in humanities special programs, was last seen alive when Mrs. Kedes went shopping at 2:15 p.m. Her son, Todd, 16, discovered the body an hour later when he returned home from school.

Stanford Chief Herrington said there was no evidence of forced entry and nothing appeared to have been taken from the home. Police immediately cordoned off the area and searched for the weapon, but found none.

The Santa Clara County Coroner's Office said an autopsy Saturday showed Arvidson had cut wounds of the neck and stab wounds in her chest and abdomen.

Herrington said Saturday police were conducting an extensive check of service workers—telephone installers, gardeners, roofers, and others who might have been in the area.

Police also checked license plate information on 50 to 75 cars parked in surrounding streets when the homicide was reported. They also interviewed Arvidson's wide range of acquaintances, he said.



Angela Arvidson

Saturday afternoon, Herrington gave a detailed, private review of the case to the victim's parents at their request. The group included her father, Donald Arvidson, her mother, Mrs. Marlene Torrey, and her step-father, Michael Torrey, all of Portland, Oregon. Her brother, Randall, a Stanford senior in economics and varsity golfer, joined several close friends, University officials, and faculty at the campus home of Student Affairs Dean James Lyons late Saturday afternoon.

Lyons said "students were shocked when they heard about the killing" late Friday. "She had a lot of close friends."

Carol Burmaster, who had shared a College Terrace house with Arvidson since September, described her as "sweet, intelligent, and hardworking." Besides housecleaning, she worked at the Tresidder coffee house to help pay her way through college. She wanted to become a speech therapist.

A 1980 graduate of Woodrow Wilson High School in Portland, she played piano, violin, and viola and compiled "an absolutely . outstanding record of achievement" there, Lyons said.

Other survivors, all from Portland, include two grandmothers, Mrs. Mildred Arvidson and Mrs. Audrey Perkins; a half-brother, Anthony Arvidson; a step-sister, Monica Torrey; and a step-brother, Scott Torrey.

No memorial service is planned at Stanford, but a fund has been established in her name. Contributions may be sent to Angela Dee Arvidson memorial fund, 301 Encina Hall, Stanford, Calif. 94305.

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How to train your intuition so as to make your decisions much sounder

BY DONALD STOKES

The best way to make major decisions is to train your intuition.

So says David M. Kreps, professor of decision sciences at Stanford's Graduate School of Business.

Actually, Kreps would prefer to be known—only half jokingly—as professor of decision arts and crafts. "There is no discipline of decision sciences," he says. "No science is involved in what I teach.

"What I think decision sciences is good for, what modeling in general is good for, is trying to understand little bits and pieces of a very complex situation, actually a complex mosaic.

"You use a model to study a little bit here, another model to study a little bit there, and it's like mental gymnastics. You figure out how this piece works, and where that piece fits in, but then you have to put all the pieces together, and you do that intuitively.

"It is both an art and a craft to know which pieces you should isolate and think about, and then how to put the pieces back together."

Kreps shows his students how this can be done.

Although he is only 32, Kreps is an outstanding scholar in the area of individual choice behavior. He has written works that establish him as an eminent mathematical economist. His path-breaking research probes the foundations of dynamic optimization theory, axiomatic dynamic choice theory, and choice theory in the context of sequential markets.

These sound formidable, but Kreps breaks the art (or craft) of decision-making into four steps.

"The first thing to do when you have a decision to make," says Kreps, "is to try to get a picture of what strategic options you have, and what are each of their possible consequences. Often the act of simply enumerating your options will allow you to discover very attractive options that you hadn't originally thought of.

"The next step is to look at the sources of uncertainty, the things you don't know about, and try to qu ntify how likely the various eventualities are. The.e is a lot of technique involved in trying to get probabilistic, quantitative statements about respective likelihoods.

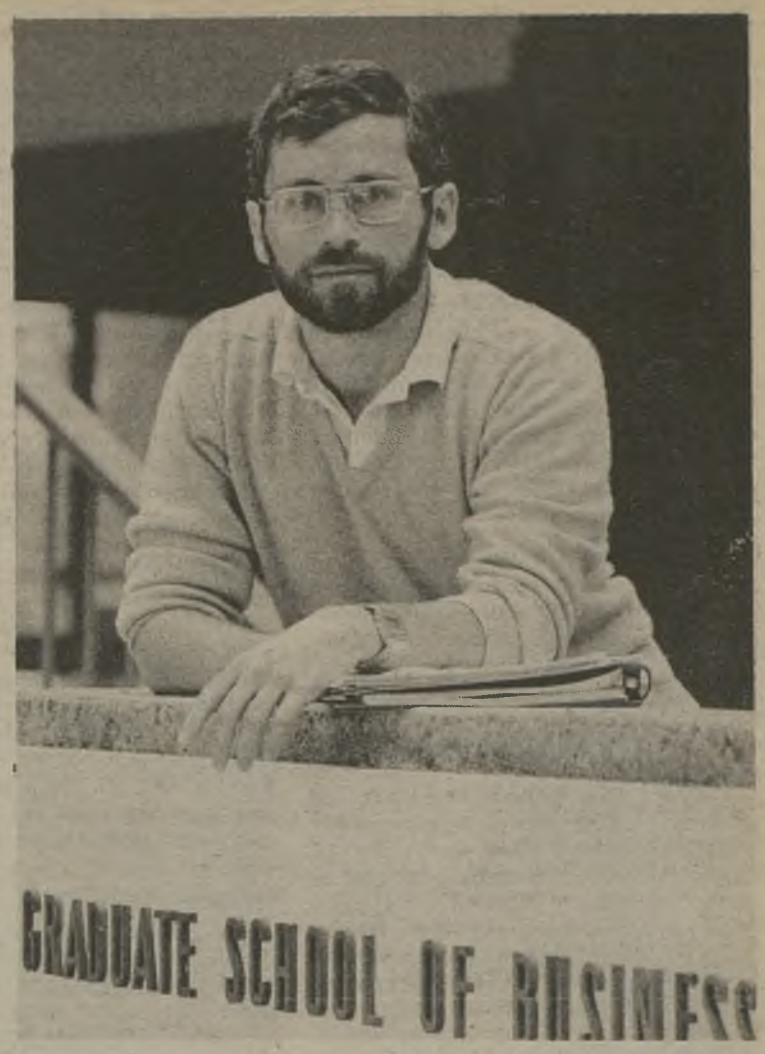
"The third step is to try to get some feel for how you view the various consequences. It is not enough to judge them separately—you should rate them roughly in the relative ways you feel about each consequence and its relation to the others. In other words 'A would be preferable to B because. . . .' This step includes the quantification of how you feel about the risks involved.

"The fourth step is a mechanical procedure—take the judgments you made in the first three steps and put them together to get the 'answer.' And then comes the fifth and hardest step—reexamine all the judgments that you made, to see why you got the 'answer' that you did. Ask yourself what important factors have you omitted or glossed over. In other words, try to reconcile what you have put down on paper with reality."

Research in this area is roughly of two types—research into the way that people should act (the normative), and research into the way that they do act and interact (the descriptive).

"Both normative and descriptive research is used as part of the decision-making process. How you carry out the first four steps—the procedures you employ, and the framework that you use—is guided by normative theory. What judgments you make, especially in the second and third steps, is influenced by descriptive theory.

For example, if you are trying to decide how likely it is that another individual will do A or B, theory that tells you how people act and interact will give you some guidance.



Although there are certain types of mistakes that tend to be made, the main function of a model is to try to engage your intuition, so that you can make better intuitive judgments.

—David M. Kreps

What sort of mistakes are typically made by presidents or managers, in the absence of using decision science?

"Often it is easy to build a model of a particular decision, to analyze it and come up with a different answer to that which had been reached by a political or managerial process. That doesn't necessarily mean that a wrong decision was made.

"The models we are capable of building for decision-making never do justice to reality, which is always much more complex, involving so many factors it had not been possible to build into the model.

"Therefore, although there are certain types of mistakes that tend to be made, the main function of a model is to try to engage your intuition, so that you can make better intuitive judgments."

Kreps finds that first-year MBAs, when confronted with these ideas, tend to fall into three camps. "For one group, analytic techniques never become quite clear. Students will learn the rudimentary mechanics, but the idea behind their application never makes sense. These students will depart the course more or less unaffected."

This is not necessarily a bad thing, Kreps believes, as some people are naturally intuitive and using analysis to sharpen their intuition dulls it instead.

"The second group consists of those who become enraptured by the techniques," says Kreps. "They leave the course as zealots; when they have to make a decision, they follow the procedure through the fourth step and then completely abdicate all responsibility for the decision; they simply do whatever the model tells them to. Happily, we don't get too many of those.

"The third group consists of those who construct the model, observe what it says, and consider how it varies from their own gut feeling. They try to figure out why the model comes up with its own particular decision.

"These sort of people—Lord love 'em!—realize that if model and intuition vary, then intuition is more likely to be right. They take a sharper look at the model and see if the results can be sharpened so that the model becomes more intuitive.

"Once you get a good feel for what you can model and what you can't, you don't trust models very far. Instead, you use them to help build and sharpen your intuition."

As an example, Kreps told of a study which had been made into the possibility of a major disaster in nuclear power plants.

"The chances of being able to predict the possibility of such a disaster hinge on whether you can specify all of the various ways in which such a disaster might occur. Clearly this is not practical. Who could have factored in, beforehand, the sequence of events that triggered Three Mile Island?

"So what do you do? You learn from the analysis. The model will tell you much about the various types of accidents, how to build in more safety and reliability. But it cannot put in everything, so that in the end you will have to rely to some extent on your intuition."

Was the result of Kreps' methods a strengthening of a student's intuition?

"That is the whole point of what we are trying to do. You cannot build a model that gives all the necessary information. What you can do is to put in all the information that you do have, and then hone your intuition on that, without losing track of the things you can't quantify."

Kreps said that the worst applications of analysis were those when a person put in all the available information, and understood each little piece, but had no feel about how they fitted together nor why the model produced the answer it did; nevertheless the person would go along with the conclusion of the model.

"The model might be terribly flawed," Kreps pointed out. "Unless you can understand why the model says what it does, and how it relates to the larger picture, you should not pay any attention to it."

Intuition is often thought of as a capability found usually in women. Does this mean that women are able to make better judgments than men?

"That's easy to duck. If it were true, it would still be hard to verify, and it wouldn't matter," Kreps said. "The variation in intuitive and judgmental skills within a gender would completely overwhelm any average differences between genders.

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Four-year belt-tightening effort follows slower growth of research volume

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were tied to expected inflation rates.

Reflecting changes in Washington, actual research volume has turned flat, especially in nonmedical areas. "We're not talking about drastic research cuts. The problem is that we're not keeping up with inflation," Vice-Provost Gerald Lieberman, dean of graduate studies and research, said in an interview.

While medical and defense-related research funding has been fairly strong, such agencies as the Department of Energy and the Environmental Protection Agency have not fared as well. Stanford has been particularly hard hit in psychology, economics, and other social sciences, Lieberman says.

Lower research volume

Lower than projected research volume left Stanford $3.75 million short of expected income from indirect cost reimbursements during 1981-82. These indirect costs, such as administering research, and sharing in fixed costs are reimbursed as part of the total cost of performing research.

Lower than expected growth in research volume does not immediately become apparent in these overhead costs, Lieberman noted. "Certain costs, such as energy, have risen faster than inflation. Small reductions in research do not free up lots of building space, and space needs are a very large component" of indirect costs.

"Some costs may be declining, but overall our costs are still up," he added. This phenomenon needs further study to be better understood.

Recently revised projections of research volume show $6 million less will be recovered in indirect costs than was previously expected in the current year 1982-83. The "outlook for 1983-84 is even grimmer," Hastorf said. About half the shortfall, or $3 million, affects the operating budget.

Although smaller-than-expected research volume is the major cause of Stanford's financial problems, the University also is affected by the high cost of living in the San Francisco Bay Area and "relentless" utility rate hikes, Bacchetti said in an interview.

The increase in utilities next year will be approximately double the inflation rate. "We would have had difficulties even without the research problem, and the evidence is the previously planned one percent cut this year," he said.

Discussion at the joint meeting of the Administration and Dean's councils was the first of several meetings that will be devoted to the budget. The issue was again discussed by the Dean's Council Monday, Oct. 25. The Faculty Senate will hear a presentation by Hastorf on the long-range financial forecast Thursday, Nov. 11.

Budget adjustments

"It's clear we have to begin the examination of what we can do without," Bacchetti said. "We want people to think about Stanford's welfare and what's optimum for the institution by reviewing their own areas and looking at the services they receive from others. We don't want finger pointing, but we do want a solid, critical look at what we can eliminate or reduce. People will need to think hard about what's really most important for us all."

"Budget adjustments at Stanford run in cycles close to 10 years apart," Lieberman said. "We came out of the previous two in good shape, and there's no reason to assume it will be any different this time."

Alternatives outlined

According to Bacchetti, the Budget Adjustment and Budget Equilibrium programs of 1969-77 left the University "repositioned in ways that were financially more sound. That's probably one reason we have had six years of balanced budgets since." A key element of that repositioning was decreasing the amount of endowment being spent from more than six percent to slightly under five percent.

"That doesn't sound like much, but it compounds to a lot of money. We realized then that we were spending the endowment at a rate that favored the present at the expense of the future," Bacchetti explained.

Many factors will be considered during the next several months as strategies are developed to reduce and eliminate forecast deficits:

* Budget cuts. These will probably be the cornerstone of the budget balancing effort. Identification of alternatives for 1983-84 and 1984-85 will begin in November. Each percent of reductions produces $1.5 to $2.0 million.

* Restricted funds cost-sharing. Stanford is unusual among comparable universities in not requiring restricted gifts to bear a share of the administrative and facility costs associated with the principal objectives of gift expenditures. A change of 10 percent could produce $1.7 million toward closing the budget gap.

* Program and service growth. Stanford's financial philosophy calls for providing a fraction of each year's increment for funding new ideas and new needs. Substantial cutbacks from the 1.5 percent of the base normally provided would, many believe, impair institutional vitality. Each half percent reduction would save $800,000, and some reductions will be considered.

* Facilities. Building projects not funded through restricted gifts must be funded by the facilities reserve, which is entirely funded by money transferred from the operating budget annually and by additional funds when there is income beyond budget requirements. Current projections call for a reduction of 30 percent in the size of that reserve over the next three years. This will require substantial cutbacks in planned projects.

* Other major income and expense factors. A few major items exert the predominant influence on the operating budget. Among these are tuition income, salary expense, and indirect cost recovery. Each of these as well as other items will be carefully examined to determine and compare the consequences of changes in these factors relative to present forecasts.

—Karen Bartholomew

David Kreps...

continued from page 3

But there is an important point to be made here—intuitive skills should not be denigrated; they are very important to good decision-making. Probably we overvalue and overemphasize the hardheaded, so-called 'masculine' model of decision-making."

When asked to say what defined decision sciences, Kreps hemmed and hawed. "I guess I don't think of decision sciences as a legitimate field," he said finally. "Fields are defined either by a particular paradigmatic approach to a set of questions, or by a set of questions that are contextually related.

"Decision sciences is instead a meeting-point for several methodologies-economics, applied mathematics, industrial engineering, and so on, and a number of application areas in management—production, strategic planning, etc.

"From economics we get some feel for how individuals interact in markets. From applied mathematics we draw means of quantifying uncertainties, using probability theory, and means for solving large but simple problems. On occasions we draw from psychology and sociology, although this doesn't happen nearly enough.

"Decision sciences takes these sciences, and tries to apply them in particular contexts. Inside the decision sciences group you find almost anarchy—people held together by the courses they teach, rather than by any single world view. It is a great place for an intellectual dilettante like myself.!"

The course Kreps teaches in the fall is called "Decision Making Under Uncertainty." In the winter he will teach "Analysis of Productive Systems," Each is a core course, which all first-year MBAs are required to take.

He will also teach an elective course called "Competitive Strategy." Kreps' dilettantish mind is shown by the notice he has fixed to his door concerning this course. One paragraph reads: "You should be forewarned that my motivation for teaching this course. . .is that I would like to learn this material better, and the most effective way for me to learn it is to teach it."

The topics that Kreps tells students he will explore in the course sound like notes for a novel on modern business. They include Implicit Collusion; Signaling and Bluffing; Biological Competition. . . .

Biological Competition? Does this mean competition between various types of people?

"In a manner of speaking. The term is supposed to connote the sort of competition you see between biological species, where one type competes until all opportunities for expansion are exhausted. This will typically be competition far more intense than competition between profit-maximizing firms."

The meaning of "collusion" as used in his list of aspects to be discussed, is implicit collusion where the firms in an industry compete in restrained fashion.

"There are many ways in which such collusion can be attained. You can have peaceful coexistence because each firm is capable of making life miserable for the others, or because the firms cede to one another fairly impregnable fiefdoms.

"Each way of maintaining the implicitly collusive scheme has its strengths and weaknesses, and we try to see what those are in the cases of particular industries."

Signalling and Bluffing? "Corporations send signals all the time about their objectives and capabilities. How do you read these signals, and how should you send them?

"For example, Pratt and Whitney recently sent a very strong signal about their technical capabilities in the form of a guarantee they offered on one of their engines.

"Was that signal 'honest,' or was it a bluff. . .an action which would only pay off if it induced a particular response from their competitor, Rolls Royce?"

Reminded of his posted notice that he was giving one course in order to learn more about the subject, Kreps was asked whether the best teachers are those who try to learn along with their students.

"In any academic discipline the teacher should be growing all the time," said Kreps. "Not only that, he or she should keep changing the field of inquiry, even if only slightly, because if ever you stop, if your mind is not learning something new, it is not working.

"One way to keep your brain engaged is to keep changing what you teach, and how you teach it."

What is his recipe for successful teaching in the MBA program?

"You have to put a great deal of work and research into a course, but at the same time try for a relaxed feeling among the class. A teacher should not make the learning process too confrontational.

"But this generalization is probably incorrect. In the Business School, effective teachers range from those who are friends of their students—and I think I come in that category—to what you might call the Prussian drill sergeants.

"We have some very good, and very effective, teachers here who are Prussian drill sergeants. They make it clear at the outset that they won't stand any nonsense, that they are in charge and things will be done their way, or else. If anybody gets out of line they will be stepped on. Very often the students accept this and enjoy it.

"The lesson is that if a particular method works for a teacher, then that is the one to use."

Kreps is the son of a professor and was reared in New Jersey. Very early on he was drawn to math, and was greatly helped from the age of 15 on by the summer camps which the National Science Foundation used to run for high school students interested in math.

"We did easy number theory, and some basic abstract algebra. The idea was to expose us to real mathematics. In high school one never really gets a feel for how math really works."

After three semesters at Wesleyan, Kreps transferred to Dartmouth, which became one of the great loves of his life ("I still love it") and from there to Stanford, where he gained his M.A. and doctorate. He did operations research at the School of Engineering Research, and in 1975 became an assistant professor of decision sciences.

He spent a year at the University of Cambridge, and managed to see much of Europe before coming back to Stanford in 1979 as associate professor. The following year he was made a full professor, with tenure.

He was still under 30.

Brody, Lipset differ sharply in their election forecasts

Two Stanford political scientists offer sharply diverging forecasts for the November Congressional elections.

Using a computer model and challenging most prognosticators, Prof. Richard Brody says the Republicans probably will lose less than 20 seats in the House of Representatives and will maintain a majority in the Senate.

His reason, in brief: public approval of President Reagan's performance dropped only five percent between November, 1981 and last March, when most candidates decided whether they would run.

It's the change in ratings, not their absolute level, that counts, Brody says. His conclusion is based on analysis of past mid-term elections since 1945.

Paradoxically, "beginning with the lowest level of approval of any president may turn out to work for the advantage of Reagan and the Republicans in Congress," he says. "The 1982 elections are not likely to be the ringing repudiation of Ronald Reagan that some observers would lead us to expect."

Prof. Seymour Martin Lipset, senior fellow at the Hoover Institution and president of the American Political Science Association, personally forecasts a Republican loss of 25 to 30 Congressional seats.

Around the world, whether left or right, ruling governments "take a shellacking" whenever the combined total of inflation and unemployment—the so-called "misery index"—tops 10 percent, he notes.

In an article which will be published in the November issue of *Public Opinion* magazine, Lipset says both the 1980 and 1982 U.S. elections fit a world-wide pattern that "economics dominates politics."

"Governing parties are punished for the performance of the economy," he declares. Among 17 democratic countries in the industrialized world where elections change ruling parties or coalitions, "since 1979 conservatives have replaced more liberal or socialist government in six countries, while left-oriented parties have upset incumbent conservative regimes in five others," he notes.

"These findings challenge the interpretation that various elections produce mandates for the victors' policies, whether conservative or socialist. . . .

"Democratic electorates seemingly expect a quick fix from governments elected during a period of economic malaise."

Paradoxically, "policy reversals which followed on shifts to the left or right. . .have contributed to economic malaise, at least in the short run. Efforts to change the economic climate and hence the expectations under which business operates are, mopre often than not, initially disruptive.

"Though the advocates of laissez-faire or the welfare state may have good reason. . .to believe their policies will have anticipated effects, such results usually only come about over the period of time that stretches beyond the next election."

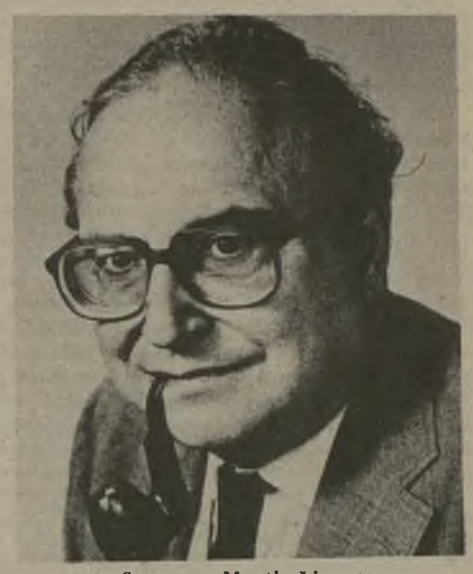
Since the overriding objectives of governing parties is to be reelected, Lipset says, they may respond to continuing, world-wide economic difficulties "By falling back on a centrist position, muddling through, and hoping for the best."

Faced with a more powerful Congressional opposition, "the Reagan Administration will behave similarly," he predicts. "Even before the election, it supported increases in taxes and in the money supply.

"Ideologists will be frustrated, here as in Europe, but fortunately or unfortunately, democratic politics and efforts to implement major economic changes do not go together."



Richard Brody



Seymour Martin Lipset

Student involvement in campaign grows

If college students are supposed to be politically apathetic, apparently some students at Stanford do not know it. Several student political organizations are busy this week with activities related to the Nov. 2 state elections.

The Stanford Democrats, the Stanford Republicans, the Tom Lantos Group all will set up tables in White Plaza with information about the candidates they support.

The Lantos Group is trying to arrange for a debate on campus between Lantos and his Republican opponent, Bill Royer.

Both the Stanford Democrats and the Tom Lantos Group are also trying to encourage a large voter turnout. Junior Brian McDonald, one of the coordinators of the Stanford Democrats, said the organization, which has about 30 active members, will canvass strongly Democratic precincts in the area by phone and door-to-door this week, encouraging people to vote.

Zaroff said the 50 students active in the Tom Lantos Group will phone voters to urge them to go to the polls.

Other student organizations are trying to supply students with information about the candidates and the issues.

The Stanford Conservative Political Alliance, an organization of about 15 students, has distributed a four-page newsletter, *The Stanford Review*, that "discussed the issues, campaign trends, and the positions of some of the candidates on certain issues," according to Tim Hannigan, a member of the alliance.

Hannigan said the Alliance will not endorse any candidates. Its main purpose is to "widen the range of political discussion on campus."

"We feel the political spectrum on campus is too narrow, basically liberal, so we attempt to bring a wider variety of political viewpoints to the campus," Hannigan said.

Stanford in Government is "Now in the process of compiling information about the propositions and the candidates," according to Joel Treisman, the organization's director of new programs. Treisman said the organization will distribute information on election issues and candidates, as well as flyers urging students to vote, around the campus this week.

Apathy is not a problem in the Tom Lantos Group, Zaroff said. "The feeling is getting more and more exciting as election day approaches," she said.

"It's fast, it's intense, and it's a lot of fun. I think most of the students involved in the Lantos group feel that working on a campaign is the best thing they have ever done at Stanford."—**Phil Taylor**

All-volunteer force working extremely well, Weinberger says in Hoover book

"At the moment, the all-volunteer concept is working extraordinarily well," Defense Secretary Caspar W. Weinberger declares in the forward to *The Military Draft*, a new book published by the Hoover Institution Press at Stanford (669 pp., cloth, $19.95).

A selection of readings on conscription, the book was edited by Martin Anderson, senior fellow at the Hoover Institution and former assistant to President Reagan for policy development. Barbara Honegger served as Anderson's research assistant.

Maintaining a large peacetime standing force wholly through volunteers "may be the most critical challenge facing the Department of Defense for the next decade," Weinberger says.

The "neglect of the late 1970s" ended with Congressional approval of a 25 percent pay increase during fiscal 1981 and 1982 and President Reagan's leadership in securing increased public appreciation for those in uniform, Weinberger adds.

"All the services met their recruiting goals in fiscal 1981; test scores improved dramatically; and recruits included the highest proportion of high school graduates ever—even greater than during the draft years.

"In fact, the median test scores and high school graduate rates for enlistees were higher than those in the general youth population.

"There were also dramatic increases in the reenlistment programs of the services. The first-term reenlistment rates were among the highest ever experienced, and career reenlistment rates are on an upward trend after several years of decline.

"These excellent. . .results have continued through the first half of fiscal 1982. . . .

"Although evidence about recruits is difficult to develop, surveys show that those in the very highest and lowest economic brackets are somewhat underrepresented on a strict percentage basis. But the force is otherwise balanced.

"In addition, if we look at regional- or state-level distributions, our surveys show that we are obtaining a proportionate share of enlistees from each state."

A recent study conducted by the Departments of Labor and Defense showed that first-term enlistees were generally comparable in their backgrounds and abilities with their counterparts working full-time in the civilian sector. In fact, the IQ scores of those volunteering for the services were higher than the national average.

"The Department of Defense is optimistic about the underlying patriotism of our youth in the face of national crisis," Weinberger says. "We do not see any logic in the argument that holds that conscription or coercive national service during peacetime would encourage patriotism.

"Rather than increasing patriotism, a peacetime draft that is not perceived as necessary may result in a backlash by the youth against their government, just as happened in the late 1960s. . . .

"The all-volunteer force will continue to receive our highest priority. The real issues are whether in peacetime the nation can man its forces-with the numbers and kinds of people needed to perform their missions and whether those forces can be increased quickly enough in an emergency. We believe that the all-volunteer force is the most appropriate way during peacetime to meet military manpower requirements.

"The final and key element of success for the volunteer force is the American public's attitude toward it. Happily, the American people. . .appreciate more than ever the part they have in keeping the U.S. at peace. That continued encouragement, that respect. . .will ultimately be the strongest factor in making the all-volunteer force work."

Anderson served as a member of President Reagan's Military Manpower Task Force when it was established in 1981. While serving as a special assistant and special consultant to President Nixon, he headed the interagency task force that evaluated the report of the President's Commission on an All-Volunteer Armed Force. He also helped to develop the legislation that abolished the draft in 1971.

Letters to the editor

Many Taiwanese students here feared surveillance in 1978, Giraud says

Editor, *Campus Report*:

The letter (*Campus Report*, Oct. 13) from a Stanford faculty member who recalled a Taiwanese student's account of surveillance by other Taiwanese students and nationals has reminded me of a similar incident which also supports the findings reported by Prof. Goheen on Oct. 6 (and Carl Johnston in the *Stanford Independent* last year).

In May 1978, I was approached by several Taiwanese students who described a very disturbing situation in a student group known as the "Chinese Students Association."

It was alleged that officers of that group were not only Kuomintang supporters, but engaged in surveillance and intimidation of other students on behalf of the Taiwanese government, inviting them to report on their fellow students' political activities. The students not only resented this, but were fearful of the possible consequences of refusing to cooperate (which could include interrogation and arrest when they got back home and also reprisal taken against their families).

My calendar records a meeting at my house on May 24 of a group of Taiwanese students (my wife and I recall that there were at least eight or 10 of them), all of whom wished to be associated with a letter to the Stanford administration requesting that the University investigate their charges, refuse admission to the University of agents of foreign governments and discourage surveillance, intimidation and coercion of foreign nationals at Stanford.

Because of their reluctance to identify themselves by name in this letter, they had decided to ask a Stanford faculty member—myself—to meet with them, examine their student cards and certify that they were in fact who they claimed to be, truly registered Stanford students, in the event that the authenticity of a letter signed by "A group of Chinese students" should be questioned.

Several people in that group had also been witnesses to a physical confrontation that had taken place in San Francisco on May 20, 1978, in which unarmed demonstrators, marching in protest against the recent election of Chiang Ching-Kuo (Chiang Kai-shek's son) as Taiwan's president were attacked by a group of Kuomintang supporters who emerged from KMT headquarters and assaulted them with long wooden poles.

The incident was covered by a local newspaper, the *San Francisco Journal*, and subsequently, both an account and a photograph appeared in the *Stanford Daily* (June 6). One of the armed assailants in the picture was identified by marchers as Yeh Bing-hui, a Stanford graduate student and an officer of the Chinese Students Association here. When the *Daily* sought to interview him they found his phone had been disconnected.

It may well be that, locally at least, the situation is less fraught with physical violence than it was a few years ago, when several incidents comparable to the one mentioned above were reported. One notes that the person called "Wong" in the *Independent* story, a leader of the Chinese Cultural Association at Stanford who refused to reply to questioning about his connection with the KMT, considered himself "more liberal than our predecessors on campus," an assertion that in itself seems curiously revelatory.

There can, however, be no question that Mr. Liu Sheng-chi's characterization of the Taiwan government as "quite politically tolerant" is belied by a long history of violations of human rights, going back 35 years (the very period of Liu's residence in Taiwan) to the massacre of 1947, well documented in our own State Department's *White Paper on United States Relations with China*, published in 1949.

Those unfamiliar with the history of KMT rule on Taiwan might profitably consult Amnesty International's *Briefing Paper No. 6* of Oct. 1976, covering the arrest and detention of suspected political opponents, the abrogation of civil rights provisions of the constitution of 1946, the inadequacy of basic legal safeguards in trials by military tribunals, the use of torture in interrogation and the use of the death penalty as punishment for political offenses.

Learning what Mr. Liu calls the "ABC's" of his country includes recognizing that Taiwanese law has rested on the assumption that the country is still at war with mainland China and that a state of siege was proclaimed in 1949, putting the country under martial law. Among proscribed subversive activities are the circulation of rumors, propaganda beneficial to "rebels," the "destruction" of national policy, strikes by workers, failure to denounce persons suspected of these and many other offenses, as well as planning or preparing for any of these acts.

One might well argue that it has been the arrest, interrogation and imprisonment of hundreds of Taiwanese, legitimized by the Draconian measures adopted under martial law, that has estranged some Chinese students from their government and, in Mr. Liu's words, "tarnished the image of the Republic of China," rather than plots "engineered" by radical saboteurs.

Raymond Giraud
Professor of French

Cohn backs semesters for humanists

Editor, *Campus Report*:

Prof. Edward Good, speaking for the committee considering a change of the quarter system to semester (or whatever), has given a preliminary opinion that there will probably be no change, since they have examined the options and find virtues in many or most.

That is hardly surprising, but the real question should be "What is the best system for the majority of professors and students at Stanford?" Twenty years ago, when the *Faculty Forum* took a poll, semester won rather handily (as it has recently at Berkeley). But clearly some voices were "more equal," and in the end, the issue was decided by sheer administrative power: the scientists and some allies preferred the quarter and got it.

Nothing unusual in an institution which, when it considered revamping the entire educational fabric, appointed not a single humanist to the (SES) committee in charge.

Now, rhythms of work are far from being an indifferent matter. At best they come down organically from the rhythms of nature: these are "bigger than us" and part of a complex Gestalt that, like the free market, we tamper with at our peril.

The academic calendar tends to reflect old seasonal cycles, of production and harvest. Then we spiral down to our traditional week cycle, the daily schedule, and so on. In our composition (for example, of verse) the forms, it is known, reflect the patterns of biology and psychology, such as breathing attention span, and so on.

The scientists who dominate our administration—the top four administrators are scientists—would no doubt favor each sector having the rhythm it prefers. But of course, given the advantage in efficiency of a single universal calendar plus the power structure and the continuing decline of the humanities, what can one expect?

What I am suggesting, however, is that we speak of this with a maximum of lucidity and a minimum of dishonesty. The result of the committee's washing its hands will be further deterioration in the quality of work in the humanities, vis-a-vis our great sister schools such as Berkeley, Harvard, Yale, Princeton, and I see no point in hiding that.

Quarter after quarter we get these half-written and unthought-through term papers, with typing mistakes uncorrected. The students knock them off, goodness knows in the rush, and often do not bother to pick them up. The faculty who scrupulously read and grade each of these papers are getting an education, the students aren't.

Last week I had dinner with an interesting couple whose child had recently graduated from Stanford. The mother, noting that her daughter's failures were not registered, and knowing her weaknesses couldn't get over her having received honors distinction. The father said succinctly about her four years: "I feel cheated."

This may not be absolutely typical—those parents seem unusually candid—but it is worrisome, tied in with the rest of our experience. We have seen quality decline here in so many ways! Somehow it didn't help to be told by Derrida at the Ecole Normale Superieure "Our standards have dropped, too." They can afford it more. . . .

Is it folly to compare ourselves in that way and want to compete with them or Harvard, etc.? The hope that we could so compete buoyed some of us in the past. I hate to just let it go.

I think the semester would be worth fighting for, as we did in the Sterling and Lyman eras. But I sense too that the old fighting spirit has diminished along with the rest. In a sense, the humanists are asking to be dominated and to have alien rhythms imposed on them.

A kindred matter is the tendency to use computers for humanistic work. Except for routine and rather pedantic material I would strongly disadvise that. The "metonymic" and plodding machine goes on grinding out data, typically, when for a good imaginative mind two or three examples will ring a bell, tell it that it is time to go on and round out (metaphorically) one's knowledge and understanding of a complex topic. I see this distinct tendency in even my best students these days.

It is the same in the realms of music and art: one heard Arthur Rubinstein say to the beaming Rostropovich the other day on Channel 9 "There are so many today who play the notes exactly as the score tells them and so few real musicians!" I have heard our great Adolph Baller say the same thing.

Even a "word processor" (gulf) has a chilling effect on true composition. Save time? What kind of time? Does anyone seriously believe Balzac could have done *better* if he had had a word processor (or even a typewriter)? He knocked out some hundred books anyway; would more have been better?

In the realm of the liberal arts, our best thinking is done through a sort of "negative capability" (Keats) which is very different from the way business men or, I suppose, many scientists work. Speed reading is anathema to reading in depth and so is speed writing apt to be deleterious to composing in depth. It is the very resistance of the mechanism for expressing oneself that often allows the mind to wander in innovative ways. Similarly, an overly smooth organization of class time easily becomes glibness. At such a metronomic pace, there is no room for genuine insight or discovery.

But it is certain that the great teachers of the past got many of their deepest creative penetrations through instants of fiery confrontation (inward or not) with dazzingly fresh young minds, in a way that had little to do with prepared texts. And when the teaching machines take over, forget all that.

I see students of the near future numbly staggering away with the glazed look of Atari addicts. Fiery confrontations my footie: rather an electronic shortcircuiting of life. . . .

Robert Greer Cohn
Professor of French

Counseling institute seeks clients with depression, relationship woes

The Stanford Counseling Institute, which offers general counseling services to the community for a wide variety of problems, wants especially to find clients suffering from depression or relationship problems.

The counselors are all Ph.D. students in counseling psychology and are supervised by faculty members. Their services are available to the general public as well as the campus community. A sliding scale tailors fees to what the client can afford.

Depression is often experienced by the individual as sadness, dissatisfaction with present circumstances, or pessimism about the future. People who are depressed often become very critical of themselves and may feel less energetic and less interested in people and activities than they would like.

Treatment for depressed people at Stanford Counseling Institute is tailored to the individual and therefore varies from person to person. The client also learns and applies skills for changing negative situations.

Another group of counselors provides services to couples who are experiencing relationship problems. These may take the form of poor communication, excessive arguing, sexual problems, difficulties expressing affection, conflicts over child-rearing issues, or dual-career problems.

Here again, treatment is generally short-term and tailored to the individual couple. It often involves teaching couples specific skills to help them more effectively solve the problems they face.

The Stanford Counseling Institute also offers help for handling anxieties, fears and phobias, stress, social skills, communication difficulties, and family problems.

Anyone interested in obtaining counseling service through the Stanford Counseling Institute should call 497-2113.

Marchaj to talk on sailing theory, practice

C. A. Marchaj, author of *Sailing Theory and Practice* and *The Aero-Hydrodynamics of Sailing* and a visiting research fellow at the Department of Aeronautics and Astronautics at the University of Southampton (England), will speak on "The Aero-Hydrodynamics of Sailing" at 4:15 p.m., Monday, Nov. 1, in Skilling Room 191.

Marchaj is in the Bay Area to participate in The Ancient Interface, a technical symposium on sailing cosponsored by Stanford's Department of Aeronautics and Astronautics.

For more information about these events, contact Alan Adler, mechanical engineering, 493-5231.

Law Dean Ely takes cautious view of judicial activism

In a democracy, "no elite's definition of what is right and good is entitled to any special deference," according to Dean John Hart Ely of the Stanford Law School.

The author of a major book entitled *Democracy and Distrust*,he argues strongly against the judicial activism favored by many of his academic colleagues nationally:

"We are a democracy precisely because we do not as a society believe that any of us has a greater right than any other of us to dictate what is ultimately important. . . .

"Thus I say to the courts: Enforce those rights respecting which there has at some period in our constitutional history been sufficient popular consensus to secure for them a place in the document.

"Enforce those rights that are needed to let us all freely and equally register our preferences.

"Enforce for minorities those rights that the majority has seen fit to guarantee for itself.

"Enforce all those rights with all the vigor you can muster.

"But beyond that, you simply have no right in a democracy—no more than philosophers or law professors or anyone else has—to tell the rest of us that we have made a mistake and that you know better."

Courts "sit primarily to safeguard democracy, to make sure that political incumbents do not manipulate things so as to deny others an effective right to participate in either the democratic process or its outcomes."

Such rights of access and of equality "are those with whose protection we should least trust elected officials," he explains.

"Such officials have every incentive to bar the access of various insurgent and dissent groups to the process. . . . And they have similar incentive to cooperate with some dominant majority of their constituency—enough to return them to office—so as to tyrannize, or at least to discriminate against, certain minorities whose continued support they do not need.

"To be contrasted in this regard is judicial protection of 'society's fundamental values,' the favored recipe of the academic theorists. For if it is truly the 'values of the people' that the theorists want enforced, elected officials have strong incentives to define them correctly—and thereby to insure their return to office—and thus the intervention of the judiciary cannot be justified. . . .

"Democracy increases the range of significant decisions for which the citizen has responsibility and thus increases her opportunities to behave in a moral manner. To the extent this rationale is valid, it should lead to a form of judicial review that increases the opportunity of the citizenry to participate in politics and political decisions and, having done that, leaves the product of their decisions alone."

Earlier examples

Early in this century, Ely notes, "something called 'liberty of contract'—which translated into the right not to pay your employees the minimum wage or to work them more than the maximum hours—was vigorously protected by the Supreme Court, even though it is nowhere mentioned in the constitutional document.

"The Burger Court has created a modern counterpart of liberty of contract by constitutionally enshrining the right to have an abortion, although, of course, that right, too, is nowhere mentioned in the document."

Both are properly left to elected officials, Ely says. He personally agrees that women should have the right to an abortion.

Ely's views were developed in the Rocco J. Tresolini lecture in law at Lehigh University this spring and reprinted in the current issue of *The Stanford Lawyer* a publication for alumni of the School.



John Hart Ely

Lawyers settle Brody Lockard suit

Attorneys for Stanford University and Brodie Lockard, a varsity gymnast injured during practice on Dec. 6, 1979, have reached an out-of-court settlement of their legal dispute which was being heard in Santa Clara County Superior Court in San Jose. The terms were not disclosed.

In a joint statement, the attorneys said:

"The case of Brodie Lockard vs. Stanford University has been dismissed. Stanford University has agreed to provide for Mr. Lockard's basic future medical care, even though it has no legal obligation to do so. No finding or decision has been made which in any way attributes fault to Stanford University or any of its employees for the happening of Mr. Lockard's accident.

"Pursuant to the agreement between Mr. Lockard, his family and representatives and Stanford University, all court records have been ordered sealed, and there will be no statement issued other than the dismissal of the case."

Mel Toff, of Mountain View, represented the University and its insurance companies, while Mel Belli of San Francisco represented Lockard.

At the outset of the trial five weeks ago, Belli asked the jury for an $18 million verdict. The University has been aiding Lockard and his family since the accident occurred.

Federal Express explains routing

In order to clear up some confusion regarding sending packages via Federal Express, members of the Stanford community may note the following information:

- If you do not have an account number with Federal Express you can still ship your package through the traffic department at 330 Bonair Siding, if you bring along an SU-10 form.
- If you do not have an account number with Federal Express and would like one, you can be billed separately and get separate pick-ups at your own location. To open an account with Federal Express and to call for pick-ups simply call 800-238-5355. Volume discounts are applied by account number.
- Federal Express has provided a drop-off box in Tresidder Union which will accept packages of any size up to 70 pounds until 4 p.m. every business day. The validator on the machine imprints the date of your shipment on all copies of the airbill.
- Federal Express provides preprinted airbills to all account holders. If you have run out of them and would like more, or if you've never had any please call the toll free number and order some.

CONTEXT extended

Associate Provost Edward E. Shaw, director of the Center for Information Technology, has extended the date for closing down the DEC2060-based Context system to no earlier than Dec. 31, 1982.

A seminar to discuss substitutes for Context is scheduled for 4 p.m. Monday, Oct. 25, in Polya Hall, room 111.

Ultrasonic occupancy sensors help Business School trim utility costs

"Our electricity use went down so much, Utilities called to see if our meters had broken."

Speaking is Barbara Taddeo, building manager at the Stanford Graduate School of Business, where major lighting modifications have recently been completed by Stanford's Facilities and Services Office.

Similar projects have been finished since the summer of 1981 in Meyer Library, the Herrin Biology building, the Art Library, and in a group of about 80 classrooms.

Because over 30 percent of the electricity used by the University is for lighting, many opportunities for improvement remain. The task of evaluating these opportunities, and of proposing other cost-effective energy conservation projects, falls to the Energy Program Office.

Probably the most interesting form of lighting control that Stanford is experimenting with is the ultrasonic occupancy sensor for classrooms.

Surveys indicate that 50 percent of the time classroom lights are on, the rooms are vacant. An occupancy sensor emits an inaudible high-frequency tone, which is reflected back differently from an empty room than from one containing a person. A few minutes after the last person leaves, the lights go out, even if that person has carelessly left them on.

Three rooms in the GSB have been equipped with these sensors.

GSB modifications

The modifications in the GSB and the other buildings represent the $200,000 first phase of a two-part, three-year lighting program.

This phase has emphasized meticulous surveys of existing lighting conditions, and low-cost improvements such as delamping fluorescent fixtures where light levels were found to be excessive or replacing incandescent lights with more efficient fluorescents.

Yearly energy savings from work already completed are expected to total over $100,000, at a cost of $136,000. The remaining $64,000 is being used for similar measures.

In a typical delamping project, one out of every four to eight fluorescent lamps are removed. Also typically, few people in the office really notice the change.

"We go through very thoroughly and make sure the lighting level will be appropriate after the delamping," says Karl Johnson, who heads the lighting program.

Conversions from incandescent to fluorescent lighting also make good dollar sense for Stanford. A fluorescent light is three to four times more efficient than an incandescent bulb.

In addition, because PG&E is currently sponsoring a conservation incentive program encouraging changes to more efficient sources of light, the University is expecting a $14,000 refund check to help defray the costs of over 1,000 conversions made last winter.

The Energy Program Office is now entering the second phase of its lighting program, which focuses on controlling when and where illumination is actually needed. Planned projects involve various kinds of timers and switches as well as extensive additional fixture conversions.

The total costs are estimated to be $419,000, with yearly energy savings of over $100,000, and another $9,000 refund from PG&E for the fixture conversions.

Common sense works

Some approaches to controlling lighting use the kind of high-technology wizardry normally reserved for "Star Wars"—but many problems can be solved in a simple, common-sense way.

"In the Art Library basement stacks, there is a large, locked-off area which is rarely used," Johnson said. "But one light switch controlled the entire basement. The locked-off area was rarely occupied and usually lit. We simply installed another switch for the locked-off part. It will save us about $1,200 a year—with just one switch."

Other switches will be installed where better control of lighting is possible. Library stacks, where only a small portion so a lit area is actually in use at one time, are a good example.

Taking advantage of natural daylight is another excellent approach to reducing electricity consumption. Many buildings at Stanford were designed with this in mind. To compensate for natural variations, light-sensitive photoelectric cells can turn lights on and off, maintaining the correct light level the way a thermostat regulates temperature.

Despite all the fixture conversions, photoelectric controls and ultrasonic occupancy sensors, there is no substitute for one thing in energy conservation: if you're not using it, turn it off.

—**Lyle B. Zimmerman**

Congress may impose more controls if scientists don't regulate themselves

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frank criticism of institutional practice in the same areas.

"Unless there is firm rejection of such behavior, the public will be perfectly entitled to conclude that the scientists are more interested in profits than results."

Limits on universities

Kennedy said there are "sharp limitations" on what universities can accomplish in this field: "Standards of the profession, publication policies, criteria for the acceptance of work, and peer review are functions that the professoriate rather than the academy must regulate."

Failure to do so "may invite unwelcome attention from others," he added. "Congress is now making concerned gestures about matters ranging from the treatment of animals to scientific fraud, and one hears proposals for government auditing of research to insure proper practice."

Self-regulation should include "firm protection. . .to the open character of scientific work," Kennedy added. "Journals should not publish any articles from which proprietary information has been held back so as to make the new work more difficult to replicate, and (professional) societies should refuse to allow papers to be presented at meetings if they are subject to similar restraints."

Scientific communication should include enough information about how an experiment was done that a competent investigator in the same field can do it the same way. "This is an exacting requirement," Kennedy said. "It compels the release of all relevant information about methods and techniques.

"Secret ingredients, magic sauces, and your own special glassware are fine in cookery or in product development, but in fundamental science they are *out*."

Several forces have combined to compress the normal pattern of innovation, blurring the clear separation between fundamental research, publicly supported and characterized by open communication, and applied work, financed by private venture capital with proprietary protection of information, Kennedy said.

These include:

1) The apparent readiness of several disciplines, such as immunology and genetic engineering, for accelerated application of knowledge;

2) Growing social awareness of the importance of scientific discovery to national productivity and "a consequent impatience" with the traditional pattern of technology diffusion;

3) A reduction of federal funding of basic, non-defense research by more than one-third (in resale terms) since 1968, with the resulting search for alternative sources of support; and

4) "The style of venture capitalization, which places new premiums on the early capture of intellectual property." Because of changes in tax law, the funds available have risen from an estimated $70 million in the mid-1970s to about $1.5 billion this year, he said.

"It is easy to forget, amidst the present excitement, that the universities have sponsored many more millionaire textbook writers than millionaire computerists or cloners," Kennedy observed.

"The university does not assert copyright to books written by the faculty—scholarly, text, or trade—nor does it try to attach other creative works. Reflected glory, and that alone, is the traditional institutional reward for such faculty (works)."

Curbing outside involvement

While there is no single, highly consistent framework governing outside involvement by university faculty or the ownership of intellectual property, Kennedy said universities should continue to make its primary claim on the time and energy of faculty "but permit limited outside involvement when that clearly offers benefits both to the faculty member's professional development and to the university-based research and training programs.

"Disclosure of these relationships should, as now, be required on demand (by the university)—and, if it proves necessary, as a matter of routine.

"Management responsibilities (held by faculty members) outside the university should generally be viewed as inconsistent with the primacy of university commitment—including significant personal responsibility for any regular laboratory operation off campus.

"Such roles not only become compelling time commitments; they may lead, as we have learned, to awkward mixtures of proprietary and non-proprietary work. They also encourage the introduction of secrecy to university-based programs and impose troublesome conflicts on graduate students.

"On the other hand, I think that intellectual proprietary rights should be vested primarily in the faculty member. After all, one of the attributes of university research that distinguishes it from that done in corporate settings is its independent, individual character.

"If we are to assert primary claims to faculty time and energy, it would seem appropriate to reward that loyalty by assigning the proprietorship of intellectual accomplishment to the innovator. It is up to us to structure incentives that will encourage inventors to assign rights to the university and to share the returned value with the entire enterprise. . . .

"No valuable invention should be delayed in its progress toward human service by the institution's own need for financial return. In most cases, that principle will lead to a first preference for non-exclusive licensing (of patents) and a fee structure designed to encourage broad participation by commercial developers.

"Second, there should be care to avoid pressure on faculty and students to concentrate unduly upon 'developable' ideas, or to keep secrets in the course of developing them.

"Finally, the university as licensor must take careful note of its other roles as investor and research proprietor, and maintain a strictly neutral policy with respect to licensing ventures that may be partly owned by the university or its faculty members."

Institutional policies

Institutional policies regarding acceptance of research grants have been "heavily conditioned" by post-war federal support, he noted. "There are no restrictions on publications and the federal patrons of research have not usually claimed patent rights.

"By contrast, a number of private research sponsors have asserted such rights in advance, through requirements that they hold exclusive licenses on any patentable discoveries made under their support.

"Where the institution claims no such rights, the acceptability of such conditions becomes a matter for the faculty member to determine. But where the institution retains rights to the intellectual property, the decision becomes more complex and difficult.

"If a faculty member were to assert that a line of important work could only be supported if a private sponsor were granted exclusivity in advance, I think the university would agree to take the project.

"What if the institution were deciding the matter on its own? I confess I would have difficulty. The situation offers too many temptations for *a priori* restraints on communication, too much emphasis on investment return, to leave me comfortable.

"I expect this to become one of the main policy issues in this area, the more so because large grants of this type have been made to several institutions."

So far as openness is concerned, "most universities refuse any but the briefest delays in publications time and reject restrictions upon access to programs," he noted.

"They have also had to cope with the increasing threats to informal communications posed by the actions of commercial firms, especially in biotechnology. Several active or prospective litigations concern the patenting of DNA sequences by companies who obtained required material through informal exchanges with academic scientists. And for each lawsuit, there are a dozen horror stories.

"Whatever the merits of these, the perception is that people are prepared to take advantage of naive informality on the part of academic researchers. The latter, predictably, are reacting by becoming more cautious.

"Meanwhile, the universities are trying to provide them with increasingly aggressive legal protection, and evolving policies for the distribution of research-derived materials that will prevent their commercial appropriation while encouraging academic circulation."

Peterson heads earthquake group

Associate Vice-President for Business and Finance Kent Peterson has accepted responsibility for developing and implementing a program of earthquake preparedness at Stanford University.

Assisting him in the assignment are Director of Public Safety Marvin Herrington, Director of Health and Safety Alain DeCleve, and Assistant Director of Facilities and Services Gary Cavazos.

They will work on contingency plans, earthquake preparedness for offices, laboratories, and dormitories, and earthquake-resistant building design and maintenance.

The group, which also will include representatives from the Hospital, SLAC, the student residence system, Risk Management, and the Provost's Office will meet once a month.

Questions on earthquake preparedness should be directed to the Earthquake Information Center at Police Services, ext. 7-9633, for the main campus. At the Medical Center, call Mary Catherine Krawec, 7-6871; at SLAC, Fred Peregoy, ext. 2221.

Big quality spread in medicine...

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care in academic centers has to do with the severity and technical complexity of the caseloads handled there.

"As smaller hospitals 'compete' successfully for routine care, there will be further concentration of the difficult cases in academic centers, followed by further increases in charges to cover the inadequacy of reimbursement. The shortfall will widen, and the teaching hospitals will be driven to further distress.

"That will, of course, be bad for research. . .(and) bad for patients."

As a teacher of medical students, chairman of a hospital board, and head of three different national committees on health policy, as well as FDA, Kennedy has been "impressed by the enormous quality spread in American medicine.

"There is a mythology to the contrary, much of it generated by then-professional organizations of medicine. They are conspicuously devoted to the proposition that there shall be no second-*class*doctors; but it does not follow that there are no second-*rate* doctors.

"The cases that wind up at Stanford or Massachusetts General Hospital or Peter Bent Brigham are in substantial part there because of quality. These institutions get the difficult cases because they are good.

"Indeed, sometimes they get them because others are not: the second hip replacement is a more complex procedure than when the first is bungled. So a particularly disastrous social consequence of inadequate reimbursement and 'competition' is that the effect falls selectively on the institutions of highest quality."

Kennedy noted that the array of scientific laboratories built on the nation's campuses in the late 1950s and 1960s now are "decaying slowly," and it's getting "harder and harder to find (private) support for bricks and mortar."

Since 1967, the federal nondefense budget for scientific research has shrunk by about 37 percent in real terms, with half of that reduction taking place in first two years of the current decade.

About two-thirds of all basic research now is done in universities. Of the total of all university research budgets, only three or four percent now comes from industry. "Thus, to make up for a one percent drop in federal support, we would have to increase industry's support by 25 percent," Kennedy said.

"It is perfectly plain that a vigorous and creative research establishment in biology and in the other basic sciences is a social obligation of the most serious kind, and that only the public sector is capable of meeting that obligation. . . .

"We need to examine the policies that govern our institutional arrangements for doing biological sciences. They have been revised in haste, even desperation, to meet current economic exigencies. As a result, their convergent effects are haphazard and often unexpectedly damaging, as in the example of academic health centers."

Increased funding of fundamental research and efforts to reduce the "rolling liability" for buildings and equipment should be accompanied by the complex task of "policy renovation" within Congress and the Executive Branch, he said.

Get hep, preps—read Stanford experts on *How To College*

With their tongues in their cheeks and hands on their wallets, three liberal arts students who graduated from Stanford last June have published "How to College: A Humorous Guide to the Four Years" (208 pp., paper, $4.95 from Primer Press, P.O. Box 3710, Stanford, Calif. 94305).

Making no apologies to editors of *The New York Times* and other college raters, Bill Jeakle, Eugene Reardon, and Ed Wyatt offer a quick list of "50 of the best state schools in the country," ranging from "1) University of Alabama" and "2) University of Alaska" right through "50) University of Wyoming," in alphabetical order.

"When choosing a college, you must take all the factors into account: reputation, number of the opposite sex, libraries, number of the opposite sex, post-graduate placement record, and number of the opposite sex," they suggest.

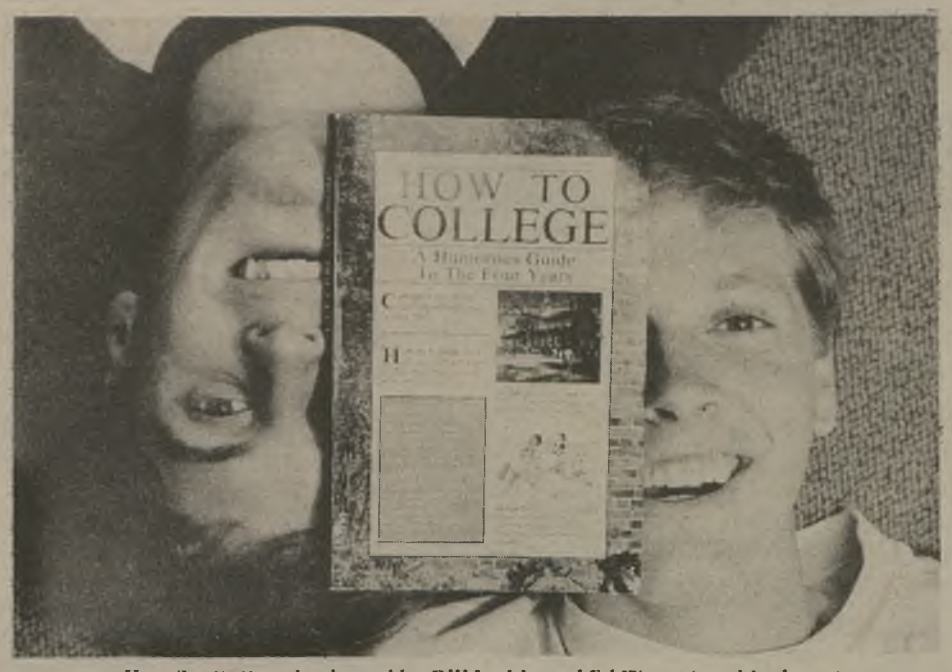
"If you picked at random, you'd probably be happy, so don't take the decision too seriously."

For those who persist, they offer these descriptions from a Southern gas station operator:

Princeton: "This place is nothing but a place where a bunch of rich snobs go to live with other rich snobs and learn how to be richer snobs."

Notre Dame: "Great school. . .but they're pretty Catholic."

Berkeley: "They'll take any low-life off the street. . .the only thing they have to pay for is drugs."



***How To College* is viewed by Bill Jeakle and Ed Wyatt (upside down).**

Arkadelphia A&M: "Cost me a couple hundred, but it was worth it. Best education money can buy."

Among the daring things a student can do before going to college, they suggest using a number three pencil on the SAT, including a nude photo on your college application, writing a bad check to cover the application fee or turning down a full tuition scholarship to an Ivy League school.

For those high school seniors now faced with the terrifying thought that one set of parties and pep rallies may be replaced by another, they counsel: "In no time at all, you will have decided what college you will attend, and that decision will affect your every resume, date, and cocktail party for the rest of your life.

"Be careful, there's nothing worse than a boring cocktail party."

"Having your parents visit you at school is a little like winning an all-expense paid trip to Akron: it probably won't be harmful, but what's the point of it?" they advise. "You'll have to miss a night or two of partying to go out to dinner with them," clean up your room, forego swearing, and go through the motions of "dating" your boyfriend or girlfriend "lest your parents think there is anything more to the relationship." The five best things about your parents visiting are that "they'll bring you money." Period.

When money and other real world needs became rather pressing in their junior year, Jeakle said, "We saw that four years of studying and a lot of tuition money had taught us one thing: how to college. So the most logical thing was to write a book about it."

"We spent four years researching," added Wyatt. "We're trying to make all of those all-nighters and frat parties pay off."

Jeakle and Wyatt both majored in English. As freshmen, they combined talent to produce a dormitory newspaper, *The Weekly Obscenity*. Reardon, an economics major, handled the business side, while Phil Chalk, a *Stanford Daily* cartoonist, provided illustrations.

After raising money from friends and family, they launched The Primer Press to produce and market their college guide.

FBI established files on Bay Area student homosexuals, GLAS discovers

The San Francisco office of the Federal Bureau of Investigation established files on homosexual student groups at Stanford, College of San Mateo, Cal State-Hayward, and UC-Berkeley in the early 1970s, according to documents obtained under the Freedom of Information Act by the Gay and Lesbian Alliance at Stanford (GLAS).

Ray Koskovich, GLAS archivist, obtained 19 pages of material from the FBI dating from 1971 to 1975 in response to his request.

These included a copy of the San Mateo Gay People's Union constitution, found in a folder atop a garbage can there, together with an internal memo recommending no investigation of the group; clippings from *The Daily Pioneer* at Hayward in 1971 and 1972; a 1971 *Stanford Daily* story headlined "Gay Students Drop Straight Roles"; and a heavily censored 1974-75 student activities directory forwarded to San Francisco by the resident agency in Berkeley.

Six additional pages of information were denied GLAS "in the interest of the national defense or foreign policy," to protect the personal privacy of others, or to protect confidential sources and internal roles and practices of the FBI.

The Gay Law Student Association at Stanford is preparing an appeal to obtain this information as well, Koskovich said.

He was "not at all surprised" that the Stanford group was of interest to the FBI, since it was organized in 1970 as one of the earliest student groups of its kind nationally. "Now the FBI couldn't possibly keep up with all of us," since so many campuses have gay groups, he added.

In replying to his request, the FBI "accidentally let us know they were gathering information about most gay student organizations in the Bay Area, not just us," Koskovich said.

"Most of the other groups were quite surprised" to learn this had been done, and now may plan FBI requests of their own, he added.

In the late 1970s, the FBI reportedly curtailed its domestic intelligence activities, compiling information on organizations only in the course of actual criminal investigations. In recent months, however, many federal officials have repeatedly expressed concern over possible loss of technological secrets from Silicon Valley to foreign countries, particularly the Soviet Union.

Koskovich became interested in possible FBI campus surveillance following an extensive story in *The Advocate*, a gay newspaper, which concluded there has been "a concerted nationwide surveillance and investigation program by the FBI into the lives of wealthy, prominent, closeted homosexual men as well as into gay civil rights groups" for nearly 30 years. But surveillance of gay groups "slowed" by the late 1960s and early 1970s, *The Advocate* added. It did not mention student surveillance.

"The FBI's national headquarters said they had nothing on us."

But there's "some reason to suspect" Stanford might still be a target for surveillance, since the FBI has acknowledged covering gay bars in Silicon Valley, he observed. While there's no evidence this actually is happening at Stanford, "we're open to the community and a fair number of our members work in Silicon Valley."

Historic Serra House faces two-mile move near Law School

Serra House, built in 1924 as Stanford President David Starr Jordan's retirement home, will be moved to a new location near the Law School this fall at a cost of about $696,000.

Now located near the intersection of Campus Drive and Jordan Way, Serra House will continue to be occupied by the Center for Research on Women (CROW), the feminist studies program, and *Signs*, a journal of women in culture and society.

Its present site will be used for a new cooling tower and for a proposed $25 to $35 million cogeneration plant, producing both electricity and steam from a single fuel. Costs of the move will be charged against these projects.

Planned for late October, the two-mile move on Campus Drive will permit occupancy at the new site by late February 1983.

The new location will be south of the Law School, adjacent to Mariposa House, near the intersection of Salvatierra St. It will require the replacement of 22 parking spaces.

Designed by Birge Clark, Serra House will be close to two other buildings of similar vintage, Rogers and Owen Houses. Previous campus plans called for this area to eventually become a parking facility.

"With space so scarce, there is little likelihood of moving the other three buildings in the foreseeable future," according to a report considered by the Board of Trustees, who approved the Serra House relocation Oct. 12.

The move is estimated to cost $96,000 more than an equivalent amount of new building space, but this would have taken 15 months to complete and resulted in the destruction of a historic building.

In the past, the University has decided to pay a comparable premium in rebuilding and renovating existing buildings on the Main Quadrangle.

Earlier this year, Ventura Hall, which adjoined Serra House, was cut in half and moved to a new location at the intersection of Campus Drive and Panama St.

CROW, feminist studies, and *Signs* will be temporarily located in the Old Chemistry Building during the transition. Phone numbers will remain unchanged.



卍卍 **Medical Center MEMO**

'Super donors': a special group of blood givers

BY DEBORAH FRANKLIN

Les Chibana arrived at work three and a half hours late one day last month so he could help keep a leukemia patient alive for a week or more.

Chibana's commute from San Mateo to Palo Alto included a stopover at the Stanford University Blood Bank where he became one of a small but special group of "super donors."

The life-supporting blood removed from his arm was less than the usual one-pint donation, but through a procedure called "platelet apheresis" he was able to give, with no danger to himself, between six and ten times the number of platelets usually found in a pint of whole blood.

"Knowing that there's a specific patient who needs my platelets makes a big difference to me," said Chibana, a graphic designer. Even before donation, Chibana's platelets were earmarked for a specific patient whose needs were made known to him by an urgent phone call.

Through apheresis, donors can be custom-matched to recipients, reducing the risk of rejection and decreasing the adverse reactions that can occur when patients receive blood from many unmatched sources.

In the same way that a cream separator skims rich froth and leaves milk, the apheresis machine pipes blood into a centrifuge from one arm of the donor, separates the blood components by weight, and returns the majority of the blood—"rehomogenized"—to the donor. Only the component needed most—usually platelets or white cells—is removed.

Less than a pint of the volunteer's blood is out of his body at any one time, enclosed within the sterile, disposable plastic tubing of the machine. The platelets taken—about eight tablespoons—will be replaced by fresh cells from his bone marrow within 24 hours.

Because a smaller quantity of blood is drawn, a super donor can give blood components more frequently than a whole blood donor, who is advised to allow eight-week intervals to pass between donations.

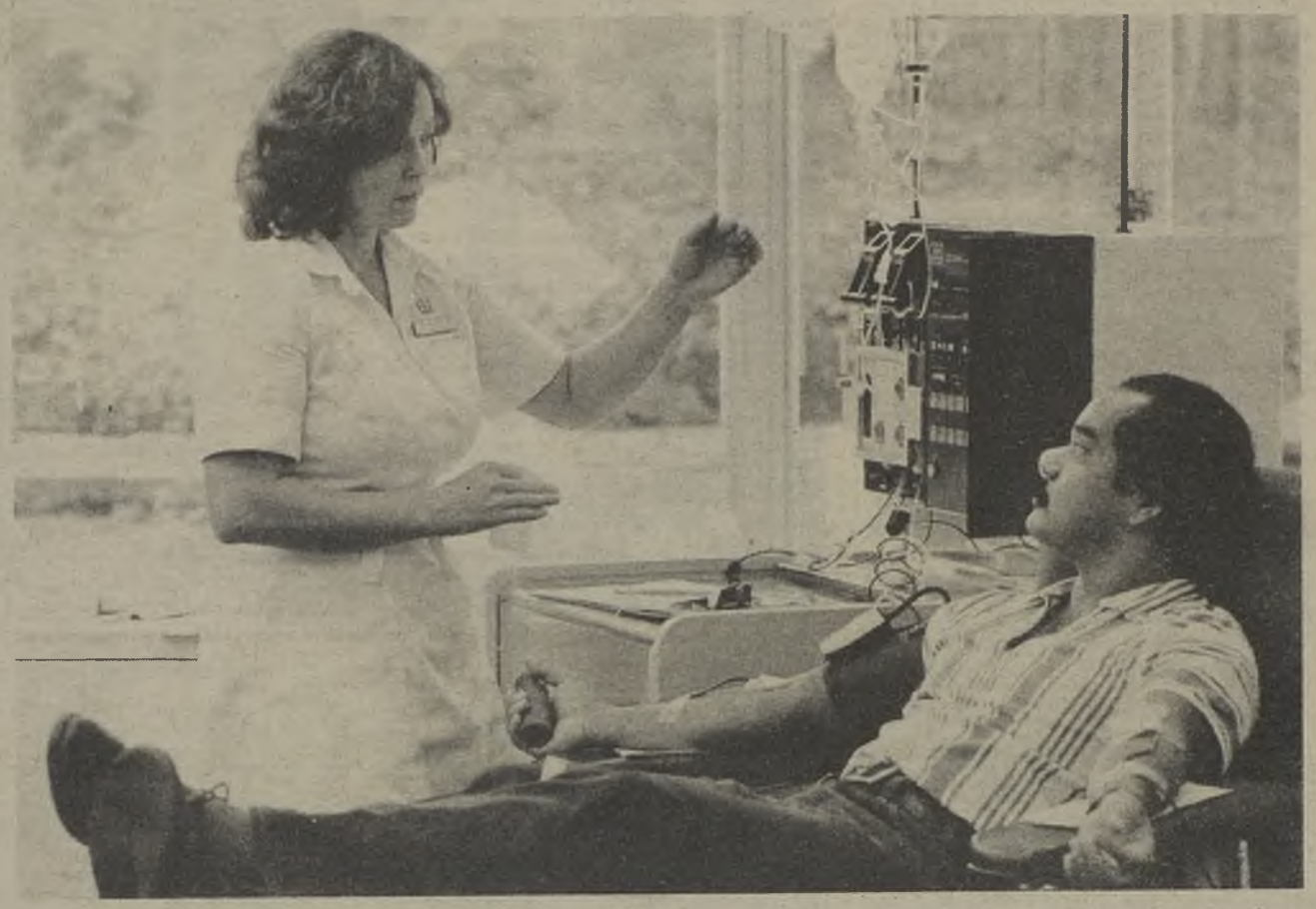
Leukemia patients use most of the platelets and white cells gathered through apheresis at Stanford's blood bank, said Pauline Burn, apheresis coordinator. Last year 64 patients received components garnered through 439 apheresis procedures, she said.

Most patients who need blood only require that it be matched to their ABO and Rh type. But for patients who receive multiple transfusions (such as leukemic patients who can require up to ten units of platelets daily during a crisis period), the two-way matching is not enough.

Each time a person receives blood from someone else, he risks developing antibodies that can attack foreign antigens (such as those from a blood donor) and destroy the transfused platelets. After multiple transfusions with blood from different donors, the patient can become completely unresponsive to the new platelets, destroying them almost as fast as they are introduced.

The troublemakers in these cases appear to be human leukocyte (called HLA) antigens—protein complexes that stud the membranes of platelets and other cells. Vital to the immune system in helping the body distinguish between itself and foreign matter, such antigens can cause problems for patients receiving needed transplanted tissue such as a heart, a kidney, or multiple transfusions of blood.

As specific to each individual as his fingerprint, the pattern of genes that code for antigens could never be matched exactly between any two individuals except identical twins. Fortunately, a mismatch of most antigens appears relatively harmless to patients. By carefully matching for the HLA antigens, which are known to cause trouble, physicians can avert the patient's "seek and destroy" response to the transfused cells.



Fran Bliven, R.N., monitors the procedure as Les Chibana becomes a "super donor" for the first time at Stanford.

Siblings often provide the best HLA match, but when a patient's need outstrips a family's ability to give, their only resort is to seek help from volunteer donors.

Stanford maintains a computerized list of 640 volunteers who have been HLA typed and have agreed to donate a component of their blood if and when it matches a patient's tissue type.

Burn encourages all those who donate whole blood to consider becoming apheresis super donors. Restrictions on who can donate are the same for both kinds of volunteers, except that super donors are requested to refrain from taking aspirin for three days prior to undergoing apheresis. (Aspirin interferes with the clotting action of the platelets.)

The number of times a volunteer will be requested to donate varies, but a typical super donor will be called to give once a week for two or three weeks in a year, Burn said. The larger the super donor pool, the greater the likelihood that several matches can be found, and the smaller the burden on any single donor.

Additional apheresis products are sometimes available through exchanges with other blood centers, Burn said, but because of the problems involved in shipping these fragile products, it is important to have as many local donors as possible.

"With a base of 2,000 super donors we could meet well over 90 percent of Stanford patients' needs," said Carl Grumet, associate professor of pathology and director of the Stanford Transfusion Service. "However, there's a complicating factor.

"In the Bay Area, we could have 2,000 Caucasian donors, but if a Chinese patient came in who had a type that was extremely rare or nonexistent among Caucasians, we'd have trouble finding a good match. We really need more non-Caucasian donors." (HLA types are not strictly tied to race, but a few types appear more commonly in some ethnic groups than in others.)

The need for apheresis blood products is growing all the time, Grumet said. An even more urgent need for both platelets and white cells will develop within a few years once Stanford's bone marrow transplant program is established.

Often apheresis matching takes on the character of an intensely personal drama.

In late September the Blood Bank began selectively harvesting young red cells for Brian Pavon, a Bay Area six-year-old who has beta-thalassemia major.

In this rare disease, the oxygen-carrying component of the red cell is defective, withering and misshaping the cell structure and speeding its destruction long before its normal 120-day lifespan.

Because his body can't adequately replace the

continued on next page

Some staff to vote in union election

An election has been scheduled Nov. 5-6 on the issue of whether about 1,200 service and maintenance workers at Stanford University Hospital wish union representation.

The election was ordered earlier this month by the National Labor Relations Board following a petition by Local 715 of the Service Employees International Union AFL-CIO.

Eligible to vote are a variety of job categories, including nursing assistants, unit service assistants, housekeeping and dietary workers, and maintenance employees.

No employees are now represented by Local 715 at the Hospital, a wholly-owned non-profit subsidiary corporation of Stanford University.

The only union bargaining unit now at the Hospital is the Committee for the Recognition of Nursing Achievement (CRONA), which represents about 1,250 registered nurses.

At the University, a Local 715 contract covers a bargaining unit covering 1,350 workers.

SUPER DONOR . . .

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cells he needs to meet his body's oxygen needs, Brian must rely on monthly transfusions of packed red blood cells.

But the gift of life carries a nasty chaser: frequent transfusions poison the body with more iron than it can handle. While the short-term effects are few, monthly transfusions year after year take their toll on a growing body, and thalassemic adolescents and young adults often die of congestive heart failure associated with the accumulated iron overload.

Because red cells normally live up to four months, by giving Brian only the youngest red cells (neocytes) via apheresis, his transfusion frequency may be reduced by as much as a third, thus cutting down his risk of iron overload. If the procedure is successful, it will used for other thalassemic patients, Burn said.

The future of apheresis may be bright in further honing medical treatment, but its success depends ultimately on volunteer blood donors, she added.

"The key thing is having a larger donor base," said Fran Bliven, an apheresis nurse at the Blood Bank. "We can have all the expertise and technical ability to get a good HLA match, to get each patient the blood product he needs. But all that expertise is wasted if we can't get enough donors."

One typical recipient, a man in his early 50's, was treated with chemotherapy for a month at Stanford for his acute myelocytic leukemia. He needed platelets four or five times each week for three weeks last spring. Keenly aware of his family's debt to several strangers, the patient's son wrote the following open letter to volunteers who were donating platelets:

TO A BEAUTIFUL PERSON:

I am the son of the man you are donating platelets for. I and my whole family think you are a wonderful, wonderful person and with your help and the Lord's we have come a long way with this disease.

You know our family is very close, and I can't imagine living a day without my father being there with us. With your help it looks like he is going to be here for a long, long time. The doctors have got this disease under complete remission. In about ten days from today he will be coming home.

Thanks again. We love you!

Award commends mortuary's generosity

Stanford University Hospital's first community service award has been presented to Charles and Rose Jones of East Palo Alto for what was termed "a lesson in lived compassion."

Mr. and Mrs. Jones, owners of the Jones Mortuary in East Palo Alto, were commended for their distinguished service to the Hospital and community. They were presented with a plaque in grateful recognition of their unique contributions.

Over the past six years, the Jones Mortuary has provided burial services, free of charge, for more than 100 SUH babies and stillborns less than 30 days old—a service many insurance companies do not cover. Director Charles Jones has made special arrangements and allowed discounts on his services in many adult cases as well.

Dean Robert Hamerton-Kelly of the Stanford Chapel remarked at the ceremony, "When I hear about people like the Joneses, I have two responses: humility, and exhaltation at an instance of such humanity, which makes us all feel better about the human race."

He added that what the Joneses do "lies beyond our ability to honor," and thanked them fot a "lesson in lived compassion."

Presenting the award, SUH director Sheldon King said, "The Jones' generosity respresents devotion to the community beyond that which most of us are capable."

Dr. Lawrence G. Crowley, vice president for medical affairs, said that the Jones' reception is expected to be the "first of many occasions like this, for presenting community service awards." He added, "Without the help of volunteers, our tasks would be impossible. This type of service improves the overall quality of the Hospital's mission."

Present at the event along with other special guests were Mayor Fred Eyerly of Palo Alto, and Mayor Barbara Mouton of East Palo Alto.



The Joneses chat with SUH director Sheldon King (left) after the plaque presentation.

Director of Community Relations Jeanne Kennedy explained how her office, in conjunction with the Chaplains Office and Social Services, had worked to bring about the award. A brass plaque, said King, will hang prominently in the Hospital to honor the award and list present and future recipients.

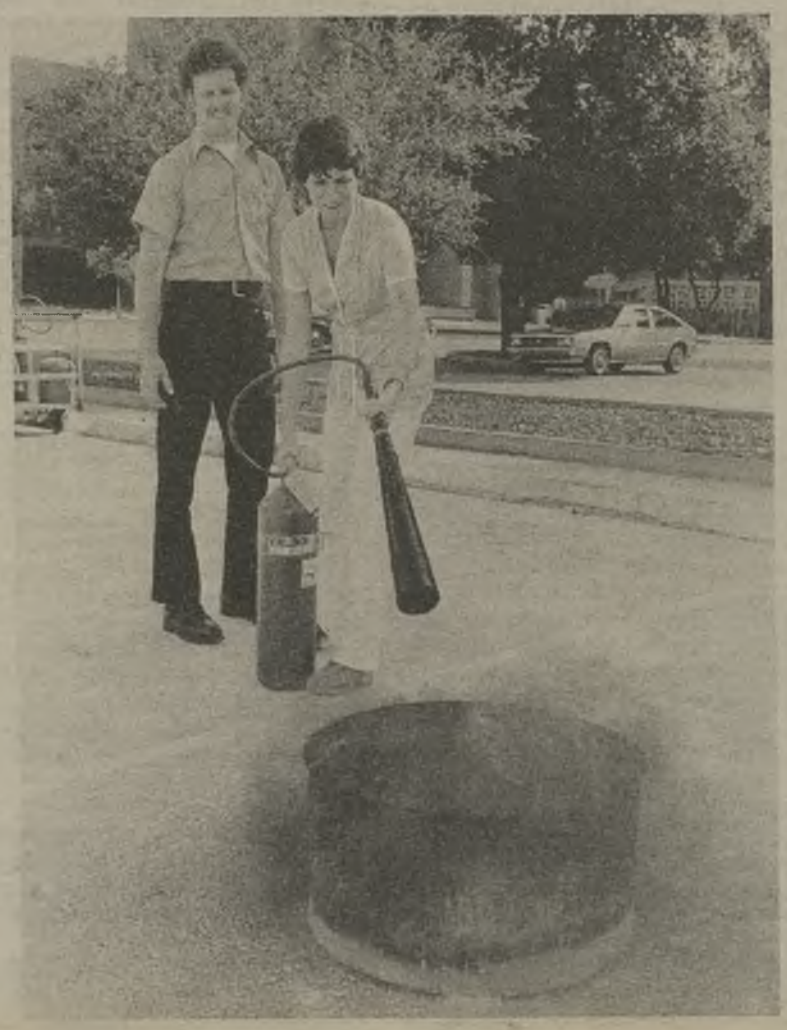
The Jones Mortuary's generosity is largely due to Rose's childhood memory of a baby brother's death, when her family could not pay for the burial right away. She hoped never to see another family go through what hers had.

"It was important to me to provide this service free of charge, because people don't always have the money," she said.

Charles Jones dedicated half of the award to his mother, who died last month. "I would have wanted her to see this," he said.

Last January, the Jones Mortuary was a victim of criminal arson. The destruction caused by the fire resulted in an estimated $250,000 worth of property damage. The Joneses said they hope their building will be ready for use again by November.

—Lisa Ames

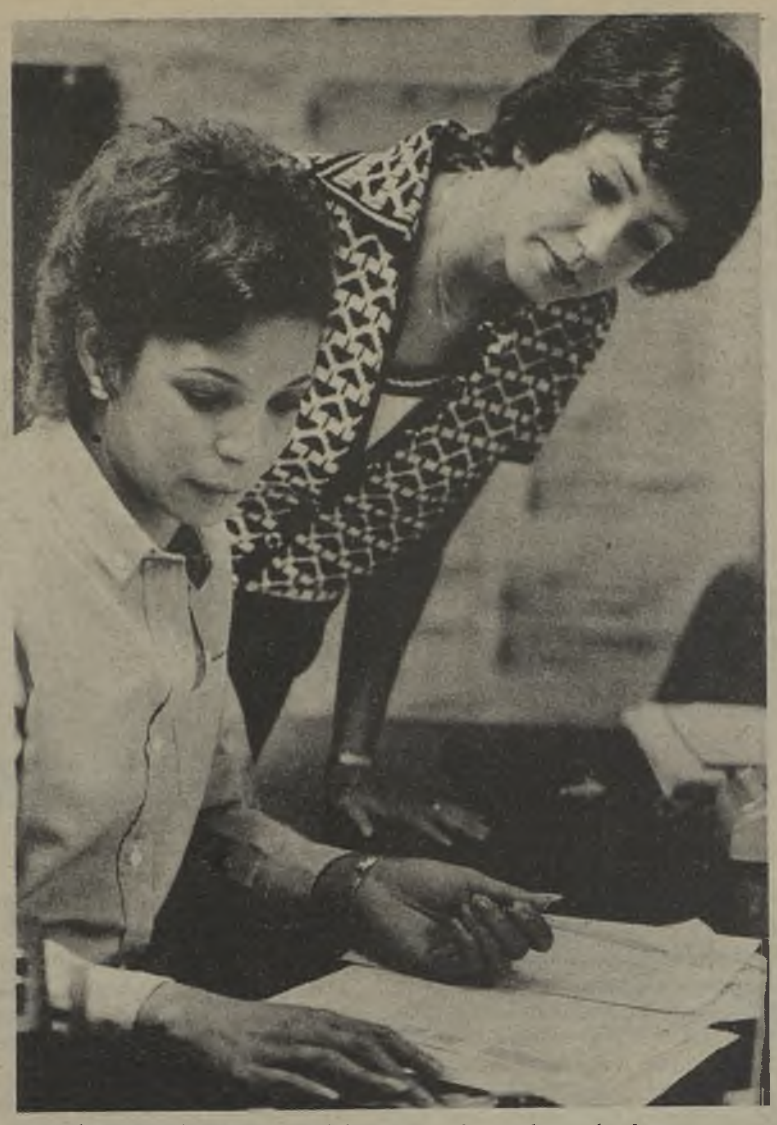


SUMC staff taught to put out flames during safety week

The Palo Alto Fire Department last week paid a visit to Stanford as part of the Hospital's annual health and safety faire. Members of the Department demonstrated, in a controlled environment, the practical use of portable extinguishers on actual fires. Here, employee Julie Silveira of the diagnostic radiology clinic practices what she's just learned, as instructor Ken Cardinale of the Fire Department looks on. Other activities that day included indoor booths, with discussions centering on home lock systems, whistles, smoke alarms, residential fire safety, crime prevention, and more.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Johnson (left) confers with her supervisor, Alexandra Lampert.

SUMC, Bobby Sox team share a leader

Ann Johnson, administrative assistant in the Department of Pediatrics, remembers when she was doing the flip side of her present job.

"I worked with Rosemary Hornby's human resources group from 1976 till about a year ago, and everything I learned there really helps me a lot now," she said, explaining that her main "turf" in Pediatrics is personnel matters within the department.

"I know what the School is dealing with, personnel-wise, what they expect of me, and therefore what I can expect from them," she said.

Johnson feels at home at Stanford in other ways, having started in the Psychiatry Department from 1969-72. Her mother, a lab technician, has been here since 1961. "We're a Stanford family," said Johnson, listing her other connections here: a sister, her daughter's boyfriend, her father's girlfriend.

In her capacity as administrative assistant, Johnson said employees come in to see her for policy information, with problems regarding supervisors or staff, and questions about taking classes.

Johnson handles another special program in the department, involving a fund established by the California-Hawaii Elks organization to aid child patients.

"We use the money to help families of children and infants who are hospitalized or outpatients here," Johnson said. "The fund generally helps with such expenses as motels, transportation, food, and sometimes funerals.

"Many families are from far away and don't have enough outside resources. We like to be able to help with extra little things as needed." Johnson explained that the pediatric social workers make contact with her when they feel a particular case warrants aid from the fund, which the Elks contribute to on an ongoing basis.

Her work is only one part of Johnson's busy life. The daughter she's raised alone, Sonja, is now 16, so Johnson has lots of time for herself. Lately she's been modeling in the fashion shows, weekends and evenings, of a designer friend.

She likes to roller skate, bike ride, and go camping too, but the most fun Johnson has is with the girls of the Bobby Sox team she manages. "We laugh a lot, but they also know I'm an authority figure."

Johnson first got involved with the Bobby Sox when Sonja, now an umpire, joined at age 10. Every girl aged 9-15 who signs up for Bobby Sox softball gets to play, said Johnson. "Intensive practices often turn into farces."

As a manager, said Johnson, "I walk the sidelines, bite my fingernails, pull out my hair, and jump up and down screaming, 'Why did she do *that?!*' "

Johnson likes to play softball herself. "But I'm not too proficient at it, and I'm certainly not the coach. At practices the kids usually tell me to sit down and watch!"

Johnson, who lives in Mountain View, recalls a period of three years when she served simultaneously as a girl scout leader and Bobby Sox manager. "And one of those years I also headed a parents' group at Sonja's junior high school."

As a single mother Johnson says her life is easier now that Sonja's older. "My life was always centered around her and my job, and that took lots of energy. I liked to keep Sonja involved in lots of activities."

And the same seems to hold true for herself. "I'm just not the kind of person who likes to go home after work and sit. I like to do things," she said, confirming the obvious.

—Lisa Ames

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, OCTOBER 27

Div. of Hematology Conference: "Expression of Oncogene in Normal and Transformed Lymphoid Cells"—Dr. William Schubach (Fred Hutchinson Cancer Research Center, Seattle). Noon, S102d.

Dept. of Neurology Grand Rounds: "Reaction of the Substantia Nigra to Massive Basal Ganglia Infarction"—Dr. Lysia Forno. 5 p.m., Palo Alto Veterans Administration Medical Center, room B108, bldg. 7.

Dept. of Medicine/Infectious Diseases Basic Science Research Colloquium: "Mechanisms of Interferon's Actions"—Dr. Thomas Merigan. 5 p.m., Fairchild Auditorium.

Puberty Education Course: "What's Happening to Me—Learn About Your Changing Body." For boys and girls ages 10-12 and their parents. 7:30 till 8:30 p.m., Children's Hospital at Stanford. Series also offered starting **Nov. 3.** For further information, call Dr. Paula Duke at 327-4800, ext. 538.

Div. of Orthopedic Surgery Grand Rounds: "Traction Techniques"—Dr. Norman Kane, 7:30 a.m., M114; and "Mini Total Hip Replacement"—Dr. Steven Woolson. 8:30 a.m., M114.

THURSDAY, OCTOBER 28

Dept. of Medicine Grand Rounds: "Neurobiology of Ganglioside Storage Disease (or 'When Neurons Get Bent Out of Shape')"—Dr. Dominick Purpura. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology Seminar: "Combinatorial Splicing as a Mechanism for Increasing Peptide Diversity in the Neuroendocrine System"—Dr. Ronald Evans (Salk Institute). 4:15 p.m., Pharmacology Library, R358.

Friends of Psychiatry and Behavioral Sciences: "Psychobiology, New Approaches to Mental Illness"—Drs. Thomas Gonda, moderator, and Jack Barchas, speaker. 8 p.m., Fairchild Auditorium. For further information, call 497-6376.

FRIDAY, OCTOBER 29

Dept. of Pediatrics Grand Rounds: "Bulimia"—Dr. Iris Litt. 8 a.m., M106.

Dept. of Biochemistry Seminar: "Viroida and Virusoids: How are they Related in Structure and Function?"—Bob Symons (Univ. of Adelaide, Australia). Noon, M316.

Child Psychiatry Grand Rounds: "Termination of Psychotherapy"—Dr. Jack Edelstein. 11 a.m. till 12:15 p.m., Children's Hospital at Stanford, Faber Auditorium.

Surgical Pathology Conference: "Interesting Derm Cases"—Dr. David Deneau. 8 a.m., L201.

MONDAY, NOVEMBER 1

Stanford Help Center: "Stress and the Housestaff Family"—Sharon Levin, L.C.S.W. 7 till 8:30 p.m., administrative conference room, Children's Hospital at Stanford. To register call 497-4577.

NOVEMBER 1 THROUGH 6

Postgraduate Medical Education Course: "Intensive Care." 7 a.m. till 5 p.m., Fairchild Auditorium.

WEDNESDAY, NOVEMBER 3

Div. of Orthopedic Surgery Grand Rounds: "Anatomy—Elbow, Forearm, Wrist"—Dr. John Kofoed. 7:30 a.m., M114.

Dept. of Dermatology: "The Inflammatory Process in Human Skin"—Dr. L. Dubertret (Heri Mondor Hospital, France). 8 a.m., Dermatology Library, R136.

Dept. of Structural Biology: "The Genetics of Myosin Assembly"—Dr. Henry Epstein (Baylor College of Medicine). Noon, Fairchild Bldg., D102.

Puberty Education Course: See **Oct. 27** description above.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

...News Notes...

Dr. William Dement, director of the Stanford Sleep Disorders Center, has been awarded the Nathaniel Kleitman Prize for distinguished service in the sleep disorders field.

The award was presented to Dement at the annual meeting of the Association of Sleep Disorders Centers Oct. 23 in St. Louis, Illinois. It is intended to honor contributions in the field, particularly "for those persons who have given generous and selfless efforts in the areas of administration, public relations and legislation."

* * * *

The Department of Cardiovascular Surgery has moved from its former offices in A206 to room A309. The phone number, 497-5771, will remain the same.

* * * *

The Auxiliary this month purchased two fetal heart monitors for the Hospital, at a total cost of about $21,000.

While Marion O'Brien-Adineh is on maternity leave (until January), Pat Toomey will be in charge of the Medical Records Department, announced Carole Price, SUH associate director.

Toomey has served as manager of Transcription Services. In the coming months, she will handle daily operational issues for the entire department in addition to her other responsibilities. She can be reached at 497-5617.

In addition, Patricia Stone from the Department of Health Services Planning will serve as consultant to the Medical Records Department. She will be in charge of such projects as department renovation, and development of a policy and procedure to comply with the new patient access to medical records legislation that becomes effective January 1. She is available at 497-7969.

Price can be reached at 497-5737 if any unforeseen problems arise.

Medical Center security officer tells how to help prevent thefts from offices

With the coming of the fall and winter seasons, an increase in attempted thefts can be expected at the Medical Center, warned Hilary Ryniewicz, director of Safety/Security Services.

All employees are requested to follow the same precautionary measures relating to their personal items within SUMC buildings and grounds as they would in public parking areas, theaters, restaurants, hotels and other public places.

Ryniewicz listed several specific steps departments and individuals should take:

• All purchased equipment should contain the manufacturer serial or identification number. A department record of numbers should be kept and filed for theft reporting. The Engineering Department will loan, on request, an etching tool to allow departments to mark equipment with appropriate identification numbers. Personal items should be marked with the owner's California Drivers License number.

• Typewriters, computer equipment, and other office equipment should be secured to the desks. For office, clinic, Hospital, and lab equipment, specialized locks are available through the Master Locksmith's Office. Engineering work orders should be submitted for hardware and installation. "It is economical to invest $30 for a typewriter lock versus the loss of an $800 piece of equipment," Ryniewicz pointed out.

• Purses, wallets, and other personal items should not be left unattended. "Placing purses and valuables in unlocked desks and cabinets is no assurance they will not be stolen," said Ryniewicz. Valuables should be kept in locked cabinets or desks. "The best protection is to carry your valuables at all times."

• Sums of money should not be kept in locked desks overnight, since locked desks are easily pried open. All petty cash funds should be turned in to the Cashier's Office. Any department dealing with large sums of money should make more frequent deposits, thereby lessening the potential amount of the loss.

• Unrecognized or unauthorized persons in any area should be asked, "May I help you?" or "Are you looking for someone?" This, said Ryniewicz, will normally cause some hesitancy on the part of the individual if a theft is intended.

• Security officers can be reached at the Facilities Protection Office, 497-7222 or 497-7223. These numbers or Communications "86" should be called for assistance and to report any suspicious activity or persons.

• An escort service at the main center is available from 10 p.m. till 12:30 a.m. A motorized vehicle patrols the north, west and south SUMC parking lots, offering rides to incoming personnel for delivery to the main Hospital entrance after a complete tour of the lots has been completed. The vehicle passes the main Hospital entrance every 10 minutes to pick up outgoing personnel for delivery to indicated parking lots.

• An escort service at the Hoover Pavilion is available from 10:30 p.m. till 12:30 a.m. A patrol is stationed at the Hoover west entrance to provide escort for incoming and outgoing personnel. A motorized vehicle patrols the Hoover lot "Q" and east SUMC parking lots, for the protection of all incoming and outgoing personnel.

• Anyone desiring escort service at other than the indicated times should contact Communications at 497-5931, which, in turn, will radio Facilities Protection personnel to arrange for a convenient meeting place and time.



'Tranquillity,' a painting by Win Belton

I-Center shows acrylics by Win Belton

Acrylic paintings by Win Belton, an art teacher at Palo Alto High School, will be shown at Stanford's International Center Nov. 3-30.

A reception honoring the artist will be held from 5 to 7 p.m. Friday, Nov. 5, at the Center.

Born in Louisiana in 1939, Belton moved to Arizona with his family when he was four. Throughout his childhood and teenage years he spent long hours drawing and painting in the desert, growing to love the rich earthy colors, the vast expanse of uninterrupted space, and the beauty of rock formations and mountains.

"The desert taught me that there is beauty in simplicity," says Belton. "This affects my art even today."

While much of his earlier work used the desert and nature as subject matter, he worked in a large abstract manner in a later period, still influenced by the desert and Hopi and Navajo Indian cultures.

The paintings in the International Center exhibition are from subject matter and impressions gathered during recent trips through Europe and this country—"For the most part I have attempted to maintain simplicity, but clarity, in form and color," says Belton.

Belton has a bachelor's degree in education with a major in art from Arizona State University and a master's degree in art education from Northern Arizona University in Flagstaff. He has been on the faculty of Palo Alto High School since 1969.

Japanese films directed by Kurosawa featured in new series at Annenberg

Ms. Audie Bock, an authority on Japanese film, will speak before the opening film of a series by the great Japanese director Akira Kurosawa at 7 p.m. Thursday, Nov. 4, in Annenberg Auditorium on the Stanford campus. A reception will follow.

The series will present three of Kurosawa's greatest films, under the sponsorship of the Committee for Art at Stanford and the Japan Society of Northern California.

Bock spent four years in Japan as a teacher and editor after earning a bachelor's degree from Wellesley College. She is the author of *Japanese Film Directors* and the translator of Kurosawa's autobiography *Something Like an Autobiography*, published by Alfred Knopf last spring.

Bock, currently a Ph.D. candidate at Harvard, also served as assistant producer of the international version of *Kagemusha* under George Lucas.

The films, all except the first at 7:30 p.m., are:

Nov. 4: *Throne of Blood*, Kurosawa's astonishing translation of Shakespeare's *Macbeth*. ($4, $3 for students, including lecture and reception);

Nov. 11: *Ikiru*, the story of a dying man who makes a passionate effort to find out what it is to really live. ($3, $1 for students);

Nov. 18: *Seven Samurai*, Kurosawa's best-known movie, in which a village hires a small band of masterless samurai to save them from marauding bandits. ($3, $1 for students).

Savoyards seek early memorabilia

The Stanford Savoyards will celebrate their 10th anniversary as the resident Gilbert and Sullivan company with a G & S gala in April, 1983.

Performances will be held in Dinkelspiel Auditorium on April 15-17 and April 22-24. Social events for returning Savoyards' alumni will take place the second weekend.

Copies of early programs, cast lists and pictures are needed, and may be sent to Stanford Savoyards, ASSU, Tresidder Union, Stanford, Calif. 94305.

Some faculty and staff decide to accept $5,000!



Don't let your beneficiaries down—put their names on the $5,000 life insurance policy Stanford has provided for each faculty and staff member.

The open enrollment period for the new life insurance plan will end Nov. 10. Many faculty and staff have named beneficiaries, but more have not.

The money could be crucial to a family in the event of an employee's death. If a family member is named as beneficiary, he or she will get it immediately—if not, the money will go into the employee's estate and be unavailable for a period of time.

So return the enrollment form as soon as possible to the Benefits Office. If you have questions, call or visit the special life insurance office in the Old Pavilion, ext. 7-0757, between 9 a.m. and 4:30 p.m., including the lunch hour.

Health care cost limits threaten academic hospitals

Following is an address by Stanford President Donald Kennedy given Oct. 22, on the occasion of the Harvard Biological Laboratories' 50th anniversary:

Old friends and colleagues: it is a great pleasure to be with you on this occasion — at least it is mostly a pleasure. I do find it a little hard to face the fact that I completed my own eight-year term in and around this building during the first half of *its* life, not to mention the first half of *mine*.

Like all of you, it has aged gracefully. Indeed, in some ways it seems to have grown younger. For example, it would not appear necessary today to resort to the Welsh elevator algorithm.

Some of you may recall that the balky elevator at the back corner of the more zoological side of the building could never make up its mirid where to go when two people on different floors pressed the call button at approximately the same time — so it simply stayed where it was. Because the residents of all floors appeared to be equally stubborn about not releasing the button to end the deadlock, the Welsh algorithm was developed. It permitted one to keep the button depressed one second for each year of one's age. That would appear no longer to be necessary.

The remarkable thing about this young/old building though, is how it was built; and that brings me to my subject, which is: how we are going to do biology in the next fifty years?

The Harvard Biological Laboratories, in contrast with almost all other places in which modern biological research is done in this country, were built in the Depression, with private money. Now, the Depression was not a bad time to build something; it had what we now call, in facilities buzz-language, "an excellent bidding climate." But it is awfully hard to find much foundation-financed construction around these days. I doubt that more than two or three private foundations are sinking serious money into buildings of any kind, and especially into research buildings.

Instead, the array of science laboratories now decaying slowly on our nation's campuses were nearly all built by federal programs in the late 1950s and 1960s. But in 1968 the last Federal budget line for health research facilities construction died. In the fourteen subsequent years, not a single significant addition to plant, save a few special cancer facilities, has been financed primarily with federal dollars.

Bricks and mortar

And as for private money of the kind Harvard and Stanford are practiced at raising, it is getting harder and harder to find support for bricks and mortar. A recent Cambridge Associates survey of capital campaigns recently concluded by leading private universities shows that whereas these campaigns in the aggragate, exceeded their goals by 4%, they undershot their capital facilities goals by 35%. Three campaigns under way now, including Harvard's, have raised 68% of their total goal, but only 31% of their combined physical plant goal. So fine research facilities like this one are to be treasured like the slowly maturing clarets of the 50s, and for the same reason — There Aren't Going To Be Any More!

Of course, research can go on despite certain handicaps. Here in the Biological Laboratories we regularly overcame hordes of ants, the aforementioned balky elevators, and escaped flies from the insectary that were, in Fred Hisaw's words, homozygous for impertinence.

But surely we will someday have to do some replacement. And our national problem with aging research facilities accurately represents a much larger challenge that faces biological research in the next half-century — a challenge to which I want to turn in the rest of this talk.

Since 1967, the Federal non-defense budget for scientific research has shrunk by about 37%, and half of that reduction has taken place in the first two years of the decade of the 1980s. That trend is likely to get worse over the next few years, and it may be exacerbated by peculiar events. We live in a time of mysterious, suddenly-appearing government initiatives. Two examples are the NIH's almost- successful effort this year to make off with 10% of the indirect cost reimbursements they owed to the universities in which the work was taking place, and the passage of a Small Business Innovation Act that will set aside more than 1% of the government's basic research money for product innovation in the profit sector.

That's not all. Coupled with the problems of non- replacement of facilities, and of dwindling direct support of research, there is a chronic liability: the deterioration of major research equipment in university laboratories. A recent AAU study documents how rapid changes in instrumentation technology, coupled with the difficulty of financing large pieces of equipment, has resulted in an increasing gap between the very best equipment and that available in most universities. Both Congress and the Administration sources became fully convinced on this point three years ago, and the last Carter budget contained a $100 million line for capital equipment outlays in the universities — a down-payment on what was estimated to be a billion-dollar shortfall. That supplement to the National Science Foundation budget was eliminated when the new Administration came into office, and any hope for special support for equipment has since been abandoned.

To complete this brief but dreary chronicle, I want to spend an extra few minutes on what may turn out to be the most serious matter of all — the threat to the academic medical centers, where much of the biological research in this country is actually done. Their health — both fiscal and intellectual — depends upon their ability to maintain teaching hospitals of first quality. But current government policies are now making that difficult, and soon may make it impossible. Though that issue may seem a little distant to this group, I assure you that it is of overwhelming importance to the overall success of biological research.

The problem, in a nutshell, is the high cost of hospital care. Two approaches to that problem are being taken by federal and state governments: The first is to control costs by limiting reimbursement, and the second is to provide what is called "competition" in the hospital sector. Both approaches sound perfectly reasonable, and yet both are having disastrous consequences. The first effect of reimbursement limitation is, of course, that it raises hospital charges to private patients; hospitals have fixed expenses, and must cover these with revenues. At Stanford University Hospital, for example, if the government paid the full cost of care for Medicare and Medicaid patients, *it would be possible to reduce overall patient charges by 14% tomorrow*

The vulnerability of academic health centers to reimbursement limitation is, furthermore, especially serious because of the severity of their caseloads. Half a dozen Medi-Cal infants in our Neonatal Intensive Care Unit who significantly exceed the average length of stay can have a significant impact on a year's budget because reimbursement is limited by admission and the additional costs of those severe cases fall entirely on the hospital.

The worse thing about reimbursement limitation is that it is such bad policy. What it does, in effect, is to shift the burden of caring for the medically indigent from society as a whole—that is, the taxpayers—to those members of society who happen to be sick, and their insurers. It is a scheme so bizarre that it is hard to believe that it could have been invented by a civilized nation.

The other cost-control strategy involves competitive contracting for hospital services provided to State or Federally supported patients. There is a certain appealing, free-enterprise ring to the word "competitive," but on careful examination that turns out to be just about all this policy has going for it. In any straightforward price competition, the routine (and, it turns out profitable) business will go away from the academic health centers to county hospitals or even to proprietary institutions.

What's wrong with that? After all, people have been arguing for some time that teaching hospitals are more expensive because they load costs properly attributed to research and to training onto the patient's bill. But in fact that is wrong. A number of recent studies — notably a recent one done at Johns Hopkins — have shown clearly that the added costs associated with care in academic health centers has to do with the severity and technical complexity of the caseloads handled there. As smaller hospitals "compete" successfully for routine care, there will be further concentration of the difficult cases in academic centers, followed by further increases in charges to cover the inadequacy of reimbursement. The shortfall will widen, and the teaching hospitals will be driven to further distress.

That will, of course, be bad for research. Although it is not germane to my main point here, I would also emphasize that it is bad for patients. I am no practitioner of medicine, but I have been a teacher of medical students in two institutions, the chairman of a hospital board and of three different national committees on health policy, and the head of a Federal health regulatory agency. (I have also, I might add, been a patient.) From each of these vantage points, I have been impressed by the enormous quality spread in American medicine. There is a mythology to the contrary, much of it generated by the professional organizations of medicine. They are conspicuously devoted to the proposition that there shall be no second-*class* doctors; but it does not follow that there are no second-*rate* doctors.

Difficult cases

The cases that wind up at Stanford or MGH or Peter Bent Brigham are in substantial part there because of quality. These institutions get the difficult cases because they are good. Indeed, sometimes they get them because others are not: the second hip replacement is a more complex procedure when the first is bungled. So a particularly disastrous social consequence of inadequate reimbursement and "competition" is that the effect falls selectively on the institutions of highest quality.

Worse still, these policies are turning us away from an important national commitment to a single system of health care for rich and poor. We are now rapidly returning to a two-tiered system, one for privately-supported and one for publicly-supported patients. It will not take much of this to end the notion of health-care democracy in this country.

Nor, to return to the main point, will it take much of it to put the teaching hospitals out of business, and to make enormously more difficult the doing of biomedical research. To many of you, it may seem a little perplexing that I've spent so much time of this problem when the cuts in research support or the state of facilities and equipment seem to impact our work more directly. But my view of the budget situation is now a little different, and I can tell you that, from here, the total financial threat to research activity now looks larger from this source than from all the others combined.

What I have said so far is that the future of biological research is seriously threatened if we look only at its traditional sources of support: that is, government policies designed to encourage scientific work in general, and those framed specifically to support the health mission. Are there other social purposes to which we might turn for some sign of hope?

The first one we might think of is agriculture. After all, the Rockefeller monies that built this building came from a set of social concerns that combined agriculture and health; and agriculture is the other major outlet, in addition to health for the application of new findings about living systems.

The difficulty here is, of course, that we have developed a unique system of funding research related to agriculture. It involves a special set of institutions, the land grant universities and state agricultural experiment stations, and federal formulas that govern the distribution of funds among them. From time to time, it is suggested that the way in which we support basic research related to health would work better; within the past ten years no less than three major national committees have criticized the formula-funding system and the state of agricultural research in this country, and have suggested alternatives more like the health model.

In 1976-77, when I was serving as senior consultant to the new Office of Science and Technolgy Policy, several of us worked very hard to establish an investigator-initiated program of competitive basic research grants in the Department of Agriculture. Against rather long political odds, we succeeded; but each year the program has been under heavy threat in the appropriations process, and it has barely hung on at an annual level of a few million dollars. The political leverage generated by the regional character of agricultural research funding is very difficult to overcome; the smell of pork hangs heavily in the air. For that reason I foresee little help from this source.

Private funding

The other prospect, now discussed with enthusiasm wherever one goes, is that private industry is suddenly interested in basic research and will step in to support it. A few large programs in a few institutions make this prospect seem the more real, especially since the dollar amounts are reported in terms of endowment rather than operating income.

Even the handful of institutions which have been successful in getting these large projects know that they support work of a rather limited and special character, and that in terms of the total financial needs of the research enterprise they represent a drop in the bucket.

The real situation is better reflected by the total figures. About two-thirds of all the basic research done in the United States is done in the research universities. Of the *total* of all university research budgets, between three and four percent are now met from industry sources. Thus to make up for a one percent drop in federal support, we would have to increase industry's support by 25% That seems to me a very difficult equation, without even reaching the question of whether most of the money would be available on terms acceptable to most of us.

Well, since I don't believe that foundations are likely to return suddenly to the support of research facilities and equipment, since individual donors are not inclined to support such things either, and since I see little hope of rescue from the other applied sector of biology or from private industry, what can I possibly offer by way of a solution?

My conclusion is simple, and it won't surprise you. I think it is perfectly plain that a vigorous and creative research establishment in biology and in the other basic sciences is a social obligation of the most serious kind; and that only the public sector is capable of meeting that obligation. It follows that appropriate policies should be put in place to get it done.

The underlying rationale is that our national productivity, as well as our national health, depends upon a continuing stream of innovation; and that a vigorous research establishment is a fundamental requirement for innovation.

In the case of biology, the relationship of fundamental research to the two great areas of application — agriculture and medicine — should be explicitly recognized, in a way that provides the best possible linkage between high-quality application and the full spectrum of institutions in which basic research is done. To accomplish these objectives, we will need to support basic research, the capital facilities for doing it, and the affiliated institutions in which applications can take place.

Well, doesn't that simply run up against the reality that in this day of expanding budget deficits, everyone must share in the cuts? I think we simply must declare that investments like this one, which involves the future intellectual capital for our society, *have* to be preserved—even at the expense of compellingly attractive alternatives. We need to develop a more fiduciary attitude about programs on which our more distant future is likely to depend.

Not only do we need a new set of budget priorities; we need to examine the policies that govern our institutional arrangements for doing biological sciences. They have been revised in haste, even desperation, to meet current economic exigencies, and as a result their convergent effects are haphazard and often unexpectedly damaging, as in the example of the academic health centers.

So although we must start by recognizing that budgets for the direct support of fundamental research must be maintained and increased, and that our rolling liability in capital equipment and

continued on next page

Libraries committee revises description of visiting scholars

Following is a report of the Academic Council Committee on Libraries for 1981-82:

RLIN

A major concern of the committee this year has been the problems of the Stanford-based computer system called the Research Libraries Information Network (RLIN). Through the director of the libraries, David C. Weber, and the associate director for Technical Service, James N. Myers, we were kept informed of the problems as they affected the working of our own libraries.

The chairman of the committee and David Weber spoke to the Senate in November of 1981, on the occasion of the Senate's discussing the previous annual report, about the serious backlog in cataloging. We invited Edward E. Shaw, then president of RLG, the interuniversity corporation responsible for RLIN, to talk to us on December 7th. The discussion proved to be very general and theoretical and left the committee rather disturbed and far from confident about the administration of RLIN at the time. The committee was probably not sufficiently aware of the particular problems of RLIN to ask useful questions.

We did advise the Associate Director for Public Services, Dale B. Canelas, in the drafting of a report on the problems the libraries were having as a result of RLIN's troubles, and this appeared in the *Stanford Daily* and *Campus Report*. The committee also encouraged Technical Services to set up a means of ascertaining the receipt of new books via Stanford's own CIT.

It would be helpful for the committee to have regular communication with the President of RLG or a very well-informed assistant and this is recommended as an item for the committee's agenda each year. It should be added, however, that the committee has expressed no doubts but that the implementation of a network such as RLIN is necessary and desirable and it hopes that growing pains will soon be overcome.

Branch Libraries

C-Lib continued and completed its discussions with the libraries of all the branch libraries and their committees. This has been a useful process, reassuring us in general of the highly successful operation of the branches but also bringing to our attention problems that do not arise in Green and Meyer.

Space problems have proved to be almost universal. There have been delays in receiving current periodicals; studies conducted by the central library staff seem likely to have reduced this to a bearable level. Some branches, such as engineering, have heavy non-Stanford use, and this involves greater than usual problems of security. Engineering, it should be ofted, also conducted a review of the periodicals it receives and made sizable savings in its budget by eliminating those not regarded as necessary.

Branch libraries are designed to serve a specific campus community. But there are times when unique holdings in one library are essential to the work of people not based in that library and who are hindered by its rules.

We examined such a case, that of the Latin American Studies Committee whose constituency needs to have greater access to materials held in the noncirculating art library, which, furthermore, does not normally give undergraduates access to its stacks. (Limited circulation is available to faculty members only).

The solution apparently lies on one hand in the branch library making accommodations for these special needs, and on the other for the relocation of books by agreement from the branch library to Green. The faculty may not be sufficiently aware of this possibility and, although it is a time-consuming process, costs are seldom a major barrier. A related problem is that of auxiliary storage, which may contain groups of books or periodicals for which browsing is still felt to be important. Here too considerable flexibility on the part of the libraries is possible.

Services

Review of the process of annually renewing or recalling faculty overdues has shown that many books have in effect been recovered for the library system, a fact that both enriches the libraries and prevents the need for costly replacements. The process, however, is in itself expensive and the committee has recommended the elimination of certain steps which should save time and money.

We have had considerable discussion of the privileges accorded to visiting scholars. The numbers involved have increased strikingly in recent years as a result, it is believed, of a certain lack of care in granting this status by departments and also because of the larger category of academically unemployed recent Ph.Ds.

On the other hand, such courtesy by Stanford to visitors (as opposed to faculty and graduate students regularly located in the Bay Area) constitutes very large if often intangible benefits to Stanford faculty and students.

The cost is now estimated to be about $1,000 per visitor each year. Stanford's fees of $200 for visiting academics who are not designated visiting scholars by a particular department compares with $750 for Harvard, $600 for Columbia and $500 for Yale. A revision of these fees to $500 seemed reasonable to the committee, and a revised description of the criteria for visiting scholars has been prepared. **(See accompanying text.)** This will be forwarded to the C-AAA for their discussion.

Meanwhile the University's desire to be helpful to visitors is seen in the provision of a room for up to 18 visiting scholars within the stacks, to be accessible by key, and in arrangements made with San Jose State University this past winter to help faculty while that university's library was temporarily closed.

A continuing subject of discussion has been the feasibility of instituting an automated circulation system for Meyer Library and Green Library, already in operation in a number of major libraries elsewhere. Against the considerable cost for the installation of such a system is the incalculable benefit to users in obtaining information quickly on the whereabouts of an item that is needed. Recent brushes with computer-generated disaster may have induced a degree of caution about embarking on this venture but it seems only a matter of time before automation comes about.

A minor but positive means of lessening the time required for getting a book in hand is the box labeled "borrower's name may be disclosed" on charge slips. But at present only 35 percent of users check this box. When the present charge slip is reprinted the form will be redesigned to make this box more prominent. Until that happens all library users should be aware of this option and the convenience it offers, e.g., letting a colleague get the information needed from the book quickly and returning it to the original borrower quickly.

Collection Evaluation

Attention to the constant problems of processing and circulating books and information may lead us to overlook the less conspicuous but even more fundamental task of collection development and evaluation. This is the only way in which we can hope to maintain the quality and utility of the library and it requires unflagging alertness and the close collaboration of a well-informed library staff with faculty and graduate students.

The committee has been most impressed with our achievements here, under the leadership of the Associate Director for Collection Development, Paul H. Mosher. To give two examples: eleven separate studies were conducted on our holdings in French and Italian, and 10 in the history of science. But the number of searches does not indicate the excellence of the results—that can be appreciated only by the grateful users.

Future Concerns

The retiring chairman of the committee passes on to his successor and colleagues some questions that have been raised and not yet answered: The operation of the Meyer Reserve System (to be reported on by the head librarian of Meyer); the bibliographic control of documents and the prospects for closer integration of the government documents division with the main catalogue; a similar problem with the cataloging of maps. A very immediate concern for the libraries is that of rising domestic book costs after a brief period of steady prices. It is possible that the increase for domestic acquisitions will rise as much as $250,000 in the coming year.

Finally, the university community should be aware of the unceasing and remarkable efforts of analysis of current operations and projected needs and desiderata which come from the library management, the University Library Council and the Provost's Task Force on Library Planning.

In a brief report such as this even a summary of the broad range of concerns addressed in the documents prepared by these groups is not feasible. Clearly the library staff, its advisory groups and this committee are always open to and eager for suggestions. Individual frustrations while working within a very complex system may reveal curable flaws or the beginnings of major problems of the future. But it must also be said that with a finite budget and staff and an infinitely expanding body of information there are inherent limitations in what any library can do. That too we the users need to realize.

Michael H. Jameson, chairman

VISITING SCHOLARS*

Stanford University has a substantial number of visitors each year working in the University for periods ranging from a single quarter to a calendar year. Stanford is glad to have them, for we frequently profit from their presence among us. As the number of visitors increases, however, it becomes more important to have a standardized method of accommodating them. This statement has been prepared for the purpose of describing to members of Stanford's faculty and staff and to the visitors themselves the privileges available to visiting scholars and the procedures established to identify them as members of the University community.

Definition:

A visiting scholar is ordinarily a holder of a doctor's degree from an accredited institution of higher learning in the U.S., or a person either from this country or from another country who is recommended by a member of the Stanford faculty as having equivalent training.

Categories:

Visiting scholars are at the University for two reasons:

1. Persons who are essentially students attending courses and seminars with a view to improving their professional position.

Qualification: Normally such persons would register on an attendance permit basis (see *Information Bulletin* for fees).

2. Persons engaged in creative research or scholarship in conjunction with a department or program and contributing substantially to the academic pursuits of the University. These persons should ordinarily be on the faculty of universities comparable to Stanford or on the research staff of major institutions. Their involvement with Stanford would consist of activities such as the following: full-time or nearly full-time participation in Stanford-sponsored research; full-time or substantial interchange or collaboration with Stanford faculty in scholarly writing; participation in a substantial advising capacity on doctoral theses or departmental matters; participation as a lecturer or seminar leader for a department or university-sponsored program. In his or her letter to the registrar, the department chairperson recommending the visiting scholar should indicate the way the scholar fits these criteria.

Qualification: When a department chairman writes to the registrar attesting to the nature of the University contribution to creative research or scholarship, the registrar will offer the privileges of the University and provide a courtesy card without charge as designation of this visiting scholarship for a stipulated period of months.

**Revised version proposed by C-Lib, May 1982.*

Miller may join National Science Board

President Reagan intends to nominate SRI International President William F. Miller to become a member of the National Science Board.

Former provost of Stanford, Miller serves part-time as professor of computer science and as professor of public and private management in the Graduate School of Business.

Members of the National Science Board are selected "because of their distinguished service in science, medicine, engineering, agriculture, education, public affairs, research management, or industry," according to the *U.S. Government Manual*, and are "chosen in such a way as to be representative of the scientific leadership in all areas of the Nation." The 24 Board members are appointed by the President with the advice and consent of the Senate, for six-year terms.

The National Science Board, in effect, establishes priorities for the National Science Foundation. According to the *Manual*, the National Science Foundation "assigns policymaking functions to the National Science Board.... The policies of theBoard on support of science and development of scientific personnel are generally implemented throughout the various programs of the Foundation."

Miller's nomination to the National Science Board is now awaiting formal submission to the U.S. Senate for its advice and consent.

Kennedy...

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facilities must be reduced, that will not be enough. These measures alone may fail, unless it is also recognized that other, often quite distant policies can do unexpected damage.

The process of policy *renovation*—and I think we are talking about nothing less — is very difficult and complex. The committee structure of the Congress is not well organized to undertake it, and it is hard to get the agreements in the Executive Branch that are necessary to orchestrate it.

But I reluctantly conclude that it is a requirement if we are to see, over the next 50 years, progress equivalent to what this marvelous building has seen in the last half-century.

When I first approached it as a freshman in 1948 to hear about biochemistry from Jeffries Wyman and his colleagues, it looked imposing and forbidding — rather like a monument. As I spent more time in it and became less awed, I saw in much more organic terms, as a bustling, creative enclave of people doing interesting things. I liked it better that way, and I surely hope that this society will not permit it to turn into a monument again.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

5423-VW (JCC:1996) UNIV MANAGER V: Dir of Stanford Univ Press; directs the editorial, managerial & financial aspect of the Press (approx. 35 staff; publishes approx. 40 titles annually; annual sales in excess of $1 million); sets publishing policy; sets budgets & other boundaries for genl publication & for specific titles; determines/authorizes number of copies to be produced; writes/signs all contracts w/ authors & others; QUALIFICATIONS: demonstrated successful exp in editorial, managerial & financial aspects of publishing in univ presses, or equiv exp elsewhere.; N11; $4166-OPEN.

36538-DS (JCC:2220) FINANCIAL MGR I: Respon for efficiently & effectively managing Univ's expenditure sys; mgmt of expenditure sections for high volume processing (Accts Payable/Payroll) incl existing computer sys; interface w/ mgmt in Procurement & Personnel depts for operation of existing sys & develop't of planned computer sys operating fr interdept'l data bases, incl develop't of on-line operating sys to serv needs of Stanford community; timely control, reconciliation, & updating of expenditure accts; financial analysis & risk assessment for expenditure operations, etc; QUALIFICATIQNS: MBA or equiv exp; 5 or more yrs successful exp managing expenditure or other acctg functions in a large complex organization; demonstrated ability in conceptual design & operation of computerized 1 expenditure sys; superior interpersonal skills, incl verbal & written commu; able to interact w/ all levels of mgmt & operations & w/ partners in interdept'l sys.; C09; $2972-3642.

Bargaining unit

24642-FM (JCC:5638) LIFE SCI TECH I: TMS Unit; simple small animal surgery; care of experimental animal; asst w/ histology (section & stain tissues); asst in experiments; lab organization; ordering of supplies; asst w/ computer analysis of data, dark room work, simple machine shop work; QUALIFICATIONS: familiarity w/ basic biology, esp physiology; willingness to learn surgery tech, histological methods, dark room tech & computer operation; ability to work well w/ other people; ability to handle animals; exp in any of the above areas desirable.; A18; $7.5.

36179-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; Work on a proj studying the effect of age on the hypothalamic-pituitary-adr enal axis in rodents & man; proj involves small vessel cannulation, pituitary dispersion & cell culture, radioimmunoassay of ACTH, corticosterone & cortisol, immune precipitation & two-dimensional gel, electrophoresis; respon for the repetitive performace of these assays & recording of procedures & results for daily discussion w/ principal investigator or his post-doctoral associate; QUALIFICATIONS: Bachelor's degree in biology or endocrine physiology required; prior knowl of cell culture tech, radioimmunoassay theory & small animal surgery desirable.; A18; $7.5.

33569-JB (JCC:8890) MISC TECHNICIAN: Toxic Waste Tech picks up radioactive & chemical wastes fr lab on campus & Med Ctr; inspect, compact, & drum low-level radioactive waste; drum vials containing organic chemical solutions; package toxic chemicals for disposal; prep waste disposal kits & distribute to labs; order & maintain supplies for waste disposal; coord & participate in transfer of packed waste to outside contractors for ultimate disposal; analyze & test samples under the direction of Health Physics, Health & Safety professionals; QUALIFICATIONS: 18 yrs of age or older; a licensed driver; physical strength to handle containers up to 55 gallon drums, manual dexterity required; Jr. college level course in chem & modern physics desirable; accuracy, neatness, atten to detail, self-direction, & maturity.; A26; $9.1.

44517-AW (JCC:6398) SCI & ENGR ASSOC TRNEE: 5am-2pm or 12pm-8pm; working w/in Network Control Ctr to serv users & to support the central network staff; coord vender serv techs at remote sites; maintain & test network diagnostic equip't; follow specific operational & documentation procedures; maintain positive relations w/ users, vender-techs & staff; plan & implement construction & repair of cable & other network hardware; may work 80-100% depending on the availability of funds; approx 6 mos training; QUALIFICATIONS: prev exp in an interactive computer environ; good aptitude for data commu theory & application; effective commu skills, both oral & written; exp w/ proj coordination; prev customer relations exp or related conflict resolution duties; aptitude for procedure & proposal writing; aptitude for electro-mech wiring & troubleshooting.; C06; $1761.30-2196.

SLAC

94628-JM (JCC:8880) Program Planner: Develop annual dept'l expense & capital budgets; develop monthly plans of expenditures & manpower requirements; analyze detailed acctg statements; review & update plans; develop proj schedules (CPN) for work being performed by dept(s) fr developm't stage thru design, fabrication, installation & sys testing; prep written status & progress rprts; carry out studies of proposed new projs; participate in prep of long range plans of depts; QUALIFICATIONS: Industrial or Mgmt Engrg degree or equiv required; understanding of basic concepts of program planning; coursework prov training in budgeting & acctg for proj control, as well as critical path network schedule prep, updating, analysis & rprtg; ability to deal effectively w/ scientists, engrs & administrators; ability to commu effectively both orally & in writing.; C07; $2113-3432. APPLY AT SLAC

Nonexempt

25868-PM (JCC:2596) SECY II-SPEC: Work as fac sec for law profs as assigned to handle all classwork needs corresp, expense repts & travel arrangemts; answer phones, xerox, & at times, cut & paste for pre-pbulication; QUALIFICATIONS: typ 70+; excel typ skills; familiarity w/dictation/transription sys essential (s/h a plus); some prev business exp or law offc exp preferred; able to work under extreme pressure, esp related to publishing deadlines; must be detail-oriented & have shown demonstrated ability for making respon judgmts & setting own work priorities; will train on computer/word processor eqpt as needed; send appl/resume to Dana Landsman, Rm 113, Crown Quad, Law School; B12; $1310-1373

20575-BP (JCC:2454) OFFICE ASST II: 50%, 1-5pm; share job; heavy telephone answering; sort I-D mail; filing; prep basic Immigration forms for students on request; prov sec'l serv to staff members; relieve receptionist at front desk as needed; schedule I-Ctr

Hospital

Submit applications to the Hospital Personnel Department, 770 Welch Road, or call 497-6361.

SR. EMPLOYEE/LABOR RELATIONS SPECIALIST-Employee/Labor Relations—#5136—(R-102): RESPONSIBILITIES: Under the genl supvn of the Asst Director of Perosnnel Mgmt, provides guidance & training to the Employee/Labor Relations Staff; recommends & assists in writing personnel policies & procedures & provides guidance to mgmt in interpreting & enforcing personnel policies & State & Federal laws; reviews & counsels regarding corrective action & progressive discipline, investigates employee grievances & EEO/NLRB complaints; provides guidance to Hosp employees on work-related problems; performs special projects as assigned; QUALIFICATIONS: Bachelors Degree in Labor Relations, Business Administration, or a related field & a minimum of 3 yrs' experience in labor relations preferred; working knowl of State & Federal laws, including unemployment insurance is reqd; experience & demonstrated ability to independently process grievances & investigations; good written & oral communications skills reqd; permanent full time M-F 8-5pm; $11.96-18.20 hrly

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Nov. 4, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Guest Room; prov liaison w/ community volunteers as needed; QUALIFICATIONS: working knowl of geography & foreign countries; an interest in inter'l edu & affairs; good telephone voice & manner—courtesy, accuracy; good typing skills plus knowl of business letter layout & usage; send appl/resume to Mary Clark, 2nd fl. 1 I-Center.; B09; $565-595.

31838-BP (JCC:2454) OFFICE ASST II: Asst to personnel offcr, processing PAF's, PDF's, PDF's, sick leave & vacation rprts; operates word processor/approx 2000 ltrs/yr to applicants; filing of confidential informa; distribute budget statments & bkup mat'l; relief receptionist for breaks; taking care of IBM 3 mos/yr; QUALIFICATIONS: typ 50; execise good judgment; willing to work w/ interruption; familiar w/ processing of payroll helpful; accurate typing skills & exp in answering business phones; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B09; $1130-1189.

25870-BP (JCC:2462) OFFICE ASST III: Gift Processing Asst in Law Fund Offc; maintain accurate & detailed gift records for production of rprts to volunteers, & for internal use; maintenance of record keeping files; typing acknowledgments fr Dean of Law Sch'l; typing ltrs to volunteers; preparing lists, charts, etc; occasional evening & wkend work may be nec; QUALIFICATIONS: typ 60; familiarity w/ 9-key adding machine & other offc machines & equip't; exp w/ memory typewriter useful; 2 yrs related exp; good command of English grammar; good commu skills; strong typing skills; good interpersonal skills & organizational ability; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B11; $1246-1310.

15119-BP (JCC:2462) OFFICE ASST III: Vehicle Register Clerk; 7:30-4:30; registers Med Ctr staff & Community Physicians vehicles to park on campus & at Med Ctr; respon for accountability of funds, sales record and processof various transactions; cashiering; posting daily receipts; deposits & submitting payroll deduction records to Med Ctr Payroll Office on 14th of each month; makes deposits & send copies to Dept of Public Safety on a daily basis; issues Clinical Faculty parking cards, temp parking stickers & spec permits as required; daily input on Data Point Terminal to post all permits sold; QUALIFICATIONS: typ 35-50; high sch'l grad or equiv; able to use calculator; basic arithmatical functions w/ speed & accuracy; supv temp employees 8/15 thru 10/31; may be moved to another location during this period of time; send appl/resume to Ramona Kelley, 711 Serra Street.; B11; $1246-1310.

42845-PM (JCC:2462) OFFICE ASST III: 50%, 12-4pm; sec'l coverage for Physicians Assistant Training Program; describe program to interested candidates; mail appl to interested applicants; set up & follow file to completion; organize applicant profile; arrange mtgs; heavy typing; respon to inquiries regarding program content; QUALIFICATIONS: typ 65+; excel typing skills, commu skills, organizational ability (Med exp helpful); send appl/resume to Winifred McCaffrey, 703 Welch F-1, Palo Alto.; B11; $623-655.

30973-PM (JCC:2554) SECRETARY II: Performs duties in Genl Reference Dept; advises in production of, types, photocopies & distributes rprts, schedules, charts, memo, bibliographies & ltrs; performs receptionist duties; miscellaneous clerical duties; maintain records for database search payments & maintains reference & informa desk statistics; maintains dept'l vacation & sick leave records & student payroll; maintain, orders & collects dept supplies; QUALIFICATIONS: prev sec'l exp; prev public serv exp; able to use transcribing equip't; ability to learn Wylbur or other text-editing sys; thorough knowl of English spelling, punctuation, & syntax; good commu skills, both orally & in writing; contact Bob Johnson, Green Lib, Rm 223, 497-3152.; B11; $1246-1310.

23589-BP (JCC:2562) SECRETARY III: Prov complete sec'l serv to 2 faculty & 2 or 3 research staff; prep manuscripts, res proposals & reports, using a computer text editor; initiate appt papers for faculty, res staff & students; prep stores & purchase reqs, interdept'l requests, check requests, expense reports; reconcile expenditure statements for sponsored res accts; prep projs of fund availability monthly; prep draft budgets for res proposals; answer phones; make travel arrangements, etc; QUALIFICATIONS: typ 65; min 3 yrs of sec'l exp; good verbal & written commu skills; good English usage & spelling; able to interface effectively w/ faculty, staff & students; familiarity w/ Univ forms highly desirable; computer text-editing exp or willingness to learn required; send appl/resume to M. Yearwood, Bldg. 460, Room 256.; B14; $1440-1514.

32115-PM (JCC:2596) SECY II-SPEC: Prov sec'l support to 3 Diagnostic Radiology faculty, & coord Div Clerkship; respon for phones & typing of corresp, manuscripts, grants; scheduling appts; travel arrangements, prep expense reports & other Univ forms; maintain faculty files as required, etc; QUALIFICATIONS: typ 65; 2-3 yrs sec'l exp; use of dictaphone & accurate typing; ability to interact w/ med students & med staff; contact: Sally Healey, S078 Med Ctr, 497-7863.; B12; $1310-1373.

30387-PM (JCC:5484) DATA AIDE II: Respon for maintaining control over epidemiological survey & surveillance records fr off-site ctrs; respon for records going thru manual validation procedures; respon of use of computer rprt to make corrections to data; prep of simple statistical tables; phone coverage; clerical support; QUALIFICATIONS: typ 40-50; knowl of large data bases essential; exp w/ data collection & mgmt; familiarity w/ computer processing procedures; exp on Stanford computer helpful (Wylbur, SPIRES, SAS); clerical exp required; send appl/resume to Kay Wilson, SHDPP, 730 Welch Road, Suite E, 497-7822.; B10; $1189-1246.

Carpools

Ride wanted from El Camino Real, next to Emporium in Mountain View—either one way or both. Will pay gas allowance. My hours are 8-5. Call Karen at 7-4847 or 969-3514 (home).

Looking for carpool, Fremont to Stanford, approx. 7 a.m. to 5:30 p.m. Call Steve at 7-9583 or 792-1486.

Established carpool, Oakland to Stanford, Hours 9-6. Non-smokers. George Gianopoulos, 7-6856.

Want to join a carpool from S.F. (22nd Ave. and Balboa area) to Stanford Medical Center 3-4 days a week, 8-5. Call Jackie Bertoletti, ext. 7-5955.

Carpool/rider, nonsmoker. SF to Stanford. 9-5, M-W, F. Call Paul Turner, 497-4275 or 497-3404, or David, 497-2727.

Looking for a ride or shared driving from Santa Cruz, 8-5. Gordon Muir, 497-3380.

Peter Coutts Hill condominiums

Stanford University is accepting applications now for rental of the new Peter Coutts Hill Condominiums.

Rental units will be available in December, 1982. Rental agreements, are month-to-month.

Preference in rentals will be given to members of the Stanford community (faculty, staff, students, etc.) and its affiliates. Families with children are welcome.

Floor plans of the various unit types and rental applications are available from the Peter Coutts Hills rental office, 138 Peter Coutts Circle, Stanford, Calif. 94305; (415) 493-1471.

The unfurnished average rents for the various types are as follows:

A-1	(2br/2ba)	$930
A-2	(2br/2ba/study)	$1,010
A-3	(2br/2ba/study)	$930 (handicapped unit)
B	(2br/2ba/study)	$985
C-1	(3br/3ba)	$1,095
C-2	(3br/3ba/study)	$1,200
D	(3br/3½ba/study)	$1,260

These are average monthly rents. The actual rent on any particular unit may vary slightly according to unit location. Additional rent of $50 per month will be charged for each unrelated adult in excess of one per unit.

Ph.D. oral exams

THURSDAY, OCTOBER 28

Uy-Loi Ly, aeronautics and astronautics, "A Design Algorithm for Robust Optimal Low-Order Controller Using a Finite-Time Performance Index," 4 p.m., Durand, Room 450.

WEDNESDAY, NOVEMBER 3

David Paul Brown, business, "Three Essays in Finance," GSB 243. **Richard Albert Ottolini**, geophysics, "Migration of Reflection Seismic Data in Midpoint Angle Coordinates," 2:15 p.m., Durand 547.



Rental housing

HOUSING NEEDED

□ **Jan. 1 to Mar. 18, '83:** Winter qtr. Visit. prof. seeks furn. 2BR hse or condo. Call COLLECT after 6 p.m. (303) 444-1979, or write: Dr. Paul Swartztrauber, 4496 Dallas Pl., Boulder, Colo. 80303.

□ **Jan.-Mar. '83:** Visit. prof. seeks furn. 1BR apt. Nonsmoker. Call 497-9745 (day) or 328-7064 (eve).

□ **Beg. Oct. 17, '82:** Resp. professional woman, no pets, seeks hsesit. Loc. refs. Call 497-3425 or 854-1543.

□ **Beg. Mar. '83 for 1 yr. (flex):** Finnish-French fam. w/2 daughters seeks 2-4BR hse/apt in Bay Area. Local refs. Will care for pets/garden. EXCHANGE 3BR/2BA apt. & 2 cars in beautiful area 5 mi. from ctr. Paris. Wkly. cleaning incl. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Nov. & Dec.:** Visit prof. & wife seek furn. apt. or hse. Call 857-5068 (day) or 856-0249 (eve).

□ **Jan. 1 to summer '83:** Family seeks 3BR furn. hse in Stanf. area. Will EXCHANGE 4BR hse w/pool on lge water-ski lake in suburb. Miami, Fla. Call (415) 322-0902.

□ **Spring qtr, Mar. 25 to June 10, '83:** Resp. female student (Jr.) nonsmoker, seeks rm. in fac/staff hse, on campus or nrby (bike dist.). Exchange hsehold help &/or payment for rm & brd. Local refs. Need to arr. now, overseas Winter qtr. Call Julie, 327-7951.

□ **NOW:** Stanf. staff & fam. seeks 2-3BR unfurn hse in rustic area anywhere betw. Palo Alto-Redwd City. Call Jeanette, 497-5798 (day) or (415) 364-6289.

□ **Jan. 1 thru Apr. 1, '83:** Visit prof. Radiology seeks 2-3BR furn. apt. or hse. for self, spouse, 2 daughters (13, 16) nr. campus. Nonsmokers. Call Jane, 497-6748 (day) or call COLLECT Dr. Gardiner, (312) 866-5365, or write: 831 So. Loomis, Chicago, IL 60607.

□ **Jan.-Mar. 83:** Retired cpl. seeks furn. 1-2BR apt., condo or hse. On campus or in PA or Menlo Pk. Conv. to shops, campus. Package deal to incl. car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Jan. to Mar. '83:** Retired Conn. cpi visit. their S.U. fam. seek 2BR hse or apt on campus, Coll. Terr., Evergreen Pk. Frpl. pref. Will hsesit or pay reasonable rent. Call Marilyn Davidson, 857-0390.

□ **Beg. Oct. '82 to March '83:** Want to rent 2BR or more, furn. condo. or hse. Please call COLLECT (714) 752-7870.

□ **Jan. to June, '83:** Visit. Prof. & wife from Oxford, no children, seek 2 or 3BR furn hse or apt on or nr campus. Call (415) 857-9263.

□ **Jan. '83 to Aug. '83:** Visit. Prof., wife & 2 children (11, 8) seek 2-3BR furn. hse or apt. nr good public schls. Easy commute to Stanf. WILL SWAP 3BR/2BA hse on 2 acres, 10 min. to U. Mass, Amherst, 1 hr. to Vermont ski slopes, 1½ hr. to Boston. Call COLLECT John Coliura, (413) 253-3287.

□ **Winter Qtr:** Visit. Prof. seeks furn. studio or 1BR apt within 3 mi. of campus. If poss. could hsesit. Call Elissa, 497-4977 (day).

HOUSING AVAILABLE

□ **Jan. '83 for 6-8 mos.:** Furn. campus hse. 2-3BR/2½BA. $950/mo. incl. grdnr & mo. hsecleaning. Call 857-9384 or 497-2065 (day).

□ **Beg. Jan. 1, '83:** College Terr. unfurn. family home, 4BR/2BA, carpets, drapes, AEK, fenced yd., 5 min. bike to campus, W/D nego. Refs. req, nonsmokers. $1250/mo. incl. grdnr. Call 858-0247.

□ **NOW:** Exceptionally lovely campus hse. Unfurn. 3BR/2½BA, study, all appl. Avail. for faculty or staff. $1100/mo. incl. garbage, water. Call Helen Meyer, 497-3453 (day).

□ **NOW:** Fully furn. 2BR/1BA 4-plex in Palo Alto. 4 mi. to campus. Incl. W/D, linens, dishes, carport w/storage. Children welcome. Walk to schls. Call Jane, 968-4957 or Jack, 494-2827.

□ **NOW:** Prof. bus. woman w/fully furn. apt. seeks permanent, mature, neat, clean hsemate to SHARE, who likes cat. Call 329-1225 (day) or (415) 364-3742 (eve).

□ **June 14, '83 to Aug. 29, '83:** Atherton, 5BR/3½BA fully furn. hse. Completely remodelled. Pool. $9000/10 wks. Incl. util., maid serv. twice wkly, gardener. Call (415) 321-4100.

□ **Beg. Nov. 1, '82:** Unfurn. hse, 4BR/2BA, newly redec., W/D. Nr. midtwn in P.A., nice family nghbrhd. 1 yr. lese. $1100/mo. Call (415) 329-0797.

□ **Beg. Nov. 1, '82:** Lge studio, furn. sep. entr. Dinette/ktchn, stor. wall, combo stove, frig, sink. Waterbed, carpet. 20 min. bike to campus. Share W/D & solar heat. Pool. $350/mo. + dep. Call (415) 364-5383, after 5 p.m.

□ **Now thru June, '83:** Sublet, Los Altos, 3BR/2BA, 2 frpl., lrg. priv. yd. $1000/mo. Call (415) 969-0613 (eves).

□ **Now:** Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, W/D, phone, frpl, sleeps 10. $200/wknd, $70/wknight. Call 493-4139 (eve).

□ **Regularly available:** 1 & 2BR furn. & unfurn. apts. & twnhses in Palo Alto & Menlo Pk. in good nghbrhds, close to campus. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Emanuel Ax to give season's first master class on Nov. 6

Pianist Emanuel Ax, winner of the first Rubinstein International Piano Competition and the Avery Fisher Prize, has donated his master class fee to the Stanford Music Guild's Scholarshp Program.

"We are delighted that Ax has chosen to make such a generous contribution to the fund," said Sally Mentzer, coordinator of the Lively Arts community outreach program.

"Artist's fees for master classes and other activities are negotiated separately from the performance fee with the artist's agent. Usually the extra fees range between $500 to $750. Ax made his donation because of his interest in furthering the careers of other pianists."

Ax will give the first master class in Stanford's 1982-83 Master Class Program from 7 to 10 p.m. on Saturday, Nov. 6 in Kresge Auditorium.

A master class involves pre-auditioned students who play for a master artist-teacher, while an audience observes. Proceeds from the classes go to the Music Guild's scholarship fund.

The master class program was started in 1978 and is cosponsored by the Lively Arts community outreach program, Stanford Music Department and the Music Guild.

A committee made up of representatives from the Lively Arts, the Music Department, students, and the Music Guild selects the artists from the Lively Arts series who will give the master classes.

Current members of the committee include: Wolf Kuhn and Naomi Sparrow from the Music Department; Ginny Reyna, Alice Anne Roberts, Sandra Goodwin, Susan Hoebick and Sally Ellenberger from the Music Guild; and Mentzer and Nan Bentley from the Lively Arts. In addition, Cristina Ruotolo and Heather Bentley, music students, are also members of the committee.

"Once the Lively Arts season is announced, the master class committee meets to review the season and decide which performers would best balance the master class program," Mentzer said. "We also look at artists who have given master classes in the past and try to offer new opportunities to Bay Area music students.

"Some of our past classes have been given by: Janos Starker, cello; Elly Ameling, voice; Barry Tuckwell, French horn; Narcisco Yepes, guitar; and Garrick Ohlsson, piano.

"Occasionally an artist is selected from outside the Lively Arts season because they are already performing in the area.

"Auditions for the master classes are held before the class and are open to residents of the Greater Bay Area. Students are invited to apply and are then asked to audition before a panel of judges. Usually about 12 people audition for about four spaces. The students genrally range in age from 16 to adult, but the auditions are open to any age level," Mentzer said.

Other artists in the 1982-83 Master Class Program include: Michael Tree, violist with the Guarneri String Quartet, who will give a chamber music class from 7 to 10 p.m. Sunday, Nov. 14, in Kresge Auditorium. Auditions will be held from 1 to 5 p.m. Saturday, Oct. 30, in Dinkelspiel Auditorium.

Violinist Donald Weilerstein from the Cleveland Quartet will give a violin master class from 7 to 10 p.m. Tuesday, Feb. 15, in Dinkelspiel Auditorium. Auditions will be from 1 to 5 p.m. Saturday, Feb. 5, in Dinkelspiel Auditorium.

Guitarist Michael Lorimer will give the final master class from 7 to 10 p.m. Friday, Mar. 11, in Annenberg Auditorium. Auditions will be from 1 to 5 p.m. Feb. 26, in Dinkelspiel Rehearsal Hall.

To receive an application and for more information, contact Sally Mentzer, (415) 497-2551

Tickets to the Master Classes are available at the door or in advance at Tresidder Ticket Office, (415) 497-4317. General admission is $5; senior adults and non-Stanford students are $3; and Stanford students are free.—Joan Meister

Black Caucus holds election/reception

The Stanford Black Community Caucus (SBCC), a revitalized organization of faculty, students, and staff, whose main goals are to assure the continued existence, improvement, and advancement of the status of the campus Black community, will have its first annual election-community reception 4:30-7:30 p.m. Friday, Oct. 29, at the International Center. All interested are welcome to attend.

The SBCC membership attempts to work closely with university offices and officers that have a significant impact on the viability, personal or professional, of Stanford's Black community. Since its official reconstitution last fall, it has been addressing issues of concern—for instance, it has called for university-wide observance of Dr. Martin Luther King's birthday (Jan. 15).

The SBCC Staff Affairs Subcommittee has been working to develop a statement on Stanford's personnel policies from a black perspective and has discussed its findings with the University Task Force on Personnel Policies, as that group endeavors to develop its own statements.

The SBCC strives to be supportive and self-sufficient, doing as much as it can for the welfare of the community itself. Last December the SBCC hosted a holiday reception, attended by over 300, to welcome new members of the community. A community development-fundraising roller skating party was successful in raising funds that will assist the group in continuing its efforts.

There are plans this year for a community reception, a tribute for retiring Congresswoman Shirley Chisholm and other fundraising activities.

The SBCC has bi-monthly meetings, in which information about activities and opportunities for the community to take advantage of are shared. The organization's newsletter, *A New Day*, is published twice quarterly. Featured in previous issues have been: Dr. Harold Boyd, director of Medical Funds in the Development office; LaDoris Cordell, former assistant dean in the Law School, recently appointed to the Santa Clara County Municipal Court bench; and Barbara Howard, office assistant in Lagunita.



Rush Rehm (Yang Sun) and Johanna Dickely (Shen Teh) in *The Good Soul of Setzuan*

Brecht's *The Good Soul of Setzuan* has five performances in November

The first production in the Stanford Drama Department's 1982-83 season, Bertolt Brecht's *The Good Soul of Setzuan*, opens at 8 p.m. Tuesday, Nov. 9 with performances continuing through Saturday, Nov. 13 in Little Theater.

The production is directed by Geoffrey Reeves, who last year directed *The Recruiting Officer* and the highly acclaimed Nitery production of *King Lear*.

The cast features Johanna Dickey as Shen Teh/Shui Ta, Rush Rehm as Yang Sun, an unemployed pilot, Fritz Brun as the barber Shu Fu, and Frederick Benz as Wang, the water-seller.

The setting is designed by William S. Eddelman, who has used a texture fabric collage of bamboo, burlap, erosion netting and other natural materials to create the drab, colorless environment of a Chinese industrial city.

Douglas A. Russell's costumes reinforce the dull and dreary atmosphere, combining elements of the 1930 movies' view of Chinese dress with a Western reality. Chinese masks are used to indicate the facelessness of the masses. The lighting is designed by Heather McAvoy.

The Good Soul of Setzuan is a parable play, set in modern China. It is the story of three gods investigating the rumor that it is impossible to be good and survive in a world of poverty and hardship. They find a prostitute, Shen Teh, known locally as the "Angel of the Slums," to whom they give money for a night's lodging.

She buys a tobacco shop to enable her to lead a "life worthy of a human being." When her shop is soon over-run by an army of parasites and creditors, she invents a ruthless cousin, Shui Ta, to deal with the situation. Conditions force her to continue the use of the disguise for her self-preservation, with increasingly tragic results.

Brecht wrote *The Good Soul of Setzuan* in Scandinavia between 1938 and 1941. By the time it was first performed in Zurich in 1943, he had emigrated to the U.S. and was living in Santa Monica. To earn a living he sold scripts to the movies and tried to get a New York production of the play.

Brecht sent a revision of the script to Christopher Isherwood in the hope that he would agree to do a translation. Isherwood was not interested, but Kurt Weill was eager to make a semi-opera from the play. This, too, failed to result in a production.

The American premiere was finally done at Hamline University in St. Paul in March of 1948, some five months after Brecht had returned to Berlin. The script was a shortened version of the Zurich script translated by Eric Bentley. In the Stanford production, director Reeves has used the Santa Monica version as a model, adopting many of the cuts and changes in that revision.

The Good Soul of Setzuan is presented instead of the originally scheduled *Turandot*. Tickets are available at Tresidder Ticket Office and by telephone (497-4317) with major credit cards. General admission is $4; students and seniors are $2.

High mass to celebrate Feast of All Saints

The Feast of All Saints will be celebrated by a High Mass in Latin at 8 p.m. Monday, Nov. 1, at the Stanford Memorial Church.

The *Missa Carminum* by the Renaissance composer Heinrich Isaac (ca. 1450-1517) will be sung by the choir of St. Ann Chapel under the direction of Prof. William Mahrt of the Music Department.

The Mass will be celebrated according to current Roman Catholic norms by Rev. Benignus Barat, O.S.B., of the Woodside Priory.

Half-price offer

Faculty and staff basketball season ticket applications have been sent out. Don't miss out on this special half-price offer which includes not only all Pac-10 and tournament games, but also free admission to seven nonconference games.

Return your applications now for the best available seats or stop by the athletic department to place your order.

Empire Brass Quintet to play Ewald, Albinoni, Schumann

The internationally acclaimed Empire Brass Quintet will be presented by the Lively Arts at Stanford at 8 p.m. Wednesday, Nov. 3, in Dinkelspiel Auditorium.

The program will feature Albinoni's "Suite en Sol," Victor Ewald's "Symphony for Brass" (which they have recorded), and Alvin Etler's "Quintet." In addition, the group will play selections to be announced, including works by Robert Schumann, George Gershwin, and Johann Sebastian Bach.

This ensemble has performed extensively in the U.S. and Europe. They have played for Queen Elizabeth II in Boston, and as part of former President Carter's Inauguration. In March, 1982, the Quintet traveled to Japan for their first tour of that country, where they were met with critical praise.

The current Quintet-in-Residence at Boston University, they have recorded nine albums.

Since its founding, the Quintet has been in the vanguard of performing new music, and has commissioned works from such leading composers as Leonard Bernstein, Peter Maxwell Davies, Brian Fennelly, and Gunther Schuller.

The members of the Empire Brass Quintet were introduced to one another by Leonard Bernstein at Tanglewood in 1971. All five are well known in their own right.

Rolf Smedvig, founding member, has served as principal trumpet of the Boston Symphony, and as a member of the Boston Pops and Boston Symphony Chamber Players. As music director of the Cambridge Chamber Orchestra, he has recorded two albums in which he is featured as conductor and soloist. Smedvig is currently on the faculties of Boston University and the Berkshire Music Center.

Trumpeter Charles A. Lewis, Jr., is on the faculty of both the New England Conservatory and Boston University. A recipient of the C. D. Jackson prize, he has appeared as a soloist with the Concert Orchestra, National Philharmonic Orchestra, and in the American premiere of Boris Blacher's *Concerto for High Trumpet and String Orchestra*.

David Ohanian, French horn, was a member of the Boston Symphony and Boston Pops Orchestras from 1970-1981. He has performed with such diverse musical groups as the American National Opera Company with Sarah Caldwell, the Newport Jazz Festival with Barbra Streisand and Henry Mancini. A founding member of the Empire Brass Quintet, he is currently on the faculty of Boston University and director of the Empire Brass Quintet Symposium at the Boston University Tanglewood Institute.

Trombonist Lawrence Isaacson formerly was principal trombone with the San Francisco Symphony. Earlier, he was principal trombone with the Hamilton Ontario Philharmonic from 1978-81. During that time, he also served as trombonist for the Royal Brass Quintet, the Canadian Broadcasting Company (Palace TV series), and the Grant Park Symphony in Chicago. Isaacson has also played with the Chicago Symphony Orchestra.

Samuel Pilafian, tuba, is an original member of the Quintet. As a free-lance musician, he has performed with the Boston Symphony, Boston Pops, Metropolitan Opera, New York Philharmonic, Duke Ellington Orchestra, and Pink Floyd. He has recorded for every major recording company and television network in the U.S. In recent years, he has been principal tuba of the American Ballet Theater Orchestra, and he is currently on the faculty of Boston University and the Empire Brass Quintet Symposium of the Boston University Tanglewood Institute.

For ticket information, call Tresidder Ticket Office, (415) 497-4317.

Mexican novelist Juan Rulfo speaks on campus Nov. 4

Juan Rulfo, considered Mexico's most important writer today, will speak at 7:30 p.m. Thursday, Nov. 4, in Room 2, History Corner, Stanford University.

Known to Mexican movie-goers for his many film scripts, Rulfo is renowned in literary circles for *El llano en llamas* (The Valley in Flames), a collection of short stories, and *Pedro Páramo*, a novel about a powerful landowner who dominates his town like a feudal lord. His work has been compared to that of American author William Faulkner.

"Rulfo has produced a type of narrative without parallel in contemporary literature," says Stanford Prof. Fernando Alegria, himself a writer and poet.

"Basically, Rulfo works with language that seems primitive, the language of peasants and obscure provincial types. Out of these strange and powerful monologues, or isolated pieces of dialogue, emerge tragic characters of great force and depth which speak a message of universal significance."

Rulfo was born in Jalisco, Mexico, in 1918. His family was victimized during the Cristeros War (militant Catholics against the government, 1926-28), and he ended up in an orphanage in Guadalajara.

Rulfo later moved to Mexico City and attended the National University, but never became a regular student. His first work of fiction was published in 1953. He has been honored by international writers' groups and recently was Regents' Lecturer at Barnard College in New York.

The evening with Rulfo is sponsored by the Department of Spanish and Portuguese and the Center for Latin American Studies.

Tyrannicide topic of Nov. 2 lecture

Prof. Franklin Ford from Harvard University will offer a free public lecture on "Tyrannicide and the 20th Century: Variations on a Classical Theme" at 4:15 p.m. Tuesday, Nov. 2, in History Corner, Room 205 at Stanford.

Ford has been the McLean Professor of Ancient and Modern History at Harvard since 1968, and has authored several books on modern Europe. His most recent publications and research are on the history of political assassination.

The lecture is free, and the public is invited.

Amish and Cajuns featured in films

Two films on unique cultures within the U.S. will be featured at tomorrow night's (Thursday, October 28) program of the International Center's Other Cultures film series, beginning at 7:30 p.m. at the I-Center.

"Amish: A People of Preservation" is an award-winning film which examines the religious beliefs, sense of community, and closeness to nature of the Amish people of Lancaster County, Pennsylvania.

"Spend it All" is a beautifully photographed, deeply revealing document of the culture of the Cajun people of southwest Louisiana, capturing the intense bravado and vitality of their lives as well as the energy of their folk music.

The Other Cultures film series is an ongoing I-Center activity, now in its fifth year of weekly presentations, showing informative and entertaining films about people from all parts of the globe. Admission is free, but a 75 cent donation to help defray costs is requested at the door.



The Newport Jazz Festival All-Stars

On Saturday—Hear the Newport Jazz Festival All-Stars!

The legendary Newport Jazz Festival All-Stars will be presented by the Lively Arts at Stanford at 8 p.m., Saturday. Oct. 30 in Memorial Auditorium.

The sextet's program, "The Golden Age of Popular Jazz," will feature a broad cross section of works by America's greatest jazz and popular song composers, including Louis Armstrong, Duke Ellington, Count Basie, Cole Porter, George Gershwin, and Harold Arlen.

The name Newport has been synonymous with the best that jazz has to offer for almost 30 years. An integral part of the festival's story has always been the Newport Jazz Festival All-Stars. Over the years, groups bearing the All-Stars title have been peopled by a diverse array of outstanding artists.

The All-Stars perform in concert halls from Tokyo to Rome spreading America's indigenous art form. The special, swinging "joie de groove" that characterizes every All-Star get-together is the essential secret of the group's international popularity.

The Newport Festival was originally held in Newport, Rhode Island, in 1955. The festival moved to New York City in 1972, but returned to its "roots" in the summer of 1981.

This edition of the Newport All-Stars is directed by cornetist Ruby Braff, who brings a wealth of experience to the bandstand, having played with such names as Tony Bennett, Benny Goodman, Louis Armstrong and Count Basie.

George Wein, pianist and producer of the Festival All-Stars, has dedicated his life to presenting quality jazz events all over the world. The regular pianist of the All-Stars, Wein also produces the Kool Jazz Festival in New York and major cities throughout the world.

Along with Wein is Slam Stewart on bass. Stewart, whose pioneering trademark has always been humming in a higher octave while he bows his instrument, has played with piano giants Arts Tatum and Errol Garner, among others.

Tenor saxophonist Scott Hamilton, a regular guest at many of the world's jazz festivals, plays in the big style of reedmen Paul Gonsalves, Ben Webster, and Coleman Hawkins. Hamilton has been dubbed the front man of the young swing generation.

On the trombone is Eddie Hubble. He is a versatile musician who has played in a host of notable groups including the Duke of Dixieland and the World's Greatest Jazz Band.

Drummer Oliver Jackson's time-right rhythm has been coupled with a long list of jazz greats including Oscar Peterson, Earl Hines, and Teddy Wilson. Jackson is a featured drummer at festivals the world over.

For ticket information, call Tresidder Ticket Office,(415) 497-4317.

Pete McCloskey to speak at I-Center

The Honorable Paul N. ("Pete") McCloskey, U.S. representative from the 12th Congressional District in California, will discuss "Middle Eastern Crises Negotiation" at the weekly Tuesday luncheon/lecture series beginning at noon, Nov. 2 at the Bechtel International Center.

McCloskey will report on his participation in a recent congressional fact-finding mission to the Middle East, during which he and his colleagues met with leaders from all countries involved in the war in Lebanon.

The Tuesday series, now in its seventh year, is focusing this fall on the backgrounds of major world issues which impede peaceful resolution of political and social conflict.

The talk includes luncheon, limited to 40. Tickets are on sale now for $2.50 at the International Center. Brown-baggers are also welcome at no charge. For more information, phone the I-Center at 497-1831.

'American Pictures'—a Dane's view of social underworld

"American Pictures," a haunting multi-media presentation of America's social underworld, will be shown free of charge Thursday, Oct. 28, in Kresge Auditorium at Stanford.

Part one of the film will begin at 6:30 p.m., part two at 8:45 p.m.

Cosponsored by the Afro-American Studies Program, the Stanford Workshop on Political and Social Issues (SWOPSI) and the Stanford Progressive Alliance (SPA), the movie chronicles Danish vagabond Jacob Holdt's five-year journey through the American underclass.

The movie traverses every layer of American society—from black sharecroppers in the deep south to the Rockefeller dynasty. In doing so, Holdt demonstrates, as film critic Richard Martin says, that "each of us, white or black, leftist or rightist, poor or rich, are limited by specific class ideologies, and subject to narrow mindedness."

"American Pictures" is a strong leftist political statement. Holdt says, "I did it because I felt outrage about the neglect of minorities in America."

Nevertheless, Holdt exposes a pathos in America which cuts across class and racial lines. He shows how the black ghetto family internalizes self-hatred in a frustrated desire to achieve society's myths, individual success and the nuclear family. At the same time he shows how the white majority is as often the victimized as the victimizer, turning to alcoholism and escapism despite possessing all the outward signs of success.

Holdt, 35, was raised in a small village in rural Denmark. Hitchhiking his way around the United States at age 22, he sold his blood twice a week to buy film for his camera.

That he came from a welfare-state society with virtually no poverty, adds to the realism with which American poverty amid plenty is portrayed. Individual photos are often brutally graphic.

"People in this country are so used to seeing artificial violence on TV that they can't confront real violence," says Holdt.

He has donated all profits to the American Pictures Foundation, a non-profit organization created in 1978 because of the film's unexpected financial success. The Foundation helped fund construction of a school in Northern Zimbabwe and is currently buying equipment for a cooperative farm with the Danish government.

Holdt and two assistants will conduct a seminar on racism, from 1 to 3 p.m. Oct. 29, in the Forum Room of Meyer Library. He will be available for interviews about his work both before and after the showing.

Nicaragua topic of I-Center talk

Barbara Ulmer, codirector of Our Developing World will present "Nicaragua Behind the Headlines: An Eyewitness Report," illustrated with slides, on Wednesday, Nov. 3, at 4:15 p.m. in the Bechtel International Center.

Ulmer and her husband Vic have led educational trips to many developing nations in conjunction with programs they have presented on China, Sub-Sahara Africa and Central America. During the summer of 1982 they conducted a group through Nicaragua and met with political and church leaders as well as other people involved in many aspects of development in that country since the fall of Somoza.

The Ulmers are teachers at the Fremont High School District and have led study tours through Cabrillo College to Tanzania, Cuba, and China as well as Nicaragua.

The meeting is open to the public without charge. For more information, call 497-1831.

Recreation update

Encina weight room has added weekend hours so that it now opens at 12 noon seven days a week. Hours are: M-Th noon-2 p.m., 3:30-8:30 p.m.; Fri. noon-8:30 p.m.; SS noon-5 p.m. (except on football Saturdays, when it is closed all day).

Roble Gym hours have changed quite a bit; hours are posted on the front door of the gym.

Roble Pool will be open on the football Saturdays that deGuerre Pools are closed: 1-5 p.m. Oct. 30 and Nov. 6.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Oct. 27 to cover the week of Mon., Nov. 8 through Sun., Nov. 14.

LATE ANNOUNCEMENTS

Thurs., Oct. 28. Stanford Geothermal Program Seminar: "Low-Temperature Geothermometry" with George A. Parks, Applied Earth Sciences Dept. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

Roble Political Action Committee Presentation: By Bill Royer, candidate for the 11th Congressional seat. 6:30 p.m. Roble Hall lounge. Open to all.

Fri., Oct. 29. Stanford Black Community Caucus: Reception and election of officers. 4:30-7:30 p.m. Bechtel International Center.

MONDAY, NOVEMBER 1

CROW Women at the Top Lecture Series: Ruth Bader Ginsburg, Judge, U.S. Court of Appeals, District of Columbia Circuit, will speak. Noon. Terman Aud. Open to all.

Biological Sciences Dept. Seminar: "The Nature of Baculoviruses and Their Use for Insect Pest Control" with Dr. Lois Miller, Univ. of Idaho. 4 p.m. Herrin Lab. Room T-175. Open to the public.

Numerical Analysis Seminar: "Compact as Possible Difference Schemes for Second Order Two Point Boundary Value Problems on Nonuniform Meshes" with Andrew White, Los Alamos National Laboratory. 4:15 p.m. Math 380C.

Radioscience Seminars: "Is Titan Wet or Dry?" with Von Eshelman, S.U. 4:15 p.m. McCullough Bldg., Room 127.

Materials Science and Engineering Dept. Special Seminar: "Overview of Amorphous Semiconductors" with Prof. Dr. Josef Stuke, Univ. of Marburg, West Germany. 4:15 p.m. Peterson 550A.

Stanford Film Society: "Touch of Evil." 7 p.m. Kresge Aud. $1.50.

Memorial Church Service: High Mass in Latin for All Saints Day. The *Missa Carminum* and Gregorian chants for the day sung by the choir of St. Ann Chapel. 8 p.m. Memorial Church. Open to all.

TUESDAY, NOVEMBER 2

I-Center Tuesday Lecture/Lunch Series: "Middle Eastern Crises Negotiation" by the Hon. Paul N. McCloskey, recently returned from a fact finding mission in the M.E. Noon. I-Center. Lunch tickets for $2.50 available a week in advance. Brown baggers welcome.

Stanford Museum Art Tours: "Approaches to Painting." A lunch hour tour beginning at 12:15 p.m. Stanford Museum. Open to all. (Tour repeated tomorrow, same details.)

Professional Opportunity Program for Ph.D.'s: "Successful Academic Interviewing Skills." 3:15-5 p.m. CERAS, Room 204.

Communications Design Seminars: "Satellite Systems and Communications Services" with Dan Miller of Hughes Aircraft. 4:15 p.m. McCullough Bldg., Room 128.

History Dept. Lecture: "Tyrannicide and the 20th Century: Variations on a Classical Theme" by Prof. Franklin Ford, prof. of ancient and modern history, Harvard Univ. 4:15 p.m. History Corner, Bldg. 200, Room 205. Public cordially invited.

Fluid Mechanics Seminar: "Boundary Layer Stability—Recent Developments" with Helen Reed, S.U. 4:15 p.m. Skilling Aud.

Applied Physics Colloquium: "The Surface Science of Heterogeneous Catalysis and Its Application to the Photo-Chemical Disassociation of Water" with Prof. Gabor Somorjai, UC-Berkeley. 4:15 p.m. Applied Physics 200.

Computer Science Colloquium: "Meta-Level Programming" with Prof. Michael Genesereth, S.U. 4:15 p.m. Jordan 040.

Roble Political Action Committee Reception: To watch election results. Professors and others have been invited to comment. 5 p.m. onward. Roble Lounge. Open to all.

WEDNESDAY, NOVEMBER 3

Book Sale: Books and periodicals in many fields. Hardbound $1 and up, paperback 25 cents and up, periodicals 10 cents. 11 a.m.-1:30 p.m. Green Library, West Wing, 1st floor, Room 101.

Ecumenical Ministries Wednesday Lunch Discussion Series: "Social Conflict in the American Political Economy" by John Manley. Noon. Casa Zapata (Stern Hall) dining room. Bring a bag lunch or arrange to eat at Zapata.

Physics Dept. Colloquium: "Micro-Miniature Refrigeration—Small is Better" with Prof. William Little, S.U. 4:15 p.m. Physics Lecture Hall, Room 101.

Electronics in Medicine Seminar: "Medical Nuclear Magnetic Resonance Imaging" with Dr. Joel Blank, Diasonics, Inc. 4:15 p.m. McCullough 134.

EE 380 Computer Systems Laboratory Seminar: Topic TBA. The speaker is John W. Hill, Microbot, Inc., Mt. View. 4:15 p.m. Terman Aud.

Colloquium of the Dept. of Chemical Engineering: "On the Flow of a Dilute Solution of a Long-Chain Polymer Near a Wall" with Prof. Nhan Phan-Thien, Univ. of Sydney, Australia. 4:15 p.m. Chemical Engineering Conference Room.

I-Center Slide/Talk: "Nicaragua Behind the Headlines: An Eye-Witness Report" by Barbara Ulmer, co-director, "Our Developing World." 4:15 p.m. I-Center. Public cordially invited.

Stanford Hillel Chorus: Under the direction of Dan Melamed singing Israeli, Hebrew and English music. Every Wednesday night. 7-9:30 p.m. Memorial Church Rehearsal Hall. Everyone welcome to participate. Information at Hillel, 497-1602.

Stanford Hillel Lecture: "Israel in Lebanon: What Was Media's Role?" by Hirsh Goodman, military correspondent and strategic analyst for the *Jerusalem Post*. 8 p.m. Kresge Aud. Public corddially invited.

The Lively Arts at Stanford: Empire Brass Quintet. Rolf Smedvig, trumpet; Charles A. Lewis, Jr., trumpet; David Ohanian, French horn; Lawrence Isaacson, trombone; Samuel Pilafian, tuba. Works by Albinoni, Ewald, Etler, and selections to be announced from works by Schumann, George Gershwin, and J. S. Bach. 8 p.m. Dinkelspiel Aud. $9.50, $8.50; students $3 off these prices.

School of Education Lecture: "Model Muddling in Science: The Case of Jean Tiaget" by Dr. Sophie Haroutunian, St. Xavier's College, Chicago. Noon-1 p.m. CERAS Bldg., Room 204.

THURSDAY, NOVEMBER 4

Stanford Geothermal Program Seminar: "Radon Transport in Two-Phase Reservoirs" with Lewis Semprini, Civil Engineering Dept. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

Biological Sciences Dept. Special Seminar: "Control of Cell Differentiation and Pattern Formation in *Dictyostelium discoideum*" with Dr. Christopher Town, Case Western Reserve, Cleveland, Ohio. 4 p.m. Herrin Lab, Room T-175. Open to the public.

Solid Mechanics Seminar: "Acoustic-Elastic Effect in Textured Materials" with Prof. George Johnson, UC-Berkeley. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Theory of Silicon Surface Reconstruction" with K. Pandey, IBM, Yorktown Heights. 4:15 p.m. Applied Physics 200.

Japan Society/Committee for Art Film Series: "Kurosawa," a talk by Audie Bock, film scholar and translator of Kurosawa's autobiography at 7 p.m., followed by the film, "Kuomonosujo" (Throne of Blood), Akira Kurosawa's rendition of *Macbeth* at 8 p.m. Reception follows. Annenberg Aud. $4 general, $3 students.

I-Center Other Cultures Film Series: "Hildegard Neff's Berlin"—the actress/author is the guide to the divided but freewheeling city; and "Jonathan Miller's London" with the physician and TV/theater personality as guide. 7:30 p.m. I-Center. 75 cent donation at the door.

STARTS Open Mike: 9 p.m. Coffee House. Sign up at STARTS office.

FRIDAY, NOVEMBER 5

Applied Mathematics Lectures: Modern problems in dislocation theory" by Prof. David M. Barnett, S.U. 3:15 p.m. Room 380-C (Mathematics Corner Basement).

Materials Science and Engineering Dept. Colloquium: "Materials for Coal Gasification Combined Cycle Power Plants" with Mr. W. T. Bakker, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

The Lively Arts at Stanford Workshop: Conducted by Anner Bylsma, violoncello, who will coach students of Tom Stauffeur and Irene Sharp. 3:30 p.m. Dinkelspiel Aud. Free and open to the public as observers.

The Lively Arts at Stanford: Anner Bylsma, violoncello. Performs three of J. S. Bach's Six Suites for Unaccompanied Violoncello. Suite No. 2, in D minor, BWV 1008; Suite No. 3, in C Major, BWV 1009; Suite No. 6, in D Major, BWV 1012. 8 p.m. Dinkelspiel Aud. $9.50, $8.50; students $3 off these prices.

Hillel Liberal Shabbat Service: 7 p.m. Old Union Clubhouse. Dinner follows, Kosher/Milchig. Cost of dinner and other details available at 497-1602.

STARTS Great Directors Film Series: "L'Amour Fou (Foolish Love)" 1968, dir. by Jacques Rivette. The story of a couple breaking up, maritally and mentally. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

STARTS Live Entertainment: Night Music. Jazz. 9 p.m. Coffee House. Free.

SATURDAY, NOVEMBER 6

Varsity Football: Vs. Arizona. 1 p.m. Stanford Stadium. Ticket information at 497-1021.

The Lively Arts at Stanford Master Class: By Emanuel Ax, pianist. Winners from the Oct. 23 audition perform and Mr. Ax comments. 7-10 p.m. Kresge Aud. $5 general; seniors and non-Stanford students $3; Stanford students free. Proceeds to the Music Guild scholarship fund.

STARTS Live Entertainment: Nuclear Whales. Rock. 9 p.m. Coffee House. Free.

SUNDAY, NOVEMBER 7

University Public Worship: Student Worship Service, 8:30 a.m.; Robert G. Hamerton-Kelly, dean of the chapel, sermon and eucharist, 11 a.m.; Catholic Mass, 4:30 p.m.

African & Afro-American Studies Lecture: "Autobiography, Biography: The Worlds of Langston Hughes" by Prof. Arnold Rampersad, English Dept. 4 p.m. Ujamaa Lounge of Lagunita Court. Reception follows. Open to all.

ASSU Sunday Flicks: "Taps." 7 & 9:30 p.m. Memorial Aud. $1.50.

The Lively Arts at Stanford: Emanuel Ax, piano. Haydn—Sonata in C Major, Hob. XVI/48; Schoenberg—6 Little Pieces, Op. 19; Beethoven—Variations & Fugue in E-flat Major, Op. 35 ("Eroica"); Chopin—Ballade in F minor, Op. 52, 3 Mazurkas, Andante Spianato & Grande Polonaise, Op. 22. 2:30 p.m. Memorial Aud. $11.50, $10.50, $9.50, $8.50; students $3 off these prices.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

The Map as Landscape. Familiar and new aspects of Western landscapes by Donna Van Dijk. Bechtel International Center. Month of October.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Thirty Miles from Stanford. Photographs by Paul Berger. Tresidder 2nd floor gallery. Month of October.

Paintings on Canvas by David Cusic. Coffee House Gallery. Month of October.

Photographs by Marianne Skogh. Gold Lounge, both entries, and other locations. Stanford Faculty Club.

Maps Are For Use. An assortment of maps and related cartographic reference works available from the Central Map Collection. Meyer Library Lobby. Through November 19.

New clock tower construction starts

Construction of the new clock tower will begin soon at the intersection of Lasuen and Escondido Malls, between the Career Planning and Placement Center and Cubberley Education Building.

The fence is already up at the site and project manager Shirley Chen estimates it will take up to five months to complete construction.

The 45-foot tower will contain the original clock works and four of the five original chimes that started their campus career in the Memorial Church tower destroyed in the 1906 earthquake. The clock works have been returned to first-class working order by Emeritus Prof. Henry Fuchs and volunteer aides.

Funds for the installation, which will include trellises and benches, were provided by an anonymous donor.

CAMPUS REPORT

Volume XV, Number 8 | A publication for Stanford University faculty & staff | November 3, 1982

University defends patent on gene splicing, cloning

Stanford University has responded to issues contained in an Aug. 2 "office action" by the U.S. Patent Office which had rejected a genetic engineering patent application.

The patent application covers the products of basic gene splicing and cloning methods invented by Stanley N. Cohen, professor of genetics at Stanford, and Herbert W. Boyer, professor of biochemistry at the University of California at San Francisco.

Niels Reimers, director of Stanford's office of technology licensing, said the response addresses all objections raised by the Patent Office "and we anticipate it will result in issuing of the patent in the near future."

Reimers said the Patent Office confirmed receipt of the document on Monday (Nov. 1). The university had three months from the Patent Office's August action to respond.

Reimers said he could not predict when a response would be available from the Patent Office.

The university's response included a 22-page amendment and remarks to the original patent application, as well as declarations by several scientists, including Cohen, Boyer and Bernard Weisblum, professor of pharmacology at the University of Wisconsin Medical School, who said information contained in the application was "enabling"—accurate and detailed enough to permit other researchers to use the genetic engineering techniques described.

The attorney noted that issue had been considered crucial, since the patent application includes an incorrect interpretation about how a particular plasmid (a circular form of DNA) was formed during Cohen's and Boyer's original experiments.

However, Weisblum and the university

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It looks like a peculiar kind of Stanford unicorn, but it's not. See page 7.

Indirect cost recovery now 'most volatile' income source

Changes in research volume and indirect cost recovery have become the "most volatile" part of Stanford's income, President Donald Kennedy told the Stanford Faculty Senate Thursday, Oct. 28.

Slower than expected research growth could result in a $3 million shortfall of income in the University's current operating budget of $207 million, Provost Albert Hastorf warned deans and other officers Oct. 20.

The changed outlook could generate "deep and significant controversy," both in Washington and on campus, Kennedy told the Senate.

While National Institutes of Health proposals to cut indirect cost reimbursements 10 percent have been "temporarily resolved," there are still "serious Congressional questions about indirect costs," Kennedy said. He indicated leaders of several universities would be discussing their concerns with representatives and federal officials in the capital.

"It is a very serious problem, both in terms of its leverage on our budget and in terms of political difficulties," he added.

"We're very determined to get it discussed thoroughly. . . . I want to urge faculty members, particularly those who do sponsored research, to make a real effort to understand the full range of complexities attached to this problem, and that really takes a a lot of work."

Last March, Stanford projections assumed research volume would grow about eight percent annually, compared to 11 percent a year earlier. Roth figures were tied to expected inflation.

When the 1981-82 results were examined, "we saw the beginnings of what appears to be a flattening in the total

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Planning Commission reviews Stanford West

The third round in Stanford's effort to build more housing for its faculty and staff along Willow Road in Palo Alto will take place Wednesday night, Nov. 3, before that city's Planning Commission.

The occasion will be the second hearing on the two-inch thick Environmental Impact Report (EIR) for the proposed Stanford West housing project. It follows a review of the design of the project by the Architectural Review Board Oct. 28.

Stanford West is a complex of 1,275 units on 46 acres between the Oak Creek Apartments and the Children's Health Council, and 194 units on 4.3 acres of land at the corner of Willow Road and Pasteur Drive.

Scheduled to be both for-sale and rental housing, the units will be made available to all faculty and staff. If the proposal passes, construction of the first units would begin next spring.

Stanford West, the 140-unit Peter Coutts Hill project, and the 800-bed Governor's Corner student housing project all are in response to the acute shortage of housing for faculty, students, and staff in this area.

At the first hearing of the Stanford West EIR on Oct. 13, speakers questioned the size of the project and the traffic that would result from it. Members of the Planning Commission inquired about the impact on the city's recreational space and programs, the affordability of the units, and the project's "conceptual goals."

"There are several points to bear in mind about Stanford West," states Phil Williams, Stanford director of planning.

"First, the City's policies and practices have encouraged—even required—Stanford to build housing on the Willow Road site. That was a condition of the city's agreement to support a Willow Road improvement project in 1978, and the zoning of the property has been reaffirmed through two City Comprehensive Plan reviews."

"Second, the project is well within the allowable number of units under city zoning: the regulations allow 1,600 units on the 46-acre site, and we are proposing 1,275.

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Wallace Stegner



Ansel Adams

Adams, Stegner, hold rap session

Photographer Ansel Adams and author Wallace Stegner autographed their work at a reception Sunday, Oct. 24, following what was billed as "a relaxed dialogue" between the two old friends in Memorial Auditorium.

Sponsored by the Library Associates and the Committee for Art and introduced by Library Associates chairman Frank Novak, Adams and Stegner talked a little about photography and reaffirmed their dedication to the natural environment.

Asked by Stegner why he no longer made prints from his famous negatives, Adams replied, "To leave my hands free for new work. My schedule was dedicated entirely to darkroom work."

Noting that Adams had compared a negative with a musical score and the print with a performance, Stegner continued, "You have been regarded as a romantic because of your reverence for nature, but your prints are austere and sharp, not vague and romantic. You remind me more of Bach than Schubert."

Adams was delighted. "I'd rather be Bach than Schubert," he said.

Acknowledging themselves to be artists and environmental propagandists, they repeated their concern about the current administration in Washington, D.C.

"The President and James Watt are dangerous to the lives of our descendants," said Adams.

"There is an enormously powerful organization on the side of exploitation," said Stegner, "resisted by a small bunch of Afghans in the hills. The members of all the environmental groups number only a few million."

"People must not emulate the ostrich and stick their heads in the sand," urged Adams.

"People should let themselves be awed by nature," added Stegner, "and take personal responsibility for preserving it."

The Ansel Adams Fund has been newly established at the Stanford University Libraries for the acquisition, care, and enhancement of library resources relative to photography and the environment.

The inspiration for the fund came from Library Associates board member George Waters, a Stanford alumnus and long-time friend of Adams. Waters has supervised the printing of many of Adams's books at Pacific Lithograph Co. and has donated related materials to the new collection, some of which are now being exhibited in the Green Library Lurie Rotunda.

Fariello to direct United Way drive this year; it's time to share

Stanford's annual appeal for the United Way will begin on November 15, under the direction of Lois Fariello, manager of conferences on the campus.

That may not be especially exciting news, but it is important all the same. There are 81 human care agencies depending on the United Way for the coming year and thousands of people depending on them.

The people who work in the Stanford community, and the emeriti and retirees who remain a part of it, have a long record of thoughtful giving to the United Way and its predecessors. Last year we gave $87,532 to support the United Way's good work. (We also gave $39,234 to support the Combined Health Agencies Drive in a separate campus appeal last spring.)

This year the United Way's dependents are in particularly serious need, for reasons that are obvious. The warm economic sun in which most of Silicon Valley is basking does not reach into many of the low-income and no-income corners of Santa Clara and San Mateo counties, or across the Bay.

There are men and women out of work, elderly who need help and children who need to be cared for. Those of us who can help should, and this is just about all of us who see *Campus Report*.

The economy makes it even harder on the needy

Margo Smith fills Law School post

Margo D. Smith, 40, trial lawyer with the U.S. Attorney's Office in San Jose, has been named assistant dean for student affairs at Stanford Law School, effective Dec. 1.

Her selection was announced by Dean John Hart Ely.

Smith, who graduated from the School in 1975, "will be able to deal effectively with all our students and student organizations," Ely noted.

"We are particularly pleased about the contribution she will make to our continuing effort to attract qualified minority students to Stanford. The Law School has a total enrollment of 507 students, of whom 95 are minorities. About one third are women.

Smith succeeds LaDoris H. Cordell, who left Stanford last spring to become a judge in the Santa Clara County Municipal Court.

Formerly Margo Dianne Richmond, Mrs. Smith was born and raised in Rossford, a small town near Toledo, Ohio.

She attended San Jose State University, earning a B.S. in microbiology and premedical studies, and worked as a medical technologist for three years before entering law school.

"Deep inside I always wanted to be a lawyer," she said in a telephone interview.

"My mother recently found my grade school diary, where I had written of my dream of being a trial attorney. But it was awhile before I realized that it was okay for me to become one."

After graduating from Stanford Law School in 1975, Smith passed the California Bar exam and became a deputy district attorney with the Santa Clara County District Attorney's Office in San Jose. She has been with the U.S. District Attorney's Office since 1979.

As an assistant U.S. attorney, she prepares and presents cases to grand juries and for trials involving violations of federal criminal laws. She also supervises beginning lawyers working as law clerks.

"My primary focus at Stanford will be to guide and counsel students and to attract students to the School," she said.

"Stanford offers minority students the same advantages it offers all students—absolutely top-notch legal training and prestige," she observed.

Smith is married to Ezekiel L. Smith, manager of telecommunications at Stanford. He graduated from Stanford Business School with an M.B.A. in 1972.

Smith's appointment gives the Law School its full complement of administrative deans, Ely pointed out.

Already in place are Thomas F. McBride, associate dean for administration, who arrived October 25, and two incumbents: J. Keith Mann, associate dean for academic affairs; and Victoria S. Diaz, assistant dean for development and alumni/ae relations.

"In Keith, Tom, Vicky, and Margo, we will have a set of deans of truly remarkable strength," Ely said.

Associate Prof. Robert Sinclair and research assistant **Tsutomu Yamashita** of the Stanford Department of Materials Science and Engineering have been named recipients of the 1982 Marcus A. Grossmann young author award of the American Society for Metals.

Established in 1960, the award honors the author or authors under 35 years of age whose paper is selected as the best published in the American Society for Metals publication, *Metallurgical Transactions*.

Sinclair is known for his work on crystal lattice imaging with the use of high resolution transmission electron spectroscopy.

Peg Dickson, executive assistant to the provost, has terminated full-time employment at Stanford to devote more time to family and personal interests. She will continue to be available for short-term staff support and special projects.

Assistant Provost **Noel Kolak** has added the responsibilities of managing Hastorf's office to her duties in faculty affairs. She is now located in Building 10 at ext. 7-4830.

Stanford's Center for Russian and East European Studies (CREES) has established a new scholarly prize in honor of its distinguished longtime head, Prof. **Wayne Vucinich**, the Robert and Florence McDonnell professor of East European history at Stanford.

Announcement of the award was made by Dorothy Atkinson, executive director of the American Association for the Advancement of Slavic Studies at the Association's recent convention in Washington, D.C. The AAASS is now headquartered at Stanford.

The prize, the first of its kind in the field, will be known as the Wayne S. Vucinich Prize. It will be awarded annually for at least five years for the most important contribution to slavic studies published in the U.S. in the previous calendar year. Recipients will be selected by a special committee of the AAASS. Each will receive a cash award of $500.

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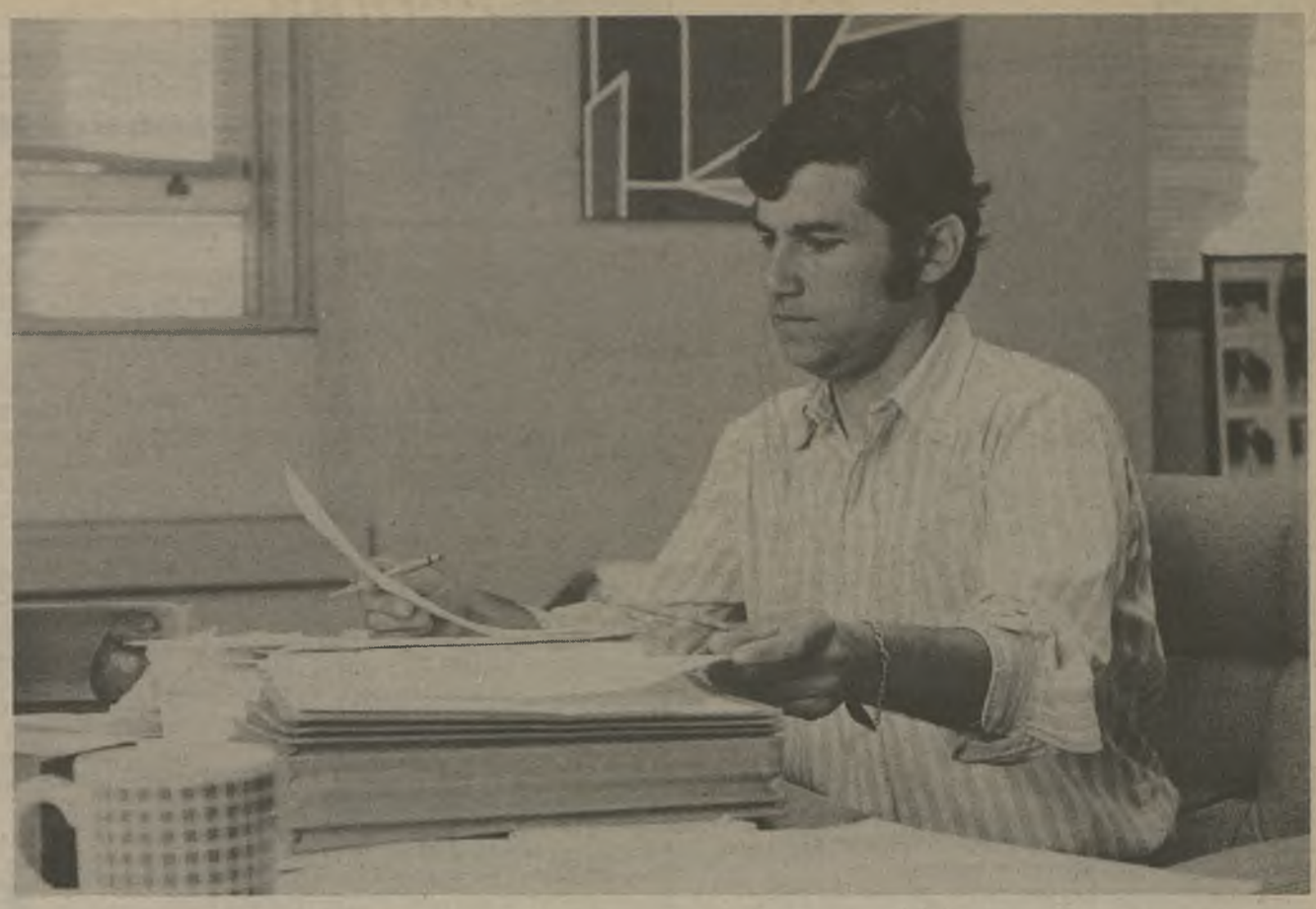
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Michael Wald seeks remedies for kids abused by parents, school teachers

Accepting physical punishment legitimizes force, he warns



Wald working on a new area of academic law – the treatment of juveniles

BY DONALD STOKES

Up to a million children in the U.S. are abused or neglected every year.

Helping them is the deep concern of a 41-year-old Stanford professor of law, Michael Wald.

Wald has gained a national reputation for his development of a set of standards, or model laws, for the legal system to deal with the problem. This effort is part of the Juvenile Justice Standards Project of the American Bar Association, which is trying to persuade all the states to adopt the standards developed by Wald.

Wald's proposals have already influenced both state and federal legislation. He works not only with individual cases but also conducts empirical research studies which break new ground. He also leads in the development of a new area of academic law—the treatment of juveniles.

Wald has for 15 years been pursuing the problem of improving conditions for abused children.

Wald said he did not think the problem was increasing, but that more public attention was now being paid to the problem.

"In some ways I think we physically abuse our children less than used to be the case. Throughout history corporal punishment has frequently been given to children. I think there is less of that now, but neglect and other forms of abuse are common.

"There is more neglect these days, due to the increased number of young, single parents. Gross neglect is usually associated with poverty, and frequently is seen where very young parents are unable to sustain themselves, let alone their children.

"However, it is important to keep all this in perspective. There are 60 million children in this country, and the vast majority are not being abused or neglected.

"Of equal concern to me as parental abuse or neglect are the thousands of juveniles who receive corporal punishment in schools every year. This usually takes the form of paddling on the buttocks.

"I don't think we shall ever lessen the abuse of children until we reach the stage when it is accepted by everybody that people should not hit other people, under any circumstances, and that there are methods for control other than physical force. That is as true for children as for adults.

"While most corporal punishment is probably not harmful, accepting the use of physical punishment legitimizes force. Sometimes it is hard for a parent to draw the line between reasonable punishment and abuse. Thus, all people need to stop using corporal punishment in order to prevent misuse by some.

"Sweden has banned the spanking of children. That would be very difficult to achieve in the U.S. Even in Sweden I don't think they enforce it—it is more a moral statement of guidance."

As part of his work Wald has legally represented children who have been badly treated, and he visits such institutions as foster homes, juvenile detention centers and mental hospitals.

He remembers poignantly the very first child whom he represented legally. Wald was 28 at the time, and was working in the district attorney's office in Ventura.

"That child is often in my mind as an illustration of the care with which one has to deal with these matters, and the power that is in the hands of those made responsible.

"The child in question was an infant boy. I studied the circumstances and found that the mother had had a narcotics problem, but had completed a drug treatment program. I recommended that the baby should be returned to the care of the mother.

"The very day after that baby was given back to his mother they were both killed in an auto accident, after the mother had used narcotics.

"The memory of that incident has remained with me ever since. But I still think I made the right decision. In this sort of work one has to take risks. The easiest course, invariably, is to take a child away from the mother. Yet when we place a child out-of-home usually we do not know what happens to it, or whether the child is still being deprived.

"The awesomeness of the responsibility that courts and lawyers and social workers have in determining what shall be done with suffering children has never been out of my mind."

Also vivid in his consciousness are the frequent visits that Wald has paid to institutions where children are housed.

"Too many of these institutions are inhumane," he said. "That has made me work very hard to keep children out of such places. Also I attempt to improve the quality of care when the resources of the family are inadequate.

"I think of those children who are confined to cells with only small windows and furnished only with a mattress on the floor.

"I think of the 13- and 14-year-olds who have run away from home and when caught are often put into cells with adults.

"There was a case in Idaho this summer where such a child was killed by some of the inmates of a jail.

"I don't say that bad conditions are widespread, but they are all too common."

Asked to name the areas that were worst, Wald replied: "Unfortunately they are all over the nation, urban as well as rural, and they are in a great many states, certainly in California.

"About 60,000 boys and girls are held in adult jails every year, and there are very few adequate adult jails. In California juveniles are usually held in juvenile detention facilities. These vary considerably, from very good in San Mateo to poor in some counties.

"In this state there are only three or four counties which regularly allow children to be put in adult jails, and they are all in rural areas. In some other states it is routine for children to be put in such jails.

The heart of the problem is that we have generally dealt with children in a manner designed to facilitate bureaucratic needs and limited resources, not child development.

"The first essential, after ending the practice of putting children in jails, is to stop warehousing them in large impersonal single-sex institutions.

"Children should be kept in their own homes whenever possible, and if it is inescapable to put them elsewhere they should be placed in facilities accommodating no more than 20 people, and should be allowed regular contact with members of the opposite sex.

Second, we must bring families into the treatment process. Despite our recognition of the relationship between parental actions and child behavior, there have been few meaningful attempts to involve parents in the juvenile court process or in treatment programs. For example, in court proceedings the parents are the forgotten parties; lawyers and judges and probation officers talk to each other, not to the youth and their families.

"Third, we should recognize that developmental and maturing processes continue at least into a person's twenties. Many 16-, 17- and 18-year-old offenders are quite immature. Therefore we must resist pressures to lower the age of juvenile court jurisdiction or to automatically transfer certain

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Wald...

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offenders to adult court."

Asked what it costs to house juveniles, Wald said that it costs $1,000 to $3,000 dollars a month to house a child in a juvenile institution.

Wald believes that, to a degree, so-called criminal conduct often seems to be a rite of passage as part of growing up. "The majority of children admit to conduct at some time that violates the criminal statutes. The offenses include shoplifting, vandalism, joy-riding in stolen vehicles, or assault.

"Most of such juvenile 'criminals' are never caught."

One of the projects to which Wald devotes much time is the Bay Area Foster Care Study, on which he works with Profs. J. Merrill Carlsmith, psychology, and P. Herbert Leiderman, psychiatry. Started in 1978, the study compares the development of abused or neglected children (usually from five to 10 years old) who are left in their own homes, as against another group of children who are in foster care.

"If you leave them in their own home you run the risk that they are going to be injured again," said Wald. "If they are put in foster care the risk is that separation from their parents may prevent them from developing firm attachments to adults.

"Not enough data has been collected in the past to form adequately-based conclusions as to which method is best. We are studying a total of some 80 children, and each child has been studied for two years.

"The data collecting part of the project has just finished. I shall be spending most of the next year on assessing the results. It is too early to draw any preliminary opinions."



The majority of children admit to conduct at some time that violates the criminal statutes. The offenses include shoplifting, vandalism, joy-riding in stolen vehicles, or assault. Most of such juvenile 'criminals' are never caught.

—Michael Wald

Wald's major research interests are in applying knowledge about child development—including psychology, psychiatry, pediatrics and other disciplines—to legal policy. For that reason he spends much time working with people from other departments, partly through the Stanford Center for Youth Development.

He teaches a joint course with Prof. Eleanor Maccoby, the noted psychologist. He also does research which gathers empirical information relevant to legal decisions about children.

Wald was asked whether the soaring divorce rate and the prevalance of single-parent homes were major factors in causing the abuse or neglect of children.

"I don't believe so. You have to bear in mind that from 60 to 80 percent of divorced people remarry," he replied. "What we see today is more of a proliferation of step-children and step-parents.

"It also depends on your time frame. Fifty years ago a great many children left school at 14 or 15 and went into employment. In 1900 only 10 percent of children graduated from high school. This means that in those generations children assumed adult roles very early.

"Children today, on the other hand, probably get less time and attention from their parents than they did a generation ago. There are not many studies on this, and the picture is not very clear, especially as there are so many labor-saving devices today which free parents for other activities, but it does seem likely that there has been a decline in family time.

"One clear fact is that more children are being born out of wedlock. Also, many more children will experience the separation of their parents. Fifty percent of all children born in the 1970s will see their parents split up.

"We don't know yet what the implications of these factors will be for children. There are so many new influences today that have to be taken into consideration. There is the effect of TV, the new attitudes to authority as a result of the Vietnam War, changed conceptions of the role of parents. It becomes very difficult to sort out what is actually affecting children, and in what ways."

As early as he can remember Wald knew that he would become a lawyer, although there was no such tradition in his family.

His main interest, however, was sports, and his great hero was Mickey Mantle. His primary concern, when deciding what college to go to—he had an outstanding record and was offered places at several universities—was which one had the best wrestling coaches.

It was for that reason he picked Cornell, where he graduated with high distinction in all subjects. Injuries made him give up wrestling.

At Cornell he was greatly influenced by his thesis adviser, Ted Lowi. He remembers with pleasure three others: Walter Berns, professor of constitutional law, and Walter LeFebre and George Fox, historians.

"These men had markedly different views of the world, they ranged from extreme left to conservative," he said. "I realized from them how much ideology shaped whatever facts one looked at. They all provided me with important frameworks for viewing government and society."

Between them, the four men he admired turned Wald's mind in the direction of making teaching his career. He went to Yale Law School with the intention of teaching when he graduated. He was unsure whether he wanted to teach law or political science, so he took a joint degree covering both disciplines.

He spent his first two years at Yale concentrating on government and law. In his third year came an experience that was to shape his entire future. Anna Freud, daughter of the famous Sigmund Freud, visited Yale for a year, working with Joe Goldstein, professor in the Law School, and Al Solnit, head of the Child Psychiatry Department. The three studied the problems of children from a legal perspective.

"I took a course with Anna Freud and became extremely interested in the work she was doing, and her approaches. I took more courses concerned with children. As a result of these experiences I turned in the direction of studying the problems of children."

Stanford was looking for a young professor of criminal law. Herb Packer, one of Stanford's all-time greats in teaching, was largely responsible for persuading the School to hire Wald.

Wald taught criminal law at Stanford for three years. He also taught courses dealing with children and the family. He took leave from 1970 to 1972, during which time he was first an attorney with the Ventura County, Calif., District Attorney, then attorney in the Public Defender Service in Washington, D.C., and the Center for Law and Social Policy. After that he worked with the Youth Law Center in San Francisco.

His investigations into the law as it affected children became known to a widening audience. He became involved through the 1970s in drafting, on behalf of the American Bar Association, model statutes that could be used by courts and social service agencies in dealing with the problems of child abuse and neglect.

Wald came to occupy a distinctive role as a teacher and educational innovator in the Law School. He became a leader in developing clinical teaching techniques and a fine instructor in more traditional classroom settings.

A senior colleague observed: "Wald has a unique combination of a realistic pragmatism with respect to legal institutions, considerable sophistication in social science methodology, and a knowledge of the value and limitations of quantitative methods."

One of the novel features of Wald's teaching is a course in which students have the opportunity to handle cases in San Mateo juvenile court. This is done under the supervision of Wald and Bill Keogh, an adjunct professor.

"The children concerned get the most concentrated attention from their young lawyers that you can possibly imagine, and it is great experience for the students. The program is good for everybody."

Wald finds his relaxation in bird-watching. When he goes on trips he always takes his binoculars wtih him, so that he can look for new species. He reckons that he has spotted half of the 600 bird species in the U.S.

The rarest bird he spotted was a smew, a European bird which somehow got lost and came to California.

Wald's wife, Johanna, is also an attorney, and she works for the Natural Resources Defense Council in San Francisco. The Walds have two children: Jennifer, their 17-year-old daughter is a senior at Palo Alto High; their son Jonathan is 13.

"We learned a great deal from our children," smiles Wald.

Ph.D. oral exams

MONDAY, NOVEMBER 8

Edward John Bouwer, civil engineering, "Biofilm Transformations of Halogenated Organic Compounds at Low Concentration," 2:15 p.m., Terman M33. **Masood Namjoo,** electrical engineering, 4:15 p.m., ERL-442.

TUESDAY, NOVEMBER 9

Soung Hie Kim, engineering-economic systems, "Markovian Methodology for Encoding and Updating the Prior Probability Assessment on Dynamic Processes," 1 p.m, Terman, Room 329.

WEDNESDAY, NOVEMBER 10

Nancy Langton, sociology, "The Population Ecology of Labor Unions in the Service Sector, 1875-1980," 3 p.m. Owen House Conference Room.

FRIDAY, NOVEMBER 12

Maurice I. Landstrass, materials science & engineering and electrical engineering, "Semi-Insulating AlGaAs:Cr for Use in High Mobility GaAs MISFET Devices," 3:15 p.m., McCullough 240. **Rohan Peries,** chemistry, "Synthesis and Applications of cis-2-Ethoxyvinyllithium; Synthetic Studies on Podocarpus Dilactones," 2:15 p.m., Chemistry Gazebo. **Steven N. Semerak,** chemical engineering and chemistry, "Excimer Fluorescence and Phase Separation of Polymer Blends Containing Poly(2-vinylnaphthalene)," 4 p.m., Chemical Engineering Gazebo. **Timothy E. Townsend,** applied earth sciences, "Discrimination of Iron Alteration Minerals in Remote Sensing Data," 2 p.m., Mitchell 350.

Public policy 'a major whose time has come,' Rosenberg says

Big government isn't the problem.

Notwithstanding the promises of election-year politicians, a simple reduction in the size of government is not the panacea for America's current problems. Unemployment, poverty, inflation, energy crises, and other ills have multiple causes, and their solution requires sophisticated mixtures of governmental and private efforts.

Now, at Stanford, there is a new program in public policy to provide undergraduate students a well-rounded understanding of the sources of and solutions to public problems.

Currently beginning its third year, it was recently approved by the University as an independent, degree-conferring undergraduate major. The program is designed "to train people to make intelligent use of materials and analyses from several disciplines, and at the same time to combine this ability with a deep awareness of the human values which are inescapably involved in public policymaking."

This quote comes from Stanford's original proposal to the Sloan Foundation for a five-year grant to establish a public policy program for undergraduates. A grant of $367,000 covering the first three years was awarded in 1980 and a two-year extension of $260,000 was awarded last spring. The program succeeded so well in attracting students and majors that it was elevated to a regular undergraduate major after only two years.

"The courses have really taken off; it's a major whose time has come," says Nathan Rosenberg, professor of economics and the program's director.

Kevin O'Beirne, a senior from Coronado and a member of the senior class council of presidents, found the public policy major to be exactly what he was looking for.

"When I arrived as a freshman," he says, "I knew I wanted to go into business eventually, and was eager to get started. I took economics, and, to be honest, didn't like it very much.

"My adviser, John Chubb, slowed me down and told me to take my time—to find a major to match my interests. He helped me learn about public policy and its relevance to business. It sounded perfect. It's giving me as much of a background as I could hope for."

Chubb, assistant professor of political science, is the public policy program's associate director. "It offers a totally interdisciplinary approach and pre-professional training," he says.

Social, political factors

The program's purpose is described this way:

"Public policies rely for their effectiveness upon the nature of responses of actors and organizations in the private sector; hence effective public policy analysis and operation needs to be based on a thorough understanding of social, political and economic factors. Similarly private sector decision-makers must increasingly deal with public sector responses to private initiatives."

The program's interdisciplinary approach focuses on "analysis, management and design" of public programs and institutions.

Students must take five core courses "designed to provide a strong background in analytical skills, an appreciation for the operation of large organizations in the implementation of public programs, and training in humanistic studies to prepare the student to understand the sharp conflicts in values that unavoidably pervade many policy issues."

Up to now, Rosenberg points out, "narrow professional specialization confined within academic disciplinary boundary lines has been a serious impediment to the application of knowledge in the formulation of public policy. The training of men and women who will fill management and analytic posts requires a breaking down of these walls."

The program, he emphasizes, "represents a commitment on Stanford's part to providing a liberal, yet structured education at the undergraduate level, in contrast to the many intellectual smorgasbords of the recent past. . . . The course requirements also allow the student sufficient time and freedom to explore other fields as intensively as he or she wishes."

While B.A. recipients will be prepared to work in the public sector or to excel in graduate programs of public policy, Rosenberg and Chubb expect many of these graduates to go to law or business school, or do graduate work in related fields such as political science and economics.

The program blends rigorous foundation requirements with flexible demands on advanced students. Majors must take 35 units of prerequisites in political science, economics, statistics, organization theory and ethics; the 25-unit sequence of core courses; and then 15 units in some problem-focused area, such as energy policy, health care, food and nutrition policy, or the economics of regulation, which the student designs in consultation with an adviser.

The core courses and their original instructors are:

Politics and Public Policy, Prof. John Manley, political science;

Organizations and Public Policy, Prof. Richard Scott, sociology;

Philosophical and Ethical Issues in Public Policy, Prof. Robert McGinn, values, technology and society;

Economics and Public Policy, Prof. James Rosse, economics;

Quantitative Methods and Their Applications to Public Policy, Prof. Lincoln Moses, statistics.

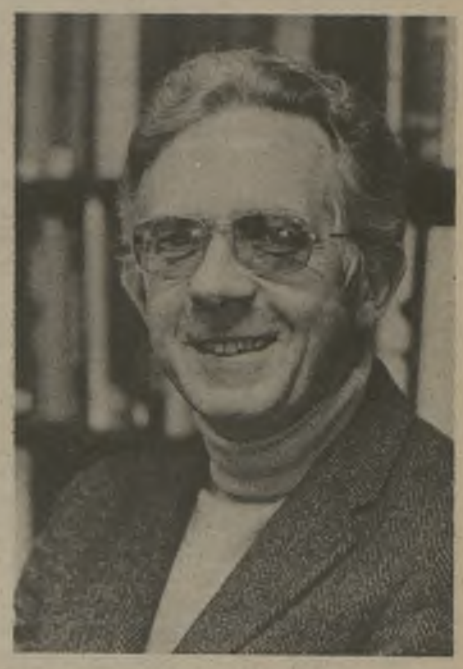
Secret of success

"The secret of our success," says Rosenberg, "is that we recruited and brought into the program highly respected senior faculty members."

Another is that extensive advising time is built into the program. Chubb notes that both he and Rosenberg are available two afternoons a week to talk with students.

"Despite the extensive prerequisites, our core courses are attracting an average of 70 students," says Chubb. "We've enrolled about 25 majors."

The program's faculty members are committed to helping students feel involved. Two or three times a year, there are informal wine and cheese meetings for the majors, and faculty, and other interested students. In addition, there are job seminars.



Successful policymaking must combine the economist's concern (for) efficient solutions with the political scientist's concern (for) feasible solutions.

—Nathan Rosenberg

"The purpose of the program is not to train narrow technocrats," says its initial proposal. "Rather, the purpose is to train people to make intelligent use of materials and analyses form several disciplines, and at the same time to combine this ability with a deep awareness of the human values which are inescapably involved in public policymaking.

"The crucial intellectual step for the student of public policy is to see that all of these different disciplines are valid at some level, but that policymaking requires analysis at *all* of these levels in order to be effective.

"Successful policymaking must combine the economist's concern over the achievement of efficient solutions with the political scientist's concern with feasible solutions. Equally, efficiency and feasibility criteria must be blended with the organization theorist's analysis of large organizations as social contexts within policy decisions are made as well as primary instruments for the implementation of policies. Each of these different levels of social reality has its own unique characteristics, processes and constraints.

"Finally, public policies need to be seen as interacting in a reciprocal way with human values and cherished conceptions of ethical behavior and social responsibilities. Such policies are shaped by and reflect these human values, on the one hand, and they are often fraught with major consequences for such values on the other.

"It is essential that those who are to be professionally concerned with public policy formation should be encouraged to acquire a sensitivity to these important but also frequently subtle and elusive interconnections." **—Harry Press**

Some faculty measures of distinction

STANFORD'S REPRESENTATION IN THE MAJOR ACADEMIES
(all figures include emeriti and emeritae)

			1982	1971
Nobel Prize Winners			10	6
Pulitzer Prize Winners			3	2
National Medal of Science Winners			11	3
Guggenheim Award Winners (since 1964)	Subtotals		154	
American Academy of Arts and Sciences			114	52
Graduate School of Business		4		
School of Earth Sciences		1		
School of Education		1		
School of Engineering		9		
School of Humanities and Sciences		80		
Humanities	11			
Natural Sciences & Math	45			
Social Sciences	24			
School of Law		3		
School of Medicine		13		
Stanford Linear Accelerator Center		3		
National Academy of Sciences			75	38
Graduate School of Business		1		
School of Earth Sciences		2		
School of Education		1		
School of Engineering		8		
School of Humanities and Sciences		49		
Humanities	0			
Natural Sciences & Math	45			
Social Sciences	4			
School of Law		0		
School of Medicine		11		
Stanford Linear Accelerator Center		3		
American Philosophical Society			16	
National Academy of Education			9	2
National Academy of Engineering			37	9
National Institute of Medicine			15	

COMPOSITION OF STANFORD'S FACULTY AS OF SEPTEMBER 1, 1982

Total number of Academic Council Members	1,269	
Total tenure-line faculty	1,144	
Total tenured	835	(73%)
Total non-tenured, but on tenure track	309	(27%)
Total non-tenured-line faculty	125	

Friends of Memorial Church—a new support group for ethical values

A new association, the Friends of Memorial Church, was launched on Sunday, Oct. 24, at a reception in the Atherton home of Roger and Esther Heyns.

Dean Robert Hamerton-Kelly addressed the 100 guests on the Church's need for the continuing help and support of its friends, and the Memorial Church Choir sang.

Specific needs, ranging from pew cushions (to improve acoustics) to the formation of the Church's own Guide service, were listed for those who wanted to support projects immediately.

In explaining the purpose of the Friends, the Church staff referred to the Stanfords' original decision to have a chapel at the center of the quad.

The founders insisted that it be nonsectarian and that all students and members of the community should be welcome there regardless of social or economic status. They wanted the church to be a spiritual and moral influence on the entire university, through teaching the existence of a beneficent Creator, the immortality of the soul, and high moral standards.

In the face of growing skepticism about religion, they hoped the Church would encourage students to develop a philosophy of life characterized by faith, compassionate service to others, and adherence to ethical values.

The Association is *not* a membership in Memorial Church, nor does it signify adherence to any creed or religious belief. It is an association of people who care about the presence of religious and ethical values in the University and wish to help the Church staff in making that presence felt.

The five areas in which the Friends will be active are: dialogue among religions, special projects (such as the Guide to the Church), building community with students, social action issues, and financial needs.

The executive committee of the Friends of Memorial Church includes Hamerton-Kelly, Associate Dean of the Chapel Wendy Smith, Judy Donnelly and David Fulton of the Development Office, congregation member Terry Burton of Palo Alto, and Roger Heyns, president of the Hewlett Foundation.

Those interested in becoming Friends of the Church should contact Wendy Smith, 497-1762.



Memorial Church is the center of campus religious activity

Context users offered alternatives as system's final day approaches

Context users with long-term projects that cannot be completed before the system's closing date of Dec. 31 may use Context programs on a similar computer in the Graduate School of Business (GSB) until July 1, 1983. This temporary arrangement is a special provision for those whose books, dissertations, or similar projects cannot be completed in the next two months.

Announcement of the temporary service was made at one of a series of seminars held to brief users on alternative systems. Application forms for the GSB services are available at the Context Office, 115 Pine Hall (telephone 497-4376).

Context is a computer-based text-processing system that has been operated by the Center for Information Technology (CIT) since the summer of 1981. It is being closed because the system did not generate enough income to cover expenses.

Thus far there have been five seminars for users. Text-processing alternatives reviewed include the CIT IBM 3081 (a large mainframe computer on campus), commercial word processors, personal computers, and the possible use of Context programs on other DEC20 computers at Stanford (Context now uses a DEC2060 computer).

The seminars were presented by Context staff in collaboration with three other divisions of CIT, Adminstrative Information Systems (AIS), Computer Systems and Services (CSS), and Instruction and Research Information Systems (IRIS).

Because closing of Context removes a valuable service for faculty, administrative staff and students who need text-processing capabilities, CIT has accelerated its efforts to improve such services on the IBM 3081 mainframe.

A new full-screen version of the editing system on the 3081 (WYLBUR) is now scheduled to be available around April of next year. In addition, it is planned that a new Xerox 9700 high-speed printer recently installed at CIT will be able to print files prepared with TeX, the powerful text formatting and typesetting program developed by Prof. Donald E. Knuth of the Department of Computer Sciences. TeX has been an important component of Context.

Copy centers move locations, aim for faster turnaround

The Word Graphics Department at Stanford, in cooperation with Green Library, has begun to manage the Green Library Copy Center. The new hours will be 9 a.m. to noon and 1-4:30 p.m. weekdays starting Nov. 8.

The Word Graphics Department, which has made outstanding improvements in quality and service over the last few years, now makes its main copy center at the Graduate School of Business directly available to patrons of the Green Library. This means that 24 hour turnaround is possible for up to 15,000 copies per customer per 24 hour period.

At the same time, the Cubberley Copy Center will be closed and its staff and services moved to Green Library Copy Center. By combining these two centers, Word Graphics will be able to offer Green, Cubberley and other nearby Stanford patrons better service.

Green Library patrons have already begun to notice the efficiency and speed of the "streamlining" concept in copy centers, which had been developed by Word Graphics Manager Arnie Olds and Copy Centers Manager Joan Kruse in the Graduate School of Business Copy Center over the past few years.

Letters to the editor

Panofsky clarifies NAS Panel guidelines

Editor, *Campus Report*:

The front page of the October 20, 1982 *Campus Report* was headlined "NAS Panel Suggests Bar on Foreigners." This referred to the recently released report of the National Academy's Panel on Scientific Communication and National Security, of which I was a member.

The headline is highly misleading and the article following does not do justice to the import of the report to the campus community. A brief outline of those panel recommendations directly affecting Stanford might be in order.

The establishment of the Panel was a response to the ill-advised and threatening actions by the federal government in its attempt to restrict the transfer of scientific information originating from university campuses.

The motivation for such action was the transfer of U.S. technology to the Soviet Union; yet the panel found—with full access to primary data—that universities and open scientific communication have been the source of very *little* of this flow.

In response the Report of the Panel recommended that *access* to or *communication* relating to any university research, be it basic or applied, should be subject to *no restriction of any kind*, unless it met *all* of the following tests:

* The technology is developing rapidly, and the time from basic science to application is short;
* The technology has identifiable direct military applications; or it is dual use and involves process or production-related techniques;
* Transfer of the technology would give the U.S.S.R. a significant near-term military benefit; and
* The U.S. is the only source of information about the technology, or other friendly nations that could also be the source have control systems as secure as ours.

Note that this recommendation would imply that most probably *all* research activities now conducted on the Stanford campus should be open to all.

The panel also recommended that if government-supported research demonstrably will lead to military products in a short time, the work should be classified, and that in consequence most American research universities would refuse to conduct such work on their campuses. Stanford University, under its policy prohibiting delays of publication, would not undertake research in this category.

It is conceivable that a narrow gray area may exist which does not warrant classification but which does meet all of the listed criteria. In that case the panel suggested that *if* such work were to be conducted on campus *no publication delays* should be tolerated and that *access* by foreigners should not be restricted.

However, it was suggested in the report that in such gray areas, particularly those items which involved process or production-related techniques, it would be reasonable to prohibit the outright employment or long-range participation of Soviet or Soviet Bloc citizens in the work. The headline referred to this suggestion.

It was also suggested that in this narrow gray area authors of a paper should be requested, *in parallel* with submitting the paper to a publisher, to also submit to the cognizant government agency the paper for review.

If the government agency representative found certain passages to be undesirable, then by mutual consent the investigator could make modifications; however the ultimate right and freedom to publish should remain with the investigator. The panel also recommended that the provisions of the various existing export regulations (EAR and ITAR) should not be invoked to deal with these gray areas.

In summary, the panel cautioned that universities should be vigilant when considering whether to accept research programs that may develop information that is not to be made available to the public—*either for military or commercial reasons*—lest they compromise the freedom from which they derive their strength. Security by accomplishment rather than restriction has served the Nation well.

I hope that this abbreviated explanation of the Panel's recommendations clarifies the situation which was obscured by the headline in question. Naturally, neither the government nor the universities are bound by the recommendations, but they establish a standard which hopefully will serve to narrow, if not eliminate, differences.

Wolfgang K. H. Panofsky
Director, SLAC

Health and safety report

Accidents and Injuries Occurring Oct. 11-29

Type of accident or injury	Number of incidents	Days Lost
Chemical contact	2	3
Chemical inhalation	1	0
Impact with object	4	2
Non-impact: sharp object	3	0
Non-impact: pinched, crushed, squeezed	3	0
Non-impact: rubbed, scraped	1	5
Lifting	3	8
Overexertion	6	22

Improper waste disposal causes fire

Improper waste disposal caused a garbage fire at Stanford that resulted in minor injuries to a fire fighter and required several specialists to spend hours sifting through more than a ton of trash dumped from a Peninsula Sanitary Service truck.

The incident underscores the need for better waste disposal practices by everyone at the University, according to Dr. Alain DeCleve, director of health and safety.

Palo Alto fire fighter Philip Constantino sustained facial burns when chemicals left in the trash flashed spontaneously.

The incident began about 3:30 a.m. Wednesday, Oct. 27, after Peninsula Sanitary Service made pickups at Hoover Library, Meyer Library, Herrin, Medical Chemistry, Old Chemistry, and the Sleep Laboratory, among other stops. When the driver noticed that the truck contents had caught fire, the load was dumped on the road between the Museum and the Orthopedic Research Laboratory.

Several University and Palo Alto officials sorted through the pile from 8 a.m. to 2 p.m., locating and identifying such solvents and flammable materials as toluene, acetic acid, sulphuric acid, acetone, paint thinner, anhydrous ether, ethyl alcohol, methanol and small flasks of other, unidentifiable chemicals.

"Those chemicals should not have been there," DeCleve said. Waste chemicals—including used containers—will be picked up promptly and disposed of properly when the individuals concerned contact Jennifer Gates of Health and Safety at Ext. 7-4767.

DeCleve and Paul Andrade are investigating the accident further. "We don't want to accuse; we just want to make sure it doesn't happen again," DeCleve said. "People should be really aware of the problems they create when they dispose of hazardous chemical wastes improperly."

Even apparently "empty" containers usually have enough material left inside to cause problems, he emphasized. While Stanford tries to monitor these materials through purchase, storage, use and final disposal "without the cooperation of faculty and others we can't make the program work," he emphasized.

He praised the "extremely helpful" cooperation of several persons in this incident, including Donald West of the city's loss control program; Mike Miller of Palo Alto Sanitation Department; Peter Burns of Palo Alto water control; Norm Lacey and Gene Williams of the Palo Alto Fire Department; and Stanford staffers Frank Jurian and Jean-Guy Bernard, among others.

Walls bulge but Trancos found sound

About 80 freshmen were temporarily evacuated from Trancos House early Friday, Oct. 29, when several non-bearing walls in the structure buckled several inches.

"It happened as we watched" over 15 minutes, said Marsh McColl. "It was the freakiest thing I've ever seen. It seemed like a mass LSD experience."

"It was like a joke at first," said his roommate, Steve Hoffman. Facilities personnel summoned to the scene said the buckling might snap back soon. They suggested temperature changes may have been the cause. The heat was turned on in the building Thursday.

The flexing resulted in minor wall cracks, comparable to those found in older homes. Part of the Wilbur Hall complex, Trancos was built in the mid-1950s.

The buckling was reported at 12:45 a.m. Some students slept in other dorms nearby, while others returned to the building by 2:45 a.m.

The walls affected were those serving as non-load bearing dividers between individual rooms.

In a report to Robert J. Mibach, facilities manager for residence halls, following the buckling Friday, Structural Engineer Robert R. Mathau said: "Wilbur Hall, Trancos House, is a three-story reinforced concrete structure. The reinforced concrete floors, attic and wood roof are supported by both the reinforced concrete exterior walls and the reinforced concrete walls forming the corridors and stairs enclosures. The first floor is a concrete slab placed on a controlled engineered fill.

"The interior partitions separating the rooms are non-structural and are not relied upon to support the building. These partitions consist of light gauge metal studs lined with plaster board.

"In my opinion, the buckling of these non-bearing partitions was probably due to differential deflections of the floors due to the gradual creep of concrete during the past 28 years.

"These walls may be removed or moved elsewhere without affecting the structural integrity of the building."



Mechanical Engineering 103—a typical class

Rain doesn't dampen the derby 'derby'

There are a number of strange ways a Stanford student can get to the head of the class. Consider the "Derby" Derby in Mechanical Engineering 103.

As rain-drenched spectators cheered, students attempted to pass a tennis ball between individuals in five-member teams, using only student-designed hats. "Derby" Derby was all part of the class' annual project.

The students often looked more like creatures from "The Twilight Zone" than engineering students.

Said class member Bruce Forsland, "The thing is everyone looks so funny, but everyone looks so serious doing it."

As the first in a series of classes required for mechanical engineering majors, ME102 doesn't emphasize structural as much as conceptual design. Each student is required to keep an idea log, into which he or she records all ideas for the Derby, including sketches. Students are graded on the logs, which often number up to 50 pages.

Says junior Jim Miles, "The more you think about it, the better your grade. I've only got about 18 pages, and I'm worried. But if we win, I hope they'll take that into consideration."

The race required some serious concentration. Stretched along the Quad corridor, teams had five minutes to get the ball, somehow, from the first person to the last without touching anything but the derbies.

For teams which tried to be the fastest, like "Andy's Heros," that wasn't too hard. In a winning seven seconds, the team's tennis ball went the minimum twelve feet along derbies constructed like a rain gutter.

Teams which tried for distance, like the "Oom-Pah-Pahs," found the task more challenging. They designed a trolley system approximately 80 feet long. Rigged like a chair lift, the "Oom-Pah-Pahs" tried to transport the ball in a small tram car along a string linking each of the derbies, which functioned like supporting pillars. Although unsuccessful, the team had fun just the same.

"We were going to make an oom-pah-pah, with the Bavarian music and the whole bit," said group member Dave Siegel, "but we couldn't find the music, and it turned out to be too difficult anyway."

The actual race wasn't the only difficulty; even the most ingenious members were challenged creatively to design the derby. Construction materials were limited to one 30-inch by 40-inch sheet of three quarter-inch foam core, a 20-foot piece of string, and some hot glue. At least one clever student found a way to bend the rules by unravelling his piece of string, thus giving him an extra 20 feet to work with.

Said T.A. Scott Kim of this kind of behavior, "The problem is carefully designed to allow all sorts of solutions. We want them to be able to bend the rules a little bit."

Miles said his final design took about 15 hours to conceptualize and another four hours to build, an estimate mentioned by members of other groups as well. Because of the structural difficulties encountered in building the derbies, Kim said that this year's assignment was one of the tougher ones.

Last year's class was assigned to build a "rainbow"—actually, a bridge made of cardboard and styrofoam constructed within a five-minute time limit over the pool in Terman Courtyard. Three years ago, students were instructed to design and build a musical instrument which would play, unattended, for exactly 30 seconds without using electricity, fire power, chemicals, or manufactured mechanisms.

Kim remarks: "We just put out the problem, and people go nuts with creative solutions. Obviously outrageousness is a part of this." —**Amy Bernhard**

Students to manage TMU's new patio grill

The Patio Grill, the barbeque that Tresidder runs located in White Plaza every noon, will soon be run by a student managerial group composed of Shoshanah Ferziger, Stephen Miner and Todd Tuomala. Miner and Tuomala are juniors, majoring in electrical engineering and industrial engineering, respectively. Ferziger is a sophomore majoring in industrial engineering. Collectively they have experience in University food service, fast food restaurant, Marriott's Great America and a country club.

They will operate the Patio Grill each lunch hour, 11:30 a.m. to 1:30 p.m., Monday through Friday. Grilled items and beverages will be available for sale.

The Patio Grill cart will also be available for dorm events, special parties, athletic events, or other special activities. For further information, call 497-4321.

Colleges share 'democracy of poverty,' Kennedy declares

Both public and private institutions "are experiencing the democracy of poverty" in higher education, but "the publics have been hit worse," Stanford President Donald Kennedy said Friday, Oct. 29 in Palo Alto.

He spoke at the 25th anniversary celebration of the Foothill-De Anza Community College District, meeting at Rickey's Hyatt House.

"Measures that prevent public support, whether they operate on local tax revenues or national appropriations policies, are tampering with our national future, and they are plain foolish," Kennedy said.

Public funds—whether federal, state or local—are required to secure access to quality higher education, he added. "In the best of all worlds, that will be a pluralistic system, one that allows scope for various kinds of individual preferences or timetables. It needs Foothills, De Anzas, San Jose States, Stanfords, Cals, Pomonas. At stake is nothing less than the intellectual capital on which we will have to run this country."

A convergence of forces now has hit the public sector of higher education hard, he noted. These include "the New Federalism, which transfers responsibilities to the states, but not the resources to meet them; the withdrawal of federal funds for student aid and research; and, especially in the Midwest and Northwest, ailing state economies."

While Stanford is "comparatively better off so far," he added, this depends "heavily on the generosity of our alumni and friends in allowing us to replace public with private dollars for financial aid, on the capacity of our faculty to generate its own research support, and to the now frayed tolerance of our tuition payers.

"But next year's budget is the most difficult we have yet faced, and over the next three or four years our financial future looks perilous."

Kennedy noted that:

"The number of community colleges in America is growing, as is the demand for their services. Nationally, in the 20-year period from 1960 to 1980, the number of such institutions grew from 663 to 1,219. The projections are for a four percent increase in enrollment this fall over last year. In the meantime, applications at four-year institutions are declining.

"That suggests that you are doing something right. And you are. Community colleges offer everyone a chance. They prepare students for a wide range of career choices.

"They are responsive to the needs of the community, of business, of industry. They are flexible, and durable. They have classes and will travel. They are experienced in serving a growing adult population. Their programs are shorter, and strongly focused. And, of course, they are affordable. (Or at least they have been.)



Enroll NOW for life insurance coverage through University

If you already have Stanford life insurance. . .

. . .and think you don't have to do anything further to enroll in the new life insurance program, guess again.

Coverage under the old plans will cease Nov. 30. Those who want to have coverage beginning Dec. 1 must enroll in the new plan by Nov. 10.

If you do not enroll now and want the life insurance later, you will have to present satisfactory evidence of insurability to obtain coverage.

The special life insurance office in the Old Pavilion (ext. 7-0757) is open from 9 a.m. to 4:30 p.m. to answer questions, send information packets to those who lost them or threw them away, and wonder why everyone waits till the last minute to do what they could have done two months ago.

And even if you don't want to buy life insurance, you can name a beneficiary for the $5,000 policy provided by Stanford for every faculty and staff member.

Student follows Kennedy's advice, analyzes President's talk at Oregon

Senior English major Thomas W. Wood offers the following as a rejoinder to President Donald Kennedy's address to the University of Oregon fall convocation on Oct. 4. The text of his remarks appeared in the Oct. 6 Campus Report.

Although I am not myself a freshman, after reading the latest issue of the Stanford *Observer* and being much inspired by President Donald Kennedy's challenge to the members of the class of '86 to develop "confidence in (their) own capacity to analyze, interpret, project, experiment and reason" and to include in their thinking the "suspicion that they ("they" being the class of '86's professors) may have it wrong," I decided to accept this challenge myself and to put it into practice by taking a close look at the language in President Kennedy's own fall convocation address to the University of Oregon.

I hope that by doing so I will encourage others to examine with care the words of those whose trust it is to help us to grow as thinking human beings during our time here at Stanford.

Excerpt One: A tight, effective interplay between biological and cultural evolution. . . has produced a rate of change in the cultural milieu that is bewildering and sometimes frightening.

How does a "tight" and "effective" interplay between biological and *cultural* evolution produce a rate of change in the *cultural* milieu that is "bewildering" and "sometimes frightening?" The only "tightness" that would help an "interplay" to produce a bewildering and frightening rate of change in the relationship between its own constituent partners would be a "being closely held or fastened," a tightness like that between a python and a field mouse. As for "effectiveness," since the interplay is ultimately producing bewilderment and fear, surely "effective" here cannot mean successful." Moreover, since the results of evolution are said to be random, "effective" here cannot mean "reaching its goal," either.

It could mean "impressive," although that meaning would hardly be cheering; an atomic explosion is certainly no less "impressive" than an evolutionary interplay. My guess would be that "effective" here is merely "having effect," a meaning that tells us next to nothing about the interplay, since virtually anything "has effect." No, an interplay between partners that results in change in one of those partners at a rate that is bewildering and frightening cannot be described either as "tight" or as "effective."

Excerpt Two: This close coupling between the two kinds of evolution offers the optimistic suggestion that in time there is likely to be a complementary relationship between our biological endowment and our cultural arrangements.

Do "couplings," even close ones, "offer suggestions"? Even if they do, they might have been embarrassed to offer this one, since all the evidence that I, at least, know of, "suggests" that if there is a trend between these evolving partners, it is away from, rather than towards, a complementary relationship. Perhaps never have our "cultural arrangements" borne less relation to our "genetic endowment." In fact, "cultural arrangmements" such as, say, chemical plants, are busily re-arranging our "genetic endowment" as I write.

Excerpt Three: What Darwin had accomplished. . . was the demonstration that a single way of knowing was no longer possible.

If this is true, then why, since Darwin's day, has one and only one way of knowing, namely, the scientific way of quantitative demonstration, become increasingly the one and only acceptable, the solely respectable, approach to knowledge?

When governmental agencies or corporations (or even universities) are trying to reach important decisions, do they limit themselves immediately to mathematical models of research and development? Or do they consult, as well, philosophers and poets, astrologers and priests? It seems that if Darwin did indeed demonstrate that a single way of knowing was no longer possible, his scientific children have failed to grasp his demonstration.

Excerpt Four: Finding an ethical path within our new vision of self is one of the great tasks of contemporary humanism.

This is a task that we will certainly fail not only to complete, but even to begin, as long as the humanities are dominated by the quantitative methods of science, methods which, by their very nature, exclude consideration of the ethical.

Excerpt Five: There is no one single objectively verifiable world; there is, rather, the cat's world, the bird's world. . . .

Is this statement itself objectively verifiable? If it is verifiable, is it so only in the world of human senses and human instruments of measurement? Or is a cat or a bird (each in its respective world, of course) free to object to it?

Moreover, is President Kennedy actually suggesting that my cat and I are in totally different worlds? If so, then what have I been feeding in my backyard? If not, if my cat's "world" and my "world" are not totally different, then what does Mr. Kennedy mean by "world"? Does he mean it in the sense one finds in a phrase like "the business world"? If so, my world and my cat's world perhaps differ little more than do "the academic world" I spend my daylight hours in and "the office world" in which my friend spends hers.

Furthermore, I, at any rate, view it as significant that when I approach my cat to scratch her back, she responds to me as if I were something familiar, as if I were what I assume is the equivalent, in feline experience, to a human being. In short, when I approach her, thinking that she is a cat, she does not run away from me, thinking I am a carnivorous tuba.

Finally, when my cat and I are both in the backyard, and a dog suddenly appears at the fence, she and I both respond by training our respective senses on the same spot; one of us does not respond by looking up a tree, although this might well be my cat's second response to the appearance of the dog.

My point, then, is this, that in taking the case of my cat and me, one is not confronted with two different worlds, but with two interpretations, one feline, one human, of the same world. Only a science in which reality had given way to methodological zeal could move an intelligent and capable man like President Kennedy to utter what, even to an untutored ear like mine, is complete nonsense. Now, if you will excuse me, I have to get my cat her dinner.

In my introduction to this analysis of President Kennedy's convocation address, I stated that my purpose was to encourage others, particularly the members of the class of '86, to undertake their own analyses of what they see and hear at Stanford. I would like now, in closing, to state my second purpose.

Assertions like those of President Kennedy in his address are by no means unique. Nor has the inadequacy of the beliefs that they express escaped detection; many able critics, most recently Prof. Robert C. Cohn in an article in the *Campus Report*, have exposed this inadequacy. What has seldom been attempted is a demonstration of the incoherence of such beliefs. My second purpose in offering this analysis has been to provide just such a demonstration. An inadequate view is undesirable; an incoherent view, quite literally, is unthinkable. When the president of a great university finds himself lauding incoherence as a guide to the future, perhaps it is time for all of us to think again.

Health insurance costs soar

In a letter to all faculty and staff this week, Manager of Benefits and Records Jeannie Thomas announced the open enrollment for health plans and the new health plan rates for calendar year 1983.

The open enrollment period will be November 10 to December 10, 1982. During this time eligible faculty and staff may 1) enroll in a base health plan without providing evidence of good health, 2) add dependents, and 3) change from one plan to another. The new coverage becomes effective January 1, 1983.

"The rate increases for 1983 are significantly higher than those the University has experienced in previous years, especially in the Blue Cross plan," Thomas explained.

Rate increases for the plans are: Bay Pacific 20 percent; Blue Cross 63.7 percent; Kaiser 16.3 percent; TakeCare 17.5 percent and Major Medical 18.5 percent.

The percentage increase realized by employees in each of these plans will be different from the percentage stated above depending on whether or not eligible dependents are covered.

"In the case of Blue Cross, the plan is experience rated," Thomas said. "This means that the costs are a direct result of how much money is paid out in claims to Stanford faculty and staff each year. The fact is that our employees have increased significantly their use of the Blue Cross plan. Blue Cross is paying out in claims much more than they are receiving in premiums; therefore they increased the rates dramatically," Thomas explained.

"We are seriously concerned about the impact of these cost increases on faculty and staff," Thomas said. "During 1983 we will be working to redesign the current plan to allow for more choices of coverages and rates for 1984."

Plans such as Bay Pacific, Kaiser and TakeCare are Health Maintenance Organizations (HMOs). These plans control their costs more effectively through the use of designated physicians and hospitals. Rate increases for these plans are community-rated and reflect anticipated costs based on utilization by the entire community, not just the University.

Thomas commented further about the trend of health care costs. "The current projections of annual medical cost inflation are in the 20-30 percent range. In general, the consumers of medical services have been unaware and unconcerned with rising medical care costs: in health plans such as Blue Cross and Major Medical, consumers have had little or no incentive to hold costs down. Through employer's plan designs, group health benefits have provided protection against virtually all types of illness and injury with minimal out-of-pocket expenses for the employees. Thus employees have been isolated to a great degree from the true cost of health care services. Additionally, technical advances have improved the quality of medical care and saved many lives. Hospitals and other providers have had to increase costs to cover expenditures for new and advanced equipment. Also, as people live longer they add to the utilization and costs."

To help offset the significant rate increases for 1983, the University is increasing its contribution for employees from $30 to $40 per month. The $40 is added to the subscriber-only cost of the least expensive plan, this year Kaiser, making the total University contribution $89.89 per month. This amount is applied toward the cost of employee coverage and the coverage of eligible dependents in whichever plan the employee chooses.

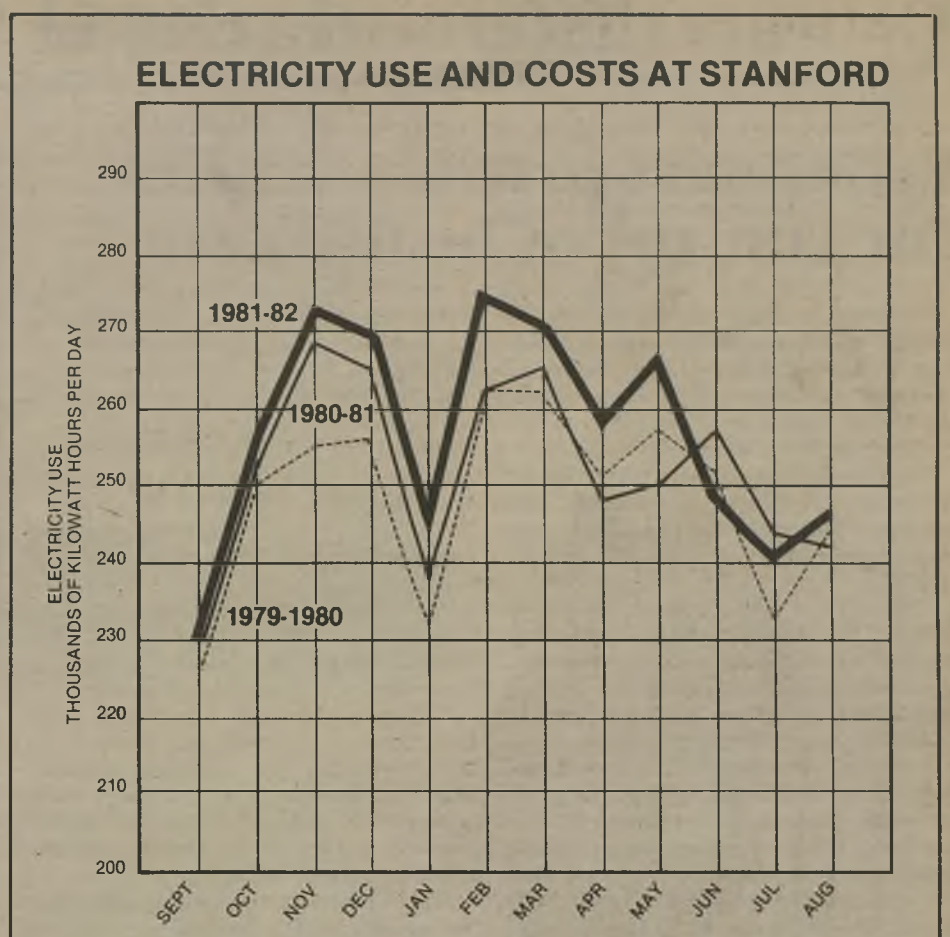
Below is a chart listing the health plan rates effective January 1, 1983. Payroll deductions for January coverage will begin with the December 22 paycheck.

During the open enrollment period and thereafter, the Office of Benefits and Records in the Old Pavilion is extending its hours from 9 a.m. to 4:30 p.m., including the lunch hour. A new telephone line will be added for insurance questions. The new number will be published in the Nov. 10 *Campus Report*. In the meantime, you may call 7-1777 if you have questions concerning health coverage. Employees at SLAC may call the SLAC Benefits Office (ext. 2357).

	Full Time			Half Time**	
	Cost	Stanford Pays	You Pay	Stanford Pays	You Pay
Kaiser Base Plan					
Subscriber only	$ 49.89	$49.89	$ 0.00	$24.95	$ 24.94
Subscriber and 1 dependent	99.78	89.89	9.89	44.95	54.83
Subscriber and 2 + dependents	143.95	89.89	54.06	44.95	99.00
TakeCare Base Plan					
Subscriber only	$ 69.30	$69.30	$ 0.00	$34.65	$ 34.65
Subscriber and 1 dependent	137.10	89.89	47.21	44.95	92.15
Subscriber and 2 + dependents	182.10	89.89	92.21	44.95	137.15
Blue Cross Base Plan					
Subscriber only	$ 89.12	$89.12	$ 0.00	$44.56	$ 44.56
Subscriber and 1 dependent	168.91	89.89	79.02	44.95	123.96
Subscriber and 2 + dependents	223.51	89.89	133.62	44.95	178.56
Bay Pacific Base Plan					
Subscriber only	$ 82.20	$82.20	$ 0.00	$41.10	$ 41.10
Subscriber and 1 dependent	136.58	89.89	46.69	44.95	91.63
Subscriber and 2 + dependents	175.67	89.89	85.78	44.95	130.72
Major Medical					
Subscriber only	$ 8.73	$ 8.73	$ 0.00	$ 4.37	$ 4.36
Dependents with Base	23.13	*	*	**	**
Dependents without Base	32.29	*	*	**	**

* For eligible employees appointed 75 percent time or more, the University will pay $8.73 per month for the employee's Major Medical coverage and also will contribute a maximum of $89.89 toward a base medical plan. If any balance remains from the maximum University contribution, the balance will be applied toward the cost of the dependent Major Medical coverage.

** For eligible employees appointed less than 75 percent, but at least 50 percent time, the University pays one-half the amount in the full-time "Stanford Pays" column. If any balance remains, then it will be applied toward the cost of the dependent Major Medical coverage.



How electricity costs are rising:
(Stanford's bills for the last three fiscal years)

1979-80: $3,802,123
1980-81: $4,895,625
1981-82: $6,973,386

Electricity costs jumped 42 percent to nearly $7 million during 1981-82

Stanford's electricity bill increased by a whopping 42 percent in the last fiscal year, largely the result of a $2 million PG&E rate increase.

Electricity costs should remain stable for the next year, but natural gas costs are expected to rise 20 percent.

Electricity rates have actually declined in recent months because of the large amount of inexpensive hydroelectric power that has been available from last winter's record snowfall. Gas prices will go up due to the Reagan administration's active pursuit of deregulation.

Electricity consumption rose 1.6 percent last year, a substantial improvement over the 2.5 percent increase recorded during the 1980-81 fiscal year.

About half of the increase can be traced to a change in operating practices in Stanford's Central Energy Facility. Plant personnel are producing more chilled water for air conditioning with electric chillers rather than with natural gas-fueled steam chillers. Despite the increase in electricity consumption, this change resulted in a net savings of $180,000 last year.

Other variations in electricity use result from increases in building square footage, installations of experimental and office equipment, and the weather, which affects use of electric heating and air-conditioning equipment.

Conservation efforts continue to pay off. For example, Stanford realized electricity savings of nearly two million kilowatt-hours, or about $150,000, from just two projects: the campus lighting modifications and the Graduate School of Business building retrofit.

Pre-law conference coming Nov. 11

This year's annual Pacific Pre-Law Conference will be held at Stanford University Thursday, Nov. 11.

Sponsored by the Academic Information Center at Stanford, the conference will be held on the second floor of Tresidder Union from 10 a.m.-3 p.m. It provides a unique opportunity for individuals interested in legal careers to meet with representatives from more than 50 law schools.

In past years, all American Bar Association-approved law schools in California have been represented, as have many law schools in the mid-west and the east-coast.

Pre-law advisors have designed the conference so that undergraduates may meet law school admissions officers in an informal setting. The conference gives students a chance to discuss their personal interests and backgrounds with representatives or to find out more about specific programs at individual law schools, such as the existence of legal aid clinics, programs in law related to women's issues, or the availability of courses in international law or taxation.

In some cases, law schools will be represented by students as well as admissions officers. In prior years, several hundred students from more than 25 Bay Area colleges have attended the conference.

Medical Center MEMO

Economist predicts battles for control of health care

"Physicians face the likelihood of several unpleasant battles for control of health care," warns Victor Fuchs, a respected Stanford University health economist and a leading figure at the National Bureau of Economic Research.

Among the battles is one that reflects a larger set of issues. "This battle pits university physicians and hospitals against community physicians and hospitals," he said.

"Biomedical research funds are flat or falling," Fuchs said. "Medical education support is dwindling and, increasingly, the university medical centers are looking for patient care to shore up their revenues.

"At the same time, these centers dread the notion of having to compete for patients in a tight economic environment. In many cases their concern is well justified. When it comes to delivering bread-and-butter care, the chances are the community physicians and community hospitals can render this care less expensively.

"On the other hand, community physicians also feel threatened. They see these gleaming medical centers, big and powerful, and they see the famous specialists, and they wonder how the medical centers will use their power, and whether it will be at the expense of community physicians and hospitals."

Fuchs expressed his views in a recent article in *Health Affairs*, a professional journal.

The Stanford economist said the conflict among physicians is exacerbated by the proliferation of activities at the frontier of medicine that should be done primarily in medical centers, but which increasingly are being undertaken in community hospitals.

"This proliferation frequently is bad economics and bad medicine," Fuchs wrote. "Eventually, this conflict is going to produce a need for better understanding, a need for compromise, a need to realize the legitimate concerns of each part of the health care enterprise."

Fuchs said he is particularly concerned about what will happen to medical research.

"Without research, without advancing the state of knowledge, medicine will begin to run up against blank walls," he said. "There is only a limited amount of improvement in health that can be purchased by increasing the number of physicians or by adding hospital beds.

"The great advances have always come from figuring out better and newer ways of preventing or treating disease. Somehow there have to be enough funds generated in medical centers to support research and to employ faculty who are actively engaged in research."

Fuchs feels society would benefit from the evolution of a medical care system where academic medical centers concentrated on research, teaching, and activities at the frontier of medicine, and did only as much primary and secondary care as necessary for them to carry out their principal missions.

"Complex, tertiary care," Fuchs wrote, "should be limited primarily to regional medical centers because they provide the specialized services more efficiently, offer higher quality of care, and carry out the research that should accompany all innovations in medicine."

Internal battles for control of health care also take place, said Fuchs, and are not limited to the academic medical centers. It is a general problem within the entire health sector in which practicing physicians and the managements of their hospitals are also fighting for control.

Curiously, government has not been



Victor Fuchs

one of the chief contestants. "This may come as a surprise," Fuchs said, "because the battle for control of health care is often depicted as one of medicine against government.

"Unfortunately, the medical profession is not using this breathing space as creatively and as constructively as it might. This is a shame because, while the regulatory threat went away for a time, medicine should not think that it has disappeared forever. It could come back quickly and heavily."

Fuchs urges physicians and other health care specialists to try to understand the reasons for conflict and to work for change.

"Let practicing physicians concentrate on treating patients and on less intensive forms of care," he advised. "Let academic physicians in medical centers concentrate on teaching, research, and tertiary care and only as much primary and secondary care as is necessary.

"Unless the necessary compromises are struck, American medicine will be consumed with conflict in the years to come, and patients and society will be the major sufferers." —**Spyros Andreopoulos**

Fire results in some damage to King's suite

An early morning fire erupted in a small storage room in the administration suite at Stanford University Hospital Tuesday, causing an estimated $2,500 damage to drywall, paint and carpet, Palo Alto fire officials said.

No injuries were reported. Security supervisor Bob Hurlbert said personnel in nearby patient units detected a faint odor of smoke through the ventilation system, "but we heard no patient complaints."

The 8-foot-by-5-foot storage room was completely gutted, and adjacent work areas of the suite sustained smoke and water damage. Ellen Davia, assistant to Hospital Director Sheldon King, estimated damage to supplies at about $20,000, including approximately $12,000 to a leased copier machine which was stored inside the room.

In addition, a $5,600 word processing machine and a $3,500 electronic typewriter stored just outside the room both sustained water and/or smoke damage. Other items destroyed in the room included paper supplies, computer disks, "and about five pieces of mail which were waiting to go out; we're going to have to sit down and reconstruct them," said Davia.

Cause of the blaze was under investigation, said Palo Alto Fire Inspector Dan Heiser. Davia said the room was locked at 8:45 p.m. Monday night when she left the office. The copier was turned off, she said, although it had a history of minor malfunctioning and may have been the source of the blaze.

Hurlbert and other members of the Hospital fire brigade began fire fighting efforts which were completed "in about a minute" after 15 city firemen in seven units arrived shortly after 7, said Palo Alto Fire Capt. Wayne Evans.

The suite is occupied by King and other top Hospital administration and support staff. The staff returned to their desks and offices about 9 a.m.

...News Notes...

Dr. Barry Tharp, associate professor of neurology and pediatrics, has been appointed to head the division of pediatric neurology at Stanford, announced Dr. David Prince, chairman of Neurology.

Tharp joined the Stanford faculty in 1969 and has served as director of the Clinical Neurophysiology Laboratories. His major research interests have been epilepsy and brain development, and he is widely known for his work on the development of the electroencephalogram (EEG) in premature and newborn infants.

Tharp was elected president of the American Epilepsy Society in 1980. In his new position he is replacing Dr. S. David Holtzman. Holtzman is leaving Stanford for Tulane University in New Orleans, where as a full professor he will institute and head a division of pediatric neurology. Holtzman has been on the Stanford faculty since 1973.

Two Stanford faculty members will be among the speakers at the 68th Scientific Assembly of the Radiological Society of North America, to be held in Chicago, Nov. 28 to Dec. 3.

Dr. Barbara Carroll, assistant professor of radiology and chief of the diagnostic ultrasound section, will present her paper, "Sonography of the Normal Neonatal Adrenal Gland."

Dr. Diana Guthaner, assistant professor of radiology, will discuss both "Left Ventriculography using Intravenous Digital Subtraction Angiography," and "Evaluation of Aortic and Peripheral Vascular Disease using Digital Subtraction Angiography."

Also speaking at the meeting will be two Stanford diagnostic radiology residents. Dr. David Oppenheimer will present "Sonographic Evaluation of Umbilical Artery Catheter Associated Complications." Dr. Fred Burbank will address "Determinants of Digital Subraction Angiography (DSA) Contrast Enhancement."

* * * *

David Hopkins and Margaret Brandeau presented a paper entitled "A Patient Mix Model for Hospital Financial Planning" at the 1982 conference of the Operations Research Society of America/The Institute of Management Science, held last week in San Diego.

Hopkins is director of the SUMC Office of Analysis and Planning and executive assistant to the vice president for medical affairs. Brandeau is a Ph.D. candidate in Stanford's department of engineering-economic systems.

Hopkins and Brandeau formulated a linear programming model to examine the impact on hospital finances of changes in patient mix under current and proposed government reimbursement regulations. The model was then used in policy analysis.

Union election starts Friday

About 1,200 maintenance and service employees at the Hospital are eligible to vote Friday and Saturday on whether they wish to be represented by Local 715 of the Service Employees International Union, AFL-CIO.

The National Labor Relations Board is conducting the election from 6:15 a.m. to 6 p.m. on Friday and 1:30 p.m. to 5 p.m. on Saturday. Employees who work in the main Hospital (or who begin their work day by "punching in" at the main center) are to vote in W001-W003, while personnel who work at Hoover Pavilion (or who "punch in" there) must vote in Room 201.

Supervisors have lists of workers eligible to vote. Personnel will be given time off with pay to cast their ballots.

After the votes are counted Saturday night, information about the election will be available by calling the Medical Center News Bureau, at 497-6911.

Herpes is topic of upcoming Progress in Medicine series

Sexually transmitted herpes viruses, their risks, prevention, and promising treatments, will be the focus of a three-part "Progress in Medicine" lecture series, sponsored by Stanford University Medical Center Nov. 9, 16, and 23.

Each lecture is open to the public free of charge, and will take place 7:30 p.m. in the Medical Center's Sherman Fairchild Auditorium.

Drs. Thomas Merigan, Anne Yeager, and John Mills, three eminent researchers in infectious diseases, will describe recent advances in understanding and controlling both varieties of the herpes simplex virus, a source of cold sores and genital infections that afflict at least 15 million Americans, and its lesser known viral relative, cytomegalovirus (known as CMV).

A usually innocuous virus contracted by 40 percent of all Americans sometime during their lifetime, CMV has been found sometimes to suppress the immune system in laboratory animals and humans, and to convert normal cells to cancerous ones in test tube cell cultures. CMV is also known to cause severe disease in recipients of organ transplants who are given drugs that suppress their immune systems.

As a part of the first lecture, Mills, a visiting scholar at Stanford from the University of California, San Francisco, will discuss his studies of the role CMV plays in a mysterious crippler of the immune system that has killed hundreds in the last year in an epidemic that stretches across the continent. Labeled "acquired immune deficiency syndrome" (AIDS), the disease seems particularly prevalent in male homosexual communities, for reasons still unclear to researchers.

AIDS, which is frequently accompanied by herpes simplex or CMV, strikes by stripping away a sufferer's resistance to infection, leaving him vulnerable to bacteria and viruses that a healthy person can thwart.



Thomas Merigan



John Mills

Yeager, an associate professor of pediatrics at Stanford, will describe the effects of herpes simplex and CMV on young children in her presentation Nov. 16, entitled "Risks for Fetuses and Infants in Contact with Infected Adults."

Both herpes simplex and CMV can be deadly for the fetus and newborn, whose immune systems are still underdeveloped. Yeager was instrumental in developing a test for CMV in transfused blood. Use of the test to screen all blood given to newborns at Stanford has nearly eliminated the threat to these patients.

Merigan, a professor of medicine and leader in Stanford's research on the antiviral compound interferon, will discuss "Present and Future Methods of Prevention and Treatment" of herpes Nov. 23.

In collaboration with the bone marrow transplant program at the University of California, Los Angeles, Merigan recently gave transplant patients blood plasma containing high concentrations of anti-CMV antibodies. (Because of the strong radiation treatments the transplant candidates undergo, their immune systems are extremely suppressed and their risk of contracting CMV is high).

Results of the study, published in the July *Annals of Internal Medicine*, showed that while the CMV infection itself was not prevented by the antibody boost, dangerous complications of the infection, such as pneumonia, hepatitis, and encephalitis were significantly reduced.

The researchers currently are repeating the experiment with a modification: instead of giving the antibody as a component of plasma, which can only be given in small, limited quantities, they are now injecting the patients with pure antibody, in hopes of maximizing the therapeutic effect.

In addition to attempting to prevent CMV infections, Merigan and colleagues are testing antiviral drugs such as leukocyte interferon and adenine arabnoside to halt the infection once it starts. As yet, no effective standardized treatment exists for the herpes viruses, Merigan said, though several promising drugs have recently been made available for testing.

"These are the first drugs that seem active against these infections and I think we'll see them widely studied in the next few years," he said. "There are other drugs coming up which will be even more effective, judging from the first experiments in animals.

"I'm not saying these will cure the infection," Merigan cautioned. "The real challenge for the future will be total prevention. Right now these are hopes, and we need further understanding of the disease mechanisms in order to pinpoint factors that cause their occurrence."

The Progress in Medicine lectures were initiated at Stanford in 1966 by Dr. Joshua Lederberg, then professor and chairman of the Department of Genetics, to provide an opportunity for leaders in academic medicine to share their insights and perspectives with the community.

Seats for the lecture will be made available on a first come, first served basis, so early arrival is recommended.

Those interested in further information or registration forms should call the Medical Center's office of public events at 497-6389.

—Deborah Franklin

Barchas offers glimpse into psychiatry of the future

Imagine a psychiatric clinic of the future.

A patient comes to the psychiatrist's office, obviously in a severely agitated or depressed state.

A blood sample, or perhaps a spinal fluid sample, will be drawn from the afflicted person. The analysis of the substance will be put into a mass-spectrometer, a $175,000 sophisticated machine now found in a small number of psychiatric research laboratories.

Simultaneously, the psychiatrist will draw from the patient a clinical history of his mental illness. Then, on the basis of the history and testing, the psychiatrist will be able to discuss with the patient the disorder and the subtype that the patient has. From the testing they will be able to identify immediately the optimal drug therapy.

That pharmacotherapy, combined with psychotherapy, will provide more specific, rapid, and effective treatment.

This vision of the psychiatry of the future was described recently by Dr. Jack Barchas before an overflow crowd in the Sherman Fairchild Auditorium of the Stanford University School of Medicine. His talk on "Psychobiology: New Approaches to Mental Illness" was sponsored by the Friends of Psychiatry and Behavioral Sciences at Stanford University Medical Center. The talk centered around new developments in the area of behavioral neurochemistry and the ways in which the new information might impact on diagnosis and treatment.

Barchas, a professor and director of the Nancy Pritzker Laboratory of Behavioral Neurochemistry at Stanford, is considered a rarity among the 30,000 psychiatrists in the United States. This is because perhaps only less than two dozen of them, like Barchas, are devoting their professional lives exclusively to researching the basic causes of mental illness at the biochemical level.

Schizophrenia no longer pertains to just that old bromide of split personality, according to the newest research findings. "It is most likely," said Barchas, "several different illnesses, say half a dozen, that we lump together because right now that's the state of knowledge. But information is developing very rapidly."

His laboratory, with private and government support, he said, is totally absorbed in a scientific search to discover what happens in the brain to cause severe mental disorders, such as schizophrenia that affects one percent of the nation's population, depression which affects five percent, and various addictive states.

A key aspect of the search at Stanford is the involvement of several faculty members who work together in a collaborative way.

Barchas emphasized those cross connections which include a close collaboration between the members of the Pritzker Laboratory and the Stanford Mental Health Clinical Research Center, directed by Dr. Philip A. Berger, associate professor of psychiatry.

At the Clinical Research Center, patients can be studied in careful detail with excellent monitoring of clinical status. Patients there may also be studied in a medication-free state. "We all owe a great deal to these volunteers who are willing to enable studies to take place in the hope of preventing others from having similar problems," said Barchas.

"Half the beds in hospitals in the United States," noted Barchas, "are devoted to patients in one or another form of psychiatric illness. Forgetting the pain of the families involved, these diseases probably cost the country over $51 billion a year in lost productivity and medical costs.

"The issue of research funding for mental illness is an overwhelming problem. Researchers in the field of psychiatry have fewer funds available in real money than in 1969."

Barchas noted that the annual spending for mental illness research is $6 per patient compared to approximately $100 and $200 spent respectively for heart disease and cancer research. The absolute amounts spent on research in mental illness are low compared to that for other serious disorders.

He said there has not been a strong tradition for government policy to support research into mental illness with the vigor that occurs for other serious illness. The private sector has also not been as active and there is not the type of private support which exists in other areas of health.

"Yet there's been an explosion of knowledge which needs to be explored," he said. "The basic sciences of neurochemistry and neuroscience have developed important information that is now incorporated into psychiatric research.

"We're learning all sorts of things, such as what neurotransmitters are present and how they work biochemically and physiologically. There was very little study of these problems until a few decades ago."

At that time, one of the shining lights of discovery that opened a new vista into the complex mechanisms of the human mind was turned on by a Swedish scientist, Arvid Carlsson. During chemical analysis of transmitters in the brain, he noticed a previously unrecognized spot on a sheet of chromatographic paper. It had never been identified before, explained Barchas, and

continued on page 13



Ronald Merrell

Friday's SMASH

"Transplantation of Islets of Langerhans" will be the topic of this Friday's S*M*A*S*H lecture, to be given 4:30 p.m. Nov. 5 in Fairchild Auditorium, by Dr. Ronald Merrell, assistant professor of surgery.

The lecture is open to all interested members of the Stanford community, and will be followed by a TGIF gathering in the Fairchild lobby.

Construction Corner

Item: Construction will soon begin on the Edwards Deck Development at the west end of the Edwards Building. This project involves 3,430 gross square feet of laboratory and lab support space, and a new central glasswash facility to be utilized by the Pathology and Surgery Departments.

Wells Hoeltje, of the SUMC Facilities Office, will serve as project manager, and Mayta and Jensen will be the construction firm on the project. The construction, costing $1.1 million, is anticipated to be completed in the summer of 1983.

Item: The construction of the space for Cardiovascular Surgery's temporary location on the north wing of the third floor of the Boswell Building has been completed. The space will serve as the offices of the department, pending completion of the Cardiovascular Research Building.

Item: The billing department of Patient Accounting has moved its offices to the second floor of the Old Barn on Welch Road, effective Oct. 28. The two main phone numbers now are: 497-7651, and 497-6655.

Editor's note: *This new regular column is prepared by members of the Facilities Department and intended to keep readers informed of relocations, renovations, and matters involving the physical facilities of the Medical Center. Watch for further updates in future "Construction Corners."*

Social worker reflects on nurturing role

A small child refuses to go to school day after day, but doctors find nothing physically wrong with him. He doesn't know why he can't go, he only knows that he's afraid. A social worker's gentle prodding in family therapy sessions reveals a source: his parents' marital problems have left him frightened that if he goes to school, they won't be there when he comes home.



"...to know other people starts with knowing yourself..."

—Cleo Eulau

"Social work is very near the core of emotions," said Cleo Eulau, chief psychiatric social worker in the Medical Center's department of psychiatry as well as in the coordinated clinic of Children's Hospital at Stanford and the Children's Health Council.

"Though we all work in different ways, I think social workers all have in common the understanding that if you intervene at a time of crisis in a person's life, whether it's medical or psychological, that's the best time to make a lasting contribution that's going to make the future easier for the person." Wait too long to intervene, and the emotional scars of not getting help when it's needed can be devastating, especially for a child, she said.

Eulau has been teaching the fine arts of psychiatric social work to enthusiastic students and new physicians since 1969 when she joined the Stanford staff. In addition to meeting with individual clients, Eulau teaches courses in family and couples therapy, both at Stanford and at the University of California, Berkeley.

"It's a complicated job, which is why I love it," she said. "There is great satisfaction in getting involved in someone's life at what may be a troubled time, to nurture."

Adolescents are Eulau's special interest. She helped set up a peer counseling program several years ago in the Palo Alto school district in which 50 or 60 junior high and high school students each year are trained to "help other kids" through the normal crises of growing up.

"The purpose of the training is not only to learn to be of service to other people, but in the process, to learn about yourself," Eulau said. In a year-long course, students learn about the stresses that can burden young lives and the community resources that can help alleviate those burdens.

"They learn very carefully what friendship and listening does, when a problem is beyond that, and how to help people get professional help in a way that helps them feel dignified and good about themselves.

"People who do the work that I do have to know themselves pretty well, and this is beginning to help young people realize that to know other people starts with knowing yourself. That's a particular pleasure in my job, and I hope in the people I train, because if you feel like it's an opportunity for you to grow yourself, you don't suffer 'burnout' or get bored or feel like you're doing the 'lady bountiful' thing for anybody. It's a mutual exploration."

Burnout, the emotional exhaustion that can wear down workers in critical care fields, has never been a factor in Eulau's life, she said. "I read a lot about burnout, I hear a lot about it. There are times when I feel incredibly drained, and absolutely need to go and look at the beach or something, where there is nobody around. But on the whole I feel incredibly exhilarated."

Sometimes a client's problems run especially deep, and the healing process is frustratingly slow or stalled completely. Those moments can be rough, Eulau said.

"Over time I've gotten very in touch with my limitations and the limitations of any system or individual to help at certain times," she said.

"That's constantly frustrating and constantly sad. But there's always something more to learn, something more to try. Learning, and being interested in doing a better job next time, helps with the incredible frustrations."

A native of New York City, Eulau first became interested in social work while working her way through Hunter College with a counseling job in a settlement house. After graduation, she chose Smith College's School for Social Work to continue her studies. Last June, the School honored its alumna with the "Day-Garrett Award," given each year to one outstanding leader in the field of social work.

The commendation letter reads, in part:

". . .The testimony given by so many of the people whose lives you have touched and enriched—your students, your teachers, your colleagues in the social work and allied professions, your friends—always echoes the same themes. You are a superb teacher and supervisor, able to articulate your profound understanding of the complexities of human development not only to other social workers, but your wisdom and thoughtfulness is consistently understood and valued by your colleagues in other helping professions. . ."

—Deborah Franklin

National Respiratory Therapy Week

In honor of National Respiratory Therapy Week, Nov. 7-13, Stanford's department will sponsor a week-long exhibit in the corridor outside the main center cafeteria.

Also, an information booth run by respiratory therapists will be set up Nov. 8 and 9 at the same location during the noon hour.

National Respiratory Therapy Week was declared by the U.S. Congress and President Reagan in recognition of respiratory therapy's contribution to health care. Noted Dr. Thomas Raffin, medical director of Stanford's department, "The growth of respiratory therapy since its inception has been exciting and challenging for those working in the field (80,000 jobs directly related). With continued recognition it is hoped they will expand the role they fill and continue to contribute significantly to patient care."

Respiratory therapists, he said, are active in the diagnosis and treatment of pulmonary disease as well as areas such as emergency medical care and research.

The department at SUMC has more than 100 employees. They deliver all of the respiratory care to patients at Stanford University Hospital, including monitoring the "breathing machines" (ventilators) used for patients in the intensive care units.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Biochemical roots of psychosis. . .

continued from page 11

he quickly related it to adrenaline in chemical structure. The compound that Carlsson discovered was dopamine.

"That discovery had implications for a number of different diseases," Barchas explained. "We now know that dopamine is important in Parkinson's disease, a movement disorder.

"It may also be important in some forms of depression. Knowledge about dopamine has led to a whole new way of thinking about schizophrenia, which suggests that a relative excess of dopamine may be involved in schizophrenia or in its treatment.

"That information ties in with other evidence about schizophrenia which suggests that the disorder may have biochemical and genetic aspects."

Barchas described some of the work of the Nancy Pritzker Laboratory in terms of dopamine and mental disorders. Members of the laboratory recently were the first to purify the critical enzyme from brain which controls the formation of dopamine and to determine some of its characteristics, including a marked activation during stress. They believe that increase in enzyme activity is a result of the addition of a phosphate group to the enzyme.

Barchas described two of his collaborations with other faculty. The first is with Dr. Roland Ciaranello, associate professor of psychiatry, with whom it was demonstrated that the amounts of the enzyme are controlled genetically. With Dr. Lawrence Kedes, associate professor of medicine, and postdoctoral fellows in his group, it has been possible to investigate the molecular genetics of the formation of dopamine.

Drs. Barchas, Ciaranello, and Kedes are now involved in a study of the processes regulating the formation of dopamine. The three of them, in association with Berger, expect to extend their studies on patients to determine whether individuals with schizophrenia, depression, autism, or borderline schizophrenia have changes in those genetic mechanisms.

The combination of basic science and an appropriate clinical environment is a critical factor in the effectiveness of the Stanford program, Barchas said.

New medications, Barchas stated, have resulted in a major change in the treatment of those with severe mental illness. In France, he observed, it was discovered almost by chance that a group of drugs called phenothiazines were effective in the treatment of many schizophrenics.

These antipsychotic drugs—such as thorazine, stelazine, melaril—are believed to block the brain's receptors for dopamine, stopping the relative excess of the neurotransmitter.

"They have been miraculous," said Barchas, "because prior to World War II, schizophrenia was a disease which almost inevitably resulted in a very bad outcome. Now an acute schizophrenic taking the medications will usually be markedly improved, and after a while will be finished with the treatment."

But this doesn't apply to all schizophrenia patients. Between 25 to 50 percent of the mentally disturbed patients get no help, or only temporary help in which they are improved but basically are still profoundly disturbed, he said. An analogous situation exists for depression. In both cases marked progress is being made.



Jack Barchas

But Barchas cautioned that such illnesses as schizophrenia and depression may have no single cause. The biochemical approach to finding out their cause is only one avenue. There is the psychological side, with attendant stresses and the psychological meaning of events: the social with family and interactional processes and role theory, as well as hereditary factors.

As part of the discussion of the psychiatry of the future, Barchas emphasized his view that ultimately there would be need for a new approach that would combine the advances in neurobiology with the behavioral approaches.

"We need to understand the ways in which behavior changes biochemistry and how the altered biochemistry in turn affects subsequent behavior," he stated. "Out of these concerns may come a new psychiatry perhaps requiring a different language to express those interrelationships which we can now only glean.

"A powerful early example of the need for multiple approaches is shown in the treatment of schizophrenia," he explained. "We are just learning that the best approach to treatment for many patients involves a combination of psychopharmacology with social and psychological approaches. That combination can be expected to be quite important in the future."

Scientists, Barchas said, are also interested in affective disorders such as mania and depression. His own laboratory, in collaboration with the Stanford Mental Health Clinical Research Center, is searching for biochemical bases of depression which is associated with several important neurotransmitters, such as serotonin and norephinephrine.

The two are distributed in varying concentrations throughout the brain, with the greatest concentration in nerve cells from areas thought to control emotion and mood.

"The most important biochemical theory of depression," said Barchas, "states that it's associated with a deficit in serotonin or norephinephrine at critical synapses, the microscopic gaps between nerves cells."

Barchas said brain chemicals other than serotonin and norephinephrine may also be involved in depression. One group of these, called endorphins, has some actions similar to those of morphine and other opium derivatives.

"Since morphine can cause profound euphoria when injected intravenously and a state of great discomfort during withdrawal, it has been hypothesized that these morphine-like compounds are involved in depression," he said. Two scientists in the Pritzker Laboratory, Drs. Eckard Weber and Chris Evans, have found several new, previously unrecognized forms of endorphins and related substances.

"The finding of such substances is quite exciting," Barchas said. "We are at a phase of neurobiology similar to that of the finding of continents and islands. We know the finding of new neurotransmitters will be important for treatment and diagnosis in the future but do not yet know exactly what their significance will be or in what disorder they will prove important."

"The first demonstration that the endorphin-like substances in brain could be changed by stress was made by Dr. John Madden, then a predoctoral student at Stanford," Barchas said. Madden demonstrated that in certain types of stress the amounts of the endorphin-like materials are increased in the brain. At the same time there is a change in pain threshold. His findings may explain the oft-noted reports of soldiers in battle or of accident victims who suffer an injury but do not feel pain, he added.

In another Stanford study, Madden, now a member a of the Pritzker Laboratory, is working with Dr. Richard Thompson, professor of psychology. They are investigating the role of endorphins in certain types of learning, Barchas said. There is also evidence that endorphins may be important for a model of depression, the type referred to as learned helplessness.

"A great deal of work at Stanford and elsewhere is now underway to determine the role of endorphins in mormal metabolism and in psychiatric disorders," he added.

—Spyros Andreopoulos

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, NOVEMBER 3

Dept. of Neurology Grand Rounds: "Digital Subtraction Angiography in Neuroradiology"—Dr. Dieter Enzmann. 5 p.m., C364.

Dept. of Structural Biology: "The Genetics of Myosin Assembly"—Dr. Henry Epstein (Baylor College of Medicine). Noon, Fairchild Bldg., D102.

Div. of Hematology Conference: "The Role of Epstein-Barr Virus (EBV) in Post-Transplant Lymphomas"—Dr. Henry Kaplan. Noon, S102d.

THURSDAY, NOVEMBER 4

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Lines, Angles, and Contours of the Ideal Face"—Drs. Nelson Powell and Brian Humphreys. 6 p.m., Rehabilitation Conference Room, Santa Clara Valley Medical Center.

Dept. of Medicine Grand Rounds: "Septic Shock"—Dr. Gary Schoolnik. 8:30 a.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "Regulation of Viral and Cellular Transcription by SV40 T Antigen"—Prof. Robert Tjian (UC Berkeley). Noon, M316.

Dept. of Dermatology: "The Pathophysiology of Psoriasis"—Dr. L. Dubertret (Heri Mondor Hospital, France). 8 a.m., Dermatology Library, R136.

FRIDAY, NOVEMBER 5

Dept. of Dermatology: "The Photobiologic Activity of Furocoumarins"—Dr. L. Dubertret (Heri Mondor Hospital, France). 8 a.m., Dermatology Library, R136.

Dept. of Gynecology and Obstetrics Grand Rounds: "The Last Epidemic"—Physicians for Social Responsibility. 8 a.m., A336.

Child Psychiatry Grand Rounds: "Mothers and Babies—The Origins of Communication"—Dr. Daniel Stern (Cornell). 11 a.m. till 12:15 p.m., Children's Hospital at Stanford, Faber Auditorium.

TUESDAY, NOVEMBER 9

Dept. of Biochemistry Colloquium: "Expression of Genes Introduced into Mice"—Richard Palmiter (Univ. of Washington, Seattle). Noon, M114.

Dept. of Pathology Seminar: "A New Oncogenic Rabbit Virus Causing Immunosuppression"—Dr. David S. Strayer (UCSD). 4:15 p.m., L201.

Dept. of Dermatology Lecture: "Gene Amplification and Drug Resistance"—Dr. Robert Schimke. 10 a.m., Dermatology Library, R136.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.

Lecture to focus on alcohol abuse

"Alcohol Use and Abuse: The Health and Social Consequences" will be the topic of a public talk 7 p.m., Nov. 8 in the Fairchild Auditorium, by Dr. Michael Jacobson, nationally known consumer advocate.

He will discuss ways for health professionals, community groups and individuals to help combat alcoholism. "Alcohol abuse costs society over $100 billion per year and results in an estimated 200,000 deaths of Americans annually," noted Holly Nickels, R.D., of the Department of Dietetics.

Some of Jacobson's suggestions, she said, include educational efforts, an increase in alcohol taxes, and building of coalitions to put pressure on legislators and the alcohol industry. He is also involved in pressuring the broadcast industry to ban liquor advertising.

Jacobson is executive director of the Center for Science in the Public Interest, a nonprofit organization based in Washington, D.C., active in nutrition education and government policymaking in food and health issues.

Under his direction the Center, along with 16 other health and consumer groups, recently appealed to the liquor industry to print health and safety warnings and ingredients on all alcoholic beverage labels, to contribute funds for public service messages to discourage drinking, and to halt marketing and advertising aimed at children and teenagers.

Jacobson's talk is being sponsored by the SUH Department of Dietetics, San Jose Peninsula Dietetic Association, and the San Mateo County Nutrition Council. Attendance is free of charge..

For further information contact Nickels or Jane Woeckener, at 497-6904.

Senate report

Faculty Senate approves biophysics, neurosciences program

TO MEMBERS OF THE ACADEMIC COUNCIL FIFTEENTH SENATE REPORT NO. 4

Summary of Actions Taken by the Senate on October 28, 1982

At its meeting on 10/28/82, the Senate took a number of actions:

1. The Senate accepted, by unanimous voice vote, the recommendation of the Committee on Graduate Studies (C-GS) that the interdisciplinary program in biophysics be extended, with the understanding that it will be put on a regular review cycle for Senate approval like other interdisciplinary degree programs.

2. The Senate accepted, by unanimous voice vote, the recommendation of the Committee on Graduate Studies (C-GS) that the interdisciplinary program in neurosciences be extended, with the understanding that it will be put on a regular review cycle for Senate approval like other interdisciplinary degree programs.

3. The Senate accepted, by unanimous voice vote, the Annual Report of the Committee on Academic Appraisal and Achievement (C-AAA).

4. After the division from the Annual Report of the Committee on Libraries (C-Lib) of the recommended revision of the University statement on Visiting Scholars (so that the recommendation might be referred to the appropriate administrative officers), the Senate approved, by unanimous voice vote, the Annual Report of the Committee on Libraries (published in *Campus Report* 10/27/82).

MINUTES OF THE FIFTEENTH SENATE OF THE ACADEMIC COUNCIL OCTOBER 28, 1982

(Draft Subject to approval by the Senate on November 11, 1982)

A meeting of the Fifteenth Senate of the Academic Council was held on 10/28/82, beginning at 3:17 p.m. in Room 180 of the School of Law, with Chairman A.L. Fetter presiding. Present were 28 Representatives, 6 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 10/14/82, were approved as submitted in writing.

Report of Steering Committee

In the Report of the Steering Committee, Chairman Fetter thanked all those who came on time so that the meeting could begin promptly. He called attention to the one new item added to the forthcoming agenda items, the report of the subcommittee of C-AAA on the Evaluation and Improvement of Teaching (C-AAA-EIT). He also announced the resignation of Professor J.A. Spudich (structural biology) from the Senate and his replacement by Professor L.T. Rosenberg (medical microbiology) beginning with the next Senate meeting.

Report of the President

In his report, President Kennedy spoke briefly on two matters:

Concerning the administration's response to the recommendations of the *Ad Hoc* Committee for TIAA-CREF Alternatives, which reported last May, President Kennedy indicated that Jeannie Thomas, manager of benefits/records, had conferred with the Scott committee on its several recommendations. She was asked to give highest priority to the recommendation that Stanford add three or four investment alternatives to the one presently available. She had estimated last June that the earliest possible date for those recommendations would be in 1983 and probably not at the beginning of the year. The process of choosing appropriate alternatives is complex and time-consuming. She is reporting regularly to the Committee on Faculty and Staff Benefits, so there is an opportunity for faculty input on the choices to be recommended. Once this highest priority recommendation of the Scott committee has been implemented in 1983, the administration will address the other recommendations made by that committee.

The second matter President Kennedy commented on was the deep impact of indirect costs on the budget difficulties anticipated at Stanford over the next two or three years. Research volume and the rates of recovery of indirect costs are currently the largest and most volatile items in our income picture. These are also controversial political issues in the federal government right now. The NIH attempt to reduce indirect cost reimbursements unilaterally this year has been temporarily resolved, but the issue of indirect cost recovery rates remains controversial both here on the campus and in Washington, where attempts are underway to establish a single set of rules across the government.

Stanford administrators are anxious to promote thorough consultation with Principal Investigators. The Dean of Research will establish a group of PIs to collaborate with him in formulating policy directions. There will be a Senate presentation in December on this problem, with follow-up discussions after that. It is a very serious problem. Faculty members are urged to make an effort to understand the complexities and magnitude of the problem, and the administration intends to provide whatever forums may be necessary to achieve that end.

In response to the president's comments on retirement investment alternatives, the hope was expressed that the University would provide at least one alternative that does not pay out differentially to men and women.

Report of the Provost

In the absence of Provost Hastorf, Vice-Provost Bacchetti made a brief report on budget concerns. He cited the publication of lead stories in the 10/27/82 issues of *Campus Report* and the *Daily* which gave a true picture of the University's budget outlook. The Provost will bring the Long Range Forecast before the Senate for discussion on 11/11/82. This report will deal with where we are financially, what factors appear to be causal, and what processes will be put in place to deal with both the short and long range budget problems.

The dominant precipitating factor is the slackening of the rate of increase in research volume. Instead of growing at about the rate of inflation, as expected in 1981-82, the rate of increase in research volume flattened out, and the result has been a decrease in indirect cost recovery to the Operating Budget. Certain fixed indirect costs, e.g., maintenance costs of research space in offices and laboratories, do not decline because the rate of research volume growth slows. This creates a gap between income and expense.

One approach to the problem will be to assess the consequences of pushing for greater income growth and less expense growth. If that doesn't solve the problem, it will be necessary to reduce the budget base to a level suitable for the income we can reasonably expect. This process will probably take three years.

In the discussion following these two administrative reports on the budget and the indirect cost recovery problem, Professor A.E. Siegman suggested that a single set of rules across the University on indirect cost assessments might be just as valid as a single set of rules across the government. A system of explicit indirect cost assessment and funding could be devised to apply to all the activities in the University, so that every expenditure by everyone in the University would either be overhead or would bear overhead. Professor Siegman expects to formulate such a proposal in the near future, and offered to share it with anyone interested in the idea.

The question of incentives for increasing research volume was also raised, with the assertion that there were many disincentives but no apparent University-sponsored incentives.

President Kennedy responded that the administration is anxious to increase research volume for various reasons, not least because it increases the creative/productive dimension of the faculty. Presently, both faculty desire to implement good ideas and School or department motivation to share salary obligations with sponsors of research provide incentives to increase the sponsored research volume. Even so, many faculty members feel that competing for outside funds is unseemly and that the risks are too great, or that their preferred research directions would have to become less venturesome to be more attractive to sponsors. Providing appropriate incentive structure is a complicated matter which ought to be explored thoroughly before we decide that we must go all out to push for increased research volume.

At the close of this discussion, the Dean of Humanities and Sciences urged the group studying the indirect cost problem at Stanford to establish contact with other Principal Investigators and Washington agencies to get a better reading on the mixed signals presently being reported by some. If the problem is a temporary one and more funding will be made available than can be promised at present, it's important to learn that now before cutting back on academic programs.

Report of the Committee on Graduate Studies (C-GS)

Program reviews of the graduate interdisciplinary programs in biophysics and neurosciences were presented by the Committee on Graduate Studies for Senate approval.

The biophysics review was presented by Professor William Little, Chairman of the Review Committee. He reviewed the procedures followed in conducting the review, summarized the strengths of the program, and commented on the only reservation expressed about the program: that there was some lack of communication and interaction among the students, who were based in different departmental research groups. This fault has already been somewhat alleviated by instituting a research seminar which brings the students together regularly. A more serious problem is the lack of University funds for program support.

In the absence of Professor Kallman, Chairman of the Neurosciences Review Committee, the chairman of the Committee on Graduate Studies presented the report and opened the discussion.

In the discussion of the reports, the observation was made that these graduate interdisciplinary programs all seem to share the same problems: they are small; students are based in the several cooperating departments and have limited opportunities to interact with their peers in the program; the programs all lack funding from University sources. This raises the question of whether or not there is justification for the continuation of such programs. Why can't these programs of study be accommodated within established departments?

Several responded that many of the very best students are attracted to Stanford because of the existence of these graduate and undergraduate interdisciplinary programs, and would be lost to the University if these options weren't available. It was also pointed out that the ranges of department and interdisciplinary degree requirements are frequently incompatible.

In addition, interdisciplinary programs exert a positive influence in bringing faculty together across disciplines, in synergizing research, and in fostering new permutations of scholarship. Student interest, faculty interest, and outside needs all combine to promote these interdisciplinary programs.

The Dean of Graduate Studies commented that the possibility of moving these programs into departments, if at all feasible, is a perennial consideration for all graduate interdisciplinary programs. (One of these programs is considering such a move at the present time.) If nothing else, such a move would provide a program with a more traditional channel for academic program funding.

Responding to a question about when the faculty Senate considers the problem of funding for such programs (while they are considering the approval of a program or after it has been approved), President Kennedy made it clear that the Senate has no power to appropriate funds. It is the administration's responsibility to do its best to help academic programs mandated by the Senate, either by assisting them to find outside funding or by providing University funds if necessary. There is always the possibility that a program may be mandated by the Senate which cannot be funded because the money isn't available. In such a circumstance, it is the duty of the administration to report that fact to the Senate.

As the discussion continued, there was further support expressed for the view that there is excessive fragmentation and narrowing of graduate disciplines. The observation was made that both a new interdisciplinary program and the department that spawned it might well be richer if the new field weren't cut adrift. There is much to be said for encouraging a department to grow and to accommodate new developments, for expecting it to make bridges and to allow for new paradigms.

It was pointed out also that the question of narrowness of focus is appropriate to ask of undergraduate as well as graduate programs, and that the issue will no doubt arise again when the undergraduate interdepartmental programs are reviewed later this year.

Following the discussion prompted by these two program reviews, the Senate, by unanimous voice vote, accepted the recommendation of the Committee on Graduate Studies that the programs in biophysics and neurosciences be extended, with the understanding that they will be put on a regular review cycle for Senate approval like other interdisciplinary degree programs.

Annual Report of the Committee on Academic Appraisal and Achievement (C-AAA)

Professor M. Sunseri, Chairman of the 1981-82 C-AAA,

continued on next page

Senate/ continued from page 14

presented the Annual Report. She called attention to the work done by C-AAA-EIT in developing student and faculty questionnaires concerning the teaching evaluation system now in use at Stanford, and indicated that data processing and the preparation of the subcommittee report are currently in progress. She also called attention to the report of the Rhodes-Marshall subcommittee and to the report appendices on the implementation of the Revised Pass/NC Policy by the Registrar.

Professor S. Matisoff, the 1982-83 Chairman of C-AAA, remarked that the C-AAA-EIT report would be presented to the Senate by early spring and is expected to generate a great deal of interchange.

In the discussion which followed this report, the comment was made that the Pass/NC Policy revision appears to be a complicated and expensive procedure with very limited benefits. If the Senate assessed indirect costs, to such a policy revision so that its members could know the real costs the Senate might react differently to such a proposal.

The Registrar reported that, while costs thus far had been somewhat lower than the original cost estimates put before the Senate last year, it is true that the policy change has not been cost-free. So far, students seem to be understanding and complying with the system, but the real test will come with the autumn end-quarter reports. It is expected that C-AAA will report these results to the Senate.

The Senate was reminded that, since one motivation for instituting this policy was to restore the legitimacy of the Pass grade in a course, it would be premature to say now that the costs of the policy change bring very limited returns.

At the close of this discussion, the Annual Report of C-AAA for 1981-82 was accepted unanimously by voice vote.

Annual Report of the Committee on Libraries (C-Lib)

Professor M.H. Jameson, Chairman of the 1981-82 Committee on Libraries, presented the Annual Report, calling attention to the need for regular and continuing communication with the President of the Research Libraries Group (RLG) and reiterating the C-Lib's conviction that, despite the growing pains, a network such as the Research Libraries Information Network (RLIN) is necessary and desirable.

He introduced Senate guest Patricia Battin, Director of Libraries at Columbia University and currently Acting President of RLG.

Dr. Battin reported that RLIN has achieved a good deal more stability in the system since May and has experienced very good service, with increased capacity, for the past five months. Generally, improvements have been more beneficial than had been projected for this period. It may be possible by December to remove some of the present restrictions on Stanford's public service terminals. New software modifications may also soon permit searching at Stanford during the evening hours, alleviating a penalty Stanford has suffered because of being at the western end of the time zone.

There was also remarkable improvement across the networks with the new Interlibrary Loan System, instituted in September; 16 libraries delivered materials in nine days or less.

At present, the system is 75 percent finished with an inventory of all holdings, including Library of Congress holdings. That information is expected to be on-line in November. Dr. Battin concluded by welcoming suggestions for improving the system and by urging scholars to become involved in the work of RLIN and the RLG.

President Kennedy expressed the gratitude of Stanford and the other RLG institutions to Dr. Battin for serving in the Presidency of RLG during a difficult period and with such conspicuous success.

In the discussion following the report, the C-Lib was asked where Stanford stands on getting the complete library on the computer and eliminating the card catalog. Associate Director Dale Canelas, University Libraries, responded that the question asked was a complicated one. The data presently in the RLIN system is, to a certain extent, an on-line catalog. The type of system referred to at the University of Illinois is an on-line catalog plus an on-line circulation system. Our best estimate is that adding the latter at Stanford would cost at least a million dollars. Then there would be the problems of linking the on-line data in RLIN with the on-line circulation system, and of retrospectively converting all the data in the card catalog into an on-line format. That is all time-consuming and labor-intensive, and beyond Stanford's financial resources at this time.

There are devices under development now to assist in the retrospective conversion of catalog data from card format to on-line format. Within five to ten years, when such devices become available, retrospective conversion of card catalogs may become economically feasible.

Automated circulation systems have obvious advantages, particularly for those who work in interdisciplinary programs and use branch libraries within the Stanford system. The Library looks forward to moving gradually toward such automation as soon as can reasonably be expected.

The question was raised whether or not the branch libraries should have sole copies or only duplicate copies of books available in the main library.

Associate Director Canelas responded that the library system has neither the budget nor the space to duplicate the holdings in the research branch libraries (Art, Cubberley, Music, and the Science libraries). Some years ago, the Senate decided that Stanford wanted to foster the branch library system. Now nearly a million dollars a year is spent on acquisitions for those research branches. They are stable and have good hours; there shouldn't be undue problems with using them.

There are other branch libraries called "working branch libraries" (e.g., Tanner Philosophy Library, Communication Library, Psychology Library, etc.). These are essentially duplicate collections, largely purchased by main library funds and cross-cataloged in the main library card system. However, during the mid-70s budget retrenchment period, funding was withdrawn from these working branch libraries because they were largely duplicate collections of books in Green Library. The policy now is that every item in the working branch libraries is or should be duplicated in Green. The research libraries, however, are research collections and they hold unique items.

In returning to the subject of an automated search and circulation system, Dr. Battin pointed out that the truncated Illinois system, while impressive as a short-term solution, has fundamental limitations which would be unacceptable for many aspects of scholarly research. For example, it permits no search by subject, but demands the name of an author, a specific title, or a catalog number for call-up.

She added that it is important to distinguish between the circulation capacity and the on-line catalog capacity of a system. The research libraries have started with the latter because if the on-line catalog is limited to only those books which circulate, the result in the long run is a restricted capacity for bibliographic search.

The Associate Director of University Libraries was asked about the different security systems presently in force in Meyer and Green Libraries. Director Canelas responded that the libraries started investing in electronic security systems several years ago, first for the Engineering Library, then for Meyer, and more recently for Cubberley. Eventually, all the libraries will adopt the system. It has already reduced loss for the Engineering Library and is expected to do so for the others as well.

To the question of whether an automated circulation system would produce significant savings to offset the heavy costs, the response was that the savings would be miniscule in relationship to the costs.

At the close of the discussion, Chairman Fetter announced that the vote on the acceptance of the Annual Report of C-Lib would be taken on only the body of the report, excluding the two-page Appendix on a recommended revision of the University statement on Visiting Scholars. This latter is being referred, not to C-AAA as stated in the report, but to the appropriate administrative officers (the Vice-Provost for Research and the Associate Provost and Registrar). It is not properly a matter for Senate action.

The Senate, on a unanimous voice vote, accepted the body of the Annual Report of C-Lib for 1981-82.

The meeting adjourned at approximately 4:50 p.m.

Clara N. Bush
Academic Secretary

University officers plan presentation on budget outlook at Senate Nov. 11

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research volume in nominal dollars," Budget Director Raymond Bacchetti told the Senate.

While some indirect costs vary directly with research volume, Bacchetti said, "a substantial fraction of indirect cost recovery is predicated on the sharing of fixed—or relatively fixed—costs proportionately between instruction and research.

"Office and laboratory space seldom is released because the rate of research. . .growth slows. Yet the cost of providing utilities and maintenance services to that space does not slack off. . . .

"The University's operating budget is sized to support a certain mix of instruction and research. A drop in income seldom produces an equivalent decline in expense."

As a result, "a tough-minded look" at the principal income and expense elements will be needed, he said. "The way things look now, we'll have to make budget reductions over the next three years to realign expense with income."

Last spring, the University trimmed one percent of its budget base for the current fiscal year. Now an additional $1 million will be sought in expenditure holdbacks, deliberate underspending by departments this year. The facilities reserve, which helps fund renovation, remodeling and construction of some new buildings, also will be reduced.

University officers already have planned an extensive presentation on the fiscal outlook at the next regular Senate meeting Nov. 11.

Prof. Anthony Siegman, electrical engineering, director of the Ginzton Laboratory, said it would help to have "a single set of rules across the University" so that indirect costs associated with non-sponsored projects could be "explicitly assessed and funded." All expenditures then could "either be overhead or bear overhead," he said.

Prof. Robert White, chairman of electrical engineering and professor of materials science, suggested increasing faculty incentives for higher research volume. "I can think of none now. There's an enormous category of disincentives," he added.

Kennedy replied that the University is "obviously anxious" to increase research volume, "not least because that makes the faculty more productive. . .the things we live for around here is to improve the productive and creative dimension of the University.

"It's not exactly true there are no incentives in place to do that. The largest one is the faculty's desire to get all the ideas they have going in the laboratories and the library. . . There is an automatic incentive of that sort to increase research volume."

In some schools, including engineering, there are existing incentives "of a crasser sort," the sharing of faculty salary obligations with research sponsors."

But Kennedy cautioned that "not every incentive is a simple issue.

"Raising 'offset' contributions to salaries from research grants does provide incentives of a sort to send faculty members scrambling for outside money but (some) feel it is an unseemly scramble that risks too much—that the faculty must then concentrate too much on safe and saleable projects as opposed to more venturesome ones.

"In our judgment, the incentive structure is a very complicated surface, one we ought to map very carefully before simply deciding that the right thing to do is push all the levers that increase incentives for (higher) research volume."

Humanities and Sciences Dean Norman Wessells said administrators should contact faculty who serve as principal investigators in research to get a better reading on the "mixed signals" from Washington on the research funding outlook.

There may be "more funding in the offing than is apparent now," he said. "It would be very bad to cut back academic programs significantly if in fact we are in a temporary situation."

Stanford West...

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"Third, the project is in partial response to the voices we heard for so many years urging Stanford to provide more housing for its employees so that the jobs-housing imbalance and the commute traffic in Palo Alto would be reduced."

Williams said that the University will continue to work closely with the city to bring about housing that meets the needs of both Palo Alto and the University.

The process began more than a year ago, he said, when Stanford sponsored a series of four public meetings with Palo Alto and Menlo Park neighbors to hear their ideas about the project before design was undertaken.

Wednesday's meeting will begin at 7:30 p.m. in Palo Alto City Chambers, 250 Hamilton Avenue.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

30975-PM (JCC:1771) LIBRARY SPEC IV: Responsible for the day-to-day mgmt of the technical processing activities & for the suprv of 3.5 FTE Lib Specialists staff performing processing activities; respon for communicating needs for change or improvements to federal librarian for discussion & evaluation; respon for providing a minimum of 5 hours per week of reference asst for members of the Stanford Community & general public using manual printed & on-line reference tools for the four Government documents collection; other duties assigned; QUALIFICATIONS: Broad knowl of technical processing & demonstrated competence in cataloging & bibliographic searching; exp in suprv a work group; ability to communicate in clear & concise manner, orally & written; work indep'ly; exp using lib automated systems;RLIN preferred send appl/resume to Bob Johnson, Green Library, Room 223 (497-3152). ;; B16; $1593-1671.

31500-BP (JCC:2454) OFFICE ASST II: A member of staff respon for the maint of the Alumni & Special Interest Volunteer Files; files must be comprehensive, complete & accurate; will perform the following duties: code various SIV & Alumni transactions on coding sheets in a legible manner; file info cards alphabetically; review various source mat'ls for update info; answer inquires from Univ offices, alumni & friends regarding info contained in file; interpret Univ policy relative to the cofidentiality of info contained in file; QUALIFICATIONS: typ 50 or willingness to learn; neat & legible handwriting; ability to work under pressure of tight deadlines; ability to organize own work & set priorities; handle detail work accurately; knowl of the English alphabet; knowl of basic offc procedures; willingness to interchange job duties; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B09; $565-595.

25871-PM (JCC:2470) OFFICE ASST IV: The Law Placement Recruitment Coordinator works independently with a minimum of supervision under the Placement Director; oversees all aspects of the employer recruitment process at Law School incl primary contact w/ employers, publication of recruiting materials, orientation of students to interviewing program; interacts w/ legal employers; interprets recruiting guidelines; etc.; QUALIFICATIONS: type 50; work well with people; supvr of clerical admin exper helpful; excellent written & oral skills; work under pressure and set own priorities during peak periods; exp with CRT or willing to learn WYLBUR; send application to Dena Landsman, Rm 113, Crown Quad.; B14; $1440-1514.

36141-BP (JCC:2470) OFFICE ASST IV: Help devl, organize, publicize & evaluate a variety of educ'l, social & cultural programs; asst in developing & conducting evaluations of progs; asst in neighborhood coord selection process; asst in planning & implementing the orientation for new residents; implement workshops/info sessions on programs organz; serve as liaison with other Univ offices; devel bochures & arrange layout/mat'ls for printing; prov organz'l help & clerical support for village programs; etc. QUALIFICATIONS: Typ 45; successful exp in developing & implementing programs, initiating projs, wrkg w/ groups of college students & faculty of all ethnic backgrounds, exercise good judgement, taking directions & wrkg indep'tly, wrkg under pressure, organz tasks, attending to detail, effective communication orally & written; send appl/resume to Patricia Brandt, Escondido Vlg. Office,; B14; $1440-1514.

28541-BP (JCC:2512) OFFICE ASST III-SPEC: Full range of office support; suprv half-time asst; type mathematical technical papers; skill in library research techniques; ability to learn word processing system & handle routine correspondence; order office and lab supplies; answer phones & escort visitors; keep monthly account of budgets & prepare graphs & statements; filing; library research as required; xeroxing, etc; QUALIFICATIONS: Type 60-70; fast, accurate 1 typist with excellent typing and grammer abilities; ability to type mathematical technical papers; skill in library research techniques. send appl/resume to Beverly yates, AEL 107, Stanford, CA 94305.; B12; $1310-1373.

24764-PM (JCC:2562) SECRETARY III: Sec for 4 faculty members plus sec/coord for dept's grad student & medical student teaching program; organize & typ all handouts & exams for dept courses; maint file of all course handouts, grades, correspondence, etc for the academic@ year; update publications each quarter or year as needed such as time schedules, courses & degree books, etc; coord weekly seminar program w/ guest lecturers & respon faculty member; ast as primary source of info & advise grad students regarding Univ & Dept requirements, deadlines, etc for application process; sec'l responsibilities, etc; QUALIFICATIONS: Typ 55-60; must be well organized; ability to handle a job w/ diverse duties and responsibilities; must work independently w/ minimum supervision; prev exec or med exp; med terminology strongly desired; knowl of grant budgets desired; send appl/resume to Pat Gonzales, R-356, Medical Center.; B14; $1440-1514.

30455-BP (JCC:2596) SECY II-SPEC: 50% time; 1-5 pm; typing correspondence; technical typing of manuscripts for publications, classwork, typing, & technical reports; preparation of university forms; normal sec'l duties, answering phones, filing, opening mail, forwarding mail, etc; willing to learn word processing; QUALIFICATIONS: Typ 60; technical typing exp preferred; knowl of university helpful; accurate typing; send appl/resume to Rose Aleman, Dept. of Physics.; B12; $655-687.

Exempt

36544-DS (JCC:2228) FINANCIAL MGR II' Asst. Controller/Control & Reporting of Expenditures; full mgmt responsibilities for developing, interpretation & application of Univ. policy expenditure sections of Controller's Offc.; reports to Dir of Acctg; develops systematic procedures which ensure that Univ resources are expended in accordance with constraints placed on them by their sources & in accordance with Univ policy; develops long term operational goals & organz priorties & operating procedures to achieve goals; etc; QUALIFICATIONS: MBA or equivl exp; CPA preferred; 7 or more yrs successful exp in acctg mgmt in a large complex organz; knowl of fund acctg & grant/contract admin; demonstrated ability in design & operation of computerized acctg system; mgmt abiltyto maximize productivity of human resources; superior interpersonal skills including verbal & written communication; able to interact effectively w/ all levels of mgmt & operations.; C10; $3494-4255.

36304-FM (JCC:8880) Misc Professional: Data Processing Coordinator will maint existing database on externally funded research/instruction projects; participate in design of new office-wide processing & reporting sys; have respons for prepara of all user documentation & user manuals for new system; share responsibilities for training all offc staff to use new system; oversee maint of info library; QUALIFICATIONS: ability to function independently w/minimal supvn in all aspects of job; extremely effective interpersonal skills, as well as written, analytic & quantitative abilities typically associated w/BA in English or math; demonstrated training skills; knowl of computer applications & familiarity w/computer languages & research environment helpful; C05; $1670-2086

36287-JB (JCC:6306) R & D ENGR II: Work closely w/ scientists to develop conceptual designs for precision optical/mechanical resrh instrumentation for use in synchrontron radiation beam lines & then calculate temperature distributions & thermal & mechanical stresses & accompanying deformations of metal surfaces & optical components heated by intense x-ray beams; will also expedite procurement & fabrication of new equip as needed; perform mechanical engrg analysis of proposed future designs of synchrontron radiation sources, beam lines, windows, monochromators & related instrumentation, in support of proposals for future facilities; QUALIFICATIONS: M.S. or Ph.D in Mech Engrg w/ ability to perform complex heat transfer & material stress calculations essential; wrkg familiarity w/ computer solutions of such problems highly desirable; ability to read & interpret engrg drawings; familiarity w/ machine shop & fabrication techniques essential;; C99; $2113-2724.

Hospital

Submit applications to the Hospital Personnel Department, 770 Welch Road, or call 497-6361.

Life Sci Res Asst II: Fixed term, 3-4 mos from hire date; perform protein separation w/one & two dimensional gel electrophoresis; ammonium sulfate precipitation & column purification of monoclonal antibodies; make fab, fragments of antibodies; QUALIFICATIONS: BS degree w/emphasis on chemistry; min 1 yr lab work exp; ability to work independently; send appl/resume to Vera Morhenn, M.D., SU Med Ctr, Dermatology Dept, R110 or call 497-5476 or 497-7193

SLAC

95041-JM (JCC:5284) COMPUTER OPR TRNEE: TMS Unit; rotating shift; 15 month training program; operate peripheral units such as tape drives, disk drives, card readers, printers; monitor & report equipment malfunctions & output errors; fulfill administrative requirements; high school or equivl; some exp in computer facility working in dispatch, disk, tape area; must know how to clean equipment, change printer ribbons/paper; good reading, oral & arithmetic skills.; A00; $1300. APPLY AT SLAC

95038-JM (JCC:5284) COMPUTER OPR TRNEE: TMS Unit; rotating shift; 15 month training program; operate peripheral units such as tape drives, disk drives, card readers, printers; monitor & report equipment malfunctions & output errors; fulfill administrative requirements; high school or equivl; some exp in computer facility working in dispatch, disk, tape area; must know how to clean equipment, change printer ribbons/paper; good reading, oral & arithmetic skills.; A00; $1300. APPLY AT SLAC

95050-JM (JCC:6704) S&E TECH SUPVR: Supervise & coordinate activities during fabrication, assembly & testing of accelerator & storage ring ultra high vacuum (UHV) chambers; responsible for planning & scheduling blocks of work; supervise technicians; provide technical assistance to developing design concepts & solving problems; must have thorough knowl of vacuum sci & technology; exp supervising crews of technicians & coordinating fabrication efforts for large projects in accelerator & storage ring science field; ability to read, understand & make engineering drawings & design components or tools; understand welding procedures; familiar with machine shop practices; have strong mathematical skills.; S17; $2416-3030. APPLY AT SLAC.

91592-JM (JCC:6406) SCI & ENGR ASSOC I: Plan, organize & direct activities of electronic technicians in performing preventative & corrective maintenance on systems & equipment; supervise installation, checkout & evaluation of new systems & equipment; pursue & identify problems areas; maintain close liaison with other groups; AA degree in electronics or equival; several years of electronic maint exp desirable; must be thoroughly familiar with high power modulators; regulated power supplies amplifiers; pulse circuitry; protection system & high density solid state analog & digital devices; basic working knowl of microwave techniques, transmission lines, beam dynamics & vacuum systems essential.; C99; $0-0. APPLY AT SLAC

Bargaining unit

29097-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; prep cell preparations, carry out experiments on membranes under supvn & analyse data; perform routine tissue culture work (maintenance of stock cultures, grow suspension cultures & batch cultures attached to growth surfaces) asst investigators in variety of experimental techs related to biochemistry & 1 biophysics of cellular membranes; prep graphs & analyse data; QUALIFICATIONS: degree in Biochemistry or related science or equiv exp; some exp w/ computer desirable.; A24; $8.65.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, November 9, Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Rental housing

HOUSING AVAILABLE

□ **June 14, '83 to Aug. 29, '83:** Atherton, 5BR/3½BA fully furn. hse. Completely remodelled. Pool. $9000/10 wks. Incl. util., maid serv. twice wkly, gardener. Call (415) 321-4100.

□ **Beg. Nov. 1, '82:** Unfurn. hse, 4BR/2BA, newly redec., W/D. Nr. midtwn in P.A., nice family nghbrhd. 1 yr. lese. $1100/mo. Call (415) 329-0797.

□ **Beg. Nov. 1, '82:** Lge studio, furn. sep. entr. Dinette/ktchn, stor. wall, combo stove, frig, sink. Waterbed, carpet. 20 min. bike to campus. Share W/D & solar heat. Pool. $350/mo. + dep. Call (415) 364-5383, after 5 p.m.

□ **Now thru June, '83:** Sublet, Los Altos, 3BR/2BA, 2 frpl., lrg. priv. yd. $1000/mo. Call (415) 969-0613 (eves).

□ **Now:** Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, W/D, phone, frpl, sleeps 10. $200/wknd, $70/wknight. Call 493-4139 (eve).

□ **April to July, '83:** Furn. campus hse., 3BR/2BA, study. Fenced yd. $900/mo. incl. grdnr & hsecleaning. Call 858-2142 (eve. & wknd).

□ **Jan. '82 for 3, 6, or 9 mo:** Fully furn. hse 2-3BR/2BA. Lovely Japanese grdn. 20 min. drive to campus. $1000/mo. incl. grdnr. Call 497-1316 or 497-1527 (day), or (408) 245-3780 (eve).

□ **Regularly Avail:** 1 & 2 BR furn. & unfurn. apts. & twnhses & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds, close to campus. $525 to $800/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Now thru June '83:** Menlo Pk, unfurn. hse. 3BR/2BA, FR, frpl, patio, beautiful encl. garden. Stove, new frig & W/D. Children welcome, pets ok. 10 min. to campus. $1100/mo. + util. Call 497-2635 (day), 325-5482 (eve).

□ **Jan. to June, '83 (flex):** Furn. campus hse. 4BR/3BA, LR, DR, FR w/frpl. Shop, carport. Auto. sprinklers. Nonsmokers. $1400/mo. + elec., gas, gardning; 1st & last mo. plus dep. Call 857-9185 or 497-1663 (day).

□ **Nov. 15 to June '83:** Spacious Mt. View. unfurn. condo. 2BR/2BA, overlooking pond. AEK, W/D, gar., pool, tennis. $725/mo. lease. Call John, 962-8473 (eve).

HOUSING NEEDED

□ **Jan. to Mar. '83:** Retired Conn. cpl visit. their S.U. fam. seek 2BR hse or apt on campus, Coll. Terr., Evergreen Pk. Frpl. pref. Will hsesit or pay reasonable rent. Call Marilyn Davidson, 857-0390.

□ **Beg. Oct. '82 to March '83:** Want to rent 2BR or more, furn. condo. or hse. Please call COLLECT (714) 752-7870.

□ **Jan. '83 to Aug. '83:** Visit. Prof., wife & 2 children (11, 8) seek 2-3BR furn. hse or apt. nr good public schls. Easy commute to Stanf. WILL SWAP 3BR/2BA hse on 2 acres, 10 min. to U. Mass, Amherst, 1 hr. to Vermont ski slopes, 1½ hr. to Boston. Call COLLECT John Collura, (413) 253-3287.

□ **Winter Qtr:** Visit. Prof. seeks furn. studio or 1BR apt within 3 mi. of campus. If poss. could hsesit. Call Elissa, 497-4977 (day).

□ **Jan. to Mar. '83:** Retired cpl. seeks furn. 1 or 2BR apt., condo, or hse. on campus, Palo Alto, Menlo Pk. Close to shops, campus. Pkg. deal to include car best. Call Dave Marimont, 497-3796 (day) or 325-7182 (eve).

□ **Beg. mid-Nov. for 6 mos. (flex):** Visit. prof., wife seek 1 or 2BR furn. apt. (linens & dishes pref.). Write to Y. Ilamed, Math Dept, Stanford 94305.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Lively Arts to present Stoltzman-Trampler- Luvisi Trio

The Lively Arts at Stanford will present the Stoltzman-Trampler-Luvisi Trio, with clarinetist Richard Stoltzman, violist Walter Trampler, and pianist Lee Luvisi, at 8 p.m., Wednesday, Nov. 10, in Dinkelspiel Auditorium.

The Trio will play Mozart's "Trio in E flat Major K. 498;" Shostakovich's "Sonata for viola and piano, Op. 147;" Brahms' "Sonata in E flat Major for clarinet and piano, Op. 120, No. 2;" and selections from Bruch's "Eight Pieces, Op. 83."

The Trio came together as an ensemble in 1980, playing their New York debut in the New School Concert series, which has also introduced the Guarneri, Cleveland, and Vermeer Quartets, and TASHI. The special rapport evident among the three musicians has led to critical praise wherever they have performed.

Stoltzman is currently regarded as one of the finest clarinetists in the classical repertoire. He has performed as a soloist with many orchestras, including recent sold-out performances with the Mostly Mozart Festival Orchestra at Kennedy Center and Lincoln Center.

In addition, he performs often with William Douglas and TASHI, of which he is a founding member, and has recorded for RCA, Desmar, and Orion records. Stoltzman was also the first clarinetist ever to be heard in recital at Carnegie Hall.

Trampler, viola, has performed as a soloist with orchestras as a recitalist and with chamber music ensembles throughout the world. At age 17, he toured Europe as violist of the Strub Quartet. One year later he was appointed principal violist of the Berlin Radio Symphony.

He came to America at the outbreak of World War II, and was soon engaged at the newly-formed summer music festival at Tanglewood, an involvement which led to a position with the Boston Symphony Orchestra under Serge Koussevitsky. Several years later, he became a founding member of the New Music Quartet, dedicated to the performance of contemporary music.

Pianist Luvisi studied with Rudolf Serkin and Mieczyslaw Horszowski at the Curtis Institute of Music where, upon his graduation, he became the youngest faculty member in the history of that institution. In 1963 he returned to Louisville, Ky., his birthplace, as artist-in-residence at the University of Louisville School of Music, where he is now also professor and head of the Piano Department.

Luvisi's solo activities have included recital and orchestral engagements across the U.S., Canada, Mexico, and Europe.

He is a frequent guest artist with the Chamber Music Society of Lincoln Center, and at New York's Mostly Mozart Festival and Chamber Music at the "Y" series. A participant for many years at the Marlboro Music Festival, he has spent the past 10 summers as an artist-faculty member of the Aspen Music Festival.

For ticket information call Tresidder ticket office, 497-4317.



Fritz Brun as Shu Fu the barber, Johanna Dickey as Shen Teh, 'the angel of the slums,' and Rush Rehm as Yang Sun, an unemployed pilot, in a scene from the Stanford Drama Department's production of Bertolt Brecht's parable play, *The Good Soul of Setzuan*, opening at 8 p.m. Tuesday, Nov. 9, in the Little Theater. Directed by Deoffrey Reeves, performances continue through Saturday, Nov. 13. Tickets at $4 (students and seniors $2) are available at Tresidder Ticket Office.

University defends DNA patent...

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contend that sufficient information was provided in the application to enable scientists to perform the basic genetic engineering process.

"The numerous publications subsequent to the filing of the subject application support the fact that by following the teachings of the subject application one can prepare functional plasmids and clone foreign DNA," stated Bertram I. Rowland, of Townsend and Townsend attorneys of San Francisco, which prepared the amendment.

In addition, Cohen and Boyer had made the plasmid in question available to researchers, enabling them to apply the technique without regard to the description of the plasmid.

In addition to Cohen, Boyer and Weisblum, other declarations were offered in the case about the enabling issue by Stanley Falkow, chairman of the Medical Microbiology Department at Stanford; David Hogness, professor of biochemistry at Stanford; and David Helinski, professor of biology at the University of California San Diego.

The amendment also addressed what Rowland called the "Darwinian" rejection. This was raised by the Patent office, which noted that a DNA process analogous to the one described in the patent can occur in nature under special circumstances.

"Based on the frequency of mutation and selection of individual species, the evolutionary process is statistically unlikely to have occurred in the time span which was available." The amendment continued by noting that "an evolutionary time scale of hundreds of thousands of years and not the lifetime of a patent" is not relevant to consideration of the application.

"The next objection," read the attorney's remarks, "concerns the question of whether Professor Robert Helling of the University of Michigan is a coinventor. Helling has declined to sign a disclaimer of co-inventorship. He also has declined to respond to queries from Rowland about what role he played in the invention, the document said. Although Helling had co-authored a journal article with Boyer and Cohen, "the doctrine that co-authorship is prima facie evidence of coinventorship has always been considered by this attorney to be mischievous," Rowland wrote. He also noted a recent case which he said supported that premise.

The patent application follows another issued to Stanford in 1980 which covers the basic techniques of gene cloning. The current application was filed in 1974 and covers products resulting from the use of the technique. (These products, called transformants, are the result of intermediate steps between the genetic raw material and the desired commercial product).

Seventy-three licenses have been issued by Stanford and UC on a nonexclusive basis for reasonable royalties based on the gene cloning techniques, Reimers said. Income to Stanford and UC so far has reached about $1.4 million.

Two products recently became commercially availiable, including insulin and a swine vaccine.

The techniques are powerful research tools for analyzing the working of genes. They also make possible the construction of "bacterial factories" that can safely produce large quantities of compounds important in medical treatment and other fields.

Because bacteria theoretically could be engineered to produce almost anything created naturally by plant and animal cells, the techniques developed by Cohen and Boyer may have significant applications in such diverse industries as energy, chemistry and agriculture.

Emigration changed Italian hopes

While most Italian emigrants to the U.S. expected to return home, "their experience in the U.S. made them too sophisticated to tolerate the Italy they had left," Assistant Prof. Dino Cinel declares in a new Stanford University Press book, *From Italy to San Francisco: The Immigrant Experience*(347 pp., cloth, $25).

Most emigrants were determined "to bring about changes at home—to make it possible for people like themselves to own land and preserve an agrarian way of life," he observes.

Those who came to San Francisco "adjusted with only minimum disruption. . . . Resettling in America was a major break with the past, but Italian settlements in San Francisco were essentially miniatures of settlements in Italy.

"For Italians, the most unexpected force for change was the failure of return migration. . . . Small scale capitalism in Italy could not survive in competition with the large-scale capitalism of the U.S. and northern Europe.

"Most Italian returnees never suspected that their old world was coming to an end, let alone that by temporarily emigrating to the U.S. they were hastening that end.

"It is doubtful whether Italian emigrants would have ever crossed the Atlantic had they foreseen the impossibility of returning to live in their native land. . . .

"Ironically, inevitably. . .temporary migration changed the very goals they wanted to achieve. The drive for material success put a premium on change; the attachment to tradition made them resist it. Neither goal could be pursued except at the other's expense.

Carpools

Ride wanted from El Camino Real, next to Emporium in Mountain View—either one way or both. Will pay gas allowance. My hours are 8-5. Call Karen at 7-4847 or 969-3514 (home).

Campus crime report

Oct. 25-Nov. 1

Burglary/residence	0	Phone harassment	0
Burglary/nonresidence	1	Controlled substance	0
Burglary/Vehicle	6	Felony arrest	3
Theft/under $200	5	Misdemeanor arrest	6
Theft/over $200	1	Adult booking	7
Bicycle theft	8	Adult cite/release	2
Vehicle accident	3	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	3
Assault	0	Driving under influence	4

Songs by Eisler, words by Brecht mark 'Cabaret Politique'

Alea II, the Music Department's ensemble for contemporary music, presents "Cabaret Politique" Friday, Nov. 12, at 8 p.m. in Tresidder Lounge.

Under the direction of Jonathan Berger, the music of Hanns Eisler and his trial by the House Un-American Activities Committee will come to dramatic life.

A stark courtroom will be the setting for the songs of Eisler, with words (in English) by his long-time collaborator Bertolt Brecht, interspersed with excerpts from the Committee's investigation into Eisler's background and "un-Americanism."

Eisler was a famous German composer, a student of both Webern and Schoenberg. Deported by the Nazis in the 1930s, he was brought to the U.S. under the personal auspices of Eleanor Roosevelt. Eisler lived first in New York, then in Hollywood, where he made his living as a freelance film composer.

In 1948 Eisler was deported back to East Germany—one of the Committee's many innocent victims. There he directed the Academy of Music in Leipzig until his death in 1962.

"Eisler is one of the greatest composers of the 20th-century," says Berger. "His songs range from jazzy cabaret, to patriotic marches, to complex, chromatic experimental pieces."

Doctoral voice candidates John Peter Gaffney (tenor) and Charles Fidlar (baritone) will take the parts of Hanns Eisler and the Committee, respectively. Voice major Nancy Kass will be the court stenographer who bursts into a few songs regarding feminist issues.

Eisler's sextet, *Fourteen Ways of Describing Rain*, will be performed as the Committee takes a recess. A 12-tone work composed for a Hollywood film, it is written for piano (Liora Bresler), flute (Yvonne Kendall), cello (Marianne Cleary), viola (Eric Kujawsky), violin (David Jaffe), and clarinet (Joseph Limacher).

Tickets for Cabaret Politique are $4 general, $2 students, available at Tresidder Ticket Office (497-4317) and the door.

Zinoviev to speak Monday on campus

Alexander Zinoviev, Soviet philosopher, novelist, and dissident, will discuss U.S.-Soviet relations at 8 p.m. Monday, Nov. 8 in Annenberg Auditorium at Stanford.

His free public talk is sponsored by the Associated Students Speakers Bureau.

He is the author of *The Yawning Heights*, a novel whose publication in the West led to his emigrating from the Soviet Union, and *The Radiant Future*, a powerful modern parable compared to George Orwell's *1984* and *Animal Farm*.

Just turned 60, he held a research appointment at the Institute of Philosophy of the Soviet Academy of Sciences for 22 years and was a member of the philosophy faculty at the University of Moscow for 14 years prior to his emigration.

His Soviet citizenship has been revoked by Leonid Brezhnev for "behavior damaging to Soviet prestige."

I-Center to show films about China

The International Center's Other Cultures film series will present two films on modern China at 7:30 p.m. Thursday, Nov. 11.

The first film, "Beijing," takes a close look at China's capital by contrasting the lives of its young and old inhabitants against the backdrop of both the ancient and modern aspects of the city.

"Beijing" was made by the first American filmmakers to arrive in the People's Republic after the United States established full diplomatic relations.

"The Giant Panda" is a film produced in the People's Republic which examines China's most popular and most endangered species.

The I-Center's China segment of the Other Cultures film series is a part of the ongoing Thursday night film program designed to be both entertaining and educational. Admission is free; however, a 75-cent donation is requested at the door.



A typical Marson print

Marson print showing

Marson, Ltd., of Baltimore will exhibit for sale its collection of original Oriental art from 11 a.m. to 5 p.m. Wednesday and Thursday, Nov. 3-4, in the lobby of Tresidder Union.

The collection contains prints from the 18th century to the present, including woodcuts, etchings, lithographs, serigraphs, and mezzotints, at a wide range of prices. They are shown in open portfolios, and browsing is encouraged.

Color photographs shown by Kuffler

Color photographs by Damien Kuffler will be shown through the month of November in both the Coffee House and second floor galleries at Tresidder Union, Stanford University.

The work included in the exhibits is from two series: Views through a Natural Lens, the world as reflected in drops of water; and California Vignettes, the larger landscape of this state.

Photographs from both series will be represented in each exhibit area.

Kuffler has been a postdoctoral research fellow in the Department of Neurobiology at Stanford for four years.

Local dance groups to perform at Roble next weekend

The Stanford Dance Division will present an invitational dance concert at 8 p.m. Friday and Saturday, Nov. 12-13, in the Roble Dance Studio on campus.

The first event of its type to be offered by the division, the performance will feature works by Stanford alumni and Bay Area choreographers, including Ellen Bromberg, Nancy Fenster, and Regina DeCosse.

In addition, members of the Stanford Dance faculty will perform "Sleeping Sonata" by John Goodwin, director of the Los Angeles-based Dime-a-Dance Company currently working on Broadway in New York City.

The Roble Dance Studio has been a popular performing space on campus for many years. With a recently refinished floor, newly installed sound system, and the anticipated purchase of lighting equipment for the studio, the Dance Division hopes to convert it into a versatile and attractive performing center. Events other than dance will be included in future performing seasons.

Workshops with members of the Twyla Tharp and Paul Taylor companies will be held in conjunction with the University's Lively Arts Series. Also upcoming are a faculty concert during February's "Dance Week" and the annual "Spring Migration."

Tickets for the concert at $4 general admission and $3 for students will be available at the door.

North is I-Center lunch lecturer

Prof. Robert North, political science, will speak at next Tuesday's Luncheon-Lecture at noon at the International Center.

North will speak on "Worldwide Competition for Scarce Resources" and, specifically, the way in which that contributes to international conflict.

North came to Stanford in 1948 to earn a master's degree and later a Ph.D. He has been a member of the faculty since 1957.

North currently specializes in international relations and has published *The World That Could Be* as well as numerous other books and well over 100 articles for professional journals.

North's discussion is part of the International Center's continuing Tuesday Luncheon-Lecture program. This quarter the program will probe the origins of world problems which elude peaceful settlement.

The Tuesday Luncheon-Lecture includes a hot lunch (limited to 40). Tickets for the lunch go on sale at the I-Center one week in advance at $2.50. The lecture is free, and brown baggers are more than welcome. For more information phone the I-Center at 497-1831.



Charles Garoian

Performance art subject of Faculty Club exhibition

Performance art as teaching methodology will be exhibited at the Faculty Club by Charles Garoian, art instructor and chairman of the Art Department at Los Altos High School, through the month of November.

The exhibit of photographs and texts by Garoian demonstrates performance art created by students at Los Altos High over the past 13 years.

A Stanford Ph.D. candidate in art education, Garoian has had experience in many types of art, including a stint as a graphic artist for the University of California Agricultural Extension Service in Fresno County. He has exhibited in many media and won awards in painting, sculpture and performance, including a grant and one-man exhibit at San Francisco Museum of Art in 1974.

Among the conceptual performances he has helped to present at Los Altos High were: Five Tons of Ice, a monument in ephemerality; Sand Pyramids, art as paradox; Drill Team, art as social commentary; and Dialogue with an Object of Conversation.

Garoian's theory is that performance art serves high school students because it allows them to bring their personal conceptions out and apply them toward emotional and conceptual growth.

Performance art allows students to apply their need for independence in a context where experimentation, pranking, and improvisation are regarded as creative play or conceptual brainstorming rather than rebellion. It provides for the creation of personal points of view and also serves the culture by providing new possibilities—i.e., cultural growth.

Once the students develop their own creative potential, they can appreciate the values, attitudes and beliefs of the past through a personal, experiential and conceptual perspective that they have created for themselves.

Garoian, in addition to being a frequent lecturer, panelist, and writer on his theory of teaching performance art, has served as president of California Art Education Association. He also teaches art history, as well as drawing, painting and other traditional art forms.

Child psychologist to speak Monday

Child psychologist David Elkind will discuss the pressures he believes are placed on contemporary children to grow up too quickly. The lecture is scheduled for 8 p.m., Monday, Nov. 8 at Jordan Hall, Room 040.

The lecture will be open to the public for a $15 donation for the scholarship fund at the Bing Nursery School.

Elkind, chairman of the Eliot Pearson Department of Child Study at Tufts University in Massachusetts, is the author of several books, including *The Hurried Child*; the subject of his Stanford lecture.

"We dress our children in miniature adult costumes, we expose them to gratuitous sex and violence, and we expect them to cope with an increasingly bewildering social environment," Elkind writes.

His lecture is the first in the Bing Lecture Series, part of an effort by the school's director, Carol Lou Young-Holt, to raise scholarship funds.

Besides the lecture, there will also be a book-signing party at 4 p.m., Sunday Nov. 7 at Bing.

Reservations for both events can be obtained from Bing School or by calling 497-4865.

SLAC researcher schedules talk

Helen Quinn, Ph.D., a research fellow at SLAC, will lecture on "What is the World Made of? (a particle physicist's view)" at 4:15 p.m. Friday, Nov. 12, in Skilling Auditorium.

Her lecture is the first in a monthly series sponsored jointly by Women in Science and Engineering and the Dean of Graduate Studies and Research. Speakers will be Stanford women faculty and graduate students in science and engineering.

The series is designed to promote interdisciplinary discussion among women in engineering and the sciences by providing a regular forum where non-technical lectures on research topics are followed by informal discussion over refreshments.

New employees topic of workshop

"Job Stress and the New Employee"—a one-session workshop for employees in their first six months of a new job at Stanford—will be sponsored by the Help Center noon to 1:30 p.m. Wednesday, Nov. 10, at the Galvez House.

The workshop will be presented by Help Center counselors Sharon Levin and Larry Starkey. Issues to be addressed are: job expectation vs. job realities; the emotional and physical components of being new; what job stress is, and how it relates to the new employee; and suggestions for eliminating or modifying job stress.

Places in the workshop should be reserved by calling 497-4577 before Wednesday, Nov. 3.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Stanford Medical Center and SLAC employees and their immediate families. All workshops, seminars and counseling sessions are free.



Emanuel Ax

Pianist Emanuel Ax to perform, hold master class

Pianist Emanuel Ax, winner of the first Arthur Rubinstein international piano competition in Israel and the prestigious Avery Fisher Prize, will perform at 2:30 p.m., Sunday, Nov. 7 in Memorial Auditorium at Stanford.

The following pieces will be included in the program: Haydn's "Sonata in C Major, Hob. XVI/48"; Schoenberg's "Six Little Pieces, Op. 19"; Beethoven's "Variations and Fugue in E flat Major, Op. 35"; and Chopin's "Ballade in F minor, Op. 52"; "Three Mazurkas," and "Andante Spianato and Grande Polonaise, Op. 22."

In addition to his piano recital, Ax will also give a master class to four pre-auditioned students at 7 p.m., Saturday Nov. 6 in Kresge Auditorium. Master classes are open to the public as observers.

The students selected for the class and what they are playing is as follows: Susan Snyder, Beethoven's 32 Variations on a theme in C minor; Kay Bedenbaugh, Debussy's L'isle joeuse; Esther Chung, Schubert's Sonata in A minor, Op. 143; and Edmund Correia, Chopin's Barcarolle.

Now in his early thirties, Ax is considered to be an "old master" of the pianoforte and has a distinctly romantic approach to piano literature.

Born in Lvov, Poland in 1949, Ax moved to the United States at the age of 12. He studied piano with Mieczyslaw Munz at the Juilliard School of Music in New York.

Ax performs regularly with such orchestras as the New York Philharmonic, the Chicago Symphony Orchestra and the Cleveland, Pittsburgh, Los Angeles, and St. Louis symphonies.

Tickets for Ax's recital range from $8.50 to $11.50. Student tickets are $3 off any ticket. Tickets to the piano master class are $5 and senior adults and non-Stanford students are $3.

Do your laps at SCRA

Stanford Campus Recreation Association, 875 Bowdoin, plans to offer a five-month winter lap swim from Nov. 1 to the end of March 1983.

Daily swim hours are anytime between 7 a.m. and dusk. The fee is $375 per family.

Members of the Stanford community may call 857-0414 for more information.

Bylsma plans cello concert featuring three Bach suites

The Lively Arts at Stanford will present Anner Bylsma, considered to be the Rostropovich of the Baroque cello, at 8 p.m., Friday, Nov. 5, in Dinkelspiel Auditorium.

Bylsma's program will consist of Suites No. 2, in D minor, No. 3 in C Major, and No. 6 in D Major for Unaccompanied Violoncello by Johann Sebastian Bach. The remaining three suites (Nos. 1, 4, 5) will be performed at 8 p.m., Saturday, Nov. 6, in Knuth Auditorium at San Francisco State University.

Bylsma also will conduct a coaching workshop at 3:30 p.m., Friday, Nov. 5, in Dinkelspiel. Participants will be students of Tom Stauffer and Irene Sharp. The workshop is free and open to the public as observers.

Born in 1934 in the Netherlands, Anner Bylsma started his musical studies at the age of three. He studied cello at the Royal Conservatory in the Hague with Carel van Leeuwen Boombamp, cellist in the Netherlands Quartet.

After receiving the Prix d'excellence in 1957, he went on to win first prize in the Pablo Casals Competition in 1959. Starting in 1962, he spent six seasons as principal cellist of the renowned Concertgebouw Orchestra of Amsterdam under Bernard Haitenk.

Bylsma is perhaps best known as an interpreter of music of the Baroque and Early Classical periods. He is a specialist of the Baroque cello, the instrument to which he has devoted most of his energies during the past 14 years.

Anner Bylsma's international reputation is based on numerous recordings and concert appearances, and especially on his interpretation of the Bach Suites for Unaccompanied Cello. These pieces were long considered to be mere musicological curiosities until Pablo Casals rediscovered them and revealed their musical worth.



Anner Bylsma

Bylsma's historically accurate conception and authentic rendering, evidence of his complete understanding of the structure, have garnered critical praise worldwide. His recordings of the Suites, which rivals the great Casals recording, was released last year.

Bylsma is currently on the faculties of the Amsterdam Sweelinck Conservatory and the Royal Conservatory in The Hague.

For ticket information, call Tresidder Ticket Office, (415) 497-4317.

Stanford Symphony opens new season

Stanford's symphony and chamber orchestras, under the direction of Andor Toth, will perform an exciting program at 8 p.m. Saturday, Nov. 13, in Dinkelspiel Auditorium.

Presented by the Department of Music, the Chamber Orchestra will play Haydn's *"Oxford" Symphony No. 92* in honor of Haydn's 250th birthday.

The Symphony Orchestra will perform Stravinsky's *Pulcinella Suite* in honor of that composer's 100th birthday, and Rachmaninoff's *Piano Concerto No. 2* with pianist Alan Gampel.

Gampel is a sophomore at Stanford with a very impressive background. He has soloed at the Hollywood Bowl and with several California orchestras, among them the California Chamber Symphony and the Ventura Symphony. In 1981 he received the Presidential Scholars Award and was a first-place winner in the Music Teachers Association of California Piano Concerto Competition. He studies with Adolph Baller.

Tuneful and exuberant, Stravinsky's *Pulcinella Suite* is a colorful, virtuoso ballet and a *tour de force* for the orchestra.

Oxford University awarded Haydn an honorary Doctor of Music degree on his first visit to England in 1790. Haydn conducted his vital, refreshing *Symphony No. 92* then, and it has been known as the "Oxford" ever since.

Tickets for the November 13 orchestra concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door. The Music Guild will serve refreshments.

Baroque Ensemble plans free concert

The Stanford Department of Music will present the Baroque Ensemble in concert at 8 p.m. Sunday, Nov. 14, in Annenberg Auditorium.

Under the direction of Prof. George Houle, the free concert will include:

Corelli—Sonata VII, op. 5, for violin (Marmee Eddy), viola da gamba (Patricia Halverson), and harpsichord (Vera Kochanowsky);

Marais—Suite in D Major from the *Troisieme Livre de pieces de viole*, 1711, for viola da gamba (Roland Hutchinson) and harpsichord (John Toenjes);

Rameau—Suite No. 1 from *Pieces de Clavecin en Concert* for harpsichord (Vera Kochanowsky), flaute traverso (Yvonne Kendall), and viola da gamba (Patricia Halverson);

Handel—Concerto grosso, op. 6, No. 4 for Baroque Orchestra, led by Marmee Eddy.

This will be the first performance of Stanford's recently formed Baroque Orchestra.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Nov. 3, to cover the week of Mon., Nov. 15, through Sun., Nov. 21.

LATE ANNOUNCEMENTS

Wed., Nov. 3. Structural Biology Dept. Lecture: "The Genetics of Myosin Assembly" by Dr. Henry Epstein, Baylor College of Medicine. Noon. Fairchild Bldg., Room D-102.

Thurs., Nov. 4. Amnesty International USA Meeting: Showing an amnesty film followed by letter writing on behalf of political prisoners. Noon-1 p.m. Room 190, Law School. (Subsequent weekly meetings, same time but in the I-Center.)

MONDAY, NOVEMBER 8

Radioscience Seminars: "Distribution of Particle Sizes in Saturn's Rings" with Howard Zebker, S.U. 4:15 p.m. McCullough Bldg., Room 127.

Numerical Analysis Seminars: "A Systolic Architecture for the Singular Value Decomposition" with Franklin Luk, Cornell Univ. 4:15 p.m. Math 380C.

Stanford Film Society: "8½." 7 p.m. Kresge Aud. $1.50.

ASSU Speakers Bureau: Alexander Zinoviev, Russian politcal writer and novelist deported from Moscow in 1978, will speak on the Russian political system. 8 p.m. Annenberg Aud. Public cordially invited.

TUESDAY, NOVEMBER 9

I-Center Tuesday Lecture-Lunch Series: "World Wide Competition for Scarce Resources" by Prof. Emeritus Robert C. North. Noon. I-Center. Lunch tickets available one week in advance. $2.50. Brown baggers welcome.

Stanford Museum Art Tours: "Printmaking Techniques." A lunch hour tour beginning at 12:15 p.m. Stanford Museum. Open to all. (Tour repeated tomorrow, same details.)

Fluid Mechanics Seminar: "Space Shuttle Photographic and Television Observations of Gasdynamics in Space" with Peter Banks, S.U. 4:15 p.m. Skilling Aud.

Communications Design Seminar: "Direct Broadcast Satellites to Home Receivers" with Bernie Jacobs of SatCom (div. of Orrox Corp.). 4:15 p.m. McCullough Bldg., Room 128.

Professional Opportunity Program for Ph.D.s: Academic Interview Workshop. 5 p.m. Career Planning & Placement Center. Sign up by calling 497-2009. (Second workshop tomorrow, same details.)

Drama Dept. Production: Bertolt Brecht's "The Good Soul of Setzuan" directed by Geoffrey Reeves from England. A parable set in modern China. 8 p.m. Little Theater. $4 general, $2 students and seniors. (Nightly through Dec. 13.)

Music Dept. Concert: Chamber music by students of Margaret Fabrizio. 8 p.m. Tresidder Lounge. Free.

WEDNESDAY, NOVEMBER 10

Latin American Studies Bag Lunch Series: "The State and the Private Sector in Venezuela" with Clemy M. de Acedo, Princeton Univ. Noon. Bolivar House, 582 Alvarado Row.

Stanford Staffers Program: African Music with Prof. James Gibbs, Anthropology Dept. Noon. Anthropology Museum, Bldg. 110.

Biological Sciences Dept. Special Seminar: "RNA Splicing in Neurospora Mitochondria: Mutants, Mechanism and Relevance" with Dr. Alan M. Lambowitz, George Washington Univ., St. Louis, MO. Noon. Room T-175, Herrin Labs. Open to the public.

Ecumenical Ministries Wednesday Lunch Discussion: "A Militarized Economy" by Dave McFadden. Noon. Casa Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata. Open to all.

CROW Women at the Top Lecture Series: The speaker is Liz Gallese, staff reporter, Wall Street Journal. Noon. Terman Aud. Open to all.

EE 380 Computer Systems Laboratory Seminar: "Buffer Performance in DAX-11/780" with Doug Clark, DEC, Tewksbury, MA. 4:15 p.m. Terman Aud.

Electronics in Medicine Seminar: "Digital Picture Archiving and Communication Systems in Radiology" with Dr. Andre Duerinckx, Philips Ultrasound, Inc. 4:15 p.m. McCullough 134.

Physics Dept. Colloquium: "Anomalons" with Prof. Yasha Courant, Lawrence-Berkeley Laboratory. 4:15 p.m. Physics Lecture Hall, Room 101.

Colloquium of the Dept. of Chemical Engineering: "Foam Flow" with Prof. Robert Prud'homme, Princeton Univ. 4:15 p.m. Chemical Engineering Conference Room.

Professional Opportunity Program for Ph.D.s: Academic Interview Workshop. Second day. See details for Tues., Nov. 9.

Black Alumni Speaker Series: "Strengthening Community Commitments: Strategies for Public Service" by Chuc Kemesu, Project Services Coordinator, Upward Bound Project, Univ. of San Francisco. 7:30 p.m. CERAS Room 204. Public cordially invited.

The Lively Arts at Stanford: Richard Stoltzman, clarinet; Walter Trampler, viola; Lee Luvisi, piano. Mozart: Trio in E-flat Major, K. 498; Shostakovich; Sonata for viola and piano, Op. 147; Brahms: Sonata in E-flat Major for clarinet and piano, Op. 120, No. 2; Bruch: from Eight Pieces, Op. 83. 8 p.m. Dinkelspiel Aud. $11.50, $10.50; students $3 off these prices.

Drama Dept. Production: Brecht's "The Good Soul of Setzuan." Directed by Geoffrey Reeves. See details for Tues., Nov. 9.

THURSDAY, NOVEMBER 11

Stanford Geothermal Program Seminar: "Silicic Volcanic Centers Supporting Geothermal Systems in the Mexican Neo-Volcanic Belt" with Gail A. Mahood, Geology Dept. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

Condensed Matter Physics Seminar: "Overview of Amorphous Silicon" with Prof. Dr. Josef Stuke, vis. prof. from the Univ. of Marburg, Germany. 4:15 p.m. Applied Physics 200.

Solid Mechanics Seminar: "Towards a Qualitative Understanding of Materials" with Dr. James Ryder, Lockheed Burbank Rye Canyon Research Lab. 4:15 p.m. Skilling Aud.

Materials Science & Engineering Special Seminar: Same details as for the Condensed Matter Physics Seminar for this date.

Japan Society/Committee for Art Film Series: "Ikiru" (1952) dir. by Akira Kurosawa. An aging civil servant discovers that he is dying and realizes "he has been dead a long time without even knowing it." He attempts to find out how "to really live." 7:30 p.m. Annenberg Aud. $3 general, $1 students.

I-Center Other Cultures Film Series: "Beijing"—a new film conveying the texture and flavor of the venerable Chinese capital; and "The Giant Panda"—a visit with China's most celebrated and endangered species. 7:30 p.m. I-Center. 75 cents requested at the door.

Drama Dept. Production: Brecht's "The Good Soul of Setzuan." See details for Tues., Nov. 9.

STARTS Open Mike: Sign up at STARTS Office. 9 p.m. Coffee House. Free.

FRIDAY, NOVEMBER 12

Applied Mathematics Lectures: "Self-focusing and modulational analysis of nonlinear Schrodinger equations" by Dr. Michael Weinstein, S.U. 3:15 p.m. Room 380C (Mathematics Corner basement).

Materials Science & Engineering Dept. Colloquium: "Causes and Prevention of Failures in Surface Condensers" with Dr. B. C. Syrett, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Stanford Women in Science and Engineering Lecture Series: "What is the World Made of? A Particle Physicist's View" by Dr. Helen Quinn, research fellow at SLAC. 4:15 p.m. Skilling Aud. All members of the Stanford community welcome. Inquiries, 497-2496.

Music Dept. Concert: Alea II presents "Cabaret Politique." An informal evening of topical music and theater by Weill, Eisler, and others. Jonathan Berger, director. 8 p.m. Tresidder Lounge. Free.

Stanford Dance Division Presents: An Invitational Dance Concert featuring works by alumni and Bay Area choreographers. 8 p.m. Roble Dance Studio. $4 general, $3 students. (Another concert tomorrow night, different program.)

Stanford Savoyards Production: Gilbert & Sullivan's "H.M.S. Pinafore, or the Lass that Loved a Sailor." 8 p.m. Dinkelspiel Aud. $5 general, $3 students. (Performances this week, tomorrow at 2 p.m., Sunday at 8 p.m.)

Drama Dept. Production: "The Good Soul of Setzuan" by Brecht. See details for Tues., Nov. 9.

STARTS Great Directors Film Series: "The Chronicle of Anna Magdelena Bach" dir. by Jean Marie Straub. The life and music of Johann Sebastian Bach and his second wife Anna. 8 p.m. Geology Corner, Room 320. $3.75 general. $2.75 students.

STARTS Live Entertainment: 9 p.m. Coffee House.

SATURDAY, NOVEMBER 13

Stanford Savoyards Production: A matinee performance of the G&S "H.M.S. Pinafore." 2 p.m. Dinkelspiel Aud. $5 general, $3 students.

Music Dept. Concert: Stanford Symphony & Chamber Orchestras. Andor Toth, conductor. Haydn—Symphony No. 92, "Oxford" in celebration of Haydn's 250th birthday. Rachmaninoff—Piano Concerto No. 2 in C minor, op. 18, Alan Gampel, pianist. Stravinsky—Pulcinella Suite. 8 p.m. Dinkelspiel Aud. $4/$2.

Drama Dept. Production: Brecht's "The Good Soul of Setzuan." See details for Tues., Nov. 9.

Stanford Dance Division: An Invitational Dance Concert. See details for Fri., Nov. 12.

SUNDAY, NOVEMBER 14

University Public Worship: Student Workshop Service, 8:30 a.m.; Ernle W. D. Young, assoc. dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.; Evening Communion in Memorial Church Round Room, 6 p.m.

The Lively Arts at Stanford: Guarneri String Quartet. Haydn: Quartet in G minor, Op. 74, Nov. 3 "The Rider"; Brahms: Quartet in B-flat Major, Op. 67, No. 3; Debussy: Quartet in G minor, Op. 10. 2:30 p.m. Dinkelspiel Aud. $11.50, $10.50; students $3 off these prices.

ASSU Sunday Flicks: "Ragtime." 6:30 & 9:30 p.m. Memorial Aud. $1.50.

The Lively Arts at Stanford Master Class: Chamber ensembles perform. Michael Tree, violist with the Guarneri Quartet comments. 7-10 p.m. Kresge Aud. $5 general, $3 senior adults and non-Stanford students, Stanford students free. Proceeds to the Music Guild's scholarship fund.

Stanford Savoyards: "H.M.S. Pinafore." See details for Fri., Nov. 12.

Music Dept. Concert: Stanford Baroque Ensemble. George Houle, director. 8 p.m. Annenberg Aud. Free.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Photographs by Marianne Skogh. Gold Lounge, both entries, and other locations. Stanford Faculty Club.

Maps Are For Use. An assortment of maps and related cartographic reference works available from the Central Map Collection. Meyer Library Lobby. Through November 19.

Acrylic on Canvas Paintings by Win Belton. Reception, Fri., Nov. 5, 5-7 p.m. Bechtel International Center. November 3-30.

Mountains of Nepal, Pakistan and Afghanistan. Photos by Damien Kuffler. Tresidder 2nd floor gallery. Month of November.

Flowers in Miniature by Damien Kuffler. Coffee House Gallery. Month of November.

Ansel Adams. Books, letters, photographs. Exhibit coordinated by the Stanford Museum and the Dept. of Special Collections. Green Library, Special Collections Gallery, second floor, West Wing. Through November 24.

Fabrizio's students give concert Tuesday

Students of Margaret Fabrizio, senior lecturer in harpsichord and early piano, will perform at 8 p.m. Tuesday, Nov. 9, in Tresidder Lounge.

Eunice Schroeder, fortepianist, will play Haydn's Sonata in E-flat, Hob. XVI:49.

David Ng-Quinn, D.M.A. candidate, will perform two seldom-heard Capriccios by Muzio Clementi on the fortepiano.

John Toenjes, well-known local harpsichordist and Music Department alumnus, will perform four sonatas by Domenico Scarlatti.

The concert will conclude with J. S. Bach's Concerto in G minor, written for harpsichord (Jill Mueller), two violins (Herbert Myers and Anne Marie De George), viola (Roland Hutchinson), and cello (Jenny Gordon).

CAMPUS REPORT

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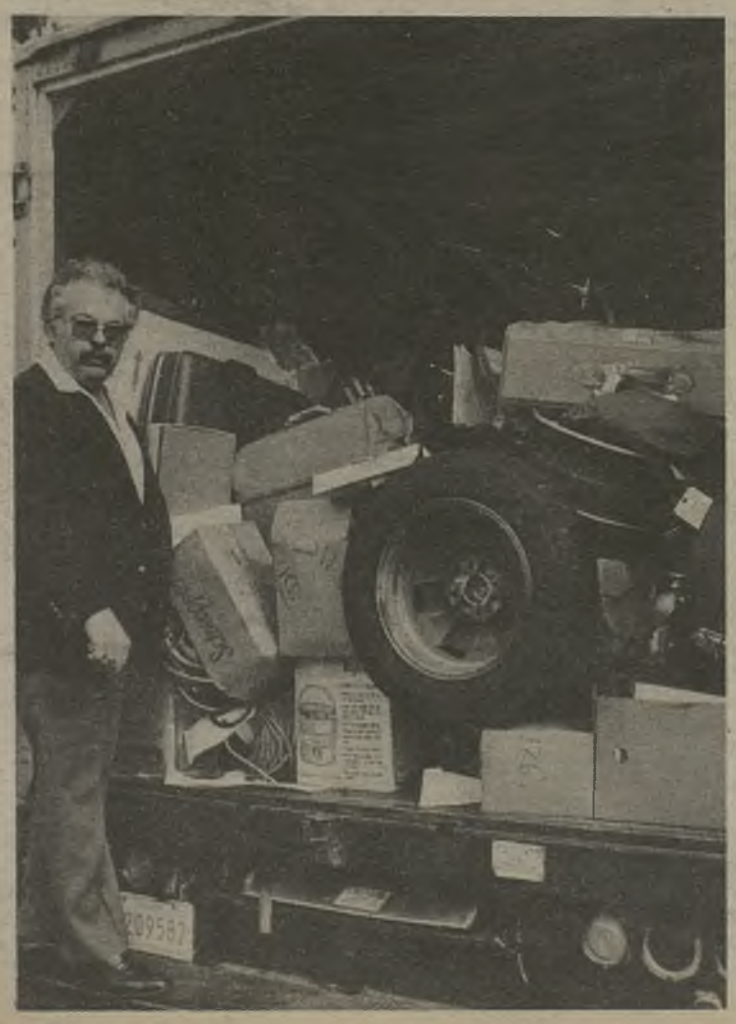
There's rain in the spaghetti sauce, but they're having a wonderful time. The story starts on page 3.

Burglary suspect's in jail, loot recovered

Robert Lee O'Connor, suspect in more than 130 Midpeninsula burglaries, was arrested in a lightning series of predawn raids coordinated by San Mateo County sheriff's officers on Tuesday.

A cat stolen from Palo Alto led to his capture.

Stanford Police Capt. Raoul Niemeyer said O'Connor was caught trying to leave through a back window at the residence of Nancy Ann Burt at 3014 14th St., Montara, between Half Moon Bay and Pacifica. Sgts. Rick Enberg of Stanford and Brian Beck of San Mateo County made the arrest.



Stanford Police Capt. Raoul Niemeyer shows off the first truckload of items removed from the home of Robert O'Connor in La Honda.

O'Connor was taken to Santa Clara County jail on a warrant including one count of vehicular theft, six counts of burglary, and one of possession of stolen property, with bail of $250,000.

About 14 officers and a dog team surrounded the Burt residence before the 5:30 a.m. raid. Burt was arrested on charges of resisting and delaying a police officer in the performance of his duty and taken to Redwood City for possible booking.

O'Connor's wife, Maureen, was arrested in a simultaneous raid at their residence on Sears Ranch Rd. in La Honda. Niemeyer said police had a warrant on the same charges as her husband, with $150,000 bail. She was taken to Redwood City but may be transferred to San Jose. She would not waive her right to be booked in San Mateo County.

A third raid on Kehoe Avenue in San Mateo brought no results. About two dozen officers from Stanford, Palo Alto, Los Altos, San Mateo County and Santa Clara County cooperated in the raids, which included a dog team at each location.

Sheriff-elect Brenden MacGuire, chief of detectives in San Mateo County, met with Niemeyer Monday morning to help plan the action. Niemeyer obtained the warrants later Monday. On Thursday, police recovered an estimated $750,000 at O'Connor's La Honda home.

More property believed stolen was recovered at the Burt residence. Niemeyer has obtained two more search warrants in San Mateo County, which he is pursuing

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Departments asked to list budget cuts

Stanford departments have been asked to deliberately underspend their current budgets and to identify long-term cuts of one to five percent as part of a major new belt-tightening effort.

Triggered mainly by lower than expected growth in research volume, the new cuts come on top of previous announced plans for a one percent budget reduction this year.

As is their custom, University officers will discuss the budget outlook with the Faculty Senate at its regular meeting Thursday, Nov. 11.

Letters from budget officers calling on departments to voluntarily reduce spending this year and to identify possible budget cuts for the next three years are being distributed this week to University administrators.

Seeking $1 million toward the University's anticipated $3 million shortfall this year, Provost Albert Hastorf is asking departments to underspend their current operating budgets and return savings to the central operating budget.

Leaving staff vacancies unfilled, reducing equipment purchases, and restricting travel were among the steps Hastorf suggested as one-time measures. The current operating budget totals $207 million.

Looking to the future, departments are asked to "identify reductions in operating budgets up to five percent of the current base" in an accompanying letter from Raymond F. Bacchetti, vice-provost for management and director of University budgets.

The five percent figure is intended as an exercise to get departments thinking about possible cuts. Actual cuts are expected "to exceed the previously expressed one percent and could go as high as four percent in 1983-84," according to Bacchetti. The target for cuts will be set in about two weeks.

"It seems likely that some fraction of the reduction target will be achieved through across-the-board cuts and some will be selective and based on an assessment of consequences to programs and operations in general," he said. The division between the two cutting alter-

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James Leckie



Anne Mellor



Robert Rabin



Ewart Thomas

Leckie, Mellor, Rabin, Thomas new fellows

Four faculty members have been selected as University fellows for 1982-83, President Donald Kennedy has announced.

They are Profs. James Leckie, civil engineering; Anne Mellor, English; Robert Rabin, law; and Ewart Thomas, psychology.

They will join Associate Profs. Michael Bratman, philosophy, Allen Cooper, medicine, and Ellen Markman, psychology, who were named fellows last year.

University fellows receive five months' salary support to pursue projects of their own choosing. This may count towards summer employment or as time off from their normal departmental responsibilities during the academic year. Typically, their projects are broader than their own academic discipline.

A Stanford faculty member since 1970, Leckie has taught about a third of the core courses in the environmental engineering curriculum.

Mellor has directed the undergraduate program in English for the past three years, directed the new program in feminist studies, heads the Faculty Committee on Committees, and this year received a dean's award for teaching in the School of Humanities and Sciences.

Rabin has been a Stanford faculty member since 1973, teaching administrative law, legal process and torts. Last year he headed the faculty search committee for a new Law School dean.

Thomas came to Stanford from the University of Michigan in 1972, earned tenure the following year, and received a Guggenheim fellowship in 1976 for theoretical and empirical studies in psychology and economics.

Since the University fellows program was established in 1969, at least 40 faculty have been selected for this honor.

Administrative members of the program this year will include Robert Freelen, associate vice-president for public affairs; Fred Hargadon, dean of admissions; Albert Hastorf, provost; Gerald Lieberman, vice-provost and dean of graduate studies and research; Dominick Purpura, associate vice-president and dean of the School of Medicine; Joel Smith, secretary to the Board of Trustees; and Trustee John A. Ditz. They may meet biweekly with the fellows.

Hopkins, Massy win prize for book on planning models

Two Stanford scholars have received the Frederick W. Lanchester $2,000 prize of the Operations Research Society of America for their pioneering book on *Planning Models for Colleges and Universities*, published by Stanford University Press.

They are David S.P. Hopkins, executive assistant to the vice-president for medical affairs, and William F. Massy, vice-president for business and professor in the Graduate School of Business.

Their materials now are being used by more than 120 institutions across the country. Applications range from theological schools to athletic programs, from endowment portfolios to faculty tenure and dormitory dining.

The ORSA called their book "the first comprehensive treatment of diverse models that have been developed to help university planners chart the future of their institutions. . . . Hopkins and Massy have intertwined mathematical models, practical insight, and sensitivity to the subtleties of university administration."

In their book, Hopkins and Massy observe that "models will not increase scarce resources. What they will do is increase an institution's chance of using those resources wisely. . . .

"The problems are getting tougher; the lead times are longer, the financial constraints grow tighter every day.

"Effective modeling in an academic setting requires a clear sense of what is important for the institution. It can help provide a more stable and predictable financial environment in which the academic process can flourish."

They admit there is legitimate concern that "the quantifiable will drive out the profound, that the academic institution will take on too many of the characteristics of a business. But these things can happen without models as easily as with them."

Properly used, computer models can help solve immediate problems can help solve immediate problems and "in the long run. . .help conserve academic values," they believe.

"Academic officers should never delegate line authority to models or to their architects. They must maintain personal responsibility for decision-making at all times."

Hopkins and Massy strongly recommend that each institution develop its own set of models, rather than adopting them ready-made from an outside source. The results will then reflect differences in style of record-keeping and decision-making at each college.

In addition, "the very process of model building almost always yields valuable insights about the system that is under study."

Their research was support in part by the Lilly Endowment.

Hansen labs research associate

W. W. Hansen Laboratories invites applications for a research associate position in the experimental study of high energy gamma ray astronomy on the Gamma Ray Observatory. The successful applicant will participate in the testing of the gamma ray telescope on the ground and to its operation in space.

A demonstrable interest in space physics and some experience in particle detection techniques are required. A willingness to participate in other projects involving the detection of gamma rays and X-rays at accelerator laboratories is desirable. The position is tenable, initially, for three years with the possibility of further extension.

Applications with curriculum vitae and the names and addresses of two academic referees should be sent to Prof. Robert Hofstadter, Department of Physics, by January 31, 1983. Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify qualified minority and women applicants.

Sloss and Arnett elected by alumni

Leon Sloss of Washington, D.C., has been elected 1983 president of the 50,000-member Stanford Alumni Association.

Assuming office with him in January as vice-president will be Dixon Arnett of San Francisco. Both were named by fellow members of the Alumni Executive Board at the group's fall meeting on campus.

A member of the Stanford Class of '49, Sloss heads his own consulting firm on national security affairs. He is a former vice-president of SRI International and has also served with the Bureau of the Budget, the Department of State, and the Department of Defense.

Long active in behalf of Stanford, he has been a member of the Alumni Association's governing body since 1979 and its vice-president during 1982. He is a member of Stanford Associates and a past president of the Stanford Club of Washington, D.C.

The Sloss family has long been associated with Stanford. The first Leon Sloss was an early member of the Stanford Board of Trustees. Leon Sloss Jr. was president of the Alumni Association in the 1940s. The incoming president and his wife, Virginia, have four children.

Arnett, a former member of the California Assembly representing southern San Mateo County, currently serves as deputy regional director of the U.S. Department of Health and Human Services, based in San Francisco.

A member of the Stanford Class of '60, he served for five years as the University's director of community relations. Before joining HHS he was vice-president for public affairs research at Claremont Men's College. He is the father of three.

Outgoing president of the Association is Albert J. Horn of Hillsborough.

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Geology students on Klamath Mountain field trip go exploring

Autumn in the Klamaths; Watching how the continent grew

BY JOEL SHURKIN

Meghan Miller sat atop the van, hunching a bit against the wind and the beginning rain. She held up a colored map and explained to the students standing at the foot of the van how she spent her summer vacation.

Miller is one of a half dozen geology graduate students who have spent their summers mapping one of the most interesting and least studied areas of the West Coast, the Klamath Mountains in the northernmost part of California.

Miller is a small, frail-looking young woman, with light brown hair and blue eyes. She doesn't look tough enough to spend summers in heat and humidity, clambering alone over the crumbly rocks of the Klamaths. She is.

Her presentation was part of a field trip organized by students in the Department of Geology and accompanied by Geology Prof. Robert Coleman, who came to Stanford from the U.S. Geological Survey.

Many of the students had spent similar summers. Now they were getting to look at real rocks to match with names and processes they have been taught.

Miller pointed to the road cut behind her and explained her theory of the history of her site, the McCloud Reservoir in Siskiyou County, just south of the Oregon border.

Miller has been able to parse out some of its history, she says.

"There are a lot of problems with ages around here," she admitted. "That's what I'm trying to work out."

Below, the dark green water of the reservoir was unusually low. The water management people at the dam let much of it out, anticipating a very wet winter and a need for storage space. The wet winter had already arrived at McCloud Reservoir.

The students asked questions, made suggestions, took notes. Finally, the presentation over, they dispersed to the road cut, pouring over the wet rocks like supplicants at a shrine, hand lenses at the ready. The only other sound, above the soft rain, was the light clang of picks.

The Klamaths are interesting because at one time they were the bottom of the sea. The terrain is called "accretionary" by geologists, which means it piled up.

"When we say accretionary terrain, we're talking about bits and pieces of material that may have formed along the continental margins or may have formed out in oceanic areas," Coleman explained.

Since the 1960s earth scientists have known that the land areas of Planet Earth ride on about a half dozen thick, rocky plates, floating above the plastic heart of the earth like croutons in pea soup.

The plates are formed in mid-ocean ridges and push out toward land. In some places, however, plates run into each other. The notorious San Andreas fault is where the North American plate, upon which most of North America rests, crunches against the Pacific plate, which contains the eastern Pacific. That crunch produces earthquakes but not volcanos.

Sometimes one of the oceanic plates will "subduct," dive under a continental plate, scraping off the sea mountains, rocks and fossils, melting and forming magmas that produce volcanic chains on continental margins.

The main reason for students working in the Klamaths is to try to establish the mechanism for this accretionary process," Coleman said. "How do these bits and pieces of material that form, say offshore or at different latitudes—how do they accrete to the continent? What sort of tectonic process allows this to happen, subduction collision or eruptive processes?

"Can we use this sort of theory that we developed for the Klamaths for the rest of the world? I say, yes, we probably can, in that some of the ideas we get from the Klamaths may be applicable to the Alps or. . . to the Himalayas or other mountain ranges.

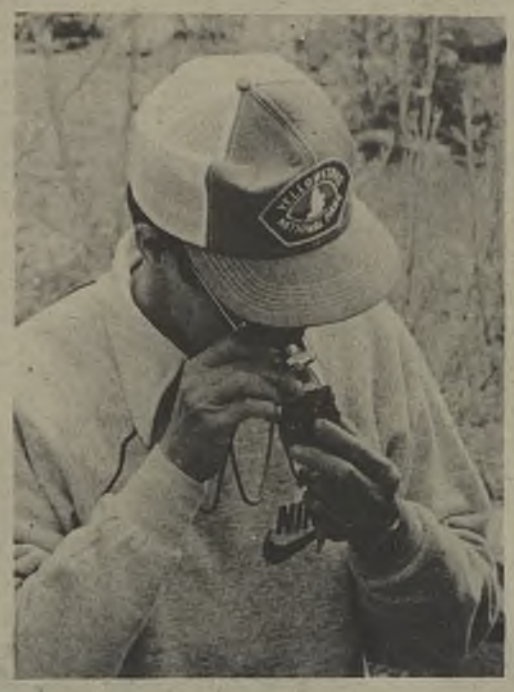
"That's the fortunate thing about geology, it repeats itself. Where you find serpentinite in the Klamaths it is the same as serpentinite in China. The idea is to look at this accretionary process in the light of the new plate tectonics theory. This gives us another degree of freedom which before we didn't have. . . . "

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Prof. Robert Coleman

The salmon were ending their fatal battles and the steelheads had begun to invade the river. The students were more interested in the rocks which once formed the bottom of a sea.







Field trip...

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Not a lot of geologic work has been done in the Klamaths because of their remoteness, ruggedness, and amount of poison oak. The Klamaths are the home of Yreka and Happy Camp and other legendary gold-mining towns of the 'forty-niners. Gold is still mined and panned in the Klamaths.

There is also chromium and nickel in the oceanic rocks.

What Coleman and other geologists want to know is how these rocks and minerals accumulate through accretion.

"As a result, these studies, although they're not directly related to ore deposits, will help us perceive how these ore deposits develop in this kind of terrain."

Another reason for the Klamath explorations is to give the graduate students like Miller "an opportunity to work in a very complex and poorly-known terrain, so that a lot of work that they do both here and in the lab will be original research.

"The graduate students (Miller, Mortimer, Bruce Hill, Mary Donato, and Craig Manning) and Bob Coleman have done an outstanding job in putting the pieces together to offer an excellent geologic-tectonic interpretation for the complicated terrain of the Klamath," commented Prof. J. G. Lion, another field trip participant.

"That's one reason why this trip is so attractive."

"The main problem I'm focusing on is the structural deformation," Miller said later, "its geologic history as a whole, its stratigraphy, just the sequence of events and how it's recorded in the rocks.

"The real controversy in that area is whether it was an island off the coast of North America or if it developed a long way from North America and was brought in on an oceanic plate and then accreted on the edge of the continent." She calls the latter process "rafting."

If it was rafted, the area was probably riding on a plate that subducted beneath the continental plate, and was scraped off."

She is essentially looking at the bedrock upon which Mt. Shasta later was built.

To show off the graduate students' work and give undergraduates a feel for field work, about 50 geology students were transported to Siskiyou County in six vans, five of them rented.

After visiting Miller's site they set up camp in a Forest Service campsite along the McCloud River in a downpour.

The students fixed supper on a long table. Propane burners boiled spaghetti and tomato sauce. The students also fixed garlic bread and salad. But it was a losing proposition and the students tried to be as content as possible as they watched the rainwater collect in the spaghetti sauce.

Then they disappeared into their tents, most of which seemed to withstand the torrent. They slept to the sound of rain on nylon, river on rock.

The Klamath River, site of most of the exploration, generally runs from its beginnings in Oregon, southwest to the Pacific north of Eureka and Arcata. The water is dark, olive, cold, not particularly clear.

The Klamath is the spawning ground for salmon, most of which had finished their run up the river a few weeks earlier. A few stragglers remained, their last spark of existence devoted to swimming against the strong current to drop their eggs.

After the salmon come the steelhead trout, ocean-going trout which also spawn in the river but do not die in the process. The vanguard of the steelhead invasion was already upriver and could be seen and heard plopping in the current.

The next morning the vans headed north into Yreka. Two broke down and had to be repaired, but by mid-afternoon the caravan had crossed I-5 and the Klamath River, and the students walked up a riverside dirt road to Carson Gulch, the area surveyed by Nick Mortimer.

Mortimer, an Englishman, had spent two summers working in this area.

His past surveys had been happily uneventful. Coleman explained that the biggest danger facing geologists in northern California was stumbling into someone's marijuana field. Marijuana has become the largest cash crop in several counties and the pot farmers do not take kindly to intruders.

Although very little, if any, marijuana is grown there, Mortimer wrote to about 20 landowners around the gulch explaining who he was and what he was trying to do. He offered them free copies of his geologic map in return for permission to survey their land. Most of the rest of his territory was Forest Service or Bureau of Land Management land.

Mortimer also managed to avoid suspicion by hanging out at the local bar, The Swallows.

"I was in there most days when I was in the vicinity. It gets hotter than hell up here. I guess it gets into the 90s when you get into the hills. And it's pretty humid too! The Swallows is very attractive after an afternoon."

The denizens of Swallows are gold miners (Mortimer says a number of families support themselves with gold mining), farmers, and an occasional motorcyclist.

"They're a very strange bunch," he said. "They're very friendly, though, once I convinced them I wasn't after the gold. . . . "

Mortimer's site is fairly typical, he explained.

"You have these sequences of chert and argillite there that presumably formed in some kind of basin, an ocean basin, near some island archs (archipelagoes), something like the Sea of Japan. This seemed to be the main rock type in my area.

"Atop the chert and argillite are some volcanic rocks, including pillows (hard tubes of lava from the ocean floor), basalts, breccias and other rocks indicative of accretion.

"This would probably be some kind of sea mount, maybe like some of the Hawaiian Island chain, volcanic rocks," he said.

"The inference is that it was a sea mount at one time, but now it's all broken and deformed and since then all this stuff has been accreted in the

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Grad student Craig Manning talks to the group









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Klamaths. You've got to pull the puzzle apart to infer what's going on."

He has found many marine fossils in his rocks, particularly radiolaria, a small creature with a silica skeleton.

"The Klamath rocks are so messed up that I guess geologists who are used to dealing with more intact rocks find it difficult to see how anything can be done with them," he said. "You've got to defocus your ideas slightly and admit that you can't tell for sure if this lava is an island arch or a sea mount or something like that.

"You've got to play with probabilities. You can usually piece together a fairly convincing story."

Mortimer spent most of his first summer in a tent in a campground, but feared his equipment would be stolen. Last summer he stayed in a Forest Service trailer in Yreka, which was more secure.

Samples of rock would be taken back to Stanford to be sliced into thin sections and studied. Coleman brought up a Geologic Survey thin section van some of the time so the work could be done on site.

The students clambered past an abandoned gold mine and up the side of one of the hills as Mortimer, who fancies a Sherlock Holmes deer-stalker hat, gave a running commentary on the rocks. At each stop the students attacked the rocks with their picks and hand lenses.

"They hand you a rock and tell you it's homogenous breccia with imbedded radiolaria, and you look at the rock—and it's shiny," said one student with good-humored exasperation.

That night the expedition camped next to the river on the parking lot of The Swallows; it was too dark and too late to proceed to the planned campsite. Mortimer was greeted by The Swallows crowd as an old friend. The noise lasted until about 2 a.m. It did not rain.

The next day the group traveled about 40 miles down the Klamath River Valley. Coleman lectured on the passing geology using the CB radios that connected the vans. At every stop the students erupted from the vehicles and were quickly crawling over the rocks, comparing finds.

Occasionally, a graduate student would give his report and was challenged by Elizabeth Miller, one of the professors attached to the group. It was done in a gentle way to probe how well the students had thought out their theories.

One had to row back a bit on his statements.

"I try to get a little audacious for a field trip," he explained.

The tour continued down the valley. The students, good geologists all, seemed to pay no attention to the real salient feature of the valley—its beauty.

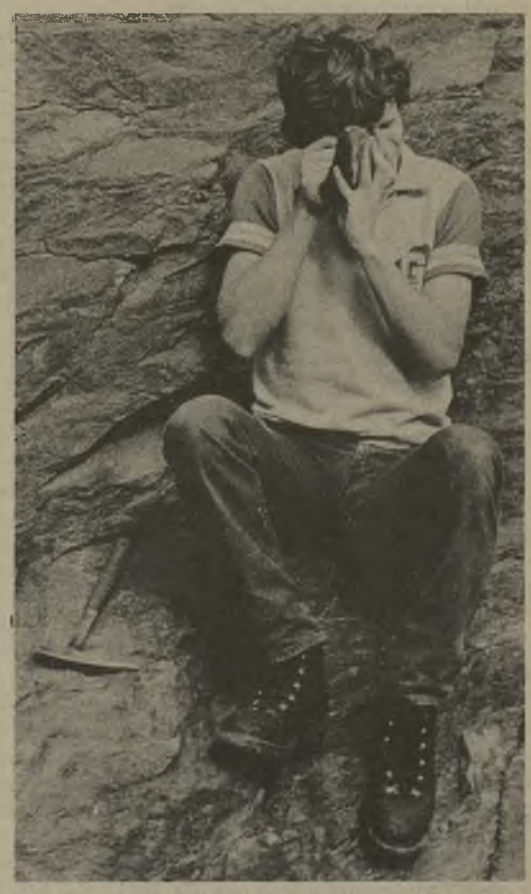
Here, unlike most of California, trees understand autumn. Oaks, maples, alders, singly or in clusters, added color to the land. While the hills were carpeted mostly with evergreens, the green was interrupted constantly with golds, yellows, reds and browns.

The river streamed through grey rocks. An occasional salmon still struggled up-current.

The geology students were busy with the road cuts and the cliffs.

"The second they get out of the car they start banging rocks," one said, admiringly.

That's what they were there for.



Jonathan Berger takes over Alea II during 1982-83

Jonathan Berger, Stanford D.M.A. '82, has been appointed lecturer in music theory for 1982-83 and director of Alea II—the Music Department's ensemble for contemporary music.

Berger has two Alea programs planned for November: a *Cabaret Politique* on Friday, Nov. 12, featuring music by Hanns Eisler interspersed with portions of Eisler's trial by the House Un-American Activities Committee, and an evening of recent and innovative works by Stanford composers on Nov. 30.

"I think Alea II should be first and foremost an outlet for Stanford composers and Stanford performers interested in new music," he says. "We will concentrate on pieces by live composers."



Jonathan Berger

Berger did most of his graduate work at CCRMA (Center for Computer Research in Music and Acoustics). "At CCRMA there's a very healthy exchange between scientists and creative artists," he notes. "It's an extraordinary place with extraordinary people."

Berger's composition *To the Lost History of Hope* for computer-generated tape was performed in September at the International Computer Music Conference in Venice. In January he will receive a $6,000 NEA grant to compose an opera for singers, instruments, and tape.

Even though much of Berger's work has been done at CCRMA, he composes more for performers than computers. Why? "It's always a surprise to see how performers will interpret my music. There's a certain element of risk in live music, as opposed to taped computer music. You never get the same thing twice. And I enjoy writing for specific performers and concerts."

Last year Berger taught music theory and composition at San Francisco State University and directed the computer-aided instruction program there.

He received his M.F.A. from the California Institute of the Arts in Valencia, where he studied composition with Mel Powell. His undergraduate work was done at the Rubin Academy of Music in Jerusalem.

"My wife and I hope to return to Jerusalem to live and work," says Berger. "It's the most beautiful city in the world."

In Israel, Berger won both the Aharoni Prize and the Sharett Prize for music composition.

Berger sees the combination of teaching and composing as ideal. "There's a lovely balance between composition and teaching. One is a completely self-centered act. . . the other is quite the opposite—a sharing of ideas. Composition is aimed at a specific goal in the future—performance of the piece. Teaching is always a source of immediate satisfaction."—**Julia Sommer**

Step-families sought by student

If the divorce rate continues at its present level, Americans will have about a 50 percent chance of living in a step-family—either in their families of origin or in their families of procreation.

Margaret Crosbie-Burnett, a Stanford doctoral student in counseling psychology, plans a dissertation on the short and long-term adjustments involved in becoming a stepfamily.

A board member of the Peninsula chapter of the Stepfamily Association of America, she believes that research may help individuals understand and cope with this stressful life change. It may also encourage desirable changes in social institutions, making them more responsive to the needs of stepfamilies.

She currently is looking for 75 step-father households in which the mother's children from a previous partner are seventh graders or older, and who are willing to spend about 60 minutes of family time filling out a questionnaire.

Overall findings will be shared with participants. Anonymity is assured. Interested stepfamilies should contact her at (415) 858-2777 or 858-0299 or 497-2113 (a message machine).

Crosbie-Burnett notes that 41 percent of U.S. marriages now are remarriages for the bride or groom or both. Since the majority of those remarrying have children from their first marriage and continue to procreate in subsequent marriages, there are now 15 million minor children—20 percent of all minors—living in households with at least one stepparent. This total does not include many households in which the couple has chosen not to legally marry.

Health plans open until Dec. 10

The annual health open enrollment period is November 10 to December 10. Each regular faculty and staff member was sent a packet of information about the new health plan rates which take effect January 1, 1983. Anyone who did not receive the information should call the Office of Benefits and Records.

Beginning November 10 the Office of Benefits and Records in the Old Pavilion has new hours 9 a.m. to 4:30 p.m., including the lunch hour.

A new telephone number has been added—7-1776. As of today, you may call the new number in addition to 7-1777 for questions about health coverage. Any questions about University insurance plans (health, dental, life, and disability) should be directed to these numbers.

Questions about retirement plans and the Tuition Grant Program should be directed to 7-1778.

Employees at SLAC may call the SLAC Benefits Office (ext. 2357).

Geothermal engineers plan workshop

The eighth Workshop on Geothermal Reservoir Engineering has been scheduled for Dec. 14-16 at Stanford, with about 40 technical papers accepted for presentation or publication.

Besides the papers, the Workshop will include three keynote presentations, a reception, and a banquet. Its aim is to provide for prompt and open reporting of progress and the exchange of ideas in geothermal reservoir engineering. Researchers, engineers, and managers are invited to attend.

All sessions will be held in the Large Group Instruction Room at CERAS; lunches will be served in Room 270-271, Tresidder Union. Registration is $125, which covers all sessions, luncheons, and the banquet. Registration deadline is Tuesday, Dec. 7. More information is available at 497-1218 or 497-4744.

Lyons wants award suggestions

Dean of Student Affairs James Lyons is seeking nominations for this year's Dean's Awards for Service to students who have made extraordinary contributions to Stanford and other students.

"The continued success of this award program hinges on Stanford people knowing about it, thinking of it when they encounter exceptional contributions of service on the part of Stanford students, and taking the time to send me a couple of paragraphs of information about the student and his or her work," Lyons stressed in an October memo.

Last year 12 students were honored for their contributions to ARLO, CROW, SCIRE, the women's community, Cowell Student Health Center, the advising program, the escort service, the *Daily*, ASSU, Black Student Union, International Center, athletics, teaching, orientation, and other areas.

Both graduate students and undergraduates in all parts of the University are eligible for nomination.

Questions or nominations should be directed to Lyons or to Sally Cole, program administrator, at 323 Old Union (ext. 7-4162).

Letters to the editor

More productivity, less pay no answer

Editor, *Campus Report*:

Many union members, including myself, are still hurting from the "unfair labor practice" strike against Stanford's management. Now it appears we must endure insults lodged in our own newspaper.

I refer to the article by Donald Stokes, based on an interview with Stanford economics Prof. John Pencavel.

Pencavel's suggestion for labor is to forego wage increases, enabling more company profits to ". . . be ploughed back into better machinery, so that productivity could be increased. . . ." This would then create ". . . bigger pies for tomorrow."

Since it logically follows that everyone would have more pie to eat, he goes on to include, "Labor and management in the U.S. are not natural enemies."

I wonder how Prof. Pencavel would respond if he were asked to forego an increase in his salary for more productivity?

To give a fair assessment of his answer, however, let's assume he no longer has a class of students to teach (since we must also assume that it is in the more efficient hands of advanced audio/visuals). Let us also say test questions and answers are also computerized, and class outlines are generalized and distributed nationally (eliminating the need for him to produce one).

Lesser paid assistants, including a host of programmers, operators, and clerical workers, etc., could handle the other details of the profession.

In lieu of these circumstances Pencavel might be inclined to answer in the same way that he says a "typical worker" would, "to hell with that, I want the money now." But if he were really astute, he might observe that management's interests might possibly conflict with his own.

My main question is, however, why does the article imply that investment, alone, will automatically cure the current crisis of productivity growth? In the first seven to eight years of the decline of productivity growth, actual high levels of investment did take place! This is not to mention that when investment declined in the 1970s, it did so *vis a vis* a low cost of borrowing funds and a high output potential for investment.

The simple solutions of America's one and only dynamic duo (Volcker/Regan) has plunged the world economy into the greatest crisis since the Depression of the '30s.

Now it looks as though workers are in for a further treat via the corporatist view. Of which, the weakened bargaining power of all unions and the logic of the Stokes and Pencavels seem to pave the way.

Let the buyer beware! The "pie" that Pencavel cleverly asks us to purchase with our wages of today (it's increasingly becoming the new/old system of extortion) is in reality a pie we must take a decreased portion of. Furthermore, this also means a higher social cost, aside from the wage cost.

I hate to be the spoiler of myths, but as of the last look, there is still no sign of the pie-in-the-sky. Should one develop and fall from the heavens, I would gladly move aside and invite Donald Stokes and John Pencavel to come and face up to it.

Ronald Black
Staff, Forsythe Hall

Campaign for flat-rate income tax gathers more momentum

BY DONALD STOKES

The second stage has now been reached in the campaign to do away with the present chaotic system of income tax and to replace it with one much simpler and more effective.

When two Stanford scholars published their revolutionary scheme for a flat-rate tax last December in the *Wall Street Journal*, a storm of interest was aroused nationally.

Robert Hall and Alvin Rabushka, both senior fellows at Stanford's Hoover Institution, became overnight notables.

Their simple proposal—to abolish the crazy quilt of current income tax regulations and substitute a flat tax of 19 percent on every individual and corporation—became a national topic.

The plan was argued, attacked, and lauded in acres of newsprint and was the theme of countless airwave arguments.

The campaign will crest in several waves during the next few months. The U.S. Senate Finance Committee will debate the idea. A bipartisan move for its adoption has started. A bill based on the idea has been introduced by Sen. Dennis DeConcini (D.-Ariz.)

Next January a book by Hall and Rabushka, *Low Tax, Simple Tax, Flat Tax*, (McGraw-Hill) will detail the plan and its potential to bring order and fairness back into the income tax system. The book will stress the impetus that the flat-rate tax would give to the performance of the U.S. economy.

The newfound fame of the two authors came after each had established a professional reputation in other fields. Hall has become noted for his research in macroeconomics, dealing with such issues as anti-inflation policy, investment, unemployment, interest rates and the effects of stabilization policy; he has made a special study of labor turnover. Although Rabushka specializes in the domestic public policy areas of taxation, he is equally renowned for his studies of housing and aging, and also of the political economies of developing countries.

Support for the flat-tax idea has come in varying degrees from President Reagan who calls it "interesting"; Secretary of the Treasury Donald Regan, the Tax Foundation, Prof. Milton Friedman (also at Hoover) and the U.S. Chamber of Commerce.

Hall, who also is a professor of economics, said "there is a significant chance that consideration will be given to a thorough overhaul of our present tax system. It would be too optimistic to hope that our proposals will not be altered or adapted."

Was the recent progress in reducing tax rates a step in the right direction? "The main problems have not been attacked," he replied. "The tax system remains a disgrace. It is inordinately lengthy, filling volumes of tax codes, and is complicated by hundreds of credits, exemptions and special provisions.

"The complexities of the present system foster contempt for government, and make petty criminals out of a large fraction of the American people."

Would the new tax yield as much as the present one?

"We estimate that the simplified tax would yield over $300 billion a year, more than that raised by the present jungle of tax laws."

Asked whether the new-style tax would close the loopholes through which many rich taxpayers escape taxation, Hall replied: "It is too sweeping to say that the rich avoid their tax obligations. I don't like that word rich—it has the connotation of idlers, and there are extremely few of those in the U.S. today. One-third of all the tax revenues come from people who pay over $10,000 a year in taxes.

"It is true that a fraction of high-income people do evade taxes. They would not be able to do so under our proposed system.

"Middle-income taxpayers, defined as those with an adjusted gross income from $15,000 to $40,000 a year, pay the bulk of taxes. On average they pay from 20-25 percent of their income in taxes.

"We estimate that something like $90 billion a year in income escapes taxation by evasion. The income base to which current progressive rates are applied has steadily eroded over the years through a wide variety of exclusions, deductions and exemptions to the point where it now constitutes no more than half of total national income.



If $90 billion escapes taxation, that amount would go a long way to closing the present shortfall in our national budget.

—Robert Hall

"Just think of it. If $90 billion escape taxation, that amount would go a long way to closing the present shortfall in our national budget."

Would the new method eliminate double taxation?

"Certainly. At present, corporate profits are taxed (when earned by the firm) and then taxed again when sent to shareholders as dividends. Income is taxed when earned and then again when put into savings. A growing chorus of criticism contends that the current system attenuates individual incentives to work, save and invest."

How about tax shelters and other forms of evasion?

"There is widespread evidence of tax evasion on interest, dividends and other forms of income. Tax shelters are now a commonplace feature of the financial landscape.

"Estimates of the 'underground economy' range from several tens of billions to several hundred billion dollars. This means that the rest of us have to pay more in taxes to make up the difference. Today, marginal tax rates of 50 percent from the personal income tax, 46 from the corporate income tax and 14 percent from the payroll tax are converting Americans into tax avoiders and channeling their investments into tax shelters."

What are the basics of the flat-tax idea?

"We propose a simple income tax based on low marginal rates to replace the entire current system of separate tax rate schedules on corporate and individual income. The new tax would be a low, flat rate applied to all taxpayers, excluding the very poor, and to all types of income.

"It would be applied to a much larger tax base than at present, thus generating similar amounts of revenue as the current high-rate system with its exemptions and deductions. The simple flat rate would end 'bracket creep' which is caused by inflation pushing people into higher and higher tax brackets.

"It would largely minimize the penalty current law imposes on two-earner households ('the marriage penalty'). It would be stable, predictable, and cease further proliferation of a variety of tax credits used to attain social goals.

"Most important, it would restore the incentives to work, save and invest, thereby promoting growth and higher standards of living."

What are the principles on which his proposals are based?

"There are four. All income should be taxed only once, as close as possible to its source. All types of income should be taxed at the same rate. The poorest households should pay no income tax. The tax returns should be simple enough to fit on a postcard."

How would business be taxed?

"The tax would apply to all forms of business—corporate, partnership, professional, farm, rentals, and royalties. The base for the tax would be gross revenue less purchases of goods and services and compensation paid to employees.

"In addition, a capital recovery allowance would be deducted for investment in plants and equipment. No deductions for depreciation, interest or payments to owners are permitted. However, the self-employed may pay themselves salary in any amount they choose, provided they report it on the compensation tax form."

How would the new method replace the hodge-podge of investment incentives in the current system?

"We propose the use of straightforward first-year writeoff of all business investment, both in new and used plant and equipment."

Would there be special provisions for the poor?

"To limit the tax burden on poor families, we propose a set of personal allowances. The tax would be 19 percent in excess of personal allowances. Our proposed allowances are: Married couple $6,200;

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Underspending of $1 million sought in effort to ease current budget woes

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natives has not been set.

Bacchetti also asked that departments survey University services they use or know about and "give us your constructive criticism and advice on where service reductions might be achieved in ways that do no more than minimal harm to your area and to the University.

"While it is clear that we must eliminate or sharply reduce some of the services we are accustomed to, it is also clear that it is much easier to assert the principle than to identify the likely candidate for reduction," he cautioned.

Bacchetti's letter, issued annually as a "protocol," provides background information and raises budgetary issues for discussion between budget officers and University vice-presidents and deans. This year's protocol meetings will be held between Nov. 15 and Dec. 10.

A third letter, about budget problems associated with facilities planning and capital projects, will be sent to appropriate units later this week.

Last March budget officers predicted a $1.5 million problem for 1983-84 and much larger potential deficits the following two years. One percent budget reductions for 1982-83 and 1983-84 were announced. By summer a "substantial fall off in the expected rate of sponsored research volume became apparent. Though dollar volume rose, it rose at considerably less than inflation and fell short by about $6 million from estimates," for the current year, Bacchetti explained.

Because of the lag between forecasting and budgeting, "the expenditure decisions for 1982-83 were in place before this decline in the rate of research increase was fully apparent; consequently, the gap for 1982-83 between income expectations and expenditure commitments is likely to be even higher than in the year just ended," Bacchetti said, explaining the need to request reductions in current spending.

"Though research volume and the related indirect cost recovery are the principal factors causing difficulty. . .utilities costs next year are expected to increase more than nine percent while inflation seems headed for six percent or lower. Financial aid continues to grow faster than the increase in student budgets in order to offset changes in federal and state student aid programs and to counteract the effects of the present recession on some students' families," Bacchetti said.

Hastorf said the $1 million holdback, divided roughly equally among all units, amounts to six-tenths of one percent of each department's operating budget.

The money returned would be one-time savings, not permanent base dollars, but the "holdbacks are, in one sense, an early start for planning cuts for next year," Hastorf said.

"We have reached a point where we need to think seriously about the reality of doing with less." Noting that budget adjustments at Stanford occur in cycles, Hastorf said that "to assume we can stall for a while and wait for things to get better is both unrealistic and dangerous. The problem will only be compounded if we avoid it."

Hastorf said he will seek specific commitments for current spending reductions from departments in December.

Noting that Stanford has experienced six years of balanced budgets despite a "sagging economy and in the shadow of strenuous efforts to balance the state and federal budgets by reducing support for higher education," Bacchetti warned that "we are in for a stretch of heavier weather in our University economy."

He cited the "fluidity of outside events, such as the capital markets, federal science policy, interest rates, state and federal financial aid policy, inflation rates, and unemployment," as areas of uncertainty that affect Stanford budgetarily.

In discussing the budget problems with departments, "we need to look ahead to 1984-85 and 1985-86 and not concentrate exclusively on 1983-84," Bacchetti said. "The opportunities available in any one year need to be seen in the context of a multi-year priority list to assure that limited resources are applied only to the highest of those priorities.

"Our problems are not greater than they were during the Budget Adjustment Program and Budget Equilibrium Program of 1969-77. The size of the gap in fact is less, but this is offset by the difficulty of budget cuts after two previous efforts," Bacchetti said.

"It is our collective determination to control rather than be controlled by financial circumstances."

—Karen Bartholomew

No injuries in HEPL Shield accident

The accidental fall of a 12-ton steel radiation shield at the Stanford High Energy Physics Laboratory Tuesday caused an estimated $100,000 in physical damage and delay of research on a new kind of laser.

There were no injuries.

The shield, one of many now being transferred from Stanford to Los Alamos, had been hoisted about 30 feet in the air by a built-in 40-ton crane at HEPL when a supporting bolt apparently sheared and the load fell to the floor.

Failure Analysis Associates has been asked to determine the cause.

The crane was operated by a Stanford employee. Sal Bravo Engineering and J&J Engineering were involved in moving the shielding. J&J riggers were less than 15 feet away when the shield fell. It was about eight inches thick, seven feet wide, and 20 feet long.

The principal damage was to equipment developed over the past five years for an experimental optical klystron. Prof. Richard Pantell is principal investigator on the project, which has been funded by the Office of Naval Research, National Science Foundation, Department of Energy and the Defense Department.

The accident could cause a two-to four-month delay in the research. Much of the apparatus involved was hand-made and took months to construct.

Income tax/

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single $3,800; single head of household $5,600; each dependent $750.

Why would the new tax help balance the national budget?

"Even if federal spending is at the high level projected in the Congressional Budget Office's baseline budget, a tax rate of 19 percent on all income would bring the federal deficit down to $75 billion by 1987.

"Immediate adoption of the simple tax would bring moderate deficits during the current recession, but would commit the nation to a balanced budget within three years, provided spending is kept at reasonable levels.

Would the new system affect interest rates?

"It would lower them. Rates would fall immediately because investors would require a lower rate of interest when they were no longer paying tax on the interest. In the medium run, the investment boom set off by the more favorable tax treatment of capital formation might bring interest rates part way back to their earlier level."

How would the proposals affect the huge underground economy?

"Low marginal tax rates will draw economic activities from the underground economy into the formal market, where they will be recorded as part of gross national product. Businesses and individuals will spend less time worrying about the tax consequences of their actions and will concentrate instead on earning higher incomes.

"Because of this we think that eventually the revenue needs of the government could be met by tax rates as low as 16 or 17 percent. Over the postwar period, cuts in marginal tax rates have coincided with episodes of vigorous economic growth and reduced inflation in the U.S."

What about charitable deductions?

"None would be allowed under our plan. We do not believe that current tax incentives are a major part of the motivation to make contributions to community, religious and other organizations. On balance, the public would be better off by paying a little more in personal contributions and at the same time save taxes by blocking the abuses by which taxpayers avoid taxes.

"There is little merit in public subsidy for organizations whose success in raising funds depends on tax deductibility rather than the intrinsic merit of their activities."

Why don't you make any allowance for medical costs, as the present system does?

"Virtually the entire U.S. population is now covered by medical insurance, Medicare, or medical benefits through welfare. The medical deduction under the present tax is a source of many abuses, including the deduction of swimming pools and other home improvements as medical expenses. Few families would suffer, and the overwhelming majority would gain by closing off this source of abuse."

Similarly for moving costs?

"Moving costs are only one of hundreds of costs incurred by taxpayers in order to earn an income. It is inconsistent to permit deduction of moving costs when costs of commuting, purchase of special clothing and other employment costs cannot be deducted."

Some critics say that the flat-rate tax would be a windfall for the rich?

"Taxation of families with high incomes and few deductions would be reduced dramatically under the new system. On the other hand, taxes paid by those who now take advantage of the almost unlimited scope for reducing or postponing taxes through tax shelters and other gimmicks will rise a great deal.

"The simple tax would be a windfall to hard workers and a loss to those who have concentrated on avoiding tax."

But surely rich people can live off interest and capital gains income and thereby pay no taxes?

"Not at all. In effect, the simple tax puts the equivalent of a witholding tax on interest and capital gains. The business tax applies to business income before it is paid out as interest, or if it is retained in the business and generates capital gains for stockholders.

"The interest, dividends and capital gains received by the rich have already been taxed under the business tax. The rich cannot escape the tax."

* * *

Hall was born in Palo Alto 39 years ago, and was educated at UC-Berkeley and MIT. He gained his doctorate at the latter and was a professor of economics there till 1974, when he came to Stanford.

He has advised a number of government agencies on national economic policy, including the Treasury Department and the Federal Reserve Board. He served on President-elect Reagan's Task Force on Inflation Policy, and is a member of the National Presidential Advisory Committee on Productivity.

He also serves as director of the Research Program on Economic Fluctuations of the National Bureau of Economic Research, an interuniversity research organization. He is chairman of the National Bureau's Committee on Business Cycle Dating, which maintains the semi-official chronology of the U.S. business cycle.

In view of the last-named position, Hall was asked what he saw ahead economically in the next 12 months.

"In view of my official position, I have to be cautious. I can say as an individual that I agree with the consensus of most economists, that the recession will end within 12 months, and may have already started to do so. Real output, inflation adjusted, will begin to grow, unemployment will remain high, and may not fall below eight percent for about a year. Inflation, which has now dropped to about three and a half percent, will fall some more."

Pianist Emanuel Ax leads a master class

'It's very inspiring to hear such a fine artist talk about music'

"What happens in your brain is more important than what happens in your hands."
—Emanuel Ax, concert pianist

Emanuel Ax, who owns two of the most valuable hands in the world of music, got up from his front row seat in Kresge Auditorium, braced those hands on the three-foot high stage, and vaulted easily up onto it.

Someone in the audience gasped, thinking of a broken finger or sprained wrist.

But Ax, who plays tennis when he isn't hearing applause and cheers at his 85-or-so annual concerts around the world as one of the great pianists of the age, never gave the leap a second thought.

On the stage, seated at the concert grand, was Kay Bedenbaugh, one of four young pianists playing for him in a master class. Bedenbaugh, just beginning studies for her doctor of musical arts at Stanford, widened her eyes in shock as Ax landed beside her piano bench.

She had just played Claude Debussy's L'Isle Joyeuse, and she instantly relaxed as he grinned and said, "Very good."



Concert pianist Emanuel Ax gives Kay Bedenbaugh pointers during master class.

Lively Arts

Master classes are offered as part of Stanford's Lively Arts with co-sponsorship of the Music Department and the Music Guild. They are designed to bring outstanding professionals together with budding young performers in an informal setting, and before an audience whose ticket fees go to the Music Guild's scholarship fund. The audience always includes many teachers.

"Past classes have been given by artists including Janos Starker, cello; Elly Ameling, voice; Barry Tuckwell, French horn; Narcisco Yepes, guitar; and Michael Tree, violist," said Sally Mentzer, community outreach coordinator for the Lively Arts. Participants in each class are auditioned by Music Department faculty and other teachers.

"It offers the students an opportunity to perform before an audience, and then receive about a half hour of very individual critiquing by a seasoned performer," said Mentzer.

Naomi Sparrow, senior lecturer in piano in the Music Department, a faculty member for 12 years, auditioned 11 pianists (applicants do not have to be Stanford students) for the four openings in Ax's upcoming class. Joining her were two Palo Alto piano teachers, Sara Doniach and Corinne Barkan.

"We look for pianists with poise, an authoritative approach, control, conviction, and technical achievement, and sensitivity to the subtleties of the music," said Sparrow.

"The student who applies presumably is headed for a professional career. A master teacher usually has a well-defined ability to describe what's necessary to make a performance, and can offer inspiration through close contact. The student already has learned the basics from her or his own teacher."

Bedenbaugh wanted to play the piano "like my older sister when I was four, but my parents made me wait until I was six."

She went to the High School of Fine Arts in her native Birmingham, Ala.; graduated as a magna cum laude music major from Birmingham Southern University; earned a master's in music at Juilliard, where she studied with William Masselos; and then won a one-year Rotary Club Fellowship to the Royal Academy of Music in London.

Her goal is to be a concert pianist, but to combine that with university teaching, which is why she applied to Stanford's D.M.A. program.

"Stanford has such an outstanding reputation," she said, "with Adolph Baller as my teacher, and its excellent program in performance practice, teaching how a piece was performed in its own time."

She was looking forward to meeting Ax, because "I've heard him in London and New York, and he is one of my favorite pianists. It's very inspiring to hear such a fine artist talk about music."

Informal and relaxed

The evening of the master class found Ax relaxed and informal, after just attending "my first live football game."

"The most important thing about these classes is for the participants to have a good time, and perform a little," he said while waiting for them—and the eventual audience of 100 or so—to arrive.

"It gives the students a chance to meet people who perform for a living, and to talk about practical problems relating to performance. When I'm performing, I'm aware of certain things: play louder or softer, or not too fast, because then you can't be heard in larger halls. Teachers know these things, but perhaps they are not touched on during lessons.

"The bad part is that people will work with a teacher week after week, and then I waltz in with a different view, not negative, but different.

"Certain things are pointed out by every teacher, and everyone forgets them. I do, too. Take Jimmy Connors, for example. Why does he so often hit approach shots into the net? He knows better, of course, but he forgets to swing through, that's why."

Ax looked over the list of the four performers he would meet in a few moments and noted how many of their teachers he knew ("Adolph Baller is a terrific musician," he said). The next afternoon, Ax would present his own performance before a large audience in Memorial Auditorium.

Now it was Bedenbaugh's turn to walk up onto the stage for her six-minute Debussy piece. Ax sat in a front row seat, about 15 feet from her, with the score in his hands.

As she played, he visibly was playing it mentally. His head tossed, his hands "played" the notes, his body movement was constant. When she finished, he led the applause (as he did for each performer), and it was loud and long.

Then he leaped up beside Bedenbaugh, put the score on the rack, and started talking over portions of it. Occasionally he sat down and played a phrase or two. Then she played it.

As Bedenbaugh played, Ax became a part of the music, singing silently—sometimes audibly—and directing with one arm. He really was playing it right along with her.

She played a particularly melodic and romantic section. "In terms of the whole piece," said Ax, "that's too loud. Do the opposite of Schubert and Beethoven; you *don't* want to project."

Then he hesitated, looked thoughtful for a full five seconds as he reached for more descriptive words, grinned, shook his head, and said, "I refuse to discuss this piece in sensual terms. This is really (he hesitated, grinned again) ecstatic."

"Fine role model"

When he concluded his session with Bedenbaugh, he said, "Everything I said may be totally wrong, but I know one thing: you have to think of this as a totality, think about its total atmosphere."

When she left the stage, Kay Bedenbaugh, who has performed in Royal Albert Hall and looks the total professional when she plays, seemed to glow with joy.

"He's so gentle and modest," she said. "The Debussy is a work I know, so he doesn't have to tell me how to play notes, but in his total conception of the piece, he's very informative. I agree with what he said; he has a different way of thinking about the piece, and would be a wonderful teacher to study with."

Naomi Sparrow summed up the evening:

"The master teacher tries to pick out points that will make a difference in a performance, not focus on specific techniques. The psychological impact of meeting and talking with a master teacher is great; an international reputation makes for a fine role model."

—Harry Press

Medical Center MEMO



A formal contract providing for the consolidation of Children's Hospital at Stanford and the pediatric facilities of Stanford University Hospital was signed Thursday night, Nov. 4, during ceremonies at Stanford's Buck House. From left are Kenneth Sayre, chairman of the CHAS board; Donald Kennedy, president of Stanford University; and Lawrence G. Crowley, president of SUH and vice president for medical affairs at Stanford. The new facility, to be a separate building adjacent to SUH, is expected to be completed in May, 1987.

Contract signed for children's med center

A formal agreement consolidating Children's Hospital at Stanford (CHAS) and the pediatric facilities of Stanford University Hospital (SUH) was signed Thursday night, Nov. 4, at ceremonies attended by the new organization's recently chosen board of directors.

"Just like a marriage courtship, we have spent the past year getting to know each other's needs and expectations, and we are now joyously celebrating a bonding of our goals and interests," said Dr. Lawrence G. Crowley, chairman of the new 10-member board and president of SUH.

"And like a marriage, we must marshal the groundwork and bond thus far achieved to forge an ongoing relationship," added Crowley, who also serves as vice president for medical affairs at Stanford University.

"We will now get on with the business of taking two dynamic institutions and creating a new entity which is even greater than the sum of its individual parts," said Kenneth H. Sayre of Menlo Park, chairman of the original CHAS board and member of the new CHAS board which will now guide the consolidation through final planning and construction.

The $40 million hospital is to be a separate building physically attached to SUH and ready for occupancy by a target date of May 1987. The project is being built in conjunction with Stanford Hospital's Modernization Plan.

The formal contract was signed by Sayre and Crowley, representing the two hospitals, and by Donald Kennedy, president of Stanford University, which operates SUH as a wholly-owned subsidiary. The agreement creates a new corporation to operate the consolidated children's medical center and mandates the new board to begin planning for construction and other details.

Five of the new CHAS board members were selected by and from SUH's board, while five others were chosen from CHAS' current board, which will continue to operate the existing hospital until it is moved to the new facility. The existing CHAS and SUH boards will serve as the parent governing bodies of new CHAS, Crowley and Sayre said.

Members of the new board from CHAS include Charles A. Anderson, Menlo Park, formerly chief executive officer of SRI International; Birt Harvey, a Palo Alto pediatrician; Shirley Oneal, San Jose, president of the CHAS association of hospital auxiliaries; Lucile Packard, Los Altos Hills, vice chairman of the current CHAS board; and Sayre, a vice president of Kidder, Peabody and Co., San Francisco.

SUH's members include, in addition to Crowley, Conrad F. Gullixson, a Palo Alto attorney, former city councilman and past president of SUH's board; Linda Meier, Atherton, an active Stanford alumna and community leader; Dominick P. Purpura, dean of the Stanford University Medical School; and Frank Roberts, senior partner with the San Francisco law firm of Pillsbury, Madison and Sutro and former SUH board president. Meier and Roberts had also served on the old CHAS board until they resigned last month to be among SUH's appointees to the new CHAS board.

In addition to regular members, each originating board appointed two alternates.

CHAS' alternates are Mary Elizabeth Kendrick of Atherton, a community leader; and Lawrence R. McDonnell of Palo Alto, retired vice president of public information for Pacific Gas and Electric Co.

SUH appointed William F. Massy, Stanford's vice president for business and finance; and David J. Stone, a Palo Alto businessman.

The contract approved during Thursday's ceremony stipulates that Crowley, as vice president for medical affairs, will serve as ex officio chairman until the new hospital is occupied.

Most provisions of the contract were announced in July when both parent boards signed an agreement in principle to consolidate.

Formal planning for a single children's medical center was begun by both boards in November 1981, but informal discussions have been occurring for many years. Central issues included rising costs, concerns about duplication of services, as well as trends in pediatric care, which resulted in attracting to Stanford the more difficult-to-treat cases and the need for a comprehensive approach to the care of children.

About 2,500 patients yearly must be shuttled one mile across a busy thoroughfare between the hospitals for specialized treatment at SUH.

The new facility will consolidate the 60 beds of CHAS and the 44 pediatric acute medical-surgical and pediatric intensive care beds of SUH. The new facility also will house the Stanford-Children's Ambulatory Care Center, which provides 27 separate clinic services, including such specialties as cardiology, birth defects, oncology and child psychiatry.

The new children's medical center will continue to provide inpatient services in the 15 specialties now offered by both hospitals.

The existing CHAS facility at 520 Willow Road in Palo Alto will continue to operate until the new building is completed. The consolidation must now pass through the review process of state and local agencies. —**Mike Goodkind**

Two more heart-lung transplants

Philip McGrath, who doctors said faced death within a few months, became the second heart-lung transplant patient at Stanford within four days.

The 22-year-old Islip, N.Y., man was reported in critical but stable condition following the five-hour operation performed Tuesday by Dr. Stuart Jamieson and five colleagues from the Department of Cardiovascular Surgery.

The operation was the ninth heart-lung procedure performed since Stanford began the program in March 1980.

Jamieson said the transplant was performed without complications, offering the former college student a potential reprieve from the death sentence imposed by his condition, known as a ventricular septal defect (VSD).

The abnormality was the same which led to last Friday's heart-lung transplant for Ronald Grunden, 40, of Ventura, Calif.

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Workers reject Local 715 in union election

Service and maintenance workers at Stanford University Hospital voted against representation by Local 715 of the Service Employees International Union AFL-CIO.

The final tally Saturday night showed a vote of 778 against, 253 in favor, with 22 ballots void or challenged. Approximately 1,150 employees were eligible to vote, showing about a 95 percent turnout during National Labor Relations Board voting Friday and Saturday.

"We are very pleased with the results," said Dan Robinson, SUH assistant director of personnel and manager of labor relations. "We feel that it is a strong vote of confidence. We will continue to live up to this very strong vote of confidence which our fellow workers have shown."

An NLRB representative said the election would be certified after 10 days unless either the employer or the union filed objections.

Michael Baratz, executive secretary of Local 715, said he is unsure whether the group will file objections to the results.

"We'll talk about it," he said.

Workers eligible to vote included a variety of job categories, including nursing assistants, unit service assistants, housekeeping and dietary workers and maintenance employees.

No employees currently are represented by Local 715 at the Hospital, a wholly-owned non-profit subsidiary corporation of Stanford University.

A nonaffiliated union, the Committee for the Recognition of Nursing Achievement (CRONA), represents about 1,250 registered nurses and is the only union currently representing employees at the Hospital.

At the University, a Local 715 contract covers a bargaining unit of 1,350 workers.

Raffin, Young to discuss on t.v. the right to die

Case: A 25-year-old man lies comatose in an intensive care unit of a hospital after being critically injured in a car accident. Not only will he never be able to resume his formerly active lifestyle, but his basic life functions are being sustained only with the aid of machines.

Dilemma: Should the man be kept on life support systems indefinitely, or should he be taken off them and allowed to die?

With the advent of modern medical technology and intensive care units, the question of the right to die is coming up more frequently. Stanford's Dr. Thomas Raffin, director of respiratory therapy and asistant chief of medicine; Dr. Ernle Young, Stanford chaplain; and Attorney Morris Abram, chairman of the President's Council on Bioethics, discuss this topic on the Nov. 25 segment of "Over Easy," a Public Broadcasting System television talk show. It will be aired at 7 p.m. that day, and again on Nov. 26 at noon.

"If a patient is on life support systems, we go by these guidelines: cause him no harm, restore him to health, and relieve suffering," Raffin said. "Our goals are either to save the patient and restore the salvagable functions, or to help him die a dignified death."

Young added what he believes should be another guideline: patient autonomy. "The patient should be able to determine what he'd like the quality of his life to be," he said.

"Technology has accelerated, but the ability to handle the technology at a moral level has often lagged behind," he added.

Often, he explained, family members are torn between the emotion of wanting to keep their relative alive, regardless of his condition, and the practicality of doing what is medically, humanely, and financially the best option.

Reaching these decisions often causes conflicts between family members and



Thomas Raffin



Ernle Young

physicians. Chaplains, social workers, and other trained professionals are especially helpful in these circumstances, all three guests agreed.

One way to avoid forcing family members to make these decisions, they advocated, is for individuals to discuss the options with their family members in advance. Individuals can also sign a "living will," available through the Society For The Right To Die. "The document is not legal, but it does express the person's wishes," Young said.

"Over Easy" is a national daily, half-hour talk show. In its sixth season, it is aired locally on KQED, San Francisco. Hosts Mary Martin and Jim Hartz feature guests who are authorities in subjects pertinent to growing, changing adults.

—Shirley Kraus

Billed as unique in the West. . .

Psychiatry has new facility

A new facility for neurochemical research has been dedicated at the Stanford University School of Medicine.

The new facility, established as part of the Nancy Pritzker Laboratory of Behavioral Neurochemistry, was dedicated to the memory of Jack D. and Sophie A. Pasarow, parents of the major donor to the project.

The new Pasarow Analytical Neurochemistry Facility has equipment and expertise which are unique in the western United States, said Dr. Jack Barchas, director of the Nancy Pritzker Laboratory.

The dedication ceremony launched the new facility and thanked the donors who made a fund drive for the refurbishing and remodeling of the Nancy Pritzker Laboratory successful.

According to Barchas, the Pasarow Facility is intended to support neurochemical research, which requires the detection and measurement of neurotransmitters—chemicals that transmit information from one nerve cell to another. For this purpose the facility has equipment which can identify substances present in minute amounts and which will aid studies in severe mental disorders in adults and children. The equipment includes a new top of the line Hewlett Packard mass spectrometer.

Dr. Dominick Purpura, dean of the Medical School, said that recent developments in psychiatry are permitting the field to move with effectiveness toward an understanding of the critical problems of mental illness which affect millions of people.

The Pasarow Facility comprises one of five divisions of the Nancy Pritzker Laboratory. The others are peptide chemistry, biochemical neuroanatomy, biochemical regulation, and behavioral neurochemistry.

The remodeling and refurbishing of the Nancy Pritzker Laboratory and the establishment of its Pasarow Facility were made possible by a combination of private donors, private foundations, and government sources. Besides Claire and Robert J. Pasarow of Southern California, other private donors included: Moshe and Margaret Alafi of Berkeley, Bill and Diane Bridgford of Fullerton, John and Marjorie Hines of Chicago, Peggy and Albert Orschel of Chicago, Peter and Barbara Pande of Palo Alto, Al and Edie Shansky of Hillsborough, and Garland and Pauline Sinow of Long Beach.

"We are deeply appreciative of the gracious help and key role the donors had in providing for this important research unit," stated Barchas.

The ceremony took place five years after the opening of the Nancy Pritzker Laboratory, established with a gift from the Pritzker Foundation. Several foundations including the Grant, MacArthur, McGraw, Norris, and Pritzker, were important in the current remodeling and refurbishing effort.

In addition, government support was received from the National Institute of Mental Health and the Office of Naval Research. "Individuals, foundations, and government are all important in research on mental illness, where there has been so little tradition of support," noted Barchas, Nancy Friend Pritzker Professor and associate chairman of psychiatry. "Each sector performed a needed role in this three-year $1,000,000 fund drive."

Dr. Kym Faull, senior research associate in psychiatry, will head the Pasarow Facility. Said Barchas, "Dr. Faull is one of the leading experts in this country on the application of mass spectrometry to the analysis of neurotransmitters and their metabolites."

"We are delighted to be in the remodeled space," he concluded, "and the work is already going full speed ahead."

This year's McCormick Lecture to feature Professor Rodin on obesity

"Obesity: Why the Losing Battle?" is the topic of the tenth annual Katharine D. McCormick Distinguished Lecture to be held at Stanford Medical Center 5 p.m. Thursday, Nov. 18.

The speaker, Dr. Judith Rodin, is a leader and respected investigator in the field of behavioral medicine. She is presently a professor of psychology and psychiatry at Yale University.

Rodin's approach to the problem of obesity has been largely responsible for current methods of treating and understanding this major medical problem. Using rigorous methodology, she demonstrated the importance of behavior in understanding the pathophysiology of obesity.

Recently Rodin studied aging using similar methods and showed dramatic effects on the aged when behavioral interventions were introduced. Her work has been of fundamental theoretical importance as well as providing insights into specific medical issues.

Rodin's most recent honor is election to the Institute of Medicine of the National Academy of Sciences. She has served on a variety of editorial boards and professional societies, been the recipient of



Judith Rodin

numerous honors and professional recognitions, and published widely.

Rodin graduated from the University of Pennsylvania in 1966, received her Ph.D. from Columbia University in 1970, and continued her education as a postdoctoral fellow at the University of California, Irvine, in 1971. She joined the faculty of New York University in 1970, and transferred to Yale in 1972.

The McCormick Lectureship honors Katharine Dexter McCormick, who donated $5 million to Stanford Medical School in 1969 with the expressed wish that it be used "for the encouragement and assistance of women pursuing the study of medicine, in teaching medicine and in engaging in medical research."

Katharine McCormick was a co-founder of the League of Women Voters and a vigorous champion of women's rights.

Previous McCormick speakers at Stanford include Drs. Marian Koshland, Maria New, Rose Payne, Rita Levi-Montalcini, Elizabeth Hay, Barbara Korsch, Rosalyn Yalow, Helen Ranney, and Mary Ellen Avery.

Rodin's lecture will be open to the public though specifically addressed to the medical community. (Continuing medical education credit is available.) The presentation will take place in the Fairchild Auditorium, with a reception in the lobby to follow. For further information call 497-6038.

Women's forum

An informal discussion of particular interest to women in medicine will be held by Dr. Rodin in the Sterling Conference Room, Dean's office, M121, at 4 p.m. Wednesday, Nov. 17. Women students, staff and faculty are invited to attend. Refreshments will be served.



Auxiliary members helped some hospitalized patients who couldn't get to the polls vote last week on election day. This is a traditional activity in which Auxiliary members distribute ballots, then collect and deliver them to the polls, working together with the League of Women Voters. Here, patient Althea Prack sorts through her voting materials with assistance from Del Winslow.

Transplants. . .

continued from page 10

Jamieson said Grunden was making excellent progress and has been able to sit up in a chair and eat solid foods. He was listed in satisfactory condition Tuesday.

"I think we have been able to offer both Mr. McGrath and Mr. Grunden at least a fighting chance for productive lives," said Jamieson, an assistant professor of cardiovascular surgery who directs the heart-lung transplant program.

Both McGrath and Grunden previously had led active lives as long as their conditions permitted. McGrath had attended Suffolk Community College on his native Long Island until September 1980, when he withdrew for medical reasons. Grunden had worked for a Southern California newspaper as a computer technician and typesetter until ill health forced him to leave in February 1980.

VSD sufferers are born with a hole between the left and right chambers of their heart. Surgeons currently can correct the hole in infants, but that procedure was unavailable to McGrath and Grunden.

When left uncorrected, the hole allows blood to flow between the chambers of the heart, causing too much blood to enter the blood vessels in the lungs.

The overcirculation causes pressure to increase in the pulmonary arteries that the right ventricle of the heart is unable to overcome.

Therefore, both the heart and lungs become damaged over many years, and a heart-lung transplant becomes the only viable alternative to death.

VSD is one of two common conditions which currently is correctable only by the double transplant operation. The other condition is pulmonary hypertension, in which the blood vessels in the lungs constrict for reasons not yet learned. In this condition, blood cannot flow effectively through the lungs, creating a backlog which ultimately damages the heart.

Since the recipients and donors must be matched by size and also by blood type and tissue type, three recipients at Stanford currently are waiting, ensuring that if a heart and lungs become available, a matching recipient will be ready.

"There are literally hundreds of people who could benefit from this operation, but the difficulty in obtaining donors has meant nearly all of these will die before any real chance of surgery," Jamieson said.

Although several of the nine heart-lung transplants, and many of the 244 heart-only transplants performed at Stanford have returned to active, even athletic lives, they must take medication for the rest of their lives to minimize the impact of rejection, the body's natural tendency to fight off foreign tissue.

The discovery of Cyclosporine (formerly called Cyclosporin A) was the impetus that allowed the heart-lung procedure to be revived last year.

The new drug overcomes problems which caused the three earlier attempts in New York, South Africa, and Texas, to result in failure. Cyclosporine, used on both heart and heart-lung transplant patients at Stanford since December 1980, is more effective than older immunosuppressives at fighting rejection while minimizing the possibility of infection. But more importantly, it allows the windpipe to heal and the lungs to function.

Four of the first seven Stanford transplant patients have returned to active lives.

Three of the patients died, all within a month of their surgeries. Doctors said two patients died of complications encountered because of previous heart surgeries, while another death was attributed to kidney failure, resulting at least in part to exhaustion rendered by a five-year battle against pulmonary hypertension.

SCI welcomes Smith as guest speaker

Stanford Community of Internists (SCI) is sponsoring a one-day symposium featuring Lloyd H. Smith, Jr., M.D., professor and chairman of the department of medicine at the University of California, San Francisco, Nov. 18.

Smith is scheduled to present the Department of Medicine's Grand Rounds lecture—"Pathogenesis and Treatment of Gout"—in Fairchild Auditorium at 8:30 a.m.

He will also lead a lunchtime conference with housestaff and students on "Urolithiasis." The public is welcome at both events.

A dinner is scheduled for members of SCI later that evening, at which Smith will lead an informal discussion on "Reflections of Academic Medicine."

Smith is also physician-in-chief of the Medical Service at University of California Hospitals, San Francisco. He has been a visiting professor at the University of Geneva (Switzerland), Pahlavi University (Iran), the University of Sydney, and the University of Auckland (Australia). He serves on numerous professional and editorial boards, and is the author of at least six books and 89 journal articles.

SCI, formed in 1979, is an organization of community and Stanford University Medical School faculty internists. With about 135 members, the group sponsors a number of educational events each year. For further information, call Sally Mixer at 497-5454.

Drachman launches new lectureship

Dr. Daniel Drachman, a renowned researcher in the causes of the neuromuscular disease "myasthenia gravis," will address Stanford community members next week in the first annual lecture on the causes and treatments for the disease.

The lectureship is sponsored by the Department of Neurology, with a grant from the H.S. Kittredge Research Fund.

Open to the public, the presentation will be held in room M104 of the Stanford University Medical School, 5 p.m. Thursday, Nov. 18.

Double vision, weakness that gets worse as the day wears on, and sometimes fatal paralysis are symptoms of the disorder that affects between five and ten thousand persons in the United States each year. The disease seems to stem from malfunctions in an overzealous immune system at neuromuscular junctions, places in the body where nerve and muscle meet.

Drachman, a professor of neurology at Johns Hopkins University in Baltimore, Maryland, has been a leader in understanding the disease for the last 15 years, according to Dr. Lawrence Steinman, assistant professor of neurology at Stanford.

"It was Drachman who really showed how the receptor for acetylcholine (a chemical messenger at the nerve junction) was involved in the development of myasthenia gravis," Steinman said. "He showed that when antibody binds to the receptor, the receptor is shed and you lose the ability of the muscle to respond to the nerve impulse."

Florence and H.S. Kittredge, long-time residents of the Santa Clara Valley, donated "a generous grant" to Stanford University Medical Center in 1972 for studies of the causes, treatments, and potential cures for myasthenia gravis, Steinman said.

A portion of the grant was set aside in 1982 to fund the neurology lectureship which is scheduled to bring to Stanford each year "people of national and international reputations who are making direct contributions to clinical treatments of the disease."

Popular diets newly critiqued

The Weight Watchers Program is the only one recommended in a recent critique of 14 diet plans.

Popular Diets—How They Rate is available through the Department of Dietetics. The 56-page booklet was prepared by the Los Angeles District of the California Dietetic Association and includes a description, rationale, analysis and conclusion for each of the 14 diets covered.

Some of the popular diets reviewed in the book are: The Beverly Hills Diet, The Complete Scarsdale Diet, The Last Chance Diet, Dr. Frank's No Aging Diet, The Pritikin Program for Diet and Exercise, The Save Your Life Diet, and New Hope for the Arthritic, among others.

The booklet sells for $5 per copy. Order forms are available at Dietetics in C108 or by calling 497-6904.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, NOVEMBER 10

Div. of Hematology Conference: "Studies on the *In Vitro* Micro Environment in Human Long-Term Marrow Cultures"—Dr. Jack Singer. Noon, S102d.

Basic Science Research Colloquium: "Cell to Cell Interactions in Development"—Dr. Dale Kaiser. 5 p.m., Fairchild Auditorium.

THURSDAY, NOVEMBER 11

Dept. of Biochemistry Seminar: "Prediction of Protein Secondary Structure"—Dr. Bob Abarbanell (UCSF). Noon, M316.

Dept. of Medicine Grand Rounds: "Pathophysiology of Multiple Sclerosis"—Dr. Stephen G. Waxman (Palo Alto Veterans Administration Medical Center). 8:30 a.m., Fairchild Auditorium.

FRIDAY, NOVEMBER 12

Child Psychiatry Grand Rounds: "Mothers and Babies—The Origins of Communication"—Dr. Daniel Stern (Cornell). 11 a.m. till 12:15 p.m., Children's Hospital at Stanford, Faber Auditorium.

Dept. of Dermatology Seminar: "Annular Lesions"—Dr. Lobitz. 8 a.m., Dermatology Library, R136.

Dept. of Gynecology and Obstetrics Grand Rounds: "Current Status of Radiosensitizers"—Dr. Norman Coleman. 8 a.m., A336.

Dept. of Neurology Seminar: "Signaling Through Gap Junction"—Dr. Michael Bennett (Albert Einstein School of Medicine). 4 p.m., C364.

Dept. of Pediatrics Grand Rounds: "Pyloric Stenosis"—Drs. Barbara Carroll and Bruce Parker. 8 a.m., M106.

NOVEMBER 13 AND 14

Div. of Child Psychiatry and Children's Hospital at Stanford, and the Extension Division of the San Francisco Psychoanalytic Institute Second Annual Symposium on Advances in Developmental Knowledge: "Infancy: Research Advances and Clinical Implications." For program information, call 563-5815.

MONDAY, NOVEMBER 15

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Impedance as a Clinical Tool"—Earl D. Schubert, Ph.D. 7:30 a.m. R117.

TUESDAY, NOVEMBER 16

Dept. of Dermatology Grand Rounds: "Leukotrienes in the Pathogenesis of Psoriasis"—Dr. Dowd. 10 a.m., Dermatology Library, R136.

Dept. of Biochemistry Colloquium: "Specific DNA Binding and Transcriptional Regulation by Glucocorticoid Receptors"—Keith Yamamoto (UCSF). Noon, M114.

Progress in Medicine Lecture Series on Sexually Transmitted Herpesviruses: "Risks for Fetuses and Infants in Contact with Infected Adults"—Dr. Anne S. Yeager. 7:30 p.m., Fairchild Auditorium. The public is welcome.

WEDNESDAY, NOVEMBER 17

Div. of Orthopedic Surgery Grand Rounds: "Monteggia and Galeazzi Fractures"—Dr. Frederick Reckling (Univ. of Kansas). 8:30 a.m., M114.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. For information call 497-6389.



Medical Alumni Day: E.T.s and kids

Medical staff, faculty, and students are invited to join Medical School alumni Nov. 19, at the Big Game Medical Alumni Meeting featuring E.T.s and kids.

The program consists of a morning scientific session, a 12:30 luncheon, and an afternoon keynote address at 1:45 p.m. entitled "Extraterrestrial Life" by Dr. John Billingham, chief of the Extraterrestrial Research Division, NASA Ames Research Center in Mountain View.

"The Coming of Age, A Pediatric Perspective" is the subject of the morning program to begin at 9 a.m., and is acceptable for continuing medical education credit. A certificate of attendance is available on request.

Speakers include Dr. Merton Bernfield, professor of pediatrics and Joseph Knotts Knowles Professor of Biology, who will discuss "Lessons from Embryos: a New Intercellular Biology."

Dr. David Stevenson, assistant professor of pediatrics and associate director of the intensive care nursery, will speak on "Bigger is not Always Better—a Neonatology Update."

Dr. Paul Pitlick, associate professor of pediatrics (clinical) will speak on "Application of Echocardiography in Congenital Cardiac Defects," and Dr. Iris Litt, associate professor of pediatrics and director of adolescent medicine will give a lecture entitled "It was the Best of Times. . .the Worst of Times, Adolescent Health and Well-Being."

Sessions will be held at Tresidder Union on the University campus.

...News Notes...

The Auxiliary has updated its Visitor Information *guide for the Hospital, announced Auxiliary president Dee Gaynor. It was revised by Joyce Vincenti, an Auxiliary Board member, chair of surgery reception, and patient services volunteer.*

The guides contain general information about the Hospital, visiting rules, miscellaneous services, area transportation, accommodations, agencies, restaurants, churches and synagogues, local businesses, recreation, and more.

They are kept at all reception desks in the Hospital, patient information, Clinics information, the Chaplaincy, the oncology/radiation therapy clinics, Social Services, Community Relations, Administration, Hoover information, and the Emergency Department.

* * * *

Emblazoned shirts for Stanford medical students and faculty are still available through the Medical Student Association and the Office of Student Affairs. A variety of styles are being displayed on the wall of the medical student lounge, opposite room M105, where order forms are available.

An Oct. 8 ordering deadline was extended at least through the first few weeks of November to allow persons to place holiday orders, said Diane Winkle, director of the Student Affairs Office.

Six styles are being offered, ranging in price from $4.30 for a child's tan standard T-shirt with brown logo to $7.80 for golf/tennis shirts.

* * * *

A streamlined Press Code for the Medical Center is being distributed by the News Bureau as a guide for all personnel who have contact with the news media.

Copies of the code will soon be available at all nursing stations in the Hospital. Physicians or other personnel who wish copies of the guidelines or have questions should call Mike Goodkind at the News Bureau, 497-6911.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Wanted: Research Volunteers

About 30 active, healthy, male volunteers over 60 are needed to participate in a study at Stanford University Medical School on the relationship between metabolism and physical conditioning.

Dr. Mark Rosenthal of the Division of Gerontology has been researching glucose metabolism in the elderly. His findings, published in last month's issue of the *Journal of the American Geriatric Society*, indicate that the so-called "glucose intolerance of the elderly" happens only in certain individuals.

"While other researchers claim that poorer handling of glucose is inevitable in aging, I found that some 80-year-old subjects had perfectly normal glucose tolerance and were better than normal in their sensitivity to insulin," he stated.

Rosenthal has theorized that physical fitness is one factor that might explain his observations, that perhaps "staying in good shape" prevents any deterioration of glucose metabolism, or promotes normal handling of glucose.

Rosenthal recently observed a correlation between insulin sensitivity and physical fitness as measured by maximal exercise testing in subjects up to age 50. Now he wants to extend the study to a group of older men.

Athletes currently in training are preferred for the study, which requires spending two nights and two mornings in the clinical research center (CRC) at Stanford. Rosenthal will compare well conditioned elderly athletes—mostly runners and swimmers—with more sedentary men of the same age group.

Participants will undergo, at no cost to themselves, glucose tolerance testing, testing for insulin sensitivity, and basic lab tests. Medical histories will be taken and complete physicals including EKG performed.

As outpatients, volunteers will go through exercise testing on a bicycle ergometer at the Stanford Heart Disease Prevention Program. Also, percentage of body fat will be measured by underwater weighing.

Rosenthal has already tested eight subjects, and expects the study to last until spring. For further information, contact him from 9-5 weekdays at 858-3933.

Editor's note: The Medical Center Memo *is happy to help publicize the need for volunteers in research efforts throughout the Medical Center, when appropriate. Contact Lisa Ames, at 7-6911, or send materials to Medical News Bureau, TC-135.*

Thief with good taste filled his house with art objects stolen from others

continued from page 1

Tuesday. "We have reason to believe he had another gold mine," he said.

On Monday Niemeyer estimated property believed stolen by O'Connor in the past two years could be worth $3 million.

According to Stanford Police Sgt. Nick Bruno, children near the O'Connor home in La Honda reported seeing a cat similar to one reported stolen in Palo Alto. San Mateo County Deputy Michael Preston developed information indicating the cat and O'Connor were at the Burt residence.

San Mateo County Sgt. Dave Bennett coordinated the three raids.

Niemeyer said O'Connor may have been involved in at least 30 Stanford residential burglaries, plus 50 in Los Altos, 30 in Palo Alto, 20 in Menlo Park, and more in Atherton and other parts of San Mateo County. All involved similar methods of operation.

Most occurred during the fall months, often between 5 and 10 p.m. Thursdays and Fridays. The burglar parked his car in the neighborhood, then jogged around to spot likely households. He usually entered through the rear of the house, trying to get in easily but not hesitating to break a window if necessary. He apparently wore gloves.

A real professional

"He's the most prolific and professional house burglar I've ever seen," Niemeyer said. "Apparently, he was working independently," although he may have a few accomplices.

"He appears to be a very intelligent individual," Niemeyer added. He may have been involved in several recent "cat burglaries" on campus, striking late at night while residents were in their homes.

Identified as a suspect in an Oct. 27, 1981, Menlo Park burglary, O'Connor was traced through materials he consigned to an art dealer in Renton, Washington. After noticing a name and address with some valuable dinner plates, the dealer contacted detectives in Los Altos, who confirmed that they had been stolen.

Since the property had crossed state lines, the FBI became involved. Niemeyer was able to match photos they took of a Kashan rug O'Connor also left on consignment with the dealer with pictures taken by its Stanford owner before it was stolen.

The dealer identified O'Connor from a photograph and said O'Connor had left Maureen's name and address as a contact when the goods were sold.

A Volkswagen camper stolen from another Stanford campus home was found and identified by officers at O'Connor's home Thursday. His wife, Maureen, was arrested at the scene after a man believed to be O'Connor fled on foot "like a gazelle," Niemeyer said.

At 10 a.m. Thursday, Niemeyer went to the La Honda residence with Stanford Sgt. Nick Bruno, FBI Agent Mike Keeley of Palo Alto, and Detective Elizabeth Martin of the Palo Alto Police Department. She wanted to discuss some allegedly stolen property which had been left at a pawn shop by Maureen O'Connor.

"When we knocked on the front door, we saw the man move to the rear, then bolt out of the house like a hornet," past Martin, Niemeyer said. When Maureen O'Connor arrived at the scene, she was told to go to her house. The man believed to be Robert was spotted again, "but took off across a field into the forest. . .there was no way I could catch him," Niemeyer said.

Maureen O'Connor would not consent to a search of the house, so Niemeyer and Keeley left Bruno and Martin at the scene, then ran checks on vehicles observed there. One proved to have been stolen from a Stanford resident.

They also had observed a great deal of property under the house and had seen valuable rugs and other items through the windows. With this information, they obtained a search warrant, returned to the house with an 18-foot U-Haul truck and several other officers and spent 12 hours—from 7:15 p.m. Thursday to 7:15 a.m. Friday—filling it with property believed to have been stolen. The truck is "stuffed like Fibber McGee's closet," Niemeyer said.

The 24-karat pigsty

While the house itself was "a pigsty," he added, the couple apparently ate off of 24-karat gold plates and used exquisite silver settings. "He didn't take any junk," Niemeyer said. The house was filled with African, Asian, Middle Eastern and other art objects; expensive photographic equipment; all kinds of sports gear, including tennis rackets, scuba, bows and arrows; firearms; rugs, furs, and jewelry.

O'Connor is believed to have been a jewelry maker, and may have studied Asian and native American art. Neighbors said he may have been a part-time track coach at a Bay Area high school, but could not identify it.

Police found no drugs and very little TV or stereo equipment. "He was a professional in it for the money," Niemeyer said. "He knew this area was affluent. People travel around the world collecting, and he'd collect from them."

A passport belonging to the Kashan rug's owner was found under the bed at the O'Connor residence. "There were lots of boxes and suitcases there with other owner's names," Niemeyer added.

A little more than a year ago, Officer Simpson of the Menlo Park police found a white Saab registered to O'Connor with its rear hatchback open, loaded with jewelry and other property near the scene of an interrupted burglary. O'Connor's wallet was in the car. A man clad in a jogging suit jumped out of nearby bushes and ran away. When police arrested O'Connor as a possible suspect, the visual identification was insufficient.

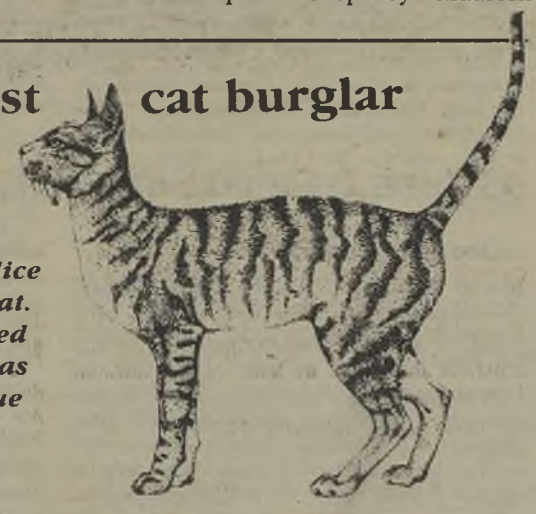
Later, he avoided a continuous three-week stakeout by police.

Niemeyer praised Los Altos Detective Lee Lera for his cooperation and work in tracing the thefts.

Any of it yours?

Police now face a mammoth task in organizing and identifying the physical evidence. Midpeninsula victims burglarized since early 1981 have been asked to obtain copies of their police reports and then call (415) 497-9639 if they believe their property may have been recovered.

Feline provides solid evidence against cat burglar



Ninety-nine out of 100 police would have ignored the cat. Because these people cared about something as real as an animal, they got a clue that led to the burglar.

Because they cared about the loss of a cat, Midpeninsula police Tuesday, Nov. 9 got what they called a "major clue" in arresting Robert Lee O'Connor, a prime suspect in 130 burglaries with a total loss of $3 million in the past two years.

"It's really incredible," said Peter Carpenter, a former Stanford executive, who owned the Abyssinian cat, called "Two" (because she was second in a litter of three).

"Ninety-nine out of 100 police would have ignored the cat. Because these people cared about something as real as an animal, they got a clue that led to the burglar."

Carpenter said Palo Alto Officer Trudy Eitel, who investigated a burglary at his home in October, 1981, promised to keep track of the cat's loss, after he assured her the pet would never have left home voluntarily.

On Thursday, her colleague, Palo Alto Detective Elizabeth Martin, went to the O'Connor residence in La Honda to question his wife, Maureen, about some alleged stolen property. She remembered to ask neighborhood children about the cat. They said Robert O'Connor had given the cat to a friend in Montara, where O'Connor was arrested in a predawn raid Tuesday. The cat was there.

"Two" has been placed in protective custody at the Palo Alto Pound, for use as evidence.

Stanford Police Chief Marvin Herrington reported late Tuesday that another truckload of alleged stolen property was recovered at Montara. Officers had two additional search warrants in San Mateo County. "The stuff just keeps rolling in," Herrington said.

Carpenter, who now lives in Atherton, is a vice-president for corporate strategy at Alza Corporation. During 1973-76 he was executive director of the Stanford Medical Center and assistant vice-president for medical affairs at the University.

Nuclear power is the answer: Bertram Wolfe

The U.S. government's current moratorium on nuclear power plant construction could cause a severe national energy shortage by 1990, a vice-president from General Electric Co. said Monday, Nov. 8, at Stanford.

Speaking to about 50 engineering students, Bertram Wolfe, vice-president of nuclear and special systems at General Electric Co., said that dependence on oil and coal energy will not solve the nation's long-term energy demand.

"The oil crisis is far from over," said Wolfe, "and coal energy brings with it some serious health and safety problems like 'acid rain' and carbon dioxide poisoning of the environment."

Wolfe blames the present moratorium on three factors:

* a "licensing mess in Washington" which, he claimed, President Reagan is intent on correcting.

* an "unhealthy financial situation" among public utility companies.

* public outcry against the potential safety and health hazards of nuclear power plants.

"What we need today is a meaningful reaffirmation of the 1954 Atomic Energy Act that would make nuclear power the long-term energy goal of the U.S.," said Wolfe.

Since nuclear power plant construction began at Oak Ridge, Tennessee in November 1943, $200 billion has been invested. Today, nuclear power supplies approximately 100 gigawatts (one billion watts) of electricity, or 11.9 percent of the nation's total energy need in 1981, according to statistics from the U.S. Department of Energy in Washington, D.C.

In the past 10 years, however, no nuclear reactors have been commissioned to be built, said Wolfe. "The realities of the decline in nuclear energy might lead us to an erosion of current fission reactor design and capabilities," he added.

Wolfe said that he believes that spending money to redesign existing power plants does not "get to the root of the problem. . . . By fixing various technical aspects in plant design, you still can't reduce the risk to zero. Nuclear power has a perfect safety record anyway."

Three Mile Island could have been cleaned up by now for one-half the cost it lost from being out of operation, said Wolfe, who also said that he believes the issue of nuclear waste is "not a serious technical problem."

Claiming that the lack of government support for licensing approval is the most important hinderance to nuclear energy development, Wolfe also said that there exists a "hostile attitude in Washington" that will, in the long run, endanger the United States' energy situation.

Wolfe predicted that France and Japan will be the most "energy-independent" countries by the early 1990s because of their government's support of nuclear power plant construction.—**Craig La Grow**



Some of the Governor's Corner residences opened this quarter.

Governor's Corner houses named after Stanford people

A number of the new buildings in Governor's Corner have been named, Dean of Student Affairs James W. Lyons has announced.

The buildings were named after people who made significant contributions to their fields of scholarship, were widely known on campus for many years, improved the quality of life for Stanford students, and were dedicated teachers or were in other ways known to and respected by undergraduates.

Those honored at Governor's Corner are as follows:

Ephraim Douglass Adams came to Stanford in 1902 as an associate professor of history. He was a productive scholar in the field of diplomatic history and a recognized authority on the Civil War and British-American relations.

To Adams is credited the idea, the planning, and the early leadership of the Hoover War Library; he was a member of the Library's directing board and its first chairman.

He was an enthusiastic and popular teacher for 28 years, serving from 1908-1922 as executive head of the History Department.

Adams died at his campus home Sept. 1, 1930.

Melville Best Anderson, first head of the English Department, was one of the original band of scholars called to Stanford by Dr. Jordan in October, 1891. In his 25 years of service, 19 of them as department head, he became widely known as a scholar and translator, and as a teacher who inspired in many students an appreciation and love of literature.

Retired from active service in 1916, Anderson died in La Jolla on June 8, 1933.

Orrin Leslie Elliott arrived at Stanford even before the academic opening of the University in 1891. Invited by Dr. Jordan to be the registrar of the new University, he served continuously in that post until retirement in 1925.

Elliott's scholarly background, his contributions to academic organization, and his keen observations of Stanford's early growth found expression in 1937 in his published history, *Stanford University, the First Twenty-Five Years*. Elliott died on Aug. 28, 1940.

James Owen Griffin was called to Stanford in 1891, one of the group invited by Dr. Jordan to form the first faculty of the University. From 1891 until his retirement in 1917, he served Stanford as professor of German and, for much of that time, as head of the German Department.

Griffin died on Feb. 11, 1939.

Oliver Peebles Jenkins studied at Indiana University under David Starr Jordan, professor of natural history and then president of that university. Subsequently invited to Stanford to join the pioneer faculty in 1891, he became the first professor of physiology and served in that capacity until his retirement in 1916.

With another Stanford colleague, Jenkins identified Pacific Grove as the best location for the establishment of the Hopkins Seaside Laboratory (now Hopkins Marine Station) for the study of marine biology.

Jenkins died in 1935.

Charles David Marx was one of a group of early Cornell students whom Jordan brought to Stanford in 1891 as members of the first faculty. Marx's initial task was to head the Department of Civil Engineering; from 1917 until his retirement in 1923, he also served as vice-president of the University under President Ray Lyman Wilbur.

Upon Marx's death in 1939, former President Herbert Hoover said: "His services to education and to the American people represent the finest citizenship of our country."

Augustus Taber Murray—classicist, Quaker, athlete, and descendant of New England whalers—came to Stanford in 1892. He remained in active service at the University for 40 years, retiring in 1932.

On the duty of a scholar: "It is his privilege not merely to teach, but to exert upon the lives of the young men and women an influence which may be past measuring." Murray's life and work are impressive testimonials of his own adherence to this intellectual creed. He died Mar. 8, 1940.

David Morris Potter, Stanford historian, author, teacher, and nationally-known expert on the Southern secession, came to Stanford from Yale University in 1961. Potter was immensely popular as an undergraduate teacher; students crowded his celebrated courses in constitutional history, the South, the Civil War, and the American character; in 1968, he received the Dinkelspiel award for excellence in teaching.

At the time of his death, Potter held the distinction of serving as president of both the American Historical Association and the Organization of American Historians. Four of his books have been published posthumously, including *The Impending Crisis*, which was awarded the Pulitzer Prize in history in 1976. Stanford historian Don Fehrenbacher was personally requested by Potter to complete the several works in progress at the time of his death; Fehrenbacher and another noted Stanford historian, Prof. Carl Degler, collaborated on these tasks for several years.

Potter, who held the endowed Coe professorship of history at Stanford, died Feb. 18, 1971.

Edgar Eugene Robinson came to Stanford from Carleton College in 1911 to accept an assistant professorship in the History Department. He subsequently served as executive head of the department for 23 years, received one of the first endowed professorships at Stanford, and was the honored person of Stanford's third endowed professorship—the Edgar E. Robinson Professorship in United States History.

He chaired the Committee on the Independent Study Plan from 1928 to 1944, overseeing an innovative plan of individually tailored programs of study, the precursor of departmental honors programs.

A mainstay of the University for over 40 years, Robinson died at his Palo Alto home Sept. 7, 1977.

Leonard Isaac Schiff, professor of physics, served Stanford in many capacities during his 24 years at the University.

Executive head of the Department of Physics from 1948 to 1966, Schiff is credited with building and sustaining a nationally distinguished department. In 1968, his faculty colleagues elected him first chairman of the Faculty Senate, a position he held concurrently with chairing the Advisory Board, an elected group of faculty concerned with major academic appointment. From 1966 to 1968, Schiff was a member of the Steering Committee of the Study of Education at Stanford, an ambitious self-study that resulted in many improvements in education programs and student services.

His contributions to teaching and to undergraduate education were recognized in 1966 by the Dinkelspiel award, Stanford's highest faculty honor. In addition to more than 140 research papers in theoretical physics, Schiff was internationally known for his textbook *Quantum Mechanics*, first published in 1949.

Known throughout the University for his integrity, selfless devotion, strength and gentleness, Schiff died unexpectedly on Jan. 19, 1971.

Payson Jackson Treat received Stanford's first Ph.D. in history in 1910, five years after his appointment as an instructor in the History Department. Traveling in 1906 to East Asia, India, and Australia launched his career as a pioneer American scholar in Far Eastern history. His subsequent travels, research, writing, and teaching in the field of East Asian history were complemented by his active involvement in the Institute of Pacific Relations after World War I and his untiring efforts to promote better Japanese-American relations prior to World War II. In 1935, the Emperor of Japan decorated Treat with the third class Order of the Sacred Treasure.

When Treat retired from Stanford in 1945, he had served for seven years as executive head of the History Department and had, by his estimation, taught more than 7,000 Stanford students.

Payson Jackson and Jessie McGilvray Treat, Stanford class of 1906, made their campus home for many years on Dolores Street, where Treat died June 15, 1972.

Mary Yost came to Stanford at the invitation of Ray Lyman Wilbur in 1921 as dean of women and associate professor of English. After 25 years of distinguished service, she retired in 1946.

Nationally known for her concerns about the education needs of women students, her work at Stanford coincided with the University's second 25 years of life—a period of transition from a small and intimate college to the larger and more crowded institution of today. Miss Yost's example of faith in young people and in student self-government, combined with adherence to high standards of conduct and academic performance, helped countless students—and the University—through difficult times of growth and change.

Mary Yost died Mar. 4, 1954.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

HOLIDAY COMING!

Due to the upcoming Thanksgiving holiday, all requisitions for newly opened positions must be in the Personnel Office, Old Pavilion, by 9 a.m. Tuesday, Nov. 23, in order for the positions to be listed in *Campus Report* the following week (Dec. 1).

Exempt

44521-AW (JCC:4076) PROGR/ANALYST GEN II Posses programming & sys analysis skills to independently analyze one or more Univ functions, & design interfaces w/ other sys & programs; must have the ability to understand user procedures, program requirements & documentation need functions as jr. member of a team & assts higher level programmers; QUALIFICATIONS: exp in SPIRES programming; ability to define & conceptualize complex logical problems; familiarity w/ modern offc informa sys, batch sys approaches, sys environments & capabilities & structured analysis techniques.; C06; $1854-2312. 1

36545-FM (JCC:2128) ACCOUNTANT II Respon for endowment income allocation, under direction of Supr of Endowment Acctg; analytical posting & maintaining manual ledger that controls endowment funds & their investment pools & determine cash flow available for investment for each of the pools; posting an analysis ledger to determine income & expenses of the specifically invested funds; maintaining share worksheets & computerized shares file; supporting develop't of new sys in endowment area; asst in yr-end closing; prep financial statements, etc; QUALIFICATIONS: BA/BS in acctg or equiv exp, plus 3 yrs of professional acctg exp; requires broad genl knowl of acctg; exp In fund actg and/or acctg for securities & security income helpful; knowl of WYLBUR/SPIRES/VISICALC helpful; effective oral & written commu skills.; C06; $1854-2312.

31428-VW (JCC:2262) FIN/MGMT ANALYST II The analyst respon for maintaining data bases of patient demographic informa; prep analyses of availability & demand for physician serv in the region; as a corollary, the analyst will be respon for preparing gross revenue, net revenue & cash collections budgets exceeding $50 million & spanning 75 operating cost ctrs; require statistical tech as well as financial analysis & extensive interaction w/ physicians, dept business mgrs, & FPP sr. mgmt; QUALIFICATIONS: bachelor's degree in business or economics w/ several yrs of exp in finance or marketing; excel verbal & written commu skills; knowl of statistical analysis; knowl of data processing concepts preferably w/ some programming familiarity; flexibility open to change & willing to learn new skills.; C07; $2113-2724.

31348-LL (JCC:5588) LIFE SCI RES ASST I Fixed term 11/15/82-5/14/83; 50% or 100%; prep of renal membranes by centrifugation; performing transport studies in membrane vesicles; performing column chromatography & gel electrophoresis; handling radioactive isotopes incl 3H, 14C & 125I; the sacrificing of animals will be regularly required; developm't of experimental protocols & writing tech papers; ability to make theoretical & practical judgments in order to change experiments w/out immediate consultation w/ principal investigator; QUALIFICATIONS: bachelor's degree in biology or chemistry or equiv exp; some knowl of protein chemistry, centrifugation, separating columns, gel electrophoresis & immunological tech helpful.; C05; $835-1043.

23592-AW (JCC:7534) FACIL ENGINEER/COORD II Responsible to Dir, Computer Sci Computer Facilities; effect smooth operation of computer sys by working w/ programmers, sys mgrs, & users to meet user requirements; handle inquiries/requests; supv & implement operational details of facilities; develop & propose operating & admin policies & procedures; schedule telecomm & datacomm serv required fr Stanfords; perform or supv installation of dataomm, telecomm, sys interconnections, networks, terminal devices; QUALIFICATIONS: prior exp in computer sys operations is mandatory; 1 exp/knowl in several of the following is highly desirable: Hardware: DEC-10, DEC-20; PDP-11; VAX 11/780; VAX 11/750; M68000; Networks/DataComm/Protocol s: Arpanet; Ethernet (3MHz & 10 MHz); dial & lease telecomm; Pup, NCP, TCP/IP, RS232; Software: TOPS-10, TOPS-20; Unix;C; SAIL; Pascal; Macro-20; good commu & writing skills; knowl of & ability to apply sound supvry practices.; C07; $2113-2724.

32503-AW (JCC:8880) MISC PROFESSIONAL Software Licensing Assoc respon for admin of Software Distribution Ctr; corresp & telephone interaction w/ potential customers; creating license agreements; performing market res; processing royalty checks authorizing tape shipments; preparing royalty-sharing agreements for faculty; preparing & filing trademark applications; also respon for seeking out & negotiating commercial license agreements w/ private software companies who wish to develop & market a commercial version of the particular software; QUALIFICATIONS: BS in computer sci or engrg; MBA or marketing exp; negotiating exp; exp in Stanford or other univ admin; excel interpersonal & commu skills.; C07; $2113-2724.

26774-JB (JCC:7650) CUSTODIAN WKG SUPVR 7:30-4pm; supv cleaning, training & other duties of the custodians assigned to you; create & maintain clean, safe, 'home-like' atmosphere for residents; check daily arrival & departure time of each custodian; submit a monthly bldg maintenance & housekeeping report; order supplies; maintain inventory control over mat'ls & keys; attend approp classes; work & commu effectively w/ students, Residential Edu, Resident Fellows & co-workers; when short of custodial help peform needed work; QUALIFICATIONS: be flexible performing job; can accept organizaitonal changes fr outside depts; have good supvry skills; demonstrated admin skills; report writing, attendance records & memos; ability to acquire exp & knowl regarding employee relations & USW contract; 3 yrs housekeeping supvry exp; excel commu skills a must.; S09; $1632.

29757-JB (JCC:7650) CUSTODIAN WKG SUPVR 8-5pm; supv cleaning, training & other duties of the custodians assigned to you; create & maintain clean, safe, 'home-like' atmosphere for residents; check daily arrival & departure time of each custodian; submit a monthly bldg maintenance & housekeeping report; order supplies; maintain inventory control over mat'ls & keys; attend approp classes; work & commu effectively w/ students, Residential Edu, Resident Fellows & co-workers; when short of 1 custodial help peform needed work; QUALIFICATIONS: be flexible performing job; can accept organizaitonal changes fr outside depts; have good supvry skills; demonstrated admin skills; report writing, attendance records & memos; ability to acquire exp & knowl regarding employee relations & USW contract; 3 yrs housekeeping supvry exp; excel commu skills a must.; S09; $1632.

Bargaining Unit

17838-LL (JCC:5638) LIFE SCI TECH I TMS Unit; generation & maintenance of murine T cell clones reactive w/ soluble antigens & analysis of these cells using T cell proliferation assays; production & maintenance of hybridomas; extensive mouse work involving antibody production, immunizations, collection of serum & minor surgery; generates antisera & monoclonal antibodies reactive w/ T cell surface antigens & soluble products of T cell clones; analysis of cell surface antigens of T cell clones by fluorescence activated cell sorting using reagents prepared in lab as well as commercially available; QUALIFICATIONS: training or exp in above techniques; prior lab exp using biochemical or molecular biology tech is important; exp w/ cell culture tech helpful.; A18; $7.5.

42877-LL (JCC:5644) LIFE SCI TECH II TMS Unit; identify, clone, map & seq the related genes of VSG 117 gene family of Trypanosoma brucei to determine the region of Gene critical for transposition; involves growth of T. brucei in rodents, purification of T. brucei fr rodent blood, prep of DNA fr T. Brucei, restriction mapping by Southern blotting of '117' cousins, cloning of genomic DNA fragments in bacteriophage, cosmlds & plasmids, nick translation using 32p of probes, etc; QUALIFICATIONS: molecular biologist w/ exp of all DNA sequencing & gene 1 cloning tech plus some exp of chromatography, analytical biochemistry, cell culturing, animal handling & microbiological techniques.; A24; $8.65.

12683-PB (JCC:7300) FOOD SERVICE WORKER I Thur thru Mon; relieve kitchen & dining room porters & pot washer; sweep & mop floors; clean walls, wash windows in assigned areas; remove, empty & wash garbage cans; remove cans & boxes fr working areas; wash & put away pots & pans & equip't; bus trays & asst in dishroom during student lunch hr; QUALIFICATIONS: must meet health & safety requirements for food serv workers; good physical condition; ability to stand for prolonged periods & to lift, move, & manipulate moderately heavy objs; able to follow instructions & to work w/ others.; A08; $5.95.

22826-PB (JCC:7308) FOOD SERVICE WORKER II TMS Unit; 50%; prep requested sack meals; clean & store all fresh vegetables; make salad dressing as needed; asst pantry worker prepare fruit salads; help cook when nec for lunch production; work extra hrs upon request fr supvr; help keep all areas clean; QUALIFICATIONS: must meet health & safety requirements for food serv workers; ability to stand for prolonged periods; must be able to follow instructions & to work w/ others.; A10; $6.23.

Nonexempt

32115-PM (JCC:2596) SECY II-SPEC Prov sec'l support to 3 diagnostic Radiology faculty, & coord Div Clerkship; respon for phones & typing of corresp, manuscripts, grants; scheduling appts; travel arrangements, prep expense reports & other Univ forms; maintain faculty files as required, etc; QUALIFICATIONS: typ 65; 2-3 yrs sec'l exp; use of dictaphone & accurate typing; medical terminology desireable; ability to interact w/ med students & med staff; contact: Sally Healey, S078 Med Ctr, 497-7863.; B12; $1310-1373.

LAB HELPER 2 half-days/wk approx; prep, dispensing & sterilization of culture media; minor lab housekeeping duties--prep of dirty glassware; routine inoculation of culture tubes in a lab devoted to the biology & genetics of Microorganisms; QUALIFICATIONS: requires good mech aptitude; ability ti be concise & accurate in weighing & measuring; familiarity w/ metric system; extensive lab exp or degree not required; prefer mature person located permanently in the area, & who does not have expectations for expansion into a full-time job; submit resume to Dr. David Perkins, Stanford Univ, Dept. of Biological Sciences; $6.39/hr.

30412-BP (JCC:2454) OFFICE ASST II 50%; hrs can be arranged; genl filing; misc typing; posting on student records; genl offc support; may not smoke in offc; QUALIFICATIONS: typ 55; accuracy; attento detail; ability to work speedily & flexibly; send appl/resume to Mary L. Scott, Bldg 590, Room 209.; B09; $565-595.

32999-BP (JCC:2454/2462) Offc Asst II/III Answer phones (about 12 lines); handle reception, & files at Order Entry Desk; take clear messages; answer routine questions fr customers; operate cash register; will train to process routine job orders & hand out completed jobs to customers; in addition to the above OAIII discuss jobs w/ customers & determine the best methods to achieve desired results; discuss prep of copy & finishing possibilities w/ customers; QUALIFICATIONS: genuine interest in printing & graphic work; good interpersonal skills; well organized; able to handle several tasks at once; good atten to detail & accuracy; some math ability required; light typing; for OAIII: knowl of printing, binding & photo tech; send appl/resume to Darla Wilson, 560 Panama Street.; B09/B11; $1130-1189/1246-1310.

29431-PM (JCC:2454) OFFICE ASST II 50%, Fixed term 11/22/82-5/23/83; 8-12 noon; prov genl clerical assistance to Asst Dir for Admin of Doctoral Program; frequent contact w/ students & faculty; evaluate & combine mat'ls & documents for admissions files such as GMAT/GRE 1 scores, recommendations, financial aid requests, & transcripts; work w/ confidential mat'ls, receive visitors; screen phone calls; typing & filing; QUALIFICATIONS: typ 45-50 accurately; legible handwriting; prof'l telephone man-

continued on next page

Rental housing

HOUSING AVAILABLE

□ **Jan. 1 to July 31, '83 (flex):** Fully furn. hse, 3BR/2BA, AEK, W/D, close to campus, shops. Children ok. $850/mo. Call 327-5641 (eve), 497-9253 (day).

□ **NOW:** Unfurn. condo, 2BR/2BA in dwntwn Palo Alto. AEK, W/D, carpets, drapes. Brand new. Rent to own, equity share. $1500/mo. (tax deductible). Call 321-7820 (day) or 327-0987 (eve).

□ **Jan. to Sept. '83 (flex):** Fully furn. campus hse, 4BR/2BA, frpl, garden w/auto sprinkler, view of hills. Nonsmokers, no pets. $1400/mo. incl. grdnr. Call 497-3987 (day) or 494-0362 (eve).

□ **Beg. Dec. 10, '82:** 4BR/3BA hse, LR, FR, study, microwave in modern ktchn. 2 car gar. On quiet st. no. Palo Alto. 6 mo. lease w/option to renew till Sept. '84. Refs. req., pets nego. $1350/mo. Call 321-2247.

□ **Jan. '83 to late May:** Contemp. hillside hse w/view in Portola Valley. 4BR/3BA, fully furn; conversation pit w/frpl., 2 lge decks, spa. 5 mi. to campus. $1700/mo. Call 327-8615 (eve) or 858-4035 (day).

□ **NOW:** Alpine Meadows, Tahoe. 3BR/1½BA cabin, phone, W/D, frpl., sleeps 10. $200/wknd, $70/wknite. Call 493-4139.

□ **NOW:** Elegant twnhse, unfurn., 2BR/2½BA, parquet flr, deck, frpl., 2 car gar. w/genie. Coll. Terr., walk to campus, stores. $850/mo, lease. No pets. Call agent, 857-0166.

□ **Thanksgiving thru Dec. '82:** Fully furn. 3BR/2BA hse. w/lge. yd. in rural setting. 3 mi. to campus, nr. Gunn Hi. $500 + care of 5 outdoor, fenced-in pets. Use of car nego. Nonsmokers. Call 948-4314.

□ **April to July, '83:** Furn. campus hse., 3BR/2BA, study. Fenced yd. $900/mo. incl. grdnr & hsecleaning. Call 858-2142 (eve. & wknd).

□ **Jan. '82 for 3, 6, or 9 mo:** Fully furn. hse 2-3BR/2BA. Lovely Japanese grdn. 20 min. drive to campus. $1000/mo. incl. grdnr. Call 497-1316 or 497-1527 (day), or (408) 245-3780 (eve).

□ **Regularly Avail:** 1 & 2 BR furn. & unfurn. apts. & twnhses & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds, close to campus. $525 to $800/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Now thru June '83:** Menlo Pk, unfurn. hse. 3BR/2BA, FR, frpl, patio, beautiful encl. garden. Stove, new frig & W/D. Children welcome, pets ok. 10 min. to campus. $1100/mo. + util. Call 497-2635 (day), 325-5482 (eve).

□ **Jan. to June, '83 (flex):** Furn. campus hse. 4BR/3BA, LR, DR, FR w/frpl. Shop, carport. Auto. sprinklers. Nonsmokers. $1400/mo. + elec., gas, gardning; 1st & last mo. plus dep. Call 857-9185 or 497-1663 (day).

□ **Nov. 15 to June '83:** Spacious Mt. View. unfurn. condo. 2BR/2BA, overlooking pond. AEK, W/D, gar., pool, tennis. $725/mo. lease. Call John, 962-8473 (eve).

HOUSING NEEDED

□ **Jan. to Mar. '83:** Visit prof. wishes to rent furn. rm/BA/kitchen on or nr. campus. Call Brix Eakin, 497-4186 (day).

□ **Jan. to Mar. '83:** Retired Conn. cpl visiting SU family seek 2BR hse or apt on campus/Coll. Terr./Evergrn Pk. Frpl. pref. Will hsesit or pay reasonable rent. Call Marilyn Davidson, 857-0390.

□ **WINTER QTR.:** Visit prof. seeks furn. studio or 1BR, pref. within 3 mi. of campus (will consider further). Could hsesit. Call Elissa, 497-4977 (day).

□ **WINTER QTR:** Visit prof. seeks very quiet apt., studio or rm. w/ktchn priv., on campus or walk dist. For 3 to 4 mo. (flex). Call Feferman, 497-2439 (day), or 857-0325.

□ **NOW:** Prof. on lv. seeks rm. or 1BR furn. apt. nr campus. Nonsmoker. Call COLLECT (804) 381-5555, or write John Savarese, Dept. of Eng., Sweet Briar Coll., Sweet Briar, VA 24595.

□ **Jan. to mid-Mar. '83:** Grad. woman seeks furn. place nr. campus. Will hsesit or pay reasonable rent. Wonderful refs. Call 326-8830.

□ **Sept. '83 to June/Sept. '84:** Approx. 50 fully furn. hses. needed for Fellows & their families coming to Ctr. for Adv. Study in Behavioral Sci. Call Frances Duignan, 321-2052 (day).

□ **Sept. '83 to Aug. '84:** Fellow, spouse, 1 child coming to Behavioral Sci. Ctr. would like to EXCHANGE elegant restored brownstone in Boston, nr. Harvrd, BU & Tufts Med. Sch. for hse on campus or Palo Alto. Call Sara Lightfoot (617) 262-4629 or Frances Duignan, 321-2052 (day).

□ **Jan. to Mar. '83:** Retired cpl. seeks furn. 1 or 2BR apt., condo, or hse. on campus, Palo Alto, Menlo Pk. Close to shops, campus. Pkg. deal to include car best. Call Dave Marimont, 497-3796 (day) or 325-7182 (eve).

□ **Beg. mid-Nov. for 6 mos. (flex):** Visit. prof., wife seek 1 or 2BR furn. apt. (linens & dishes pref.). Write to Y. Ilamed, Math Dept, Stanford 94305.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Library Associates to hear Halsband

Associates of the Stanford University Libraries will be provided with an intimate look into the life of an early feminist when they meet on Sunday, Nov. 21.

Robert Halsband, a current Guggenheim fellow and professor emeritus at the University of Illinois, will discuss "Lady Mary Rides Again: The Significance of Lady Mary Wortley Montagu Then and Now," at 3 p.m. in Annenberg Auditorium.

Halsband, who is also a reader at the Henry E. Huntington Library in San Marino, notes that Lady Mary was significant in 18th century England for her advocacy of women exercising their personal liberty, participating in politics and public affairs and asserting their ambitions professionally.

Halsband, who had edited several volumes of Lady Mary's letters, remarks on her reputation as one of the great English letter writers. He is author of *Lord Hervey: Eighteenth Century Courtier* and *The Rape of the Lock and its Illustrations 1714-1896*.

A reception will follow the program in the Louis R. Lurie Rotunda of the Cecil H. Green Library. The public is invited. There is no charge.



Sir Michael Palliser to lecture on detente

Sir Michael Palliser, recently retired as Permanent Undersecretary of the British Foreign Office, will talk about "The Future of Detente in British Perspective" at a public lecture at 4:15 p.m. Thursday, November 18, in Room 205, History Corner.

Sir Michael, who has been the top civil servant of the Foreign Office for a number of years, most recently headed the British cabinet's task force dealing with the Falkland conflict. His lecture is sponsored by the Western European Studies Committee and is open to the public.

Book Month observed

In honor of Jewish Book Month, the first in a series of monthly Jewish Book Club meetings will be held from 10 a.m. to noon on Sunday, Nov. 21, 1982, in the Stanford Hillel Library (basement, Old Union Clubhouse).

Rabbi Ari Cartun will dedicate the new library facilities.

The meeting, open to the public, is sponsored by the Stanford Hillel Committee and the Palo Alto B'nai B'rith Men's Lodge.

Health and safety report

Accidents and Injuries Occurring Oct. 29-Nov. 5

Type of accident or injury	Number of incidents	Days Lost
Impact with object	3	5
Non-impact: sharp object	1	0
Non-impact: pinched, crushed, squeezed	3	3 (0, 2, 1)
Fall from height (includes stairs)	3	33 (0, 2, 31)
Overexertion	2	7 (0, 7)
Stress	1	0

Campus crime report

COMMUNITY CRIME INFORMATION
Oct. 25-Nov. 1

Burglary/residence	0	Phone harassment	0
Burglary/nonresidence	4	Controlled substance	0
Burglary/Vehicle	7	Felony arrest	1
Theft/under $200	6	Misdemeanor arrest	4
Theft/over $200	4	Adult booking	4
Bicycle theft	11	Adult cite/release	1
Vehicle accident	3	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	3
Assault	0	Driving under influence	2

Ph.D. oral exams

MONDAY, NOVEMBER 15

Francoise Arnaud Hibbs, French and Italian. "Space in the Novels of Simone de Beauvoir: Its Expression and Function," 2:30 p.m., 274, Bldg. 260.

TUESDAY, NOVEMBER 16

Yvonne Captain-Hidalgo, Spanish and Portuguese. "The Changing Continuity of the Commitment Principle: A Comparative Analysis of Alejo Carpentier and Manuel Zapata Olivella." 2:15 p.m., 274, Bldg. 260. **Michael Leonard Stein,** statistics, 1:30 p.m., Sequoia 120.

WEDNESDAY, NOVEMBER 17

Barbara Goffigon Cox, education and psychology. "Patterns of Dual Language Acquisition in a Bilingual Community," 9 a.m., e114, Education Bldg. (Cubberley). **David S. Dranove,** business. "The Physician/Patient Relationship and Home Health Care: Two Economic Analyses," 2:15 p.m., 272 Graduate School of Business. **Peter Menzies,** philosophy. "Causation, Conditionals, Decision Theory," 1 p.m., 91B. **Richard Swent,** electrical engineering. "Channeling Radiation from Positrons and Electrons." 2:15 p.m., Applied Physics 200.

THURSDAY, NOVEMBER 18

Allan Samuel Jacobs, geophysics. "The Pre-Stack Migration of Profiles," 2:15 p.m., ESMB 350. **David McCandless,** drama and humanities. 2:15 p.m., Room 125, Memorial Auditorium.

FRIDAY, NOVEMBER 19

Anne Maria Bankay, Spanish and Portuguese. "Roque Dalton's Poetry in the Context of the Sixties: The Thematic and Artistic Concerns of Spanish American Poetry of this Decade," 2:15 p.m., Room 274, Bldg. 260. **Frederick Edward Dopfel,** engineering-economic systems. "A Composite Investor Criterion for Capital Budgeting," 10 a.m., Room 329, Terman. **Patricia McGinn Marshall,** education. "Homework Versus Classwork: Two Study Situations that Contribute Differently to Achievement in Elementary Mathematics," 1:30 p.m., 204 South, CERAS. **Bradford Bennett Pate,** applied physics. "The Diamond Surface Electronic and Atomic Structure," 2:15 p.m., McCullough 240.

Jobs/ continued from page 16

ner; able to work w/ confidential mat'ls; answer questions w/ tact & diplomacy; Univ exp, esp regarding admissions files preferred; send appl/resume to Ann Coulthard, Room 224, GSB or call 497-2831.; B09; $565-595.

39129-BP (JCC:2454) OFFICE ASST II Fixed term 11/15/82-6/30/83; Mon-Fri, 11-3pm; serv as receptionist working w/ 4 professional staff & up to 4 student Interns & 4 student employees/staff asstants; sorting mail; answering phones typing accurate, finished copy of corresp, forms, newsletters; greeting visitors; making appts; operating offc machines; QUALIFICATIONS: typ 45-50; 1-2 yrs of approp sec'l/clerical exp; min supvn; ability to win cooperation fr students, faculty & staff of diverse cultural & ethnic bkground; knowl of Stanford helpful; send appl/resume to Michael Ramsey-Perez, 2nd Fl. Tresidder.; B09; $565-595.

26883-BP (JCC:2454) OFFICE ASST II 75%, 9-4; prov clerical/sec'l support for Computer Music Ctr; asst administrator in day-to-day running of Ctr; screen calls & visitors; pick-up & sort mail; fill requests for publications & informa; order supplies; 1 write reqs & follow-up; set-up & maintain files; maintain mailing list; typ corresp & forms using typewriter & computer terminal; prov genl offc support, etc; QUALIFICATIONS: typ 60; exp or ability to learn use of computer terminal for text processing; 2-3 yrs clerical/sec'l exp; good interpersonal skills; atten to details; send appl/resume to Patte Wood, CCRMA/Music Dept, Stanford, CA 94305.; B09; $848-892.

28542-BP (JCC:2462) OFFICE ASST III Answering telephones; filing; making travel arrangements; operating word processor & IBM Sel II to type manuscripts, reports, proposals & class notes; xeroxing offc work as required; mtg deadlines for delivery of class mat'ls to TVI; hand-carrying mat'ls around campus; trips to Reprographics Dept for drafting work; setting up seminars & mtgs; QUALIFICATIONS: typ 65+; excel typing skills; prev offc exp; interact well w/ people; able to work under pressure & meet deadlines; send appl/resume to Mary Cloutier, McCullough 226.; B11; $1246-1310.

25875-PM (JCC:2596) SECY II-SPEC Work as faculty sec for law profs; primary respon for law prof/author engaged in constitutional law & biography, w/ spec interest in political & constitutional developm't & humanities; transcribing tapes of corresp & drafts for articles & books; word processing, xeroxing & answering phones, etc; QUALIFICATIONS: typ 70, excel typing skills (70wpm); transcribe tapes; 1 good spelling; transcribing accuracy; will train on word processor; send appl/resume to Dena Landsman, Rm 1131, Crown Quad, Law School.; B12; $1310-1373.

33326-PM (JCC:2596) SECY II-SPEC Sec'l serv for a faculty member & a group of grad students; typ tech manuscripts res proposals & reports, using a computer text editor; make travel arrangements; answer phone; maintain files; mail reprints; maintain mailing lists & reference lists; QUALFICATIONS: typ 65; good verbal & written commu skills; good English usage & spelling; able to interface effectively w/ faculty, staff, & students; familiarity w/ Univ forms highly desirable; computer text-editing exp or willingness to learn required; send appl/resume to Carol Vonder Linden, 365 Mitchell.; B12; $1310-1373.

32624-LL (JCC:5914) LIC VOC NURSE 8:30-5pm; works under direction of Clinic Chief & Dir of Clinic Nursing; prov nursing support to physicians in clinic; dir patient care duties; restocking of supplies;-cleaning of instruments; admin of medication as ordered by physicians; QUALIFICATIONS: current Calif LVN license; outpatient clinic exp desirable; excel mental & physical health.; B14; $1440-1514.

11743-TC (JCC:6810) SOC SCI RES ASST I Admin questionnaires & psychiatric rating scales to patients on res ward; conducts diagnostic interviews; prep biological samples for assay incl measurement of urine, centrifuging blood samples; asst in prep of res grants; prep data for presentation; perform lib searches, collect res reference articles perform longitudinal assessments, evaluate symtoms fr videotaped observations; participate in patient recruitment, evaluation & selection; QUALIFICATIONS: bkground or exp in use of structured diagnostic interview & in psychiatric rating scales, Hamilton, SCAG; bkground or exp in clinical res w/ psychiatric patients, res methodology, data collection & collation; strong writing skills.; B12; $1310-1373.

11746-TC (JCC:6810) SOC SCI RES ASST I Prep data for computer input & asst w/ computer input/-data entry; perform computer searches perform statistical analyses of clinical data on computer; prep data for presentation; admin questionnaires & psychiatric rating scales to patients on res ward; asst in data collection & mgmt; asst in prep of res grants; perform longitudinal assessments, evaluates symptoms fr videotaped observations; perform lib searches, etc; QUALIFICATIONS: knowl of statistics (parametric & non-parametric); computer exp & familiarity w/ SPSS (or other package for analysis of data), sys for text editing, job submission & retrieval & data mgmt sys; bkground or exp in psychology.; B12; $1310-1373.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Nov. 16, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.





Gregory Wait (above) will conduct the Stanford Chorale in music of Britten, Purcell, and Vaughn-Williams at 8 p.m. Tuesday, Nov. 16, in Memorial Church.

Alan Gampel (left) is soloist in the Rachmanioff Piano Concerto No. 2 when Andor Toth conducts the Stanford Symphony at 8 p.m. Saturday, Nov. 13, in Dinkelspiel Auditorium. Also on the program: Haydn and Stravinsky.

Modern Japanese architecture topic of Watanabe talk

"Transformation of the Western Model?: A Perspective on Modern Japanese Architecture" will be the subject of a slide talk by Hiroshi Watanabe at 7:30 p.m. Tuesday, Nov. 16, in Room 2 of History Corner at Stanford.

His free public talk is cosponsored by the Center for East Asian Studies at Stanford and the Japan Society of Northern California.

Watanabe has worked in Tokyo as an architect and architectural critic since 1971. After studying at Princeton and the University of Tokyo and receiving a master of architecture degree from Yale, Watanabe began his career with the firm of Maki and Associates.

He subsequently served as visiting lecturer at Columbia and Kanto Gakuin University, and as Japan correspondent for *Architecture Plus* and *Progressive Architecture*. His talk will focus on Western influences in Japanese architecture.

For further information, please call the Center for East Asian Studies at Stanford University at 497-3362.



Margaret Fabrizio

Fabrizio presents Italy, Bach, and her own music

"Italy and Bach—Past and Present" is the theme of harpsichordist Margaret Fabrizio's recital at 8 p.m. Friday, Nov. 19, in Annenberg Auditorium at Stanford.

Presented by the Music Department, her concert will be in two sections. The first half will feature Italian music from 1637 to 1970, opening with a recently discovered *Sonata per Cembalo* by Azzolino Bernardino della Ciaja, composed in 1738.

Representing contemporary Italy will be *Domino* by Marcello Panni—composer-in-residence at Mills College and a native of Rome. In this piece Panni leaves much room for improvisation by the performer.

Rounding out the Italian portion of the program will be *Toccata Seconda* by Frescobaldi and four sonatas by Scarlatti.

The second half of Fabrizio's program will include preludes and fugues from Bach's *Well-Tempered Clavier*, which Fabrizio recently performed in its entirety at San Francisco's Palace of the Legion of Honor.

Concluding the concert will be Fabrizio's own composition: *Hands Across the Sea*, which is based on the chord progression and figuration of Bach's first prelude in C Major from the *Well-Tempered Clavier*.

Written this year, it is scored for two tracks of pre-recorded tape, one in meantone tuning and the other in well-tempered tuning; amplified harpsichord in both tunings; and Innermedia projection by Fabrizio—images from three slide projectors superimposed upon each other, giving the effect of a movie.

Tickets are $4 general, $2 for students and senior citizens, available from Tresidder Ticket Office (497-4317) and the door.

Shanghai Conservatory students to perform on Chinese instruments

Five young artists from the Shanghai Conservatory of Music will perform traditional Chinese music at Stanford University at 8 p.m., Friday, Nov. 19, in Room 281 on the second floor of Tresidder Union.

The young women, ranging from age 17 to 22, are touring the U.S. from the People's Republic of China for the first time.

Their performance will include solos and ensembles of Chinese stringed instruments; the guzheng, pipa, erhu, yangqin, and liuqin.

The Shanghai Conservatory of Music, established in 1927, is China's oldest music institute. It trains the best of China's young musicians in both Chinese and Western instruments and was featured in the recent film, "From Mao to Mozart," with Isaac Stern. The conservatory's 400 students include boarders in elementary and high school as well as professional school students.

The musicians to perform at Stanford are Qiu Li-rong, 19, freshman in the Folk Music Department majoring in pipa; Wu Qiang, 17, a middle school junior majoring in liuqin; Yuan Li, 20, a senior in the Folk Music Department majoring in yangqin; Fan Yan-yan, 19, a junior in the Folk Music Department majoring in erhu; and Yao An, 22, a junior in the Folk Music Institute majoring in guzheng.

Their program emphasizes traditional folk tunes, such as the pipa solo, "Spring Snow," the yangqin solo, "Call to War," and the quintet, "Parting at Yangguan."

The November 19 concert, sponsored by the Center for East Asian Studies, is open to the public, free of charge.

Tresidder offers chance to think up art programs

In celebration of its twentieth anniversary, Tresidder Union is offering Stanford community members an opportunity to present art programs in sponsorship with the Union.

The arts have been a major focus of Tresidder programs over the years. In recognition, the union offers financial, technical and promotional support for art programs organized by groups or individuals especially worthy.

Proposals will be judged on suitability to the anniversary theme, uniqueness, creativity, diversity and the ability to complement other planned programs.

They should also support the Tresidder goal of "enhancing the living, learning, and working environment of Stanford by providing a social center for informal interaction as well as programming, and experiences of cultural, recreational, and educational nature."

Interested applicants may pick up forms at the Tresidder information desk. The deadline is Dec. 1; announcements will be made by mid-December. For further questions, call Twentieth Anniversary Coordinator Nanci Howe at 497-4311.

Ng-Quinn to perform in solo recital

David Ng-Quinn, pianist and D.M.A. candidate, will perform at 8 p.m. Saturday, Nov. 20, in Tresidder Lounge at Stanford.

Presented by the Music Department, Ng-Quinn's program will include a Bach toccata, a Beethoven sonata, two Romanian dances by Bartok, three preludes by Debussy, and *Variations on a Theme by Paganini* by Brahms.

Last year Ng-Quinn performed the Brahms *Piano Concerto No. 2* with the Stanford Symphony Orchestra to impressive reviews. "He carried the whole. . .with the aplomb of a veteran seasoned by years of touring," said the *Stanford Daily*. "The final chords sent the audience into cheers of recognition, of thanks, and of praise for this young pianist who shared this wonderful performance with them."

A native of Hong Kong, Ng-Quinn received his B.A. from Cornell and his M.M. from the University of Wisconsin-Madison. At Stanford he studies with Adolph Baller,

Gibbs to speak on jazz to Staffers

Prof. James Gibbs, anthropology, will present an informal lecture-demonstration on the African roots of jazz to the Stanford Staffers at their regular monthly meeting at noon Wednesday, Nov. 10, in the Anthropolgy Museum, Building 110.

Gibbs will use audio tapes to trace African musical forms to the forms of the Caribbean, Brazil, and the Afro-American music which gave birth to jazz.

The meeting is open to the Stanford community.

Thorne to speak on black holes, etc.

The fourth annual Bunyan lecture on cosmology will be presented by Prof. Kip Thorne at 8 p.m. Tuesday, Nov. 16, in Room 100 of Physics Lecture Hall at Stanford.

His topic will be "Black holes, White Holes, Wormholes, and Tunnels through Hyperspace."

Thorne is the William R. Kenan Jr. professor of theoretical physics at the California Institute of Technology and a member of the National Academy of Science. His research has had a profound impact on many areas of theoretical astrophysics and gravitation, including relativistic stars, gravitational radiation, and black holes. He is one of the authors of the now classic tome, *Gravitation*.

The Bunyan lecture will be at a level appropriate to a general audience.

Thorne will present a more technical lecture at the Applied Physics and Physics Colloquium at 4:15 p.m. Wednesday, Nov. 17, in Room 101, Physics Lecture Hall. His topic will be "Paradigm Changes in Black Hole Physics."

The Guarneri's here again—concerts Sunday, Wednesday

The world masters of chamber music, the Guarneri String Quartet will be presented by the Lively Arts at Stanford at 2:30 p.m. Sunday, Nov. 14 and at 8 p.m. Wednesday, Nov. 17. Both concerts are in Dinkelspiel Auditorium.

The program for the Sunday concert will include: Haydn's "Quartet in G minor, Op. 74, No. 3"; ("The Rider"); Brahms' "Quartet in B-flat Major, Op. 67, No. 3; and Debussy's "Quartet in G minor, Op. 10."

The Wednesday evening concert will include: Mozart's "Quartet in D Major, K. 499"; Barber's "Quartet, Op. 11"; and Dvorak's "Quartet in A flat Major, Op. 105."

The Guarneri String quartet is considered to be among the preeminent string quartets in the world today. Arnold Steinhardt and John Dalley, violins; Michael Tree, viola; and David Soyer, cello, are the original members of the Guarneri which was founded in 1964 at Vermont's Marlboro Music Festival.

The Quartet tours to cities and colleges throughout the United States and Canada, and to Europe, New Zealand, Australia, Japan, as well as to major international music festivals. They have been featured on television and radio specials, documentaries and educational presentations both in the United States and abroad. They are also the subject of a book by Helen Ruttencutter entitled *Quartet*.

Last season Mayor Koch presented them with the New York City Seal of Recognition, an honor awarded for the first time.

Three of the four players are presently faculty members of the Curtis Institute of Music in Philadelphia and all members of the Quartet have been appointed as Professors of Music for the 1982-83 academic year at the University of Maryland.

The Guarneri's recordings, several of which have won international awards, are exclusively on RCA Red Seal. Among their recordings are collaborations with such artists as Arthur Rubinstein, Pinchas Zukerman, and Boris Kroyt and Mischa Schneider of the Budapest Quartet.

For ticket information call Tresidder Ticket Office, (415) 497-4317, BASS and other Bay Area agencies.

Falcon to speak at I-Center Tuesday

Prof. Walter Falcon, director of Stanford's Food Research Institute, will speak at the next Tuesday Luncheon-Lecture sponsored by the International Center beginning at noon, November 16, at the I-Center.

Falcon, who came to Stanford in 1972 as director for the Food Research Institute, will speak on the issue of "World Hunger" and its ramifications for world peace.

Previously, Falcon served as a member of the President's Commission on World Hunger from 1978 to 1980. He currently sits on the board of trustees for CIMMYT (International Maize and Wheat Research Center in Mexico) and the Agricultural Development Council.

Falcon has written numerous articles on the role of the United States in solving world problems. He also coauthored two forthcoming books, *Casavah in Java* and *Food Policy Analysis*.

Falcon's lecture is part of the I-Center's continuing luncheon series. This quarter lecture topics deal with the origins of problems which plague international relations. Tickets for lunch cost $2.50, but brown baggers are invited at no charge. For more information, phone the I-Center at 497-1831.

Quantum gravity topic of lectures

Prof. John Archibald Wheeler of the University of Texas-Austin will present three lectures on the ramifications of quantum gravity. They are as follows:

4:15 p.m. Monday, Nov. 15: "This Incredible Quantum Business" in the SLAC auditorium;

1 p.m. Wednesday, Nov. 17: "Beyond the End of Time" in the SLAC auditorium;

4:15 p.m. Monday, Nov. 22: "The Boundary of a Boundary as the Foundation of Physical Law" in Room 101, Physics Lecture Hall.

The lectures are open to all interested people.

Rebecca Northern speaks on orchids

Rebecca T. Northen, will give an illustrated lecture on orchids and their Illustrators at 3 p.m. Sunday, Nov. 14, in Annenberg Auditorium at Stanford.

A reception will follow in the Lurie Rotunda of Green Library, marking the opening of an exhibit of books from the collections of William K. Glikbarg and the Stanford University Libraries entitled, *The Orchid Observed: Five Centuries of Botanical Illustration*.

An exhibit catalogue and poster will be available for purchase. The exhibit will continue through January 11.

Films scheduled on Rome, Stockholm

The International Center will present another Cities of the World segment of its Other Cultures film series at 7:30 p.m. Thursday, Nov. 18 at the Center.

The first film, "Anthony Burgess' Rome" explores the dual nature of Rome, where Catholicism and Roman paganism blend to create a unique harmony. International literary figure Anthony Burgess introduces the viewer to Rome and its many famous pieces of art.

Swedish actress-writer-director Mai Zetterling narrates the second film. "Mai Zetterling's Stockholm" explores the capital of one of the most affluent countries in the world and features conversations with such personalities as Queen Christiana and August Strindberg.

The Other Cultures film series is a weekly program, sponsored by the I-Center, designed to inform as well as to entertain. Admission is free, however a 75 cent donation is requested at the door. For further information, phone 497-1831.



What terrible fortune does Buttercup see in the palm of Captain Corcoran? She foretells a great change in his life, and Buttercup herself holds the secret that will bring happiness to the lovers on the H.M.S. Pinafore.

Savoyard's new staging of *Pinafore* starts Friday for six performances

The Stanford Savoyards will present Gilbert and Sullivan's *H.M.S. Pinafore or the Lass that Loved a Sailor* Friday through Sunday, Nov. 12-14 and 19-21, in Dinkelspiel Auditorium. All performances are at 8 p.m. except the 2 p.m. matinee on Sunday, Nov. 13.

Pinafore, probably the best known and most loved of all the G&S operettas, is set in England on the deck of the Pinafore. It concerns the love affair of Josephine, daughter of Captain Corcoran, and Ralph, a common sailor aboard the ship. Their happiness appears doomed, however, due to the difference in their social class and the fact that Josephine has been promised to Sir Joseph Porter, K.C.B., the patronizing and stuffy First Lord of the Admiralty.

Ralph and Josephine plot an elopement but their plans are revealed to the Captain by the evil Dick Deadeye. Ralph is soon in irons and everyone despairs. It is up to Little Buttercup (who loves the Captain, by the way) to save the day. She does so by revealing a secret she has kept for many years.

Their differences swept away, Ralph and Josephine are reunited and the operetta ends happily in true G&S fashion.

Stage director for *Pinafore* is Tony Orazem, who has directed two other Savoyard shows and productions of the Menlo Players. Music director is David Friburg; assistant director and chorus master is Chris Dant; and choreographer is Pat Terman.

Tickets at $5 general admission or $3 for students are available at Tresidder Ticket Office or at the door.

Harvard professor speaks on racism

Harvard Prof. Martin L. Kilson will speak on "The Crisis of the Black Intellectuals: Dilemmas of Racism and Racist Society" at 4 p.m. Tuesday, Nov. 16, in the History Corner, Room 307 at Stanford.

Kilson is one of the most distinguished Americans writing on Afro-America and Africa. He is known for his provocative style, and his willingness to tackle difficult, controversial issues.

He has written extensively on African politics and on Afro-American politics, black intellectuals, black education in America, and notions of ethnicity among America's minority groups.

Each year, the Afro-American studies program at Stanford organizes its efforts around a particular theme. Last year, it was black popular culture. This year, the program will sponsor films, speakers, and panels about Afro-Americans who advanced ideas about the nature of Afro-American and American society—political thinkers, artists, writers, intellectuals.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Nov. 10, to cover the week of Mon., Nov. 22, through Sun., Nov. 28.

LATE ANNOUNCEMENTS

Wed., Nov. 10. Art Dept. Lecture Series: "Artist-Lithographer Bolton Brown" by Clinton Adams, director of the Tamarind Institute at the Univ. of New Mexico. (Bolton Brown was head of the Stanford Art Dept. in the 1890s) 8:15 p.m. Annenberg Aud. Public cordially invited.

Sun., Nov. 14. Stanford Libraries Associates Lecture: "Orchids and Their Illustrators" by author Rebecca T. Northen. 3 p.m. Annenberg Aud. Public cordially invited.

MONDAY, NOVEMBER 15

Biological Sciences Dept. Seminar: "Genomic Reorganization During Macronuclear Development in Coliates" with Dr. Elizabeth Blackburn, UC-Berkeley. 4 p.m. Room T175, Herrin Labs. Open to the public.

Energy Policy Seminar: "Business Planning in an Uncertain Oil Market" with Thomas Neville, vice president, corporate development, Natomas Company. 4:15 p.m. Skilling Aud.

Numerical Analysis Seminar: "Tracking a Few Exterior Eigenvalues of a Growing Tridiagonal Matrix" with Beresford Parlett, UC-Berkeley. 4:15 p.m. Math 380C.

Stanford Film Society: "Yojimbo." 7 p.m. Kresge Aud. $1.50.

Speakers Bureau/Committee for Justice in the Middle East: Hisham Milhem, Lebanese journalist, will speak about the invasion of Lebanon. 7:30 p.m. CERAS, Room 112. Public cordially invited.

TUESDAY, NOVEMBER 16

Stanford Museum Art Tours: "Provenance of Art: Part II." A lunch tour beginning at 12:15 p.m. Stanford Museum. Open to all. (Tour repeated tomorrow, same details.)

Fluid Mechanics Seminar: "An Exact Theory of Gravity Waves in Two Dimensions and its Implications for Ship Waves" with Dr. Marshall Tulin, UC-Santa Barbara. 4:15 p.m. Skilling Aud.

Communications Design Seminar: "An Advanced Digital Telephone Switch" with Amr Badawi, S.U. 4:15 p.m. McCullough Bldg., Room 128.

CEAS Slide-Talk: "Transformation of the Western Model?: A Perspective on Modern Japanese Architecture" by Hiroshi Watanabe, architectural critic. 7:30 p.m. History Corner, Room 2 (lower level). Public invited.

1982 Bunyon Lecture in Physics: "Black Holes, White Holes, Wormholes and Tunnels Through Space" by Prof. Kip Thorne, Caltech. 8 p.m. Physics Lecture Hall, Room 100. Public cordially invited.

Music Dept. Concert: Stanford Chorale, Gregory Wait, conductor. Britten—Cantata Misericordium; Purcell—Funeral Sentences; Vaughan Williams—In Windsor Forest. 8 p.m. Memorial Church. $4/$2.

WEDNESDAY, NOVEMBER 17

Ecumenical Ministries Wednesday Lunch Discussion: "The Reality of Local" by Nevida Butler. Noon. Casa Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata.

Electrical Engineering/Center for Materials Research Solid State Seminar: "Defects in Amorphous Silicon" with Prof. Dr. Josef Stuke, Univ. of Marburg, West Germany. 3:15 p.m. Peterson 550A.

Physics Colloquium: "Paradigm Changes in Black Hole Physics" with Prof. Kip Thorne, Caltech. 4:15 p.m. Physics Lecture Hall, Room 101.

Electronics in Medicine Seminar: "Medical Ultrasound Imaging: An Overview and Prospects for the Future" with Dr. James Havlice, Diasonics, Inc. 4:15 p.m. McCullough 134.

EE380 Computer Systems Laboratory Seminar: "Network Architecture for Personal Computers" with Skip Stritter, Nestar Inc. 4:15 p.m. Terman Aud.

Stanford Hillel Service: Celebrating Kiddish L'vanah (the Sanctification of the New Moon) and Rosh Chodesh Kislev (the new month of Kislev), the service followed by a panel discussion on "The Changing Role of Jewish Women." 7:30 p.m. Call Hillel, 497-1602, for location.

Speakers Bureau Event: NASA representatives and Columbia Space Shuttle's Dick Truly will speak on their experiences with the shuttle and NASA's long term program to inhabit space. 8 p.m. Kresge Aud. Public invited.

The Lively Arts at Stanford: The Guarneri String Quartet. Mozart: Quartet in D Major, K. 499; Barber: Quartet, Op. 11; Dvorak: Quartet in A-flat Major, Op. 105. 8 p.m. Dinkelspiel Aud. $11.50, $10.50; students $3 off these prices.

Casa Italiana Lecture: "American Literature in Italy: A Retrospective" by Prof. Sergio Perosa, chairman, English Dept., Univ. of Venice. 5 p.m. Casa Italiana, 562 Mayfield Avenue.

Art Dept. Lecture Series: "In This Mirror: A New Form of 'Momento Mori' in 15th Century Netherlandish Art" by Prof. James Marrow, UC-Berkeley. 8:15 p.m. Annenberg Aud.

Lively Arts at Stanford Open Rehearsal: By the Guarneri String Quartet. 4:30-6 p.m. Dinkelspiel Aud. Free and open to the public.

THURSDAY, NOVEMBER 18

Stanford Geothermal Program Seminar: "Heat Extraction Modeling" with Stephen T. Lam, S.U. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

CEAS Colloquium: "The United Front in Communist Base Area Construction" with Dr. David Paulson, post-doctoral fellow from Harvard Univ. 4:15 p.m. L. H. Hoover Bldg., Room 238.

Western European Studies Lecture: "The Future of Detente from a British Perspective" by Sir Michael Palliser, former permanent secretary of the British Foreign Office. 4:15 p.m. History Corner, Room 205. Public cordially invited.

Japan Society/Committee for Art Film Series: "Seven Samurai" dir. by Akira Kurosawa. A village hires a band of samurai to save them from marauding bandits. 7:30 p.m. Annenberg Aud. $4 general, $3 students.

Condensed Matter Physics Seminar: "Why Are Actinides Interesting?" with G. R. Stewart, Los Alamos National Laboratory. 4:15 p.m. Applied Physics 200.

I-Center Other Cultures Film Series: "Anthony Burgess' Rome" introduced by the international literary figure; and "Mai Zetterling's Stockholm"—the actress-writer-director presents the capital of Sweden. 7:30 p.m. I-Center. 75 cent admission requested at the door.

Music Dept. Concert: Scott Whitaker, tenor, with Dina Klemm, piano. Love and Other Things. A recital of 20th Century Art Songs. 8 p.m. Tresidder Lounge. Free.

STARTS Open Mike: Sign up in STARTS Office. 9 p.m. Coffee House. Free.

FRIDAY, NOVEMBER 19

CEAS Chinese Archaeology Slide-Talk: "Dating of the Early Dunhuang Caves" by Prof. Su Bai, Beijing Univ. 3 p.m. Cummings Art Bldg., Room 2. Public invited.

Materials Science and Engineering Colloquium: "Materials Performance in Nuclear PWR Steam Generators" with J. P. N. Paine, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

CEAS Concert: Chinese Folk Music by advanced students from the Shanghai Music Conservatory. 8 p.m. Tresidder Union, Room 281. Free and open to the public.

STARTS Great Directors Film Series: "Moses and Aaron" dir. by Jean Marie Straub. The resonant confrontation of Moses and his brother. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

Stanford Savoyards Production: Gilbert & Sullivan's "H.M.S. Pinafore, or the Lass that Loved a Sailor." 8 p.m. Dinkelspiel Aud. $5 general, $3 students. (Performance repeated tomorrow and Sunday, same details.)

Music Dept. Concert: Margaret Fabrizio, harpsichord. 8 p.m. Annenberg Aud. $4/$2.

Archaeological Institute of America Lecture: "Minturnae" by Brother S. Dominic Ruegg, F.S.C. 8:15 p.m. Room 370 (opp. the Physics Tank). Public invited.

STARTS Live Entertainment: Items to be announced. 9 p.m. Coffee House. Free.

SATURDAY, NOVEMBER 20

Perspectives on the Israeli/Palestinian Conflict: A presentation by an Israeli and a Palestinian. Edward Said, Columbia Univ., will speak on "The Question of Palestine Now" and David Amit, Hebrew Univ. of Jerusalem, speaks on "Lessons of Horror and Perspectives of Hope." 2 p.m. Annenberg Aud. Public cordially invited.

The Stanford Savoyards Production: See details for Fri., Nov. 19.

Music Dept. Concert: David Ng-Quinn, piano. Works by Bach, Beethoven, Debussy, Bartok, Brahms. 8 p.m. Tresidder Lounge. Free.

STARTS Live Entertainment: Program to be announced. 9 p.m. Coffee House. Free.

SUNDAY, NOVEMBER 21

University Public Worship: Student Worship Service, 8:30 a.m.; Wendy Smith, assoc. dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.; Evening Communion in the Memorial Church Round Room, 6 p.m.

Libraries Associates Lecture: "Lady Mary Rides Again: The Significance of Lady Mary Wortley Montagu Then and Now" by Dr. Robert Halsband, prof. emeritus at the Univ. of Illinois. 3 p.m. Annenberg Aud. Public cordially invited.

ASSU Sunday Flicks: "Everything You Always Wanted to Know About Sex." But were afraid to ask. 7 & 9:30 p.m. Memorial Aud. $1.50.

Stanford Savoyards Production: Final performance of "H.M.S. Pinafore." See details for Fri., Nov. 19.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Ansel Adams. Books, letters, photographs. Exhibit coordinated by the Stanford Museum and the Dept. of Special Collections. Green Library, Special Collections Gallery, second floor, West Wing. Through November 24.

The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. November 15-January 11.

Maps Are For Use. An assortment of maps and related cartographic reference works available from the Central Map Collection. Meyer Library Lobby. Through November 19.

Acrylic on Canvas Paintings by Win Belton. Bechtel International Center. Through November.

Views Through a Natural Lens and **California Vignettes.** Color photographs by Damien Kuffler. Tresidder Coffee House and second floor gallery. Month of November.

Photographs by Marianne Skogh. Gold Lounge, both entries, and other locations. Stanford Faculty Club.

VISITORS FROM OTHER COUNTRIES

Nov. 15. Mr. Fernando Lopez Imizcoz, producer for the government TV station. Argentina.
Study group in biotechnology. City of London Polytechnic, England.
Dr. Joseph V. Mtangsi, chairman of food research, Yaounde University, the Cameroons.
Prof. Per Schiolddorg, psychologist, Univ. of Oslo.

Nov. 18. Group of 12 vocational educationists, Thailand.

For further information, please call Maria Bun, International Visitors Office, 497-1984.

Calendar to go on-line; but don't forget the forms

The Calendar of Events, like so many other things on campus, will soon be on-line and available to anyone who has a computer terminal.

Events for the calendar have always been submitted in writing, but now they must be submitted on forms which present the information in the proper order for feeding into the computer.

Forms will be sent to major presenters as soon as they are delivered from the printer. Others who want copies in order to list events in the Calendar should call Events and Services, ext. 7-2551. When the Calendar finally is on-line, *Campus Report* will provide directions on calling it up.

CAMPUS REPORT

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Hastorf sees $10 million, three-year crunch

Stanford faces a three-year $10 million belt-tightening effort, University officers told the Faculty Senate Thursday, Nov. 11.

Caused mainly by slower than expected growth in research volume, the crunch may require operating budget cuts totaling about five percent in this period, Provost Albert Hastorf said.

The University still hopes to achieve a balanced budget this year through voluntary holdbacks and cuts in facilities reserves, he added. But it could sustain a $1 million operating budget deficit in 1983-84.

The outlook for research funding is particularly uncertain. Cutbacks in energy and social science research, changes in indirect cost recovery rates, and questions about continued commitment to the principle of full recovery for research costs make present estimates "very tentative," Hastorf emphasized.

Besides the "vagaries" of research, changes in federal and state student aid programs, inflation, and "our own initiatives" to improve education add to the budget crunch, Hastorf said.

Provosts at other universities report similar problems "last year for some, this year for others," Hastorf said. "Ours will continue."

Last year, Northwestern froze faculty and staff salaries, "a bold move, and one I'm desperately anxious to avoid," Hastorf said.

MIT has announced plans for three-year cuts amounting to $10 million in its operating budget. Indications are these

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Humanities Center big benefit to resident fellows, Corn says

The most valuable facet of the new Stanford Humanities Center, according to Wanda Corn, associate professor of art, is the relationship of the Center's resident fellows.

"Our collegiality makes time mean something," she says.

For the 14 humanities fellows—six Stanford faculty members, five Stanford graduate students, and three faculty from other universities—their year here offers that great intangible benefit, time to do research and, in many cases, work toward completion of a book.

But the fellowship is a firm two-way street: each fellow must offer something specific to Stanford. Some teach a course, others direct a seminar, still others will take leadership roles in conferences.

The entire program, now in its first year, has just received a strong vote of confidence from the Mellon Foundation. It has made a $250,000 grant, available over five years, to bring to the Stanford Humanities Center two or three non-tenured faculty from universities not offering substantial doctoral work in their fields.

This grant, according to Prof. Ian Watt, the Center's Director, must be matched by other gifts. Efforts toward this goal are now in progress. To date, Watt says, the Center's support totals well over one million dollars. It includes a large gift from Mrs. Marta Sutton Weeks, part of which goes into endowment and part to support faculty Fellows; $500,000 from the Pew Foundation, spread over three years; some other donations; and a small amount of start-up funds from Stanford.

"The majority of our support comes

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Kick the two culture habit, Adams urges

Americans should try to kick the "two culture" habit spawned by C.P. Snow, Prof. James Adams, director of the Stanford values, technologiy and society program told engineering alumni Saturday, Nov. 13.

Among students today, he observed, "the stereotyping is much as it was when you went to school." Students in the physical sciences, engineering, and preprofessional programs are often regarded as "techs," while those in the humanities and social sciences are considered "fuzzies."

"The 'techs' are considered by the 'fuzzies' to be nerds, undoubtedly compulsive in everything except dress and social comportment, incapable of interesting thoughts, and probably preferring to talk with each other about problem sets," Adams said.

"The 'techs," in turn, consider the 'fuzzies' as being only marginal at reaching logical conclusions, probably unable to keep their bicycles in operation, and completely unable to support themselves after graduation."

While picking one of these two cultures enables people to specialize and enjoy the comforts of their own "tribe," the personal and social costs are "staggering," Adams said.

"My very soul is scarred by my undergraduate days at Caltech, because at that time most women belonged to the other culture. It's no fun to be 18 years old and forced to prove that you are *human* before you can even get around to proving you are *desirable*. . . .

"Even more critically, we pay a personal cost in our intellectual life and our problem solving ability. The highest forms of intellectual stimulation require the ability to generalize over concepts that range across both cultures.

"Effective communication requires elements from both cultures, as does successful education. Creativity and the ability to respond to change require the ability to be cross-cultural, to deviate from the usual problem solving patterns."

Happily, both in his own experience and that of engineers in his audience, he

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Renowned Mexican writer Juan Rulfo spent the first week of November at Stanford, participating in seminars, holding office hours for faculty and students, and giving noon and evening talks. Above, Prof. Fernando Alegria (left), who appeared with Rulfo in a videotaped conversation for the Stanford archives, escorts him on a campus walk. Rulfo, whose *Pedro Paramo* is considered by many to be the most significant Mexican novel ever written, also spoke at the University of Santa Clara and attended an autograph party at Bookworks in San Francisco.

Ingle receives Earth Sciences teaching award

Prof. James C. Ingle, Jr., new chairman of the Geology Department, has been honored by Dean Allan Cox as the outstanding teacher of 1982 in the Stanford School of Earth Sciences. This teaching criterion, which included a $2,000 award, is the first ever presented by the School.

Cox praised Ingle as "a teacher whose enthusiasm for oceanography and micropaleontology is infectious.

"We run a serious risk every year that the 280 students who take his introductory courses will all become micropaleontologists and saturate the world job market. Jim's lectures are full of substance, wit, and style. I never pass up an opportunity to hear him speak and the students rarely do either—which is the ultimate accolade of a lecturer."

Prof. George Thompson, who chaired both the Geophysics and Geology Departments last year, cited Ingle as "a standout candidate" in a department known for excellent teaching.

Thompson, now chairman of geophysics, also called attention to favorable comments from the senior survey. One student said he had enrolled in the Oceans course as "a painless way to fulfill my math/science requirement" but became engrossed in the subject because of Ingle's enthusiastic presentation. This student added that Ingle "is the standard by which I measure the teaching ability of other professors."



James Ingle

All of the 139 students who responded to the course evaluations regarding the Oceans class for 1981 credited Ingle with above-average knowledge of subject matter, and 121 of them gave him the highest possible rating on this criterion.

As a researcher, Ingle studies micropaleontology, emphasizing application to the history of Cenozoic and Mesozoic marine sequences around the North Pacific margin, the paleoceanography of the Pacific, marine correlations, and biostratigraphy. His courses include Introduction to Micropaleontology, Advanced Micropaleontology, and Microfossils in Exploration Geology.

Even before he received his Ph.D. from University of Southern California in 1966, Ingle was singled out for awards in his field. He received the W. A. Tarr Award of Sigma Gamma Epsilon honorary fraternity in 1958 and was one of five nominees for the Newcomb Cleveland Prize of the American Association for the Advancement of Science in 1962. He was a fellow of the Geological Society of America in 1973 and of the California Academy of Sciences in 1975.

Ingle came to Stanford as an associate professor of geology in 1968 after spending the previous year as visiting research scholar at Tohoku University in Japan. He became professor of geology and associate chairman of the department in 1981 and chairman of the department in 1982. In 1981 Ingle was invited to speak at the NATO Advanced Study Institute on the Geological Record of Coastal Upwelling, Portugal.

Last year he chaired the U.S. Working Group, International Geological Correlation Project 114 meeting of the Pacific Neogene Correlations in Osaka, Japan, and was coorganizer and leader of an international field conference on the Neogene/Quarternary boundary in the southwestern U.S.

Peter Coutts Hill condominiums

Stanford University is accepting applications now for rental of the new Peter Coutts Hill Condominiums.

Rental units will be available in December, 1982. Rental agreements, are month-to-month.

Preference in rentals will be given to members of the Stanford community (faculty, staff, students, etc.) and its affiliates. Families with children are welcome.

Floor plans of the various unit types and rental applications are available from the Peter Coutts Hills rental office, 138 Peter Coutts Circle, Stanford, Calif. 94305; (415) 493-1471.

The unfurnished average rents for the various types are as follows:

A-1	(2br/2ba)	$930
A-2	(2br/2ba/study)	$1,010
A-3	(2br/2ba/study)	$930 (handicapped unit)
B	(2br/2ba/study)	$985
C-1	(3br/3ba)	$1,095
C-2	(3br/3ba/study)	$1,200
D	(3br/3½ba/study)	$1,260

These are average monthly rents. The actual rent on any particular unit may vary slightly according to unit location. Additional rent of $50 per month will be charged for each unrelated adult in excess of one per unit.

People

Sidney Hook, senior research fellow at Stanford's Hoover Institution, has received a letter from President Reagan calling him "an intellectual mainspring of our country."

Professor emeritus of philosophy at New York University, Hook was described by the President as America's "global philosopher of freedom through more than half a century's continuous struggle against the totalitarian ideologies of left and right.

"You were right in identifying the danger of Soviet totalitarianism immediately after [World War II]. And you have fought throughout your career for the right of reasoned discussion in the university setting on all issues," Reagan said.

Hook, a fervent democrat and anti-communist, is well known for his conservative views on defense and foreign policy. He has published more than 1,000 articles, reviews, essays, and books, including *From Hegel to Marx*, and *Reason, Social Myths and Democracy*.

Reagan congratulated Hook on his upcoming 80th birthday.

Sigma Chi award supports Stanford

The Stanford chapter of Sigma Chi has been selected by the national Sigma Chi Foundation as a winner of the Peterson Significant Chapter Award, the highest award given to an undergraduate chapter.

This award is presented annually to chapters which achieve distinction in 10 major fields of fraternity operation.

Having received a large plaque and check, the Stanford Sigs will present the check to Stanford President Donald Kennedy for either scholarship counseling or the purchase of one bollard.

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The Van Dykes marry science and art in a remarkable book

BY DONALD STOKES

Milton Van Dyke and his wife, Sylvia, had their world turned upside down within the space of 12 minutes.

On Nov. 15, 1967, they became, to their complete astonishment, the parents of identical male triplets.

Today, 15 years later, they have produced another remarkable creation.

Prof. Van Dyke, one of the pioneers of space missile technology, and his wife have published a book that may rank as a landmark in the marriage of science and art.

The book is *An Album of Fluid Motion* (Parabolic Press, P.O. Box 3032, Stanford, Calif. 94305; 176 pp., $20). It captures, in photos of remarkable beauty, the wonders of fluid flow—the study of the motions of liquids and gases past bodies.

The Parabolic Press is actually the Van Dyke's dining table. It was here that the book was laid out and assembled. "We even gave up that table during the Christmas season and used other odd tables, but our friends understood," says Sylvia Van Dyke.

Van Dyke, a striking figure with his grizzled crew cut and goatee beard, told a campus interviewer the story of how the idea for the book began. "It came to me 24 years ago, when I was teaching at the University of Paris," he said. "While browsing through the books on the Left Bank I came across the beautiful *Atlas de Phenomenes Optiques*.

"As an engineer absorbed in fluid mechanics I said to myself, "Why don't we have something like this for fluid motion?"

Van Dyke often thought about the idea as time went by, and early in 1980 he began to work seriously on the project. He set out to gather photographs from all over the world, and from a long way back in time, in order to form a collection of visual representations of fluid mechanics.

By corresponding with colleagues and looking through journals he located outstanding photographs taken by scientists throughout the world during the last century. He wrote to each one or to his estate, explaining the project and inviting cooperation.

The response was gratifying; as months went by he slowly accumulated hundreds of photos that were both eye-catching and useful to the study of fluid motion.

The tedious work of securing and assembling the photographs took Van Dyke and his wife more than two years. When they had collated most of the material, their inquiries revealed that if the album were to be published commercially the retail price of each volume would be prohibitively high for students, whom the Van Dykes visualized as finding the work most useful.

"Sylvia and I decided to publish it ourselves," said Van Dyke.

They badly underestimated the time and labor required to prepare final copy for the printer. Evening after evening they painstakingly considered which photos to use, how to display them, how to caption them vividly and accurately.

Each of the nearly five hundred photos chosen, with draft text to accompany it, was mailed back to the contributor for approval. This meant correspondence all over the world.

In May 1982 came the day that Van Dyke had first dreamed of 24 years before.

The Van Dykes had in their hands first copies of the 176-page book, with its glossy photos and carefully researched text.

The response from the professional world was enthusiastic. *Scientific American*, in its issue of October, 1982, devoted a whole page of unstinted praise to the book and ended by saying "This collection. . . will enduringly reward many owners. What technical library can be without it?"

The frontispiece adds the dimension of history. It is a photograph made by Ernst Mach (whose name is used as a measurement of high-speed flight) in Prague in 1888. It shows close up a brass bullet in supersonic flight. It was among the first of such pictures ever made, and shows the bow shock-wave.

The scientific purpose of the album is marked by the various sections, each of which illustrates a particular branch of fluid mechanics, from "creeping" to "supersonic" flow with other types such as "laminar," "natural convection" and "vortices" on the way.

A layperson, however, relishes the book for the sheer beauty of its images. Many of the photos capture esoteric echoes of ballet or music or abstract art. The final photo, which shows the flow effect of a disturbed rocket engine, could command a place in any exhibition of modern art.

Each photo combines beauty with a scientific truth, frozen in a millisecond of time. Sometimes the truth is one that can be revealed only in a photo. One example is the shot of a smoke-ring, which proves that the vortex ring is not a single closed "doughnut" as smokers may suppose; rather within it there is what Van Dyke would call a toroidal spiral, the outer sheath curling in on itself countless times.

The story of how that photo was obtained typifies the efforts that went into the creation of the book. "A student of mine had seen it in a paper published 20 years ago in a Canadian journal," said Van Dyke. "It turned out that the senior author was dead. But the student who was his coauthor, and now holds his chair, had one yellowed print that he was willing to lend us. And as you see, it is a masterpiece."

Van Dyke hopes to publish an augmented second edition of the book and once again he is inviting colleagues all over the world to send in suitable photographs.

Van Dyke was asked if he could put into layman's language what form of research he was engaged in.

"In this branch of engineering we are concerned with approximations," he said. "We assume that something is small, that the speed is slow, or the thickness of the plane's wing is not very great, and we usually take the first approximation.

"In my Ph.D. thesis I tried to improve on that by doing a second approximation. If one has a number of approximations one can turn them over to the computer to solve the routine arithmetic, which in a few minutes gives as many as twenty to a hundred or more approximations.

"A student of mine who made quite a name for himself in water waves did the 117th approximation.

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Sybil and I decided to publish (the album) ourselves. We badly underestimated the time and labor required to prepare final copy for the printer.

—Milton Van Dyke





To a fluid motion engineer, this is a Karman vortex street. To a layman, it is one of nature's beauties.

Lori Williams links bacteria fossils to hidden oil fields

A postdoctoral geologist at Stanford has been finding a "surprising correlation" between the fossil remains of a certain type of bacteria and the location of hidden oil fields.

Lori Williams is currently involved in one of three research teams exploring the terrain of California's Central Valley. Collectively called the San Joaquin Basin Project, the graduate field study program is headed by Steve Graham, associate professor of petroleum geology and is sponsored by 13 major American oil companies.

Williams has been examining rock types of Central Valley oil reservoirs in the Monterey Formation, a geological name first coined for a group of white-colored rocks which outcrop on the coast near Monterey. She has isolated the fossil remnants of a type of bacteria that appears to have contributed to the source of much of the oil that is being pumped out of oil wells in California every day.

Oil is generated deep beneath the earth's surface by the heating and breaking down of organic material (the remains of dead plants and animals) which has become trapped in certain layers of the earth's crust over many millions of years.

"Geologists might one day be able to use Lori's analysis of this bacteria and its distribution to better predict where companies should be drilling for oil," said Graham, who works closely with Williams as her adviser.



Bacterium associated with oil fields.

Bacteria as fossils

The bacteria she has found as fossils in the Central Valley rocks live in modern deep-sea sediments made up of the skeletons of billions of microscopic diatoms, a one-celled species of green algae.

"It's basically a recycling process," said Graham. These bacteria colonize and live off the remains of the diatoms and then, with time, decay into crude oil. Only the oil and the nonorganic diatom skeletons remain.

Displaying an array of beautiful geometric patterns, these silicate skeletons reveal the architectural complexity of nature. Intertwined throughout these fossil structures are remains of the bacteria that Williams believes to be a fundamental substance from which much of the oil in California is created.

Once the bacteria has been slowly transformed into oil over time, said Williams, it is hard to get the oil pumped out through the pores of these skeletal diatoms.

In answer to this problem, Graham and Williams have been involved in studies with Bill Brigham, Roz Fussihi, and Sidgi Abu-Khassim of the Petroleum Engineering Department, in which the rock reservoirs containing the thick tarry oil were heated to higher temperatures so that the oil became less viscous and flowed more easily through the rock pores. In petroleum geology, such a technique is called a "secondary recovery method."

"By chemical analysis, we're trying to 'fingerprint' this bacteria," said Graham, who indicated that some living specimen of the same bacteria have recently been dredged from deep waters off the coast of Santa Barbara.

When bacteria die and are buried in an aquatic environment that has a low concentration of oxygen (like the ocean bottom off the Santa Barbara coast), they become an excellent medium for the slow process of conversion into oil to take place. In such an environment, the water is usually so deficient in dissolved oxygen that few living things besides bacteria can survive in it.

Between five and ten million years ago, much of the San Joaquin Valley was covered by 2,000 feet of sea water. "The possibility of greater quantities of this type of bacteria occurring throughout the Central Valley area is very good, said Graham. Currently, several billion barrels of oil are known to exist in the San Joaquin basin.

"There's bound to be more," said Graham, "but probably not a startling amount because it's not a virgin territory; oil companies have been out there for a long time."

Graham asserts that this project does not attempt to be a consulting service to his oil company sponsors, but "we may be helping them out indirectly by providing some scientific data on why the oil is there."

Company sponsors

The 13 oil companies which are sponsoring Graham's project are: Chevron, Getty Oil, Occidental Petroleum, Superior Oil, Tenneco, Texaco, Gulf Oil, Marathon, Amoco, Union, Shell, Conoco, and Atlantic-Richfield.

Exxon removed its financial support this year, but its space was filled by Conoco. A few other companies may join the list soon because of their interest in a field trip Graham and his students led for the pacific section of the Society of Economic Paleontologists and Mineralogists this past summer.

Fellowship support

The money from firms goes to fellowships for graduate students, and also supports such research costs as equipment purchases, collection of a variety of analytical data, and field trips.

Williams coordinates the Monterey Formation study with the aid of three graduate students: Michael Kruge, Linda Weber, and Joyce Clark. In addition, Graham also oversees two other lines of research within the San Joaquin Basin Project.

Five masters students are currently involved in a geological study of a group of sedimentary rocks in the basin called the Temblor Formation. Scott Cooley, Matt Bate, John Kuespert, Phil Estes, and Happy Harun are studying the history of deposition of sandstones which crop out in the mountain areas on the western side of the San Joaquin valley.

Over many millions of years, the San Andreas fault has dramatically altered the topography of the mountainous areas that these students are studying.

Specifically, Bate works on rock outcrops in the vicinity of the city of Coalinga. Kuespert works on the marine deposits and nonmarine river channel deposits that underlie the nearby Kettleman Hills, just west of Interstate 5.

The third aspect of research in Graham's project is developed by Jim Ingle, chairman of the Department of Geology, and his Ph.D. student Bob Milam.

Their project focuses on an earlier period in the San Joaquin basin's history, prior to the time when continental plate collisions caused the birth of San Andreas fault system. Their study may shed some light on the processes that led to the widespread extinction of many groups of organisms at certain times in the past as, for example, the curious disappearance of the dinosaurs at the end of the Cretaceous time period 65 million years ago.

—Craig LaGrow

Willow Road extension plan includes El Camino barrier

A large "island" in the middle of El Camino Real in Palo Alto to prevent traffic from crossing the highway onto Alma Street is a major feature in a plan for a Willow Road extension submitted by Stanford to the City this week.

Frank Morrow, Stanford director of real estate, said that the intersection design is part of an application to build a two-lane extension of Willow Road from its present terminus at Arboretum Drive to a new terminus at El Camino.

The road is to be built through a vacant lot between the Stanford Shopping Center and San Francisquito Creek, Morrow said. The proposal calls for right and left turns only at the highway.

"We are well aware of the desire on the part of the City to prevent traffic from crossing onto Alma Street, so our consultant engineers have tried to devise an intersection arrangement that will make any crossing extremely difficult, as well as illegal," Morrow said.

The extension follows the outermost "barrel" of a four-lane road to El Camino that was approved by Palo Alto in 1978. The project was shelved, however, when it lacked enough votes to form an assessment district to finance the work.

The Palo Alto Architectural Review Board is expected to take up the application in December, after the city staff makes an environmental assessment. If required, a supplemental Environmental Impact Report will be prepared and heard over the next several months, as well. That process will culminate with two Planning Commission and two City Council hearings next spring.

Morrow said that the extension is needed to divert traffic now using the Shopping Center parking lot and private Stanford roads as routes to El Camino Real and to serve coming construction traffic in that area.

Stanford will build the road at a cost of $1 million, Morrow said. The proposal comes after completion of an $867,000 extension of Campus Drive to Junipero Serra Boulevard, and before the start of a $250,000 link of Welch Road across Pasteur Drive.

Oil prospecting technique used to study earth's crust

Researchers in Stanford University's Department of Geophysics are studying the earth's dynamic structure through the extension of a technique originally designed to discover oil.

The seismic reflection method, used by oil companies for several years, involves the projection of sound waves into the earth. Stanford geophysicists process and interpret deep seismic reflection data—the echos which are sent back from many miles under the earth's surface.

Deep seismic reflection profiling, according to Prof. George Thompson, chairman of the Departments of Geophysics and Geology, "is the extension of a standard but developing technique that's used in prospecting for oil, mainly.

"It's an extension of this beyond the depths where oil can occur, into the deep crust. . . so we have now basic scientific purposes rather than prospecting."

The crust is the outermost layer of the earth and ranges from three to 42 miles (5 to 68 kilometers) in thickness.

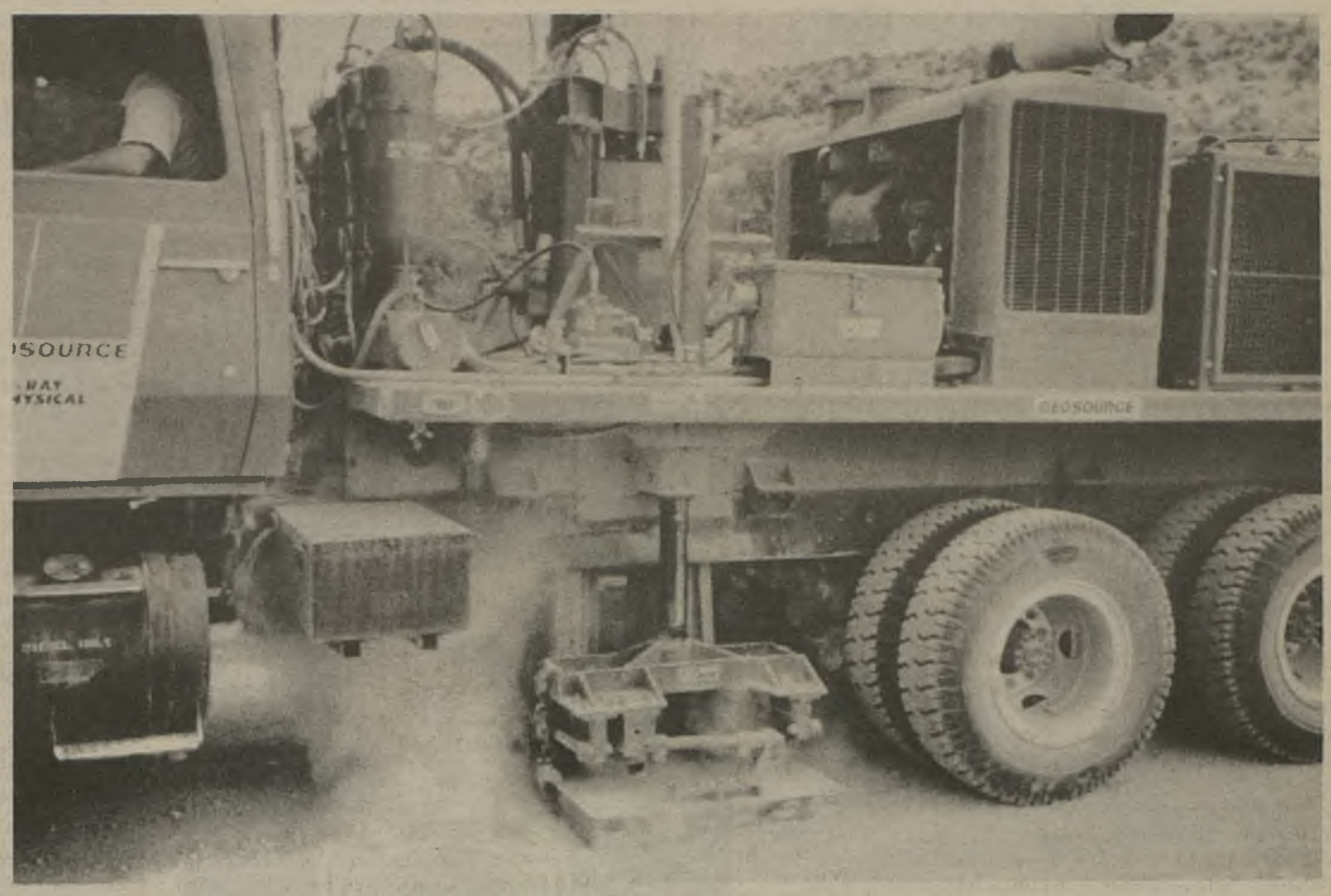
While Thompson described deep seismic reflecting as "basically the most revealing way to investigate the earth," he said the processing and interpretation of data presents a challenge to geophysicists because the sound waves get distorted underground.

Thompson likened the interference between the sound waves and the rock layers in the earth to a hall of mirrors, "where you get everything coming back in a highly distorted fashion."

Before Thompson begins his work on reflection data, the information is collected and processed. Most of the data collection is currently being conducted through Gornell University which contracts geophysical services companies to do the field work, according to Thompson. Stanford purchases magnetic tapes which store the data in digital form, he said.

The processing—which involves complex mathematical steps carried out on a computer and ends up with a cross section of the earth on paper—is carried out in cooperation with professor of Geophysics Jon Claerbout and members of the Stanford Exploration Project which he heads. According to Thompson, Claerbout has made great advances in the imaging of seismic data by computer.

When Thompson and a team of students receives the processed data, they interpret the information. Interpretation, according to Thompson, is determining "what (the data) means in terms of geologic structure."



Pad on truck sends seismic waves into the ground

Thompson's work concentrates on plate tectonics. This term refers to the idea that the earth is divided into about a half dozen major plates which move in relation to each other. The movements are responsible for the formation of the continents and the production of earthquakes, volcanos, and mountains.

"The best known, popularized occurence of this kind is in the middle of the Atlantic where you notice that South American and North America fit together with Africa and Europe," Thompson said. "The Mid-Atlantic Ridge is where the continents are still drifting apart. . . about five centimeters (2 inches) a year."

The occurrence that Thompson describes provides proof for the highly publicized theory of continental drift, developed by Alfred Wegener in 1915.

"The whole structured fabric of the earth we live on is a consequence of these plate movements, so part of our interest is to really understand the physical processes that are going on," Thompson said. He added that he and his co-researchers are not trying to predict earthquakes or the eruption of volcanos, but are "looking at the history of this over millions to hundreds of millions of years."

Typically, five trucks each weighing 18 tons (16,300 kilos) are sent to the research site. Hydraulic devices attached to the trucks' undersides are lowered until pads at the ends of the devices rest on the ground. Hydraulic power vibrates the pads, causing vibrations to be sent underground.

Thompson said the process is exactly like that used in the ultrasound imaging of fetuses, except that waves of lower frequencies must be used in seismic reflection work because the earth would absorb higher ones.

"Although we'd like to use those higher frequencies because they give you a better resolution, you can see smaller things, we're restricted to using waves that are generally in the range of about 5 to 50 Hz. (cycles per sound)," he said.

National Science Foundation grants support the field work, through Cornell, and students in the Department of Geophysics, through Thompson. Claerbout's Stanford Exploration Project is funded by a consortium from industry.—**Kristen Christopher**

Boskin, Shoven think election outcome bodes ill for Social Security reform

Prospects for sensible, long-term Social Security reform have worsened considerably since the elections, according to Stanford Economics Prof. Michael Boskin.

He and fellow economics Prof. John Shoven spoke at an informal seminar at the Center for Economic Policy Research at Stanford.

Boskin noted two "largely unreported" results of the election: 1) the fraction of the total voters who were elderly—over 65—among all those casting ballots rose six percent, and 2) the Republicans got only 50 per cent of the elderly vote, down considerably from 1978 and 1980.

Protected against inflation by the indexing of social security benefits, the elderly will grow "more and more vocal about no benefit cuts of any sort," he said. The present system "lumps together retired millionaires. . .with those at the bottom who probably aren't getting enough," providing benefits five times as great as their total contributions and interest earnings.

The indexing of social security benefits by prior Republican administrations "removed the political incentives for giving credit to those who reduce inflation," Boskin said.

Overall, the government faces "horrific" budget pressures in the next few years, Boskin said. Ultimately, this may result in a move toward value-added taxes, which are common in Europe.

Shoven said the fiscal problems make any major tax reform unlikely in the next few years.

If a value-added tax is imposed, it would probably be supplemental to existing income taxes, he said. "The outlook is for more taxes, not necessarily simplified taxes."

Shoven said it was politically "naive" to think that "the present tax system was screwed up by a bunch of bunglers in Washington." Political pressures for each of the preferences built into the present system would not likely be overcome by simply attacking all of them simultaneously through a flat tax.

One of the principal changes of a flat tax would be to shift the tax burden from the wealthy—who now pay about 30 to 33 percent effective rates—toward middle income families.

Proposals for a flat tax around 19 percent, developed by Stanford economists Robert Hall and Alvin Rabushka, would result in higher rates for most taxpayers. "As we get close to it, the flat tax will disappear," Shoven said.

Both he and Boskin indicated that the nation might move toward a consumption tax by liberalizing the present provisions for Individual Retirement Accounts (IRAs) and Keogh plans. These permit tax sheltering of savings until they are used for consumption, at which time they are taxed.

But Shoven noted that people may borrow funds for investment in IRAs, thereby obtaining tax deductions for the interest paid on the loans while sheltering income. This "raid on the Treasury" should be stopped, he said.

Prof. James Rosse, CEPR director, noted that one danger of the value-added tax is that it is "so hidden that no one is aware" of its impact on prices.

Boskin predicted an acceleration of previously scheduled social security tax increases over the next two years.

The outlook for the next 10 to 15 years is "much rosier," with progressive liberalization of IRAs and a gradual move toward first year "expensing" of all investment expenditures.

Van Dyke/ continued from page 5

People sometimes ask the point of this sort of thing. But George Gabriel Stokes, who really started water wave theory a hundred years ago, worked out the fifth approximation by hand; and it turns out that many more approximations are necessary to capture the highest wave."

Asked whether his research was directed to specific problems, Van Dyke replied that he was concerned more with techniques. "My latest paper concerned shock waves, and could have been of interest to scientists working on the fusion process, but the work was not done with that in mind."

Van Dyke recalled that a student had recently said to him, in mild astonishment: "You are still working in the same line of research that you did for your Ph.D.?"

"It's true," said Van Dyke. "I am still pursuing the same vein of research. I am a little obsessed with the computer these days, but apart from that there is still so much to learn, and to teach, about fluid mechanics.

"The flow of air over planes or missiles, for example, is something that can be visually understandable if one uses appropriate techniques. Occasionally people can see the process for themselves without any aids—such as by watching contrails from highflying planes, or the progress of clouds.

"Scientists use all sorts of means to make fluid mechanics visible. In the wind-tunnels we use a wide variety of methods to trace the flow, sometimes aluminum dust, or fluorescent dyes. My colleague Steve Kline (professor of mechanical engineering) has an interesting method of using hydrogen bubbles."

Van Dyke met his wife Sylvia when she traveled from her native England to visit a long-time pen pal in Modesto, California. They were married in Memorial Chapel, Stanford, in 1962. Their daughter, Nina, is today a sophomore at Stanford, living in Toyon Hall. Their triplet sons are sophomores at Gunn High School.

"The boys probably owe their lives to the fact that they were born at the Stanford University Hospital," he said. "Triplets had not been expected, and when they were born two months prematurely, they weighed only about three pounds each. Very intensive care was necessary, which fortunately Stanford is well equipped to give.

"Parents of twin children sometimes say to us, 'We know what you have been through.' But they don't. That third one is not just a third more, but an exponential increase.

"We didn't have any hired help; but my mother and father who were then in their seventies, came up from Campbell three nights a week so that I could prepare my lectures. Later my mother-in-law came from England for a year."

Are your sons very much alike today? he was asked.

"No, they never have been. Each has his own personality and style. They rarely dress alike or think alike."

Stanford—and particularly the School of Engineering—seems an oasis of academic tranquility to Van Dyke. Although he was raised in an academic family, he had no intention of going into teaching, for he experienced as a boy what he calls "the seamy side of academe."

His father was a professor of mechanical engineering who served on the faculties of a number of colleges in the Middle West. During the Depression he changed his posts frequently, and young Milton went to one elementary school after another, in various states.

"Everywhere it was the same," recalls Van Dyke. "Those were difficult economic times and, perhaps for that reason, every faculty seemed to have its intrigues and feuds. In growing up I heard all about the worst side of academic life—presidents who were fired and deans who were bastards; all the bickering and jealousies. . . ."

He broke off, smiling. "It was the same everywhere, until I came to Stanford. I came here 22 years ago at the invitation of Nicholas Hoff and Fred Terman. I came here expecting it to be as bad as all the other educational centers I had known, and I was never more surprised in my life.

"At Stanford I have never known anything but friendliness and a family atmosphere."

He mentioned his experiences at another leading institution in California and commented, "It was so bad that when you gave a party you had to do research to make sure that you didn't invite the wrong people to meet each other.

"I still marvel at the pleasantness here. So far as I know, in the School of Engineering at Stanford, there is not one person who is not speaking to some other person.

"I have served under three deans, all good men, and I have received nothing but kindness and helpfulness here."



This view of a smoke ring shows it is not a true ring, but a 'tightly wound toroidal spiral.'

In spite of his daunting experiences in the Mid-west, and temperatures there which sometimes reached 47 degrees below zero, he has fond memories of such places as Nebraska and North Dakota. "I wish I could bring my kids up there."

For what reasons?

"The son of the governor of the state and the son of the town drunkard were in one of my classes. I met such a wonderful cross section of types. Sometimes I fear that in spite of the magic of Stanford, and the wonderful life that is possible here, it is a very closed world for a child to grow up in."

Van Dyke received a full scholarship to Harvard, and went there with the idea of following his father into some form of engineering. He was not drawn at that stage to academe, partly because of memories of his father's experiences.

He studied engineering sciences, and because World War II was on, he obtained his bachelor's degree in three years by taking summer courses.

He joined the predecessor of NASA (then called NACA) at Ames and joined a research group that was building wind-tunnels to study how airplanes could fly at the speed of sound. The chief of that group, Prof. Walter Vincenti, is today his colleague in the next office at Stanford.

Others from that group who are also at Stanford include Dean Chapman, adjunct professor of aero/astronautics, and Prof. John Spreiter, mechanical engineering.

The Ames group was incorporated into the Navy, and Van Dyke recalls having to do "shore patrol" in Palo Alto, which at that time was a sleepy little town, without any bars.

He went to CalTech for his Ph.D. as soon as he got out of uniform. By this time he knew that he wanted to continue in fluid mechanics, and he concentrated on that line of research. On returning to NACA in 1950 he turned from wind-tunnel experiments to theoretical research.

In 1953 he was awarded a Fulbright grant and Guggenheim fellowship and went to Cambridge, England, where he spent a rewarding year before returning to NACA. In 1958 he was invited to teach at the University of Paris. Between spring and fall of that year he learned French well enough to lecture.

While he was in Paris he had one of the happiest surprises of his life. He received an invitation from Fred Terman, legendary founder of the Stanford School of Engineering, inviting him to join the faculty. "It never occurred to me to say 'No,' and I arrived on campus in 1959. I've been happily here ever since."

As early as 1958 Van Dyke discovered a new mathematical technique to aid the design of ballistic missiles. This discovery aided the description by mathematical means of the way air is shoved aside as the nose cone of the ballistic missile plunges through the atmosphere at thousands of miles an hour. As the new method could be adapted to computers it opened up new possibilities for improving the design of missile nose cones.

Van Dyke is a modest man and he is reluctant to talk about his successes in research, which have earned him membership in the American Academy of Arts and Sciences and the National Academy of Engineering. He conceded that engineers all over the world were—and still are—anxious to find better ways to calculate fluid flow at super-speeds, and that the Americans and Russians have poured large resources into finding the answers.

"No, it's not easy," he agreed. "All sorts of methods were being tried, and mine was to try to do it purely analytically without any numbers. In the end, in desperation, I did it by a numerical method." He waved his hands in dismissal of the subject: "What was written about my methods was somewhat exaggerated. The Russians have their methods, we have ours.

"When I came to Stanford I started working with some new techniques I had learned from my professor at CalTech, Paco Lagerstrom. A layman would probably find them hard to understand and not of much interest. They were so-called perturbation problems, and I got some of my Ph.D. students working on some of the associated research."

Van Dyke wrote a book on the subject in 1964. He agreed to the interviewer's suggestion that the book had been "quite a success." He republished it himself, in 1975, in order to keep the cost down. The book was translated in the Soviet Union, and Van Dyke is one of the few authors who ever received and was able to make use of royalties from the Russians.

"I received 300 rubles," he said. "While my family and I were touring the Soviet Union in a Volkswagen bus I was involved in an auto accident, and the 300 rubles just about covered by liability."

For the last 10 years Van Dyke has been trying to find in his research "some sort of compromise between the purely analytical on the one hand and number-crunching on the other.

"I think there is room for some judicious combination of analysis and computing," he said. "We are surrounded by number-crunchers these days. People put their equations through the computer, and in a few hours a solution comes out."

A few hours? an interviewer asked. Did the computer take that long?

"Yes, when billions of figures are involved." Van Dyke recounted an experiment which had been conducted by a colleague at another university; it had taken the computer a year of continuous operation, day and night, to come up with the required solution.

At this point in the interview one of Van Dyke's sons, Brooke, entered the office and asked if he could examine the computer, or part of one, which was being built by a colleague down the hall. Van Dyke escorted the boy to the other office and came back beaming.

"You see!" he smiled. "The computer is taking over—no, I don't really believe that. The computer will never do as much as the human mind."

New program links Stanford, community-based job training

Ann Williams no longer has to listen to the sound of traffic passing by during commute hours while she sits at home hoping to receive a phone call from a prospective employer.

Thanks to a unique employment program at Stanford, she is now a part of the commute.

Williams' clerical training at Opportunities Industrialization Center West (OICW) in Menlo Park had provided her with specific skills but, until her recent appointment at Stanford, employers were more interested in her practical experience than her job potential and desire to learn.

The Stanford Employment Experience Program (SEE) has been instrumental in bridging the gap between community-based employment training programs and the University.

SEE is designed to assist the University in meeting staffing needs while making a positive impact on affirmative action goals. The program is targeted for, but not limited to, the economically disadvantaged, handicapped, and minority populations.

Program participants are classified as trainees for six months while receiving on-the-job and other training to develop the full range of skills required for the position. Supplemental training, evaluation, and counseling services are provided by the SEE program staff.

"Every job requires a period of training or adjustment," according to program coordinator Michael Britt.

"Employment professionals and placement specialists have put several excellent candidates behind the experience eight ball. This program is for people who have taken the time to acquire marketable work skills and need a chance to demonstrate their employability."

A key component in the success of the program has been the careful selection of supervisors to work with candidates placed by SEE. "Supervisors work with our candidates, from the prospective of 'I'm responsible for. . . ' as opposed to, 'I'm in charge of. . . ,' " says Britt.

Roberta Bernstein, a program supervisor in the Pathology Department, thinks the program is a success.

"All in all I am very pleased with the SEE program and I would use it again," she says. "We agreed to take a trainee for the position, and the staff agreed to help with the training."

The program affords a supervisor the opportunity to work with a candidate who, for the most part, has no rigid, preconceived notion about his or her job. Supervisors can mold their ideal coworkers as a result of the on-the-job training format used by SEE.

"We're not working in an environment where the primary goal is to secure a monetary profit, but the services provided by SEE are very cost effective," said Britt.

This is a program with worthy goals. . . . Here in Business and Finance we have had six SEE people. Four of them have successfully completed their training programs and have achieved nontrainee status, and the other two are still in the training program.

—Bill Massy



Supervisor Roberta Bernstein (standing) and trainee Ann Williams of the Pathology Department think the SEE program is a success

"Private industry has invested several hundred thousand dollars in professional training staffs and consultants, in addition to taking advantage of government-sponsored training programs to supplement the salaries of trainees. Stanford's monetary investment, for obvious reasons, does not come close to that of private industry, but the commitment is solid." The following is a list of the cost-effective features of the program:

* Staffing officers save a tremendous amount of time during the screening and placement process;
* Supervisors are aware of the performance proficiency of each candidate *before* he or she is interviewed or placed;
* Supervisors are provided with assistance form the SEE staff for job-related training.

"They sent me a person first who was their top applicant," says Bernstein. "I thought it was a nice idea that they were screened, because these people were trainees and would not otherwise have had a chance to compete in the marketplace with other trained applicants."

Williams, who works under Bernstein's supervision, agrees.

"I would probably still be looking for a job if it weren't for the program," she says. "I suppose I'd be looking through temporary services, or doing things I wouldn't really enjoy."

Networking has been a major obstacle for the program.

"One of our greatest challenges has been to get staffing officers and supervisors to make use of the services provided by SEE," states Britt. "We have constantly encountered a major bottleneck when we attempt to implement the program at a few staffing officer and supervisorial levels. We can't be effective if departments refuse or cannot make jobs available for the program."

SEE was successful in securing a specific number of job commitments during the proposal stage for the program from each University vice-presidential group. However, the tremendous drop in the job attrition rate has reduced the availability of jobs for the program. Requisitions for new jobs have declined. Many departments are attempting to exercise fiscal restraint by not filling vacancies or consolidating and reorganizing the duties of their staff.

. . . we considered the program experimental in this area last year, and we concentrated the efforts on a few select departments. Based on the qualitative success of that experiment, we have now expanded it to the entire vice-presidential area.

—Albert Hastorf

The SEE staff has focused on the qualitative aspect of the program. "Employees placed by SEE are some of the best-informed staff members on campus," boasts Britt.

Program participants attend SEE-sponsored workshops on financial management, sexual harrassment, career development, survival skills, and telephone techniques. Regular individualized training activities are offered by the SEE staff at the job site.

"The training has helped me immensely," says Williams. "When I first came to the program there were some things that I had forgotten, or that I never knew how to do."

Workshops are held during the noon hour to minimize the amount of time program participants spend away from their worksites and to afford supervisors an opportunity to attend.

Britt, who earned his doctorate in education at Stanford, is convinced that applicants hired through SEE will have long and successful careers at Stanford.

"They're good workers with a strong sense of loyalty and dedication," he says. "Very few people were willing to give them a chance to succeed in the past."

The program has a 94 percent success rate in placing candidates in positions on campus (four candidates were promoted to nontrainee status before their six-month training periods were over).

"We'd like to bring the program closer to staffing officers and supervisors," states Britt. "We always extend them invitations to visit the community training centers working with the program. We're always interested in talking to anyone considering taking advantage of the excellent services provided by SEE."

The agencies working with SEE are as follows: San Jose Indian Center, Goodwill Rehabilitation Center, Mayfield Training Center, Center for Employment Training (San Jose), Mid-Peninsula Youth and Community Services, Veterans Outreach, Sensory Aids Foundation, American Council for Nationalities, International Rescue Committee, Foothill/De Anza Community College District, MAEP-Indochinese Refugee Center, Opportunity Industrialization Center-West, and the State Department of Rehabilitation.

They were carefully selected according to a set of criteria developed by Britt. They include: 1) target population served; 2) applicant participation in the community program; 3) quality of training programs; 4) job retention and placement record; 5) funding sources; 6) proximity of agency to Stanford; 7) possible impact of agency referral on Stanford's affirmative action goals; and 8) the agency's follow-up programs.

Cronbach, Shapiro write book on the intricacies of evaluating programs

Program evaluation is an art, Emeritus Prof. Lee J. Cronbach declares in a new book, *Designing Evaluations of Educational and Social Programs* (374 pp. cloth, Jossey-Bass).

"There is no single best plan for an evaluation, not even for an inquiry into a particular program, at a particular time, with a particular budget," he declares.

But professionals are now close to agreement on issues hotly debated in the past: "For example, some writers urge the evaluator to apply his own best judgment to the facts and recommend a social action. Others want the evaluator to act as the eyes and ears for a pluralistic community, keeping his social values out of what he says. Everyone, however, seems to agree that the community is pluralistic and that the evaluator should acquaint himself with what subcommunities believe and care about."

Developing an evaluation is an exercise of the dramatic imagination," Cronbach declares.

"No one learns to plan and conduct evaluations from a book. The way to learn is to try and try again, part of the time under circumstances where a more experienced practitioner can comment on plans and suggestions.

"Not many would-be evaluators have that opportunity. Some learn the business from the bottom up by signing on with a contract research organization; in a large firm, however, junior members are not likely to participate in much of the planning or to gain experience with a variety of styles.

"The evaluator is in many cases the only person free to roam nearly everywhere and talk to nearly everyone, and so he can form a picture of the situation available to no one else. Using that opportunity tactfully requires maturity rather than expertise. Experience and specialized knowledge are bound to help—not in eliminating difficulties but in supplying more and more tactics for getting around them."

Cronbach holds the Vida Jacks professorship, emeritus, in the Stanford School of Education. His book was written with the assistance of Karen Shapiro.

Help Center use rises steadily

The Stanford Help Center, which celebrated its fifth anniversary Sept. 30, has seen use of its services rise from 137 in 1977 to 1,419 this past year, according to a newly released annual report *(see below)*.

Besides its personal counseling services, the Help Center has added to its offerings: lectures, seminars, and workshops on subjects like health maintenance, money management, improving work and family relationships, and home protection.

Groups for single parents, older people living alone, and wives of medical residents provide support networks for those whose families don't fill that role.

Most of the Help Center's activity has centered on personal or family problems that adversely affect health and work productivity. However, staff members, managers, and supervisors may make appointments to consult on work-connected problems, providing they are not more properly the business of Employee Relations—e.g., grievances and individual job evaluations.

The Center marked its fifth anniversary with a reception which honored retiring David Kaplan, who is still a part-time consultant.

Help Center has aided nearly 3,400 faculty, staff, and family members

Following is the annual report of the Stanford University Help Center for the period Sept. 1981, to Aug. 1982. It was written by David M. Kaplan, Ph.D., who retired as director Sept. 1 but continues as a Help Center consultant.

This fifth annual report consists of a review of the first five years of Help Center operations rather than of the past year, which has been our custom. During this five-year period a variety of services for faculty and staff have been instituted and the Center staff has expanded modestly (four FTEs, including an office assistant position) to achieve our objective of serving 10 percent of the Stanford work force each year.

CENTER PHILOSOPHY

Although university and industrial employee assistance programs are organized primarily to provide clinical services for a minority of "troubled" employees, Stanford's program is unique in its concern for the *total work force* and for organizing a program that seeks to protect and enhance the health and productivity of all members of the university work community. As a direct consequence of this emphasis, prevention, wellness and self-care are the watchwords of our program.

HEALTH EDUCATION

Our educational activity, which is broadly concerned with enhancing the individual's ability to care for his own needs and to cope with normal problems of living, is a central Center activity. Through lectures, seminars and workshops, which are offered regularly throughout the year, information is provided to Stanford personnel on a wide variety of topics—e.g., health maintenance, money management, ways of improving work and family relationships, methods of protecting the home and family from criminal intrusion and assault, etc. In addition to those classes that Center staff provide, we have the ability to offer workshops on a wide variety of subjects that are requested by faculty and staff. Individuals on campus, with diverse talents and expertise, enthusiastically lead many of our educational offerings.

COUNSELING SERVICES

Since each of us, in the course of living, faces normal stress situations that may be overwhelming temporarily, the Center offers a readily available program of counseling on a voluntary basis, to individuals, couples, and to other family members.

The counseling program is a critical Center activity. The objective of the counseling program is to provide prompt professional assistance to faculty and staff for current stress problems, many of which are in early stages and amenable to brief interventions. For those clients whose problems require extensive clinical treatment, referral to appropriate clinical resources is arranged. At the Center approximately one client out of eight requires referral for long-term treatment elsewhere.

In addition to individual counseling we offer experience in peer support groups for those members of the work community who do not have available to them active family support networks. Single parents, older persons living alone, and wives of medical residents are examples of groups which often do not have available family support in times of stress.

Our counseling activities are confidential; records are kept only for statistical reporting. We depend heavily on self-referrals; all of our clients arrange their own appointments.

Managers, supervisors and staff members can also receive individual consultation for problems with colleagues, supervisors and coworkers, provided individual identities are not revealed to Center staff, and the concerns are not more properly the business of Employee Relations—e.g., grievances, individual job evaluations.

COMMUNITY ACTIVITY

The Center is responsible to the university community which it serves through 1) an Advisory Board representing every segment of the community, including minorities, labor unions, faculty, and staff; and 2) an evaluation system which encourages all of our clients to rate the service and to suggest new activities that are appropriate for us to consider—e.g., subjects for workshops, new peer support groups, etc.

In addition to the services that we offer, the Center has been instrumental 1) in working with other Stanford groups to establish new services for University personnel—e.g., the Health Improvement Classes offered by the Heart Disease Prevention Program and 2) in coordinating jointly the efforts of diverse groups on campus concerned with alcohol and drug abuse, including Student Health, Alcohol Clinic and Help Center. We anticipate that the coordination of other university and community programs will continue as an important function of the Center.

STATISTICS

Since its inception in 1977, 2,939 faculty and staff members and 452 family members have utilized Help Center services for a total of 3,400 users.

The utilization of services by faculty and staff has increased from 137 in 1977 to 1,419 this past year (this latter figure includes participants in workshops). The counseling services has grown from 137 in 1977 to 729 clients in 1982. Faculty use of counseling increased tenfold (from 7 to 70); minority use increased fivefold (from 24 to 124); family members increased sevenfold (from 22 to 163).

Our educational program was initiated in 1978 with three workshops which were attended by 60 persons. In 1982 our workshops expanded to 27 in number and were attended by 690 faculty and staff.

In the past year the Help Center sponsored three support groups: for single parents, for mid-life women, and for learning techniques of stress reduction.

THE NEXT FIVE YEARS

What new developments in Center Activity can be anticipated for the future?

The basic mission of the Center is to enhance the health and productivity of the Stanford work force; this objective has been met thus far through a program of education and counseling that has been outlined above. But active consideration is now being given to several additional methods of improving individual productivity.

RESEARCH AND TRAINING

While the Center has relied on an informal method of evaluating Center activities (through a client evaluation questionnaire), a more sophisticated analysis of our activities is needed to properly evaluate all aspects of Center services.

What are the cost benefits in providing faculty and staff with Center services? What objective ways are there to evaluate program effectiveness beyond client ratings? What new trends are emerging in client needs that require changes in the program? These and other questions bearing on program evaluation strongly suggest the need for instituting a research component.

The Center provides an opportunity for studying health problems on individual family and community levels. It is a potential research and training laboratory for selected graduate students who, in return for access to Center data and clients, could meet the Center's need for program evaluation. A number of academic departments have expressed interest in both research and training opportunities that the Center might provide.

A committee of the Advisory Board is currently reviewing the feasibility of limited Center research and training activities, it being clearly understood that such activities must be conducted in ways that do not reduce service activities or obligations and do not impair the confidential relationship with clients or the confidence clients have in Center services.

ON-THE-JOB PROBLEMS

The Center program was begun five years ago with a clear focus on client problems that were external to the work place and the job situation. The emphasis was on personal and family problems that were impeding work productivity and health.

The bulk of our activity to date has centered on "outside" personal difficulties. However, there have been a growing number of requests from individuals and from established campus groups for the Center to address interpersonal problems that either stem from the workplace or are played in that context including conflicts between colleagues, coworkers, supervisors and supervisees.

It is clear from the history of industrial health programs that whether the initial program focus is on internal or external personnel problems, the program must be concerned eventually with both kinds of problems to realize its full potential. But it is equally clear that before the Center diverts its resources to job-related problems, a good deal of thought and dialogue is needed to avoid jurisdictional and territorial disputes.

There are several groups already involved in the area of work problems—e.g. Employee Relations, Ombudsmen, Unions. Why should the Help Center also get involved when there are others available?

Apparently, despite the existence of the offices described above, the sheer number of work problems and the preference of individuals for one consultation group or another may justify Center involvement. However, it is important before venturing into new responsibilities to be sure of protecting the enviable reputation the Center has earned for impartiality, and competent assistance to members of all segments of the university community.

The next five years should see the Center expand its program into several new areas, some of which can be anticipated. The full potential of the Center to enhance the productivity and health of faculty and staff members has yet to be reached.



Ellie Oppenheim

Oppenheim boosts student role at TMU

Ellie Oppenheim came to Stanford in September 1977 as assistant director of Tresidder Union under Dan Williams. She was appointed director in March 1980 after Williams left Stanford to return to Oregon. In the two years since she took over, Tresidder has seen a number of changes, some labor disputes, and a survey to find out what Union users really want. News Service intern Amy Bernhard recently talked to Oppenheim about what she wants for Tresidder; the story is below.

For the 20th anniversary of Tresidder Union, students published a commemorative brochure.

That's not unusual; students now participate in nearly every facet of Union operations, from staffing and managing food service enterprises to organizing on-campus programs and events.

What is unusual is that five years ago, fewer than half the number of students who currently work at the Union were employed there.

The reason for the change is Director Ellie Oppenheim, who has energetically pursued a policy of student involvement in the Union. Unabashedly proud of increasing student use and participation, Oppenheim is quick to mention that there's still a lot to be done.

Says she: "I won't say that we're perfect, because I don't think that we are; but no organization is. I'm probably my harshest critic."

She may be her harshest critic, but Ellie Oppenheim is Tresidder Union's biggest advocate.

Since coming to Stanford in 1977, one of Oppenheim's first priorities has been making the Union a place that is more responsive to the needs and desires of the Stanford community.

"We have been building and developing in ways that are making us more responsible to Stanford University faculty, staff and students," says Oppenheim. "Our goal is to promote interaction. That's the image I'd like to foster, of Tresidder Union as a central gathering place."

Offering what Oppenheim calls "high quality, affordable services" like the Crossroads food service, the Sequoia Travel Center, and the hairstyling salon provides one vehicle to draw people together.

Another is Tresidder Union programming. The Union has an obligation to provide social, recreational, cultural and educational programs for the community, says Oppenheim. Activities like the recent Harvest Festival, ballroom dancing, and wine tasting, among many others, expose students "to new ideas, concepts and skills in an atmosphere in which they can relax and have fun."

Student involvement is a primary reason why Oppenheim wanted to pursue college union management.

While an undergraduate psychology major at the University of Wisconsin, Oppenheim began planning ski club trips as a natural extension of a lifelong hobby. First planning shorter trips, then organizing a more ambitious 10-day European tour, Oppenheim was hooked on planning student activities.

She advanced from the ski club to the Union Program Board, planning and producing art exhibits, entertainment, and lectures, as well as making recommendations to the University Chancellor about Union policies.

Realizing that she enjoyed this volunteer work, Oppenheim stayed at Wisconsin to pursue her M.B.A. to "gain both skills and credentials to go on as a director of a University student union."

After spending three years there as assistant manager of the student union, she came to Stanford, where she has since been using her management skills, experience and enthusiasm to improve Tresidder.

Under her direction, students now help interview prospective employees and screen resumes—an opportunity for first-hand experience in job interviewing and resume-writing.

Oppenheim has also encouraged student involvement in entrepreneurial ventures. The Corner Pocket, the Patio Grill and Encina Station are all food services run by students. Tresidder staff give support and advice, but management is the students' responsibility.

Says Oppenheim proudly, "I don't know of any other union running that kind of entrepreneurial agreement."

Planning to continue most of the work started when she first arrived, maintenance and repair of current facilities rate high on her list of priorities. Cleanliness and appearance are weak points in the Union—largely, she says, because of budget deficits in the 1970s.

Another problem Oppenheim would like to correct is a lack of space. Currently, many services provided are so popular that they are almost *too* successful for the space they have. For example, the Store is the most heavily used Tresidder facility, yet as any lunchtime shopper knows, it is often cramped and overcrowded. The Coffee House faces a similar problem, in that it is not designed for the volume the Coffee House management would like to handle.

However, Oppenheim doesn't have any immediate plans for expansion. Her first goal is to identify the separate users of the Union, and their respective needs.

"We're starting simply by learning who our users are. We would like to serve all segments of Stanford. We're reaching our limitations of space, but we're not anywhere near reaching our limitations of needs."

Life insurance deductions set

Jeannie Thomas, manager of Benefits and Records, wants to thank all faculty and staff for their positive response to the new life insurance plan. The Office of Benefits and Records is currently processing all the forms received over the past 60 days.

The life insurance deduction for those who chose Option II should appear on the Nov. 22 paycheck. If no deduction appears, or if the deduction seems to be incorrect, please contact the Life Insurance Center at 7-0757 immediately. Those faculty and staff who chose the $5,000 free coverage (Option I) will not have a deduction.

Life insurance certificates will be distributed after December to all faculty and staff who enrolled in the new plan. Attached to these certificates will be a copy of the completed enrollment form.

Audio-visual guide available

Stanford faculty and staff may have an easier time locating the audio-visual equipment they need for their classes if they use the new *Guide to Audio-Visual and Instructional Resources at Stanford*.

The free pamphlet lists the location of the audio-visual equipment on campus, including computer equipment, film and videotape facilities, and graphic art and photography services.

The guide is a joint project of the Center for Teaching and Learning, the Stanford Instructional Television Network, University Events and Services, and the Communication Skills Program of the Graduate School of Business.

The guide is being mailed to Stanford faculty members. Others who would like a copy can call the Center for Teaching and Learning at 497-1326.



This little girl, forced to evacuate her home during the heavy rains last January, was one of more than 10,000 Bay Area residents who received emergency shelter, food, or clothing from the local chapters of the American Red Cross. The Red Cross is one of the agencies supported by the United Way campaign, just starting on the campus. All faculty and staff will soon receive an appeal from this year's United Way chairperson, Lois Fariello—please remember how many local programs depend on it. *(Photo reprinted with permission from the Peninsula Times Tribune.)*

Soviet studies in U.S. have eroded sharply in past two decades

The death of Brezhnev with its attendant speculation has dramatized the extent to which Americans are not ready to answer serious questions about the Soviet Union, according to two Stanford Soviet experts.

A lack of support in the last 15 years by the government and private foundations for research in Soviet policy has been accompanied by a serious erosion of programs of Soviet studies within universities nationwide.

"Since the late 1960s many aspects of Soviet and East European studies have been deteriorating and are approaching a state of crisis," says history Prof. Alexander Dallin, chairman of the international relations program.

"There has been a major decline in support on the part of the foundations (notably Ford, Rockefeller, and Carnegie) which had previously contributed generously to the development of the field, and in some instances also on the part of the private universities and state legislatures supporting public universities."

As a consequence, adds Dallin, we probably now have fewer experts in the field than at any time since 1945. Further, of the top specialists in this field, more than one half will retire within the next five to ten years and there will not be highly experienced people to replace them.



Dorothy Atkinson Alexander



Alexander Dallin

The most exact indicator of the decline in Soviet studies is the decrease in language enrollments in Russian and East European languages, says Dorothy Atkinson, executive director of the American Association for the Advancement of Slavic Studies, currently based at Stanford.

Enrollments in Russian peaked in 1968 and have steadily declined since that time. By the fall of 1980 Russian enrollments in over 2,000 institutions of higher learning surveyed by the Modern Language Association had dropped 40 percent as compared to 1968. Enrollments in secondary schools declined by over 70 percent in the same period, according to Atkinson.

The report of the Presidential Commission on Foreign Language and International Studies in 1979 stated that the situation was critical. "Since that time, over 50 institutions of higher education in the U.S. have completely shut down their Russian programs of instruction in the Russian language," says Atkinson.

She notes that there are currently more teachers of English in the Soviet Union than students of Russian in the U.S.

A bill is currently before Congress, which attempts in part to remedy the situation. Introduced by Senators Richard Lugar (R-Ind.) and Joseph Biden (D-Del.), the bill asks for a government endowment to aid certain institutions in need of support of their programs in Russian and Soviet studies.

If approved, the bill would allocate $50 million to be invested in government bonds, the interest from which would be dedicated to enhancing programs at centers such as the Kennan Institute for Advanced Russian Studies.

The recent Harriman grant to the Soviet Studies program at Columbia University may also indicate a turnaround in private support, says Atkinson.

Both scholars admit, however, that serious damage has already taken place, which will take years to remedy. As an example of our current unpreparedness in this field, Dallin noted that two years ago a Soviet soldier defected from the Russian troops in Kabul and sought asylum in the American embassy. "There was no one there who could talk to him," because no one knew Russian. —**Millicent Dillon**

How four scholars at Stanford view Brezhnev succession

Prof. Robert Wesson, a senior research fellow for five years at Stanford's Hoover Institution, who is affiliated with the University of California (Santa Barbara), said:

"Few people realize that whoever becomes president of the Soviet Union will need quite a few years to consolidate his power. It took Stalin four years to get real control, it took Khruschev two years, and Brezhnev shared power with Kosygin and Podgorny for a long time before he was able to emerge as the man in control.

"To get control the leader has to remove from office, or shunt aside, all those who are not recognizably his own men.

"For the next few years, therefore, we shall be dealing with a new president who is not the absolute leader, but first among equals.

"The armed forces of the U.S.S.R. may very well have a stronger influence on the selection than they have in the past. There are indications that the military is fed up with what it regards as the inability of Russia to become dominant in arms.

"The generals are also dissatisfied with the quality of life in Russia and the state of morale. They don't like the fact that since 1977 the death rate has been going up in the Soviets, that alcoholism is becoming a severe problem. The food lines are back in Russia for the first time since the Stalin regime.

"The general belief that Andropov will win the struggle is probably accurate, and the fact that he is head of the funeral commission is another strong clue to that.

"Russia is rather like America politically in one respect. If a candidate is in the lead, as Andropov is, he has to run a little faster. He is more vulnerable, he has nowhere to go but down, he is more exposed to criticism. I am not predicting that Andropov will win, but the indications on balance do seem to favor him.

"The fact that Andropov has been head of the KGB could mean that he would be able to consolidate his power more quickly."

Mikhail Bernstam, a Russian dissident who is a visiting scholar at Hoover Institution, and has been in this country for five years since his Russian citizenship was revoked for his 'anti-Soviet' activities inside the U.S.S.R., described what is going on in the Kremlin as a result of Brezhnev's death.

"The authorities waited for 26 hours before announcing the death because three important steps had to be taken first. Number one was to alert the military in every area of the country. This was not for purposes of national defense, but for internal security. There is often a tendency when important events occur in Russia for the people to seize the excuse for indulgence both in alcohol and food.

"It is highly probable that the second step taken was to limit distribution of alcohol.

"The third step was probably to increase food supplies, so as to lower the likelihood of outbreaks of protest at the long-continued shortages. It is a rare occasion when the mass of the people can have a ready excuse to demonstrate, even grief for a leader, and the authorities want to keep everything calm.

Thursday is the day of the weekly meeting of the Politburo, the 15-man controlling body of the U.S.S.R., and undoubtedly they are making arrangements for the regular meeting of the plenum committee of the Communist Party, which takes place in two weeks time. It is this joint legislative assembly that will vote on the new leadership.

"Between now and then the various major groups inside Russia will be lobbying and maneuvering to try to ensure that the choice will be a person amenable to their particular interests. Among these groups the important ones include the military, the secret police, the heavy industry delegates, and perhaps most important of all, the entrenched bureaucracy."

Robert Conquest, senior research fellow at Stanford's Hoover Institution, and curator of its East European collection, recently attended a meeting of leading experts on Soviet affairs.

"Our consensus at that time was that the most likely person to become president was Konstantin Chernenko. However I am hedging my bets somewhat now, in view of Brezhnev's death, and the fact that his influence will not be there at the Communist Party meeting which votes for the leader. I think it will be Andropov by a narrow margin, but Chernenko is by no means out of the running.

"I'm sure that Brezhnev's death came at an awkward time for the Politburo. When you think that three out of the five top men in Russia have died or retired since January it is clear that the Politburo has been caught on one foot.

"I am often asked if one of the younger men may not get the job. The fact is that the youngest likely person is Gorbachev who is 51, and has held for the last 20 years posts that give him little support from the factions that count in the voting. The other is Romanov, who is 59, (and) may still be in disfavor because of the party which he gave for his daughter a year or so ago, when priceless crockery of historic value was smashed during the festivities.

"It will not be last-minute lobbying that will occur from now till the full selecting committee in two weeks time. The struggle for influence and votes has undoubtedly been going on for a long time. Perhaps it has gone on for years. Most of them are probably trying to figure out who is going to win and if and when to switch their support and perhaps rat on the other person they had promised to support. They lobby each other and waste a great deal of time in four-hour speeches to the Politburo in which they try to establish influence.

"Among my reasons for picking Andropov is that he is undoubtedly the one who has been most closely identified with the Party line, whereas those who were still in what might be called the Brezhnev camp at least talked about reform.

"At the meeting which I attended recently of experts on Russia there was general agreement that the struggle and internal dissension in the Politburo will probably go on for a couple of years.

"The scene inside the Kremlin will continue to be what it has been for years, that of something akin to Machiaevelli's *Prince.*"

Stanford History **Prof. Terence Emmons,** who has for 41 years edited the *Russian Review*, the oldest journal of Russian affairs in the nation, said:

"Yuri Andropov, who until recently was head of the KGB (the secret police) and then retired, has been widely supposed to be a leading candidate for the top position. However, others, such as the novelist Zinoviev, think it may prove to be an unknown such as Grischin.

"External evidence seems to point to the fact that a power struggle has been going on for a long time between the factions who want their point of view to rest with the man at the top. This was shown fairly clearly in 1978, when a leading member of the Politburo died and the authorities went to extraordinary lengths to publicize the medical report on the causes of his death. It gave long details of the cirrhosis of the liver, the cancer and heart condition which were all said to have led to the death. Clearly the authorities were worried about public reaction to the death and the need to allay suspicions that the dead man was a victim of the power struggle.

"Brezhnev has been seriously-ill for at least four years, so there is little doubt that the power struggle has been going on for at least that time. After Stalin died the power struggle led to the deaths of several high-ranking people."

Asked whether the Soviet armed forces were a dominant factor in the selection of the new leader, as evidenced by the huge arms budget in the U.S.S.R., Emmons replied that he thought the U.S.S.R. was unique among totalitarian societies in not being politically maneuvered by the armed forces.

New Baroque organ for Memorial Church a labor of love

For Herbert Nanney, professor of music at Stanford, it is a joyous event more than 30 years in the making.

For Charles Fisk, who once planned to be a nuclear physicist and instead became a student of Nanney's, it is an opportunity to give something unique to the sources of his inspiration.

And for thousands of students, faculty, staff and local residents who gather and worship in Stanford's Memorial Church, it will be a chance to enjoy an even broader, more beautiful and more authentic program of music.

All are anxiously awaiting the arrival, a year from now, of a new Baroque-style organ—a type of Baroque organ never before built. Charles Fisk, a former Stanford organ student, is the organ's designer and builder.

Nanney, a master organist who has taught music at Stanford since 1947, says talk began in the 1950s about the need for a new organ in the church to expand the range of music which might be played. Because the church is non-denominational, the best of church music from all periods and faiths has always been performed there.

Sunday services featuring the Memorial Church Choir, 75 strong, have long been accompanied by Nanney on the romantic organ built by Murray H. Harris in 1901. However, its sound is just not suitable for some of the music which Nanney would like to see performed, particularly music from the French and German Baroque.

Fortunately for both Nanney and the community, Evelyn Almack Turrentine, loyal worshipper, joined Nanney's dreams to expand the musical range of the church.

"She was our next-door neighbor on Alvarado Row, and she used to say, 'Some day I'm going to leave some money in my will for a new organ,' " Nanney recalls.

"Of course, then she married Lowell Turrentine and moved to another home and I had forgotten about it. Then, in 1973, I was on sabbatical in England and I learned that she had died and left $400,000—half her estate—to fund the new organ. I had had no idea she would leave that much money. I was very excited."

Nanney soon learned that far more money would be needed because of the necessity of strengthening, against possible earthquake damage, the church's north wall, where the new organ would join the old one.

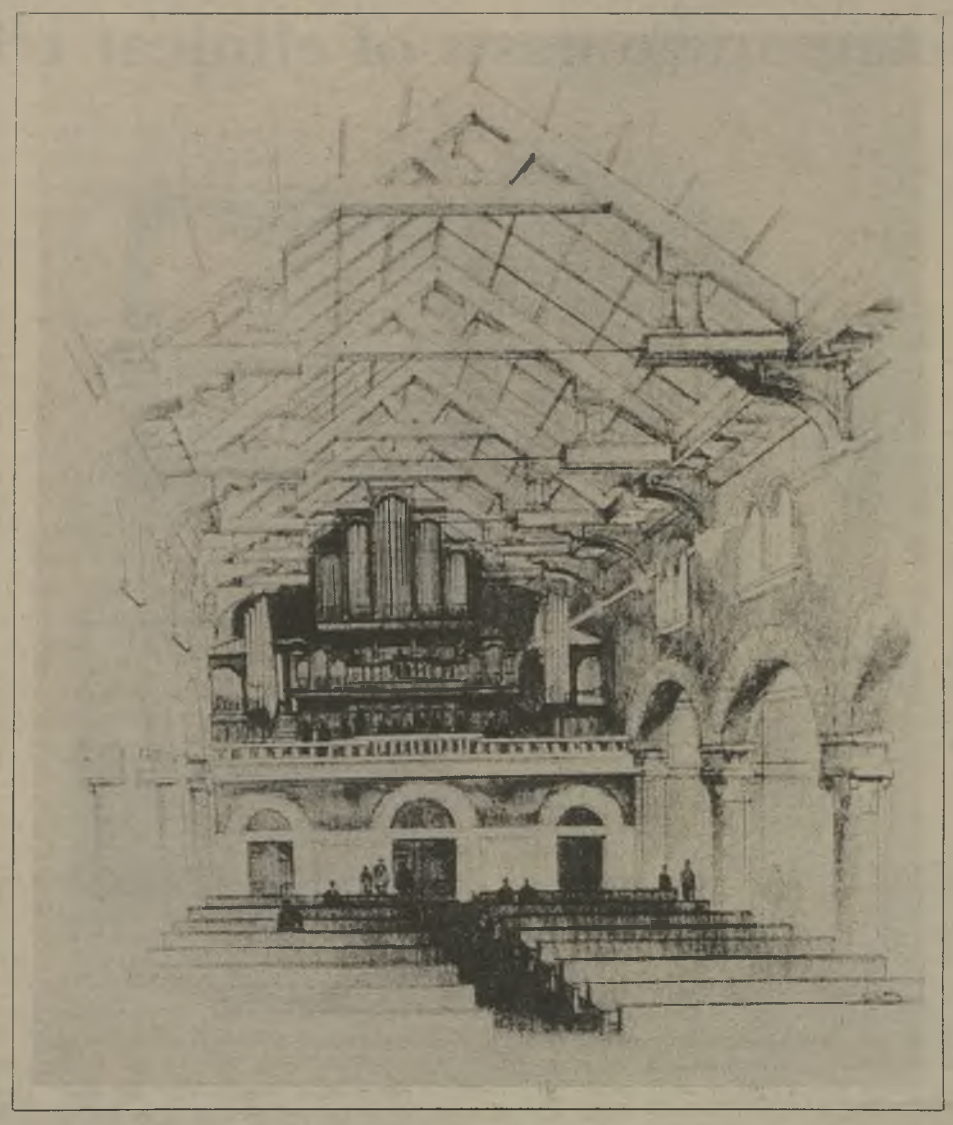
Fortunately for Nanney and the community, Virginia Morell, widow of George Morell, provided in 1979 that proceeds from a sale of property be used for renovation of the church, thus financing an additional $510,000 of the project's $1.9 million cost.

In September, the Board of Trustees upped the budget to $1.9 million from $1.6 million, in order to expand the capabilities of the new organ, making possible performance of both Baroque and Renaissance music. To accomplish this, the organ will have 17 keys per octave instead of the usual 12.

Family-like dedication

Much of the project's charm comes from the almost family-like dedication it has inspired among those involved.

Nowhere is this more apparent than with Fisk. His 20-member workshop in Gloucester, Mass., is currently hard at work on the organ—casting the tin and alloyed metals which make up the pipes, joining and molding the fine wood which forms the organ's chests and casework, and preparing for the extensive tonal testing which will be conducted before it is shipped to Stanford.



Drawing shows what the new organ will look like

After Fisk earned his A.B. at Harvard, he came to Stanford in 1950 to begin work on a Ph.D. in nuclear physics. But one day he walked into Memorial Church, heard Nanney playing the organ, and his entire world began to change.

"I realized I was deceiving myself," he says. "I didn't want to be a nuclear physicist. I wanted to do something in music."

Fisk's musical background, up to then, consisted of singing in a boys' choir under organist E. Power Biggs, singing in Harvard's Memorial Church choir, and playing a little piano and trumpet.

Robert Keine, Nanney's assistant, suggested that Fisk meet with John Swinford, who took care of the Stanford Memorial Church organ. Swinford assured Fisk that one way to be a musician was to be an instrument maker. "There's no money in it, but great satisfaction," Swinford said.

Fisk immediately changed his major to music and stayed at Stanford for six quarters, taking all the music courses an undergraduate major would take.

"Herb Nanney despaired of my ever learning to play the organ," says Fisk, "but one thing I did learn was that American organs were totally unsuited to playing the music of J. S. Bach. I wondered if there was some way to make an organ so that Bach and other early music would sound truly authentic."

Fisk became part of a growing group of people at Stanford interested in early music, among them Nanney, Putnam Aldrich and George Houle.

Fisk didn't stay around long enough to earn a degree. But now, says Nanney, he "is considered by most organists to be the top American builder of the Baroque type of organ."

Trend toward authenticity

"There is a trend today," Nanney continues, "toward using the correct instruments for the pieces for which they were originally written. (With the Murray Harris organ) we can simulate to some extent a Baroque piece, but it just doesn't sound the same. It's like playing harpsichord music on the piano."

The church's present 3,355-pipe romantic organ survived the 1906 earthquake virtually unscathed, even though the wall behind it did not. The recent reconstruction of the north wall is the first since 1912 when the quake damage was repaired.

These renovations included concealing steel frames behind the wall and behind the arch columns facing the quadrangle. The stonework on the wall's face was replaced with concrete designed to replicate the former appearance.

After the Fisk organ arrives in mid-1983, it will be "voiced"—a three- to four-month process during which the instrument will be acoustically adapted to its new surroundings.

"They'll adjust the pipes so that they fit the room with the right brightness, right blend and right volume," according to Nanney.

Representatives from the Fisk Company visited Memorial Church and took extensive measurements in order to design and build the new organ with both acoustic and aesthetic considerations in mind.

Acoustical improvements

Unfortunately, the ornate nature of the church's interior made it impossible for the new Fisk organ to be installed without some concessions; one of the beautiful stained-glass windows is now obstructed from the congregation's view from the inside of the church. However, plans have been made for lights to be installed to make the window still visible from outside.

In addition to structural changes, alterations to improve the church's acoustics were made, and burlap cloth, plus two inches of felt which had been placed on the ceiling of the church many years ago was removed.

When Fisk finishes his job, he notes, he will have built new organs "in the two universities where I've studied." He provided a new organ for Harvard's Memorial Church, and now it's Stanford's turn.

"I wanted to build an organ that not only will serve as the Memorial Church organ at Stanford, but one that would bring full circle the process that began there for me, a quest for a truly old organ. I wanted old music to spring to life in the way it was written, in a way it hadn't been heard before.

"This all seems to be a working out of my destiny, to bring me back to Stanford."

—Joan O'Connell

Ph.D. oral exams

FRIDAY, NOVEMBER 19

David I. Brubaker, electrical engineering, "Theory of Acoustic Speckle," 2:30 p.m., AEL 109. **Frederic B. Jennings**, economics, "Interdependence, Incentives, and Institutional Bias: An Organizational Perspective on the British Canals," 2:15 p.m., Room 414, Encina Hall.

MONDAY, NOVEMBER 22

Max Henrique Machado Costa, electrical engineering, "Interference Channels," 3:15 p.m., Durand Bldg., Room 260. **Jennifer Freyd**, psychology, "The Internalization of Physical Laws of Motion," 2:15 p.m., 358 Jordan Hall. **Kenneth Olson**, philosophy, 1 p.m., 91B.

WEDNESDAY, NOVEMBER 24

Jonathan Bregstone Green, applied physics, 2:15 p.m., Applied Physics 200. **Helen Fay Nissenbaum**, philosophy, "Emotion and Focus," 1:15 p.m., 91B.

Medical Center MEMO

Computers to bring down costs of clinical trials

Because of advanced technologies, such as computerized image processing, doctors can now study heart disease in new types of less costly clinical trials, according to the president of the American Heart Association.

"Such studies could utilize a few hundreds of volunteers instead of the many thousands demanded by most of today's large scale clinical trials," said Dr. Donald Harrison, Irwin Professor of Medicine and chief of the division of cardiology at the Stanford University School of Medicine.

"The duration of such studies would only be a few years, the costs would be acceptable and therapeutic interventions would be rigorous," he said.

The new type of clinical trial would evolve a new strategy to study the factors which result in progression and hopefully regression of atherosclerosis, or hardening of the arteries, Harrison said. Physicians would visualize the development of atherosclerosis by computer-based techniques, so that treatment may begin at earlier stages of the disease.

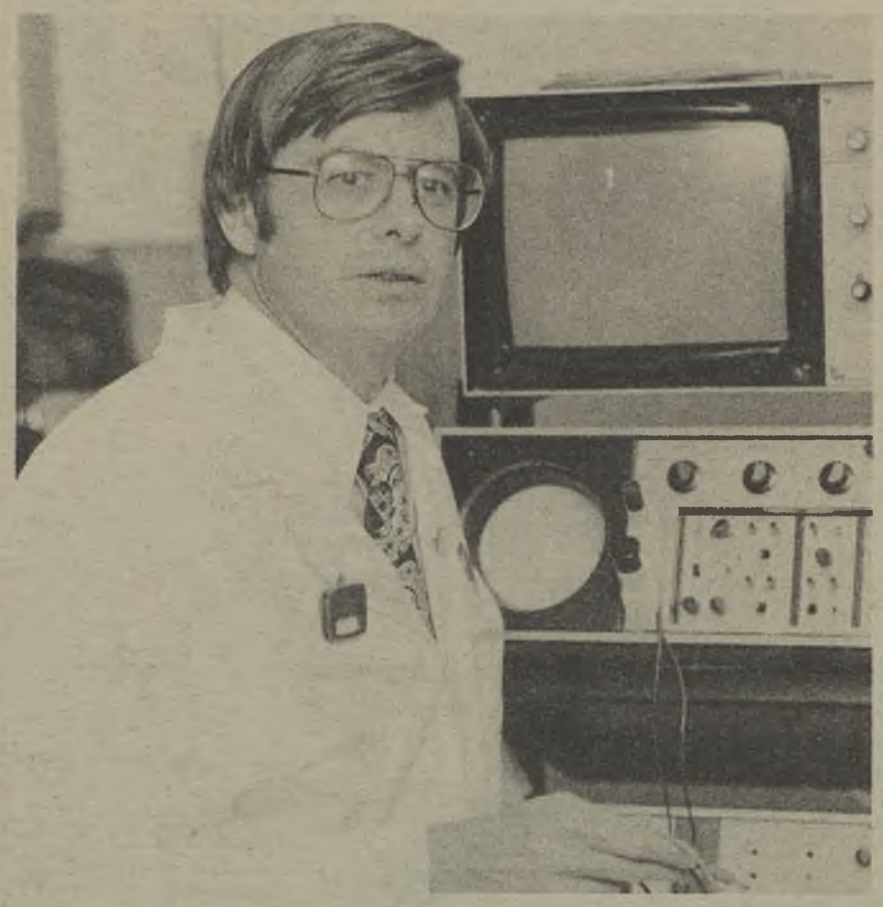
"Such techniques have been already developed for studies of femoral and coronary arteries," he said.

Harrison addressed the annual meeting of the American Heart Association in Dallas, Texas, Monday, Nov. 15.

Clinical trials that compare prospectively the effects and value of a given treatment against a control in human patients have long been regarded as the cornerstone of modern clinical medicine.

They include the so-called "therapeutic trial" in which doctors document statistically one treatment as being superior to another, and the "intervention trial" which determines the probable effect of a treatment on the biological processes of man.

Clinical studies have been utilized with an increasing scientific basis and sophistication, and more of them have been performed in the past 20 years than in all of recorded medical history, Harrison said. Yet there's more controversy about them than in any previous time.



Donald Harrison, president of the American Heart Association

Harrison cited these reasons:

- Clinical trials require long-term commitments for study and are expensive.
- They compete for research dollars for basic and clinical research of many institutions.
- They fail to provide answers, and they become self-perpetuating in that one trial uncovers multiple other questions requiring more clinical trials.

"This results in massive costs," Harrison said.

He cited a recently federally-funded study on the value of trying to diminish the major risks associated with heart disease that cost $115 million. The study found no significant difference in deaths between a group that received special medical treatment and one that received more ordinary care.

"Results may be influenced by multiple uncontrollable factors, especially in field trials in free-ranging populations," Harrison said. "Control populations modify their behaviors with societal changes and thus confuse the results. This clearly occurred in the multiple risk factor study."

In addition, Harrison said, not everyone agrees with trial design. Some are timed poorly after the questions they seek have already been answered by ordinary clinical practice. And there are moral and ethical limits to clinical trials.

"These controversies," Harrison said, "suggest that we need to examine ways to improve clinical trials in the future."

Harrison described an example of a model computer analysis system that he developed with his colleagues, Dr. Edwin Alderman and William Sanders, for studying coronary arteries.

The system provides direct visualization of the extent of atherosclerosis in arteries so that treatments may be applied at earlier stages of the disease.

The computer is programmed to provide volumes, diameters, areas and degree of narrowing of multiple segments of the vessel. These variability limits are used to set boundaries and quantify vessel changes in atherosclerosis.

"The value of this technology is that it provides a continuous variable measure, from small lesions to large ones," Harrison said. "Every participant in the study contributes a value rather than a small percent of patients having death or infarction (heart attack) as occurs in regular clinical trials."

Numerous technologies now available will permit new horizons for clinical trials in the next two decades, he predicted, and "we should use them."

—Spyros Andreopoulos

Asia-America exchange in the works

A program promoting the exchange of medical education and research between Asia and America has been established by Stanford University School of Medicine's department of medicine, according to Dr. Thomas Raffin, assistant chief of the department.

Stanford University-Asia Medical Fund (SAMFUND) will sponsor the exchange of research fellows, and eventually faculty and educational and research programs between universities in Asia and Stanford, he said. The first group of up to four fellows is expected to arrive at Stanford for the 1983-84 school year for up to a three-year stay.

"The purpose of this funding is to improve health care and increase communication and understanding," Raffin said. "By bringing together people from the Pacific Basin and America to compare and exchange ideas, a framework will be established for learning, understanding, and growth."

Specifically, Raffin said, the fellows will "work in some of Stanford's top investigative laboratories. They can then take their newfound knowledge and expertise back to their own universities and continue developing their own careers."

In turn, he continued, "there is exciting opportunity for Stanford fellows and faculty to spend time at Asian universities investigating specific diseases—bilary tract disease, hepatitis-B, and certain cancers indigenous to those areas.

"Stanford researchers have a unique opportunity to collaborate with some sophisticated programs of investigative groups at these universities," Raffin said.

From idea to reality

The program was spearheaded by Raffin, who first traveled to Japan and Hong Kong in 1978 to explore the possibilities of setting up such an arrangement. In 1981, the Ishiyama Foundation of San Francisco contributed $500,000 to the Department of Medicine to establish SAMFUND.

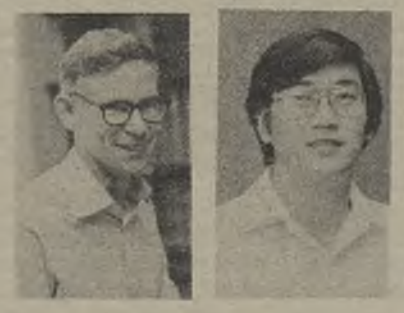
The same year, Dr. Anthony Felsovanyi, clinical professor of medicine, traveled to Hong Kong with Raffin to establish an advisory board of civic and corporate leaders, who contributed another $500,000 to SAMFUND.

The organization's board of directors was formed in 1982. In addition to Raffin and Felsovanyi, the board includes Drs. Kenneth Melmon, chairman of the Department of Medicine and of the board; Richard Popp, vice-chairman of the Deparment of Medicine; and Ferid Murad, chief of medicine at the Palo Alto Veteran's Administration Medical Center.

The advisory board in Hong Kong is responsible for helping to support the Hong Kong-Stanford program. Similar boards will be established in other Pacific Basin areas including Japan and possibly mainland China.

Raffin said he hopes SAMFUND will attract sufficient funding to support these academic exchanges. Said Melmon of the program, "This is an important academic program with great potential for strengthening medical investigation in Asia and at Stanford."

—Shirley Kraus



Robert Baldwin Peter Kim

Professor & student will SMASH Friday

This Friday's S*M*A*S*H lecture will be delivered by Dr. Robert Baldwin, professor of biochemistry, and Peter Kim, a fourth-year student in the Medical Scientist Training Program.

They will discuss "Experimental tests of the Prediction of Protein Folding," 4:30 p.m. Nov. 19 in the Fairchild Auditorium, with a TGIF gathering afterwards in the lobby.

Herpes simplex. . .

Trimming fiction from facts

Despite a "herpes hysteria" arising from increasing media coverage of the sexually transmitted virus, the disease is probably not as infectious as most people believe, said Dr. John Mills, a visiting scholar in infectious diseases from the University of California, San Francisco.

Mills spoke Tuesday night, Nov. 9, in an overview lecture on the clinical problems with herpes simplex viruses in adults, the first of a three-part series of public talks on the viruses.

"Herpes, both in the perception of the physician and the lay public is, at the present time, a fairly serious problem," Mills said. "What is not clear is whether there has been a real increase in the incidence of this disease in recent years."

Though Mills cited one study that showed a nearly ten-fold increase in the reporting of herpes simplex outbreaks between the years 1966 and 1980, he said the jump could be simply a result of the public's increasing awareness of the disease and willingness to report symptoms to physicians.

The two herpes simplex viruses that afflict at least 15 million Americans with recurrent cold sores and genital infections stem from a family of viruses that include those causing chicken pox, shingles, and mononucleosis.

Currently there is no cure for herpes simplex infection. Though outbreaks of the open sores symptomatic of the infection usually last less than a week or two, and may occur only once or as often as several times a year, the virus remains in the body as long as the person lives, and can become active at any time without warning.

Nearly 90 percent of all Americans have antibodies to herpes simplex virus I (HSV-I), indicating that sometime during their lives they were exposed to the infection, according to a recent study. Usually associated with milder, less frequent outbreaks of blisters than HSV-II, HSV-I most often causes sores in and around the mouth (though genital infections are possible), and can be contracted simply through contact with an infected person's saliva, Mills said.

HSV-II, the virus most often associated with genital inflammation, occurs less frequently—in between one and ten percent of all Americans—the same study showed. Current commercially available blood tests don't distinguish between HSV-I and HSV-II, so patients may learn they have contracted herpes, but not know which variety they have.

Immunologic tests and probes using monoclonal antibodies can accurately identify each virus strain, and should be ready to move from the laboratory to the physician's office within three or four years, said Mills, who is chief of infectious diseases at San Francisco General Hospital.

Despite its reputation, HSV-II "is not terribly infectious," Mills told the crowd. "Everybody worries a bit about getting the infection from a toilet seat or towel, but it takes sexual contact or the equivalent for transmission of the virus."

Because herpes has a thin protein coat that dries out easily, the virus can't survive more than 24 hours outside the body and has a tough time infecting healthy, unbroken skin. "Skin-to-skin or mucous-to-mucous contact is required for infection," Mills said.

People with herpes frequently ask whether they can inadvertently transmit the infection to a sexual partner during the disease's dormant periods. The answer is a qualified no, according to Mills. "You probably don't get herpes from people who are completely asymptomatic," the scientist said, "but because symptoms can be mild most individuals don't realize they have the disease."

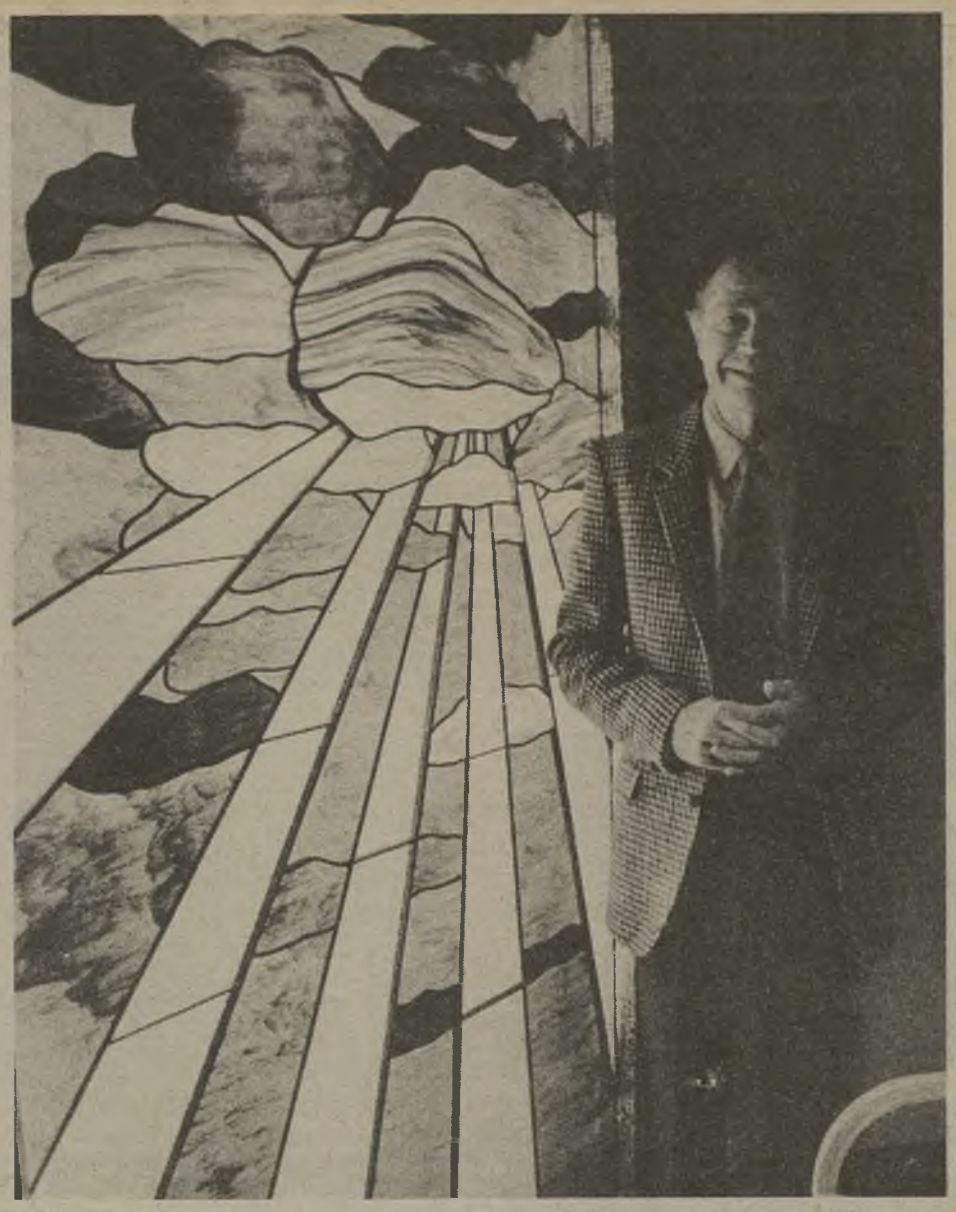
"Barrier" birth control methods such as condoms, and "open, empathetic communication between sexual partners" can help minimize the risk of infection, Mills said.

Dentists, anesthesiologists, and other health professionals who work in patients' mouths should wear rubber gloves, he said, to avoid contracting the oral form of the virus.

While herpes is bothersome but not life-threatening for the great majority of adult sufferers, the infection can be fatal in newborns. Dr. Anne Yeager, associate professor of pediatrics at Stanford, described the risks for fetuses and infants in contact with infected adults in the second lecture of the series last night, Nov. 16.

Dr. Thomas Merigan, professor of medicine in infectious disease, will profile current and future treatments for the disease in the final lecture Nov. 23. The presentation will be held at 7:30 p.m. in the Medical School's Sherman Fairchild Auditorium.

—Deborah Franklin



Chaplain Ernle Young takes pride in the new chapel's large stained glass window.

Hospital's new chapel opens today after year of being missed by all

The dedication ceremony for Stanford University Hospital's new chapel is scheduled for 4 p.m. today, culminating an open house scheduled to begin at 2 p.m.

Located across from the Hospital gift shop, the new facility is being completed just about a year after the former chapel was eliminated as part of the Patient Admitting Services' renovation.

The chapel features a floor-to-ceiling stained glass window, created by artist Ginny McAfee, and funded by the Medical Center Auxiliary. The window symbolizes "hope in the midst of pain and despair," said Dr. Ernle Young, chaplain. It contains no sectarian elements, he added, to maintain the Hospital's non-denominational policy. The window is bordered by tiles from the University's original Memorial Chapel, which was rebuilt after the 1906 earthquake.

"The chapel has really been missed," Young said. "Staff as well as families and patients need a quiet place available to them."

Young, who organized the chaplaincy at SUH 10 years ago, said he and his colleagues, Reverend Frank Geer and Father John Hester, serve those who seek them out by simply responding to their needs—ranging from finding accommodations at a local hotel or buying an airline ticket, to carrying out religious functions or just listening to people express their feelings.

"The most challenging function for me is to deal with people's existential questions about life and pain, and helping them find satisfactory answers," Young said.

About 65 percent of the patients Young deals with are critically or terminally ill and are concerned with issues such as the right to die and the quality of life. In such cases, Young said he tries to present all options to families and patients, and help them decide what may be the best for all involved.

Young said he encourages local clergy to continue caring for members of their congregations in the Hospital. "Our offices serve as a base for clergy. We don't want to come in between them and their members, but rather we are here to supplement their services."

The chaplains' offices are located in C112A, next door to the new chapel, and they can be reached at 497-5101. The chaplains are there during regular business hours, and are always on call.

CRONA convention: holistic health

The public is invited to attend "The Nurse as Healer: Self and Others," a program planned for the 1982 CRONA (Committee for the Recognition of Nursing Achievement) Convention, to be held Nov. 22 and 23 in the Fairchild Auditorium.

Topics of the first day will center on holistic health, with continuing education credit available. Speakers Joyce Lechuga and Katharine Riordan will address such issues as "Disease, Holistic Health and Personal Responsibility," "Concept of Stress/Message and Benefits of Illness," "Mind/Body Relationship in Creating Illness and Health," "Role of Nutrition in Health Treatment for Healthy, Vital Nurses," and "Experiential Visualization in Healing."

The registration deadline is Nov. 18 for both days' programs and Monday's banquet dinner at Rick's Swiss Chalet in Palo Alto, which will include a discussion by Bonnie Berg of "Women's Health from a Holistic Perspective." Fees will be charged for that day.

Tuesday will consist of the CRONA business meeting, including a talk by President Hedy Dumpel on "CRONA's Art of Collective Bargaining," as well as discussion of bylaws, resolutions, and budget. Attendance at the business meeting is mandatory for area representatives.

For further information call the CRONA office in Palo Alto at 325-2801.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

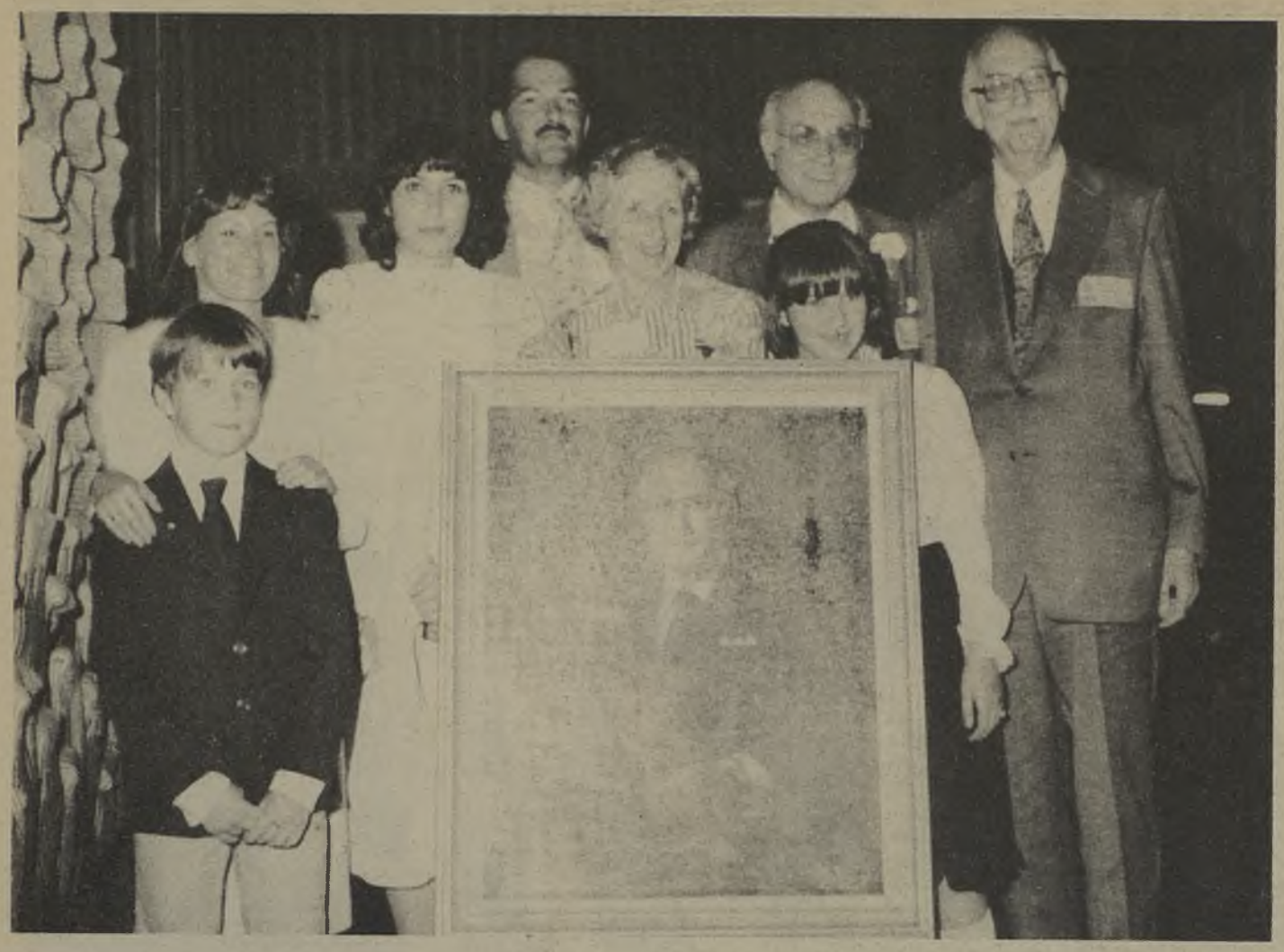


PHOTO BY LEONARD WINOGRAD, DEPARTMENT OF DERMATOLOGY

A FEAST FOR THE FABULOUS FARBERS—More than 350 colleagues, former dermatology residents, and patients gathered last Friday at the Sharon Heights Country Club to pay tribute to Dr. Eugene M. Farber (second from right), professor and chairman of the department of dermatology at Stanford for the past 35 years. They presented him with an oil painting which will hang in the Medical School's hall of fame with portraits of other leaders. Farber's work has been in skin disease, particularly psoriasis. Pictured here with him (from left) are Dr. Farber's grandson Ben, daughters Charlotte and Nancy, son Don, his wife Ruth, granddaughter Elinor, and brother Dr. Jay Farber.

Construction Corner

Item: Construction involving the expansion of offices for the Chaplaincy Service and the relocation of the chapel on the first floor of the Hospital is completed. Besides the chapel, the area will provide additional space for the Hospital chaplains as well as visiting local clergy. (*See related story on the chapel dedication, page 13.*)

The construction was done by George MacDonald Inc.; Gordon MacLachlan was the project manager for SUMC Facilities.

Item: The renovation of the Biochemistry Dishwashing area on the third floor of the Medical School is nearing completion. The 968 square foot area underwent remodeling of three rooms and installation of a new moisture barrier for the floor. The installation of new dishwashers and drying equipment will complete the project.

Norm Berge of the SUMC Facilities Office is project manager, and Michael E. Morgan Construction is the contractor.

Editor's note: *This new regular column is prepared by members of the SUMC Facilities Department.*

...News Notes...News Notes...News Notes...

The Lane Medical Library is holding a booksale Wednesday, Dec. 1, in the Sherman Fairchild Auditorium Lobby.

From 8 a.m. till 12 noon, books will sell for $2 each. From 12:30 till 4 p.m., the price will be $1. Rare books and special items will be individually priced.

Proceeds of the sale go towards new library acquisitions.



Barbara Battino

Barbara Battino has been appointed associate director of Hospital Public Relations effective Nov. 8, announced Spyros Andreopoulos, director of the Office of Communications.

Battino will be a staff member of the Office of Communications, but will report directly to Sheldon King, executive director of SUH. She will be chiefly responsible for organizing and implementing the Hospital's public relations program. Initially her activities will be directed in support of the Hospital Modernization Program.

Battino comes to Stanford from the University of Washington in Seattle, where she served in a similar position with the Health Sciences Center and Hospital. Prior to moving to Seattle in 1978, Battino had served on the public information office staff of Stanford University Medical Center.

She will be temporarily housed in the HMP Office, Room P1095, and can be reached at 497-6645.

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Dr. Robert Glaser, former vice president for medical affairs and dean of the School of Medicine (1965-70), was elected president of the American Clinical and Climatological Association at the association's annual meeting last month in Tucson, Arizona. He will serve in the post until October 1983.

Glaser has been a trustee of the Henry J. Kaiser Family Foundation since 1970, and has been its president and chief executive officer since 1972. He currently serves as consulting professor of medicine at Stanford. He is a director of the Palo Alto Medical Foundation as well as several companies..

As president of the American Clinical and Climatological Association, Glaser succeeds Dr. George Cahill, professor of medicine at Harvard Medical School.



Ronald Castellino

Dr. Ronald Castellino, professor of radiology, has been elected a member-at-large of the 12-person executive committee of the Faculty Practice Program, announced Don Tower, executive director of the FPP.

Castellino's election was announced this week following mailed balloting of the entire FPP constituency.

Castellino serves as director of the Division of Diagnostic Radiology.

The executive committee schedules weekly meetings to direct the FPP, the organized medical group practice of the faculty in the clinical departments of the Medical School.

* * * *

The Clinic Administration offices have moved from their previous locations on the first floor of the Boswell Building. Vera Waechter, R.N., assistant director of Clinic Administration, and Vicki Stewart, administrative assistant, now occupy rooms A367 and A369. Their phone number remains 497-6323.

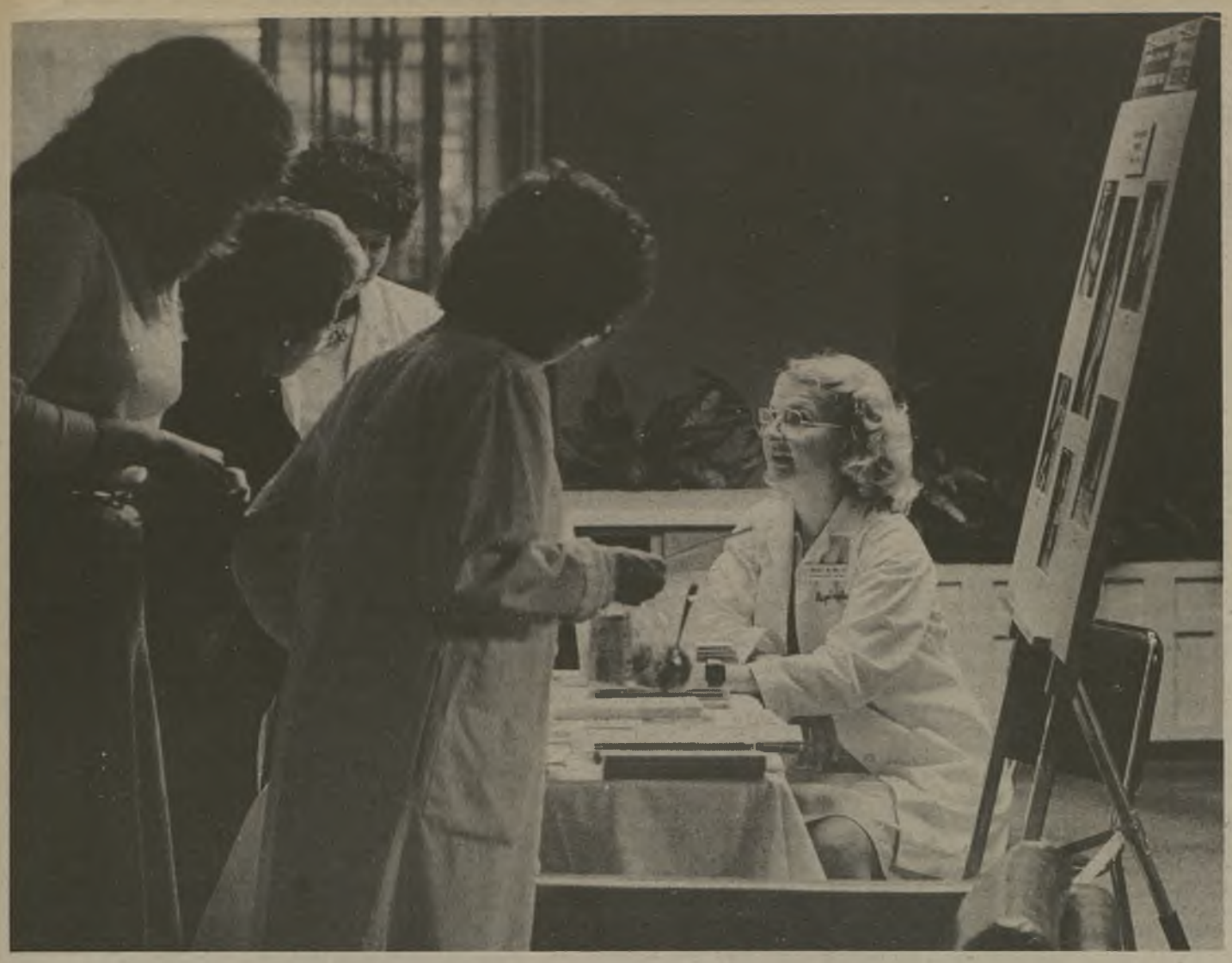
Also, Donald Tower, executive director of the Faculty Practice Program, is now located in room A333 and can be reached at 497-7293.

* * * *

Dr. Iris Litt, director of adolescent medicine and associate professor of pediatrics, received the 1982 Adolescent Health Award from the American Academy of Pediatrics (AAP) at the Academy's annual meeting last month in New York City.

Litt was recognized for her leadership in bringing quality health care programs to teenagers in prison. As medical director of the Juvenile Detention Center for the city of New York from 1968-73 and of the Adolescent Reception and Detention Center at Rikers Island Health Services in N.Y.C. from 1974-76, Litt developed a model program which has helped bring about significant changes in prison health care for adolescents.

In her present position at Stanford, Litt has continued to serve as a consultant to detention facilities and prisons on issues of health care.



A week-long exhibit outside the cafeteria area marked Stanford's recognition of National Respiratory Therapy Week, Nov. 7-13. Here, respiratory therapist Margaret Melancy runs a noon hour information booth as interested staff members and visitors inquire and learn about the burgeoning field.

Sokol, 85, dies at home; memorial Thursday

Emeritus Prof. Anthony E. Sokol of the Stanford Department of Political Science, a world authority on the Austrian navy, died Thursday, Nov. 11, at his Palo Alto home following a lengthy illness. He was 85.

A former officer in Franz Joseph's navy, He received Austria's highest civilian honor, the Cross of Honor, First Class, in Science and Art for his 1968 history, *The Imperial and Austro-Hungarian Navy*.

While confined with an oxygen tent 24 hours a day in his bed at home, he continued to write until his death.

Survivors include his wife, Else, and a son from a previous marriage, Otto, a Stanford educated professor of anatomy at the University of Alabama.

Cremation is planned, with ashes scattered at sea. The family prefers contributions to heart and cancer research.

Born March 28, 1897, in Vienna, Sokol received his B.S. degree at Mississippi State Teachers College in Hattiesburg in 1928, and came to Stanford the following year as a teaching assistant. After obtaining his master's and doctorate degrees in German here in 1930 and 1932, he joined the faculty as an assistant professor in 1934.

During World War II, he organized the teaching of Malay languages for the Far Eastern Branch of the Army Specialized Training Program, established at Stanford in 1942.



Anthony Sokol

In 1945, when Stanford organized a new Department of Asiatic and Russian Studies, he was named its executive head, remaining in that capacity until 1957, when the Department of Asian Languages was formed. A research associate at the Hoover Institution, he then joined the political science faculty.

In 1961, his book on *Sea Power in the Nuclear Age* was published. While he reached normal retirement age in 1962, he continued teaching for more than a decade. His 1970 freshman seminar on "The Position of Women in a Historical Society" was one of the first Stanford courses on the subject.

He advised colleagues on establishment of the Stanford study center in Vienna and taught there in 1968 and 1972.

He sent hundreds of books to the Austrian National Library and the Austrian War Archives.

In 1976, he published a book on *The Attempts of the Hapsburg Emperors of the 16th and 17th Centuries to Establish a German Imperial Navy*.

Following retirement, he travelled extensively with his wife and pursued his interests in writing, reading, ships and photography.

Memorial service

A memorial service will be held at 2 p.m. Thursday, Nov. 18, in Memorial Church. Associate Dean of the Chapel Ernle Young will preside.

The eulogy will be given by John W. Dodds, professor emeritus of English and former director of special programs in humanities, a long-time faculty colleague of Sokol.

Med Center Calendar

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, NOVEMBER 17

Basic Science Research Colloquium: "Steroid Regulation of Gene Expression"—Dr. Gordon M. Ringold. 5 p.m., M104.

Dept. of Neurology Grand Rounds: "Some Newer Techniques in Diagnostic Electrophysiology"—Dr. Leslie J. Dorfman. 5 p.m., Palo Alto Veterans Administration Medical Center, Bldg. 7, Room B108.

Clinical Pharmacology Seminar: "Tolerance to Effects of Psychotropic Drugs"—Dr. Stephen Henauer and Edward Gallagher, Ph.D. (of the Palo Alto Veterans Administration Medical Center). 4 p.m., M110.

Div. of Orthopedic Surgery Grand Rounds: "Monteggia and Galeazzi Fractures"—Dr. Frederick Reckling (Univ. of Kansas). 8:30 a.m., M114.

THURSDAY, NOVEMBER 18

Dept. of Dermatology: "Local Facial Flaps"—Dr. Lee Smith. 8 a.m., Dermatology Library, R136.

Dept. of Medicine Grand Rounds: "Pathogenesis and Treatment of Gout"—Dr. Lloyd H. Smith (UCSF). 8:30 a.m., Fairchild Auditorium.

Katherine D. McCormick Lecture: "Obesity: Why the Losing Battle?"—Dr. Judith Rodin. 5 p.m., Fairchild Auditorium.

Dept. of Neurology: First of an annual lecture series on myasthenia gravis—Dr. Daniel Drachman (Johns Hopkins). 5 p.m., M104.

FRIDAY, NOVEMBER 19

Child Psychiatry Grand Rounds: "Children of the Holocaust"—Drs. Jill Armbrust and Peter Oswald (Langley Porter Neuropsychiatric Institute). 11 a.m. till 12:15 p.m., Children's Hospital at Stanford, central conference room.

Dept. of Pathology, Surgical Pathology Conference: "Interesting Infectious Disease Cases"—Dr. Luis Fajardo. 8 a.m., L201.

MONDAY, NOVEMBER 22

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Tympanometry"—Ann L. Kuklinski, M.S. and Holly Hosford-Dunn, Ph.D. 7:30 a.m., R117.

TUESDAY, NOVEMBER 23

Dept. of Dermatology: "Differential Diagnosis of Eruption of Diaper Area"—Dr. A. Jacobs. 10 a.m., Dermatology Library, R136.

Progress in Medicine Lecture Series on Sexually Transmitted Herpesviruses: "Present and Future Methods of Prevention and Treatment"—Dr. Thomas C. Merigan. 7:30 p.m., Fairchild Auditorium. The public is welcome.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Senate report

Proliferating curriculum may unfairly burden CUS

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 5

Summary of Actions taken by the Senate on November 11, 1982 at its meeting on 11/11/82, the Senate took the following actions:

1. The Senate approved, by unanimous voice vote, the revised charge to the Committee on Undergraduate Studies (SenD#2449) submitted by the Committee on Committees, subject to Professor Ryan's friendly amendment that the paragraph on ex *officio* membership be worded as follows:

> The Vice Provost for Undergraduate Education, the Associate Dean of Humanities and Sciences for Undergraduate Programs, the Dean of Engineering, and the Registrar, or their respective designees, shall be *ex officio* members of the Committee without vote.

2. The Senate accepted, by unanimous voice vote, the Annual Report of the Committee on Undergraduate Studies (C-US) for 1981-82.

Minutes of the Fifteenth Senate of the Academic Council November 11, 1982

(Draft subject to approval by the Senate on December 2, 1982). A meeting of the Fifteenth Senate of the Academic Council was held on 11/11/82, beginning at 3:16 p.m. in Room 180 of the School of Law with Chairman A.L. Fetter presiding. Present were 34 Representatives, 8 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 10/28/82 (SenD#2444)were approved as submitted.

Report of the Steering Committee

In the Report of the Steering Committee, Chairman Fetter reminded the Senate members that the Senate would not meet in two weeks, since the next regular meeting date falls on Thanksgiving day. The next Senate meeting will be held on Thursday, December 2, 1982. It will be the last Senate meeting of Fall Quarter, and will include on the agenda a report on Determination of Indirect Costs by Vice Provost Lieberman.

By consensus, the Senate deferred consideration of a Committee on Committees report on a revised charge to the Committee on Undergraudate Studies until after the Annual Report for 1981-82 had been discussed, since the changes had been first recommended by the 1981-82 C-US.

Report of the President and the Provost

Both the President and the Provost yielded the time reserved on the agenda for their regular reports to the Senate in deference to the Preliminary Long Range Forecast report to come later in the meeting.

Annual Report of Committee on Undergraduate Studies (C-US)

Chairman Fetter called upon Professor Ellsworth (Psychology) to present the Annual Report for the 1981-82 C-US. Professor Ellsworth pointed out that the report contains an up-dated timetable for the review of undergraduate academic programs outside departments. She summarized the program reviews completed in 1981-82 and the actions taken on those programs, in addition to citing the reviews postponed until 1982-83. She also pointed out that C-US had not appointed a Subcommittee on Distribution Requirements to act for it on that matter in 1981-82, but had elected to do the work itself. While the activity was valuable in informing the C-US members about the issues involved in satisfying the distribution requirement course criteria, it was enormously time-consuming. In the process, a number of problems with the distribution criteria were identified and referred to this year's Subcommittee on Distribution Requirements for consideration. Last year's C-US also made recommendations about how best to represent the new administrative structure for undergraduate studies on this year's C-US.

Chairman Fetter called on Professor Paul Seaver, Chairman of the 1982-83 C-US, to comment on the current committee's plans on matters related to work begun by the 1981-82 committee. Professor Seaver reported that the forthcoming agenda for C-US appears to be overwhelming. C-US is now instructing its new Subcommittee on Distribution Requirements and is preparing to receive two reports from its Subcommittee on Residential Education and Advising, one on residential education (Autumn Quarter) and one on Ethnic Studies (Winter Quarter). In addition, C-US will be receiving a series of program reviews. Two have already been received: reviews of Humanities Special Programs and of Social Thought and Institutions. A number of other program reviews are to be received shortly, e.g., those on Human Biology, International Relations, Latin American Studies, and Mathematical Sciences.

After these have been reviewed, there are still others, e.g., Overseas Studies, Freshman-Sophomore Seminars, SWOPSI, SCIRE to be reviewed this year. C-US has also been requested to examine the proliferation of interdepartmental majors with what appear to be slightly different emphases, and also to consider how departments might encourage language study beyond that required by the University.

In the discussion of these reports, it was noted that Senate actions have consistently added to the work-load of this traditionally hard-working committee until the accumulated agenda threaten to become unmanageable. The suggestion was made that reviewing programs might be a separate function assigned to a subcomittee of C-US. Dean Wessells suggested that the new Curriculum Committee in the School of Humanities and Sciences might prove a useful body in exercising oversight on those interdepartmental undergraduate programs within the School. President Kennedy added that the past decade or so had seen the growth of a largely unregulated curriculum. Up to now, C-US has borne the burden of the oversight because of its fine leadership and the confidence placed in it by the Senate. Now the Senate and the Schools are beginning to worry about the proliferating curriculum. This concern should result in spreading the workload more equitably so that C-US won't be unduly burdened.

At the conclusion of this discussion, Chairman Fetter called on Chairman Mellor for a Committee on Committees' report on a revised Charge to the Committee on Undergraduate Studies. Chairman Mellor pointed out that the revised charge (SenD#2449) had originally been proposed by the 1981-82 C-US, had been later endorsed by this year's C-US and is recommended to the Senate by the Committee on Committees.

The Associate Dean of Humanities and Sciences for Undergraduate Programs asked if C-US still carries the responsibility for monitoring teaching appointments made outside a department or School. Several programs where this is still true were cited as examples. Other programs formerly under C-US have now been transferred to a department or a School; in these cases, the new administrative body is expected to exercise autonomy in the appointment of teaching staff.

After a discussion of the paragraph specifying *ex officio* membership in C-US, Professor L. Ryan moved that the words "Associate Dean of Humanities and Sciences for Undergraduate Programs" replace the words "Dean of Humanities and Sciences" both because of the importance of that membership to the image of the office and because the Associate Deanships referred to in Humanities and Sciences and Engineering are not parallel appointments. Chairman Mellor accepted the change as a friendly amendment, noting that the charge had come from C-US with the wording suggested in the Ryan amendment.

The revised charge, as amended, was approved by unanimous voice vote.

Following this vote, the Annual Report of C-US for 1981-82 was accepted by unanimous voice vote.

Preliminary Long Range Financial Forecast

At the outset of his report, Provost Hastorf thanked the Steering Committee for allotting time on the Senate agenda more than a month early for a Preliminary Long Range Financial Forecast. The signs of financial difficulties ahead should be given early attention, he said, but early attention has to be based on tentative assumptions.

About a year ago, when the first signs appeared that Stanford was beginning to live beyond its means, the Provost asked the units of the University to reduce the budget by one percent in 1981-82 and to expect to do so again for 1983-84. It now appears that larger budget reductions will be necessary.

There may well be a cycle in which an institution like Stanford operates for some years on a balanced budget and then a series of outside forces combine to push the budget off balance. That happened to Stanford some years ago and resulted in the University's Budget Adjustment Program (BAP) and the Subsequent Budget Equilibrium Program (BEP). It's happening again now. Various forces have pushed and are pushing us out of balance: inflation, energy costs, federal action (both regarding student aid and research costs), and our own initiatives in proposing new ideas and new programs.

Other institutions like ours have reported the same phenomena. They have dealt with it in different ways. Northwestern put an absolute freeze on faculty and staff salaries; MIT announced a three-year budget-cutting program to remove at least $10 million from the Operating Budget; legislators in Washington State and in Michigan have required drastic cuts in public-supported higher education; Ohio passed a faculty salary bill with insufficient funds to pay tenured faculty and with the comment that the legislators had never believed in tenure or been sure that the faculty worked long enough hours to deserve their pay.

The Provost proposes that Stanford try now to get the budget in balance, hopefully within a two-to-three year-period, and without losing our impetus to improve, e.g., Western Culture, expansion of the LOTS facility, the Humanities Center at Stanford, or the outfitting of science laboratories.

Our expenses have been on a curve of steady escalation; our income is now starting to deviate from that escalation curve. We can lower our expenditures temporarily with budget cuts and then hope to return to our earlier level and rate of increase in a few years. That's not a likely scenario.

In another possible approach to the problem, we can lower our expenditures through permanent budget cuts and return to a lower level of expenditure but maintain the same rate of escalation. That is an optimistic scenario.

Finally, we can reduce our expenditures to a lower level and adopt a reduced rate of escalation as well. This is the scenario we need to consider if we are to live within our means and, at the same time, retain some impetus.

At this point, the Provost strongly emphasized the tentative nature of the assumptious on which these early plans are based. These assumptions are necessary to long range planning, but they are not fixed. The assumptions may change, but the issues will not.

He then turned to the assumptious on which current estimates of the problem are based. The key assumptions include:

1. An estimate of inflation (based on the GNP deflator rather than the CPI) of a six percent inflation rate over the next three years.
2. Income projections
   a. An estimate of tuition increases for the next three years of 12 percent, 9 percent, and 9 percent (i.e., inflation plus six percent, inflation plus three percent, and inflation plus three percent). This estimate reflects a conscious attempt to lower the rate of escalation in tuition increases. The reasons for it are apparent, but it has obvious impact upon University income.
   b. An estimate of the rate of indirect cost recovery which will increase over the next three years: In 1983-84, the possible range is from 69 percent (the present rate) to 73 percent; in 1984-85, the range of possible rates is 75 percent-79 percent; and for 1985-86, 81 percent-85 percent. These estimates are based on the enduring notion of full recovery of the indirect costs of doing research. The rate is negotiated with the government and dependent upon our research volume. Because the volume of research declined in 1982-83, our indirect cost recovery rate was lower than expected and we now estimate a gap of $3 million which must be closed before our projected income for 1982-83 matches our projected expenditures.
   c. An estimate of research volume somewhat below the present rate of inflation, i.e., inflation minus one percent (adjusted downward from an earlier estimate of a research volume somewhat above the current rate of inflation, i.e., two percent above the present six percent estimate).

The Provost cautioned that estimated income for a given budget year is based in part on indirect cost recovery rates; those recovery rates may have to change within the ranges given for each year. If they do, such changes will affect the anticipated budget totals.

3. Projections of expenses
   a. An estimate of salary increments for the next three years of 7-8 percent (inflation plus one-two percent), reduced from an earlier projection of

continued on next page

Senate/ continued from page 16

inflation plus 2.5 percent. The University rejects the notion of a salary freeze or the weakening of its present good competitive salary position with respect to comparable institutions.

b. An estimate of about $12.2 million for student financial aid per year. There is no plan to cut that aid; we are absolutely committed to a need-blind admissions policy.
c. A general estimate of other expenses at the rate of inflation plus one-two percent, except for utility costs which run at inflation plus three percent.
d. A general estimate of consolidations and improvements at 1.5 percent of the base for each of the next three years, most of it for 1983-84 committed to ventures already begun, e.g., Western Culture, the improvement of student computing facilities, and other academic ventures.

After setting forth the assumptions in some detail, the Provost directed the Senate's attention to the anticipated budget totals and the estimated gap between income and expenditures for the years 1982-83 through 1985-86. Instead of a balanced budget in 1982-83 as expected and approved for this year, the new estimates project a $3 million gap. Two actions are currently being taken to close that gap:

1. Reducing the contribution from the Operation Budget to the Facilities Reserve by $2 million. This reserve is used to refurbish classrooms and to rebuild and re-equip laboratories.

2. Asking all units to begin, with the 1982-83 budget, to "holdback" expenses whenever possible, (e.g., to leave a vacancy unfilled, etc.), and to contribute that amount to the central core.

For the year 1983-84, a gap of $1.6 million had already been forecast and the request for a one percent budget reduction was a result of that forecast. Now it appears that the gap will be $9.6 million. The forecast proposes a number of methods for closing that gap and also anticipates budgeting a $1 million deficit. The deficit budgeting prevents unnecessary wrenching of programs to effect all the cuts simultaneously. It also allows for the possibility that the gap may have been overestimated. In the latter case, the deficit may not be so high and the reduction of the contribution from the Operating Budget to the Facilities Reserve need not be so great.

Other actions proposed to reduce the 1983-84 gap include:

1. Instituting a routine charge on all restricted gifts spent outside the Operating Budget, as is currently being done by most other comparable institutions. This is estimated to bring in $1.2 million annually.

2. Reducing the amount for consolidations and improvements. This will reduce, but not completely eliminate, the money available for new programs.

3. Exercising central initiatives to increase income or decrease expenses in a number of ways, including:

a. decreasing energy expenditures,
b. shifting from prepaid Industrial Park leases to annual leases,
c. moving sabbatical leave budgeting to the staff benefit pool.

With these and other such initiatives, it is the University's goal to achieve $2 million in savings.

4. Cutting the budget by about 2.3 percent (by present projections) of the applicable base. Such a cut would not apply, for example, to Financial Aid.

In 1984-85, the proposal is again to reduce the consolidation and improvement contribution from the Operating Budget and to count on budget cuts of about 2.8 percent along with the generation of new income to close the remainder of the $4.5 million gap.

The budget cuts total five percent. That may not be enough. It may be necessary to extend the process into 1984-85 even though the gap by then is expected to be relatively small.

Actions already taken include:

1. A letter to Deans and Directors asking them to think about how they could get a five percent reduction in their budgets. No unit will be free from this budget objective. Differences are expected, however, in the amounts various budgets contribute.

2. Several groups are already at work on these problems. One is a budget group with representatives from the Provost's staff and from the office of the Vice President for Business and Finance. The President meets with this group, as will a new University Fellow from Psychology, Professor Ewart Thomas.

The Advisory Committee on Budget Planning (C-APB), chaired by Professor R. Cannon and advised by last year's chairman, Professor H. Riggs, is also considering the problem. The aim is to get maximum faculty involvement in the hope of getting through the process with as much thought and care as possible.

In the discussion which followed the Provost's report, it was made clear that the 1982-83 gap arose from a drop in income (particularly a reduction in indirect cost recovery dollars) which was not accompanied immediately by a commensurate drop in expenditures. Only certain indirect costs are variable; others (e.g., space, utilities) remain fixed commitments and thus contribute to the size of the gap.

While inflation is somewhat less than expected this year, the long range forecast results are not very sensitive to relatively small differences in the inflation rate, e.g., six percent rather than eight percent. In fact, certain components of inflation, like energy, seem to exert greater impact on the University's budget than does the overall inflation rate itself.

It was also emphasized that failure to negotiate the higher indirect cost recovery rates with the government in future years would result in even larger gaps between income and expenses.

Stock market investments do contribute to the income picture, but are not a major factor. University policy for utilizing endowment incorporates a smoothing principle that slows the rate of change in utilization in relation to market value of the proposal. A rising market, then, gets reflected over time rather than all at once.

Gifts feature in income in several ways. The 1982-83 fund-raising year is expected to exceed the total achieved last year. Part of those funds will go directly to the Operating Budget; part will go to the endowment and will be represented in the budget only by the pay-out on the principal. A major strategy being pursued now is to shift the emphasis from restricted to unrestricted gifts in order to achieve a higher proportion of gift funds with greater flexibility. The new charge on restricted gifts will also help bear some of the operating costs of the University in support of those expenditures. There will be no dramatic changes; preserving the long-range steady flow of gifts is of the highest priority.

There was some discussion of the cyclical nature of these budget problems and the ability to forecast them, with the comment that at least the present problem seems less formidable than the last major budget crisis (BEP). The Provost agreed that there is improvement in forecasting, but pointed out that some factors probably cannot be adequately predicted, e.g., political changes at the federal level, or even local perceptions of the federal climate for research proposals in a given field.

Discussion followed concerning the link between indirect cost recovery rates and the volume of research. Projected cost recovery rates clearly are sensitive to current research volume. For the individual researcher, higher indirect cost recovery rates are a substantial limitation on productivity with the direct costs of a given grant.

There is always the question of the point of diminishing returns on indirect cost recovery rates. The Vice Provost for Research pointed out that the volume drop affecting us this year occurred last year at the old cost recovery rates.There will be more evidence to help us answer that question by the end of this year.

There was also the question of what was being planned in the direction of reducing indirect costs at Stanford, as is currently being done at MIT. The Provost indicated that Stanford, like MIT, intends to look hard for possible cuts in the services (administrative and other) which contribute to indirect costs. It is reported, however, that MIT also plans to cut academic programs in the Humanities and Sciences, putting on hold its plan to become a complete University.

Budget officers were also asked what particular restricted funds are to be newly charged, and if that decision is to be applied University-wide. The Provost responded that the formula Schools, i.e., GSB and Medicine, would retain income derived from such charges. These charges represent an attempt to spread the costs of expenditures more equitably, rather than expecting unrestricted funds to bear some of the indirect costs for projects funded by restricted gifts. Stanford is one of the last institutions of its kind to institute such a charge, though it is not done by all institutions in such a direct way.

In commenting on the politics of indirect cost recovery rates, President Kennedy responded to a suggestion that it might be inadvisable to consider raising the indirect cost recovery rates substantially at a time when NIH had recently protested current rates as too high. He pointed out that NIH did not attempt to change current rates but, rather, attempted to withhold cost recovery funds already owed at previously negotiated cost return rates. This is a very different matter.

The pervasive notion that university cost return rates are too high is contradicted by the fact that in private industry and nonprofit research centers they are very much higher. The government's policy is now full recovery of indirect costs. Whether or not the government and universities will adhere to current policy will depend on the intersection of many factors: what's happening to rates and volumes in institutions like Stanford, the perceptions of legislators and executives in the Federal Government about the appropriateness of these rates, and the perceptions of investigators about the consequences on research of high indirect cost rates.

At Stanford in the past, any investigator caught in a redistribution of direct and indirect funds at a time when the indirect cost rates change has been able to appeal for help to a special University fund. Even with the current budget problem, such a recource will be available if needed.

With respect to the Schools not covered by this preliminary financial forecast, Provost Hastorf commented that GSB has very little involvement in federally sponsored research and that the School of Medicine's research volume is holding up well.

In response to a question, the percent of expenditure expected as a charge on restricted gifts was estimated to be from 10-15 percent.

It was noted that Stanford's decline in research volume appears to be part of a secular trend in all but the health sciences. The virtual disappearance of grant support from Department of Energy sources has had a major impact in this decline here and elsewhere.

A cautionary note was sounded about using charges against restricted funds to solve the problem. Shifting funds from outside to inside the Operating Budget will spread the costs more equitably but will not produce new money overall.

The question was asked whether or not BAP and BEP actually got us to a slower rate of escalation on costs, as was originally intended. Vice Provost Bacchetti responded that indeed it had, principally in the area of consolidations and improvements. (C&I), which in the days of BAP and BEP had been one of the principal forces in escalating costs. It's expressed as a fraction of the whole base, and at that time was rising at a rate of about 3-3.5 percent annually. It is now down to about 1.5 percent. Other things have been going on, however. For example, from the early 1970s to the early 1980s, the utilities rates went up at a compound annual rate of 25 percent (from $3 million to $13 million in the budget).

The inflationary features and our efforts to keep down the real growth (C&I) probably offset each other under high inflation. If inflation can be held down, controlling C&I will help to suppress that incline of growth.

The comment was made that, over time, Stanford's administrators have maintained the practice of a low budget return from the endowment, ensuring that the endowment would, over the long term, pay a stable proportion of University expenses. The question was, without doing long-term damage to that admirable policy, could we smooth the effect of the current budget problem by taking a somewhat larger proportion of endowment funds over the next few years.

The Provost responded that the probable deficit budgeted for 1983-84, as well as the tight control of facilities expenditures, will provide some smoothing effect, especially since this budget-cutting task is not as severe as that faced with BAP and BEP.

A question was asked concerning the sensitivity of the gap to a change in percentage of salary increases. How much would a change of one percentage point cost? The response was $1 million.

Near the end of the discussion, Dean Wessells commented that a budget cut amounting to over five percent total represents nearly $2 million out of the Humanities and Sciences budget when that School's resources have already been pared thin by BAP and BEP. That's the size of a medium-sized department for Humanities and Sciences. It's going to be a painful process.

Vice Provost Bacchetti commented in response that the good news is that the cuts can be smaller than for BAP and BEP; the bad news is that it's the third time around.

The Provost closed by promising to keep the Senate informed of any changes in basic assumptions which might affect these preliminary projections.

There being no other business, the meeting adjourned at approximately 5:00 p.m.

Clara N. Bush
Academic Secretary

Statistics consulting

A free statistical consulting service, operated by Statistics Department graduate students under faculty supervision, is available to all faculty, staff, and students on Stanford business.

The service is open from 1 to 3 p.m. Tuesdays and Wednesdays, and 10 a.m. to noon on Fridays in Room 107, Sequoia Hall.

Interested people are encouraged to come by for statistical advice in the early stages of the project, so that the consultants can be helpful in the design process. People at any stage of research are welcome, however.

For more information, call Trevor Hastie at 497-2623 or 497-2620.

Current forecast: 6% inflation, 5% research growth, 12% tuition hike

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will focus on administrative services and on educational programs in the humanities and social sciences.

The University of Washington and the University of Michigan have "not very gracefully been asked by their state legislatures to apply the meat axe to their budgets," he added.

In Ohio, the legislature has passed a bill for faculty salaries which fails to cover the dollars needed for tenured professors. Some legislators indicated they never believed in tenure for people who "only work eight or nine hours" in class. This is "an act of considerable naivete," Hastorf observed.

Stanford currently forecasts inflation (the GNP deflator) at six percent annually for the next three years, with salaries growing one or two percent above this rate. Both estimates were higher a year ago.

Stanford has done relatively well in faculty salaries, picking up a percent or two on its competitors. But "we live in a high cost area" and "don't want to get behind," Hastorf said. "We are an institution of people."

This year there was "independent agreement" among economists consulted on the outlook for inflation for 1982-83, Hastorf said. It would not be prudent to "bet too much" on what will happen in the two subsequent years.

The current forecast for tuition is six percent above inflation in 1983-84, dropping to three percent above inflation in 1984-85 and 1985-86. This compares with a tuition increase of 15 percent which took effect this year.

No action on tuition will be taken until the February meeting of the Board of Trustees. The University hopes to lower the escalation in the rate of tuition increases "for obvious reasons," Hastorf said. But the consequences on income are substantial, since tuition provides about 45 percent of the operating budget.

The budget now includes about $8 million in University funds for undergraduate student aid and $4.2 million for graduate students. "We are absolutely committed to maintain aid-blind admissions" for undergraduates, despite "the vagaries from the banks of the Potomac," said Hastorf. "That costs us money."

Research growth slows

Where a year ago the University forecast research volume would grow about two percent above the inflation rate, it now forecasts research volume will trail inflation by about one percent.

The University's current forecasts are based "on the enduring notion of full recovery of indirect costs," Hastorf said. While he "strongly hopes" that the indirect rate will remain at 69 percent in 1983-84, "we may have to look for some increase at some time" during the year, perhaps as much as four percent.

Very preliminary estimates are that the indirect rate could rise to 75-79 percent in 1984-85 and 81-85 percent in 1985-86.

Engineering Dean William Kays suggested there is "a point of diminishing returns on the indirect rate," where further research growth would be curtailed.

Vice Provost Gerald Lieberman, dean of graduate studies and research, noted that the first signs of decline in research volume appeared before the last increase in the indirect recovery rate.

President Donald Kennedy observed that indirect cost recovery rates were "very much higher" for private industry and non-profit organizations with the same sponsoring agencies as universities.

Hastorf noted that the volume of federally sponsored research in the Graduate School of Business was "very small" while research volume in the Medical School was still "holding up very well," better than the rest of the University. Both these schools are outside the University's operating budget.

Prof. Anthony Siegman, electrical engineering, director of the Ginzton Laboratories, said that increases in indirect costs could result in "substantially less" funding for actual research purposes. He asked whether those on University general funds were "pressured to make cuts of the same magnitude."

Hastorf replied that "this is why we have to work together."

He noted that Stanford is currently considering a 10 to 15 percent charge on restricted funds to help support the operating budget, a change which would amount to about $1.2 million next year. Kennedy noted that a survey last year showed Stanford is almost alone among comparable institutions in levying such a "tax."

Prof. G.L. Bach of the Business School supported this change but said: "We shouldn't kid ourselves. This won't make a fundamental dent on the problem. It's taking money from one pocket and putting it in another." Hastorf agreed.

Improvement rate trimmed

Vice Provost Raymond F. Bacchetti, director of University budgets, noted that one major change since the major belt-tightening programs of the 1970s at Stanford has been a reduction in consolidations and improvements—additions like the Western culture program and student computing. Where these formerly were growing at a compound rate of three percent or more annually, now they average about one and a half percent. But they have a very powerful long-run impact on expenditures.

While the recent surge in the stock market may help increase endowment value, Hastorf noted, it is "very volatile." The University already uses a three-year "smoothing" technique to reduce the impact of stock market ups and downs on its income. As a result, if the market enjoys a sustained increase "it will help the long-range forecast, but not a whole lot," said Associate Vice President Kent Peterson.

Asked about gift support, Bacchetti said the University's forecast already assumes another strong year, with efforts to increase the share going to unrestricted support. On a long-term basis, Stanford ranks second only to Harvard in total gift support among private universities.

Bacchetti said that "steady initiatives" were needed to maintain this "very successful record," keeping gift support "high over the long haul." Last year gift support amounted to $70 million.

Prof. Sanford Dornbusch, sociology, suggested that the University might consider temporarily increasing the current payout from endowment to help ease the pending budget crunch.

Hastorf replied that similar results are embodied in the projected deficit for 1983-84 and in the "very tough" cutbacks on classroom renovation and other facilities improvements.

Endowment payout cut

In the 1970s, Stanford reduced the current payout from endowment to help assure that this source of funds would continue to bear its proportionate share of the budget permanently. Increasing the payout might be "a short-term benefit" but would "increase the size and frequency of future budget problems," Bacchetti said.

Earlier, Hastorf said that the one-year deficit had been considered to avoid "wrenching" changes in programs by trying to cure the budget problem "in one fell swoop." Should economic conditions improve, the deficit could be correspondingly reduced.

He said such central initiatives as increased programs to conserve energy and a shift from prepaid to annual leasing of industrial and commercial facilities might help ease pressures on the operating budget.

Overall, cuts of about 2.3 percent will be needed in 1983-84, with an additional 2.8 percent in 1984-85. "It's a good question whether that will be enough or whether we have to be more severe," he observed. By 1985-86, the problem should be "substantially smaller."

In letters asking departments to list possible cuts, he noted, "we do not expect anyone to be free of contributing but we also expect differences in what each will contribute."

On a long-run basis, the outlook is for slower growth in real terms for Stanford. In the 1950s and 1960s, the University had annual growth rates as high as 15 percent annually. Trustees prudently set aside reserves against possible deficits, which first emerged in the late 1960s. These now amount to less than one and a half percent of the annual operating budget of $207 million.

Faculty involvement

Hastorf told the Senate that Prof. Robert Cannon, head of aeronautics and astronautics, had agreed to head a faculty advisory committee on the budget. "Our goal is not to grind everyone down with committee work but to get as much involvement from participants as possible, so we can get through the budget-cutting process with as much care and thought as possible."

Prof. Ewart Thomas, psychology, a University fellow, also will examine the University's budget process.

Comparing the current outlook with the $16 million belt-tightening efforts of the mid-1970s, Bacchetti said: "The good news is that it's smaller than BAP and BEP (the Budget Adjustment Program and Budget Equilibrium Program). The bad news is that it's the third time round."

Humanities and Sciences Dean Norman K. Wessells noted that the cuts in his School alone could amount to $2 million, the equivalent of a medium-size department.

"It's going to be very painful," he said.

—Bob Beyers

Cold? Recirculate heat from house peak

On sunny days, air that usually heats up to more than 80° collects in the peaks of the roofs of most Bay Area homes. That may seem a trivial fact, but it helped save Gordon Ratliff about $100 this year, and he expects it to save him even more next year.

Ratliff, a plant officer at Stanford Linear Accelerator Center, has designed and installed a device that distributes that warm air throughout his Peninsula home, a practice that has made a considerable dent in his heating bills.

The device consists of a simple blower and a thermostat. These are placed in the attic, near the peak of the roof. They are connected by a four-foot long, eight-inch sheet metal duct which goes from the attic through a hole cut in the ceiling to a simple diffuser. The parts cost about $80.

Whenever the air around the thermostat reaches at least 80°, the blower, electrically connected to the thermostat, is activated, pushing the warm air down through the diffuser and into the rest of the house.

The system, which Ratliff installed in October, 1981, works so well that he only has to use his gas heater in the morning and on cloudy days during the winter. Even then, the thermostat is never above 68°. "On sunny days the blower comes on around noon, and by 5 p.m. the temperature in the house is about 74°," he said.

Ratliff suggests that homeowners considering the change simply take the temperature in their attic near the roof peak in mid-afternoon on a sunny day. If the roof is vented, the vent should be closed, so that warm air does not escape. The system should prove economical if the temperature rises above 80° on a sunny day, which should happen in most Bay Area homes.

From November, 1981, through September of this year, Ratliff used about 170 fewer therms, the measure of heat used by PG&E, than he did during the same period the previous year, which amounts to a saving of about $100.

He expects to save an additional 180 therms during the coming year, which represents about a $225 saving from his 1980 heating bill.

Ratliff said it took only about an hour for him to install the system, but cautions that people who are not familiar with electric wiring should hire an electrician to install it.

Still, he said, it would not cost much more than the $80 he paid for parts to have the device in most homes. The only other cost is the electricity needed to operate the blower, which is about 15 cents a day, he said.

Ratliff also referred to the federal tax law that allows individuals who use solar heating systems to deduct 55% of the cost of the system from their tax return. "With the 55% solar tax break," he said, "the system pays for itself in two months."

—Phil Taylor

Public hearing set on solar retrofits

A public hearing will be held on the Santa Clara County Solar Retrofit Ordinance at 1:30 p.m. Tuesday Nov. 23 in the County Administrative Building.

If passed, the ordinance, which would affect Stanford residents, would require a solar hot water heating system to be installed in a house without such a system if the house is sold.

There is an escape clause, which would allow an exemption if the installation is "uneconomic," but the administrative procedure is vague.

The hearing will take place in the Board of Supervisors' Chambers, located at 70 W. Hedding Street, San Jose.

Humanities Center...

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from external funds," he emphasizes.

"The purpose of the program is to strengthen the humanities at Stanford in a way that no one person could do.

The Center also received $2,000 from the Academy of Educational Development, in recognition of its program for attracting and retaining junior faculty.

The Center's general aims, as stated in its brochure, are "to promote humanistic studies and interests in three main ways: by operating a fellowship program mainly concerned with research; by supplementing and otherwise strengthening humanistic teaching at Stanford; and by conducting studies of problems in the area of the humanities broadly defined, and of their relationships to other disciplines."

Given the mix of 14 scholars, there is a serendipitous "interdisciplinary benefit," in Ian Watt's words. His associate director, Mort Sosna, notes that one of the requirements is that the fellows "contribute to Stanford's intellectual life."

One of the ways they do this is to meet during the week—once for lunch, and once for a late afternoon colloquium; and on other days more informally, usually at lunch time.

"At lunch," says Corn, "we take turns talking about something of interest to each of us. For the colloquium, we all read something in common, an article or part of a book. One of us is responsible for introducing the topic, then it's a free-form discussion.

"Because we're all such specialists in this academic world, the collegiality and community are extremely enticing. The center offers us an opportunity to sit down with people in other disciplines."

Kendall Walton, professor of philosophy at the University of Michigan, says the weekly colloquia "are a valuable opportunity for extended discussions among scholars in different fields."

He is teaching a course and writing a book on "Representation in the Arts," a philosophical examination of aesthetic questions concerning such topics as the nature of realism, the differences between pictorial and verbal representation, and the ontological status of fictional entities.

Cultural and social forms

"The book is intended to appeal to nonphilosophers, people in the arts with a theoretical bent, as well as to philosophers," Walton says, "so the Center discussions are especially useful to me."

Watt points out that the Autumn Quarter's Fellows' seminar theme is on the relation between cultural forms, such as music, art, and literature, and social forms and change.

Gwendolyn Wright, whose Ph.D. from UC-Berkeley is in architectural history, is teaching a new course called "Architecture, Planning & Politics in the 19th and 20th Centuries."

She is the author of two books on the social aspects and history of housing and architecture, and is working on a third. She points out that "cultural differences involve politics, and require a humanistic perspective, including political history, esthetics, social sciences, and city planning. I needed to get a variety of humanistic points of view," and added that the Center's weekly meetings are producing exactly that.

For Corn, whose course is "The Poet and Artist in American Modernism," the fellowship offered an opportunity to complete a book she began four years ago while at the same time offering to students a course that fits in perfectly with her writing project.

Other courses by the Fellows include "Models of Modernist Fiction," by Prof. Lilian R. Furst, University of Texas, Dallas; "Linguistic Change," by Prof. Joseph H. Greenberg, Stanford; and "Drama and Society in Renaissance England," by Prof. David R. Riggs, Stanford.

Ian Watt, in addition to his duties as Center Director, is teaching two courses this year: "Masterpieces of English Literature from the Englightenment to the Modern Period," an undergraduate course; and a graduate seminar on Joseph Conrad.

Conference on individualism

Watt and Sosna—who came to Stanford after nine years as a program officer at the National Endowment for the Humanities, and whose specialty is southern history—are planning a major conference for early 1984 on "The Reconstruction of Individualism."

This fall the Center helped sponsor the first annual meeting of the Humanities Institute, which focused on four topics: narratology, the concept of carnival, interpretations of "Coriolanus," and reassessments of Jean-Paul Sartre. In addition, the Center was associated with conferences at Stanford last year on "Disorder and Order," on "Women Writing Poetry in America," and "Recent Studies in the Family, Biography and Theory."

Permanent quarters

The Center, now based in temporary Quad offices, expects to move into permanent quarters in Rogers and Mariposa Houses next June.

Besides Corn, Stanford faculty fellows include Greenberg, anthropology and Riggs, English; Herbert Lindenberger, English; David E. Wellbery, German; and John Winkler, classics. The graduate fellows from Stanford are Maria Makela, art; Rush Rehm, drama; Maidi Rosenblatt, anthropology; Nancy Ruttenberg, comparative literature; and Kenneth Warren, English.

The faculty executive committee for the Center is composed of Profs. William Chace, associate dean of Humanities and Sciences; Martin Esslin, drama; John Freccero, French and Italian; Albert Gelpi, Graduate Division; Tom Heller, law; and Lee Yearley, religious studies. The Center also has an Advisory Board of 14 members, including three from outside; a selection committee; and a committee on budget and development.

—Harry Press

Two cultures...

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noted that "people in the two cultures have an affinity for marriage.

"Engineers, physicists, and mathematicians often find their life is all the fuller for having married someone who is verbal, visual, and perhaps not overly enamored with quantitative thinking."

Professionally, he noted, scientists, engineers, and others in the quantitative disciplines must leave the "tech" culture to some extent to grow personally, financially, and in job responsibility.

"Management certainly requires elements not strictly part of the quantitative culture," he noted. "Questions of philosophy and ethics are becoming increasingly common in engineering and in business.No senior manager can or should escape them.

"To remain in a single culture constrains one to a technician role."

Understanding technology

On the other hand, as technology has properly come under greater political control, "we have placed ourselves in the rather worrisome position of making these decisions with an electorate and a political leadership which does not understand the nature of science and technology very well.

"As a result, expectations are startlingly out of line with feasibility. Our society seems to want innovation without failure, high performance without cost, and complexity without error.

"Such things are not possible. Legislation, no matter how strangling in its complexity, cannot solve the problems, nor can litigation. We spin our wheels a great deal and frustrate ourselves repeatedly because of leaders who reside in one culture and scientists and engineers who reside in the other.

"A blurring of these two cultures would lower these costs."

And there's reason for hope such change can occur, Adams added. "Rapid changes can take place in cultural allegiance," as illustrated by the rapid growth of women in engineering. Where young women once were thought "cute" if they knew no math, now they may be regarded as "dumb" for not honing this skill.

Sharp cultural shifts affected many engineers in the so-called growth movements of the 1960s and 1970s, particularly in the Bay Area.

While it's easy to be "creatures of intellectual habit," the patterns can change rapidly, Adams suggested. When engineering and business executives in a continuing education program are asked to try writing a poem, for example, they may rediscover a talent dormant since their school day—a point he illustrated by having his audience take five minutes to compose a poem and then read it to those in adjacent seats.

"People in the verbal culture spend precious little time learning about science and engineering, and in fact the material is not available in easily useable form," Adams said. "They need help. It would be to all of our benefit if those in the quantitative culture spent a bit more effort educating those not in their tribe."

Computers bridge gap

Computers may help bridge the cultural gap. Several humanists at Stanford have become computer "cultists of the first degree" after realizing how these machines can make writing easier, he noted.

The Sloan Foundation now is trying to encourage more quantitative content in liberal education. Some 150 colleges and universities have established programs focusing on human values, technology, science, and social institutions. The largest, at MIT, involves about 30 full-time equivalent faculty.

Surveys among Stanford seniors have shown that those majoring in engineering and science take more courses in the humanities and social sciences than vice versa. The University needs a few new courses on technology, science, and mathematics for those not majoring in these fields.

"Stanford has a unique chance to break through the limitations of the two-culture philosophy because it possesses excellent science and mathematics departments and the only Big Ten style engineering school on a campus which considers itself to be pseudo-Ivy League. We have the strengths of Harvard and MIT in a single institution.

"C.P. Snow did an exquisite job of illuminating a characteristic of our culture. However, now that we recognize it, we should begin the task of stamping it out."

Straw ballot shows GSB students favored Democrats, nuclear freeze

If you thought all business school students were more politically conservative than the general populace, you might be very surprised at a straw poll taken last week at Stanford's Graduate School of Business.

In a survey of voter preferences, Stanford's MBA students clearly favored Democratic over Republican candidates, and approved by a wide margin the most controversial of California's ballot propositions 11 (bottle bill), 15 (gun control), and 12 (nuclear freeze).

The poll, which was reported in the November 5 issue of the Business School's student newspaper, the *Reporter* was based on returns from 200 of the School's 600 MBA students.

The students went against the tide in preferring Los Angeles Mayor Tom Bradley over state Attorney General and now Governor-elect George Deukmejian, 155-48, and in favoring Governor Jerry Brown over San Diego Mayor Peter Wilson 112-103. They worked with the tide in choosing Democratic Congressman Tom Lantos over Republican Bill Royer by a two-to-one ratio and in selecting Republican Ed Zschau, an alumnus and former member of the Stanford Business School faculty, over Democrat Tom Lynch, 87-21.

Although the bottle bill and gun control propositions went down to defeat, the students favored them to wide margins—78 percent and 84 percent, respectively. They voted for the nuclear freeze initiative by a two-to-one margin.

Said the *Reporter* in summary: "Last Tuesday's survey indicates that business school students do not necessarily vote conservatively when it comes to social issues, nor can they be automatically expected to vote their future pocketbooks. The biggest unanswered question concerns the two-thirds of the student body that did not return survey forms. Would they have voted differently from those who participated?"

Staff employment opportunities

Exempt

15593-DS (JCC:1480) STU SERV OFFICER III The Coord of Engrg & Sci Advising respon for counseling undergrad & grad students majoring in engrg & sci disciplines in connection w/ the develop't of their career plans & related job-hunting tech; respon for establishing & maintaining contacts w/ employers; acts as CPPC liaison w/ School of Engrg & various sci depts & works closely w/ faculty members; respon for providing approp workshops & seminars; assts in implementing the overall 1 goals of the Ctr; QUALIFICATIONS: sufficient familiarity w/ engrg & sci disciplines to discuss career objectives knowledgeable w/ engrg students & alumni; associated w/ a degree in a related field; exp as a practicing scientist or engr, or an educator helpful; ability to relate to a diverse group of students, faculty staff personnel, & reps fr business & industry is considered essential nec.; C07; $2113-2724.

29555-AW (JCC:7558) FACIL ENGINEER/COORD II Respon for: continuous operation(24 hrs/day, 7 days/wk) of SU telephone sys operator console & TWX/TELEX/FACSIMILE serv; the related equip't maintenance; bldg security & maintenance; phone directory listing & distribution; manage staff of 2 supvrs, 19 operators & 25 students; carry out all personnel actions, training & performance monitoring; perform genl offc managerial offc managerial & admin duties; supv work in billing section; asst Telecomm Mgr in areas of fiscal cost control; short & long range budgeting; policy develop't & spec projs; QUALIFICATIONS: knowl & skills equiv to BA or BS degree in Business; work exp in areas of acctg, budgeting & admin; 2+ yrs exp in mgmt, supvn, work scheduling, training & performance monitoring; familiarity w/ computers & data processing; phone & phone & PBX exp helpful; strong oral & written commu skills; organizational & report writting skills.; C07; $2113-2724.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets. 497-1827. or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Bargaining Unit

29098-LL (JCC:5638) LIFE SCI TECH I TMS Unit; perform bacterial genetic experiments on Escherichia coli; e.g. mutation assays using gamma radiation; bacterial survival curves, & other simple procedures in microbiology; QUALIFCIATIONS: college training in microbiology or relevant exp in bacteriological tech.; A18; $7.5.

36635-PB (JCC:5778) LAB GLASSWARE WASHER TMS Unit; 50%; perform routine washing procedures for genl lab glassware such as beakers, erlenmeyer flasks, volumetric flasks, graduated cylinders, culture tubes, conical centrifuge tubes, & serological pipettes & spec washing procedures for lambda micropipettes, delicate microcolumns & tissue homogenizers prev knowl of acid wash protocol & genl lab procedures mandatory; knowl of tissue culture washing procedures & processing of sterile glassware; ordering dishwashing supplies; genl lab clean-up, etc; QUALIFICATIONS: knowl of routine & acid washing protocols & genl lab procedures; familiarity w/ handling of delicate, spec lab glassware; manual dexterity, cleanliness, neatness, orderliness, & esp, ability to follow carfully oral & written instructions.; A11; $6.38.

44592-JB (JCC:7166) DELIVERER II TMS Unit; pickup/deliver mat'ls on & off campus and/or Med Ctr for Stores, Vendor Returns & SPS; respon for security & proper handling of mat'l-& equip't; lifts & moves heavy objs; loads/unloads delivery vehicles; safely drives vehicles (incl trucks up to 5 tons) & operates forklifts; pick up mat'ls on a rush basis fr vendors located fr San Jose to San Francisco; respon for checking items against paperwork; receives all goods in SPS; reporting discrepancies, damage, miscount etc to supvr; QUALIFICATIONS: must have valid Calif Driver's License; able to operate trucks & other mat'l movement devices; able to deal w/ numbers & basic math; able to interact w/ customers; must have sufficient strength to move heavy mat'ls up & down stairs.; A17; $7.33.

18938-PB (JCC:7324) FOOD SERVICE WORKER IV TMS Unit; Mon, Tues & Wed, 6-3pm; Sat & Sun, 10-7pm; high quality food prep; portion control; sanitation procedures; cooks breakfast, lunch & dinner for 350 to 400 people; prep all hot food for breakfast & lunch on wk days, & dinners on wkend; follows standardized recipes & food production sheets; follows prescribed methods for cleanliness & sanitation of person & food products; respon to open & close the kitchen; must work w/ other cooks & helpers; must give instructions to helpers; must clean up of kitchen & equip't; QUALIFICATIONS: exp in large volume cooking & basic knowl of high quality food prep; 1 able to read & speak English; able to stand for long periods & lift heavy loads; must work wkends.; A20; $7.91.

16278-LL (JCC:8890) MISC TECHNICIAN TMS Unit; 40% as Lab Asst I; logging in & labelling specimens & samples; asst a higher level lab employee by handling animals & performing other manual tasks; simple lab operations such as adding isotopes to cultures, etc; record keeping; set up apparatus, clean lab & equip't, etc; 40% as Life Sci Tech I; making simple chemical solutions & media; centrifugation & assembly of electrophoresis gel plates; microdlsection, microinjection, plasmid prep, protein extraction & purification, electrophoresis skills & computer programming in Pascal, etc; 20% as sec IIS; typ sci manuscripts, res proposals, rprts, course handouts; prep purchase orders, check advances, expense repts work orders, petty cash receipts; compose & typ corresp, etc.; A16; $7.16.

Nonexempt

31077-PM (JCC:1755) LIBRARY SPEC II Fixed term 11/29/82-8/31/83; performs duties in Catalog Dept; performs processing monographs on-line w/ MARC, LC & RLIN member copies; searches MARC, SUL main catalog, Lib of Congress printed copy, Name Authorities, Monographic series to verify name headings & series treatment; typ authority cards for personal & corporate name headings; typ series cards using AACR II format; files in Main SUL Catalog; 1 inputs copy prepared by monographic catalogers into RLIN database; QUALIFICATIONS: typ 40; prev lib exp, preferably in tech processing; reading knowl of one Western European lang, preferably German; exp w/ automated sys; prev exp w/ RLIN II desirable; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B12; $1310-1373.

15594-BP (JCC:2462) OFFICE ASST III Permanent 10-month position, 9/1-6/30 each yr; serv as initial contact w/ & prov informa to students, spouses, staff, alumni, & employers about employment opportunities, on-campus interviews, counseling, spec programs & services & resources available at Student Employment Offc/CPPC; respon for the compilation, documentation, & analysis of statistics on SEO registrants & placement data; asst w/ various annual surveys; respon for phone calls & mail; typ corresp, rpts, job reqs, & other projs; maintains appt calendars for counseling staff; respon for retrieval, photocopying & processing of student resumes; QUALIFICATIONS: typ 55-60; flexibility to handle multiple assignments; work accurately w/ numerical data & perform basic calculation; organize work & function well under pressure; send appl/resume to L. Mason, CPPC/SEO, White Plaza.; B11; $1246-1310.

HOLIDAY COMING!

Due to the upcoming Thanksgiving holiday, all requisitions for newly opened positions must be in the Personnel Office, Old Pavilion, by 9 a.m. Tuesday, Nov. 23, in order for the positions to be listed in *Campus Report* the following week (Dec. 1).

33681-PM (JCC:2554) SECRETARY II Typ corresp fr rough typed & hand written drafts or dictation equip't; typ manuscripts, professional papers & reports; prep edu'l mat'ls and/or grants; composing routine letters in accordance w/ oral or written instructions; prep univ forms; maintain a variety of files; operate various offc machines; make appts, travel & hotel arrangements; arranging mtgs & conferences, etc; QUALIFICATIONS: typ 60-70; ability to construct letters; typ accurately & proofread; knowl of dictating equip't needed; 1 s/h desirable but not nec; word processing exp helpful; send appl/resume to Joan Koskamp, TA 103 Med Ctr, Division of Physical Therapy.; B11; $1246-1310.

20099-BP (JCC:2554) SECRETARY II Research Sec to professor; prov full range of sec'l serv; maintain calendar; typ corresp, rpts, manuscripts, res grants & course work; extensive use of word processing/-text editing skills in all phases of assignments; work independently & w/ initiative; good interpersonal skills also essential in dealing w/ faculty, staff, students & visitors; QUALFICATIONS: typ 70; exp in word processing helpful; knowl of psychology helpful; college bkground desirable; verbal & writing skills crucial; excel grammar, punctuation & spelling; send appl/resume to Linda Heider, Dept of Psychology, Bldg 420, Rm 110.; B11; $623-655.

29959-BP (JCC:2562) SECRETARY III Prov sec'l serv to Prof. of Chemistry; monitor budgets; prep grant proposals; develop proposal budgets; administer res expenditures; typ manuscripts, proposals, repts & corresp; maintain schedules; arrange travel; prep reqs & other SU forms; coord admin & clerical serv for large res group (approx 15 researchers &

continued on next page

Rental housing

HOUSING AVAILABLE

□**April to July '83:** Furn. campus hse, 3BR/2BA, study;. Fenced yd. $900/mo. incl. grdnr, hsecleaning. Call 858-2142 (eve & wknd).

□**Beg. Dec. 15, '82:** Avail. indef. Unfurn. 1BR lux. condo, AEK, Lndry facil. nrby, pool, sauna, gardens. Air-cond. Lincoln Green in Sharon Hgts. $650/mo. Call Ed Haertl, 497-3008 (day) or 854-6028 (day).

□**NOW, to share:** 2BR/2BA hse. Share w/1 person. W/D. Gar., basement. Must like gardening. 2 blcks to campus, El Camino, 4 blcks to Marguerite bus. $400 + util. Lv. message 858-2121.

□**NOW:** TAHOE/DONNER VACATION CONDO. Fully furn., fully equip., sleeps 8. On ski run. Clubhse w/spa. W/D. Firewood. Call Al 326-3821 (eve).

□ **Jan. 1 to July 31, '83 (flex):** Fully furn. hse, 3BR/2BA, AEK, W/D, close to campus, shops. Children ok. $850/mo. Call 327-5641 (eve), 497-9253 (day).

□ **NOW:** Unfurn. condo, 2BR/2BA in dwntwn Palo Alto. AEK, W/D, carpets, drapes. Brand new. Rent to own, equity share. $1500/mo. (tax deductible). Call 321-7820 (day) or 327-0987 (eve).

□ **Jan. to Sept. '83 (flex):** Fully furn. campus hse, 4BR/2BA, frpl, garden w/auto sprinkler, view of hills. Nonsmokers, no pets. $1400/mo. incl. grdnr. Call 497-3987 (day) or 494-0362 (eve).

□ **Beg. Dec. 10, '82:** 4BR/3BA hse, LR, FR, study, microwave in modern ktchn. 2 car gar. On quiet st. no. Palo Alto. 6 mo. lease w/option to renew till Sept. '84. Refs. req., pets nego. $1350/mo. Call 321-2247.

□ **Jan. '83 to late May:** Contemp. hillside hse w/view in Portola Valley. 4BR/3BA, fully furn; conversation pit w/frpl., 2 lge decks, spa. 5 mi. to campus. $1700/mo. Call 327-8615 (eve) or 858-4035 (day).

□ **NOW:** Alpine Meadows, Tahoe. 3BR/1½BA cabin, phone, W/D, frpl., sleeps 10. $200/wknd, $70/wknite. Call 493-4139.

□**Jan 15 to July '83:** 4 BR/1¼ BA hse. in Los Altos. Fully furn., all appliances, lge. garden. $975/mo. Call (415) 961-3079 (eve.).

□ **Thanksgiving thru Dec. '82:** Fully furn. 3BR/2BA hse. w/lge. yd. in rural setting. 3 mi. to campus, nr. Gunn Hi. $500 + care of 5 outdoor, fenced-in pets. Use of car nego. Nonsmokers. Call 948-4314.

□**NOW, HAWAII:** Haena, Kauai. 2BR/1BA hse, fully furn. Sleeps 7. Loft, laundry. Walk to beach. $280/wk. Call Nancy Scholl, 321-4407.

□**Dec. 22, '82 for 1 yr. (flex):** Fully furn. contemp. campus hse. 2BR + 2 studies (1 converts to BR), 2BA. Frpl, piano, lush atrium, wooded lot. $1350/mo. incl grdnr, water. Call 857-0479.

□**Regularly avail:** 1 & 2 BR furn. and unfurn apts. & twnhses, also 3BR/2BA hses. In Palo Alto & Menl;o Pk, good nghbrhds, close to campus. Call Shirley, 493-2321 or Jane, 968-4957.

HOUSING NEEDED

□ **Jan. to Mar. '83:** Visit prof. wishes to rent furn. rm/BA/kitchen on or nr. campus. Call Brix Eakin, 497-4186 (day).

□ **Jan. to Mar. '83:** Retired Conn. cpl visiting SU family seek 2BR hse or apt on campus/Coll. Terr./ Evergrn Pk. Frpl. pref. Will hsesit or pay reasonable rent. Call Marilyn Davidson, 857-0390.

□ **WINTER QTR.:** Visit prof. seeks furn. studio or 1BR, pref. within 3 mi. of campus (will consider further). Could hsesit. Call Elissa, 497-4977 (day).

□ **WINTER QTR:** Visit prof. seeks very quiet apt., studio or rm. w/ktchn priv., on campus or walk dist. For 3 to 4 mo. (flex). Call Feferman, 497-2439 (day), or 857-0323.

□ **NOW:** Prof. on lv. seeks rm. or 1BR furn. apt. nr campus. Nonsmoker. Call COLLECT (804) 381-5555, or write John Savarese, Dept. of Eng., Sweet Briar Coll., Sweet Briar, VA 24595.

□ **Jan. to mid-Mar. '83:** Grad. woman seeks furn. place nr. campus. Will hsesit or pay reasonable rent. Wonderful refs. Call 326-8830.

□ **Sept. '83 to June/Sept. '84:** Approx. 50 fully furn. hses. needed for Fellows & their families coming to Ctr. for Adv. Study in Behavioral Sci. Call Frances Duignan, 321-2052 (day).

□ **Sept. '83 to Aug. '84:** Fellow, spouse, 1 child coming to Behavioral Sci. Ctr. would like to EXCHANGE elegant restored brownstone in Boston, nr. Harvrd, BU & Tufts Med. Sch. for hse on campus or Palo Alto. Call Sara Lightfoot (617) 262-4629 or Frances Duignan, 321-2052 (day).

□**Jan. to Mar. '83:** Visit Prof & wife seek 1 or 2BR furn. apt. or hse within 1 mi. of campus. Homeowners, nonsmokers, local refs. Call (212) 260-8221 or write R. Lipsey, 70 E. 10th St., #3, NYC 10003.

□**Mid-Dec. to Summer '83:** Mature fac. cpl visit. Stanf. will care/sit your hse or apt. Will pay rent & provide expert care of furn., yd., pets. Exclnt refs. Call 497-0909 (day), or 324-8166 (eve).

□**Jan. to Oct. '83:** Cornell Prof. & fam. on sabbatical seek Bay Area hsng. Will EXCHANGE Ithaca 3BR hse, xtraordinary, custom design, nestled in forest. Flex. within above time. Call Vera or Dr. John Billinghamat (415) 965-5989.

□**Jan. 1 to April 15, '83:** Visit. Oxford Prof seeks hsng for self, & fam. Will EXCHANGE 4BR hse in Oxford, fullyequip., central heat. 2½ mi from city ctr. Wishes similar hsng at Stanf. Call 326-6524.

□**Dec. 1 to Jan. 29, '83:** Visit. Med. Sch. fac. seeks to rent furn. 1 BR apt. or small hse. Call COLLECT (319) 356-2551 or Dr. Angel, 325-2476 (eve).

□**NOW to April 1, '83:** House or apt. sitting. Mother of fac. mbr. seeks long to short periods. Call Lee Yearley, 497-0466 (day) or 493-6430.

□**Beg. Jan. or Feb. '83:** Stanf. alum seeks furn. hse on old campus for yr. or more, or furn twnhse in Sharon Hgts. 3BR pref. (flex). Call 857-0623.

□**JAN to July '83:** Visit Prof, wife, 16 yr. old child seek furn. hse. on or nr. campus. Call Marlene Wine 497-2444(day).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box ????, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Jobs/ continued from page 16

grad students); QUALIFICATIONS: typ 70; 3-5 yrs of sec'l exp; some knowl of acctg helpful; knowl of SU forms, procedures preferred; good English skills; ability to work independently; send appl/resume to Sally Tremaine, Mudd 121A.; B14; $1440-1514.

31078-PM (JCC:2462) OFFICE ASST III Performs duties in Privileges Div of Central Circulation Dept; answers patrons' questions & makes approp directional/informational referrals; determines patron eligibility for privileges; issues lib cards; accepts payments; takes appl for UC Berkeley/Stanford Coop Program cards; answers phones & refers queries; respon for opening/closing procedures; organizes & maintains complex records & files; maintains statistical records, maintains sections of Privileges Manual covering offc operations, etcs; QUALIFICATIONS: typ 45; prev public serv exp; atten to detail; learn & interpret a large number of complex policies on lib privileges & fees; good commu skills, both orally & in writing; prev cash register exp; knowl of standard offc machines; prev exp w/ automated lib offc processes; contact Bob Johnson, Green Lib, Rm 223 (497-3152).; B11; $1246-1310.

17843-PM (JCC:2596) SECY II-SPEC Sec to 2 faculty members and several postdoc fellows; answer & direct phone calls; set up mtgs; transcribe and type corresp; learn to operate Xerox 860 word processor; typ manuscripts & rpts, grant proposals; maintain files; make travel arrangmts; order supplies; prepare expense reports, etc.; use dictaphone; QUALIFICATIONS: Type 65-70 accurately; familiarity w/ medical terminology preferable; several yrs sec'l exp; ability to work independently & arrange work priorities; some knowl of dictaphone; send appl/resume to Dr. Parnes/Dr. Fathman Rm S115, Med Ctr.; B12; $1310-1373.

33704-PM (JCC:2714) MED SERV ASST III-SPEC 7:45-4:30; Patient Relation Rep; respon for day-today handling of patient inquiries either by phone, in person or thru written corresp; promptly & satisfactorily respond to patient's concerns in a comprehensive manner; requires intensive knowl of physician billing, Medicare, medical insurance billing as well as training in data retrieval for patient acctg & FPP policies & procedures; requires high level of tact & diplomacy usually involving patient complaints or misunderstanding; interface w/ all areas of FPP business offc, clinic, hospital & med staff; QUALIFICATIONS: typ 35; 1-2 yrs college edu w/ business & commu or equiv exp; 3 yrs exp in business offc dealing w/ public or equiv combination of both knowl of commercial & gov't insurance billing procedures; knowl of med terminology; contact: Ginger Hummer/Barbie Padilla, 525 University Ave., Suite 400.; B12; $1310-1373.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Nov. 23, in room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

33701-PM (JCC:2714) MED SERV ASST III-SPEC 7:45-4:30; Patient Relation Rep; respon for day-today handling of patient inquiries either by phone, in person or thru written corresp; promptly & satisfactorily respond to patient's concerns in a comprehensive manner; requires intensive knowl of physician billing, Medicare, medical insurance billing as well as training in data retrieval for patient acctg & FPP policies & procedures; requires high level of tact & diplomacy usually involving patient complaints or misunderstanding; interface w/ all areas of FPP business offc, clinic, hospital & med staff; QUALIFICATIONS: typ 35; 1-2 yrs college edu w/ business & commu or equiv exp; 3 yrs exp in business offc dealing w/ public or equiv combination of both knowl of commercial & gov't insurance billing procedures; knowl of med terminology; contact: Ginger Hummer/Barbie Padilla, 525 University Ave., Suite 400.; B12; $1310-1373.

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Premed Libaek thrives on pressure of Big Game Gaieties

For a short five weeks, the Stanford students who participate in the annual Big Game Gaieties forego schoolwork and sleep to perfect the traditional roasting of Stanford, UC-Berkeley, and Big Game traditions.

Although the demands of their showbiz life are concentrated and hectic, and at times overwhelming, for orchestral director Lita Libaek, it's life as usual.

The hard work and short time period are "exhilarating," says Libaek, who also composed the show's original score and contributed to the script and lyrics.

"It's a challenge because you've got that time pressure, and the performance reflects on you."

Ever since 1911, Ram's Head, the student drama organization, has been producing the Gaieties as the highlight of its year. The show's producer, Debbie Ingram, and director, Eric Abrams, have nearly 150 students involved, of whom only 40 are in the cast. The 1982 version, called "Waiting for Big Game," will be presented in Memorial Auditorium at 8 p.m. Thursday, Nov. 18, and at 2 and 6 p.m. Friday, Nov. 19.

For Lita Libaek, the Gaieties will be the highlight of several years of another opening, another show. She was born in Sydney, Australia, and moved with her parents to Hollywood for her high school years.

At Stanford, she has been involved in more than a dozen productions, including "West Side Story," "Side by Side by Sondheim," and "Cabaret." Prior to this year's Gaieties, Libaek has written music for "As You Like It," and the Stanford Children's Theater, for which she has been musical director for the past two years.

Gaieties is an original musical comedy, which, says Libaek, "has no other pretensions other than to make you laugh."

It all starts the previous spring when writers submit the scenes they've written to the head writer, Timothy (T-Bag) Biglow, who spends the summer putting together the final script. Meanwhile the head composer, Libaek, writes the show's song and dance numbers, and, later, the vocal arrangements and orchestrations. The show is then cast and directed by members of the artistic staff during the few short weeks of rehearsal, and the orchestra is rehearsed by Libaek.

"What I enjoy most is making order out of randomness," she says. "You have to start from scratch, and there's a thrill in seeing it all come together. It's fun to see the cast bring life to something that evolved from a bunch of comedies sitting around a table making each other laugh."

Her rich musical background gives the production a professional touch. Libaek says her father, a Juilliard graduate, who now composes, conducts, and performs in films and television, claims his daughter could read music before she could read words. She says she doesn't remember; nevertheless, she was born with perfect pitch, played the piano at age three, and entered the Sydney Conservatory of Music in grade six.



Lita Libaek

Libaek says the school was like the one in the television show "Fame": students received ear and sight training, and instruction in composing and performance. The school also taught traditional academics, which made the total experience difficult but satisfying and maturing.

Being talented wasn't enough, however. Hard work, knowledge of and an intuition about music were demanded as well.

"Once you go through that initial thing of having your ego knocked out from under you, you suddenly realize that there are so many people who are better than you are."

Libaek says this was inspiring rather than discouraging because of the Conservatory's teachers.

"When you start making progress in their eyes, it's the most satisfying thing in the world."

Libaek herself is an inspiration. She works at the Coffee House, is orchestral director of an off-campus community production in addition to Gaieties, and is double-majoring in music and microbiology. Her academic plans continue through medical school with an interest, although tentative—"I don't want to be narrow-minded—in reconstructive surgery.

She sees a close connection between her conducting and her eventual life as a physician.

"A lot of musical direction is teaching and coaching," she says. "I see myself as teaching eventually as a doctor, because it is a doctor's responsibility to educate patients, not just direct or prescribe. Patients do much better if they understand the reasoning behind the doctor's orders."

She is a person brimming with energy beneath her quiet surface, and she is able to concentrate on the production because, as she notes, "after the auditions, the competition ends and all of us begin working toward a common goal—a successful show."

Her interest in pursuing a career other than music is something she has in common with other Gaieties cast and crew members. Despite her extensive ability and experience, music nevertheless remains a hobby.

"It's almost too self-indulgent for me because I enjoy it so much as a hobby. I almost don't enjoy it as much when it's a living." Besides, she adds, "most of the time if you're organized you can do both at the same time."

How does she find time for school, music, Gaieties and her job? Characteristically, she gives a modest answer.

"I guess I'm not a disciplined enough person to get things done without pressure. I make time for those things because I just wouldn't be satisfied with myself if I wasn't doing anything."

Music, a life-long passion, is also an outlet for tension—her kind of personal escape.

"I love music and I love feeling that in my own way I'm helping to create something from nothing. You have to do it because you love doing it; there's no real reward per se."—**Amy Bernhard, News Service Student Intern.**

Health and safety report

Accidents and Injuries Occurring Nov. 8-12

Type of accident or injury	Number of incidents	Days Lost
Improper lifting	3	8 (0, 3, 5)
Overexertion	1	0
Temperature extreme—burn	1	0
Impact with object	1	6

Police exhibit recovered loot worth $2 million

Stanford police organized the Tiffany of flea markets Monday, Nov. 15, displaying an estimated $2 million in recovered property from hundreds of Peninsula thefts.

Two racks packed with expensive furs, an exquisite antique gun collection, violins, jewels and gold dinner plates were among the items assembled in two 10 by 50 foot trailers in the Police and Fire Department compound on campus.

Six burglary victims from Stanford and Palo Alto were scheduled as the first of hundreds to view the merchandise, recovered last week from Robert O'Connor's home in La Honda, a friend's house in Montara, and large storage rooms O'Connor rented in Foster City.

The recovery is believed to be the largest of its kind in at least 20 years in this area.

Stanford Police Capt. Raoul Niemeyer, who headed the investigation which culminated in O'Connor's arrest Nov. 5, said one gun in the collection had been reported stolen in Redwood City in 1978.

Previously regarded as a suspect in 130 burglaries since early 1981, O'Connor may have been involved in a much wider range of thefts, Niemeyer said. O'Connor was paroled in Redwood City in 1978.

Dubbed the "connoisseur burglar" by Niemeyer, he may have hit commercial establishments, vacant home garages, and a wide variety of other targets, judging by "bits and pieces" of the recovered goods, the captain said.

Among the recovered items was a plain brown bag labelled—and misspelled—"Bob's Choise" which contained about two dozen derringers and vest pistols. A fine display of flintlock rifles was displayed on an adjacent shelf.

Rare coins, stamps, and gems which may have been disassembled from jewelery also were abundant. In addition to the substantial job of arranging for victims to view the property, numerous insurance adjustments may prove necessary. Disposition of unclaimed items probably will be up to the courts.

So far, nearly 400 victims have called the Stanford police at (415) 497-9639. To view the recovered goods, they must obtain a copy of the police report filed when the property was stolen and then wait to be scheduled to visit the trailer with a detective. Several jurisdictions have assigned officers to work full-time on the massive identification task.



Above is one of the photographs in Damien Kuffler's California Vignettes group, now being exhibited at the Coffee House and the second floor gallery of Tresidder Union. Kuffler, a postdoctoral research fellow in the Department of Neurobiology, has included two series in the show—California Vignettes and Views through a Natural Lens, the world as reflected in drops of water. This is Kuffler's second exhibition at Tresidder.

Amos, campus slaying suspect, surrenders in San Jose

Donald John Amos, suspect in the Oct. 22 Stanford campus slaying of Angela Dee Arvidson, turned himself in at the main Santa Clara County jail in San Jose at 8:30 a.m. Sunday, Nov. 14, according to Stanford Police Capt. Raoul Niemeyer.

Amos, 29, a San Jose deliveryman, was sought on a no-bail murder warrant issued Oct. 26 by Santa Clara County Municipal Court Judge Miriam Wolfe.

Sheriff's deputies told Niemeyer that Amos walked down the ramp at the jail and said: "I'm Don Amos. I understand you guys are looking for me."

He was taken into custody and questioned by Santa Clara County Sheriff Sgt. Tom Beck and Detective Mike Lombardo.

On Monday, Beck told reporters that Amos learned he was wanted by authorities when he read it in the newspapers.

"He said he knew he was wanted by police and didn't want to jeopardize the safety of his family by continuing to run," Beck added. "He said he doesn't remember anything about any murder. He said it's like a temporary blackout. Several hours are just missing."

Sheriff's Capt. Wes Johnson told reporters that during the period Amos was missing, he apparently stayed with friends in Salt Lake City.

Amos told investigators he fabricated a story about being attacked by a dog because he didn't know how else to explain his torn shirt and bloody jeans to his wife.

After he turned himself in, she was picked up for questioning at the couple's apartment, then released by police.

Contacted at their home in Portland, Oregon, the victim's mother and stepfather, Marlene and Michael Torrey said: "We're very relieved that the suspect has been caught."

Arvidson, 20, a junior in humanities special programs, was stabbed to death at the campus home of Prof. and Mrs. Laurence Kedes, where she had gone to do housecleaning.

She was last seen alive when Mrs. Kedes went shopping at 2:15 p.m. Her son, Todd, 16, discovered the body when he returned home from school an hour later.

Before entering the house, Todd noticed a sales slip for plastic trash can liners in the driveway, which he picked up and put in a car. This clue led to Amos, according to an affidavit filed in support of the murder complaint.

Amos worked for Tompkins Promotions, a Los Altos firm that sold the trash can liners under contract with the Horizon Home for the mentally retarded, which received part of the proceeds.

Tracing back through Horizon Home and Tompkins Promotions, police learned that Amos had been scheduled to make a delivery at the Kedes home the day of the murder.

Sheriff's detectives then obtained a search warrant for Amos' home in San Jose, where they found a bloody pair of men's blue jeans and a man's torn plaid flannel shirt, according to the affidavit.

Amos has several prior arrests, authorities said. In 1975, he was charged with rape, kidnap and assault in Santa Cruz County. The charges were reduced to assault with a deadly weapon and he was sentenced to a year in county jail.

In 1977, Amos was arrested for auto theft and drunken driving in Santa Clara County, but the charges were reduced to grand theft and he received five years probation.

Last year, San Jose police arrested Amos for selling LSD. He pleaded guilty and was sentenced to seven months in jail.

Following an autopsy of Arvidson, the Santa Clara County Coroner's Office said there were no obvious signs of sexual assault. But in a news conference Oct. 25, Santa Clara County Sheriff Robert Winter indicated sexual assault may have been the motive for the crime.

The autopsy showed Arvidson died of cut wounds of the neck and stab wounds in her chest and abdomen. No weapon has been reported found.

Campus crime report

Nov. 8-15

Burglary/residence	1	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	3	Felony arrest	3
Theft/under $200	3	Misdemeanor arrest	4
Theft/over $200	2	Adult booking	6
Bicycle theft	3	Adult cite/release	1
Vehicle accident	5	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	6
Assault	0	Driving under influence	0

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
10/22-11/8	Unkn.	600 blk Lomita	Misc.	

Auditions slated for new musical, 'CYCLOPS'

Auditions for the Drama Department production of "CYCLOPS/Nobody's Musical," a new musical, freely adapted from the Euripidean satyr play with book and lyrics by Rush Rehm and music by Francis James Brown, will be held Nov. 21-23 in Stanford's Little Theater.

"CYCLOPS" will be directed by graduate directing student and Shubert award-winning playwright, Rush Rehm. At Stanford Rehm has directed his own translation of Sophocles' *Oedipus the King* and the highly acclaimed *The Emperor Jones*. Last year he appeared as King Lear in the production directed by Geoffrey Reeves.

The composer of "CYCLOPS," Brown is a one-time student of Roger Sessions and Luigi Dallapiccola and recently composed the film score for *Priest of Love*.

Steve Ullman, a Drama Department student who last year directed *West Side Story*, is the music director and orchestrator. William S. Eddelman will design the sets and costumes for the production and John Rathman will be lighting designer.

Auditions will be held Sunday through Tuesday, Nov. 21-23, from 7 p.m. to 10:30 p.m. with afternoon auditions on Sunday, Nov. 21 from 2 to 5:30 p.m.

There are roles for 13 male singer-actors (tenors, baritones, and basses) and six to eight female dancers. Men should prepare two songs (one ballad, one up-tempo) for auditions and bring sheet music for the accompanist. All auditioners should be dressed to move. Please sign up for an audition time in the Drama Department office located in room 144 in the back hall of Memorial Auditorium.

"CYCLOPS" is a different sort of musical; Euripidean in its shifting tones, sexually charged in its satyr-play origins; and contemporary in its theatricality.

Auditions are open to everyone, but preference will be given to Stanford students. Performance dates for "CYCLOPS" are Feb. 16-26, 1983.

Student rush tickets

"The Lively Arts at Stanford has established a new ticket policy for Stanford students," said Vicky Holt, director of University Events and Services.

"The new policy 'Student Rush' allows Stanford students to purchase two tickets per student I.D. at $3.50 each for all Lively Arts concerts that are not sold out. These 'rush tickets' may be purchased just before curtain time at the performance box office," Holt added.

For more information call Tresidder Ticket Office, 497-4317.



Young artists from the Shanghai Conservatory of Music will perform on the pipa, guzheng, erhu, yangqin, and liuqin at 8 p.m. Friday, Nov. 19, in the Tresidder lounge.

Michael to discuss world development

Prof. Donald Michael, a social psychologist and emeritus professor of planning and public policy at the University of Michigan, will speak on "Global Development: Preparing for a Precarious Future" beginning at noon Nov. 23 at the International Center's Tuesday Luncheon-Lecture.

Michael has done much work in the area of social change as it relates to changes in physical and social technology. Michael's speech will cover those areas, particularly as they pertain to developing countries.

Michael is a social psychologist with a background in both the natural and social sciences with degrees from Harvard and the University of Chicago. In recent years his interests have revolved around the issues of beliefs and their effects on society and the implications of long range social planning.

No hot lunch will be served this Tuesday in recognition of Fast for World Hunger Day. For more information the I-Center at 497-1831.

Palestinian, Israeli to speak

Prof. Edward Said, a member of the Palestinian National Council, and Prof. Daniel Amit, a leading Israeli advocate of Israeli-Palestinian reconciliation, will speak at 2 p.m. Saturday, Nov. 20, in Annenberg Auditorium.

Said, a Palestinian American, is professor of comparative literature at Columbia University and author of three books: *The Question of Palestine*, *Orientalism*, and *Covering Islam*. He has published articles in the *New York Times*, *Atlantic Review*, and the *New York Review of Books* as well.

Amit is professor of physics at the Hebrew University of Jerusalem, and is presently visiting professor at the Institute of Advanced Study in Princeton, N.J. An outspoken critic of Israeli policies in the occupied territories, Amit is a cofounder of the Israeli Committee Against the War in Lebanon.

The appearance of Amit and Said at Stanford is part of "Perspectives of the Middle East Conflict," a speakers series sponsored jointly by the Associated Students Speaker Bureau and the Committee for Justice in the Middle East.

Other speakers will be Seymour Martin Lipset of the Hoover Institution, who will speak at 7:30 p.m. Mon, Nov. 29, in CERAS, Room 112, and Joseph Teicher, president of Haifa University in Israel, who will speak at 4:15 p.m. Thursday, Dec. 2, in Building 200, Room 2.



David Ng-Quinn will perform in a solo recital at 8 p.m. Saturday, Nov. 20, in the Tresidder lounge. His program includes works by Bach, Beethoven, Bartok, Debussy, and Brahms. The free concert is sponsored by the Music Department.

Athletics facilities schedule

Thanksgiving holiday Nov. 23-28

Closed for the entire recess: Roble complex and pool, Maples Pavilion.

Open for the entire recess: Tennis courts (sign up as usual), golf course (first available time after 11 a.m.) and driving range (7 a.m. to one hour before dark), Tresidder recreation center (no bowling until 10 a.m. Thursday and Friday), Olympic gamefield, Perrier Parcourse, and Angell Field.

Closed Thursday and Friday: Encina lockers and showers (open SS 11 a.m.-5 p.m.), Encina weight room (open SS noon to 3 p.m.).

deGuerre Pools: Closed from 5 p.m. Wed. through Thur.; open F, S, S, 1-5 p.m.

deGuerre Courts: Closed Thursday; open F, S, S 11 a.m.-7 p.m.

IM Fields: Reserved only, call 497-0505.

Shuttle pilot, film show set

NASA Administrator James Beggs and space shuttle pilot Dick Truly will speak at Stanford Law School's Kresge Auditorium at 8 p.m. Wednesday, Nov. 17.

Truly will narrate films featuring rare footage of the takeoff and landing of the Columbia shuttle as well as illustrations of how astronauts function aboard the spacecraft.

Truly was one of the pilots flying space shuttle approach and landing test flights from June through October of 1977.

NASA Administrator Beggs, the sixth person to head the space agency, will discuss general and technical aspects of the ongoing "industrial revolution in space," including such topics as what lies beyond the space shuttle concept; scientists conducting research while in space; and future space techniques in general. Both Beggs and Truly will answer general and technical questions when they conclude their presentation.

Mothertongue show planned Sunday

Stanford Workshops on Political and Social Issues (SWOPSI) will present the Mothertongue Reader's Theatre in "Did You Come, or Fake It?" a script on women and sexuality at 7:30 p.m. Sunday, Nov. 21, in Kresge Auditorium on the Stanford campus.

Collectively composed from the life experiences of many Mothertongue members, women friends and writers whom they admire, the script explores the diverse range of women's sexuality with candid humor and honest emotion. The fast-paced one-and-a-half-hour show presents stories, dialogue, scenarios, and testimonies, turning inside out assumptions that sexual politics means conformity or that women's sexuality is anything other than an open issue.

Mothertongue is a feminist reader's theatre and a sister group to the Women's Speakers Network and a nonprofit sponsored project of the San Francisco Women's Centers.

A sign-interpreter accompanies the performers. The free public performance will be followed by a discussion led by the members of Mothertongue.

Early music concert set

The Stanford Music Department presents the Early Music Singers and the Renaissance Wind Band at 8 p.m. Tuesday, Nov. 23, in Dinkelspiel Auditorium.

The singers, under the direction of Prof. William Mahrt, will perform German music of the late Renaissance and early Baroque, including compositions of Schutz and Praetorius in both German and Latin and German songs by Lassus and Lechner.

The Wind Band, under the direction of Herbert Myers, will perform 16th- and 17th-century works for crumhorns, a dance suite by Schein on recorders, and works for shawms and sackbuts.

The Singers and Wind Band will combine for two polychoral motets by Praetorius on Christmas subjects. Joining the Wind Band will be violins, dulcian, violone, cornett, and organ.

Berkeley sweeps Stanford in humanities faculty ranking

Stanford's faculty rankings improved since 1969 in four of nine humanities fields covered in a new national survey.

Published earlier this month, the study showed the perceived quality of faculty rose from seventeenth to a seventh place tie in Spanish; from eleventh to seventh in philosophy; from eleventh to seventh in art history; and from "good" to ninth in linguistics.

In two other fields, Stanford dropped slightly but remained among the top 10 nationally. German dropped from a tie for fifth to a tie for sixth, while English fell from a sixth place tie to tenth.

In other fields, classics dropped from fourth to fourteenth, French from eighth to twelfth, and music from tenth to a fourteenth place tie.

UC-Berkeley was higher than Stanford in all nine fields surveyed. Princeton was higher in seven fields, Yale in six, and Harvard and Columbia in five.

Overall, Stanford was about on a par with Chicago and Cornell.

Sponsored by the Conference Board of Associated Research Councils, including the American Council of Learned Societies, the American Council on Education, the National Research Council and the Social Science Research Council, the $500,000 two-year study was funded by the Mellon, Ford, and Sloan Foundations, the National Institutes of Health, the NSF and the National Academy of Sciences.

About 1,689 professors in these nine fields, an estimated 20 percent of the 8,600 humanities professors nationally, were asked to rate the universities on the scholarly quality of their faculty, among other factors. Results were based on 1,064 replies.

Results were converted into a scale of one to 99, where 50 represented the average and about two-thirds clustered between 40 and 60. Results were as follows:

Art history (41 universities rated): Yale, 75; NYU, 70; Harvard, 69; Columbia, 68; Princeton, 66; Berkeley 64; Stanford, 59; Hopkins, 58; Michigan, 58.

Classics (35 universities): Harvard, 70; Berkeley, 67; Yale, 65; Princeton, 62; Michigan, 61; North Carolina, 60; Bryn Mawr, 59; Brown, 59; Texas, 58; Columbia, 57; Chicago, 57; Penn, 57; Cornell, 56; Stanford, 55.

English (106 universities): Yale, 73; Berkeley, 71; Virginia, 70; Harvard, 69; Columbia, 68; Chicago, 68; Hopkins, 67; Princeton, 67; Cornell, 67; Stanford, 66.

French (58 universities): Yale, 74; Princeton, 73; Columbia, 70; NYU, 68; CUNY, 62; Berkeley, 61; Michigan, 61; Pennsylvania, 61; Indiana, 60; Illinois, 60; Cornell, 60; Stanford, 59; Harvard, 56.

German (48 universities): Princeton, 67; Yale, 67; Wisconsin, 67; Berkeley, 65; Indiana, 65; Stanford, 63; Cornell, 63; Texas, 63; Harvard, 59.

Linguistics (35 universities): MIT, 69; UCLA, 66; Texas, 63; Chicago, 62; San Diego, 62; Berkeley, 61; Pennsylvania, 61; Massachusetts, 60; Stanford, 58; Harvard, 55; Yale, 52.

Music (53 universities): Princeton, 67; Chicago, 67; Berkeley, 67; Yale, 66; Illinois, 63; Pennsylvania, 62; Michigan, 62; Cornell, 62; CUNY, 62; Columbia, 61; North Carolina, 60; NYU, 60; UCLA, 60; Stanford, 59; Indiana, 59.

Philosophy (77 universities): Harvard, 72; Princeton, 71; Pittsburgh, 71; Berkeley, 69; UCLA, 68; Chicago, 67; Stanford, 66; Michigan, 65; MIT, 64.

Spanish (69 universities): Harvard, 74; Pennsylvania, 72; Texas, 69; Yale, 68; Berkeley, 67; Michigan, 65; Stanford, 63; Wisconsin, 63; UCLA, 63.

Similar ratings of graduate programs in the sciences were released in September. Three more reports covering programs in other disciplines will be issued later.

The 1969 survey was conducted by the American Council on Education and published in a 115-page "Rating of Graduate Programs."

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Nov. 17, to cover the week of Mon., Nov. 29, through Sun., Dec. 5.

LATE ANNOUNCEMENTS

Fri., Nov. 19. Applied Mathematics Lecture: "Perturbation solution of some nonlinear oscillation problems using symbolic and numerical computations" by Prof. James Geere, SUNY-Binghampton. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Sun., Nov. 21. SWOPSI Public Event: "Did You Come, or Fake It?" A performance about women and sexuality by the Mothertongue Reader's Theatre. A sign interpreter accompanies the performance. Discussion follows. 7:30 p.m. Kresge Aud. Public cordially invited.

MONDAY, NOVEMBER 22

Biological Sciences Dept. Seminar: "Regulation of Yeast Cell Type by the Mating Type Locus" with Dr. Ira Herskowitz, UC-San Francisco. 4:15 p.m. Room T-175 Herrin Hall. Open to the public.

Radioscience Seminars: "Dynamics Explorer Observations of Plasma Waves in the Magnetosphere" with Umran Inan, S.U. 4:15 p.m. McCullough Bldg., Room 127.

Materials Science and Engineering Dept. Special Seminar: "Amorphous Silicon Solar Cells and Other Applications" with Prof. Dr. Josef Stuke, Univ. of Marburg, West Germany. 4:15 p.m. Peterson Bldg., 550A.

Numerical Analysis Seminar: "A Variational Method for Generating Multidimensional Adaptive Grids and Its Application to 2-D Hydrodynamics" with Jeffrey Saltzman, Los Alamos National Laboratory. 4:15 p.m. Math 380C.

Energy Policy Seminar: "The Myopia Strategy for Electricity" with Chauncey Starr, vice chairman, EPRL. 4:15 p.m. Skilling Aud.

Stanford Film Society: "Strangers on a Train." 7 p.m. Kresge Aud. $1.50.

Hillel Foundation Lecture: "The State of the U.S.-Israel Relationship: A Washington Update" by Jonathan Kessler, American Israel Public Affairs Committee. 8 p.m. History Corner, Room 2. Public cordially invited.

Casa Italiana Lecture: "The Italian Mezzogiorno: Dilemmas of an Undeveloped Region in a Developed Country" by Gisele Podbielski, consultant to the Ministry for the Mezzogiorno for the promotion of foreign investments in the Italian South. 8 p.m. Casa Italiana, 562 Mayfield Avenue.

Civil Engineering Dept. Urban Planning Lecture Series: "Mitigating Impacts of the High Rise Development: Housing, Transportation, and Historic Preservation" by Dr. Randolph Rossi, planning, environmental and regulatory coordinator, Port of San Francisco. 4:15 p.m. Bldg. 300, Room 300. Public invited.

Pre-Fast Programs: "Agrarian Change in Central America" with Larry Simon of Oxfam. Noon. Meyer Forum Room. And, "No Jobs/No Budget: Domestic Food Crisis" with Nevida Butler of the Ecumenical Hunger Program. 7 p.m. Meyer Forum Room.

TUESDAY, NOVEMBER 23

Campus-Wide Fast: "Structural Causes of Starvation" with Larry Simon of Oxfam. Noon. Meyer Forum Room. And, "Where Does Our Money Go?" with Larry Simon. 8 p.m. Meyer Forum Room. Services of Prayer and Fasting: 7:15 a.m., 9 a.m., Noon, 3 p.m., 6 p.m., 9 p.m., midnight. Memorial Church.

I-Center Tuesday Lecture-Lunch Series: "Global Development: Preparing for a Precarious Future" by Donald N. Michael, emeritus prof. of planning and public policy, Univ. of Michigan. Noon. I-Center. Lunch tickets available for $2.50 one week in advance. Brown baggers welcome.

WEDNESDAY, NOVEMBER 24

Ecumenical Ministries Wednesday Lunch Discussion: "Making Democracy Happen—the Nature of Social Obligation" by Arturo Pacheco. Noon. Casa Zapata (Stern Hall) dining room. Bring bag lunch or arrange to eat at Zapata. (Final in the series.)

Latin American Studies Bag Lunch Series: "Petroleum and the Poltical Facts: Democratization in Venezuela" with Terry Karl, asst. prof. of government, Harvard Univ. Noon. Bolivar House, 582 Alvarado Row.

EE380 Computer Systems Laboratory Seminar: "The Dictionary of the Future" with Martin Kays, Xerox PARC. 4:15 p.m. Terman Aud.

Services of Prayer and Fasting: 3 a.m., 7:15 a.m. Break Fast Communion. Break Fast meal, 7:30 a.m. Bechtel International Center.

THURSDAY, NOVEMBER 26

Thanksgiving Holiday.

FRIDAY, NOVEMBER 27

STARTS Great Directors Film Series: "History Lessons" dir. by Jean Marie Straub. An adaptation of a Brecht novel in which four Roman witnesses describe Julius Caesar's "irresistible rise" to power. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

STARTS Live Entertainment: Bob Valdez. 9 p.m. Coffee House. Free.

SATURDAY, NOVEMBER 27

SUNDAY, NOVEMBER 28

University Public Worship: Student Worship Service, 8:30 a.m.; Wendy Smith, assoc. dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.; Evening Communion in Memorial Church Round Room, 6 p.m.

ASSU Sunday Flicks: "Fame." 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

Ansel Adams. Books, letters, photographs. Exhibit coordinated by the Stanford Museum and the Dept. of Special Collections. Green Library, Special Collections Gallery, second floor, West Wing. Through November 24.

The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. November 15-January 11.

Maps Are For Use. An assortment of maps and related cartographic reference works available from the Central Map Collection. Meyer Library Lobby. Through November 19.

Acrylic on Canvas Paintings by Win Belton. Bechtel International Center. Through November.

Views Through a Natural Lens and California Vignettes. Color photographs by Damien Kuffler. Tresidder second floor gallery and the Coffee House. Month of November.

Performance Art as a High School Teaching Methodology. Documentation in film and text by Charles Garoian. Stanford Faculty Club lower entry area. Through late November.

Melange of Paintings. By several artists who have had exhibits in 1982. Faculty Club Gold Lounge.

Fiberwork by Priscilla Hextor. Faculty Club upper entry. Through late November.

VISITORS FROM OTHER COUNTRIES

Nov. 23: Group of 6—dean of the School of Medicine and faculty members and administrators, Toho University, Japan.

Nov. 24: Dr. Adnan Shihab-Eldin, director general of the Kuwait Institute for Scientific Research, Kuwait.

For further information, please call 497-1984, International Visitors, Maria Bun.

CAMPUS REPORT

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Exclusive licensing reviewed

Stanford currently is reviewing the disposition of intellectual property, such as copyrights and patents, resulting from research activities, according to Vice Provost Gerald Lieberman, dean of graduate studies and research.

In a white paper distributed to the Board of Trustees and discussed earlier this month with the Committee on Research, Lieberman notes that interim, internal guidelines now require advance approval of any proposed arrangement that would give industrial sponsors of Stanford research:

1) Title to intellectual property resulting from the research;

2) Royalty-free exclusive licenses; or

3) Options to exclusive licenses to research results which are patentable or copyrightable before the results are achieved.

A key policy question, he says, is "whether Stanford should accept corporate research agreements that require giving exclusive licenses to the sponsor prior to the development of any discovery.

"The granting of an exclusive license may be necessary if development is to take place after a discovery has been made: few firms will expend large sums for development that is likely to benefit others disproportionately.

"However, difficulties may arise from corporate research agreements in which the sponsor requests the right to exclusive licenses on all discoveries made as a result of the research funded by the company.

"Some believe that such a blanket arrangement provides incentives for

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Faculty should disclose industry ties: GSA

Stanford faculty should make annual reports on their outside professional activities to their department heads, the Graduate Student Association's Academic Affairs Committee believes. *(Text, p. 14).*

In particular, faculty should disclose "the extent and nature of equity interests in firms with products or research activities closely allied to their own academic fields," the committee declares. It also recommends that:

1) "Companies in which a faculty member has a major equity (or equivalent) interest should be prohibited from sponsoring the faculty member's University-based research;

2) "Faculty members should be prohibited from assuming managerial functions in commercial ventures while they are full-time members of the University staff;

3) "If the University administration cannot carefully monitor dual employer-employee advisee relationships (between faculty and graduate students), they should be prohibited.

4) "Peer review should be extended to include all sponsored research, industrial as well as governmental. A peer review system is the best means available for assuring the University community and the public that University-based, industrially sponsored research will continue to be of the highest quality. This peer review process would be most effective when done in conjunction with other universities."

The committee included student entrepreneurs as well as those whose advisers are entrepreneurs. "All are convinced that the University should conduct a comprehensive review of equity and managerial participation by faculty in for-profit ventures," the report said. It was written by William J. Smith, graduate student in chemical engineering.

Earlier this year, a special committee in the Stanford School of Medicine recommended that faculty "should report their consulting activities to the department chairperson on a regular and continuing basis."

Stanford permits full-time faculty to consult one day per week, or 52 days per year. When questions arise, these ties must be disclosed "upon request" by the relevant dean, the provost or the president.

The GSA committee acknowleged that "the driving force behind this report came from a small number of students who have experienced severe problems and found present policies inadequate to deal with them.....

"At present, University policies governing relations between University personnel and outside profit-oriented ventures are generally few and poorly defined....

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New rule proposed on advising, outside jobs

To avoid conflict of interest, Stanford faculty members should not hire or directly supervise graduate students in jobs outside the University while continuing to serve as the student's adviser or dissertation committee member.

That's the unanimous recommendation of the Committee on Research, slated for consideration by the Faculty Senate at its next regular meeting Thursday, Dec. 2.

The only exceptions to this policy should be those made in advance by department chairmen, the committee said. It is headed by Prof. Joseph B. Keller, mathematics and mechanical engineering.

The full text of its recommendation states:

"Faculty members must be especially sensitive to potential conflicts of interest between their teaching responsibilities vis-a-vis graduate students working under their supervision and their outside consulting interests.

"To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's adviser or as a participant on that student's dissertation committee.

"Exceptions to this provision must be approved prospectively by the department chairman."

The committee also will unanimously recommend that any delay in publication of research to protect the patentability of an invention be reduced from the present maximum of one year to 90 days.

Since the present policy was adopted in 1969, the committee said, "experience...has taught us that decisions to file patent applications, and the filing process itself, can reasonably be accomplished within a three-month period."

During the past year, the committee also reviewed and approved a policy statement on tangible research property prepared by Vice Provost Gerald Lieberman, dean of graduate studies and research.

Tangible research property includes biological cell lines, computer software,

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People

H&S groups study salaries, computing

The recently formed organization of Humanities and Sciences Department and Program Administrators has appointed two subgroups which deal with areas of concern to members: one on departmental computing equipment and procedures; and one to examine H&S exempt salary treatment.

The large group plans monthly meetings, while the subgroups meet more frequently to carry out their studies.

In addition, the Humanities and Sciences Dean's Office has expressed interest in sponsoring some of the meetings, with the first tentatively scheduled for December.

For more information on the organization, call Arlee Ellis, political science, ext. 7-1806.

Foreign student enrollment record

Foreign student enrollment at Stanford rose more than four percent to 2,052, an all-time high.

Asians accounted for nearly all the increase from last year's total of 1,967, the previous record.

Foreign students accounted for one fourth of Stanford's total graduate enrollment, with 1,569 of the 6,398 people at this level. More than a third of the University's postdoctoral students—165 of 480—likewise are foreign.

At the undergraduate level, only 266 of Stanford's 6,563 students—or four percent—came from other countries. In addition, there were 34 nonmatriculated students and 18 on attendance permits.

According to Lee Zeigler, director of the Bechtel International Center, there was "a significant increase" in foreign women students, who now total 411, or 20 percent of those from other countries.

By Stanford school, the largest concentration is in Engineering, where 771 are enrolled. This is 29 percent of the School's total enrollment. The largest single department for foreign enrollment is electrical engineering, with 219.

In the School of Humanities and Sciences, there are 500 foreign students, or 12 percent of the 4,113 enrolled.

In the Graduate School of Business, 150 of the 733 students enrolled—or 20 percent—are foreign. In Education, the proportion is somewhat higher—27 percent—with 135 of 491 from other countries.

Earth Sciences has 78 of 427, or 18 percent; Medicine 42 of 606, or seven percent; and Law four of 510, less than one percent.

The remaining foreign students have not declared their majors, are in graduate special programs, or have individually designed majors.

Students from Asia total 791; from the Americas, 475; Europe, 412; Middle East, 246; Africa, 69; and Pacific Basin, 51. Eight are stateless.

By country, Canada leads with 171, followed by Taiwan, 152; Japan, 148; Mexico, 122; Korea, 117; India, 114; United Kingdom, 109; Hong Kong, 84; Iran, 77; France, 65; Israel and China, 60 each.



Victor Fuchs

On Dec. 4, New York University College of Business and Public Administration will present **Prof. Victor Fuchs** with the John T. Madden distinguished alumni award for "outstanding character, ability, and energy," and distinguished service to the community."

Michael Jackson, assistant director of overseas studies, has been elected chairman of the Stanford Black Community Caucus for 1982-83.

He succeeds Thom Massey, associate dean of students for campus affairs.

Shelley Shaw, of development gift processing, was elected vice-chairwoman.

Four standing committees on staff affairs, finance, information and publications, and community relations will be headed respectively by Dan Crump, employee relations; Vernetta **Wilson**, personnel; **Ronald Hudson**, student affairs; and **Dorothy Webster**, personnel. **Joyce Tipps Coats** will represent the Stanford Linear Accelerator Center and **Aaron Smith** the Medical Center.

The caucus seeks to link the campus with external black communities, other minority communities, and their activities and programs. Further information may be obtained by calling Ronald Hudson at (415) 497-2733.



Henry Ramey

Prof. Henry J. Ramey, petroleum engineering, has been awarded the 1983 Anthony F. Lucas Gold Medal Award.

Given by the American Institute of Mining, Metallurgical, and Petroleum Engineers, the award recognizes Professor Ramey's contributions in the fields of thermal recovery of oil, reservoir engineering aspects of geothermal steam production, and interpretation of well pressure behavior.

Patricia Zavella, post-doctoral fellow at the Stanford Center for Chicano Research, has been appointed associate editor of *Feminist Studies* journal.

Zavella received her doctorate in anthropology from UC-Berkley this year. Her principal research interest is the impact on the family of women entering the labor force.

Marguerite pauses

Marguerite, the campus shuttle bus system, will not operate on Thursday and Friday, Nov. 25-26. It will resume service on Monday, Nov. 29.

Letters to the editor

Alumnus chastises Cohn, lauds Kennedy

Editor, *Campus Report*:

I was appalled both by the narrowness of Prof. Robert Greer Cohn's response to Donald Kennedy's speech to the University of Oregon and to the cynical tone with which it was offered.

I concur in Prof. Cohn's views that it is imperative that we continually search for universal moral values, elusive as they may be, and that the humanities are important in this search. I can see no justification in President Kennedy's speech, however, for the conclusions reached by Prof. Cohn.

The suggestion that we recognize that others may approach problems with a perspective foreign to our own is not an abdication, as Prof. Cohn indicates, of the quest for universal moral values. Even if we were to accept the premise of Prof. Cohn that "a humane leader of a great university owes it to us to remind us of these home truths occasionally," we cannot accept the premise that a particular speech into which these truths may not have been woven can lead to the conclusion that we erred "in picking a scientist for our president."

To suggest that in order to be a president of a university "as everyone knows, you have to be a politician, inclined to mouth the fashionable shibboleths, and flatter the abandoned and psychically deprived youth with their inchoate myths and opportunism" is pure and unadulterated nonsense. If Prof. Cohn's statement were correct, no one would be a suitable college president.

As an interested alumnus, I have read with great interest every speech of Donald Kennedy which has appeared in literature distributed to alumni. The total image of the man is clear beyond cavil—a humanist with a soul and a totally open mind. We are indeed privileged to have him as our president.

Alan S. Rosenberg
Stanford B.A. 1949

Reuters to fund Third World PJFs

Reuters, the British international news agency, has announced plans to fund four full academic year fellowships for "Third World" journalists, two at Oxford and two at Stanford. The two at Stanford will join the Professional Journalism Fellowship program in the Department of Communication.

Prof. Lyle Nelson is director of the program; Harry Press is managing director. Nelson will join the Board of Trustees of the Reuters Foundation set up to administer the program and its future expansion into other areas of journalism training.

Barclay meets award winners

The first two scholarship awards have been made from The Friends of Tom Barclay Fund. Emeritus Prof. Barclay meet with the recipicients at a Faculty Club luncheon on Monday, Nov. 22.

They are Ellen Nerenberg, a junior majoring in English, and Wayne Alabardo, a freshman, major undeclared.

The fund was established to honor Barclay on his 90th birthday. Those mainly responsible for getting it established are George Egan, '39, and Rudy Munzer, '40, both former students of the eminent political scientist who taught at Stanford from 1927 to 1957.

To date, 176 contributors have given $200,000. At Barclay's request, the fund has been designated for undergraduate financial awards to students in the humanities and social sciences, with special consideration for those studying political science.

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Congressional Medal winner's revelation

Admiral Stockdale tells of five-year duel with commissar

BY DONALD STOKES

First of two articles

America's most decorated naval hero, James Bond Stockdale, is about to reveal the hidden story that lies behind the famous feats which won him the Congressional Medal of Honor.

Vice-Admiral Stockdale's bravery in resisting eight years of brutal torture, interrogation and isolation in a Vietnamese prison named Hao Lo (Fiery Furnace) is part of the nobler side of the documented Vietnam War.

But his long drawn-out duel of courage and wits with the enemy prison system's political commissar has never been described.

In spite of his broken bones and other wounds, and the years of torture and brutalization, Stockdale lived to win that duel, and to witness the man called The Cat defeated and broken in spirit.

Stockdale is writing a book that will reveal the strange story. The tentative title is "The Old Man and The Cat."

The book is incidental to Stockdale's main aim in life today. What he wants more than anything else is to teach young people the lessons to be learned from his experiences in Fiery Furnace prison.

That is what he is doing at Stanford. A senior fellow at the University's Hoover Institution, this winter he will teach sophomores a course called "Combating Coercion and Manipulation."

His Stanford students will probably react similarly to those in the classes which he taught at the U.S. Naval War College, when he was its president.

The students will find themselves comparing Stockdale to great figures from the past and in literature who suffered attempted extortion and manipulation while in prison. The students may compare Stockdale with Socrates and his choice of death over compromise; with Miguel de Cervantes who met degradation in prison before writing "Don Quixote"; with Koestler's Rubashov; with Solzhenitsyn's Ivan Denisovich; with John Bunyan writing "Pilgrim's Progress" while in jail.

And, perhaps most frequently, with the Stoic philosopher Epictetus.

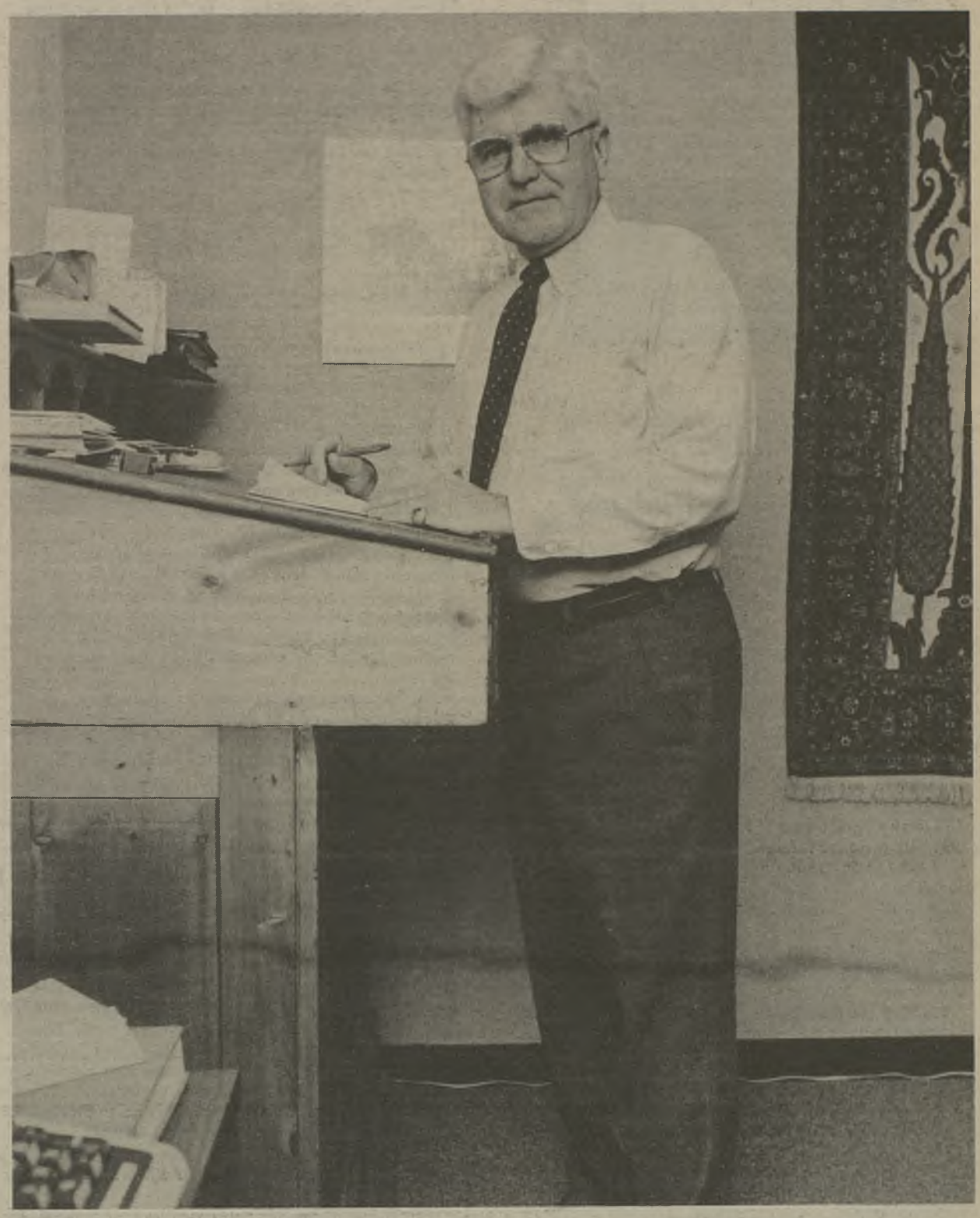
The words of Epictetus surged into Stockdale's mind when, on Sept. 9, 1965, he was shot down over North Vietnam while leading a fighter-bomber squadron on his 200th mission. In those last few minutes of freedom, as he floated down on his parachute to the hell he knew awaited him at the hands of the North Vietnamese, he recalled a passage from the philosopher-slave's stern manual for the Roman warriors: "If you require me to lose my own proper good, that you may gain what is no good, consider how unreasonable and foolish you are."

His ordeal began as soon as he landed. He lay helpless under a hail of blows, with his back broken by the landing. The mob smashed one of his legs, the other sustained a bullet-wound. He was flung into a truck and for three days and nights was jolted in an agonizing journey to prison.

When he finally arrived he can vaguely remember a satisfied face looming over him, that of a senior North Vietnamese officer. Stockdale's pain made him drift off into unconsciousness. Later, perhaps hours, perhaps days, he became aware of the same smug face looming into vision.

The communist officer told him coldly what to expect: "You have medical problems and political problems. In this country we handle political problems first. If they are satisfactorily resolved—that is, if you demonstrate a proper understanding of the American war of imperialist aggression and help us take concrete action to stop it—then we will attend to your medical problems."

From that day forth it was made clear that any medical help would only be given if Stockdale bent to his captors' will.



Admiral Stockdale stands at a specially made desk because his smashed left leg is permanently straight.

The terms of his ordeal were spelled out to him repeatedly: "You are not a prisoner of war. You are a common criminal. You are stripped of all military rights and must meet all demands made of you, or suffer severe punishment."

The voice sliced through Stockdale's daze of pain. ". . .You will never look up. . .you will bow deeply to the guards. . .you will be kept alone and out of sight of other prisoners. . .you are not allowed to speak, even to yourself."

These words to the wounded man set the scene for eight years of attempted coercion and intimidation. The cruelty had an important purpose. The Communists realized that Stockdale could be an invaluable propaganda weapon for them.

If Stockdale, the highest-ranking U.S. prisoner in North Vietnamese hands, could be induced to make a public statement about American "war guilt" it could be used all over the world and so help to sap American resolve.

What the captors planned was to break Stockdale's resistance and spirit, then get him to tape messages that could be valuable in turn to break the American public's will to support the war. Also, they wanted to produce to visiting "fact-finders," of the gullible type, a penitent senior officer who admitted America's "crimes." A very few such men were manipulated, but never Stockdale.

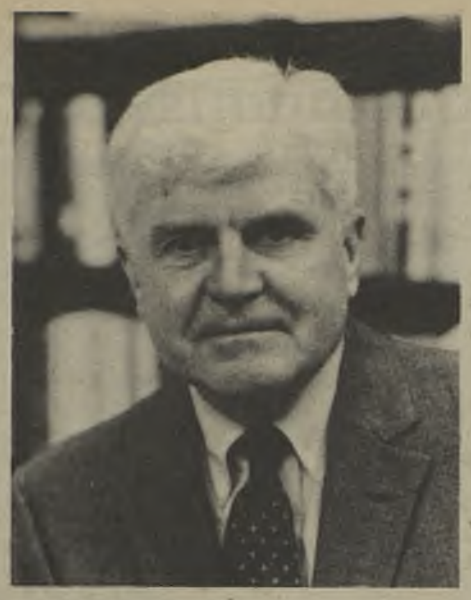
At Christmas 1965, when the white-bearded and crippled Stockdale had been in an isolation cell for four months, with his wounds untreated, he was made to hobble out of his cell. Blinking in the semi-tropical light, the airman was shoved into a room where the senior officer was waiting.

The face of that officer was sharp, his lips thin and tight, the eyes unblinking. It was a face Stockdale was to have imprinted on his persecuted mind.

This was Major Bai, or The Cat, as the U.S. prisoners were to call him in their forbidden communication with each other.

"I had no idea at that time that Major Bai could speak English" said Stockdale. "Perhaps he was self-

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(When) you realize how thin and fragile our veneer of culture is, when you realize the truth that we can all become animals within weeks when cast adrift and tormented, you start having some very warm thoughts about the only life preserver within reach—that human mind, that human heart in the next cell.

—Admiral James Stockdale

Stockdale...

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conscious because he could not speak it fluently—and he was a very prideful man."

The officer next to The Cat was the interpreter, who was to become Stockdale's personal antagonist. But it was the third figure who riveted the prisoner's attention. He had dead eyes and the immobile facial musculature of a waxworks dummy. He had a complete lack of expression. This creature was the torturer, known to the American prisoners as Pig Eye.

Major Bai's voice was metallic and one-toned, like the clanking of chains. "You and I have much in common," he told Stockdale. "We are about the same age, we each have sons in college (clearly he had done his research on the prisoner), but we belong to different social systems.

"There is a brick wall between us," The Cat went on. "You and I can never climb that wall, but we must try to see through it, because we must stop this imperialist war of aggression. You and I will work together to do this."

Stockdale grimaced from a recurrent nightmare: "This made sweat run down my back, for from my studies and reflections I knew at once that this was one of the first signs of attempted manipulation. The stage was now set for what The Cat intended to do with me. He wanted me to help him encourage Americans to turn against the war.

"That was how my long struggle began with Major Bai.

"The rules imposed on us set up, in an intense and bizarre form, an extortion factory. Nothing new in that. It was much like those described by Dostoevsky, Solzhenitsyn, and Koestler. It was a carrot and stick operation, common to most communist prisons, but not unique to them.

"One thing they all have in common—a tripwire system designed to snare you in a violation so that the jailers can brand you guilty of moral turpitude. There is always an escape valve, a way to make amends if you repent.

"The trip-wire in Hoa Lo prison was the 'no communication' rule. Each prisoner had a choice to make, and he stood to lose either way. If he obeyed and did not communicate with his comrades he suffered the conscience pangs of betraying his fellows and at the same time sentenced himself to a desperate loneliness.

"If he communicated—and this was the only way to go for loyalty, for a feeling of self-worth, for dignity—he would periodically be caught and tortured under the charge of ingratitude for the 'humane and lenient treatment' he was being given."

Stockdale smiled in counterpoint to a recollection: "The reaction of we prisoners was to build up a high-speed network of communication. Mostly it was by wall-tapping, but we used every other opportunity as well. We used the same code that Koestler's Rubashov used."

The white-haired hero is reluctant to dwell on the tortures inflicted on the Americans. He has told the story often, and in any case he is more interested in the battle of wits with The Cat.

It is from others that one learns of the most frequent torture. It was to force the prisoner to the floor, tie his upper arms behind him, and while standing on his back cinch up the elaborate binding by jerks, pulling his shoulders together while the torturer stuffed the prisoner's head down between his feet.

Arms under contorted tension produce an excruciating pain. The longer a prisoner waited before submitting to questioning, the longer he would have to spend with arms that had lost all power, and they would dangle helplessly for weeks afterwards; 45 minutes of blood stoppage usually cost about six months of dangling.

"The torturer was called Pig Eye because of the expressionless cast to his eyes," said Stockdale. "He was a professional; he could get the ropes round you and make you submit with a minimum of physical damage.

"There was another guard we called Big Ug, who was a massive brute, very powerful, who would break bones and do all sorts of other damage. But Pig Eye knew just how to make you submit quickly.

"Soon after you had submitted there came The Cat, clawing with his mind and guile, and it needed every atom of your will to resist him, and force them to start the whole business over again."

It was not long before Stockdale had the entire group of Americans organized, close-knit, in frequent communication with each other. One prisoner transmitted a total of 10,000 words in one day.

But the punishments came ruthlessly. Stockdale was sick, reduced 50 pounds in weight, his smashed knee fused straight forever, one arm dangling uselessly.

Stockdale sustained himself by repeating the Stoic rules laid down by Epictetus. He was crippled; very well, Epictetus said "Lameness is an impediment to the leg, but not to the will."

He was dependent on his extortionists for life support, so he soon learned to avoid asking for anything, and so not be liable for demands for reciprocity: Epictetus' rule was "Whoever would be free, let him wish nothing which depends on others, else he must necessarily be a slave."

Stockdale could stop his misery at any moment by becoming a puppet; was it worth the shame? Epictetus: "If some person delivered up your body to a passer-by you would certainly be angry. Do you feel no shame in delivering up your own mind to be reviled, disconcerted and confounded?"

Hour after hour the wall-tapping went on; the prisoners constantly sustained each other. Stockdale advised and directed, developed their collective will. Day after day the punishments struck. Again and again Stockdale was delivered into the skillful hands of Pig Eye. Again and again, wracked and depleted, he faced Major Bai, who was never present at the actual torturing.

The pain and resistance to it became part of Stockdale's very being. In an ineffable way, the crippled officer willed his way to an exaltation of spirit that grew out of his suffering.

Stockdale puts it this way: "Prisons have been crucibles of both degradation and creative impulse throughout history. They seem to bring out the very best and the very worst in mankind. The main inspiration is obtained through reflection, through the opportunity provided for uninterrupted thought, time to reorder one's life while in solitude."

After each bout of torture, after each interrogation, a prisoner would summon his remaining strength to wall-tap a report to his fellows, to help them in their ordeals. The common suffering, the common will, the common victory over temptation, fused the prisoners, in spite of their individual isolation, into one loyal being.

"When you're alone and afraid and feel your culture is slipping away even though you're hanging on to your memories—memories of language, of poetry, of prayers—hanging on with your fingernails as best you can and yet, in spite of all your efforts, still seeing the bottom of the barrel coming up to meet you, and you realize how thin and fragile our veneer of culture is, when you realize the truth that we can all become animals within weeks when cast adrift and tormented, you start having some very warm thoughts about the only life preserver within reach—that human mind, that human heart in the next cell.

"You are not ashamed to wall-tap what you mean when your pal is being taken out for torture for being caught trying to get a message to you. You tap 'G.O.D. B.L.E.S.S. Y.O.U.'

Stockdale recalls that the two years he had spent at Stanford, as a post-graduate studying for his M.A., helped him to turn the communist's arguments upside down.

"Bob North, a political science professor at Stanford, taught me a course called 'Comparative Marxist Thought.' This was not an anticommunist course. It was the study of dogma and thought patterns.

"We read no criticisms of Marx, only primary sources. All year we read the works of Marx and Lenin. When I was in the prison in Hanoi I understood more about Marxist theory than my interrogator did.

"Several times I was able to say to The Cat, 'That is not what Lenin said—you are a deviationist."

Stockdale described another significant incident in prison: "One night in 1966 I was dragged out of my isolation cell. I was tortured and interrogated during the whole of one night. What they were after was to persuade me to be taken downtown and say the right things to an American visitor.

"Major Bai had a long spiel which he had prepared for me. I was ordered to say all sorts of things damaging to the American cause, nearly all of them untrue, including statements about our having sought out civilian targets for bombing. The night wore on, and the questioning and torture continued.

"I found out that there was one thing Major Bai was particularly anxious for me to say. It was that our bombing was against international law. They wanted to include in their propaganda a statement by me to that effect.

"Finally, after they had worked me over for several hours, I lost control of myself. I became a screaming creature. I upset the table and shouted 'No, I won't say that, I won't. I don't care what you do to me!'

"You would think that was a suicidal move, for the torturer was standing there holding the ropes with which he could, with one pull, shut off the circulation of my blood.

"But no, the effect on those people was to make them go to the door together, speaking rapidly to each other. I was able to make out a few words. Major Bai was saying that he had to produce a prisoner for an important visitor by 10 o'clock that

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Stockdale...

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morning. Dawn was just breaking.

"It came to me in a flash that this man was under bureaucratic pressure. At that moment I saw my captors in a different light. I realized that the men who were treating me with such cruelty and violence were not political evangelists, but driven servants.

"They confronted a person with whom they could not cope. I realized that the best weapon I could use was to appear to my captors as a man liable at any moment to lose control of himself, who was capable of unpredictable explosions. I had unwittingly convinced them of this. They could not risk taking me to see the visitor."

Stockdale shifted his smashed left leg, which sticks out straight when he is seated. He looked out of the window at the placid campus: "Pressurized experiences make you concentrate all your being. Sometimes you can sense that you are undergoing what I call a 'melting' experience.

"Some of your innate fears and biases melt as you come to realize that under the gun, you must grow or fail. When you face such a situation as we in prison your resources emerge, sometimes ones you never realized you had. The human spirit has a fund of resilience that rises to the occasion in the grandest sense."

The successful resistance of the American prisoners meant disgrace for The Cat. The Vietnamese leadership made a scapegoat out of Major Bai, whose job it was to produce prisoners who had been "turned."

"Major Bai had sat in on their General Staff," said Stockdale, "and helped lay down policy for our treatment. He had never been able to get anywhere with us. He had failed. He had lost face.

"Major Bai had invested his life in a form of politics that demanded certain sacrifices and he had made them. I want you to understand that he was not a fanged monster. He was a guy with a lot of problems, a good many of which I gave him."

"I saw The Cat for the last time in June 1970. That was five years after we had met. He came to see me in my cell.

"Bai looked haggard and nervous, and he had lost weight. Ostensibly, he had come to see me because I was alleged to have 'incited a riot.' By this time he was no longer in charge, but had some sort of advisory capacity.

"Bai was calm, and said in a quiet voice: 'Things have not gone well with me.' He and I had spoken together so many hundreds of times that we were on an easy conversational basis. He went on: 'I have had to go before the people to confess my misinterpretation of the humane and lenient policy of Ho Chi Minh."

"Major Bai was still clearly very upset over what had happened to him. He came out of a reverie and said 'Do you know that I used to be on the General Staff?"

"He did not mention the charge which had been made against me, of inciting a riot. Instead, he said quietly, 'I would like you to come downtown and visit an American professor who has come to the city.'

"Well, The Cat's teeth were now drawn, and we knew each other so well that he did not look surprised when I told him 'You know I won't do that.' "

What was an American professor doing in the enemy capital during the war?

"People like that were The Cat's targets of opportunity," Stockdale explained. "If he could intimidate prisoners into telling the visitors we were treated well, and that we realized the U.S. was fighting a dirty war, if they were to take photos of us and report that we were in great shape, it would be very good propaganda for the Vietnamese.

"The Cat's job was to manipulate the prisoners into doing what he wanted."

Stockdale made a tight-lipped smile: "I never appeared before any visitor; I always refused. Producing suitable prisoners was a must for The Cat. What Major Bai wanted in particular were senior captives, men whose positions would impress the people back home in the U.S. I was a wing commander, the only prisoner held by the North Vietnamese to hold that top flying rank.

"My refusal to cooperate with The Cat was not a matter of bravery for me, for we had long ago made our respective positions quite clear. On that last visit The Cat did not rant at me. He didn't do anything except to say quietly 'I rather hoped you would. We have been in this a long time together.'

"Up till that time, whenever we met or parted, under the rules imposed I had been required to bow to him. But this time I knew instinctively that that stuff was off. The Cat called to a guard, who would take me back to the isolation cell. I knew that but I didn't care.

"As we waited Major Bai touched me on the shoulder. By this time he was speaking English to me without an interpreter, and called me 'Sto-dale.' He asked, 'How long has it been for you, Sto-dale?'

"Five years," I replied.

"The Cat looked grave: "Well, I'm afraid it is going to be several more years.' We did not shake hands, we just looked at each other. I never saw him again."

It was to be three more years before the prisoner's ordeal came to an end. But those three years were comparatively benign. The tortures ended, so did the pressures, so did many of the cruel deprivations.

The counting of the days did not end, nor the dreadful monotony. As always, it was the group's cohesiveness that helped them through.

The wall-tapping continued to be their link with each other and to their hopes for being united to those they loved and who suffered with them.

As he came to the end of his story the admiral paused, trying to find the words that summed it all up.

He spoke at last, a remarkable statement: "In a way I was always rather sorry for The Cat. He went down the tube finally because bureaucracy demands scapegoats when anything goes wrong.

"I don't know whether he is still alive or not, but if I were to meet him again I would probably buy him a drink."

The former prisoner tried to explain why he felt no bitterness toward his captors: "Prison and torture and isolation can be pressure chambers that forge the spirit. That is what happened to many of us in prison. It was almost a spiritual and intellectual transformation.

"People may find it hard to understand, but I am thankful for those years in prison. In many ways they were the most valuable years I have ever known."

He echoed Solzhenitsyn: "Bless you, prison, for having shaped my life."

Software Distribution Center to help market programs

Stanford has formed a Software Distribution Center (SDC) to help distribute University-developed scientific programs.

The purpose of the center is to enable scientic programs to get widely distributed without getting the developer bogged down in the work of assisting the people who buy the programs.

"A scientist who can send out a software program would find that he or she would be providing a lot of informal support service to people out there," says Niels Reimers, director of technology licensing.

"The alternative is to develop a very complete program which might be inappropriate for a university to do. Providing services certainly diverts our people from what they should be doing."

Reimers said the existence of these computer programs frequently is not well known. "Simple publication in the journals is inadequate for scientists elsewhere to stand on the shoulder of the Stanford scientist and advance science," Reimers says.

In the past the University would license a company to distribute and support the software, and the Stanford scientist would work with the company to help make the program easier to use.

"But that didn't take care of all the problems, so the Software Distribution Center was formed.

"At least it's a way to take the load off the scientists' backs."

The programs are sent out in an "as is" basis, Reimers says. There is usually no support. "If it runs, fine; if it doesn't run, sorry," Reimers says.

The University has set up a three-tiered system to handle the distribution.

In the first "tier", programs go to other scientists solely for the cost of distribution, usually from $50-100.

The second "tier" involves commercial companies. They receive the software and may use it for developing commercial products and processes of their own, but they cannot turn around and sell that software to anybody else.

The final "tier" uses software distributing companies as the university has in the past. If there is sufficient market for the program, the company will adopt the software and advertise it. The company would also provide the support to the users.

Reimers says that occasionally programs sent to first and second tier companies prove to be so popular that a commercial firm takes over the distribution.

A number of programs are already being distributed by SDC, including programs to assist in designing new, large-scale integrated circuits, running electronics firms, and solving complex mathematical, scientific, and medical problems. The software consists of computer tapes containing code, the zeros and ones that constitute basic computer instructions.

Lawrénce Osborn of the Office of Technology Licensing said the University had not distributed its own software in the past because it was felt that such a move would kill off the commercial market.

But tests run by the University showed that this was not the case, Osborn said. The distribution actually "created a market place."

All of the customers so far are high-technology firms. Many, such as Hewlett-Packard, can support the programs themselves.

So far Stanford has sold 25 pieces of software to 150 firms. "Most bought two or three pieces of code," Osborn said. "We had a lot of repeat business."

Fourteen of the Stanford-distributed programs "had a commercial life after the initial distribution," he said.

Since 1980, the University has earned $437,000 selling software with another $850,000 coming in the form of equipment or discounts on equipment.'

The Office of Technology Licensing has assigned Bill Osborn to act as full-time coordinator of the software center.

Facsimile questionnaire distributed

The Telecommunications Department has sent a questionnaire to deans and department heads to aid in its plans to introduce facsimile service to all departments next month.

Facsimile communication transmits copies of full pages, including drawings, pictures, and hand-written notes, to compatible terminals at other locations over standard telephone lines.

The cost of the transfer is the same as telephone charges for the duration of the call. It is much cheaper than TWX/TELEX messages, and facsimile service is especially advantageous when charts or drawings, special formatting, or signatures are important.

Telecommunications is trying to determine what volume of use would be created by a facsimile service at Stanford. The questionnaire will provide information about need, anticipated use, and contacts with compatible terminals.

The questionnaire should be returned to Telecommunications by the end of November.

Any questions about facsimile service should be directed to Telecommunications, ext. 7-1148.

Expedition to Greenland—stalking the ghost of Wegener

The answer to how the continents crack and drift apart may lie in the very land where Alfred Wegener, the pioneer who was first in modern times to suggest that continents drift, died in relative obscurity on an expedition in 1930 Greenland.

A Stanford scientist has gone back to Greenland to study this process of "rifting"—how continents pull apart.

The most difficult task of Dennis Bird's research is getting to his field area. For the past two summers, he has been studying a desolate, nearly inaccessible area on the east coast of Greenland that is cut off by Arctic pack ice for all but two months of each year.

To reach their remote camp, he and his colleagues have had to use light planes, helicopters and fishing boats, even though it was the height of the Arctic summer.

Bird has just joined the Stanford Geology Department this fall as an assistant professor specializing in theoretical geochemistry. His interest in the east coast of Greenland stems from work he undertook while he was a post-doctoral scholar at the University of Arizona at Tucson, and a graduate student at UC-Berkeley.



Setting up camp across from a Greenland glacier

Along the southeastern coast of Greenland, there are systems of fractures along an inactive "fossil rift zone" that formed about 55 million years ago when that landmass was rifted from the Eurasian continent.

By studying the hydrothermal alteration of rocks in these fractures, that is, the chemical changes in the rocks caused by circulating hydrothermal fluids, he hopes to learn what conditions of temperature, pressure and fluid composition prevailed during the initial stages of rifting.

As a theoretical geochemist, Bird has studied the thermodynamic properties of minerals in order to make predictions of how hydrothermal fluids react with rocks to form these minerals. He has also been studying the Salton Trough of Southern California, an active rift system, to see how well theoretical predictions square with what is happening in an operating rift zone.

Studying the rift

Bird's investigations in Greenland are the next step in his program of research. Having established that the thermodynamic database predicts some of the things that happen in active spreading systems, Bird wants to try to determine the temperature, pressure and chemical potential of the components in an active fossil rift system.

An ideal system for his purposes is located on the coast of East Greenland, the site of the Skaergaard Intrusion, a large body of intrusive rocks about 300 cubic kilometers in volume covering an area of 70 square miles. It is one of several that dot the coast, providing a perfect natural laboratory for testing the theoretical predictions of temperature, pressure, and fluid composition in an incipient rift zone. It is well-exposed at the surface through uplift and erosion after first being intruded at deep crustal levels.

"In east Greenland, we have the opportunity to actually walk on an outcrop that corresponds to depths of about 10 kilometers (6 miles) in hydrothermal systems that were associated with the initial rifting of Greenland from mainland Europe about 55 million years ago," he says.

The Skaergaard Intrusion is one of the best studied intrusions for its mineralogy and petrology, although no more than a dozen geologists have ever visited it. Hydrothermally altered minerals and the associated fracture systems were not discovered until 1971, however.

In 1981, Bird and Dennis Norton received a National Science Foundation grant to travel to Greenland and look for fractures. "That was essentially an exploratory expedition to do reconnaissance around and within the intrusion to see if there are fractures, which contain hydrothermal minerals, and is this investigation worth pursuing? The answer to that question is yes, definitely." They found hydrothermal minerals in fractures as closely spaced as one per meter, a number which agrees with the theoretical calculations of rifting in a continental setting.

On this first expedition, Bird and his party discovered just how difficult it is to reach East Greenland even in the summer. "The logistics in trying to get to the Skaergaard is sometimes more difficult

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Word processing course available

The Departmental Information Systems Group of CIT has acquired a word processing basic skills and concepts audiovisual course for use at Stanford.

This is a videotape and cassette course acquired from Southwestern Publishing, which teaches how to operate most word processing equipment. It assumes no prior knowledge of word processing. Text processing operations are demonstrated on the equipment of several word processing vendors. After completing the course and about an hour of hands-on experience on any display-based text editor, one should be able to do productive text processing work.

This is a self-paced course which takes about seven hours to complete. Following an introductory videotape explaining word processing, the student moves through six segments of instruction each involving an audiocassette, a learning exercise, a videotape presentation, a skill inventory checking exercise and a summary of each segment. One of the course books is a manual, which then guides one to using any word or text processing system.

To enroll for the course sign up at the Information Desk in Forsythe Hall. Videotape equipment and a study room are provided at Forsythe and student course books are available from Document Sales also at Forsythe. Cost for using these materials is $5 ($2 for students).

Marriage and the young geophysicist...

Women entered the field of geophysics about six years ago, and ever since geophysicists have been marrying each other "like crazy," according to George Thompson, head of the Geophysics Department at Stanford.

Most of these married couples seem enthusiastic about sharing similar professions. "Oh, I think it's great!" Laurel Burns-Newberry, a graduate student at Stanford, says about being involved in the same field as her husband. "I would encourage others to do the same," she says firmly.

Helen Smith (who asked that her real name not be used) says, "If I am stumped on a technical question, I can ask my husband." John Smith adds, "We can understand on the same level." Helen agrees. "We have a lot in common. We can share problems," she says.

Helen works for Amoco while John works for Western Geophysics. They both are located in Houston, Texas.

"We are more likely to find work in the same city which are usually oil cities," Helen says.

She notes other conveniences. "We go to conventions together. It also allows us two circles of friends which allows a broad cross-section of people to talk with in the field," Helen comments.

Related fields

It seems that the most ideal situation is when couples work in related fields but not for the same companies. Tarin Davies, a self-employed independent consultant in hydrogeology, says, "My husband and I are in related fields but not identical. It suits us well."

Peter Davies is a Ph.D. student at Stanford. "For the past two summers I've been a technical assistant for Peter. It's wonderful to have training close enough to his to enable me to be a technical assistant for him," says Tarin.

Mary Lou and Mark Zoback both work for the same company, Geological Survey, but maintain different professional titles.

"Ideally, I wouldn't choose a spouse in the same field," says Mary Lou. "I find it limiting. It's hard to find more for external life. We go to parties and see the same people every time," she comments. To solve this problem, Mary Lou says, "Now we have made a deliberate effort to find friends outside of work."

Mary Lou does see advantages in having her husband working for the same company. Many couples face a dilemma when one spouse is transferred. "A great advantage in working for the same company is that both of us can transfer our jobs. When Mark was transferred to the Bay Area, I was able to transfer my project for Geological Survey, too," Mary Lou comments.

She cites another advantage. "We really appreciate what each other does. If we were in different fields we would not understand what the other was doing."

The Zobacks have experienced the interruption of their personal life due to similar career interests.

"One of the hardest things is writing a paper together. The biggest problem is that you can't get rid of it. You go home and talk about it. You wake up in the morning and you talk about it. I don't recommend it to anyone! But we'll

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Greenland...

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than the work we actually do when we get there. It's really a remote area," says Bird.

The coast of Greenland is all but cut off by a thick ice pack, and is accessible for only six to eight weeks around August.

Because of the ice, the earliest Eskimo (or Greenlander) and Viking settlers could not land on the east coast. Eric the Red, the Viking adventurer, did not touch down until he reached the south tip of Greenland after traveling west from Iceland. To this day, the west Greenland coast is more heavily settled than the east coast, which holds only a few small villages.

What makes entry by seagoing vessel possible are the fjords and a phenomenon called catabatic winds. Steep glaciers from the inland ice field produce icebergs in the fjords. The icebergs and the action of tides and coastal currents help break up the pack ice. Also, strong seaward winds are generated by the imbalance between cold, dense air over the ice cap, and warm air over the ocean.

As cold air flows down through the fjords, it expands and heats up. High wind velocities develop and break up the sea ice. In spite of these effects, the southeastern coast between Kap Gustav Holm and Kap Dalton is less explored than the northeastern coast because there are fewer fjords present in the south to generate the winds and the icebergs.

To reach their destination, Bird and his colleagues first flew to Reykjavik. No planes were flying to Greenland that summer due to a telegraph strike, so they had to take a fishing boat across the Danish strait to Angmagssalik, a small fishing village on the east coast.



Geologist rows across an ice-strewn fjord.

A second vessel, an old Norwegian sealing boat called the Furenak carried them to their destination, but it had to travel a circuitous route back toward Iceland to avoid the pack ice before the crew found a channel leading to the field area, Kangerdlugsuag.

The party of six spent about one month there. "We always have to travel with Danish scientists when we do any type of work in Greenland," says Bird.

"They are extremely helpful with the difficult logistical arrangements necessary for any type of research in Greenland. It was a Danish colony for a long time, and they were just given their independence. They have tried to keep it culturally isolated. They want to try to let the Eskimos—the Greenlanders—be Greenlanders."

During the last two weeks of their stay in 1981, they met a group of four Greenland families, 27 people in all, who hunted seals for their livelihood. Later, in the 1982 expedition, Bird's party was the first group they had seen for nearly a year.

They had run out of supplies like sugar, tobacco, and alcohol months ago, and survived by eating seal meat and burning seal oil for fuel.

"They were neat people, really beautiful people," recalls Bird. By the time the expedition had come to a close, the members of the two parties had become good friends.

With the reconnaissance expedition a success, Bird obtained funds for a second expedition to map in some detail the fracture system in the intrusion's lower region. This time, getting there was even more exciting.

Flying north

Bird and his field assistant, Ralph Rogers, currently an assistant professor at the University of Oklahoma, were traveling with a large expedition of 16 people. They were from different institutions and were headed for different spots along the coast. Bird's group had permission to fly to Angmagssalik from Iceland, and to go from there by helicopter to Kangerdlugsuag.

Greenlandair has an absolute monopoly on all flights to, from and within Greenland. During the summer there are several helicopter flights up the east coast. The pilot, however, was reluctant to fly as far north as Bird's field area because of the lack of air support there, and he kept postponing their flight for days at a time.

After three weeks of delay, two scientists in an area called Sodalen near Mikis Fjord and about 20 kms from Bird's area heard of the troubles and cleared a small airstrip for them. A pilot and a Twin Otter aircraft with large balloon tires was hired from Iceland to fly them up the coast.

They were close to their destination, but not before there was another delay. Greenlandair, citing their monopoly on air traffic, refused permission for the flight. Eventually, Bird's party had to have Greenlandair contract for the pilot from Iceland to fly them to Sodalen.

The party left at 11 p.m. with plenty of daylight to spare in the long Arctic summer day. After two reconnaissance passes, the plane landed on a 250 meter (270 yard) never-before used airstrip carrying 900 kilograms (almost 2,000 pounds) including six people. It touched down in less than 200 meters (215 yards), an amazingly accurate landing considering the uncertain conditions.

"We had about 35 days on the outcrop, and we mapped extensively the fracture systems in the lower part of the intrusion, which is called the Layered Series, and found that this fracture system does extend down to the base of the intrusion."

Fracture mapping

To study the fracture system and its hydrothermal minerals requires a combination of cleverness and muscle work.

"We've been trying to develop techniques for fracture mapping," Bird said.

"Initially we go out and do some recon traverses just to establish if there are mappable fractures with hydrothermal minerals in them. If that's the case, then we have to go back and set up a tape, maybe 50 or 100 meters, (55-110 yards) in various spots, and along this tape, we will count every fracture that crosses the tape, measure its orientation, and then take systematic samples and try to observe cross-sutting relationships. This produces a spot map.

"This is also complemented by air photo-mapping, using both stereographic projections and oblique photos to map large scale features. Other times, we get down on our hands and knees and make maps. . . .

It's very much like drawing a detailed picture. This is the only way you can get geometric relationships of fractures in this type of rugged topography."

By mapping the fractures as carefully as they analyze the minerals within, they hope to determine the stress field at the time of rifting, and ultimately, how the rift itself forms and propagates.

"What we're mapping are strains—strains associated with the collapse or failure of a magma chamber. . . . My specialty has to do with how the fluids formed these minerals in the cracks. What are their characteristics in terms of temperature, pressure, and mineral composition. . . . The chemical aspect, my specialty, is very intimately entwined with the mechanics of all the rocks."

Bird's research will continue for at least two more years. He has mapped the lower intrusion, and has funding for one more expedition in the summer of 1984.

—Allan Chen

...when two work in the same field

continued from page 6

probably write more," she sighs.

Tarin Davies says that she foresaw the problems of being in identical fields. "I considered going into engineering geology (her husband's field), but decided not to. One of the major reasons why was because I didn't want us to have identical expertise. It's important for me to have separate expertise for my own individual growth."

Competition is a potential problem for couples in closely related fields and interests. Walter Lynn says, "If there are hard feelings, such as competition or threat, it's not so much because people are in the same position. It's deeper than that, perhaps a personality mismatch."

"My wife is making more money than I am right now. I don't feel threatened. Neither does she. In fact, I hope her salary increases so I'll be able to retire earlier," he adds, grinning.

No competition

Although the Zobacks have worked together, they claim that competition is not a problem. "There was no competition when writing the paper. We see it as a combination of talents," says Mary Lou.

The "Smiths" explain why they do not compete. "I'm an explorationist and deal with client relations. John is a contractor in research. He sells services for companies. In fact, I deal with client relations for my husband's company. We work for each other," Helen says.

Among the couples interviewed, home life values varied extensively. The two couples who have not yet had a child agreed that they would take equal responsibility. "We already talked about a family. We'd split it 50-50. We would both continue work," says Laurel Burns-Newberry.

John Smith also agreed to share responsibility for rearing a child.

"If we do have a child, which we hope to, I would go 50-50." Helen Smith adds, "We would probably take turns every six months."

On the other hand, the other two couples, who have experienced the reality of parenthood, take different approaches. Mary Lou Zoback is the mother of a six-month-old child and works part time. Her husband is in China for three weeks working for Geological Survey.

"I don't mind staying home from work. I planned on going back full time by now, but chose not to," says Mary Lou. "It is a little hard when he comes home from work. I hear about things going on at Geological Survey that I don't even know about because I'm only part time." She says that Mark has agreed, when he returns, to stay home one day a week to spend time with his child.

Peter and Tarin Davies decided on a more traditional alternative to parenthood. "I'm seven months pregnant right now. My first priority is the child so I'll stay home as much as required," says Tarin.

"I will spend less full time at my career than Peter will because of our child. I don't resent it at all," she says sincerely.

"We're both very family oriented. We think it's unfortunate that Peter doesn't have the opportunity to spend half his time with the baby. It's a blessing to be able to spend half my time with my child."

—Linda Kemby

Jayne Dungan dies at age 76

Jayne Dungan, who retired as coordinator of Stanford's Guide Service in 1972, died Wednesday, Nov. 17, in the Hoover Pavilion of Stanford University Hospital at the age of 76.

A memorial service will be held at 3 p.m. Saturday, Nov. 27, at Holy Trinity Episcopal Church, Menlo Park. Instead of flowers, the family prefers contributions to the Stanford University Guide Service fund, c/o Memorial Gifts, 301 Encina Hall.

Dungan, who spent several years as a library assistant in the Hoover Institution before taking over the Guide Service, received her education at Radcliffe and Oxford.

She is survived by her children, Betsy, Jay, and Michael, and three grandchildren.

Research associate posts open

Two research associate or postdoctoral fellow positions at Stanford Magnetic Resonance Laboratory will start in early 1983. Work with new 600 MHz spectrometer and an interdisciplinary team on biological applications of NMR. Must be proficient in NMR spectroscopy, electronics, hardware and software, and probe construction. Rank and salary depend on qualifications.

Send inquiries to Dr. Oleg Jardetzky, Stanford Magnetic Resonance Laboratory, Stanford University, Stanford, Calif. 94305, (415) 497-6270.

Stanford is committed to Equal Opportunity through Affirmative Action in Employment; we are especially eager to identify minority persons and women with appropriate qualifications.

Change accelerates, Weber says in annual libraries report

Change is inevitable and necessary. Those who are current participants can influence the direction of change, the rate of change, and the methods of change. As Justice Sandra Day O'Connor reminded us at Commencement: "... There are amazing ways in which the individual can impact on society, even as a volunteer and without reference to any governmental act at all."

The University Libraries have changed as much or more this year than in any other recent year. Considered in its totality, it has been a dynamic experience. Some change has come from internal impetus and some from external, some was long planned and some quite sudden in occurrence, some with foreseen consequences and some with consequences unforeseen—but all stimulating.

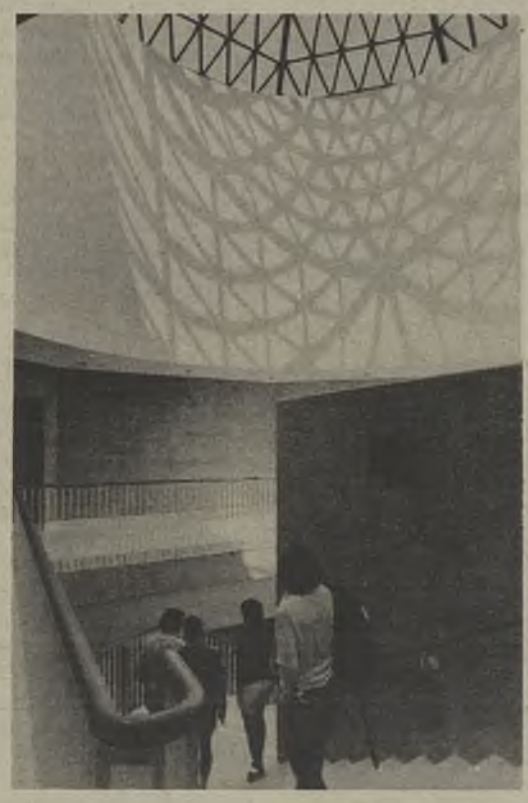
Two examples can serve to point up these currents at play. The first is the addition of glass to enclose the center well on the upper floors of the J. Henry Meyer Memorial Library. Due to the size, central location, and encouraging acoustics of this interior space, students over the past fifteen years found it a convenient location to take study breaks, sometimes with puckish motives, sometimes with disturbing consequences. Furniture rearrangements, a white sound system, and efforts at behavioral modification were all tried, but none was deemed as effective as glazing in the well. An undergraduate student on the Academic Council Committee on Libraries urged that it not be postponed until summer, so the job was done at the beginning of Spring Quarter with very salutary effects.

A second instance was the implementation by the Research Libraries Group of a vastly improved network file system for book ordering and cataloging and its unanticipated impact on the Libraries. The system's use was so immediate and heavy throughout the country that computer capacity was exceeded, resulting in poor operating conditions for a good part of this academic year. The new RLIN system was worth waiting for, yet the first, temporary consequences of this change were major perturbations in library purchasing and processing routines as well as in the provision of services to faculty and students.

An organization operates in a specific environment, and it survives and grows through changes in that environment. To do so, it must adapt to pressures, respond to demands, and make the best use of opportunities which present themselves. Adaptation is generally of an incremental nature—within a conceptual framework, an accumulation of minor steps is taken toward the organization's stated goals. The University Libraries have used such statements of goals accompanied by three-year specific objectives as a way of keeping our eyes focused on the general direction being pursued, while forces for change may at times seem to be pushing us to one side or the other of the desired course. At the beginning of this academic year, a new iteration of this goals and objectives document was compiled, aired with faculty and students on the Committee on Libraries, and provided to the University.

It is fortunate that, although this year saw many changes, none of them was overwhelming. Major, radical changes are not only difficult but generally unwise. Information on which to base decisions for change is often less than would be desirable, and accurate predictions about the future are problematic. Personnel are often wedded to prevailing patterns of behavior and can only accommodate a certain pace of change. These patterns are supported not only by formal organizational structure, but also by employee skills and personal relationships developed over extended periods of time. Furthermore, the Libraries' clientele requires a rather stable and dependable service pattern so that they can accomplish their library work without being surprised, frustrated, or required to spend extra time.

Thus, it is well for the faculty and students to be aware that electronic exit control equipment has been added recently in Meyer Library, Cubberley Education Library, and the Engineering Library, with others to follow in the years immediately ahead. It is well for our readers to know that plans are progressing for Stanford to house some of its less-used collections in a specially-designed university of California Library Facility in Richmond, which will be ready for occupancy in the fall of 1982. And it was well that



our readers have experimented this year with the direct use of an on-line catalog in the Engineering Library, Meyer Library and Green Library, which is likely to be the common method of accessing catalog records in a few years.

Even though theory points to the advisability of incrementalism, profound change can occur when some large force affects the organizational infrastructure: for example, a computerized approach to cataloging. Once such a new system is adopted, substantial changes will take place in patterns of behavior, organizational structure, employment criteria, and procedures used by staff in performance of their tasks. These will occur in a ripple effect as personnel adjust their mode of operation to the demands of the new system. While the costs of initiating and implementing such a major system may be high, maintaining an outmoded system may be just as costly. Thus the ability to change is affected by what has gone before, by the strength of argument and planning of current participants, by financial capacities, and by the time of supervisors, department chiefs, and directors to think through the options, gain confidence in the direction being proposed, communicate with their colleagues, develop procedures to implement the new direction, and inform the community served by the fifteen units comprising the Stanford University Libraries. Each decision is grounded in the results of previous decisions, the sum being progress toward a new standard of achievement or a new concept of service.

An example of a change in program that has been emerging in recent years is improved services to the science and technology community through a stronger science department. Fundraising will be undertaken to build up endowment of book funds in the sciences, a weakness of the Libraries for many years.

Another example of programmatic change is the renewed effort to provide collections and services for the social sciences comparable in effectiveness to those currently offered in the sciences and humanities. Studies have shown the need for improvements in collections, more effective bibliographic instruction and faculty contact, and suggest that there may be some unnecessary title duplication between libraries. A major program of collection analysis has been undertaken in social science disciplines in order to gain more precise and accurate identification of collection needs. Reassignment of expert staff and a significant appointment to a vacant position have provided the professional capacity needed to guide and manage the new social science effort. Meetings with faculty in half a dozen departments have helped shape the direction that should be pursued, and a review of book funds in support of those needs will lead to revised allocations. A sophisticated title-overlap study will be high on the agenda of the University Library Council subcommittee that oversees collection coordination. It is hoped that appropriate enhancement of social science book funds will follow that of the sciences and technology as the next major effort to convey to our friends the message that endowment of the collection acquisition program is a *sine qua non* for maintaining the strength of a first-rate teaching and research library in straitened financial times.

Looking at the internal circumstance of the Libraries, there are forces for change within the library itself as well as from the University at large. A major example this year is the Library program and Process Study, a year-long effort in organizational development. Its origins were in discussion with University officers in February 1981, and its intent was to seek strategies enabling the library to operate and manage itself more effectively within the prospective context of diminishing resources during this decade. The study in the Libraries looked at the quality of the work environment, the style of communication processes and decision-making, decentralization of management and delegation of authority, methods of operating in a physically decentralized system, and interaction between the academic and the business parts within the libraries as well as those same relationships in the University itself. A survey of all library staff was undertaken in the summer of 1981 to gather information on attitudes, working conditions, leadership, peer relationships, job satisfaction, and expectations. Led by a Steering Committee comprised of University and Library managers, this study reflects the importance of interrelationships between the Libraries and the University. The results of the survey and of the Program and Process Study will effect change in the Libraries which can be beneficial to staff and to operations as experienced by members of the community. While some of the library staff would press for radical change in structure, policy, or procedure, others would say that the very duration of this project illustrates that major change requires wide participation, much deliberation, and careful choices so that forward-looking moves are taken with long-term beneficial results.

Some change is easy to comprehend. This year, ground was broken for the Braun Music Center, of which one-third will be devoted to the new Music Library. A naming donor for the Music Library is being sought. Renovation of the Green Library Staff Room was completed. A Visiting Scholars' Reading Room is operational, and fundraising is under way for a more complete facility to meet the needs of those visiting scholars who cannot be accommodated in faculty studies. Early American Imprints in a large microform publication are being analyzed under a federal grant and made available nationwide through the RLIN system.

Change does not always require financial adjustment or increased budgets. Yet there are certainly consequences of budgetary change, and the one percent cut in the budget for 1982-83 will have its impact. Although library book funds were hit especially hard, concern for the continued strength of the book funds is shared with many University officers. The consequences of a change here can affect the quality of the Libraries adversely or beneficially for decades to come.

Although change is welcomed, it must be carefully monitored. The Libraries need and welcome the comments, suggestions and perceptions of faculty and students throughout the University as well as of University officers who may have a broader view and other perspectives that can benefit the shaping of change in the University Libraries for the years ahead.—**David C. Weber**

Stanford graduate student goes to China with Big Bird

Big Bird, the world-famous Sesame Streeter, has helped bring Milton Chen to Stanford for his Ph.D. studies.

Big Bird even took Chen to China, out of which trip will come a 90-minute NBC special next spring.

How a kid born in Negaunee, Mich. got to these places has a lot to do with chance, but Chen's seizing the main chance points up the importance of being ready—and able. Next June he will complete course work toward his Ph.D. in communication research, in which he is studying the impact of technology on education, especially on children.

"I'm a believer in fate and good fortune," says Chen. "Planning one's life doesn't often allow for more serendipitous things."

The key element in all of this was simple: a colleague in audience research at Children's Television Workshop (CTW) in New York where Chen had a summer job while attending Harvard left to get married. Among his Harvard courses were some in communication research, specifically formative testing of audiences.

When the research job was offered to Chen, he was ready, and he eventually became research director for a CTW science show, "3-2-1 Contact." He also was involved with the better known CTW shows for children, "Sesame Street" and "The Electric Company."

Chen's parents came to the United States in the 1940s from China. His father studied mining engineering at Penn State University and has worked for nearly 30 years as an engineer since that time. (The son was named after the then president of Penn State, Milton Eisenhower.)



Milton Chen

"I'd planned to be a civil rights lawyer, and was admitted to Harvard Law School," says Chen. "But after one year there, I found I didn't enjoy the law, and furthermore, wasn't very good at it. I got a summer job writing press material in 1976 at CTW, and a permanent job came later that summer when my colleague left to be married."

His work involved testing segments of the shows in advance on children's audiences, to enable writers and producers to learn how to improve the productions. Although he didn't consider a Ph.D. program at the time, the research proved to be good preparation for his later academic work at Stanford.

When he decided to continue his education, he applied to both the Yale School of Organization and Management and to Stanford, and was admitted to both.

He chose Stanford "because the people and courses provided the broad scope and flexibility I wanted. I already was familiar with the mass media work of Profs. Wilbur Schramm (emeritus director of Stanford's Institute for Communication Research) and Donald Roberts."

A few years before Chen began his studies at Stanford, and soon after China reopened its relationships with the rest of the world, several producers from China Central Television (CCTV) visited the New York headquarters of Sesame Street.

"They knew about CTW and were quite interested in what we were doing," says Chen. "They said it was similar to their efforts to use TV to educate."

Then, in 1980, Chen was one of the four CTW people who went to China to return the visit with CCTV, and to propose, among other projects, a two-country production: "Big Bird in China."

The story tells of Big Bird's quest to meet The Phoenix, the mythical Empress bird symbolizing good fortune to the Chinese.

"To Big Bird, she also represented something of a distant relative he wanted to track down," says Chen.

Agreement was reached, the special ultimately was sold to NBC, and intense preparation began, both in New York and Beijing.

In China, Madame Xu Jiacha, head of children's programs for CCTV, began a talent hunt for a young Chinese girl who would be Big Bird's guide to China. After screening several hundred girls, she found her star, a six-year-old named Ouyang Lianzi, daughter of a journalist and an engineer.

"She had 64 English lines and her weeks of rehearsal with her parents paid off; she did beautifully," says Chen.

CCTV's part of the coproduction was to provide all local facilities, Chinese actors and actresses, and housing and travel.

Last May, a crew of 23 Americans spent three intense weeks taping in Guilin, Suzhou and Beijing.

While at Stanford, Chen has spent 10 months studying intensive Chinese, and his knowledge during the taping was invaluable, because very few of the Chinese and American participants involved in the production spoke the other's language. At the conclusion of the taping, with the aid of the Department of Communication and the US-China Relations Program, he spent another six weeks at the Beijing Broadcasting Institute, exchanging information on television production.

Present plans are for "Big Bird in China" to be shown in the United States sometime this spring, and with Chinese dubbing, in China about the same time.

Along with his classroom work, Chen is a research assistant with the new Study of Stanford and the Schools' panel on educational technology. —Harry Press

Chemist van Tamelen develops one-step method for steroid production

Stanford chemists have solved a major mystery in the natural production of steriods and have developed the simplest possible method of steroid production in laboratories.

"It will not be possible to devise a simpler method," said Eugene E. van Tamelen, professor of chemistry and head of the research team.

Steroids are fat-like substances that include many of the hormones, including sex hormones. Their presence in organisms is vital to life.

The Stanford work may permit researchers—and perhaps pharmaceutical firms—to produce specially-altered steroids in a one-step method without the use of enzymes.

Basically the research involves a substance called lanosterol from which all steroids are produced.

Scientists had known that lanosterol came from a very simple chemical called squalene. They had a problem explaining how the transformation of squalene into lanosterol came about because it seemed to defy the known laws of organic chemistry, van Tamelen says.

Many complex organic molecules consist of rings of atoms containing the element carbon. Lanosterol contains four such rings, three of them holding six carbon atoms, one of them with just five.

Too many rings

According to chemists' understanding of such things, one of these six-carbon rings should have only five carbon atoms; no matter how they worked on the problem chemists could not explain the extra carbon atom.

The odd ring was the third ring produced in the chemical reaction, the C ring.

"Squalene is a comparatively simple but big molecule. It has 30 carbon atoms," van Tamelen says. "It's got no rings; it's very monotonous. By the time it's converted to lanosterol you've got a very complicated molecule with many geometrical or structural possibilities in terms of spatial arrangement."

In work reported in the current issue of the *Journal of the American Chemical Society*, the Stanford researchers found that the transformation from squalene to lanosterol works this way:

Research done at Stanford many years ago showed that the first step consists of squalene picking up an oxygen atom—it becomes oxidized. This triggers the "cyclization" of the chemical.

"A lot's going on during the cyclization process," van Tamelen says, "and we didn't know exactly what was happening. Is it all going on at once? Is it happening in stages? What do the intermediates look like? How does nature control certain parts of the overall reaction?"

It was found that the reaction does, indeed, happen in stages, although the stages last only a small fraction of a second.

For a short time each ring is frozen in place.

Van Tamelen found that after the formation of the second ring two of the carbon atoms are held very close together for a moment, and are therefore forced to react to each other.

The result is a six-carbon ring where normally chemists would expect only a five. This alters the rest of the reaction and the formation of the last ring. The result is lanosterol.



Eugene van Tamelen

"There are some ramifications which are very interesting.

"What we wanted to do was utilize, as closely as possible, the reactions that nature employs, translate them into laboratory test tube reactions where you don't use an enzyme, and try to build up steroids by such methods," van Tamelen says.

"If you want to make some steroids that are a little unusual, structural modifications or anything like that, then you can't use an enzyme. It's nice to use completely artificial methods. . . to see what you can do in a laboratory, or a pilot plant, or maybe in a factor. Who knows?

"It is translating biochemistry as well as you can, as closely as you can, into industrial or normal organic chemistry.

"It turns out that if you make a few changes you can employ reactions that are similar to the biosynthesis process and actually make quite complicated steroids.

"There cannot be a shorter method. The reason I'm saying this is because it's one step. It can't be shorter than that."

The process does not produce a great deal of steroid, but in one approach the Stanford researchers have been able to increase production to around 50 percent, and hope to do even better.

The work is supported by the National Institutes of Health. Van Tamelen's coworkers included Eric J. Leopold, a research associate, and former postdoctoral students Stuart A. Marson and Hans R. Waespe. —Joel Shurkin

Bellamy to speak as woman at top

Carol Bellamy, council president of New York City, will speak at Stanford Univesity in "The Women at the Top" lecture series sponsored by the Center for Research on Women.

Her free public talk will be at 8 p.m. Monday, Nov. 29, in Annenberg Auditorium. She replaces Congresswoman Pat Schroeder, who had to cancel her scheduled appearance.

The first woman to hold citywide office in New York, Bellamy is serving her second four-year term as council president, the second highest office in city government. She has been a lawyer since 1968, specializing in corporate finance and securities law with Cravath, Swaine and Moore. Earlier, she was elected to the State Senate.

Billing complaints meet freshened response in Clinics

The Stanford Faculty Practice Program is getting record numbers of patient complaints, and that's just fine—for awhile—with the program's new executive director.

"What's new and refreshing is that not only do we have personnel available to listen, but that we are able to resolve many of the difficulties and get rid of a backlog of problems," explained Donald Tower, who started as director of the faculty's group practice in September.

Nerve center for the newly zealous effort to straighten out billing complaints, Tower said, is a recently created patient relations office.

Ginger Hummer, who started work the same week as Tower, heads up a staff whose job is to resolve billing questions.

Some of the past problems, Hummer said, were bizarre:

"For example, there was really no system for taking care of refunds.

"What would happen is that no action would be taken until repeated complaints were made, and then everyone would sort of rally behind the patient to try and help him.

"Then very often a refund would be made twice. That meant that the patient would end up owing us money again. Since the accounts were old, they would sometimes be turned over to a collection agency.

"Can you imagine the anger of a patient who finally received a refund after several months of frustration, only to be sought after by a collection agency?

"Our new philosophy is that we are patient advocates. Our goal is to improve our relationship with our existing patients by eliminating the need for them to contact us. When they do call, however, our goal is to attempt to give them prompt, courteous, professional service.

"Stanford has the best medical care available," she continued, "but patients have been scared away by our billing reputation. We want to get the word out that those days are gone. We are establishing a billing system as good as the quality of our medical services."



"Our goal is to improve our relationship with our existing patients by eliminating the need for them to contact us."

—Ginger Hummer

The word seems to be spreading fast. Hummer said her office gets 200-350 phone calls each day, along with 100-150 pieces of mail, and many walk-in visits from patients. The office hours have been expanded to 8 a.m.-4:30 p.m. Monday through Friday to accommodate the increased workload, and additional phone lines are available for callers.

Currently as many as eight persons are on duty simultaneously to help callers, although Hummer and Tower both expect that the number of people assigned to this task can be cut back soon.

"When I came in September we had a backlog of 1,500 complaints," she said. "Now we have a backlog of 25. We respond to all complaints within 24 hours."

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Battling the dangers of herpes in infants and fetuses

Infants born to mothers who never have had herpes simplex run a greater risk of being harmed by the disease than the children of women who have had recurrent bouts of the infection, according to a researcher at the Stanford University Medical School.

"The woman who has herpes is in good shape if she knows she has it," said Dr. Anne Yeager, associate professor of pediatrics at Stanford. "The problem comes for the mother who doesn't know she has it."

Yeager described the dangers of herpes simplex and cytomegalovirus to fetuses and infants Tuesday evening, Nov. 16, in the second of a series of public "Progress in Medicine" lectures on the herpes viruses.

Women who carry the virus chronically have antibodies in their blood which they pass on to a developing fetus as a protective cloak of immunity, Yeager said. But if a woman never has contracted herpes, or has contracted it recently, her infant is born without antibodies to the virus and, for the first few weeks of life, is vulnerable to an infection that can severely damage its vital organs such as the brain, liver and adrenal glands.

More than annoyance

The two herpes simplex viruses (labeled HSV-I and HSV-II) that afflict at least 15 million Americans with recurrent cold sores and genital infections are annoying but non-life-threatening infections for most adults. HSV-I is responsible for most oral infections while HSV-II is most often linked to recurring genital blisters, though both viruses have the ability to attack mucous membrane anywhere in the body.

Yeager emphasized that both viruses are equally dangerous to infants in the first weeks of life and the mother is not the only source of infection. Grandparents or friends with open cold sores caused by herpes can occasionally transmit the virus through a kiss to the infant.

"Adults and children who have herpes and are in contact with an infant whose mother has never had herpes, and therefore has not passed on immunity to her infant, can give the baby the infection," Yeager said.

A decade ago obstetricians routinely delivered infants by Caesarean section if mothers had experienced an active episode of genital herpes sores within the last trimester of pregnancy. Once the sack of amniotic fluid that surrounds the developing infant during pregnancy ruptures in the hours before delivery, the child takes fluid into his lungs, along with any viruses present in his mother's birth canal. Via Caesarean section, physicians can remove the baby directly from the uterus before the sack is ruptured.

Day of delivery

More recent studies have shown that men and women with herpes usually only are able to transmit the virus for a few days when open sores are present, so women with herpes now have routine vaginal deliveries unless they have an outbreak of sores the day of the delivery. Recurrent blisters last an average of nine days, and contagious virus cells are shed only during the first four days.

Yeager quoted studies from her own and other laboratories that indicate the group of susceptible infants may be even narrower. She cited a study conducted at Emory University several years ago which showed that three of six infants delivered vaginally who contracted herpes at birth all had mothers whose tissue cultures showed that they were shedding active virus the day of delivery. The three women were experiencing their first outbreak of the disease.

This study is frequently quoted, Yeager said, as evidence that 50 percent of infants exposed to herpes at birth will contract the infection.

"Less quoted is the fact that, in the same study, of the 23 women who had

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School staff meet Purpura in first forum of its kind

Stanford University Medical School's future is not "doomed" by external economic trends as some might think, Dean Dominick Purpura last week reassured a roomful of administrative and support staff.

While expense reductions and budget restrictions throughout the School are becoming increasingly necessary as programs like Medi-Cal grow financially tighter, he said, "We're not on a collision course, and things will get better."

A creative approach will be needed during the next few years, he said, for the Medical Center to maintain a competitive edge. Examples of this are the Hospital Modernization Plan and the Boswell Building Renovation Project.

Purpura's talk, "The Medical School Today: Learning to and Loving to Live with Less" was the first Medical School Staff Forum, a new series for administrative and support staff launched by the Human Resources Group (HRG) of the Medical School.

"This is the first time we've done anything like this for this particular group of employees," said HRG manager Rosemary Hornby. "They're the ones who maintain continuity for the Medical School. We wanted them to have more of a chance to see where the School is going and how they fit into the scheme."

Hornby said she hopes to have administrative and support staff help plan forums in the future, "so they can decide who they want to hear from." She said she hopes anyone with an idea will let her know.

The Staff Forums are just one example of several new activities being planned by HRG, said Hornby, representing a change or additional direction for the group.

"This office has always reviewed and approved personnel transactions in the Medical School and served as a resource for departmental staff," she explained.

"Now we're being asked to develop programs for staff to help them enhance working relationships, develop skills, and bring them into closer contact with the University and the School.

"All this is fun, and long overdue," said Hornby.

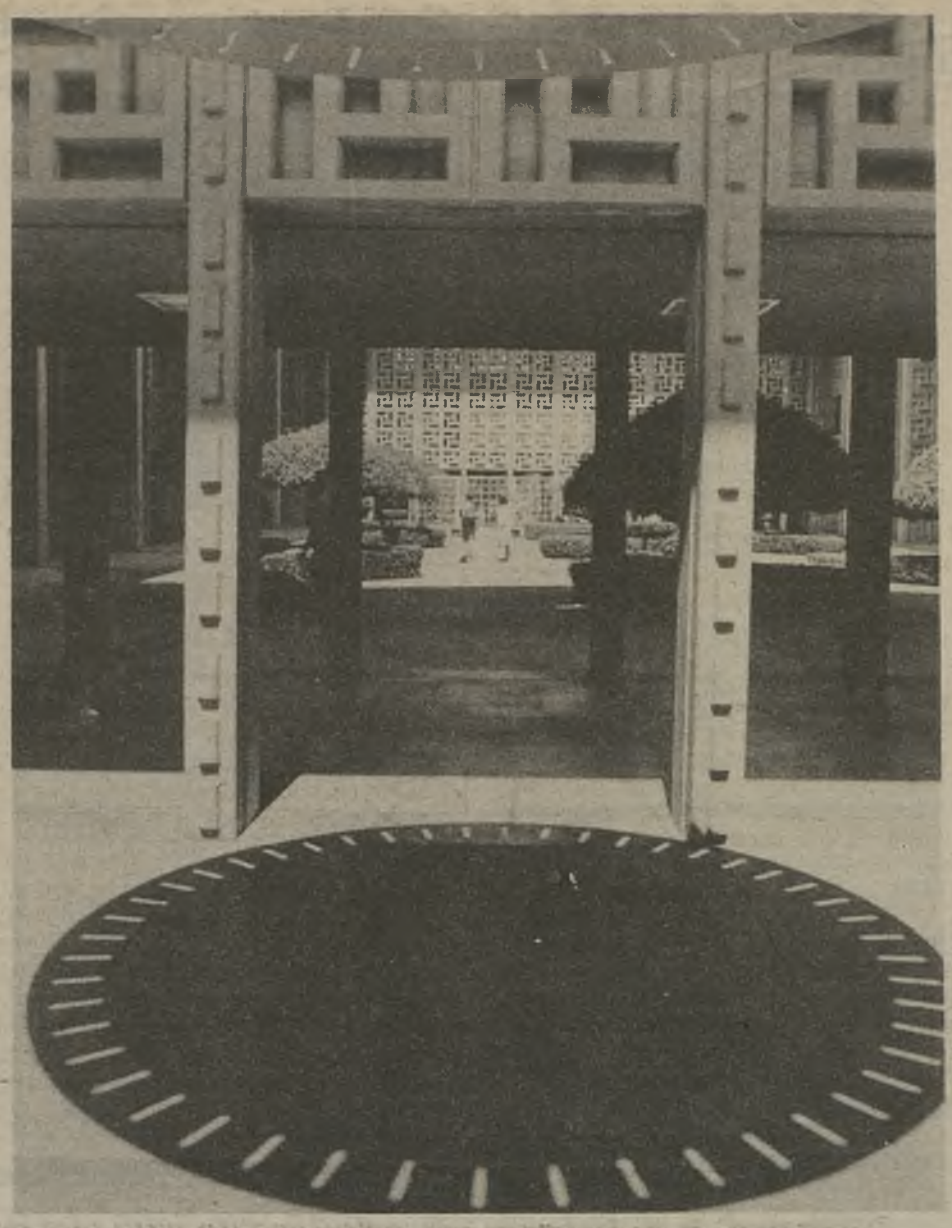
Activities being planned include a special quarterly orientation program for new Medical School employees; and Medical School staff recognition/reunion events for employees with long service.

"We want HRG to be more of a resource center for staff," said Hornby. "We post applicable activities, and now we have information on file regarding area child care, amusement and recreation, and other concerns."

Hornby sees much significance in HRG's relocation last February, out of the Dean's office and Hospital basement, into new headquarters in room M118.

"All of the HRG staff members are together now, in our own office. We're physically an entity, so we're recognized as a functional unit. And we've organized ourselves so that we're able to do all these new things on top of the personnel matters we still handle."

A Staff Activity Advisory Group, said Hornby, will be meeting with members of HRG to plan and advise on future programs. "I really want input from the people these programs are designed *for*," Hornby stressed. —Lisa Ames



Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MONDAY, NOVEMBER 29

Dept. of Emergency Services: Advanced Cardiac Life Support Provider Recertification Course. For registration information, call 497-7907.

Dept. of Gynecology and Obstetrics REI Conference: "Menstrual Cycle"—Dr. Alan Shapiro. 8 a.m., A336.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Sensorineural Hearing Loss"—Dr. F. Blair Simmons. 7:30 a.m., R117.

TUESDAY, NOVEMBER 30

Dept. of Dermatology Grand Rounds: "Selected Topics in Contact Dermatitis"—Dr. Alexander Fisher. 10 a.m., Dermatology Library, R136.

Depts. of Pathology, Medical Microbiology, Medicine/Immunology, and Genetics Seminar: "Early Development of the T Cell Repertoire: *In Vivo* Treatment of Neonatal Mice with Anti-I-A Antibodies Interferes with Differentiation of I-Region Restricted T Cells But Not K/D Region Restricted T Cells"—Ada M. Kruisbeek, Ph.D. (NIH). 4:15 p.m., 3rd floor conference room, Fairchild Building.

WEDNESDAY, DECEMBER 1

Lane Medical Library Booksale. Proceeds go to new library acquisitions. 8 a.m. till noon—$2; 12:30 till 4 p.m.—$1. Rare books and special items individually priced. Fairchild Auditorium lobby.

Dept. of Neurology Grand Rounds: "Multiple Sclerosis: Current Concepts in Diagnosis and Treatment"—Dr. Larry Steinman. 5 till 6 p.m., C364.

Depts. of Pathology, Medical Microbiology, Medicine/Immunology, and Genetics Seminar: "Development of the Cytotoxic T Cell Lineage Inside and Outside the Thymus"—Dr. Ken Shortment. 3:15 p.m., 3rd floor conference room, Fairchild Bldg.

THURSDAY, DECEMBER 2

Dept. of Medicine Grand Rounds: "Neurosyphilis"—Dr. Robert Cutler. 8:30 a.m., Fairchild Auditorium.

DECEMBER 6 AND 7

Nursing Educational Services: Pediatric Critical Care Course, Level I. Continuing education credit available. Registration deadline is Nov. 29 and fees are required. For further information, call 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Hoffman named one of 1983's Hartford Fellows

Dr. Brian Hoffman, assistant professor of medicine, has been named one of twelve 1983 John A. and George L. Hartford Fellows by the Hartford Foundation in New York City.

Each Fellow will receive $105,000 over a three-year period as support for the early stages of his medical research career, as well as a stipend paid to the sponsoring institution for research expenses. Each Fellow is a young physician beginning on a faculty track in a U.S. medical school who plans to pursue a career in medical research.

Hoffman is interested in the mechanisms by which catecholamines, such as adrenalin, activate cells. He is particularly interested in the inhibition of the enzyme adenylate cyclase. His fellowship support will begin in July, 1983.

The 1983 Hartford Fellows are the fourth class of Fellows to be supported by the Hartford Foundation since the program was established in 1979. The objective of the program is to encourage promising and highly qualified young physicians to pursue medical research careers.

Twelve Fellows are selected annually through a national competition. This year, 94 individuals were nominated by 62 American medical and research institutions. The Fellows were selected by an advisory committee of prominent medical researchers.

In addition to the Fellowship program, The John A. Hartford Foundation makes grants to stimulate health care payment system reform and to promote efficient energy use. In 1981, the Foundation gave more than $10 million to projects in these three areas.

Medical Faculty Openings

Stanford University is an affirmative action employer and welcomes nominations of women and minority group members and applications from them.

The department of genetics at Stanford University is seeking an assistant professor with scientific interests in the areas of human genetics (for example, cytogenetics, human biochemical genetics); or cellular genetics (particularly chromosome structure and function). The position will be full-time, involving teaching and independent research.

Applicants should send curriculum vitae, bibliography and names of three referees to: Dr. Stanley N. Cohen, chairman, Department of Genetics, Stanford University Medical Center, Stanford, California 94305.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Clinics billing revamped. . .

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Hummer's official title is assistant director of the FPP for patient relations, one of five assistant directors. She is part of a general administrative reorganization of the program that accompanied Tower's arrival.

Other assistant directors include Vera Waechter, R.N., who has served for many years as manager of patient services for the outpatient clinics, now under the auspices of the FPP. With her new title as assistant FPP director for the clinics comes broadened responsibilities for supervising the outpatient care arm of the FPP, Tower said.

Mike Worlund is assistant director in charge of patient accounts, directing a billing staff of 59 persons. Jane Duperrault is in charge of finance, while Noel Tebo, formerly of El Camino Hospital in Mountain View, is assistant director for data systems.

Until Tower arrived, the Clinics were administered separately from the FPP, and until January 1981 they were under the jurisdiction of the Hospital. The more than 80 separate outpatient clinics are staffed by 240 full-time medical faculty members.

The FPP was under the direction of an associate dean for administration, who supervised an FPP controller, a position which has been eliminiated.

As before, an executive committee, consisting of the dean of the Medical School, department chairmen and two at-large physician members, oversee the FPP, including distribution of the approximately $36 million in revenues to the academic departments represented by the membership.

"For the first time we have a management team that meets and functions together," said Hummer.

Tower said he was pleased with the restructuring and proud of his new staffers. And he reemphasized the role that Hummer and patient relations must play.

Besides one-to-one problem-solving, both Tower and Hummer see the patient relation function as a chance to make long-range improvements in procedures.

"My job really is to look for trends, not just respond to the loudest complaints," said Hummer. "For example, if someone has a problem, I investigate on the basis that other people may have encountered the same difficulty, and that a change in the system might be needed."

Changes are being made in the way services are written on bills, so that insurance companies will recognize clearly that the service the Clinics provided was one they ordinarily reimburse.

Policies, including due dates for payment of bills, are clearly spelled out, so patients will know what is expected of them.

". . .We are establishing a billing system as good as the quality of our medical services."

"For example, we don't bill outpatient insurance, so it's important that patients know that so that they will bill the company. This will very soon be communicated on the bill," said Hummer.

She added that just about the most important job for her staff is patient and staff education of Clinics policies.

"If the patients just know what to expect when they come here, that usually solves most of the problems," she said. The office is preparing handbooks and handouts explaining Clinics policy. All staff, from nurses to administrators to physicians, are also being informed so they too will be able to answer inquiries their patients may have.

The patient relations office is now located at 525 University Ave., Palo Alto, but will soon be moving closer to the Clinics. Underground, validated parking is available there. The phone number is 328-6138.

—Shirley Kraus and Mike Goodkind



Sheldon King

King to meet staff over lunch

A new program to begin in December is intended to expand communication between Sheldon King, executive vice president and director of the Hospital, and SUH employees.

King will be inviting small groups of long-term employees for informal lunches from noon to 1:30 p.m. in room C200. Luncheons will be held monthly, with a different group of employees each time.

Employees will be chosen by tenure, and will be sent personal invitations. Copies will be sent to department heads with the request that time off be arranged appropriately.

"I see this as an excellent opportunity for me to get to know some of our employees, share information with them on the programs going on at the Hospital, and listen to their creative ideas and suggestions," King stated.

He added that plans are also being formulated for quarterly luncheon meetings with small groups of supervisors, to begin in February.

Eagerly awaiting signals & signs of life in space

Is there intelligent life on other planets?

Dr. John Billingham thinks there is, and as chief of the Extraterrestrial Research Division at NASA Ames Research Center, he is leading the efforts to verify his belief.

Billingham intrigued Medical School alumni with his ideas as keynote speaker at their semi-annual meeting Nov. 19.

Research is being conducted on the premise that like Earth, there are other planets suitable for life, Billingham explained. Once life is introduced, it is likely to go through evolutionary stages similar to Earth's. Darwinism—evolution and survival of the fittest—most likely occurs any time life exists, he said.

The most feasible way to detect life on other planets, Billingham explained, is to pick up a signal. Researchers are developing a "multi-channel system analyzer" with which to do this.

Because they don't know what frequency the signal would be on, they need as many channels as possible. The signal would be picked up by the analyzer, and reflected off a big "dish." A prototype of an analyzer with 75,000 channels is being built at Stanford, and will be tested for the first time in the spring.

The "proper machine," Billingham said, will have from 10-100 million channels. He expects it to be built in about seven years.

The oft-asked question, Billingham said, is why it matters if other life exists. "We know very little about extraterrestrial civilizations. What we do know, however, is that they are much older than our civilization. Thus, in their evolutionary process they've gone through the stage we are going through now.

"If we could just detect a signal, we'd know they've successfully survived, and that we will be able to do so also," he said.

—Shirley Kraus

For infants with herpes or CMV, timeliness of treatment is crucial. . .

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experienced recurrent infections (as opposed to primary infections) and were virus positive on the day of delivery, only one baby became infected."

Yeager has since studied 204 women who had herpes sometime during their pregnancy, and none of the babies have developed the severe symptoms of a herpes infection. Apparently these infants were "protected" by antibodies they received from their mothers, Yeager said.

Though the remote possibility of "silent shedding"—transmitting the virus when no sores are present—exists, even this process could be detected through a tissue culture or blood test on the day of delivery. "We think eventually that it's not going to be so helpful to culture throughout the pregnancy, but perhaps only on the day of delivery to detect the virus," Yeager said. Infants who have definitely been exposed to active virus can then be watched for signs of disease and quickly treated with a battery of newly developed antiviral drugs.

"If the virus is suspected in babies, and the infants are offered antiviral therapy within three days of the first sign of illness, as a general rule they do very well," Yeager said. Studies are currently under way at Stanford and other research centers to determine whether the antiviral drug acyclovir or adenine arabinoside is more effective in treating neonate infections.

"The thing to remember is that only half of these babies have skin lesions. If you wait for the skin lesions to make the diagnosis, you're going to miss half the cases."

If a baby suddenly becomes lethargic or develops an enlarged liver or spleen and shows a sudden drop in platelets for no apparent reason, but doesn't have a bacterial infection, it probably has herpes, Yeager said. Premature infants are especially vulnerable to the disease and timeliness of treatment is crucial for these children.

Cytomegalovirus (called CMV) is a less famous member of the herpes virus family, but "overall may be of more importance to the average parent than herpes simplex," Yeager said. The virus is a threat because 50 percent of American women have never been exposed to the virus, so can't transmit immunity to their infants.

CMV can be transmitted through blood transfusion or through other body fluids. Yeager and her Stanford colleagues developed a screening test for donated blood in 1977 that has eliminated transfusion-acquired infections in vulnerable premature infants. Still, studies indicate that 15 percent of all pregnant women shed CMV virus sometime during their pregnancy, and can infect the developing infant.

"If you wait for the skin lesions to make the diagnosis, you're going to miss half the cases."
—Anne Yeager

"In addition to the one in every hundred infants who are born with the infection, five in a hundred will acquire it within six weeks of age," Yeager said. This figure compares to the one in 10,000 who develop defects from a congenital rubella infection acquired in the first trimester of pregnancy.

While effects of the infection can range from slightly stunted growth to mental retardation, liver damage, and even death in some infants, the most common effect of CMV is deafness.

"It is especially important that these babies be identified early because there's good data that indicates that their hearing actually gets worse between one and two years of age," said the scientist.

If the babies can be diagnosed early, they can often be treated successfully. "One out of every 100 American babies is born with this problem," Yeager said. "It is a major health hazard."

—Deborah Franklin

Franklin, Johnsen call expunging of criminal records ineffective, costly

Expunging criminal records is "ineffective" and entails high moral and legal costs to society, two Stanford Law School scholars declare.

Prof. Marc A. Franklin and Diane M. Johnsen, a 1982 Law School graduate now serving as law clerk with the Ninth Circuit Court of Appeals, detail their views in the current issue of *The Stanford Lawyer* and in the *Hofstra Law Review*.

While providing "little real benefit" to convicts, expungement statutes "foster dishonesty, limit access to judicial records, and threaten First Amendment rights of expression," they declare.

Legislators should consider "less offensive" ways of helping convicts after their release from prison, ranging from wage subsidies, tax incentives and halfway houses to civil rights acts, they suggest.

In those states which permit the expunging of criminal records, this can only be done several years after the convict is released from incarceration. It is therefore "totally ineffective" in eliminating discrimination against presumably rehabilitated convicts, reducing the chances they will return to criminal activity, or aiding rehabilitation for their own sake.

"The records are shielded from the public too late to help the convict find the initial job, credit or housing that will prevent a return to crime," they explain.

Some states, including Kansas, Massachusetts, and New Jersey, require officials to lie about the existence of criminal records that have been properly expunged. Others, including Kansas and Nevada, allow convicts with expunged records to deny the records exist.

Massachusetts and Utah are among the states which prohibit employers from inquiring about any criminal record that has been properly expunged.

The net effect is "tremendous social costs in dishonesty and secrecy," Franklin and Johnsen believe.

Even when records to be expunged are specified in detail, entries on police blotters are not erased or sealed, nor are entries on appellate court dockets outside the jurisdiction of the expunging court.

Unofficial sources, such as news accounts and the memories of those who witnessed or otherwise knew of the crime, the trial, and the sentencing, also endure.

"Criminal trials constitutionally may not be closed as a matter of course," they note, citing the Sixth Amendment and *Richmond Newspapers Inc. v. Virginia*. "It is inconceivable that the public would stand for the broad speech and press restrictions that would be necessary to seal the other 'unofficial' sources of criminal record information. . . .

"Our tradition of public criminal trials of adults suggests a long-perceived value in the openness of the criminal justice process. . . .

"Expungement's dishonesty. . .handicaps society by preventing it from confronting and clarifying its own attitudes about convicts and their reentry into society.

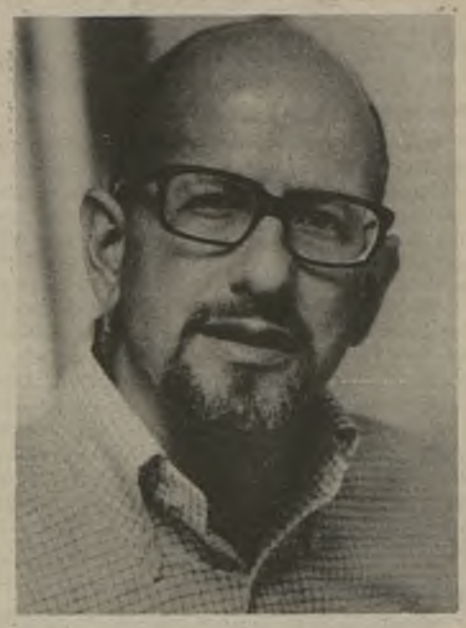
"When the public is deceived by the concealment of criminal records or by lies about their existence, it is deprived of the opportunity to learn to accept convicts, particularly those who have rehabilitated themselves. Indeed, it is encouraged to think it appropriate to look askance at those whose conviction records are available.

"It is questionable whether the full implications of expungement statutes, whose goal is to rewrite history, were ever made known to voters."

Some states, like New Jersey, infringe First Amendment freedoms by prohibiting "any person" from divulging information contained in expunged records, they note. Several court decisions and the First Amendment bar punishment "for publication of accurate information about once-public official records, whether or not those records are now open to public view," they declare.

Employers, creditors and others barred from criminal information about applicants may simply discriminate against groups that have, or are thought to have, disproportionately high conviction rates.

Expungement statutes make criminal records less available for research, thus depriving the public of knowledge about the criminal justice system and its participants. They may also conflict with expression rights guaranteed by state constitutions.



Marc Franklin

Franklin is the Frederick I. Richman professor of law at Stanford. Before coming to Law School, Johnsen was a reporter for the *Arizona Daily Star* in Tucson. She now is law clerk for Judge Ben C. Duniway in the Ninth Circuit Court of Appeals.

Ph.D. oral exams

MONDAY, NOVEMBER 29

Javad Khakbaz, electrical engineering, "Concurrent Checking and Testing PLAs, and Related Checker Design Issues," 4:15 p.m., Room 240, McCullough. **Stephen W. Pronchick,** mechanical engineering, "An Experimental Investigation of the Structure of a Turbulent Reattaching Flow Behind a Backward Facing Step," 3 p.m., 501A, Bldg. 500. **Ginger Tong,** art, "Yun Shou-p'ing (1663-1690) and His Landscape Art," 2:15 p.m., ar121, Cummings Art Bldg. **Charmaine Kim Voss,** sociology, "Working Class Formation and the Knights of Labor, 1875-1895," 3 p.m., Conference Room 19, Rodgers House. **Takeo Yamada,** engineering-economic systems, "Structural Controllability and Observability of Linear Time-Invariant Descripter Systems," 2:15 p.m., 329 Terman.

TUESDAY, NOVEMBER 30

Christopher Wayne Crandell, chemistry, "Computers in Chemistry: Part I. Use of ^{13}C Spectra in Computer-Assisted Structure Elucidation; Part II. Computer-Assisted Search for Common Three-Dimensional Substructures," 2:15 p.m., Chemistry Gazebo.

WEDNESDAY, DECEMBER 1

James Elmer Corter, psychology, 12:30 p.m., Jordan 358, Bldg. 420. **Jean Marc Heritier,** applied physics, "Picosecond Spectroscopy Using a Photoacoustic Detector," 3:30 p.m., Applied Physics 200. **Jim Shee Chun Tom,** engineering-economic systems, "Adaptive Quota Policies for the Survival Control of Fisheries," 1 p.m., Terman 329. **John E. Gaiser,** physics, "Charmonium Spectroscopy from Inclusive ψ' and J/ψ Radiative Decays," 2:15 p.m., Varian Conference Room.

THURSDAY, DECEMBER 2

Russell Mark Richman, mechanical engineering, "Flow Visualization in a Piston Engine Cylinder," 4:15 p.m., Room 300, Bldg. 300. **Susan Diane Waldman,** education, "Gender Identification and Sex-Role Formation in Young Children from Families with Traditional and Nontraditional Attitudes," 2:15 p.m., e114, Education Bldg. (Cubberley).

FRIDAY, DECEMBER 3

David G. Horner, education, "An Examination of Policies on Academic Freedom at Selected Religiously-Affiliated, Liberal Arts Colleges," 2:15 p.m., e5, Education Bldg. (Cubberley). **Alex R. Hybel,** political science, "From Deception to Surprise: Theory of Surprise and Surprise Avoidance," 2:30 p.m., Political Science Faculty Lounge. **Rangarajan Jayaraman,** mechanical engineering, "An Experimental Study of the Dynamics of an Unsteady Turbulent Boundary Layer," 3:15 p.m., Room 300, Bldg. 300. **Doug Morgan,** electrical engineering, 4:15 p.m., AEL 109. **Kwaku Osafo,** food research, "Rice Policy in Ghana," 2:15 p.m., Food Research Institute, Room 214. **Sara N. Meneses-Imber,** education, "The Ayacucho Foundation of Venezuela: A Case Study of Socio-Cultural Incorporation into the Transnational System," 2:15 p.m., e208, Education Bldg. (Cubberley). **David Deitch Weisberg,** economics, 2:15 p.m., Encina 414.

Health and safety report

Accidents and Injuries Occurring Nov. 15-19

Type of accident or injury	Number of incidents	Days Lost
Animal/insect contact	1	0
Contact with object:		
Non-impact: sharp object	3	0
Non-impact: pinched, crushed, squeezed	1	0
Non-impact: rubbed, scraped	1	0
Fall from same level	3	(4, 0, 0)
Foreign body	1	0
Lifting	3	(5, 4, 0)
Other	1	0

Peter Coutts Hill condominiums

Stanford University is accepting applications now for rental of the new Peter Coutts Hill Condominiums.

Rental units will be available in December, 1982. Rental agreements, are month-to-month.

Preference in rentals will be given to members of the Stanford community (faculty, staff, students, etc.) and its affiliates. Families with children are welcome.

Floor plans of the various unit types and rental applications are available from the Peter Coutts Hills rental office, 138 Peter Coutts Circle, Stanford, Calif. 94305; (415) 493-1471.

The unfurnished average rents for the various types are as follows:

A-1	(2br/2ba)	$930
A-2	(2br/2ba/study)	$1,010
A-3	(2br/2ba/study)	$930 (handicapped unit)
B	(2br/2ba/study)	$985
C-1	(3br/3ba)	$1,095
C-2	(3br/3ba/study)	$1,200
D	(3br/3½ba/study)	$1,260

These are average monthly rents. The actual rent on any particular unit may vary slightly according to unit location. Additional rent of $50 per month will be charged for each unrelated adult in excess of one per unit.

GSA: Faculty underestimate time needed in venture firms

Following is the text of a Graduate Student Association Committee report on faculty-industry relations written by chemical engineering graduate student William J. Smith.

Summary

During the last decade increasing numbers of University faculty have assumed equity, consulting or managerial positions in industrial ventures closely related to their research fields. When a faculty member assumes entrepreneurial responsibilities, his or her new role may both support and detract from the University's principal missions of teaching, research and public service.

To aid the University in reviewing and developing regulations promoting the beneficial aspects of these relations between faculty, students and industry, this report presents several policy recommendations based on the experiences, opinions and observations of several students.

Some of the students who contributed information to this report either are entrepreneurs themselves, or have advisers who are entrepreneurs and speak from personal experience. All are convinced that the University should conduct a comprehensive review of equity and managerial participation by faculty in for-profit ventures.

Student Experiences

Undergraduates, graduate students and post-docs have had mixed experiences with faculty members who have combined the roles of entrepreneur, researcher and educator. Students value the additional grant support for campus-based research, the access to industrial personnel and laboratories, the opportunity for consulting while enrolled and the job opportunities on graduation which arise from close faculty-industry relations.

At least 10 undergraduates, graduates, and post-docs, on the other hand, have reported experiences to the University Ombudsman or to the Dean of Graduate Studies within the last year where they believe conflicts between their adviser, the researcher and educator, and their adviser, the entrepreneur, have interfered with their education and training.

Many other reports of problems exist on the student grapevine in biochemistry, chemical engineering, computer science, electrical engineering, mechanical engineering and medical microbiology. In some cases the atmosphere surrounding joint student-faculty research has changed from cooperative investigation to mutual mistrust. This has severely restricted the flow, discussion and development of the ideas necessary for innovative research (see the memorandum from the GSA Academic Affairs Committee to the Committee on Research, *Campus Report*, April 21, 1982, p. 16).

Of the problems in this area reported to the Ombudsman's office in the last year, the most serious involved situations in which the advisers had assumed formal or *de facto* managerial positions in start-up ventures.

In one example, it was apparently very difficult for the faculty members involved to manage the problems of a struggling young company and still have enough time and energy to supervise their graduate students.

In another example, because of the key role one faculty member played in a competitor, an outside sponsor would not support an ongoing University project unless that faculty member ceased his active participation in the research. The University accepted the funding and the faculty member subsequently left the project as requested by the outside sponsor.

Present University Policies

At present University policies governing relations between University personnel and outside profit-oriented ventures are generally few and poorly defined.

The University administration is aware of this as there have been a number of changes in the last year making the policies more specific. The Faculty Senate, on the recommendation of the Committee on Research, has amended the consulting policy to require faculty members to disclose their consulting activities when requested to do so by the "cognizant dean, the provost, or the president."

Basically the University relies on the individuals involved to structure their outside relationships in a manner compatible with the University's teaching, research and public service objectives. As faculty-industry and student-industry relations have become more common in the last decade and some individuals have assumed key roles in outside for-profit ventures, it is becoming evident that there are limits to the commitments an individual may make to an outside organization and still fulfill his or her obligations to the University.

In most cases in which problems have arisen and been brought to the attention of our committee it does not appear that the faculty have intentionally overcommitted themselves. Rather, as inexperienced businessmen, they have underestimated the difficulties of securing operating capital and competent management for their fledgling ventures. Hence, they have been forced to spend more time securing funds for and managing their venture than they had originally intended to.

It was, furthermore, not clear to either faculty or students that services performed for one's own outside venture were governed by the University's consulting policy. The synopsis of the consulting policy found in "Patents, Copyrights and Other Research Property" recently published by the Patent and Copyright Affairs Group contains a much needed clarification of this point. It makes is clear that work done for a company in which one has an equity interest is consulting even if there is no service-related fee. This policy clarification should be widely publicized for both faculty and students.

The recent change in University policy governing the outside employment of students by their advisers recognized not only the substantial advantages to be gained by both parties in such a relationship, but also the inherently high potential for abuse. The new regulation quite properly insists that a third party, the department chairman, be informed of and approve of the details of the relationship to protect the junior party's interests.

But the regulation does not deal with other situations. Suppose that the faculty member and the student both hold equity positions in the company or are both corporate officers, as is the case in at least one company in mechanical engineering and computer science.

It is not clear from the above regulation that these individuals need to consult with the department chairman about their outside working relationship. Yet strong motivation clearly exists for the faculty member involved to provide preferential treatment for his student coworker as compared to students not involved with the company. Indeed, one complaint alleging such preferential treatment has already been received by the Ombudsman's office.

The regulations or modifications described above have been adopted on a case-by-case basis as problems arose or were anticipated. Two serious problems with this approach are apparent. First, it relies primarly on staff, students and junior faculty to bring problems to the attention of the University administration and committees. Yet these parties are extremely reluctant to report on their difficulties because they perceive that such reports can be made only at great personal risk. No one can estimate the number of serious problems which have gone unreported.

Secondly, relations between University personnel and industry are so complex and varied that many potential problem areas are almost impossible to anticipate, and hence govern with a manageable number of regulations. Further, without a comprehensive understanding of the general nature and various types of relations between University personnel and industry, no one can say with assurance that a regulation designed on the basis of a specific case will be broadly applicable. Instead, it may be an overreaction to an isolated occurrence and lead to unnecessary restrictions on the activities of students, staff and faculty alike.

In short, it will be impossible for the University to accrue the maximum benefits from relationships between its personnel and outside organizations, and simultaneously guard against abuses, unless the University administration knows what those relationships are.

Surveying Outside Professional Activities

Many of the problems arising from outside professional activities are eventually brought to the attention of the dean of graduate studies and research and the departmental chairmen. Thus it is desirable to provide these individuals with access to information on the outside activities of faculty not just after a problem has developed (which is the *de facto* current policy), but from the time a faculty member first enters into serious negotiations to provide services for an outside organization.

Prior notification would serve two purposes. First, it would give the University administration, based on their previous experience, a chance to catch problems early, before they became serious. For instance, in the case of a new venture, the administration could point out that the amount of capital was inadequate or that more management talent might be needed. Second, it would ensure that the University administration received representative reports of relationships between University personnel and industry, not just information on the major successes and failures. These reports would then be useful in evaluating the effectiveness of current University policies and, if needed, for forming new policies.

The University should consider adopting the following or a similar process for annually surveying the outside professional activities of faculty, staff, and students:

1) The Committee on Research should prepare and distribute an "Annual Report on Outside Professional Activities," to be filled out by all faculty members and collected, reviewed and filed by the department chairmen.

The report would be accessible to administrators, students, faculty and staff. The report should also be available to those for whom the faculty perform services, such as regulatory agencies and governmental committees.

2) The dean of graduate studies and research should summarize the reports, supplementing them with information gathered informally from students, faculty members and staff, and present his findings to the Committee on Research.

The annual report would document governmental, industrial and professional committees on which a faculty member serves and the organizations, profit or non-profit, for which the faculty member provides services related to his or her academic field.

In particular, the form would request that the faculty member disclose the extent and nature of equity interests in firms with products or research activities closely allied to their own academic fields. The Annual Report of Outside Professional Activities recently proposed by an Ad Hoc Committee of the UC-Davis Academic Senate on Conflicts of Interest illustrates how the report could be structured.

Comparable institutions have recognized the problems inherent in relations between their faculty and outside commercial ventures. Their guidelines on faculty-industry relations are generally more explicit than Stanford's.

MIT requires "faculty members to keep their department heads informed continuously in adequate external committees, and other special assignments, whether within or without the Institute."

Harvard states in its guidelines that arrangements between faculty members and industries in which the faculty members assume responsibility for the day-to-day operations of the firm, either as a line officer or as a consultant, "present an unacceptable conflict of interest or commitment." At least one Harvard faculty member was asked to resign, and did, as a result of this policy.

Substantial support for disclosure of consulting and equity interests to the University community and public already exists. President Kennedy, Prof. Halsted Holman, and graduate students William Smith and Thomas Dietterich all expressed their support for public disclosure during a panel discussion held as part of last spring's symposium on *Universities, Industries and Graduate Education*.

It is apparent from private conversations, however, that substantial opposition to public disclosure also exists among administrators, students and faculty. However, few are willing to openly discuss the reasons for their opposition. These need to be elicited (in confidence if necessary), documented and carefully evaluated.

Additional Policy Recommendations

Based on the situations brought to the attention of our committee, the University ombudsman and the dean of graudate studies and research by undergraduates, graduate students, post-docs and faculty we make the following additional recommendations.

1) Companies in which a faculty member has a major equity (or equivalent) interest should be prohibited from sponsoring the faculty member's University-based research. Presently, nearly all faculty with outside commercial interests are voluntarily abiding by this policy. One case in which this policy was not adhered to resulted in legal and other problems for University administrators, faculty members and students alike.

2) It appears from the cases we have seen, and the policies of other universities cited above, that it is almost impossible for faculty to assume managerial responsibilities in an outside commercial venture and still perform the duties required of a full-time University professor. Consequently, faculty members should be prohibited from assuming managerial functions in commercial ventures while they are full-time members of the University staff.

3) The dual employee-employer advisee-adviser relationship should be monitored closely by the administration. The recent change in regulations requiring faculty and students entering into an employee-employer relationship may prove to be adequate to protect student and University interests.

It is not clear, however, whether this or any other policy will be sufficient to prevent faculty members from providing preferential treatment to their student employees. Must a student work for the company to be assigned to certain projects in the group? If the University administration cannot carefully monitor dual employee-employer advisee-adviser relationships, they should be prohibited.

4) One of the most difficult and important questions for the University community to answer with respect to industrially sponsored research is the following: is the research directed toward answering fundamental scientific questions or solving basic engineering problems?

It is generally agreed that peer review has done an excellent job of answering that question for the National Science Foundation and the National Institutes of Health. An appropriately structured peer review system could provide the answer for industrially sponsored research as well. Peer review should be extended to include all sponsored projects, industrial as well as governmental. A peer review system is the best means available for assuring the University community and the public that University-based,

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Kilson talk provokes lively discussion of black studies

Black intellectuals are moving beyond the "cathartic balm" of enthnocentrism in America, Harvard Prof. Martin L. Kilson said Tuesday, Nov. 16, at Stanford.

"Blackness belongs to everyone, impervious to chauvinist boundaries," he told an overflow audience of 70. Several prominent black faculty challenged his views.

As racism in America "gradually weakens" and "Afroization continues to shape important facets of American character," Kilson argued, blacks can "resume the essential burden of being an intellectual, namely fidelity to the interdependence of the human condition."

To get ahead as an intellectual, he told a student, "You gotta be good. It's as simple as that.

"Learn to use the language that's most powerful and persuasive," as a writer. Or become deeply skilled in economics to attack the "parochial, chauvinist. . .capitalist, barbaric features of the American economy."

"Be good" as an intellectual "if you want to critique all that raunchy, crazy stuff about Negroes in psychology or politics" or "hoodlums in genetics" like Stanford Prof. William Shockley, coinventor of the transistor.

Disagreement

Prof. Sylvia Wynter, Spanish and Portuguese, congratulated Kilson for "a wonderful talk. . .with which I totally disagree.

"As you talked, I felt great pain," she added. "If you want to know what inequality is today, it is to be on an American campus and to believe that black studies was, and is, part of an intellectual revolution of enormous direction.

"(Yet) you refer to black studies and the black movement of the 1960s as only ethnocentricity."

Kilson said "I'm a proponent of black studies" primarily because it provided a "powerful option for (black) intellectuals in society."

"Was it anything else?" Wynter asked.

"Very little, in fact," he replied.

It's important to distinguish between what's written—and read—and the "vagabond" grid of what's sent on the "street communication grid," Kilson added.

The scholarly results of black studies have been "disappointing. . .haven't produced a bloody thing," unlike the work of black scholars in mainstream social science departments or other disciplines, he said.

Asked about the future role of black colleges and universities, Kilson said it was "sad but historically necessary" that the most "intellectually talented and gregarious" students would come to places like Harvard and Stanford. "You didn't go to Tougaloo," he observed.

Black colleges

Thirty years ago, nearly nine out of 10 college blacks were enrolled in black colleges, he said. In the 1920s and 1930s they were "important" in providing a haven for black intellectuals. They were "reasonably supportive" of the political left, especially in comparison to "Penn, Harvard and Cornell" and also encouraged ties across ethnic and racial boundaries.

But today these colleges are "in trouble," he said, after acknowledging he had not studied them.

Prof. St. Clair Drake, anthropology, who has participated in a National Endowment for the Humanities study of black colleges for two years, said that the move toward integrated but predominantly black colleges is helping integration work both ways. Blacks integrated in predominantly white colleges could contribute to their "Afroization," he noted.

Prof. Clay Bates, materials science and electrical engineering, said there are many examples of black scholars trained or employed at predominantly white, high prestige universities who have returned as scholars at predominantly black institutions. "I don't agree that black schools are going under," he added.

"That's good news," Kilson replied.

Prof. Donald Harris, economics, suggested that even "cosmopolitan" black intellectuals would be limited because they have to exist in a bourgeois society," where some might make "quite a profit at it."

Kilson replied that, even so, a less ethnocentric approach would be more effective in pushing capitalism "beyond itself" to "whatever it is—socialism, communism, humanism." He described his own preferences as "flabby, eclectic, open-ended humanism," agreeing when Wynter added the adjective "liberal."

Prof. James Gibbs, anthropology, a fellow graduate student of Kilson's at Harvard in the 1950s, said that if black intellectuals "flee into cosmopolitanism" they still face a "real dilemma" if they abandon ethnic concerns.

"How can you clasp to your bosom one aspect without losing the other?" he asked.

Kilson suggested that Richard Wright provided one example of how this had been done. He cited Senior Fellow Thomas Sowell of the Hoover Institution at Stanford as one of the few black intellectuals in the "crypto-fascist, crypto-racist right wing."

A cultural milieu

While it may never have been easy for intellectuals to find the right cultural milieu, Kilson said in his prepared remarks that it is easier for Afro-Americans now than during any previous period.

A key element is "the emergence of a new generation of college-educated whites, shaped by the counter-culture movement of the 1960s and 1970s who are discarding psycho-cultural constraints upon a cosmopolitan cultural identity in which 'blackness' is an accepted element."

Racial parochialism reached its peak between 1965 and 1975, but has begun to subside, he said. "The black aesthetics and black studies movements saw the formatin of numerous agencies that racially proscribed the creative life of most Afro-American intellectuals.

"These agencies included three major national magazines—*The Black World*, *The Black Scholar*, *and Freedomways*; cultural conferences and groupings of infinite descriptions;" and black caucuses in such academic associations as the American Political Science Association and the American Sociological Association."

In general, he predicted, "the typical black intellectual will undergo a transition from parochialism to cosmopolitanism (cultural marginality) by fits and starts, while a few will experience a clean and sharp break with ethnocentrism. . . .

"After all, many intellectuals gained jobs and influence in the ethnically protected academic marketplace of black studies programs, and it is to be expected that disengagement from black ethnocentrism will take time.

"The more creative and talented black intellectuals, however, will seize the new opportunities for cosmopolitanism, aided no doubt by the recent examples of disengagement from ethnocentrism set by LeRoi Jones and Julius Lester."

While some may remain in a "hybrid status" between these extremes, they will gradually disengage themselves from "the black bourgeois power game of monopolizing blackness," he predicted.

"This perplexing inability to monopolize 'blackness' has always been recognized by leaders of the religious-oriented form of black ethnocentrism," including the Garveyites of the 1920s and 1930s and the Black Muslims of the 1950s to 1970s. Both favored migration to Africa, much as Zionists backed migration to Israel.

But the creative potential and enduring appeal of black spirituals, gospel, blues and jazz suggest that "blackness is endemically cosmopolitan," as Orlando Patterson and others have argued, Kilson said. Black intellectuals "should never want for sources of viable, creative inspiration."

His talk was one in a series arranged by the Afro-American studies program at Stanford, headed by Prof. Kennell Jackson, history.

Wynter, Drake, and Gibbs each have headed Afro-American Studies at Stanford in the past decade.

—Bob Beyers

NASA's Beggs looks forward to space station approval

James M. Beggs, administrator of the National Aeronautics and Space Administration, said Thursday, Oct. 18, he thinks he can sell Congress and the Administration on building a space station—with a little help from the Soviet Union.

Beggs, on the Stanford campus as part of a program at the Hoover Institution, said he thought the Reagan Administration was "favorably inclined to the space program.

"The problem the administration faces vis-a-vis a program like that, is that while you're trying to cut the budget in various and sundry ways. . . it's awfully difficult to move out on a brand new initiative. . . .

"But I think given the proper planning of the job on our part, coming up with a proposal that fits reasonably sound budgets for the next six or seven years, we'll do well," Beggs said in an interview.

President Reagan has referred to a U.S. "permanent presence" in space, presumably an orbiting space station, but members of his administration, particularly Budget Director David Stockman, have apparently restrained him from making any firm commitments.

Beggs said that NASA has contracted with eight consortia in industry and academe to analyze the need and usefulness of a space station. Those reports should be ready early in 1983.

NASA will then do further studies on the "architecture," defining the activities that would be performed on such a station. Then NASA will be ready to go to the White House and Congress and ask for funds.

He said a space station would have some commercial uses, but the project will not "rise or fall" on the commercial potential; the real argument is whether a space station is a "desirable next national commitment.

"The gut, basic question is whether this nation is committed to the continued exploration and exploitation of space. If you are, then you need certain things to do that. The shuttle was one of those tools," he said. The station would be another.

"My crystal ball has always been clouded. My view of the world says that I think this country has always considered itself a pioneering country in high-technology kinds of things. This is high technology; it has very large benefits for the country in a very economical and psychic way, which is very important. I don't think either political forces or the American people are going to back away from it."

Beggs said that having two Soviet cosmonauts presently setting space endurance records on a Soviet space station will not hurt his argument any.

"That should be a 'driver' for us to learn the same things that they are learning. There is a general unease in Washington that the Soviets are flying more and more. But I don't know if that's a major 'driver' or not," he said.

"The argument goes as follows:

"We think the space station is a good idea on its own merits; we are prepared to defend it on its own merits for America. We think it's important to continue to learn and extend capability in space if you want to fulfill the commitment to be a true space-faring nation.



James Beggs

"You have to take account for the fact that the Soviets have been flying very, very extensively for a long, long time, and they are learning things we're not privy to. You have to be worried about the fact that you could, indeed, wake up one day and find you're falling behind in this technology. It's one of several arguments.

He said there are military aspects to this competition but he doesn't think it is as important as the technological aspects.

The space station could provide great technological fallout in such things as computer sciences and robotics, just as the Apollo program provided fallout in electronics and operations sciences.

—Joel Shurkin

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

36636-LL (JCC:5588) LIFE SCI RES ASST I: Utilize biochemical & chemical analytical tech in neurochemical & psychiatric research; perform biochem assays for neurotransmitter enzymes, assays for neurotransmitters & their metabolites, receptor assays, & protein purification; help w/ establishing procedures for maintaining primary adrenal medullary cell cultures & adrenal medullary explant cultures for biogenic amine enzyme regulation studies; QUALIFICATIONS: BS or MS in chemistry or biochemistry or equiv edu & exp required; familiar w/ & can perform basic lab skills essential; this incl use of serological & micropipettes, balances, pH meter, liquid scintillation counter, ultraviolet & visible spectrophotometers, high pressure liquid chromatography instrumentation, high speed & ultracentrifuges, polyacrylamide & agarose gel electrophoresis apparatus; able to work closely w/ supvr on various projs.; C05; $1670-2086.

31349-LL (JCC:5588) LIFE SCI RES ASST I: In charge of a cell culture facility & will be respon for maintaining tissue culture cell lines & aiding in prep of primary cultures & culture media; help develop & perform both hormone binding assays & radioimmunoassays; QUALIFICATIONS: BS degree or equiv exp; some familiarity w/ sterility tech; prev exp w/ binding assays or RIA helpful but not required; willing to work w/ 125I, 3H & 14C labelled chemicals.; C05; $1670-2086.

Bargaining Unit

39076-FM (JCC:8452) PLUMBER/STEAMFITTER: TMS Unit; 8-4:30; performs high pressure Steam Maint; inspects, installs & repairs high pressure steam lines; serv & repairs steam valves, pressure regulators condensate pumps, condensate lines, traps & expansion joints; inspects & maint 20.5 miles or 103,240 ft of high pressure steam & condensate return lines, condensate pumps & high pressure regulators; occasionally respon for defining parts, mat'ls, & methods of repairs; also performs plumbing maint; installs & repairs chilled water sys w/in bldgs, etc; QUALIFICATIONS: able to read Steam Maps; uses proper methods of valving steam & condensate; follows safety procedures; reads drawings & schematics, welds, soft & silver solders; able to perform rigging operations; preferably completed steamfitter or pipefitters apprentice program.; A37; $11.8.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Nov. 30, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

SLAC

94427-JM (JCC:6492) LAB MECHANICIAN III: TMS unit; from drawings, sketches & verbal descriptions, perform machine work on diverse types of equipt & produce components or parts; requires full journeyman level skills; operate all machine shop & hand tools; use all types of precision measuring devices; familiar w/ rigging methods & operation of various types of hoists; familiar w/ standard shop practices; knowl of welding, brazing & sheet metal; A41; $2250. APPLY AT SLAC

Nonexempt

28166-BP (JCC:2462) OFFICE ASST III: Strong typing skills for classwork & genl corresp for dept profs; maintain undergrad student files, keeping them up to date; liaison person between undergrad majors & faculty advisor; offc receptionist for dept'l offc; sort mail; operate & maintain offc machines; order supplies; answer phones; act as Petty Cash custodian; aid Dept'l Colloquium faculty organizer w/ details in arranging for visiting speakers once each wk during academic yr; contact: Margie Jaedicke, Stauffer III,Rm 113, 4974906.; B11; $1246-1310.

43076-BP (JCC:2470) OFFICE ASST IV: Prov offc & sec'l support for Facilities Procurement staff of 5 people; handle all details of day-to-day running of the offc; typ contracts, letters, memos, reports & forms using the word processor; answer telephones; screen calls; handle requests for informa & refer calls to approp staff member; open, screen & distribute mail; order offc supplies & equip't; maintain files; input & update computer file; maintain records of expenditures & accts for offc budget; reconcile monthly budget statements; maintain Petty Cash fund; respon for the develop't, maintenance & revision of all offc procedures & sys; QUALIFICATIONS: typ 65; high proficiency w/ word processing equip't essential; some knowl of WYLBUR/SPIRES computer lang desirable; good oral & written commu nec; knowl of procurement policies & procedures desirable; send appl/resume to B. Leans, Old Pavilion Annex.; B14; $1440-1514.

36180-PM (JCC:2596) SECY II-SPEC: 8-4:30; prov sec'l support for res/clinical unit in Div of Gerontology; performs accurate finished form typing on corresp, manuscripts, reports & forms, fr handwritten or typed copy; receives & screens a variety of calls & visitors, some patient contact; require indiv interested in learning APPLE computer; enter & evaluate clinical data; QUALIFICATIONS: typ 65; knowl of med terminology helpful; 2-3 yrs of approp clerical sec'l exp required; ability to work w/ a diverse group of doctors, technicians, nurses & clerical staff; contact: Betty Barnett, 497-5913.; B12; $1310-1373.

21996-BP (JCC:2596) SECY II-SPEC: Full sec'l serv to Prof & Div chairman; take dir dictation; typ corresp, class notes, tech reports; open mail, sort, arrange corresp & prep journal manuscripts for reviewing; keep complete filing sys; review records of expenditures for several contract budgets; opportunity for independent work in sub-editing & processing of journal articles is provided; QUALIFICATIONS: typ 65; knowl of gov't contracts; familiarity w/ policies & procedures of univ desirable; good verbal & written commu skills; good English usage & spelling; contact: T. Hegis, Rm 252, Durand Bldg., 497-2173.; B12; $1310-1373. 33702-PM (JCC:2714) **MED SERV ASST III-SPEC:** 7:45-4:30; Primary respon is to assure a timely processing of follow-up claims & tracers to MediCare, MedICal & Commercial carriers; submit tracers to MediCare MedICal & Commercial carriers; work insurance corresp; process insurance inquiries; coord activities w/ Cash I.D. area, Billing & Patient Relations area; prep of adjmts on accts; review patient insurance updates & generate claim forms; process MediCal denials QUALIFICATIONS: working knowl of Physician Billing Procedures for Gov't & Commercial Programs; must have analytical & problem solving skills; work & commu w/ people both w/in & outside the area of respon; able to work w/ frequent interruptions; work accurately & rapidly; knowl of CRT helpful; prev exp in med setting; contact: Marty Witron, 525 University Ave., Suite 400.; B12; $1310-1373.

28400-PM (JCC:2714) MED SERV ASST III-SPEC: 7:45-4:30; primary respon is to assure a timely processing of in & Outpatient Billing forms for submission to MediCare & MediCal carriers; prep claims for Compliance Review Section; prep of approp adjmts on patient accts; access terminals, patient files, microfilm & MediCal sticker file for insurance informa; send claims to Med Analyst for diagnosis or By-Report procedures; asst w/ the completion of month end MediCare & MediCal summaries; submit claims to Hospital Industrial Carriers for payment, etc; QUALIFICATIONS: working knowl of Gov't regulations of Physician Billing Procedures for MediCare & MediCal accts; able to work w/ frequent interruptions; able to work accurately & rapidly; knowl of CRT helpful; typing skills; prev exp in med setting; med terminology; contact: Marty Witron, 525 University Ave., Suite 400.; B12; $1310-1373.

31723-PM (JCC:2714) MED SERV ASST III-SPEC: 7:45-4:30; Primary respon is to assure a timely processing of follow-up claims & tracers to MediCare, MediCal & Commercial carriers; submit tracers to MediCare MediCal & Commercial carriers; work insurance corresp; process insurance inquiries; coord activities w/ Cash I.D. area, Billing & Patient Relations area; prep of adjmts on accts; review patient insurance updates & generate claim forms; process MediCal denials QUALIFICATIONS: working knowl of Physician Billing Procedures for Gov't & Commercial Programs; must have analytical & problem solving skills; work & commu w/ people both w/in & outside the area of respon; able to work w/ frequent interruptions; work accurately & rapidly; knowl of CRT helpful; prev exp in med setting; contact: Marty Witron, 525 University Ave., Suite 400.; B12; $1310-1373.

32609-LL (JCC:5914) LIC VOC NURSE: Work under direction of Nurse Mgr in various clinics to prov nursing support to physicians; dir patient care duties & asst physicians as well as restocking of supplies & cleaning of supplies; QUALIFICATIONS: current Calif LVN license, 2 yrs exp in an acute care setting desirable; must have excel commu skills; able to use initiative, tact & good judgment; must be of good physical & mental health.; B14; $720-757.

Rental housing

HOUSING AVAILABLE

□ **March to Oct. '83:** Close-in fully furn. campus hse. 3BR/1BA, study, 18'covered Doughboy pool (chem. maintained). Fenced yd, central air. No cats. $1000/mo. incl. grdnr. Refundable $500 sec. dep. + 10% int. Call (415) 322-9208 or 497-2512 (day).

□ **Jan. to June 83:** Furn. Palo Alto hse, 4BR/3BA, LR, DR, FR w/frpl, study. Pool w/solar sovr. Close to campus. $1650/mo. incl. pool serv. Call 493-1179.

□ **Beg. Dec. 15, '82:** Furn. fam. hse, 4BR/2BA, fenced yd. Nr. schls, parks, shops. 3 mi. to campus. Children welcome. Call Marilyn Hull, (415) 326-8683 (wkdays), (415) 493-6164 (eves & wknds).

□ **April 1 to June 15, '83 (flex):** Fully furn. hse, 4BR/2BA, den, AEK, W/D, hot tub. Children ok. So. Palo Alto, 3 mi. to campus. Swim/tennis club mbshp (across st.). On bus rte. $1000/mo. incl. grdnr & club mbshp. Call (415) 494-6492.

□ **NOW:** Fully furn. 3BR/2½BA + study, 2-story deluxe twnhse. Formal DR, frpl, wet-bar, 2 car gar., pool, jacuzzi. 10 min. to campus. $1700/mo., 1st & last mo. rent, + $1500 sec. dep. Call Sonia, 494-2939.

□ **NOW:** Prof. woman has rm to rent w/BA, W/D, ktchn. priv. Female, nonsmoker. Furn. except for bed. 10 min. to campus. $325/mo. incl. util. Call 969-5870, after 7 p.m.

□ **Beg. Jan. 1, '83:** Fully furn. Oak Creek apt. w/sports fail. 5 min. to campus. Avail. for 6 mos. (flex). $675/mo. Call 326-3684, morns. & eve.

□ **Jan. to Sept. '83 (flex):** Fully furn. 4BR/2BA lrge campus hse. Frpl, garden w/auto sprinklers, view of hills. Nonsmokers, no pets. $1400/mo. incl. grdnr. Call 497-3987 (day) or 494-0362 (eve).

□ **NOW:** Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, phone, W/D, frpl., sleeps 10. $200/wknd, $70/wknights. Call 493-4139 (eve).

□ **Jan. 15 to July 1, '83:** Fully furn., all appliances, 4BR/1¼BA hse in Los Altos. Lge garden. $975/mo. Call (415) 961-3079 (eve).

□ **Dec. 20 thru Jan. 3, '83:** Fully furn. campus hse., 4BR/2BA, close in. $400 incl. hsecleaning & util. Call 497-9432 (day), 327-8042 (eve).

□**NOW, HAWAII:** Haena, Kauai. 2BR/1BA hse, fully furn. Sleeps 7. Loft, laundry. Walk to beach. $280/wk. Call Nancy Scholl, 321-4407.

□**Dec. 22, '82 for 1 yr. (flex):** Fully furn. contemp. campus hse. 2BR + 2 studies (1 converts to BR), 2BA. Frpl, piano, lush atrium, wooded lot. $1350/mo. incl grdnr, water. Call 857-0479.

□**Regularly avail:** 1 & 2 BR furn. and unfurn apts. & twnhses, also 3BR/2BA hses. In Palo Alto & Menl;o Pk, good nghbrhds, close to campus. Call Shirley, 493-2321 or Jane, 968-4957.

□**April to July '83:** Furn. campus hse, 3BR/2BA, study;. Fenced yd. $900/mo. incl. grdnr, hsecleaning. Call 858-2142 (eve & wknd).

□**Beg. Dec. 15, '82:** Avail. indef. Unfurn. 1BR lux. condo, AEK, Lndry facil. nrby, pool, sauna, gardens. Air-cond. Lincoln Green in Sharon Hgts. $650/mo. Call Ed Haertl, 497-3008 (day) or 854-6028 (day).

□**NOW, to share:** 2BR/2BA hse. Share w/1 person. W/D. Gar., basement. Must like gardening. 2 blcks to campus, El Camino, 4 blcks to Marguerite bus. $400 + util. Lv. message 858-2121.

□**NOW:** TAHOE/DONNER VACATION CONDO. Fuily furn., fully equip., sleeps 8. On ski run. Clubhse w/spa. W/D. Firewood. Call Al 326-3821 (eve).

HOUSING NEEDED

□**Jan. to Mar. '83:** Visit Prof & wife seek 1 or 2BR furn. apt. or hse within 1 mi. of campus. Homeowners, nonsmokers, local refs. Call (212) 260-8221 or write R. Lipsey, 70 E. 10th St., #3, NYC 10003.

□**Mid-Dec. to Summer '83:** Mature fac. cpl visit. Stanf. will care/sit your hse or apt. Will pay rent & provide expert care of furn., yd., pets. Exclnt refs. Call 497-0909 (day), or 324-8166 (eve).

□**Jan. to Oct. '83:** Cornell Prof. & fam. on sabbatical seek Bay Area hsng. Will EXCHANGE Ithaca 3BR hse, xtraordinary, custom design, nestled in forest. Flex. within above time. Call Vera or Dr. John Billinghamat (415) 965-5989.

□**Jan. 1 to April 15, '83:** Visit. Oxford Prof seeks hsng for self, & fam. Will EXCHANGE 4BR hse in Oxford, fully equip., central heat. 2½ mi from city ctr. Wishes similar hsng at Stanf. Call 326-6524.

□**Dec. 1 to Jan. 29, '83:** Visit. Med. Sch. fac. seeks to rent furn. 1 BR apt. or small hse. Call COLLECT (319) 356-2551 or Dr. Angel, 325-2476 (eve).

□**NOW to April 1, '83:** House or apt. sitting. Mother of fac. mbr. seeks long to short periods. Call Lee Yearley, 497-0466 (day) or 493-6430.

□**Beg. Jan. or Feb. '83:** Stanf. alum seeks furn. hse on old campus for yr. or more, or furn twnhse in Sharon Hgts. 3BR pref. (flex). Call 857-0623.

□**JAN to July '83:** Visit Prof, wife, 16 yr. old child seek furn. hse. on or nr. campus. Call Marlene Wine 497-2444(day).

□ **Beg. Dec. 1, '82 (flex):** 32 yr. old Stanford PhD student seeks quiet 1BR or studio apt. or cottage. Responsible, neat, nonsmoker. No pets. Call Susan Hofer, 497-0322 (day).

□ **Jan. 1 thru June 15, '83:** Visit. prof. w/child age 9 seeks furn. hsng. Shared hsng possible. Call Suzanne Caldwell, Dept. German Studies, 497-1068.

□ **Jan. to Mar. '83:** Retired cpl. seeks furn. 1 or 2BR apt., condo, or hse on campus, Palo Alto, Menlo Pk., close to shops, campus. Pkge deal to include car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Sept. '83 to June '84:** Approx. 50 fully furn. hses needed for Fellows & their families coming to Ctr for Advanced Study in the Behavioral Sciences. Call Frances Duignan, 321-2052 (day).

□ **Winter Qtr:** For 3 or 4 mo. (flex.): Visit. prof. seeks very quiet apt, studio, or comfortable rm. w/ktchn priv. On campus or walk to campus. Call Feferman, 497-2439 or 857-0323.

□ **Feb. to June '83:** Visit. prof. from MIT & wife seek furn. 2BR apt. or hse nr campus. Will give loving care to animals, plants. Stanf. refs. avail. Could EXCHANGE 4BR hse in Concord, Mass. Call 328-8103 till 12/4, or (415) 593-6506. Or call COLLECT (617) 369-4713.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

University should more closely monitor outside activities of faculty...

continued from page 1

"In most cases in which problems have arisen...it does not appear that the faculty have intentionally overcommitted themselves. Rather, as inexperienced businessmen, they have underestimated the difficulty of securing operating capital and competent management for their fledgling ventures....

"Undergraduates, graduate students, and post-docs have had mixed experiences with faculty members who have combined the roles of entrepreneur, researcher, and educator. Students value the additional grant support for campus-based research, the access to industrial personnel and laboratories, the opportunity for consulting while enrolled, and the job opportunities on graduation which arise from close faculty-industry relations.

"At least 10 undergraduates, graduates, and post-docs, on the other hand, have reported experiences to the University Ombudsman or to the Dean of Graduate Studies within the last year where they believe conflicts between their adviser, the researcher and educator, and their adviser, the entrepreneur, have interfered with their education anbd training.

"Many other reports of problems exist on the student grapevine in Biochemistry, Chemical Engineering, Computer Science, Electrical Engineering, Mechanical Engineering, and Medical Microbiology.

"In some cases, the atmosphere surrounding joint student-faculty research has changed from cooperative investigation to mutual mistrust. This has severely restricted the flow, discussion and development of the ideas necessary for innovative research."

The GSA noted that work done for a company in which an individual has an equity interest is consulting, even if there is no service-related fee. While there are substantial advantages to both parties in outside employment for students by their faculty advisers, there is also "inherently high potential for abuse," it added. Hence it is appropriate for the University to insist that department heads be informed of and approve the details of such relationships.

When both the faculty member and the student hold equity positions or both are officers in the outside company "as is the case in at least one company in Mechanical Engineering and Computer Science...strong motivation clearly exists for the faculty member...to provide preferential treatment for his student coworker as compared with students not involved with the company."

The Ombudsman's Office has already received one such complaint.

No one can estimate the number of problems which have gone unreported because staff, students, and junior faculty are "extremely reluctant...because they perceive such reports can be made only at great personal risk."

Routine reporting and prior notification would give the University "a chance to catch problems early, before they become serious." By providing a broader overview, it would encourage a balanced evaluation of university-industry relations, "not just information based on major successes and failures."

The GSA committee recommended that the Dean of Graduate Studies and Research should summarize individual faculty reports, supplementing this with information gathered informally from other sources, and present his findings to the Committee on Research, which makes policy recommendations to the Faculty Senate.

MIT requires "faculty members to keep their department heads informed continuously in adequate detail regarding all outside professional activities, service on external committees, and other special assignments, whether within or without the Institute."

Harvard's guidelines state that when faculty members assume responsibility for the day-to-day operations of a firm, either as a line officer or as a consultant, this "presents an unacceptable conflict of interest or commitment." At least one Harvard faculty member has been asked to resign as a result of this policy, and did so, the GSA committee report states.

At present, nearly all Stanford faculty with outside commercial interests are voluntarily abiding by the proposed prohibition against the outside firm's funding of the faculty member's research. In one case where this was not done, legal and other problems resulted for administrators, faculty and students alike.

"If the University is to ensure that rapidly increasing and much needed ties between faculty, students, and outside organizations will promote teaching, research, and public service, then it must monitor these relationships closely and regulate them when necessary," the GSA committee declares. The Office of the Dean of Graduate Studies and Research is in the best position to identify existing deficiencies.

"We agree with President Donald Kennedy's statement last spring during a panel discussion...that 'good policies will always leave faculty members with enough discretion for a few to abuse,' " the report concludes.

"We believe, however, that the University community has not yet considered the possibility that current abuses may be of sufficient frequency and magnitude to seriously impair the University's...functions."

Lieberman...

continued from page 1

proprietary secrecy that would distort the fundamental purpose of the University, and that the University accordingly should not give up its right to examine the appropriateness of exclusivity for each invention on a case-by-case basis."

This question is currently under review by the Committee on Research and may be discussed in conjunction with its annual report to the Faculty Senate Thursday, Dec. 2.

Lieberman notes that "interactions between academia and industry are not only desirable, they are essential to keep American science and technology strong.

"However, university-industrial relations have grown dramatically in complexity over the past few years. Industrial technology in such areas as electronics and computer software has advanced to a point at which many results of basic university research can now be applied in industrial settings in a matter of months, as compared to the decades required in earlier eras.

"In addition, new fields of university research into basic properties and processes, such as recombinant DNA, which have emerged recently offer unprecedented potential for widespread commercial application.

"Thus industry, which supports more university research for potential profit-making purposes than for philanthropy, is looking for increased and novel research partnerships with academia. At the same time, universities are faced with the need to replace dwindling federal support for research activities.

"The increase in university-industrial relations is therefore both a positive and predictable outcome. The proportion of Stanford's research programs funded by industrial sources has more than doubled—from about two percent a decade ago to almost five percent today—and now totals more than $5 million in annual expenditures.

"It is likely that industrial sponsorship of our research will continue to increase considerably faster than federal funding. But it will probably never represent more than a fraction of our total funding, in view of the fundamental differences between the missions of educational institutions and profit-making companies."

Lieberman's paper will be published in the Dec. 1 issue of *Campus Report*, the University's weekly newspaper for faculty and staff.

GSA text...

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industrially sponsored research will continue to be of the highest quality. This peer review process would be most effective when done in conjunction with other universities.

There are many advocates of peer review of industrially sponsored research within the University community. Biochemistry Professors Paul Berg and Arthur Kornberg, for instance, are trying to establish a peer review system for industrially sponsored research through the Life Sciences Foundation.

Conclusions

If the University is to ensure that the rapidly increasing and much needed ties between faculty, students and outside organizations will promote teaching, research and public service, then it must monitor these relationships closely and regulate them when necessary. The office of the dean of graduate studies and research is in the best position to piece together the reports of department chairmen and to identify significant deficiencies in existing University policies. The above proposals, designed to give the University a sound informational base on which to make policy decisions, have recognized this.

Even from the limited information now available, scattered reports to the ombudsman, to the dean of Graduate Studies and Research and to the GSA Academic Affairs Committee, it is clear that arrangements between faculty members and industries in which the faculty members assume responsibility for the day-to-day operations of the firm present an unacceptable conflict of interest or commitment. Thus the recommendation to prohibit full-time faculty from accepting such responsibilities.

We agree with President Kennedy's statement last spring during a panel discussion on universities, industries and graduate education that "good policies will always leave faculty members with enough discretion for a few to abuse."

We believe, however, that the University community has not yet carefully considered the possibility that current abuses may be of sufficient frequency and magnitude to seriously impair the University's teaching, training and public service functions.

Budget correction

In last week's story about the budgetary presentation to the Faculty Senate, it was incorrectly stated that Stanford is one of only a few institutions levying a "tax" on restricted funds. The sentence should have read, "Stanford is almost alone among comparable institutions in *not* levying such a 'tax.' " A 10 to 15 percent charge on expenditure of restricted funds is currently under consideration at Stanford.

Research...

continued from page 1

circuit drawings, engineering diagrams, and other material developed in the course of research.

The new policy 1) promotes prompt and open exchange of tangible research property and associated research data with other academicians outside the investigator's immediate laboratory; 2) states that control over the development, storage, use and distribution of tangible research property is the responsibility of the principal investigator or laboratory director; and 3) provides tangible research property may not be sold for a profit.

In response to student concerns that faculty members may file disclosures on inventions, without informing students involved in the disclosures, the Sponsored Projects Office has developed a document on "Patents, Copyrights, and Other Research Property" as a working guide for distribution to graduate students in research departments. The Committee on Research also approved an arrangement proposed by the Stanford Synchrotron Radiation Laboratory in which a consortium of three external sponsors—another university, a commercial company, and the federal government—would fund construction and operation of two new beam lines for three-year renewable periods. One-third of the operating time will go to the other university sponsor, one-third to the corporate sponsor, and one-third to general SSRL users.

Besides Keller, 1981-82 committee members were Profs. Jon F. Claerbout, geophysics; Michael Fayer, chemistry; Philip Hanawalt, biological sciences; Sumner Kalman, pharmacology; James Meindl, electrical engineering; Jonathan Roughgarden, biological sciences; Margaret Wright, operations research; Research Assistant Mark Everson, Stanford Center for Youth Development; and students Peter Brett and John Halamka.

Meindl currently heads the committee. Continuing members include Brett, Claerbout, Fayer, Halamka, Hanawalt, and Kalman. New members include Profs Edward Garwin, physical electronics, and John Shoven, economics; Research Associate Marcia Bieber, radiology; and student Rosie S. Redfield.

Lebanese system disintegrating, journalist says

The current Lebanese political system is beginning to fall apart due to internal problems within the government, a Lebanese journalist said Monday, Nov. 15, at Stanford.

Hisham Milhem, a Washington correspondent for a Saudi Arabian newspaper, "Okaz," himself a Labanese-born Christian, said that the Lebanese people are now presented with the historical opportunity to reunite the country by establishing a national coalition that will work to rid Lebanon of foreign invaders.

"Never before has loyalty to the Lebanese nation been so deep as today," said Milhem, who described his fellow Lebanese as being "tough mountain people who are not going to be subjugated by anyone."

With an audience of about 60, Milhem was the first speaker in a series of talks called "Perspectives on the Middle East Conflict," sponsored by the ASSU Speakers Bureau and the Committee for Justice in the Middle East.

"President Gemayel only rules over a very small area in the country, and the Lebanese army is very weak now," Milhem said.

While admitting that Palestinian and Syrian occupation in Lebanon has also been a problem for the Lebanese, Milhem asserted that the Israeli military occupation of southern Lebanon "is the issue that must be dealt with first."

Visibly angered by the invasion of Israel into southern Lebanon, Milhem said: "The Israelis haved destroyed our country in the south. Now they want to sell us the cement to rebuild it."

Milhem called it a "war-torn misery belt" that the Israelis have destroyed and are now trying to incorporate into their own economy by flooding the area with Israeli-made goods and by controlling the municipalities.

If the Israelis insist on making a peace treaty with us only by applying force, there will be trouble, he said. "The Lebanese people are willing to take the lead now and face their invaders."

Milhem suggested what he believes will be the requirements for the formation of a new Lebanese coalition. He said it should:

* Refuse to ever sign a peace treaty with Israel;
* Work politically and militarily to end the Israeli occupation;
* Press for disarmament of the country's many militias and establish a unified national army;
* Maintain its Arab character and political strength in the Arab world;
* Strive for human and political rights of Lebanese people;
* Regulate any political pressure in Lebanon that would endanger Lebanese sovereignty;
* Maintain the democratic character of the country.

Calling for an end to the fighting in Lebanon, Milhem said: "The Israeli is not 10 feet tall. He bleeds as I bleed. And many have bled in Beirut."

—Craig LaGrow

Shaw's *Arms and the Man* starts Dec. 1

The Stanford Drama Department's production of George Bernard Shaw's *Arms and the Man* will open at 8 p.m., Wednesday, Dec. 1, in the Nitery. The production, directed by second-year doctoral student Stephen Weeks, is part of the Graduate Directing Workshop series. Performances continue through Saturday, Dec. 4.

Arms and the Man, first produced in London in 1894, was Shaw's fourth play and his first theatrical success. It was received with great laughter, and Shaw was concerned that he would be appreciated too much for his humor and too little for his ideas.

The play deals with the conflict between realism and romanticism in the human experience and, although the excesses of romanticism are condemned, the play is more concerned with the subtle and shifting balance between realism and idealism. At one point, Shaw subtitled the play a "romantic comedy" and at another time an "antiromantic comedy." It is both.

Set in Bulgaria in the late 1800s, *Arms and the Man* is the story of an idealistic young couple whose highest ideas are tested against down-to-earth practicality and realism when a war breaks out.

Throughout the play we hear echoes of Shaw's statement that "the tragedy and comedy of life lie in the consequences. . . of our persistent attempts to found our institutions on the ideals suggested to our imaginations by our half-satisfied passions, instead of on a genuinely scientific natural history."

The setting for *Arms and the Man* is designed by Laurence Maslon, the lighting by Nan Buck, and the wardrobe supervision is by Douglas A. Russell.

The young couple, Raina and Sergius, is played by Christine Roum and Scott Leland. Others in the cast include Grahm Winton as Bluntschli and Deanna Carlyle as Louka. Admission is free.

Two showings set of Morocco film

"Morocco: Cities, Sun and Sahara," produced and narrated by Clay Francisco, will be presented twice on Monday, Dec. 6, by Stanford University Events and Services as part of the on-going Discovery Film Series.

The film will be shown at 2:30 p.m. in Kresge Auditorium, and at 7:45 p.m. in Memorial Auditorium.

The film depicts the people of Morocco in a variety of settings. Some of the places visited are the royal palace in flower-filled Rabat, the imperial city of Fez, the Kairouine Mosque housing the world's oldest university, the Moslem shrine of Moulay Idriss, Casablanca, and the coastal city of Tangier.

Also included are Agadir, a major resort, Marrakech, still reached by camel caravan across the mountains, and, finally, the date capital Zagora, at the edge of the Sahara. South from there is the stark beauty of gigantic, continually shifting sand dunes.

Tickets are $3 for the matinee and $4 for the evening showing. Tickets are available at the door, or at Tresidder Ticket Office (415) 497-4317.

Panel on Japan's hi tech challenge

Keiske Yawata, president of NEC Electronics U.S.A., Inc., and Prof. Daniel Okimoto of the Stanford Department of Political Science will discuss "The Japanese Challenge to High Technology Industries in the 1980s" at 7:30 p.m. Thursday, Dec. 2, in Kresge Auditorium at Stanford.

Sponsored by the Northeast Asia-U.S. Forum on International Policy, the free public program will be moderated by Stanford Prof. John Linvill, director of the Center for Integrated Systems.

Okimoto is codirector of a major binational research project on U.S. and Japanese high technology industries, based at the NEA-US Forum, and author of a new book, *Japan's Economy: Coping with Change in the International Environment.*

Before becoming chief executive officer of NEC Electronics U.S.A., Yawata was general manager of the International Electron Devices Division of Nippon Electric Co. from 1973 until 1981.

The CIS, directed by Linvill, is a new program bringing together Stanford's top-ranked Departments of Electrical Engineering and Computer Science with scholars from materials science and other disciplines. The Center is funded by three-year gifts of $750,000 from each of 18 U.S. firms and government-sponsored research totaling $8 million. Ground will be broken for its new building early next year.

The lecture program is the first in a series which will cover such topics as arms control, international security, science and technology, economic management, and health.

Sierra Camp open for winter sports

For the first time since it began operation in the 1950s, the Stanford Sierra Camp at Fallen Leaf Lake, near Tahoe, will be open for winter sports.

Camp Director Wim Steenbakkers has announced plans for a four-weekend trial opening in January and February, featuring Nordic skiing.

Twenty-four guests will be housed in the main lodge at the camp the weekends of January 21-23, January 28-30, February 3-6, and February 11-14.

Participants, accompanied by instructors, will arrive at the camp after a three-mile ski over Fallen Leaf Road, while their luggage is transported by snocat. (Steenbakkers notes that any fit adult with the desire to learn will find the trip an ease and a pleasure.)

Activities during the weekend will include personalized cross-country ski instruction, guided nature tours, ski equipment clinics, lessons in Nordic downhill techniques, introduction to winter wilderness skills, and ski races and snow games. In addition to comfortable fireside meals, there will be movies, music, and time just to absorb the winter wonderland.

Alumni, faculty, staff, and students are welcome to participate in the program. The rates are $130 per person (double occupancy) for the first two weekends and $195 per person for weekends three and four.

Further information may be obtained by contacting the Stanford Sierra Camp staff at Bowman Alumni House, 497-2021.



Arthur Barnes

Wind Ensemble salutes Grainger

Stanford's Wind Ensemble, under the direction of Arthur Barnes, presents a centennial salute to Percy Grainger at 8 p.m. Saturday, Dec. 4, in Dinkelspiel Auditorium.

The Music Department concert will also feature Paule Reale's *Concerto for piano trio and wind ensemble*, written and premiered this year.

Grainger was born in Australia in 1882 and died a U.S. citizen in 1961. He premiered Grieg's piano concerto in 1907 and wrote many popular works for band, chorus, and orchestra based on English folk songs and dance tunes.

Grainger played oboe in the U.S. Army Band during World War I and later joined the music department at New York University. He was a frequent guest conductor at Interlochen in the '30s and '40s.

The Wind Ensemble will play Grainger's *Handel in the Strand*, *The Immovable Do*, *Molly on the Shore*, *The Power of Rome and the Christian Heart*, the very famous *Country Gardens*, and *Lads of Wamphray*.

The Mirecourt Trio, in residence at Grinnell College in Iowa, is traveling to Stanford specifically to perform Reale's concerto, and then to record it in Los Angeles. Trio members are Kenneth Goldsmith, violin (Stanford music M.A.'68); Terry King, cello; and John Jensen, piano.

Reale, age 39, is a composer at UCLA. His concerto was commissioned for the Mirecourt Trio and the Green Lake Festival of Music through a grant from the Jerome Foundation of Saint Paul, Minn. It is based on the medieval *Dies Irae* hymn, and "has everything," according to Prof. Barnes—"jazz, tangos, ragtime, tone-clusters. It's very rhythmic."

Tickets for the Dec. 4 concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and at the door.

Lane book sale

Lane Medical Library will hold a book sale from 8 a.m. to 4 p.m. Wednesday, Dec. 1, in the Sherman Fairchild auditorium lobby. Proceeds of the sale will be used for new library acquisitions.

The books will be $2 each from 8 a.m. to noon, with the price going down to $1 from 12:30 to 4 p.m. Rare books and special items will be individually priced.

Chorus, Orchestra join to perform *King David* and *Te Deum* Dec. 3, 5

Stanford's Chorus and Orchestra will perform Honegger's *King David* and Bruckner's *Te Deum* twice: at 8 p.m. Friday and Sunday, Dec. 3 and 5, in Memorial Church.

Presented by the Stanford Music Department, Andor Toth will conduct these combined forces and a very impressive line-up of soloists: cantor Hans Cohn, soprano Barbara Reiter, contralto Marcia Hunt, tenor Gregory Wait, baritone John MacAllister, and soprano Lila Stuart in her first appearance since joining Stanford Music Department's faculty this fall.

King David tells the biblical story of David: his youth, crowning as king after the tragic defeat of King Saul, his reign, and finally the crowning of Solomon.

Te Deum is Bruckner's strongest affirmation of his deep Christian religious faith and definitely his most popular choral work.

The role of narrator in *King David* will be spoken in English by Hans Cohn, cantor at Temple Beth Jacob in Redwood City. Cohn has soloed at the Carmel Bach Festival and studied with the great basso, Alexander Kipnis.

Soprano Barbara Reiter will sing the role of Angel. Earlier this year she won first prize in the Metropolitan Opera apprentice auditions.

Contralto Marcia Hunt has soloed frequently with the Oakland Symphony, Pocket Opera, and Lamplighters, She was last heard at Stanford in Beethoven's *Symphony No. 9.*

Completing the soloist roster for *King David* will be popular Stanford tenor Gregory Wait. The spoken role of the Witch of Endor will be taken by Florence Oeschger, who is completing her M.M. at San Jose State while working full-time as Stanford Music Department's secretary.

Soloists for *Te Deum* will be Gregory Wait and Marcia Hunt, plus two exciting new soloists: Stanford's new voice teacher, Lila Stuart, and bass-baritone John MacAllister. Stuart comes from the University of Redlands and was formerly artist-in-residence and leading soprano with the Opera Theater at Indiana University's School of Music.

MacAllister has sung five seasons with the San Francisco Opera and is a frequent soloist with the San Francisco Symphony, Oakland Symphony, and many other groups.

Rob Campbell, D.M.A. candidate in choral conducting, has prepared the Chorus this quarter while Prof. William Ramsey, director of choral activities at Stanford, is on sabbatical.

Tickets for the two performances ($4/$2) are available from Tresidder Ticket Office (497-4317) and the door. Advance purchase of tickets is strongly recommended.

Alea II plans *Requiem for Cornelius*

A Requiem for Cornelius will be presented by Alea II at 8 p.m., Tuesday, Nov. 30, in Dinkelspiel Auditorium.

Alea II is the Stanford Music Department's ensemble for new music, directed by Jonathan Berger.

Composer Cornelius Cardew, a student of Stockhausen and one of the foremost composers of aleatoric ("chance") music, died last year at the age of 45. The requiem will include his *Autumn 1960* for an unspecified number of players, conducted by Jeannine Wagar.

Also on the program will be *Vision No. 15* from Messiaen's *Visions of the Infant Jesus*, with pianist John McGiness; Morton Feldman's *The King of Denmark*, with percussionist William Winant; David Lang's *Blue Nails*, with trombonist Anne Witherell; and the premiere of Paul Nahay's *Torus* for two pianos. D.M.A. candidate Nahay will perform *Torus* with pianist Ellen Brodsky.

The free public concert will begin with a surprise piece whose composer requests the audience set their digital wristwatch alarms to sound at 8:07.

Christmas Faire at TMU Dec. 3-5

Abundant crafts, music, jugglers, magicians, and international foods will provide the holiday fare for the eleventh annual Stanford Christmas Faire at Tresidder Union Friday through Sunday, Dec. 3-5. The free public festivities will be open from 10 a.m. to 5 p.m. daily.

The Faire will be highlighted by 87 craftpeople who will display a wide variety of quality handcrafted items including paintings, sculptures, jewelry, pottery, leatherwork, photography, stained glass, woodwork, toys, stitchery and weaving. New additions include hand-blown glass ornaments, original silks, and perfumes blended on the spot to match individual personality. The craftpeople were chosen from more than 600 applicants.

Holiday food and drink, homemade pastries, and entertainment by wandering minstrels and mimes also will be featured. Twenty percent of all artists sales benefit the campus program activities sponsored by STARTS, Student Arts at Stanford.

Unique, special and handcrafted gifts range from 25 cents to over $500.

Van Siclen talks on Egypt here

Charles Van Siclen III, a fellow of the American Research Center in Egypt, Inc., and director of the Babastis Research Project, will give an illustrated lecture about the origin and development of the Stanford Museum's Egyptian Collection at 7:30 p.m. Wednesday, Dec. 1, in Terman Auditorium on the campus.

A member of the Stanford Class of '67, Van Siclen first became interested in the Museum's extensive Egyptian holdings while he was an undergraduate. He is currently cataloging the collection and in his lecture will trace some of the more interesting objects back to their places of origin.

Van Siclen has done field work in Egypt since 1971 and has served as lecturer for five Stanford Alumni Association Travel/Study Colleges on the Nile.

The program is free and open to the public.



Orford Quartet

Lively Arts presents Orford Quartet playing Mozart, Beethoven, Schafer

The Orford Quartet, one of Canada's national treasures, will be presented by the Lively Arts at Stanford at 8 p.m., Wednesday, Dec. 1, in Dinkelspiel Auditorium.

The program will include Mozart's "String Quartet in G Major K. 387 ('Fugue')"; Beethoven's "String Quartet, Op. 59, No. 3 in C Major"; and Canadian composer R. Murray Schafer's "String Quartet No. I."

Founded in 1965, the Orford comprises violinists Andrew Dawes and Kenneth Perkins, violist Terence Helmer, and cellist Denis Brott. In 1974 the quartet received first prize in the European Broadcast Union's international string quartet competition in Stockholm. It has toured extensively in the U.S., Eastern and Western Europe, the Soviet Union, North Africa, and the Caribbean. The group has also made 20 recordings.

The quartet has a wide repertoire of over 130 works, specializing in contemporary works by Canadian composers. It is the quartet-in-residence at the University of Toronto.

Principal violinist Dawes is from Western Canada. He studied violin with Clayton Hare, Murray Adaskin, Lorand Fenyves, and Oscar Shumsky. He has appeared as soloist with all major orchestras of Canada, and has given recitals in Canada, the U.S., and Europe. In addition, he has been a prize-winner in many national and international violin competitions.

Perkins, violin, has been a member of the Montreal Symphony and the McGill Chamber Orchestra, and taught at McGill University. He has toured Canada with chamber groups, and appeared as soloist in Canada and with leading orchestras in Italy and Switzerland. Also a native of Western Canada, Perkins has studied with Ivan Galamian, and in Geneva with Lorand Fenyves, where he was a classmate of Andrew Dawes.

Helmer, viola, was born in Northern Ontario, and has studied with Geza de Kresz, Kathleen Parlow, Joseph Gingold, and Arthur Grumiaux. A graduate of the University of Indiana, he also has a Diplome Superier from the Brussels Royal Conservatory. Helmer made his debut with the Toronto Symphony at 15, and has since played with the Stratford Orchestra and the Chicago Chamber Orchestra.

Brott, cello, joined the quartet in 1980. He won first prize at the 22nd international cello competition in Munich, Germany. Born in Montreal, he was a protege of Gregor Piatigorsky at the University of Southern California. He has appeared with every major orchestra in Canada, and his solo engagements have taken him throughout the U.S., Mexico, and Europe. Brott has taught at Interlochen Arts Academy, North Carolina School of the Arts, and the UC-Santa Barbara.

For ticket information, call Tresidder Ticket Office at (415) 497-4317.

Nagle to give talk on peace at I-Center

"Peace: Can We get There from Here?" is the topic of the final autumn quarter Tuesday luncheon/lecture at noon, Nov. 30, at the Bechtel International Center.

Michael Nagler, associate professor of classics and comparative literature at UC-Berkeley is the featured speaker. Nagler is founder and codirector of the Berkeley Peace Studies Project and author of *America Without Violence*, a book that challenges the assumption that violence is an inevitable part of human existence.

Nagler's past education and experience include a medical degree from Cornell, postmedical work at NYU and a year of study in Heidelberg, Germany, in addition to his doctoral degree in comparative literature from Berkeley. He has written extensively on Greek mythology and literature and more recently published an article on "Peace as a Paradigm Shift" which appeared in the *Bulletin of Atomic Scientists* in December of 1981.

Tickets for the lunch cost $2.50, available in advance; brown baggers are also welcome at no charge.

The series will resume winter quarter on January 11. Focusing on major world issues and their backgrounds during the current quarter, the series will concentrate on particular countries and case studies next quarter.

For further information, phone the I-Center at 497-1831.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Nov. 24, to cover the week of Mon., Dec. 6, through Sun., Dec. 12.

MONDAY, NOVEMBER 29

Biological Sciences Dept. Seminar: "Current Status of Gene Amplification" with Dr. Robert Schimke, S.U. 4:15 p.m. Room T175, Herrin Hall. Open to the public.

Energy Policy Seminar: "Long-Term Planning Results 1982-2002" with Mason Willrich, vice president, PG&E Co. 4:15 p.m. Skilling Aud.

Numerical Analysis Seminars: "Analysis of a Multigrid Method as an Iterative Technique for Solving Linear Systems" with Ann Greenbaum, Lawrence Livermore Laboratory. 4:15 p.m. Math 380C.

Applied Physics Colloquium: "Theory of the Two-Electron Chemical Bond" with Prof. W. A. Harrison, S.U. 4:15 p.m. Applied Physics 200.

EE350 Radioscience Seminar: "Propagation of ULF/ELF Electromagnetic Fields Along the Sea-Sea Floor Interface" by Aziz Inan, his Ph.D. dissertation examination. 4:15 p.m. McCullough Bldg., Room 134.

Stanford Film Society: "Some Like it Hot." With Marilyn Monroe, Jack Lemmon, Tony Curtis. 7 p.m. Kresge Aud.

ASSU Speakers Bureau/Committee for Justice in the Middle East Lecture: "Middle East Realities and American Politics" by Prof. Seymour Martin Lipset. 7:30 p.m. CERAS Room 112. Public cordially invited.

TUESDAY, NOVEMBER 30

Hillel Tuesday Lunch Program: "Israel Through Women's Eyes" with Ellen Boneparth, Dean of Social Sciences, San Jose State University. Alumni Room, Old Union Clubhouse. Kosher lunch for $1.25, or bring a bag lunch.

I-Center Tuesday Lecture-Lunch Series: "Peace: Can We Get There from Here?" by Assoc. Prof. Michael N. Nagler, UC-Berkeley, and author of *America Without Violence*. Noon. I-Center. Lunch tickets for $2.50 sold one week in advance. Brown baggers welcome.

Fluid Mechanics Seminar: "Recent Developments in Transonic Flow Theory" with David Nixon, Nielson Engineering and Research, Inc. 4:15 p.m. Skilling Aud.

Communications Design Seminar: "Integrated Circuits in Tomorrow's Radios" with Polly Estabrook and J. B. Kuo, S.U. 4:15 p.m. McCullough Bldg., Room 128.

Music Dept. Concert: Alea II, the Stanford Ensemble for New Music. Jonathan Berger, director. An evening of recent and innovative works. Set your digital wristwatches for 8:07. 8 p.m. Dinkelspiel Aud. Free.

WEDNESDAY, DECEMBER 1

Lane Medical Library Booksale: $2 items, 8 a.m.-noon; $1 items, 12:30-4 p.m. Rare and special items individually priced. Sherman Fairchild Aud. Lobby. Proceeds towards new library acquisitions.

Book Sale: Books and periodicals in many fields. Hardbound $1 and up, paperback 25 cents and up, periodicals 10 cents. 11 a.m.-1:30 p.m. Green Library, West Wing, first floor, Room 101.

EE380 Computer Systems Laboratory Seminar: "Application of Distributed Computers to a Real Time System" with Fletcher Buckley, RCA, Moorestown, N.J. 4:15 p.m. Terman Aud.

Electronics in Medicine Seminar: "Electro-phrenic Stimulation in Otherwise Respirator-Dependent Quadriplegics" with Dr. Conal Wilmot, chief of rehabilitation, Santa Clara Valley Medical Center. 4:15 p.m. McCullough 134.

Colloquium of the Dept. of Chemical Engineering: "A Mathematical Model of Oil Recovery by Gas Injection" with Dr. Khalid Aziz, S.U. 4:15 p.m. Chemical Engineering Conference Room.

The Lively Arts at Stanford: Orford Quartet. Mozart: String Quartet in G Major, K. 387, ("Fugue"); Schafer: String Quartet No. 1; Beethoven: Quartet in E-flat Major, Op. 74. 8 p.m. Dinkelspiel Aud. $9.50, $8.50; students $3 off these prices.

Drama Dept. Graduate Directing Workshop: George Bernard Shaw's "Arms and the Man." Directed by Stephen Weeks. 8 p.m. The Nitery. Free. (Through Dec. 4.)

CROW Women at the Top Lecture Series: Pat Schroeder, U.S. Congresswoman, Colorado First District, will speak. 8 p.m. Kresge Aud. Public cordially invited. (Last in series.)

Art Dept. Lecture Series: "Letterforms in Evolution" by Asst. Prof. Charles Bigelow, Depts. of Art and Computer Science. 8:15 p.m. Annenberg Aud. Public cordially invited.

Alumni Associaton Guest Lecture: "Mummies and Mysteries: Investigation in the Egyptian Collection of the Stanford Museum" by Egyptologist Charles Van Siclen, '67, lecturer on Alumni Association Colleges on the Nile. 7:30 p.m. Terman Aud. Public invited.

THURSDAY, DECEMBER 2

Biological Sciences Dept. Special Seminar: "Variable Genome of Flax—Its Response to Environmental Stress" with Dr. Christopher Cullis, Dept. of Applied Genetics, John Innes Institute, Norwich, England. Noon. Room T175 Herrin Hall. Open to the public.

Stanford Geothermal Program Seminar: "Geophysical Monitoring of Vapor-Liquid Interfaces in Reservoirs" with Amos M. Nur, S.U. 1:15-2:30 p.m. Room B67, Mitchell Bldg.

Solid Mechanics Seminar: "Preliminary Design of Composites" with Dr. D. J. Wilkins, General Dynamics, Ft. Worth. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Transition Metal Impurities and Core Excitons in Semiconductors" with A. Zunger, Solar Energy Research Institute, Golden, Colorado. 4:15 p.m. Applied Physics 200.

I-Center Other Cultures Film Series: "Threads of Life" explores facets of life in a rural village of Afghanistan as well as in the capitol; and "Stones of Eden," a year in the life of a wheat farmer in Centrl Afghanistan. 7:30 p.m. I-Center. 75 cent donation at the door.

Drama Dept. Graduate Directing Workshop: Shaw's "Arms and the Man." See detials for Wed., Dec. 1.

FRIDAY, DECEMBER 3

STARTS Christmas Faire: Opening fanfare from Tresidder Balcony, Fri., Dec. 3 at 10 a.m. Handcrafted articles by 85 artisans, juggler, musicians, dancers. 10 a.m.-5 p.m. today through Sunday. Free admission.

Applied Mathematics Lecture: "On the Symmetric Eigenvalue Problem" by Prof. Tara Nanda, UC-Berkeley. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Materials Science and Engineering Dept. Colloquium: "Austenitic Stainless Steel BWR Piping Materials" with Dr. A. Gianuzzi, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Stanford Women in Science and Engineering Lecture Series: "Risks and Benefits in Engineering Decisions" by M. Elisabeth Pate-Cornell, asst. prof. of industrial engineering, S.U. 4:15 p.m. Skilling Aud. Stanford community welcome. Inquiries at 497-2496.

STARTS Great Directors Film Series: "Destroy, She Said" directed by Marguerite Duras, a primary exponent of the French New Novel and a leading figure in modern experimental film. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

Music Dept. Concert: Stanford Chorus and Chamber Orchestra. Andor Toth, conductor. Honegger's "King David"; Bruckner's "Te Deum." 8 p.m. Memorial Church. $4/$2. (Repeated Dec. 3, same details.)

Drama Dept. Graduate Directing Workshop: Shaw's "Arms and the Man." See details for Wed., Dec. 1.

STARTS Live Entertainment: Tom Smith and Jon Creger. Folk and light rock. 9 p.m. Coffee House. Free.

SATURDAY, DECEMBER 4

STARTS Christmas Faire: 10 a.m.-5 p.m. Tresidder Union. See details for Fri., Dec. 3.

Music Dept. Concert: Stanford Wind Ensemble. Arthur Barnes, conductor. Paule Reale—Concerto for Piano Trio & Wind Ensemble featuring the Mirecourt Trio (Kenneth Goldsmith, violin; Terry King, cello; John Jensen, piano). Percy Grainger Centennial Music: The Immovable Do, Shepherd's Hey, Country Gardens, The Gum-suckers March, Molly on the Shore, Handel in the Strand. 8 p.m. Dinkelspiel Aud. $4/$2.

Drama Dept. Graduate Directing Workshop: Final performance of Shaw's "Arms and the Man." See details for Wed., Dec. 1.

SUNDAY, DECEMBER 5

University Public Worship: Student Worship Service, 8:30 p.m.; Glen Stassen, Southern Baptist Theological Seminary, sermon and eucharist, 11 a.m.; Catholic Mass, 4:30 p.m.

STARTS Christmas Faire: Final day. 10 a.m.-5 p.m. Tresidder Union. See details for Fri., Dec. 3.

ASSU Sunday Flicks: "Personal Best." 7 & 9:30 p.m. Memorial Aud. $1.50.

Music Dept. Concert: Stanford Chorus & Chamber Orchestra. Same details as Fri., Dec. 3.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

Before Darwin and After. Books and other materials dealing with Charles Darwin, his theory and its impact. Second floor, West Wing, Green Library. Through November.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. November 15-January 11.

Acrylic on Canvas Paintings by Win Belton. Bechtel International Center. Through November.

Views Through a Natural Lens and California Vignettes. Color photographs by Damien Kuffler. Tresidder second floor gallery and the Coffee House. Month of November.

Performance Art as a High School Teaching Methodology. Documentation in film and text by Charles Garoian. Stanford Faculty Club lower entry area. Through late November.

Melange of Paintings. By several artists who have had exhibits in 1982. Faculty Club Gold Lounge.

Fiberwork by Priscilla Hextor. Faculty Club upper entry. Through late November.

Japanese Brush Painting by Ami Wada. Reception, Fri., Dec. 3, 5-7 p.m. Bechtel International Center. Dec. 3-30.

Brown bag concert

Stanford's Chamber Orchestra, under the direction of Andor Toth, invites the Stanford community to a free brown-bag Christmas concert at 12:30 p.m. Thursday, Dec. 2, in Dinkelspiel Auditorium. The concert will conclude at 1:30 p.m.

The orchestra will perform sections of Corelli's *Christmas Concerto* and music by Mozart, Bach, and others.

Student soloists will include John DeVincenzo, trumpet; Allan Rubin and Daniel Cher, violins; Cindi Campbell, cello; and Kathryn Barnard, flute.

Soloists from the community will be Janet Da Foe and Laurel Machado, violins, and Curtis Smith, cellist.

Literary criticism

Prof. Sara Castro-Klaren of Dartmouth College will speak on "Feminist Literary Criticism and Women Writers in Latin America" at 4:15 p.m. Thursday, Dec. 2, in room 276, Building 260, at Stanford University.

Her free public lecture is sponsored by the Department of Spanish and Portuguese.

Engineering talk

Assistant Prof. M. Elisabeth Pate-Cornell, industrial engineering, will speak on "Risks and Benefits in Engineering Decisions" at 4:15 p.m. Friday, Dec. 3, in Skilling Auditorium on the Stanford campus.

The lecture, sponsored by the Office of the Dean of Graduate Studies and Research and Women in Science and Engineering (WISE), is one of a series of monthly talks presented by women faculty and graduate students.

CAMPUS REPORT

Volume XV, Number 11 | A publication for Stanford University faculty & staff | December 1, 1982

Crews clear storm debris from campus

"Controlled chaos" is the way Jim Horgan, manager of operations and maintenance described the aftermath of Tuesday morning's storm at Stanford.

More than 30 trees were uprooted by the heavy winds and rain including a 100-year-old eucalyptus that fell across Campus Drive West near the Golf Course Driving Range, blocking the road and snarling morning traffic. Crews cut away enough of the tree to reopen the road at 10:30 a.m.

A catalpa tree blocked Mayfield Ave. near Campus Drive East, but a path for vehicles was cut through by 7 a.m.

Operations and Maintenance employees were summoned beginning at 1 a.m. to cope with storm-related problems.

Tree limbs falling on overhead electrical lines caused numerous blackouts in the faculty-staff housing area and on the central campus, according to Utilities Manager Jerry Ostrander. Power to Operations and Maintenance, Stores, Commissary, and Children's Center was disrupted until 11 a.m. Emergency generators were utilized at Operations and Maintenance.

Pine Hall and the Research Libraries Group trailers were without power for about 30 minutes early Tuesday afternoon when a power breaker opened unexpectedly. Crews closed the breaker, restoring electrical power. Ostrander said no evidence could be found as to why the breaker opened.

By mid-afternoon when power had been restored to campus, Ostrander turned his efforts to helping PG&E locate blackouts in the faculty-staff housing area. Stanford crews are not allowed to handle PG&E lines, Ostrander said, but his men helped secure downed lines that posed hazards.

Ostrander said residents could report power problems to the University at 7-2281. He then will coordinate with PG&E to restore service.

According to grounds manager Herb Fong, two houses on Salvatierra sustained serious roof damage when three elms fell during the night. Two more elms fell at the entrance to the Buck Estate and two trees were down at Hoover House, the University-owned residence of the president.

Hundreds of branches littered the campus, Fong said. He attributed the extent of the damage to the fact that many trees have been planted too close together, resulting in weak structures and inadequate root systems. Thinning out groves of mature trees leaves behind weak trees susceptible to damage.

A fallen eucalyptus blocked the exit at University Stores on Bonair Siding, where

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This tree on Inner Quad near Memorial Church is one of the casualties of Monday night's storm.

Jaedicke to take charge at the GSB corral

Robert K. Jaedicke, 53, professor of accounting at the Stanford Graduate School of Business since 1961, has been appointed dean of the School, effective Jan. 1, President Donald Kennedy announced Tuesday, Nov. 30.

Jaedicke served as acting dean in 1979-80 and as associate dean for academic affairs from 1969 to 1981. He will succeed Rene C. McPherson, 58, who announced his intention to resign in June, citing health and personal reasons.

Jaedicke holds the endowed William R. Kimball professorship of accounting. He will be the sixth dean of the School, which was founded in 1925, and the first selected from its faculty in many years. the last three deans—Ernest C. Arbuckle, Arjay Miller, and McPherson—were prominent corporate executives.

Miller once said Jaedicke "could be dean of any business school in the country. He's got all the good qualities that you look for in an executive.

"He cares about the institution. He's smart, hard working, and always plays his cards face up. There's no hidden agenda with Bob, no politicking, no indirection. He's straightforward and honest."

While Jaedicke was associate dean for academic affairs, Stanford was rated the top business school in the nation by faculty peers and by other business school deans.

Jaedicke played a key role in revamping the curriculum, trimming course requirements to give students more latitude in tailoring the MBA program to their major interests, and broadening the curriculum on grounds that managers need to more fully understand the workings of both the public and private sector of the economy.

Stanford now is the most selective of the nation's major business schools, with 5,000 applicants for 320 positions in each MBA class. Three out of four students offered admission chose to enroll, a "yield" not exceeded by any other school.

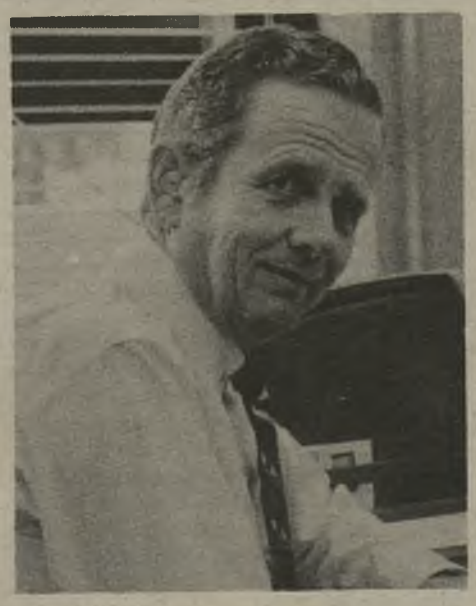
Jaedicke currently teaches a first-year MBA course in accounting and directs the Stanford Executive Program, an eight-week, intensive summer program to help top executives improve their managerial skills.

Jaedicke is well-known for his love of the West and life on the range. His third-floor office in the Business School is decorated with Charles Russell prints of the Old West, models of cowboys, samples of barbed wire, and photos of his family on the ranges of Big Sky Country.

Born and reared in farm and ranch country, Jaedicke was riding horses before he was in his teens. For years, he has spent summers and other holiday periods working on ranches in Montana, usually with his family. He and his wife, Marilyn, have four children.

Jaedicke's appointment culminates a four-month search by a 12-member committee headed by Stanford Business Prof. Harold J. Leavitt. Leavitt said Jaedicke "turned out to be the standard by which we judged all candidates. His strong support in the business community was a major factor in his selection."

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Robert Jaedicke

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Students check out first car more carefully than college

In all too many cases, "the first purchase of an automobile is more thoroughly researched than the purchase of a college education," Stanford Admissions Dean Fred Hargadon suspects.

"Learning about colleges is an arduous task, one to which many students simply do not allocate sufficient time and thought," he adds.

Chairman of the College Board nationally, Hargadon suggests students should start this process by assessing their own educational interests. Then they should talk with their parents, "a much underutilized resource," about what they might do differently if they had the chance to be starting college.

After that, students should look up the basic facts about colleges in a current issue of such publications as the College Board's *College Handbook*, Peterson's *Annual Guide to Undergraduate Study*, and Cass and Birnbaum's *Comparative Guide to Colleges*.

After using basic data from these sources to narrow down their choices, students should request bulletins and application information from perhaps a dozen different colleges.

Assessing this "second-level information" isn't easy, Hargadon cautions. "The quality of an academic program obviously depends on the quality of the faculty and the student body, neither of which is as easily measured—and certainly not as easily rank ordered—as some would have us believe."

Is faculty quality determined simply by the number of Ph.D.'s, for example, or do the institutions where they were obtained make a difference?

When it comes to teaching, are all assistants necessarily better than all teaching assistants, or all full professors—many of whom once were TA's—better than those who have not yet achieved this rank?

Contrary to the quick, summary impressions conveyed by "insider" and popular guidebooks, colleges and universities often may have more than one academic and one social milieu. The fraction of faculty and students identified with any one milieu shifts from year to year, and from fall to spring in the same year, he suggests.

"While colleges are frequently portrayed as rather traditional institutions, it is in fact their dynamic rather than their static qualities which have most impressed me," he adds."Colleges change academically, socially, and extracurricularly not least of all by by virtue of the particular application and enrollment decisions made by succeeding generations of students."

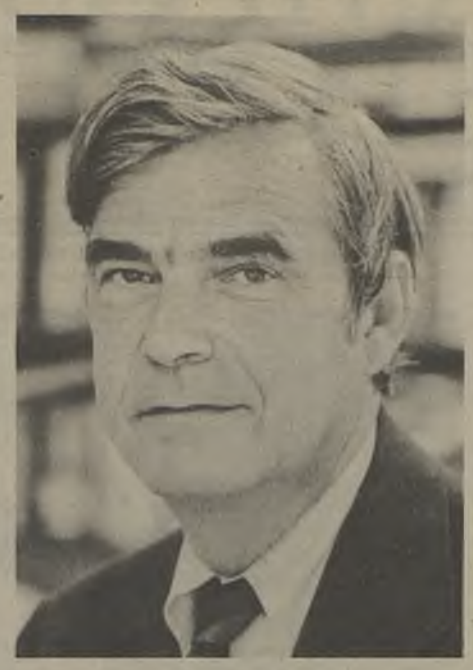
Eight years ago, for example, Stanford had very little extracurricular drama; now almost 20 amateur productions are put on in various dormitories annually.

Introducing complexity

If college admissions counselors want to help students think about college, "it is a matter of integrity that we avoid simplicity and introduce them to complexity—that we let them know that a commercial guidebook's two- or three-page interpretive description of a college is an inadequate substitute for a 50, 100, or 135-page college bulletin, however vulnerable to overstatement or idealism some of the latter may be....

"Guidebooks have the effect of treating prospective applicants and colleges alike as fixed objects, as if the matter of selecting a college to attend were a mere matter of finding a nut to fit a bolt.

"Decisions about where to attend college are expensive ones and not to be taken lightly. When my own staff travels, they spend less time trying to 'sell' Stanford than they do attempting to help students begin to ask the right questions about college in general.



Fred Hargadon

"Our experience suggests that too many students want to know the wrong things. Too often, they are interested in what a college will do for them, rather than what opportunities a given college's resources will offer them to make something of.

"Too often, they want to know the requirements for getting through, rather than the challenges which will be presented along the way. They want to know what their 'chances' for admission to medical school will be, rather than the ways in which they might grow and change while in college. They want to figure out 'how to get admitted' rather than what it is they plan to do with college once they get there."

No easy choices

Even for those who do their homework, college choices remain difficult, he adds. Should a student attend college where similar students are in the majority or in the minority? Should a student attend college where it's reasonably certain he or she will graduate at the top of the class or enroll where the odds are they may wind up in the bottom 90 percent?

"The best education is the one which is actively pursued rather than passively received," he suggests.

The same goes for choosing colleges. "The degree to which you can effectively evaluate and compare the programs and resources of various colleges will depend greatly upon just how much thought you have given to what it is you seek from college," Hargadon advises students.

This does not mean students have to know precisely what occupations they plan to enter or even what their majors in college will be. But if students don't develop a pretty clear notion of what they expect to get out of college—other than a degree—it is difficult to know what resources to look for and how to weigh their comparative usefulness in terms of the student's goals.

Besides taking time to list their likes and dislikes, strengths and weaknesses, students should "make a list of the things they think they ought to know about, but don't, or of the academic and extracurricular activities they should have attempted, but did not," he adds.

"Students considering college should always act to maximize their options. One's goals, ambitions, and career plans may change...the likelihood of change should be built into one's planning.

"This is no less true for the ninth or tenth grader selecting courses to take in high school than it is for the high school senior selecting a college to attend." Where the ninth or tenth grader might be concerned if college were still available as an option if a planned ballet career did not develop, the senior should consider whether a college chosen for the strength of a particular department has alternatives in case the student's interest in one subject wanes.

Anticipating growth

Students should take into account their own anticipated growth, the changes which take place in colleges themselves, and the variety of paths to be followed in any single college, he suggests.

"Colleges are dynamic and are affected by the students who enroll and the talents, skills, and inclinations they bring with them," Hargadon observes.

"There is no evidence to suggest that either the intelligence level or the integrity of those who write college publications are lower than that of those who publish the interpretive college guidebooks which purport to tell you what colleges won't (reveal).

"A given college catalog, well done, tells prospective students—if they will only take the time to read it—far more about that college than any guidebook possibly can."

Hargadon's views were developed in a panel discussion at the National Association of College Admissions Counselors last September and will be published in *The Stanford Observer*, the University's monthly newspaper for alumni, parents, and friends. Single copies are available on request from Stanford News and Publications Service.

Search firm helps look for new v.p.

Stanford has retained an executive search firm to help gather information about candidates for its vice-presidency for development, President Donald Kennedy told the Development Office staff in a recent letter about the status of the nationwide search.

Julia Hirsch of Boyden Associates—a Stanford alumna, former staffer, and active volunteer—will screen a select group of nominees from among the more than 200 names that have been put forward, Kennedy said.

The search committee hopes to develop a short list of finalists within a few weeks, then "ask these finalists to go through Stanford's usual thorough round of interviews," he added.

"If all proceeds according to plan, we will announce the appointment early in winter quarter."

Kennedy himself is heading up the committee. Serving as vice-chairman is Ray Bacchetti, vice-provost for management. His assistant, John Hughes, staffs the search committee.

Rhyne shows work

Programmer/analyst Theresa Marie Rhyne of CIT currently is showing her paper and fabric collages at Old Town Art Center in Los Gatos.

Rhyne has a Stanford bachelor's degree in civil engineering and has done graduate work in structural and geotechnical engineering, seismic design, and infrastructure planning and management.

She has developed a unique technique of blending cut-out pictures into unified and harmonious themes. Her subject matter encompasses the full spectrum of common events, objects, and places.

Rhyne has had several exhibitions in the local area, including Stanford.

Sponsored Projects holiday closings

All principal investigators planning to submit proposals for January 1 deadlines are reminded that the Sponsored Projects Office will be closed Thursday and Friday, Dec. 23-24, and Friday, Dec. 31.

Due to the holiday schedule, the U.S. postal system is generally overloaded: therefore, it is recommended that proposals reach SPO no later than Monday, Dec. 13, to insure timely processing, to allow for the mail backlog in meeting the deadline, and to give SPO time to process unavoidably late proposals.

Additionally, the principal investigator should identify an individual who will be available during the processing period to answer any questions and to be responsible for correcting any errors. Please indicate on the Proposal Routing Sheet the name of the contact person, together with home, office or vacation telephone numbers, as Sponsored Projects expects to be reviewing proposals outside of normal office hours.

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Stockdale will show students how to avoid manipulation

Second of two parts

BY DONALD STOKES

When the administration in Washington hinted to James Bond Stockdale that he might like to take a federal position he shot down the idea with the skill learned as a 200-mission wing commander.

"I can do more for the country outside Washington than directing traffic in some bureaucratic job," he snorted with salty scorn.

Vice Admiral Stockdale is America's ranking naval hero. Holder of the Congressional Medal of Honor and 24 other decorations, he is nationally famous for having resisted the tortures and coercion of his Vietnamese captors for eight terrible years.

In spite of broken bones, a body scarred by tortures, savage interrogations and isolation in cramped cells, his diamond-hard will was victorious.

Today Stockdale plans to do more for his country. He is polishing the teaching skills which he gained as president of the Naval War College. Starting this winter, Stockdale, who is a senior fellow at Hoover Institution, will teach "Combating Coercion and Manipulation," a seminar course for sophomores.

Stockdale will show his students how most of us are liable to manipulation and coercion in our everyday lives; how it occurs in every large organization, every educational institution, even in religious circles.

Stockdale will teach how to recognize the warning signs, how to defend oneself with dignity, maintain one's feelings of self-worth; how to deal with fear and not be consumed by guilt.

The hero is coming home. Stockdale was squadron commander of a supersonic F-8 Crusader outfit when he was selected by the Navy as a "comer" and in 1962 was sent to Stanford for two years to study politics, history and economics.

Stockdale noticed that in many courses his interest would peak about the time the professor would say something to the effect of "But we're getting into philosophy—let's get back to the subject."

"I decided to take some philosophy courses," Stockdale said. "It was my good fortune one morning to wander through the halls of the Philosophy Department, in civilian clothes, and come to an open office whose occupant asked if he could help me.

"When I told him I was a graduate student technically in the humanities but with no formal philosophy background, he could scarcely believe it. When I told him I was a naval officer, he asked me to have a seat. He had been in the Navy in World War II. His name was Philip Rhinelander (now emeritus professor of philosophy).

"He was in the midst of his two-term course 'The Problems of Good and Evil.' This he built on the lessons of the Book of Job ('Life is not Fair'). He offered to let me enter the course, and, to overcome my shortcomings of background, to give me an hour of private tutoring each week.

"I loved Phil's class, and particularly our hour together each week. I remember how patient he was in trying to get me to realize the full implications of Hume's 'Dialogues on Natural Religion.'

As we parted after our last session, he reached up to his bookshelf and said, 'You are a military man—take this booklet as a momento of our hours together. It provides moral philosophy applicable to your profession.' It was Epictetus' *Enchiridion*."

Three years later, incarcerated in Fiery Furnace prison, Hanoi, passages from that 2,000-year-old work were a mainstay for Stockdale during his long drawn-out captivity. Time and again, in Stockdale's moments of agony, Epictetus spoke to him across 20 centuries. Stockdale, in turn, inspired the other American prisoners to maintain their spirits, and to resist.

After an eight-year-long duel with his captors Stockdale remained unbroken, while his chief opponent and interrogator was in disgrace for having failed to break the American.



This bust of Admiral Stockdale was unveiled in the Lou Henry Hoover Building at Stanford on Oct. 22. Flanking it are Mrs. Sybil Stockdale and Admiral Stockdale.

Stockdale plans to show his students at Stanford how the lessons he learned in suffering in Vietnam can be applied to everyday life.

"My course is really a study of how man manipulates man by means of the imposition of coercion and guilt. Though sometimes done in an easily recognized, explicit and illegal way, the process is usually more subtle, more insidious and within the law.

"People who are part of hierarchies—be they academic, business, governmental, military or other—are frequently in positions where others are trying to manipulate them, to get moral leverage on them by methods which are not easily recognized by the victims.

"What I experienced at the hands of the North Vietnamese was an acceleration and intensification of this process through physical coercion and solitary confinement. It formed a pressurized microcosm which was ideal for the study of the elements of this phenomenon.

"The manipulative squeeze plays of a harsh political prison provide harsh extortive forces that can drive to the surface issues of integrity and destructive guilt. In civilian life these take much longer to fester and to erupt into public view. In the prison cauldron people make or destroy their own lifetime reputations in weeks.

"Coercion and manipulation has been going on for thousands of years. Those who practice it use whatever means works, whatever will make people do things against their will or their normal inclinations."

And sometimes the carrot is used instead of the stick?

"Of course. But understand that I am not making this an 'anti' course. All I am trying to do is to sharpen people's sensitivity to what is happening to them a great deal of the time. If you are going down the primrose path, at least know that you are being led and by what tools you are being led.

"Perhaps I am more sensitive to the process than most because I was exposed to the extortionary process in such a concentrated form. It gave me a vivid awareness of the process and how it is conducted.

"I know when I am being 'had.' You cannot survive such a prison experience as I had without developing long tentacles of awareness about what is being done.

"The manipulation doesn't happen very often to writers or artists or other free agents. It happens mostly to people in hierarchies, such as in business, government, faculties. It even happens in the world of religion."

Does the growth of hierarchies and mass organizations mean that manipulation is now more than ever a fact of life?

"Yes, most people have to knuckle under to the organization, to Big Daddy—as somebody put it, 'cooperate to graduate.' This process can become a quagmire if you let it become one. You can become compromised by so many little steps that seem insignificant, and before you know it, you have passed the point of no return. The extortionist knows, when you reach that point, that he has you."

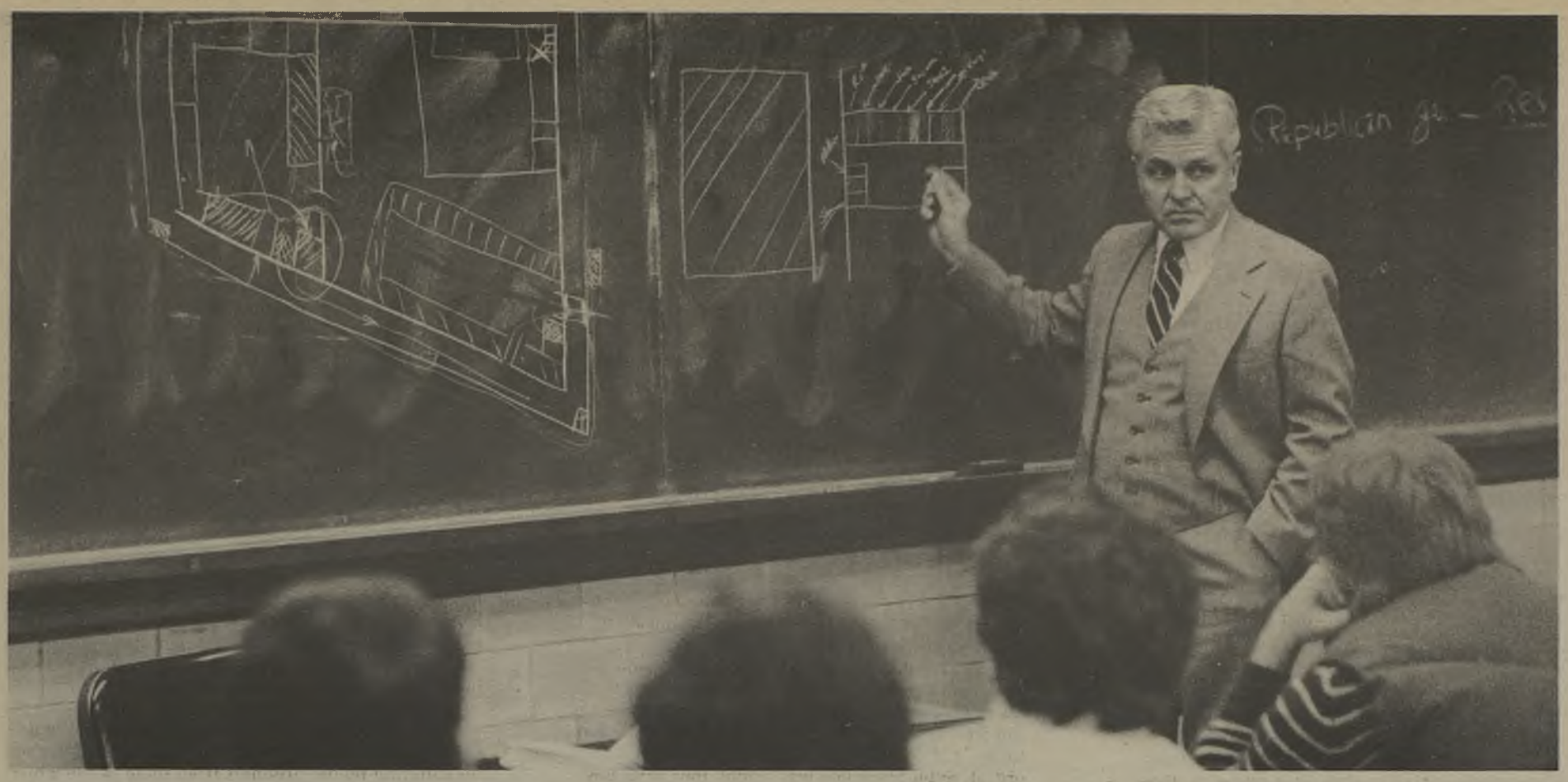
So the person who prides himself on being a 'good organization man' is on the slippery slope?

"Exactly. Many people have no compunction against taking those little steps which seem to have no harm, but which lead inevitably to surrender of oneself.

"However, don't get the idea that I am trying to create rebels. All I am trying to do is to warn people how they must take stock of themselves, how to avoid taking those steps which can lead them to becoming ashamed of themselves."

One of the first lessons, he says, is to disabuse oneself of the inborn belief of most people that a natural economy prevails by which evil is punished and virtue is rewarded.

continued on next page



Admiral Stockdale tells Hampden-Sydney College students about his experiences as a prisoner of the North Vietnamese.

Stockdale...

continued from page 3

"When it dawns on trusting souls that no such moral economy is operative in this life some of them come unglued. Aristotle had a name for what happens to good men who suffer unjustified bad ends—tragedy. The control of tragedy in this sense is the task of education.

"The only way I know to handle failure is to gain historical perspective, to think about men and women who have successfully lived with failure in our religious and classical past.

"One can develop or learn that special kind of courage that can prepare us for failure and diminish its worst effects. Failure is not the end of everything—a man can always pick himself up off the floor and fight one more round."

Stockdale remembers warmly many of the Stanford faculty who helped him to form his ideas. There were Peter Duignan and John Bunzel (today senior fellows at Hoover Institution), Emeritus Prof. Thomas Bailey and Prof. Robert North.

People often ask Stockdale what other influences prepared him for what he had to face during his long years in the hands of the North Vietnamese.

"Many things and many people," he tells them. "Partly my training as a football player, my military training, my academic studies.

"But the training that may surprise you as being useful was in dramatics. My mother was a dramatic coach, and when young I played in every single production she put on. That may seem trivial, but I think an ability to act is often important in crucial situations. Certainly it is important in being a good teacher."

People who are part of hierarchies—be they academic, business, governmental, military or other—are frequently in positions where others are trying to manipulate them, to get moral leverage on them by methods which are not easily recognized by the victims.

—Admiral Stockdale

How can his wartime experiences be a guide to everyday living in hierarchies?

"In these worrying times of economic hardship, people can so easily fall into despair. One of the realizations that came to us in prison is that we are all capable of achieving more than we think, that the human spirit has a vast amount of resilience and if we summon it up it will rise to the occasion in the grandest sense.

"It is uplifting to realize the untapped resources of our own minds. You would think that prisoners in isolation, in really tough situations, would lose their spontaneity and their spirit, but that is not so. If you summon your will, whether in war or within the organization, you can achieve far more than you think. Your resources will emerge, sometimes ones you never realized you had."

Reminded that he had once referred to "the mutation of ethics in our litigious society," Stockdale nodded his head vigorously. "Yes, moral goodness becomes defined as conformity to specified rules of conduct; personal virtue is considered synonymous with a mechanical disposition to submit consistently to those rules.

"The flagrant, excessive use of courts and regulations and the growing penchant for directing society's course by a myriad of rules has largely and sadly depreciated the burden of moral responsibility. No longer are individuals expected to make determinations of right or wrong.

"Society has largely adopted the judicial process as its moral yardstick and forfeited common sense and personal responsibility. 'Legal' is not necessarily synonymous with 'good.'

"This situation exists to a great extent in business or government bureaucracies, in which too many functionaries are armed only with technical knowledge and a legalistic, by-the-numbers approach. This type of person proceeds through his career tripping over minutiae and substituting checkoff lists for common sense.

"Our bureaucrats have been weaned on slogans and fads of the sort preached in the better business schools of the country. Rational managerial concepts are expected to cure all evils."

Stockdale turned his beliefs into action when he resigned from an important position, a civilian one, he had been given after his release from captivity. He felt that to stay on in that high position would compromise his principles, for reasons he would rather not discuss nowadays. To his great surprise it was the young people who supported him enthusiastically, while older people shook their heads.

This makes Stockdale optimistic about today's younger generation. "This is not the first time I have come across this new attitude, this spirit, in our educated men and women in their 20s and 30s. I think it is born of a new, responsible, awakening of moral responsibility. I like it.

I get a big kick out of today's young people, and realizing their spirit. They feel less dependent and don't worry about keeping the lid on and going along with the system. They are more idealistic and ethical, and they are capable of being tough about it.

"They know what is worth standing up for, and they are not afraid to do it.

"My generation was brought up on such ideas as 'Don't be impulsive' and 'Wisdom will come to you later,' and 'You will come to see that the name of the game is to get along and accommodate.' I think a lot of that was bred into us by a fear of failure."

The older people have lost that spirit?

"I wonder whether my generation has become hooked on collegial solutions, on keeping the lid on, on seeking a consensus, on making a deal to preserve unanimity.

"Corporate life, board life, hierarchical life breed a slide to accommodation which we are told is necessary to get something accomplished. That is an invitation to moral weakness. If you don't think any weakness is incurred by becoming used to compromise, try living in a communist jail. I still

continued on next page

Stockdale...

continued from page 4

remember that favorite phrase of my interrogator in prison: 'Why not meet us halfway?'

"I do not advocate a POW name, rank and serial number stance at every board of directors meeting here at home. But neither do I advocate suppressing moral sensibility in the interest of cooperation—or tenure.

"I believe today's young people will do better than we did.

"Let me tell you how I would like to spend the next few years. I'd like to continue with my writing and get several books published. At the same time I want to get more and more involved with helping undergraduates. I look forward to the day when my writing is done and I can be a teacher.

"My mother was a teacher, and two of my sons are teachers. I think every good leader is a teacher. Every great leader I have known has been a great teacher, able to give those around him a sense of perspective and to set the moral, social and motivational climate among his followers.

"Glib, cerebral and detached people can get by in positions of authority until the pressure comes on. When that happens people cling to those they know they can trust—those who are not detached but involved.

I don't have any simple formulae for my students, but I can advise some good readings, and pass on some thoughts I think will be useful. The subject I deal with is so basic. I see so many affirmative nods when I tell some of my beliefs to experienced men who have had success in business and other fields. .

"Typically, one will say, 'That is a belief I have carried right through my career, I have always resisted the attempts of my colleagues and counterparts to manipulate me.' "

Stockdale tries to impress his young friends with the fact that it is highly relevant to their studies and future careers to study Epictetus and the other philosophers of old.

"They will learn how to deal with the corporate structure, with collegial activity, with the group, political party, or force. It all comes under the heading of the collective.

"I understand that, I am not against it. I simply want people to be aware of the consequences of blindly following edicts that are the conventional wisdom of the day, of following the formula.

"Within each group there is a whirlpool of temptation. If a person does not maintain his autonomy, his dignity, his sense of right and wrong, then he will lose his independence by allowing himself to be led into compromises, which later can be held over his head.

"I want to strike a blow for individualism, for pride and dignity."

Stockdale is writing a book about his experiences in prison. There is a possibility this may be made into a movie. Stockdale resembles in some ways an elderly Paul Newman, and the white-haired hero agreed jocularly that it would suit him nicely if Newman played the lead.

He plans a second book about his views on leadership. But it is a third book which is most on his mind today. It is tentatively called "The Eye of the Storm," and it centers largely on the part that his wife of 35 years played during his wartime ordeal. Sybil Stockdale was raising four little boys when Stockdale was in the prison the Vietnamese called Fiery Furnace.

"Sybil and I each invested a considerable part of our lives in the Vietnam period," he said. "Round her kitchen table in Coronado, Calif., was founded the League of Families of American Prisoners and Missing in South East Asia.

"She did this against government opposition. In those days, 1967 and 1968, they would not give any information to service wives about other wives, however worrying the individual situation. The authorities did not want any input from families.

"The official attitude was 'Keep quiet, and don't try to enter into matters of national significance.' Sybil would not listen to that sort of talk. She became involved in a big way.

She read every book she could lay her hands on concerning communist treatment of prisoners. She made up her mind that it was vitally necessary for the media here to publicize the fact that our people were getting killed or tortured as prisoners in Vietnam. The government would not listen to her arguments.

"She kept at it, and after a long hard fight, during which she suffered two nervous breakdowns, she finally got through to some sympathetic people. Slowly the official attitude changed. Publicity was given to the barbaric methods of the North Vietnamese.

"As soon as media references began to be made to the harsh conditions in the Vietnamese jails, our conditions in prison slowly began to change. Why? Because the Vietnamese did not want to spoil the relatively favorable perspective that many Americans had at that time about Communists who had us in their power."

Thus it was that Sybil Stockdale, half way round the world, was able to help relieve her husband and his suffering fellow-prisoners from some of the worst burdens of their captivity. Their teamwork—hers in persistence of principle, his of heroism under ultimate stress—was a partnership in nobility.

Stockdale still reads Epictetus and gains strength from him. The tough old slave-philosopher would be proud of his distant pupil and of all those who act on his bleak but stirring counsel.

Japan should dramatically increase nonmilitary foreign aid, Okimoto says

Japan should "dramatically increase" its nonmilitary foreign aid, a Stanford scholar believes.

Japan also should work to strengthen free trade and become more influential as a "rule maker" in the international community, says Assistant Prof. Daniel Okimoto of the Stanford Department of Political Science.

His views are detailed in a new book he edited, *Japan's Economy: Coping with Change in the International Environment*, published by Westview Press (304 pp., $13.50 paper, $30 cloth).

In his book, Okimoto notes that "by systematically eschewing military power and focusing instead on economic enhancement, Japan has managed to construct an industrial and technological (base) that now makes it awkward for the country to continue assuming a posture of politico-military innocence."

Japan spends less than one percent of its gross national product on defense, while the U.S. now plans to increase the share of its GNP devoted to defense from five percent to eight percent by 1985.

While critics contend that Japan gets a "free ride" on U.S. Defense, Okimoto notes that Japan's defense expenditures, like its GNP, have risen at an average rate of seven percent annually in the past 15 years. Japan's total defense expenditures—$10 billion this year—rank eighth in the world.

The primary constraint on increased defense expenditures in Japan is political, not economic, Okimoto says. Economic simulation studies show "Japan's economy is clearly capable today of sustaining substantially larger defense outlays without suffering serious setbacks in either the rate of growth or the size of the economy."

While Japan is "highly sophisticated" in commercial microelectronics, its defense-related technology is "conspicuously backward," with only about one percent of the very limited defense budget allocated to research and development.

If Japan's technological assets were harnessed in a bilateral program of research and development, the capacity of the U.S. and Japan to lengthen their technological lead over the Soviet Union would be "given a powerful thrust forward," Okimoto observes.

If defense expenditures are combined with economic assistance and research and development expenditures, Japan spends about four percent of its GNP on these kinds of international cooperation. This compares to about eight percent for the U.S. at present, according to Tokyo University economist Uchida Tadao.

He and others have suggested an international division of labor for these security responsibilities, with each country specializing in areas where it enjoys a comparative advantage. Japan thus would be in a logical position to strengthen economic security through expanded aid programs.

"Obviously, this kind of nonmilitary aid must come from taxes and voluntary contributions by all the Japanese people," Okimoto says. "In this sense, foreign economic policy is indeed domestic economic policy, but idealistic humanitarianism in international politics is quite consistent with Japan's nationalistic interests."

In encouraging free trade, he continues, "Japan must take practical policy measures to avoid disrupting the domestic markets of other countries. . . .

"Given the tremendous impact of Japan's actions and policy on the world economy, Japan's failure to assume a responsible role appropriate to its position reveals a lack of serious concern about maintaining the stability of a precarious international system. . . .

"If the achievements of the Japanese people are to have a significant place in world history, it will be because (their) creativity and the nonmilitary stance. . .can make a substantial contribution to the prosperity and stability of the world economy. . . .

Stanford ranks high in engineering

Stanford ranks second nationally in the perceived quality of its faculty in mechanical engineering and tied for second in electrical engineering, according to a major new national survey.

Stanford was fifth in chemical engineering and sixth in civil engineering.

MIT ranked first in both mechanical and electrical engineering, second in civil engineering, and seventh in chemical engineering.

Berkeley ranked first in civil engineering, tied with Stanford for second in electrical engineering, ranked third in mechanical engineering, and fourth in chemical engineering.

The new survey was based on a survey of 822 engineering faculty across the country. It was sponsored by the Conference Board of Associated Research Councils, including the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council. It is part of a series funded by $500,000 from the Mellon, Ford, and Sloan Foundations, the National Institutes of Health, the National Science Foundation, and the National Academy of Sciences.

The report gave two figures for the perceived quality of faculty. The first was a raw score, ranging from 0 to 5 on a scale where 4 was "strong" and 5 "distinguished." The second figure converted this raw score into a scale of 1 to 99, with 50 representing the average and about two-thirds clustered between 40 and 60.

On those measures, the results were:

Chemical Engineering: (79 universities rated) Minnesota, 4.9, 73; Wisconsin, 4.8, 72; Caltech, 4.7, 71; Berkeley, 4.6, 71; Stanford, 4.5, 70; Delaware, 4.5, 69; MIT 4.3, 67; Houston, 4.1, 64; Princeton 4, 64; and Illinois, 4, 64.

Civil Engineering: (74 institutions) Berkeley,4.8, 75; MIT, 4.7, 74; Illinois, 4.5, 72; Cal Tech, 4.5, 71; Texas, 4.2, 67; Stanford, 4.1, 67; Cornell 4, 66.

Electrical Engineering: (91 institutions) MIT, 4.9, 76; Berkeley, 4.8, 75; Stanford, 4.8, 75; Illinois, 4.6, 73; USC, 4.1, 67; UCLA, 4.1, 67; and Cornell, 4, 66.

Mechanical Engineering: (82 institutions) MIT, 4.8, 76; Stanford, 4.6, 74; Berkeley, 4.6, 73; Caltech, 4.3, 69; Minnesota, 4.1, 68; Princeton 4, 66; and Michigan 4, 65.

Lieberman reviews issues in academic-industrial ties

Following is a "White Paper" on Stanford-industrial relations prepared by Vice-Provost Gerald J. Lieberman, dean of graduate studies and research, distributed to the Board of Trustees in June, and discussed with the Committee on Research in November:

University-industry relationships have been the subject of considerable scrutiny over the past year or two, at Stanford and elsewhere.

It is beyond doubt that university interactions with industry offer significant benefits:

They provide funding for specific university research activities as well as gifts to support broader educational missions;

They provide a matrix for outside consulting activities, giving faculty opportunities for continuing education and experience that can lead to improved scholarship and teaching;

They provide a means of speeding the transfer of science and technology from the university laboratory into the stream of commerce for the public benefit; they can enrich students' educational experiences through interactions with visiting scholars from industry and industrial participants in such programs as university research consortia and affiliate programs; and

They can lead to improved quality in applied science.

Indeed, interactions between academia and industry are not only desirable, they are essential to keep American science and technology strong.

However, university-industrial relations have grown dramatically in complexity over the past few years. Industrial technology in such areas as electronics and computer software has advanced to a point at which many results of basic university research can now be applied in industrial settings in a matter of months, as compared to the decades required in earlier eras. In addition, new fields of university research into basic properties and processes (e.g., recombinant DNA) which have emerged recently offer unprecedented potential for wide-spread commercial application.

Thus, industry—which supports more university research for potential profit-making purposes than for philanthropy—is looking for increased and novel research partnerships with academia. At the same time, universities are faced with the need to replace dwindling federal support for research activities.

The increase in university-industrial relations is therefore both a positive and predictable outcome. The proportion of Stanford's research programs funded by industrial sources has more than doubled—from about two percent a decade ago to almost five percent today—and now totals more than $5 million in annual expenditures.

It is likely that industrial sponsorship of our research will continue to increase considerably faster than federal funding; but it will probably never represent more than a fraction of our total funding, in view of the fundamental differences between the missions of educational institutions and profit-making companies.

Despite the positive benefits of university-industrial relationships, there is reason for concern that the unprecedented potential for financial gain that has resulted from the new commercial opportunities might divert universities and/or their individual faculty members from their primary obligations of teaching and research.

This issue has been the subject of considerable review at Stanford, involving faculty, students, and University officers.

Are industrially-sponsored projects as academically worthwhile as are projects funded by sponsors who don't have potential financial profits as a motive for their support?

Are some individual faculty members likely to be diverted from their primary duties to the University by outside consulting activities that are becoming increasingly attractive financially?

Are graduate students assigned research tasks solely on the basis of their scientific merit, regardless of potential commercial applications of their work?

Are research activities and their results shared openly with other scientific colleagues, beyond their own laboratories, without delays motivated by proprietary commercial interests?

Are universities so attracted by industrial support that they have the potential for ceasing to become independent, credible, and impartial resources?

Is the transfer of technology from universities via patents, copyrights, and licensing arrangements conducted in ways that best serve the public interest?

These and related questions have been addressed at Stanford and many other universities over the past two years. During this period, Stanford has developed several new or revised policies and guidelines to help faculty and administrators avoid conflicts of interest while preserving the flexibility and freedoms necessary to foster a creative research and teaching environment. These changes include:

* A University-wide requirement for faculty to disclose, upon the specific request of the President, Provost, or cognizant dean, the general nature of their outside consulting activities when questions of potential or apparent conflicts of interest arise;

* A proposed policy prohibiting faculty from hiring or directly supervising graduate students in outside consulting activities while simultaneously acting as those students' Stanford advisor or as a participant on their dissertation committees (subject to Faculty Senate approval this fall);

* A set of principles and guidelines governing industrial affiliates and related programs at Stanford arising from corporate gifts;

* A recommended change in the Secrecy in Research Guidelines to permit delays in publication of research results for patent application purposes to be modified from the current one-year limit to a 90-day maximum (subject to Faculty Senate approval this fall);

* Publication of a policy pertaining to tangible research property, i.e., research results in such tangible forms as biological cell lines, computer software, electronic chips, etc. The policy requires that such tangible research results must be made available to others for scientific purposes in an open and timely fashion, i.e., they may not be withheld for commercial purposes;

* A policy requiring prior review and approval by the Provost for any University investments in companies owned totally or in significant part by our faculty which aim to commercialize faculty members' research results.

In addition to the changes above, which have already been implemented or formally recommended, several other issues either are under current consideration or will be in the near future:

* A faculty committee in the Medical School has recommended a School policy requiring nonclinical faculty in the School to disclose the nature of their outside consulting activities on a continuing and formal basis to the Department Chair, not only because outside consulting activities have the potential for distorting academic objectives, but also because the Medical School faculty has a unique role in the development and application of new diagnostic tools and therapies ultimately tested and used on patients.

* That same Medical School Committee has also recommended disclosure to Human Subjects Committees of the personal involvement of principal investigators in companies sponsoring their drug studies.

* The same report proposed that distribution of income from "clinical consulting" be reviewed for comparison with the way nonclinical consulting income is handled (all fees generated by faculty in clinical departments through the practice of medicine go into the Faculty Practice Plan). The above three recommendations are being considered now by the Executive Committee of the Medical School.

* Stanford's Consulting Policy is concerned primarily with the time faculty spend in such activities, and does not limit the duties that the faculty member may undertake for the company. Faculty may hold officerships or other positions, and some concerns have been expressed about the appropriateness of such activities because of their potential for distorting the academic objectives of the University.

* The issue of routine reporting of the general nature and time spent on outside consulting activities of the faculty will be reconsidered.

* Matters relating to the disposition of intellectual property (e.g., copyrights and patents) resulting from research activities are also under review.

In order to provide an opportunity to study these issues on a case-by-case basis, interim guidelines for internal use have been developed which require approval of the Vice-Provost and Dean of Graduate Studies and Research of any proposed arrangement with industry that would give industrial sponsors of Stanford research 1) title to intellectual property resulting from the research; 2) royalty-free exclusive licenses; or 3) options to exclusive licenses to research results which are patentable or copyrightable before the results are achieved.

This last point raises the question whether Stanford should accept corporate reseach agreements that require giving exclusive licenses to the sponsor prior to the development of any discovery.

The granting of an exclusive license may be necessary if development is to take place after a discovery has been made: few firms will expend large sums for development that is likely to benefit others disproportionately. However, difficulties may arise from corporate research agreements in which the sponsor requests the right to exclusive licenses on all discoveries made as a result of the research funded by the company.

Some believe that such a blanket agreement provides incentives for proprietary secrecy that would distort the fundamental purpose of the University, and that the University accordingly should not give up its right to examine the appropriateness of exclusivity for each invention on a case-by-case basis.

The question of conflict of interest ultimately comes down to matters of individual ethics and personal integrity. No set of policies can substitute for integrity, nor legislate individuals' motivations.

However, it is important that Stanford continue to examine our industrial relations as they evolve, in order to provide the meaningful guidance to faculty and administrators and to maintain the public's trust that Stanford indeed is an independent and impartial resource committed to its mission of discovery and dissemination of new knowledge.

Thus, University officers, the Committee on Research, and other *ad hoc* committees which may be established for this purpose, will continue to study these issues with great care during the coming year and may formulate additional policies to guide Stanford's—and individual faculty members'—relationships with industries in ways which will best support our primary educational missions.

Sally Cole to handle Honor Code cases

Dean of student affairs James W. Lyons has announced the appointment of Sally Cole as Assistant Dean for Judicial Affairs. Cole's new responsibilities are in addition to her position as Director of Research for Student Affairs.

The assistant dean for judicial affairs is a campus-wide resource for questions or concerns about Stanford's Honor Code and Fundamental Standard. In addition, Cole will investigate alleged violations of the Honor Code and Fundamental Standard and, when appropriate, initiate formal charges on behalf of the University. These activities were previously lodged in the Office of Legal Counsel at the delegation of the President. The decision to move this responsibility to Student Affairs resulted primarily from a desire to decrease the perception of adversary proceedings and to emphasize more visibly the educational goals underlying the student judicial process.

Cole will be reporting periodically to the Stanford community on cases heard by the Stanford Judicial Council—or, at students' request, by the dean of student affairs. (Individual student identities will not be disclosed.) She is also responsible for overseeing the judicial process as a whole and ensuring that cases are dealt with as expeditiously as possible.



Sally Cole

Lyons observed that Cole is a long-time student of Stanford's Honor Code; in 1976, and again in 1980, Cole conducted surveys of students' beliefs, perceptions, and behaviors with respect to their own academic honesty and that of their fellow students.

Anyone with questions, concerns, or problems about the Honor Code or the Fundamental Standard can reach Cole at 7-2733 or 7-4162. Her office is in 323 Old Union.

Weinstein studies industrial marketing around the world

BY MARCIA TANNER

Industrial marketing represents the most important segment of the economy, but it has received much less attention than consumer marketing in the academic world, says David Weinstein, visiting professor of marketing at the Stanford Business School for the 1982-83 academic year.

Lacking the theoretical basis which academic research could provide, industrial marketing executives often rely on rules of thumb and intuition when making important strategic decisions.

Working to redress this imbalance, Weinstein brings to the GSB an international perspective, solid hands-on expertise, and impressive academic credentials in the field of industrial marketing strategy for multinational corporations.

On leave from INSEAD in France, one of Europe's leading international schools of management, Weinstein consults with a broad range of multinational firms on industrial marketing stategy issues, and his teaching and research reflect his involvement in that complex arena.

"The challenges involved in industrial marketing are quite different from those in consumer marketing," Weinstein explains. "When you're dealing with organizations, the purchase decisions are oriented more to the long term, and riskier.

"And since the customers are groups of individuals, many different people are involved in a single decision-making process. Not only do you have to understand them as individuals, you also need insight into their interactions as a group, the politics of the organization, and so on."

Because industrial buying, in most cases, requires a long-term relationship, organizations tend to be as conservative in purchase decisions as do individual consumers when a heavy commitment is entailed, Weinstein says. "This does not necessarily mean that they make the best economic decisions. But it does create a barrier to taking market share away from competitors."

Marketing complex

The marketing system itself is much more varied and complex in industrial marketing; the simple exchange process between a buyer and a seller can become very convoluted, Weinstein points out.

"Consider, for example, the interrelationship between the manufacturers of chemical or electronic products that compete for customers in some product areas, supply each other with other products, share a joint venture in a third area, and manufacture under mutual licensing agreements in a fourth," he says.

"Then, some of the tools you rely on in industrial marketing—such as the promise of faster delivery or the building up of inventory—represent a heavy investment for the firm and may be partly out of the marketing person's control. The same is true of communication to your customers.

"Consumer marketing is very direct, whereas in industrial marketing you have many intermediaries between you and your customer (your salesforce, distributors, etc.), and the message has a greater chance of being distorted along the way."

All these factors make for greater complexity in the design and implementation of industrial marketing strategy, Weinstein says. Add the international dimension—when strategy is planned from the viewpoint of the corporate headquarters of a multinational company with subsidiaries all over the world—and the situation becomes even more complex.



David Weinstein

"Here you're also dealing with sensitive organizational issues, where the challenge is to maintain a good working relationship between corporate HQ and its outposts in other countries."

Despite the importance of industrial marketing in the world economy, Weinstein observes, the academic world has tended to focus on consumer marketing. "This is partly because it's more difficult to obtain data from the industrial marketing community."

Weinstein is working to correct this omission at the academic level in ways that he believes will have practical consequences for business. One current project is a collaborative effort with Jean-Claude Larreche, Weinstein's colleague at INSEAD and creator of the successful marketing strategy game called MARKSTRAT.

"Weinstein and Larreche are developing a similar computer-based game for industrial marketing strategy, tentatively named INDSTRAT. "It should be useful for marketing executives in any industrial firm, anywhere in the world," Weinstein says.

INDSTRAT simulates the process of designing and implementing strategy in the industrial marketing environment. "Players in the game have to anticipate the needs of the marketplace, coordinate their 'firm's' research and development so that new products are ready for the market when they're needed, make strategic choices about which markets or market segments to go after, and decide how to position the product in the market.

"Players must also consider how to introduce a product into the client organization given the fact that several decision-makers are involved, each with different degrees of influence on different stages of the buying process—which in turn requires decisions on the organization and allocation of the sales force."

INDSTRAT has features which should make it especially interesting to play, Weinstein says. "It involves the cross-licensing of products and technology between competing companies, for one thing," Weinstein says.

"And it's designed with varying degrees of difficulty, so that people with different levels of experience can play. It also will use current telecommunications technology to link players in different parts of the world, so that executives in San Francisco, New York, Tokyo, and Paris may play against each other at the same time."

Customer perceptions

With the cooperation of some of his industrial clients, Weinstein is also collecting data on customer perception, buyer behavior, and so on, from firms in Europe, the Far East, South America, and the United States. "This is the type of information we have a lot of from consumer marketing firms, but it barely exists for industrial marketing.

"Since so much of what we know about marketing is based on experience, there's every reason to also be interested in how managers actually make industrial marketing decisions and there, lots of empirical work is needed."

As part of this exploration, Weinstein and Gary L. Lilien of Pennsylvania State University have recently completed a study comparing the determinants of industrial marketing expenditures of firms in the U.S. and Europe.

"We compared the results of data collected from 55 European companies on 80 products with a sample of 131 products from 29 companies in the United States," Weinstein says. "We found surprisingly few differences across the board in the way decisions are made. This led us to conclude that there are probably only a small number of strategic factors that influence budgeting behavior in Europe and the U.S. What differences there are probably stem largely from different circumstances, such as different styles of advertising use. We need to identify and measure the impact of those strategic factors to develop a general, quantitative understanding of industrial marketing decision-making that would be helpful to managers."

While at Stanford, Weinstein hopes to interest his marketing colleagues in further exploration of his data.

Weinstein's most recent article, "Optimal Strategic Business Portfolio Analysis," appears in the October 1982 issue of *Management Science*. In it, he and his coauthor Marcel Corstjens, develop a new model to assist managers with one important aspect of strategic planning in marketing: the "product portfolio mix."

By incorporating two models, one based purely on financial considerations (return on investment) and another solely on strategic ones, the authors have come up with a more comprehensive framework intended to help managers satisfy a number of criteria when determining and analysing a company's product-market policy.

Weinstein is also the author of "Sales Forecasting for Industrial Products," a chapter in the recently published *Handbook of Forecasting* (Spyros Makridakis and Steven C. Wheelwright, Eds., John Wiley & Sons, 1982).

A native of Israel, Weinstein received his BA from the Hebrew University of Jerusalem and his MBA and Ph.D. from Columbia University. He did post-doctoral research at the Consumer Research Institute in Washington, D.C., and has been a visiting scholar at Harvard Business School.

At Stanford, Weinstein will be teaching three sections of the introductory marketing course required of all MBAs in their first year. "I'm looking forward to interacting with such an exceptionally bright group of young people as these," he says.

Marjorie Dodds, 79, dies at Hospital

Marjorie K. Dodds, 79, wife of Stanford emeritus professor of English John W. Dodds, died at Stanford Hospital Friday afternoon.

She was taken ill at home and rushed to the hospital. She had been suffering from heart problems.

In addition to her husband, who is the brother of the late Harold Dodds, former president of Princeton University, Mrs. Dodds is survived by two sons, John A. Dodds of Atherton and Christopher Dodds of Evanston, III. She had five grandchildren.

Mrs. Dodds was born in Denver, Ohio, and attended Mt. Holyoke for two years before transferring to Smith College, where she graduated in 1926. She met her husband while both were doing graduate work in English at Yale.

The Dodds came to Stanford in 1937 from University of Pittsburgh. John Dodds held an endowed chair, the Jackson Eli Reynolds professorship in humanities, when he retired in 1967. The family home is on the Stanford campus.

No memorial services are planned.

The family prefers gifts to the Stanford Children's Health Council.

Medical Center MEMO

Recombinant DNA offers hope for future herpes vaccine

A vaccine that prevents herpes simplex infections without exposing the recipient to the virus may be a decade away, said Dr. Thomas Merigan, Becker professor of medicine and head of infectious diseases at Stanford University Medical School.

In the meantime, a new generation of antiviral drugs recently approved for herpes treatment can curtail both the severity and duration of blisters though they can't keep the outbreaks from recurring.

"It looks like recurrence is still a problem, even with the most potent agents available today," said Merigan in a public lecture held at Stanford Tuesday, Nov. 23, describing current and future treatments for herpes viruses.

Many of the 40 million Americans who suffer from recurring herpes blisters on their mouths or genitals wonder why effective treatments and vaccines have taken so long to be developed. The answer, Merigan said, lies in the large and complex structure of the virus which, until the advent of recombinant DNA technology, has been inscrutable to researchers.

"These viruses are also particularly challenging because they persist and can cause recurrent infections in the presence of immunity," Merigan said. "Once we are infected, we are infected for life, though the symptoms appear only periodically and, in most people, eventually disappear completely."

In comparison to polio, which has a much smaller and simpler structure, herpes viruses are made up of a number of proteins in a complex structure.

When the active herpes virus, a naked package of genetic material, invades a cell in a patient, it takes complete control of the host cell's functions, diverting nearly all the cell's energy to the replication of viruses. In this way, thousands of copies of the virus are produced that can spread to other cells.

The problem with most antiviral drugs is their toxicity. In order to thwart the virus, an effective agent must somehow influence the growth of the virus in infected cells. But, in many respects, herpes-infected cells look a lot like normal cells. The challenge to researchers has been to develop drugs that can zero in on infected cells without harming healthy ones.

Two currently used

Adenine arabinoside (called ara-A) and acyclovir are two effective drugs now available to the public which have the necessary specificity, Merigan said.

First used in 1972 to treat herpes simplex infections in the eye, adenine arabinoside has a very similar structure to a component of the herpes simplex DNA. But the drug has an important structural difference: once incorporated into the genetic code of the virus, it turns off the action of an enzyme that the virus needs to reproduce itself. Once the virus stops replicating, the infection is arrested and can't be spread to other cells.

Acyclovir, an even more powerful drug, according to Merigan, works on the same target as ara-A, but has an additional degree of specificity. The drug, first used in clinical trials in 1979, only



"It looks like recurrence is still a problem, even with the most potent agents available today. . ."

—Thomas Merigan

becomes active once it is inside a virus-infested cell. This specificity gives healthy cells, such as those in the bone marrow that can be especially vulnerable to DNA-altering drugs, an added measure of protection, the scientist said.

The two antivirals have been especially useful in treating herpes infections in "immunosuppressed patients," such as those with organ transplants or some types of cancer, whose normal immunities to infections have been drastically reduced by the drug therapies they need to stay alive.

Infections in such patients caused by herpes simplex or cytomegalovirus (CMV), another variant of herpes, can spread to vital organs such as the heart and kidneys and be fatal. Although the antivirals can't prevent infections, they can greatly reduce the serious complications associated with the infections, Merigan said.

Prompt administration a must

Though a tremendous boon to immunosuppressed patients with prolonged herpes simplex infections, antivirals have been less useful for herpes sufferers with short-lived infections because the time which they are most effective is in the first few days of infection.

"These are exciting drugs, but they have to be given early," Merigan said, "probably within the first few days (after symptoms begin to develop)." Patients are often slow to bring the infection to the attention of their physician, and most hospitals are not equipped with viral diagnostic laboratories that can make a quick, positive diagnosis of herpes, he said.

Chronic, low-level doses of the drugs might be a solution for some patients,

continued on page 10

Ultrasound screening proves useful in neonatal ICU

Stanford University scientists have demonstrated a new use for ultrasound diagnostics—to detect blood clots in the vessels of critically ill infants who are being monitored by umbilical artery catheters.

The use of noninvasive ultrasound, they hope, will spare newborn babies from the potentially negative effects of radiation, while providing doctors with a quick and safe screening method for a variety of catheter-associated complications.

Catheterized babies in the past have been subjected to the use of angiography, a method which provides doctors with X-ray visualization of blood vessels following the introduction of contrast material.

But now with his faculty colleagues, a Stanford resident, Dr. David Oppenheimer, has found that sonography—previously used effectively to *locate* umbilical artery catheters—is equally suited for detecting thrombosis, or clot formation, in the aorta and nearby arteries.

Addressing the 68th Scientific Assembly of the Radiological Society of North America Monday, Nov. 29 in Chigago, Oppenheimer explained, "Sonograms can be performed at cribside without removing infants from the intensive care environment. Diagnostic information is obtained without associated ionizing radiation and iodinated contrast material."

In a clinical study at Stanford, 71 neonates with umbilical artery catheters received a series of ultrasound exams. All echoes *not* representing the catheters themselves were considered indicative of an abnormality. (Normal arterial vessels, Oppenheimer said, are free of these types of echoes.)

In one instance the catheter itself, by completely filling an inner blood vessel, appeared to obstruct normal blood flow. This caused ischemia, or blood deficiency in the area, and normally present pulsation was absent. Vascular pulsations returned when the catheter was withdrawn.

(Oppenheimer explained that umbilical artery catheters are never used unless absolutely necessary in patient treatment, but that without them "many more babies would die." The umbilical artery provides the easiest route for monitoring patient hemodynamics, the movements and forces involved in blood circulation.)

Twelve infants had clinical signs of complications, including bluish or blanched extremities or toes, malfunction of a catheter, decreased peripheral pulses, leg swelling, and hypertension. Catheters had been in place between two and 35 days before symptoms developed. Ultrasound demonstrated abnormal echo collections of various sorts in ten of these infants.

Other causes were hypothesized in two symptomatic children with normal ultrasound exams. In one of these, the catheter had recently been removed, possibly causing an associated clot to fragment and then lodge in a more peripheral blood vessel. Oppenheimer said that most neonatal clots tend to resolve without the need for surgical intervention.

In his study he found that ultrasonically detected abnormalities persisted from two to more than 70 days. Many of these lasted long after the clinical symptoms had resolved.

In one baby, Oppenheimer said, the abnormality was mobile rather than fixed to the vascular wall. This moving "flap," he said, may have been causing the patient's hypertension. He hypothesized that the flap represented either a "floating" clot or a layer of vessel wall which had torn off during catheter insertion.

"Sonograms can be performed at cribside without removing infants from the intensive care environment."

—David Oppenheimer

He added, "This type of abnormality has not previously been demonstrated in a catheterized infant. Our ultrasound exams led us to detect it."

Moreover, in a variety of cases ultrasound was able to identify clots and other obstructions causing ischemic symptoms in the babies. Further work, Oppenheimer said, is required to determine the long-term prognostic significance of ultrasonically detected vascular abnormalities and the impact of their detection on patient care.

What he has demonstrated, however, is that ultrasound is useful as a diagnostic tool in catheterized infants. "It is likely that future diagnostic techniques will provide even more accurate analysis of flow limiting lesions," he concluded.

Oppenheimer's research was supported in part by a grant from the General Clinical Research Centers Program of the Division of Research Resources, National Institutes of Health.

His report was co-authored by Drs. Barbara Carroll and Karen Garth of the Division of Diagnostic Radiology, and will appear in the December, 1982 issue of *Radiology*.

—Lisa Ames

Humor helps in dealing with commotion of the Sleep Disorders Center

One of Lynn Hassler's greatest fears is having a boring job. As administrator of the Sleep Disorders Center, however, boredom is the last thing she has time to worry about.

"This is not your usual place to work," she said, chuckling. "When I interview people for positions here I tell them if they want a calm, relaxed atmosphere, this isn't the place for them."

With about 50 employees, including physicians, researchers, and support staff working on about ten research programs sponsored by about 15 grants, the Center gets, she admits, a bit crazy at times.

"Dr. Dement (Center director) is so overcommitted that the amount of activity on the local and national level is overwhelming. Because of the volume of work, a lot of what we do is at the last minute," she said.

Hassler's job then, is to keep the "craziness" organized. With a staff of three, she is in charge of the Center's budget, including the research programs, and personnel. She also helps determine space allocation, and interacts with the University. Her favorite responsibility, she said, is organizing meetings of sleep researchers from all over the country, many of whom visit Stanford to keep up with the latest research.

Despite the overload, Hassler enjoys working at the Center. "Dement is a stimulating and challenging person to work for," she explained. "He's always pushing you to do things you didn't think you could do. He promotes you to work independently, and I think I can do that pretty well."

Dement also encourages Hassler to "figure out new ways of doing things." Since she's been in the position of administrator, she said, she's revamped "just about every office process." She's most proud of the budget, she explained. It was a "mess" when she began working on it—the grants, funding sources, and programs were all mixed up. "Its finally understandable," she concluded.



"This is not your usual place to work."

—Lynn Hassler

Hassler wasn't always enthusiastic about the Center. She began working there as a receptionist in 1972. Not even a year later, she quit and worked for another office instead. Six months later she formed her own typing service, which she ran until 1976. The Center called her in one day to help with some typing, and she's been there ever since.

The key to her longevity is the ability to maintain a sense of humor—an ability that's taken her four years to develop, Hassler concedes. Exemplifying her newly cultivated trait is a scrapbook, full of documents with typographical errors, ungrammatical errors, and other "absurd" things people at the Center give her.

"I used to take everything so seriously," she said. "I worked ten hours a day until I realized it was killing me."

Even so, Hassler admits she periodically does "burn out." At such times, she takes off in quest of her favorite hobby—seemingly contrary to her vivacious personality—birdwatching.

"I just forget about everything, and trip out watching them," she said of the birds.

Hassler has seen nearly 800 spiecies throughout California, as well as Mexico, Trinidad, and Tobago. She's also been in three bird-a-thons, sponsored by Pt. Reyes Bird Observatory, to raise money to save Mono Lake. This past year, she raised about $1,100 for sighting about 120 species in one day.

Hassler is also a gardening enthusiast, and has recently taken up weight lifting. And during the Medical Center's softball season, Hassler was out in right field. Even when she is sitting in her home, Hassler said, she feels she has to do something. As a result, she said, her house is overrun with needlepoint pillows. "I'm hyper, I like to do something all the time," she admitted.

And at the Center, there is more than enough for her to do. —**Shirley Kraus**

Self-help for arthritis sufferers

Among a variety of community education programs originating at Stanford are arthritis self-help courses, conducted throughout the Bay Area over the past three years.

Directed by Drs. Kate Lorig and Halsted Holman through the Stanford Arthritis Center, the project uses specially trained lay leaders, most of whom have arthritis themselves or in their families, or feel a strong personal desire to help those with the often crippling disease. Class members practice exercise and relaxation techniques, discuss nutrition, medications, and generally work on problem-solving for the physical and emotional aspects of arthritis.

The research is funded by the National Institutes of Health (NIH) and the National Arthritis Foundation (NAF). Results since it began are encouraging, says Lorig. In fact, the initial success has been such that, in cooperation with the NAF, the project has expanded across the country, with similar classes debuting in about 30 cities nationwide.

This local class was held at Menlo Park's Little House.







Between an assortment of lectures on holistic health topics, there was time for nurses and others attending last week's 1982 CRONA Convention to glance through literature supplied by the Center for Health Awareness in San Jose. The Center was instrumental in presenting this year's program, entitled "The Nurse as Healer: Self and Others." The second day consisted of a CRONA business meeting, including a talk by the union's president, Hedy Dumpel.

...News Notes...

The Department of Nursing Services sponsored its first national nursing research symposium Nov. 18-20 at the St. Francis Hotel in San Francisco. The symposium, which focused on clinical research, was attended by nearly 300 people.

Sixty nursing research projects were presented by participants from all over the U.S. and Canada, according to Dr. Lois Welches, R.N., associate director of Nursing. Seven of these, she said, were Stanford projects.

* * * *

John Medeiros, Ph.D., a Stanford faculty member, is serving as acting director of the Division of Physical Therapy, effective Nov. 24.

Medeiros replaces Terry Sanford, who served as acting director since January, 1981, and who has left Stanford for a position at Springfield College in Massachusetts.



Aaron Smith

Aaron Smith, pediatric clinical social worker at Stanford University Hospital, spoke at the Nov. 23 meeting of "Parents for Heart," a group sponsored by the Santa Clara County Chapter of the American Heart Association.

A film entitled "Of Hearts and Lives" was shown, followed by an informal discussion with Smith to allow for the sharing of ideas and concerns. Smith is one of three medical advisors to the parents' group. The other two are nurses Eleanor Hedenkamp and Ann Weinberger.

Herpes. . .

continued from page 8

except that the virus could subtly change its structure and become resistant to such therapies. In addition, Merigan said, the possible side effects of long-term exposure to the drugs could outweigh the benefits.

Ultimately, the best way to stop a "herpes epidemic" is to prevent infection, and several research teams around the world are working on different types of vaccines that could do just that, Merigan said.

An "attenuated virus" vaccine, injections of a live virus that has been altered slightly to give recipients a very mild virus infection without the accompanying disease, is useful against diseases such as polio or measles which can only be contracted once in a lifetime. Once exposed to the vaccine, the body makes antibodies and other factors to thwart a future infection.

But, because herpes can lie dormant in a patient without producing symptoms, recipients of an attenuated virus vaccine might run the risk of developing herpes years after the inoculation. Such an infection might be dangerous for patients who were healthy when they were vaccinated, but later became immune suppressed.

Recombinant DNA technology will permit a different kind of vaccine, Merigan said. As scientists break up the DNA of the virus into specific components, they are also able to isolate fragments that code for proteins on the virus surface. Such fragments have been used to make a vaccine in bacteria that can stimulate herpes directed antibodies in animals.

Thus, it might eventually be possible to initiate the recipient's natural immune response without exposing him to infectious components of the virus. In addition, further studies of immunity and resistance to infection will be required, Merigan said, to know how best to deliver this vaccine to produce enduring protection.

"I'm enthusiastic about the vaccines, but I think it's going to take at least another decade of research to perfect them," Merigan said. "But at least with recombinant DNA techniques, we have hope that they are possible."

—Deborah Franklin

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Med Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, DECEMBER 1

Lane Medical Library Booksale. 8 a.m. till 4 p.m., Fairchild Auditorium lobby.

Dept. of Neurology Grand Rounds: "Multiple Sclerosis: Current Concepts in Diagnosis and Treatment"—Dr. Larry Steinman. 5 p.m., C364.

Depts. of Pathology, Medical Microbiology, Medicine/Immunology, and Genetics Seminar: "Development of the Cytotoxic T Cell Lineage Inside and Outside the Thymus"—Dr. Ken Shortman (of Melbourne Hospital). 3:15 p.m., 3rd flr. conference room, Fairchild Bldg.

Basic Science Research Colloquium: "Serotonin Receptors and Adenylate Cyclase in Parasites"—Dr. Tag Mansour. 5 p.m., Fairchild Auditorium.

THURSDAY, DECEMBER 2

Dept. of Medicine Grand Rounds: "Neurosyphilis"—Dr. Robert Cutler. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology: "The Actions of Avermectin on GABA Nerve"— Dr. C.C. Wang (of UCSF). 4:15 p.m., R358.

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Snoring"—Drs. Robert Riley, Brian Humphreys, F. Blair Simmons. 6 p.m., Wang Library, R117.

Dept. of Genetics Seminar: "Reversible Transformation of Lymphocytes with an Intracellular Parasite, Theileria"—Samuel J. Black, Ph.D. (of the International Laboratory for Research on Animal Diseases, Nairobi, Kenya). 12:15 p.m., S336.

FRIDAY, DECEMBER 3

Dept. of Pediatrics: "Wiskott-Aldrich Syndrome"—Dr. John Miller. 8 a.m., M106.

Dept. of Pathology Surgical Pathology Conference: "Regional Morphology and Pathology of Prostate"—Dr. John McNeal. 8 a.m., L201.

MONDAY, DECEMBER 6

Dept. of Structural Biology: "Studies on the Photo Receptor Cyclic CMP Phosphodiesterase and its Homology with Adenylate Cyclase"—Dr. Mark Bilensky (of Los Alamos National Laboratory). Noon, Fairchild Bldg., D102.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Masking Techniques"—Holly Hosford-Dunn, Ph.D. 7:30 a.m., R117.

DECEMBER 6 AND 7

Nursing Educational Services: "Pediatric Critical Care Course, Level I." Continuing education credit available. Fees required. For further information, call 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Graduate students develop new Robot Drill technique

A recent Stanford graduate is getting ready to market a drill developed at Stanford which can drill oil wells sideways or even uphill.

The Robot Drill (TM) uses hydraulics to grip the side of its own hole. This enables the bit to go off in almost any direction. The inventor, Robert Horstmeyer, has formed a Palo Alto Company, Advanced Drilling, to market the device.

Horstmeyer conceived of the drill while a physics major at the U.S. Naval Academy. He says he was impressed by the ways the navy used hydraulics in nuclear submarines. He and another graduate student, Larry Weick, produced a working model of the drill while at Stanford and tested it in a concrete-filled cylinder.

The drill would replace the conventional form of digging oil wells, according to Advanced Drilling chairman Harold C. Nissley.

"The idea was that there's got to be a better way to drill holes in the ground rather than use an 80-year-old technology which is essentially brute force," Nissley says. "You take rotating pipe and just have a lot of weight added to it."

Old technology

This technology has been improved upon through the years, but remains basically the same. Usually oil drillers put a three-coned bit at the end of a 93-foot pipe and, by adding weight to the pipe, force the bit downward.

Once the bit comes to the end of its reach, another 93-foot pipe is added, and so on, Nissley says. To change the bit, the whole drill stem has to be pulled up, section by section; the process is reversed to reimplant the bit.

Horstmeyer's system holds onto the side of the hole, offsetting the torsional and forward thrust of the drill.

"You're gripping the sides of the hole down deep as you go. You can think of it like a kind of inflated tire that you inflate against the sides of the hole; then you deinflate, let the air out. . .you lower the anchor, expand it and drill some more," Nissley says.

The drill stem is 10 to 20 feet long.

Attached to the stem are hoses which carry "mud," a heavy liquid used to clean away the rubble produced by the bit, and the return hydraulics. Another tube carries electronic wiring for the sensors.

New technology

Nissley says the system has two advantages over the usual drilling method.

"The first is that we can go down into a hole and come back out approximately 10 times faster than the conventional system." Each round "trip" includes the time it takes the driller to pull out the bit, replace it, and reinsert it to the bottom of the hole.

Instead of having to deal with each long section of pipe, the Robot Drill can be reeled in like a fishing line.

Another advantage is that the drill can go around corners, sideways, or in a curve.

It is possible to bend a conventional drill stem and go off at an angle. But this is so slow and expensive that it is done very rarely. It is also possible to drill at an angle using conventional technology. This is also slow and the angle is limited to around 60 degrees, Horstmeyer says.

"In places like the North Sea, drilling is done from expensive platforms," Nissley emphasizes. "Drilling in the Beaufort Sea near the Arctic Circle, for example, involves building artificial islands costing up to $1 billion each."

"Obviously, it is extremely important economically to drill as many wells as possible from one platform. With Horstmeyer's Robot Drill, permitting highly deviated and horizontal drilling, more wells could be drilled from one platform. Of course, this amortizes the cost of the platform over the larger number of wells."

In addition to oil wells, the drill can be used in coal and mineral mining, tunnelling, geothermal wells, pipelines, and for utility conduits in urban areas and under roadbeds.

Advanced Drilling Corporation was formed in April, 1982, to produce and market the Robot Drill. Many of the initial investors are people in the oil industry from Calgary, Cleveland, Europe, and Texas.

The company plans to drill test wells in Taft and Half Moon Bay to produce additional data for further engineering development and investment information.

Stanford was given stock in the company because University facilities were used. —**Joel Shurkin**



Inventor Robert Horstmeyer stands in front of his Robot Drill. Hal Nissley, chairman of the company, is to the rear.

Letters to the editor

Here's how to help ASSU recycling

Dear patron of ASSU Recycling:

Recently we've been barraged by questions from confused patrons of the recycling program about the kinds of paper we accept and the reason why each type must be segregated.

The ASSU recycling staff must *hand sort* paper into the following categories: newspaper, computer paper, computer tab cards, corrugated card board, and white paper. White paper includes letter heads, bond machine copies, stationery and typing paper, white tablet sheets without backing, unused envelopes, and white card stock. Metal staples, paper clips, and fasteners need not be removed.

The following material is NOT recyclable: plastics of any kind, glue bond paper, glossy magazine paper, ditto masters, mimeo stencils, carbon paper, NCR paper, photographic or blueprint paper, any item with attached cellophane tape or self-adhesive labels, and copier paper wrappings (they're usually contaminated with non-water soluable glues).

Markets to which we sell our paper will either refuse to accept our product or will lower our prices significantly if they find contaminants or mixtures of newspaper, white paper, and computer paper. When we empty a barrel from the Stanford campus you can imagine the tedious and costly sorting required if the paper is unsorted or contaminated.

Please help us by policing your own barrel; post this letter nearby to use as a reference.

Some confusion was created this fall by our new policy for student residences, where we now collect newspapers rather than mix recyclable paper.

Fred Beddall
Comanager
ASSU Recycling, 7-0915

Jaedicke...

continued from page 1

President Kennedy called Jaedicke "deeply and deservedly respected by the faculty and a proven performer."

Well known among both academic and practicing accountants, Jaedicke is author or coauthor of six textbooks and numerous articles on accounting. Among his books are *Managerial Accounting*, now in its sixth edition, *Management Controls, Quantitative Analysis for Business Decisions* and *Accounting Flows: Income, Funds, and Cash*.

He has won several awards for outstanding research articles, including two in a row from the National Association of Accountants in 1961 and 1962 on use of quantitative methods in planning and control within an organization. The American Institute of Certified Public Accountants cited him for distinguished contribution to literature for an article defining the principles of objectivity and reliability in financial reporting.

Jaedicke holds bachelors and masters degrees in business administration from the University of Washington, where he graduated cum laude and Phi Beta Kappa. He received his Ph.D. from the University of Minnesota in 1957.

He began his academic career in 1953 at Minnesota, as an instructor and assistant professor. He became a Ford Foundation postdoctoral fellow and assistant professor of business administration at Harvard before coming to Stanford in 1961. He directed the GSB's doctoral program from 1965 to 1968, then served as associate dean for academic affairs from 1969 to 1979, when he was named acting dean.

When McPherson became dean in September, 1980, he asked Jaedicke to serve another year as associate dean for academic affairs. Jaedicke spent 1981-82 in academic research.

The last dean promoted from within the business faculty at Stanford was J. Hugh Jackson, who served from 1931 to 1958. The permanent faculty now totals 72, and is widely known for its research. Ten new faculty were appointed this year. Besides more than 600 MBAs, the School has 73 Ph.D. students in residence, and 42 executives in the Stanford-Sloan program. More than 500 executives participate in executive education programs, which will be extended to Singapore and Geneva in the near future.

The School receives $4 million in gift support from 4,000 donors annually.

—**Rich Kurovsky**



THE TIME IS 1 p.m. Saturday and Sunday at Tresidder Union, when Milton, the quick-witted cur, matches wits with the Christmas Faire audience in his own TV talk show. Puppeteer Gary Schnell and his furry friend will be outdoors if the weather is fine and inside if it's not. Schnell has entertained street-corner and college audiences across the country in the show entitled "Dog Day Afternoon."

Rental housing

HOUSING NEEDED

□ **June '83 to Aug. '84 (flex):** Visit Prof in Elec. Engr seeks hsng for self, spouse & 12 yr. old daughter. Nonsmokers. Call COLLECT (505) 294-7758, after 5 p.m., or write: Prof. Etter, EECE Dept., Univ. New Mexico, Albuquerque, NM, 87131.

□ **Jan. 1 thru June 15, '83:** Visit. prof. w/child age 9 seeks furn. hsng. Shared hsng possible. Call Suzanne Caldwell, Dept. German Studies, 497-1068.

□ **Jan. to Mar. '83:** Retired cpl. seeks furn. 1 or 2BR apt., condo, or hse on campus, Palo Alto, Menlo Pk., close to shops, campus. Pkge deal to include car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Sept. '83 to June '84:** Approx. 50 fully furn. hses needed for Fellows & their families coming to Ctr for Advanced Study in the Behavioral Sciences. Call Frances Duignan, 321-2052 (day).

□ **Winter Qtr:** For 3 or 4 mo. (flex.): Visit. prof. seeks very quiet apt, studio, or comfortable rm. w/ktchn priv. On campus or walk to campus. Call Feferman, 497-2439 or 857-0323.

□ **Feb. to June '83:** Visit. prof. from MIT & wife seek furn. 2BR apt. or hse nr campus. Will give loving care to animals, plants. Stanf. refs. avail. Could EXCHANGE 4BR hse in Concord, Mass. Call 328-8103 till 12/4, or (415) 593-6506. Or call COLLECT (617) 369-4713.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

HOUSING AVAILABLE

□ **Regularly Available:** 1 & 2 BR furn. & unfurn. apts. & twnhses, and 3BR/2BA hses in Palo Alto & Menlo Pk. In good neighborhoods and close to campus. $525 to $800/mo. Call Shirley (415) 493-2321 or Jane (415) 968-4957.

□ **Now:** SKI CABIN, So. Lake Tahoe. 2BR, frpl, color TV, phone, Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Dec. 22 for 1 yr (flex):** Fully furn contemp. campus hse. 2BR + 2 studies (1 can convert to BR), 2BA, FR, piano, lush atrium, wooded lot. $1350/mo. incl. grdnr, water. Call (415) 857-0479.

□ **March to Oct. '83:** Close-in fully furn. campus hse. 3BR/1BA, study, 18'covered Doughboy pool (chem. maintained). Fenced yd, central air. No cats. $1000/mo. incl. grdnr. Refundable $500 sec. dep. + 10% int. Call (415) 322-9208 or 497-2512 (day).

□ **Jan. to June 83:** Furn. Palo Alto hse, 4BR/3BA, LR, DR, FR w/frpl, study. Pool w/solar sovr. Close to campus. $1650/mo. incl. pool serv. Call 493-1179.

□ **Beg. Dec. 15, '82:** Furn. fam. hse, 4BR/2BA, fenced yd. Nr. schls, parks, shops. 3 mi. to campus. Children welcome. Call Marilyn Hull, (415) 326-8683 (wkdays), (415) 493-6164 (eves & wknds).

□ **April 1 to June 15, '83 (flex):** Fully furn. hse, 4BR/2BA, den, AEK, W/D, hot tub. Children ok. So. Palo Alto, 3 mi. to campus. Swim/tennis club mbshp (across st.). On bus rte. $1000/mo. incl. grdnr & club mbshp. Call (415) 494-6492.

□ **NOW:** Fully furn. 3BR/2½BA + study, 2-story deluxe twnhse. Formal DR, frpl, wet-bar, 2 car gar., pool, jacuzzi. 10 min. to campus. $1700/mo., 1st & last mo. rent, + $1500 sec. dep. Call Sonia, 494-2939.

□ **NOW:** Prof. woman has rm to rent w/BA, W/D, ktchn. priv. Female, nonsmoker. Furn. except for bed. 10 min. to campus. $325/mo. incl. util. Call 969-5870, after 7 p.m.

□ **Beg. Jan. 1, '83:** Fully furn. Oak Creek apt. w/sports fail. 5 min. to campus. Avail. for 6 mos. (flex). $675/mo. Call 326-3684, morns. & eve.

□ **Jan. to Sept. '83 (flex):** Fully furn. 4BR/2BA lrge campus hse. Frpl, garden w/auto sprinklers, view of hills. Nonsmokers, no pets. $1400/mo. incl. grdnr. Call 497-3987 (day) or 494-0362 (eve).

□ **NOW:** Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, phone, W/D, frpl., sleeps 10. $200/wknd, $70/wknights. Call 493-4139 (eve).

□ **Jan. 15 to July 1, '83:** Fully furn., all appliances, 4BR/1¼BA hse in Los Aitos. Lge garden. $975/mo. Call (415) 961-3079 (eve).

□ **Dec. 20 thru Jan. 3, '83:** Fully furn. campus hse., 4BR/2BA, close in. $400 incl. hsecleaning & util. Call 497-9432 (day), 327-8042 (eve).

Ph.D. oral exams

FRIDAY, DECEMBER 3

Douglas H. Hamilton, geology, "The Tectonic Boundary of Coastal Central California," 2:15 p.m., Room 326, Bldg. 320.

MONDAY, DECEMBER 6

Daphna Baratz, education, "How Justified is the 'Obvious' Reaction," 2:15 p.m., e114, Education Bldg. (Cubberley). **Jonathan P. Raider,** graduate special—social theory, "The Origins of Sociology in France: The Historical Discontinuity of the Counterrevolution," 2:15 p.m., Conference Room, Florence Moore Hall.

TUESDAY, DECEMBER 7

Anirudh Dhebar, engineering-economic systems and economics, "Theory of Optimal Dynamic Pricing and Market Equilibria for Goods with Positive Demand Externalities," 2:15 p.m., Terman 217.

WEDNESDAY, DECEMBER 8

Ralph Alan Bergh, applied physics, "All Fiber Gyroscope and the Rotation Rate Error Due to the Optical Kerr Effect," 2:15 p.m., Applied Physics 200. **Marilynn J. Price,** education, "Directed Imagination and Drawing: Justification and Implementation," 2:15 p.m., e114 Education Bldg. (Cubberley).

THURSDAY, DECEMBER 9

Victor Chin-Keung Chan, art "Pierre-Paul Prud'hon and Neo-Classicism," 2:15 p.m., ar101A, Cummings Art Bldg. **Sheldon Gorell,** chemical engineering, "Optimal Stability of Variable Viscosity Displacements in Porous Media," 4 p.m., Chemical Engineering Gazebo. **Susan L. Griffiths,** education and psychology, "Conditions of Organizational Decline: Responses of Experienced Ex-Teachers and Current Teachers," 2:15 p.m., e114 Education Bldg. (Cubberley). **Peter Claver Matthews,** statistics, 2:15 p.m., s120. **Stephen G. Powell,** engineering-economic systems, "The Transition to Nondepletable Energy," 2:15 p.m., Terman 329.

FRIDAY, DECEMBER 10

Jeffrey L. Coles, economics "Efficiency and Inefficiency in General Equilibrium Models," 2:15 p.m., Room 414, Encina Hall. **Laura Seitel,** modern thought & literature, 2:15 p.m., 52T (Bldg. 50). **Alexander Wessitsh,** education and psychology, "Explanation: Comprehension, Concept Formation, and Discourse," 2:15 p.m. e208 Education Bldg. (Cubberley).

Staff employment

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827. or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

30740-TC (JCC:8880) MISC PROFESSIONAL: Develop & implement marketing strategies for Stanford athletics — 14 men's & 10 women's intercollegiate sports, spec events, tournaments & championships & other athletic activities; secure sponsors to underwrite spec events, advertising promotions, etc; supv production of 'Cardinal Sports Line' incl writing & placing wkly advers; promote football regular & group ticket sales & also youth group ticket sales; arrange speaking engagements; handle corresp; supv Asst. student staff & sec; freq evening & wkend work; some local travel; QUALIFICATIONS: able to write & speak clearly & persuasively; exp in Univ admin, marketing, ticket & game promotion indicating strong familiarity w/ intercollegiate sports; proven organization ability in sports related events; demonstrated ability to interact effectively w/ wide variety of athletic professionals & community reps; demonstrated exp in supvn, task mgmt, long range planning; C06; $1854-2312.

30738-TC (JCC:3280) INFORMATION EDITOR II: Help in all aspects of sports informa, publications, media servs; write & edit news releases & feature stories on Stanford varsity teams; write & edit press brochures; res & assemble records, statistics, rosters, other mat'l for press brochures & programs; answer requests; serv as liaison between Stanford coaches & athletes & the news media; edit periodic newsletter for supporters of Stanford athletic program & other tasks as assigned by Director; seasons; some travel; QUALIFICATIONS: typ 65; demonstrated writing & editing exp in sports inform or sports writing; BA degree in commu or equiv combination of edu & work exp; excel keyboard skills for word processing on computer terminal; extensive overtime during peak seasons; some travel; ability to work w/ a wide variety of professionals; C05; $1670-2086.

Bargaining Unit

31079-VW (JCC:1728) PORTAL MONITOR: TMS Unit; 50%; Sun-Thurs, 7-11:15pm; performs duties in Central Circulation Dept; checks patrons' identification for access to lib; enforces lib regulations w/ regard to pets, smoking, food & beverages; prevents access by potentially disruptive persons; refers security problems to supvr; exam book bags, briefcases & other belongings for lib mat'ls at the exit portal; prov informa & directions on request by patrons; maintains statistics; shelving & sorting discharge cards, etc; QUALIFICATIONS: require prev public serv exp; ability to commu clearly in spoken English; dependability & punctuality; ability to learn & apply lib regulations tactfully & courteously; A09; $6.08/hr.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Dec. 7, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.



The root of the eucalyptus tree that blocked Campus Drive West dwarfs one of the workers who toiled to open the road.

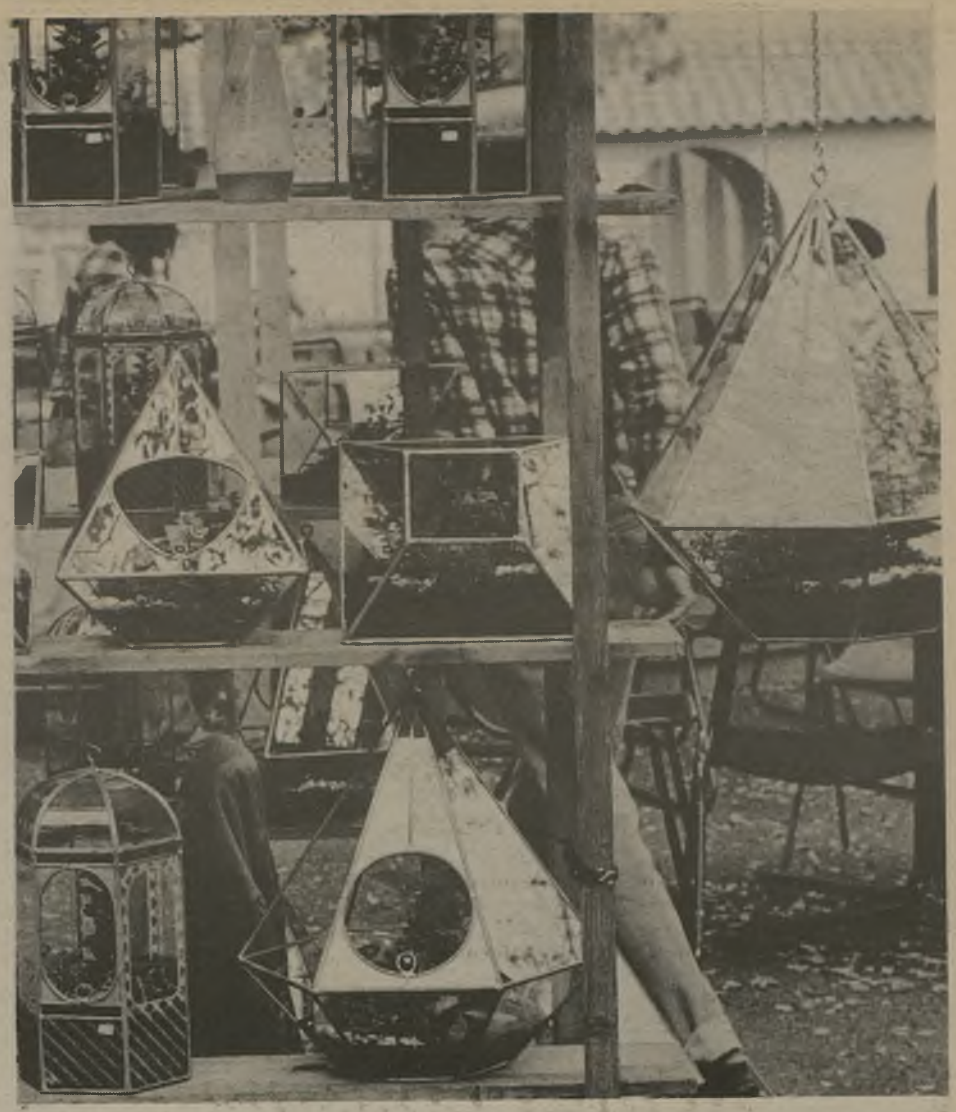
Storm/ continued from page 1

a fence also was knocked down. Falling limbs also damaged two Operations and Maintenance trucks.

In other storm-related incidents, the HP-3000 computer at Operations and Maintenance was down, delaying response to queries about service. High winds toppled a 20- by 8-foot wall at the Braun Music Center construction site. The wall had been scheduled for grouting Tuesday.

Skylights on two dormitories were blown open during the night and the pool bubble cover at the Pearce Mitchell housing complex collapsed.

Horgan estimated repair, overtime, and outside contractors' costs would reach $10,000 to $20,000. He said he hoped the campus would be cleaned up by the end of the week.—**Karen Bartholomew**



Unusual entertainment, fascinating food, and 85 of the best craftsmen around will gather at Tresidder Friday through Sunday, Dec. 3-5, for the STARTS Christmas Faire. Open from 10 a.m. to 5 p.m. all three days, the Faire is a sort of combination fantasy break and good, practical place to do your Christmas shopping.

Senate to consider bar on faculty hiring of Ph.D. advisees in outside firms

Following is the Annual Report of the 1981-82 Committee on Research, headed by Prof. Joseph B. Keller, mathematics and mechanical engineering. Its policy recommendations will be considered by the Faculty Senate Dec. 2.

During the past academic year the Committee on Research (C-Res) met five times to consider University Research-related policies and practices. As usual, one of the meetings was open to all members of the Stanford community to give them an opportunity to raise questions and issues of concern.

Significant committee efforts were devoted to matters related to openness of research and to potential conflicts of interest arising from outside consulting activities of the faculty. The committee also considered the University's indirect cost rates and their structures.

Actions Requiring Senate Approval

The C-Res recommends two policy changes which require Senate approval:

I) **Modification of the Faculty Consulting Policy** to include the following paragraph:

Faculty members must be especially sensitive to potential conflicts of interest between their teaching responsibility vis-a-vis graduate students working under their supervision and their outside consulting interests. To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's adviser or as a participant on that student's dissertation committee. Exceptions to this provision must be approved prospectively by the department chairman.

Background: Student members of the C-Res and a representative from the Graduate Students Association expressed concern about situations in which graduate students work for their faculty advisers in outside employment in fields related to the students' training.

Specifically, questions were raised about the ability of faculty members in such situations to separate their University teaching obligations to their students from the priorities and obligations of their outside consulting activities. After considerable discussion, the Committee voted unanimously to propose the above addition to the Faculty Consulting Policy.

II) **Modification of the Secrecy in Research Guidelines:** Current University policy, as adopted by the Senate in 1969, permits delay in publication of research up to a maximum of one year to protect the patentability of an invention in cases 1) where the sponsor intends to apply for a patent on an invention arising from the research, and 2) where publication would destroy the patentability of the invention. However, experience over the past decade has taught us that decisions to file patent applications, and the filing process itself, can reasonably be accomplished within a three-month period after a disclosure has been filed.

Thus, to promote openness in research and to permit timely publication of research results, the C-Res voted unanimously to propose for Senate approval a modification of the Secrecy in Research Guidelines to change the maximum period of publication delay for patent protection purposes from one year to 90 days.

Such a policy, as revised, is similar to relevant policies at most other universities.

Other actions of the Committee on Research

1. The C-Res reviewed and approved a policy statement (which essentially incorporated other current University policies) regarding the control and distribution of tangible research property (TRP). TRP is tangible property, such as biological cell lines, computer software, circuit drawings, engineering diagrams, etc., which is developed in the course of research.

Three primary points of the policy statement are 1) University policy is to promote the prompt and open exchange of TRP and associated research data with other academic colleagues outside an investigator's immediate laboratory; and 2) control over the development, storage, use, and distribution of TRP is the responsibility of the principal investigator or lab director; and 3) TRP may not be sold for profit. The policy statement was issued by Gerald J. Lieberman, vice provost and dean of graduate studies and research, on March 16, 1982.

2. The C-Res approved an arrangement proposed by the Stanford Synchrotron Radiation Laboratory (SSRL) director in which a consortium of three external sponsors (another university, a commercial company, and the federal government) would fund construction and operations of two new beam lines for three-year renewable periods as follows: one-third of the operating time for the other university sponsor, one-third to corporate sponsor, and one-third to general SSRL users.

3. Students expressed concern about faculty members filing disclosures on inventions which arise from University research activities involving students, without informing the students of such disclosures. In the course of these discussions, it became clear that students may not be sufficiently aware of the laws and University policies and procedures related to the disposition of intellectual property arising from research.

Thus, it was recommended that a working guide on patents and copyrights and other forms of intellectual property be prepared and made available to graduate students in research departments. As a result, the Sponsored Projects Office did develop such a document, entitled "Patents, Copyrights and Other Research Property." It is being distributed this fall to relevant departments.

Reports to the Committee

1. The 1981-82 C-Res heard at its open meeting reports from Dean Lieberman and Frank Riddle, associate controller, on the 1982-83 indirect cost rates for sponsored research and the ways in which indirect costs are calculated. Dean Lieberman reported that a rebate plan would be implemented, beginning in 1982-83, to ease the transition to the new rates for principal investigators.

2. Dean Lieberman also reported to the committee the recommendations of the Ad Hoc Task Force on Industrial Affiliates. It had been established by the Provost to look into the nature of the relationship between the University and industrial members of the 21 or so affiliate programs on campus. (See *Campus Report* edition of April 28, 1982, for the text of those recommendations.)

1981-82 C-Res Members: P. Brett, J. Claerbout, M. Everson, M. Fayer, J. Halamka, P. Hanawalt, S. Kalman, J. Meindl, J. Roughgarden, M. Wright.

1982-83 C-Res Members: J. Meindl (chairman), M. Beiber, P. Brett, J. Claerbout, M. Fayer, E. Garwin, J. Halamka, P. Hanawalt, S. Kalman, R. Redfield, J. Shoven.



Naomi Sparrow (left) and Thomas Stauffer

Stauffer, Sparrow to give concert at 8 p.m. Tuesday in Kresge Auditorium

Cellist Thomas Stauffer and pianist Naomi Sparrow will perform at 8 p.m. Tuesday, Dec. 7, in Kresge Auditorium on the Stanford campus.

Their concert will cover a wide range of styles from the decade 1910-1919—one of the most revolutionary decades in the history of music. "It was a terrible time for humanity, but a wonderful, exciting time for music," says Stauffer. "There was a great deal of experimentation going on."

On their program are *Pohadka* by Janacek, sonatas by Koechlin, Debussy, and Hindemith, and *Three Short Pieces* by Webern.

Stauffer is lecturer in cello at Stanford, principal cellist with the Santa Rosa Symphony, and a member of the Bloch String Quartet in residence at UC-Davis. He studied with Margaret Rowell and Gabor Rejto, and was a Fulbright Fellow at the Music Academy of Zagreb in Yugoslavia. Stauffer also has an M.A. in composition from UC-Davis and was *student extraordinar* in composition at the Academy for Music and Dramatic Arts in Vienna.

Sparrow is senior lecturer and head of the piano program at Stanford. Previously she taught at Mills College and was a founding member of the Mills Performing Group. Sparrow is a well-known specialist in contemporary music, and has recorded for Fantasy Records and CRI.

Tickets are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

ASSU sponsors holiday sharing drive

The Associated Students of Stanford University (ASSU) will sponsor a holiday sharing drive from Dec. 2-15, collecting packaged food, clothing, household items, toys, books, and money to benefit the Ecumenical Hunger Program.

Drop boxes will be placed in all campus residences, as well as the ASSU office, Tresidder Union, CPPC, and various campus offices, lounges, and libraries. Money donations should be made in check form (payable to the Ecumenical Hunger Program) and sent to the ASSU office.

The Ecumenical Hunger Program is a community organization which has operated since 1975 to bring food, clothing, and household items to needy Palo Alto, East Palo Alto, and Menlo Park residents. They operate a food closet which services (emergency) needs; they also supervise a gardening project and a food-purchasing cooperative to ease long-term needs.

For further information, call ASSU at 497-4331, and watch for announcements in "Once Around the Quad."

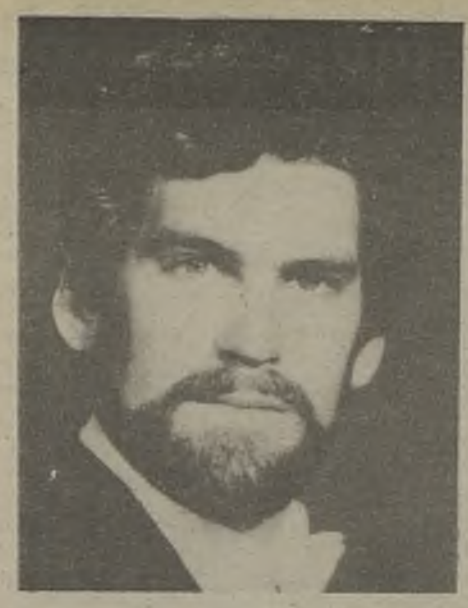
Help Center hours

The Stanford Help Center's new hours, effective Dec. 1, are as follows:

9 a.m. to 5 p.m. Monday, and Wednesday through Friday, including lunch hours; 9 a.m. to 7 p.m. Tuesday, including the lunch hour.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Stanford Medical Center, and SLAC employees and their families. All workshops and counseling sessions are free.

Make appointments by phoning 497-4577 9 a.m. to 5 p.m. Monday through Friday. Parking is available at Angell Field.





Cantor Hans Cohn (right) of Temple Beth Jacob in Redwood City will be narrator for the Honegger *King David*, which will have performances by the Stanford Chorus and Orchestra at 8 p.m. Friday and Sunday, Dec. 3 and 5, in Memorial Church. Also on the program is the Bruckner *Te Deum*, for which John MacAllister (left) will be a soloist. MacAllister has sung five seasons with the San Francisco Opera.



Prof. Herbert Nanney will give his 36th annual concert of Christmas and Advent music at 2:30 p.m. Sunday, Dec. 12 in Memorial Church.

Rousing weekend of Christmas music slated Dec. 10-12 at Memorial Church

Stanford's Music Department, in conjunction with Memorial Church, finishes off the Fall Quarter with a rousing weekend of Christmas music at Memorial Church Dec. 10, 11, and 12. All concerts are free and open to the public.

The ever-popular *Service of Lessons and Carols* will be presented twice: at 8 p.m. Friday and Saturday, Dec. 10 and 11. Both the Chorale and the Church Choir will sing—the Chorale in the organ loft, conducted by Sharon Paul; the Choir on the altar steps, conducted by Gregory Wait. University organist Herbert Nanney will accompany.

Among the works to be sung at the Service are *A Boy was Born* by Britten, *A Spotless Rose* by Howells, *O Magnum Mysterium* by Poulenc, *Nunc Dimitis* by Grechaninov, and *Quodlibet* by Paul Nahay, Stanford graduate student in composition.

Organ buffs will especially enjoy Herbert Nanney's 36th annual organ recital of Advent and Christmas music at 2:30 p.m. Sunday, Dec. 12. Nanney will perform works by Bach, Lau, Karg-Elert, Franck, Charpentier, Daquin, and others.

The Messiah Sing tops off the festive weekend at 7 p.m. Sunday, Dec. 12, conducted by Gregory Wait. Soloists include soprano Nancy Wait and baritone Leroy Kromm. The public is invited to sing *or* play Handel's beloved oratorio. Participants should arrive early—this is a very popular event. Choral scores will be sold at the door ($4.50); orchestra parts will be provided.

Pauling to speak

Prof. Linus Pauling will speak on "Reversing the Present Arms Race" at 8:15 p.m. Wednesday, Dec. 8, at Fairchild Auditorium, Stanford University Medical Center.

Pauling, an emeritus professor of chemistry at Stanford, is the winner of two Nobel Prizes—for chemistry in 1954 and the peace prize in 1962. His talk is sponsored by the Stanford and Mid-Peninsula chapter of Physicians for Social Responsibility. It is free and open to the public.



The Mirecourt Trio performs with the Stanford Wind Ensemble Saturday, December 4, in Paul Reale's Concerto *Dies Irae* for piano trio and wind ensemble. The concert starts at 8 pm in Dinkelspiel Auditorium.

Christmas Faire starts Friday morning

Abundant crafts, music, jugglers, magicians, and international foods will provide the holiday fare for the eleventh annual Stanford Christmas Faire, open 10 a.m. to 5 p.m. Friday through Sunday, Dec. 3-5, at Tresidder Union, Stanford University.

The Faire will be highlighted by more than 80 craftpeople displaying a wide variety of paintings, sculptures, jewelry, pottery, leatherwork, photography, stained glass, woodwork, toys, stitchery and weaving.

New additions include hand-blown glass ornaments, original silks, and perfumes blended on the spot to match individual personality. Selected from over 600 applicants, these craftpeople offer some of the finest work presently being done in northern California.

In addition to the craftpeople, there will be holiday food and drink, homemade pastries, and entertainment by wandering minstrels and mimes also will be featured. Twenty percent of the artists' sales benefit the campus program activities sponsored by STARTS, Student Arts at Stanford.

This is an ideal opportunity to find those unique, special and handcrafted gifts that range from 25 cents to more than $500. And in addition to providing Christmas shopping opportunities, the Faire is sure to be a delightful and festive holiday experience.

I-Center shows Wada's ink paintings

Sumi-e ink paintings by award-winning Japanese artist Ami Wada will be on view at Stanford's International Center from Dec. 2-31.

The exhibition will include the painting titled "Sho-shun," depicting two rabbits in a floral setting, which won Best of Class award in a competition with more than 5,000 other entries at the Japanese Nangan-In Art Society last year.

A reception for the artist will be held at the International Center from 5-7 p.m. Friday, Dec. 3.

Born in Yokohama, Japan, the artist was educated at Yamate Women's School in Yokohama and the Azuma Art School in Kyoto where she studied the Senmenga style of Art. She subsequently studied privately with Shutei Ota in Tokyo.

Ami Wada's watercolor paintings are executed in oriental brush painting styles. Her techniques include those of traditional Japanese brush painting and the "wash" technique using *washi*, the handmade rice paper of Japan.

The artist's work has been exhibited here in the U.S. as well as in Japan. She currently lives in Sunnyvale and has taught a class in Japanese brush painting at Foothill College as well as giving private lessons.

Summer institute on world education set at Stanford

The Bay Area Global Education Program's (BAGEP) 1983 Summer Institute will be held at Stanford from June 22 to July 8. Its theme will be "Focus on Latin America."

Funded in part by the National Endowment for the Humanities, this program for elementary and secondary educators will be presented in cooperation with the Stanford-Berkeley Joint Center for Latin American Studies, and the Stanford Program on International and Cross-Cultural Education (SPICE).

Similar to previous Institutes on Asia and Africa, during this immersion in Latin American culture participants will experience a wide variety of presentations, including lectures by distinguished faculty, films, curriculum sessions, performances, and field trips.

Educators will have the opportunity to review current curriculum materials, including units on Latin America currently being developed by SPICE's Latin American Project (formerly Project REAL), under a grant from the U.S. Department of Education.

The program is open to any elementary or secondary educator on a fee basis. Applications and information may be obtained by writing: Kathie Toland, SPICE/Latin America Coordinator, Lou Henry Hoover Building, Room 226, Stanford University, Stanford, Calif. 94305. Deadline for applications is April 1, 1983.

Drama auditions for *The Wager*

Auditions for the Drama Department's production of *The Wager*, by Mark Medoff, will be held Dec. 5-7 in Stanford's Little Theater.

Medoff, who received an MA in English from Stanford, has also written the Tony Award winning play, *Children of a Lesser God*.

The Wager will be directed by Christine Roum, a graduating senior in Drama and Communications, as a senior honors project.

Auditions will be held Sunday and Monday, Dec. 5-6, from 7 p.m. to 10:30 p.m. with call-backs Tuesday, Dec. 7, from 7:00 to 10:30 p.m. All auditions will be in the Little Theater.

Please sign up for an audition time in the Drama Department office located in the back hall of Memorial Auditorium, Room 144. Scripts will be available on a loan-out basis when you sign up. All are encouraged to audition.

Performance dates for *The Wager* are Feb. 9-12, 1983, in the Nitery.

Kennedys to host Stanford Staffers

The Stanford Staffers will have their annual Christmas party at the home of President and Mrs. Donald Kennedy on Wednesday, Dec. 8.

Members and their guests will enjoy refreshments and conversation with the Kennedys.

For more information, call Kay Mahon, ext. 7-2968.



Carol Cheek

Alma Trio, guests to perform Dec. 9

The Alma Trio & Guests will perform at 8 p.m. Thursday, Dec. 9, in Dinkelspiel Auditorium. Stanford Music Department's ensemble-in-residence is celebrating its 40th anniversary this year. Members are Andor Toth, violin; Gabor Rejto, cello; and Adolph Baller, piano.

Mozart's *Trio in B-flat Major, K. 502* will open the program. It is a piece with all the Mozart trademarks: skill, elegance, humor, thematic beauty, and harmonic variety.

Bartok's *Sonata No. 1 for violin and piano* will follow—a brilliant showpiece filled with Hungarian folk rhythms and melodies set in contemporary idioms.

Concluding the program, by popular request, will be Schubert's famous "Trout" piano quintet. Joining the Alma Trio will be bass Larry Epstein and violist Carol Cheek. Epstein is a member of the San Francisco Symphony; Cheek is a teacher and soloist from Los Angeles.

Tickets for the Dec. 9 concert are $4 general, $2 students and senior citizens.

Mehnert to tell what Soviets read

Klaus Mehnert will discuss "The Russians Today: What They Read—What They Are," at 7:30 p.m. Thursday, Dec. 2, in History Corner, Room 2 (Serra Street near Palm Drive).

The talk will be based on his forthcoming Hoover Institution press book by the same name. A question and answer period will follow.

A regular commentator on German television and radio since 1950, Mehnert has also been the editor of both *Osteuropa* in Berlin and the political weekly *Christ und Weldt* in Stuttgart.

Born to German parents in Moscow, Mehnert moved to Stuttgart, Germany at the outbreak of World War I. He graduated from the classical Gymnasium and studied at the Universities of Tubingen, California (Berkeley), Munich, and Berlin, where he received his Ph.D. in history.

The speech will be cosponsored by the Hoover Institution and the Stanford Committee on Political Education.

Police urge patience on recovery of stolen goods—it will take weeks

Swamped by calls from 650 citizens seeking recovery of an estimated $2 million in stolen property, Stanford Police Capt. Raoul Niemeyer Wednesday, Nov. 24, urged public patience in a process that may take six weeks or more to complete.

The property was recovered earlier this month from the residence of Robert and Maureen O'Connor in La Honda, a friend's house in Montara, and rented storage rooms in Foster City.

The O'Connors will have a preliminary hearing at 8:30 a.m. Monday, Nov. 29, in San Jose Municipal Court Department 6.

"We're getting swamped with a lot of irate people" who want to identify and recover their property, Niemeyer said. So far, the police have concentrated their effort on victims involved in six burglary counts filed in the case.

Starting Monday, other victims from Stanford and Los Altos will be called by their local police for appointments to view the recovered goods, which fill two 50-foot trailer modules.

Niemeyer emphasizes that 1) victims must have a copy of the police report filed at the time of their property loss, and 2) detectives from each jurisdiction involved will notify the victims and schedule the viewing. Only two persons per hour can be scheduled, under police supervision.

Only one jurisdiction per week can be handled, Niemeyer said. "We have had more than 100 calls from Palo Alto alone."

Calls have been received from victims as far away as Contra Costa, Niemeyer said. So far, however, it still appears that the burglaries were mainly in Los Altos, Stanford, Palo Alto, Menlo Park, Redwood City, and nearby parts of San Mateo County. "I don't think he did more than 300 cases," Niemeyer said. "That's incredible," but far below the number of citizens who have called.

While the trailers now house an impressive display of furs and an exquisite collection of derringers and other antique guns, some of the most valuable items—museum quality rugs, gold, silver, and fine jewelry—reported lost have not been recovered. The jewelry may have been broken up, and the gold and silver melted down, Niemeyer suggested.

Those who have viewed the property "appear to be pretty truthful," Niemeyer said. "They're not trying to rip off someone else's keepsake." The spontaneous reactions are quite marked. "People will go through two or three boxes, then suddenly discover something they never thought they'd see again."

Even after the lengthy process of arranging for victims to view the recovered goods is complete, the property may not be released without permission of the court. Those victims whose losses were reimbursed by insurance face further complications.

Stanford Daily gives us the last laugh on Big Game

Continuing the Big Game rivalry in a humorous vein, *Stanford Daily* editors Wednesday distributed 7,000 copies of a bogus four-page issue of *The Daily Californian* with the banner headline "NCAA awards Big Game to Stanford."

The lead article said "an unprecedented and sure-to-be-controversial decision" was made by "a special NCAA panel, invoking a rarely used amendment to its bylaws."

An editorial commented "if this game is going to be decided in the courtrooms, so be it. We're prepared to fight this decision by the NCAA as long as it takes."

Richard Klingler, *Stanford Daily* editor, credited staffers Tony Kelly and Adam Berns with the idea for the bogus edition.

Copies were distributed in Berkeley between 8 and 9 a.m., before the regular issue of the *Daily Californian* hit the streets.

"It was gone almost as soon as it was delivered," Klingler said. "We intended it to be slightly implausible. Our intent was to be humorous rather than malicious."

How was it received? "They weren't laughing," Klingler said. Some early readers argued whether the issue was authentic.

Stanford students worked all night to produce the issue. Ten did the writing, and another 10 the distribution. "Bears shocked, appalled," was the headline on a front-page sidebar story.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next calendar deadline is Wed., Dec. 1, to cover the week of Mon., Dec. 13, through Sun., Dec. 19.

LATE ANNOUNCEMENTS

Wed., Dec. 1. Basic Science Research Colloquium: "Serotonin receptors and adenylate cyclase in parasites" by Dr. Tag E. Mansour, Pharmacology Dept. 5 p.m. Fairchild Aud.

CROW Women at the Top Lecture: Eleni Fourtouni, editor and translator of *Great Women Poets*, reads Greek women poets (in translation). 8 p.m. History Bldg., Room 203. Public cordially invited.

Squash: Vs. Peninsula SC. 6 p.m. deGuerre.

Thurs., Dec. 2. Wrestling: Vs. Oregon. 6 p.m. Maples Pavilion.

Fri.-Sun., Dec. 3-5. Men's and Women's Swimming & Diving: Stanford Invitational. All day. deGuerre pools.

Fri.-Sat., Dec. 3-4. Men's Basketball: Stanford Invitational. 7 & 9 p.m. Maples Pavilion. Ticket information at 497-1021.

Sat., Dec. 4. Men's and Women's Rugby: Stanford Ten-a-Sides. 8 a.m. Maloney Field.

Fencing: Vs. San Jose State. 1 p.m. Roble Gym.

MONDAY, DECEMBER 6

Structural Biology Dept. Lecture: "Studies on the Photoreceptor Cyclic GMP Phosphodiesterase and its Homology with Adenylate Cyclase" by Dr. Mark Bitensky, Los Alamos National Laboratory, NM. Noon. Fairchild Bldg., D102.

Numerical Analysis Seminars: "The Splitting Extrapolation Method for Multidimensional Problems" with Lin Quin, Academia Sinica. 4:15 p.m. Math 380C.

Condensed Matter Physics Special Seminar: "Surface and Thin Film Analysis of Mercury Cadmium Telluride by Combined SIMS, AES, XPS and TDMS" with Otto Ganschow, Westfalische Wilhelms Universitat Munster, West Germany. 4:15 p.m. McCullough Bldg., Room 240.

Stanford Film Society: "Left Handed Gun." 7 p.m. Kresge Aud. $1.50.

TUESDAY, DECEMBER 7

Fluid Mechanics Seminar: "Rapid Estimation of Unsteady Aerodynamic Forces by the Transonic Indicial Method" with Sam McIntosh, Nielsen Engineering and Research, Inc. 4:15 p.m. Skilling Aud.

Music Dept. Concert: Thomas Stauffer, cello, with Naomi Sparrow, piano. Music by Debussy, Koechlin, Janacek, Hindemith. 8 p.m. Kresge Aud. $4/$2.

Alumni Association World Premiere Film: "The Verdict" starring Paul Newman. 7 p.m. Memorial Aud. Tickets $5 at Tresidder Ticket Office or major outlets. No tickets sold at door. A benefit for the Student Film and Television Production Center.

WEDNESDAY, DECEMBER 8

Electronics in Medicine Seminar: "Laser Applications in Cardiology" with Dr. Robert Ginsberg, Dept. of Cardiology. 4:15 p.m. McCullough 134.

Colloquium of the Dept. of Chemical Engineering: Title TBA. The speaker is Prof. Roy Jackson, Princeton Univ. 4:15 p.m. Chemical Engineering Conference Room.

Squash: Vs. California No. 2. 6 p.m. deGuerre.

Basic Science Research Colloquium: "Immunochemistry of actin clathrin and HLA" with Dr. Peter Parham, S.U. 5 p.m. Fairchild Aud.

Dance: Student and Class Projects. 7 p.m. Roble Gym.

Women's Basketball: Vs. San Jose State. 7:30 p.m. Maples Pavilion. $2 adult, $1 child.

Physicians for Social Responsibility: "Reversing the Present Arms Race" by Linus Pauling, twice Nobel Laureate. 8:15 p.m. Fairchild Aud. Public cordially invited.

THURSDAY, DECEMBER 9

Men's Basketball: Vs. St. Mary's College. 8 p.m. Maples Pavilion. Ticket information at 497-1021.

Music Dept. Concert: Alma Trio and Guests. Andor Toth, violin; Gabor Rejto, cello; Adolph Baller, piano. Mozart—Trio in B flat Major, K. 502; Bartok—Sonata No. 1 for violin and piano; Schubert—Quintet in A Major, op. 114, "Trout." 8 p.m. Dinkelspiel Aud. $4/$2.

Law School Lecture: "Rhetoric and Legal Reasoning" by Prof. Chaim Perelman, Universite Libre de Bruxelles. 4:15 p.m. Law School, Room 280. Public cordially invited.

FRIDAY, DECEMBER 10

Applied Mathematics Lecture: "A dynamic theory of sedimentation" by Prof. Russel Caflisch, Math Dept. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Materials Science & Engineering Dept Colloquium: "Cyclic Crack Growth in Pressure Vessel Steels" with Dr. R. Jones, EPRI. 3:30 p.m. Peterson Laboratory, Room 550A.

Music Dept./Memorial Church: Service of Lessons and Carols. Gregory Wait, conductor; Herbert Nanney, organist. Music of Brahms, Britten, Poulenc. 8 p.m. Memorial Church. Free. (Repeated tomorrow, same details.)

STARTS Great Directors Film Series: "India Song" (1972), dir. by Marguerite Duras. Varied characters comment on a story of marital infidelity and suicide at an embassy reception in Calcutta in the mid-1930s. 8 p.m. Geology Corner, Room 320. $3.75 general, $2.75 students.

Archaeological Institute of America Lecture: The speaker is David Stronach, UC-Berkeley. Title TBA. 8:15 p.m. Room 370 (opposite Physics Tank). Public cordially invited.

SATURDAY, DECEMBER 11

Men's Basketball: Vs. Chico State. 3 p.m. Maples Pavilion. Ticket information, 497-1021.

Music Dept./Memorial Church. Service of Lessons and Carols. See details for yesterday.

SUNDAY, DECEMBER 12

University Public Worship: Student Worship Service, 8:30 a.m.; Robert G. Hamerton-Kelly, dean of the chapel, 11 a.m.; Evening Communion in Memorial Church Round Room, 6 p.m.

Music Dept. Concert: Organ Recital by Herbert Nanney. Advent and Christmas Music to inaugurate the new console of the Murray Harris organ. 2:30 p.m. Memorial Church. Free.

ASSU Sunday Flicks: "My Fair Lady." 6:30 & 9:45 p.m. Memorial Aud. $1.50.

Annual Messiah Song: Gregory Wait, conductor; Herbert Nanney, organist. Come and sing or play the Handel oratorio. Orchestra parts provided. Bring choral scores or they may be purchased there. 7 p.m. Memorial Church. Public invited to participate or listen.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.

Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.

Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.

The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. Through January 11.

Japanese Brush Painting by Ami Wada. Reception, Fri., Dec. 3, 5-7 p.m. Bechtel International Center. Dec. 3-30.

Melange of Paintings. By several artists who have had exhibits in 1982. Faculty Club Gold Lounge.

Contemporary Chinese Paintings by Anna Wu Weakland. Tresidder 2nd floor gallery. Month of December.

Photographs by Matthew Schwartz. Coffee House Gallery. Month of December.

CAMPUS REPORT

Volume XV, Number 12 | A publication for Stanford University faculty & staff | December 8, 1982



Students study in the sun

Campus growth, complexity may divide faculty, staff

Administrative costs at Stanford today remain about the same as a decade ago, at 27 percent of the University's operating budget.

But sheer growth of the institution and professionalization of its managers have increased tension in faculty-staff relations, according to an extensive self-study of university organization and management.

"Within universities, the coexistence of two subcultures—the faculty and staff, each with substantially different workstyles and objectives—can produce stress. . .as when, for example, the person held accountable for cutting a certain amount of grass each day by a computerized schedule runs a noisy mower next to a lecture," the study noted.

While this may seem a trivial example, "a good deal of pent-up frustration within the institution is due to the failure of one culture to understand the needs of the other."

Originally headed by Vice-President Joel P. Smith, development, the study included President Donald Kennedy, Provost Albert Hastorf, Vice-Provost Raymond F. Bacchetti, director of university budgets; Vice-Provost Gerald J. Lieberman, dean of graduate studies and research; Vice-President William F.

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Indirect costs for research spark Faculty Senate concern

Slow or no growth in total research volume makes it increasingly difficult for Stanford to recover the full costs of producing new knowledge, Vice-Provost Gerald J. Lieberman, dean of graduate studies and research, told the Faculty Senate Thursday, Dec. 2.

Last month, Provost Albert Hastorf cited lower than anticipated growth in research as a prime cause of a new three-year $10 million belt-tightening program for the University.

"In Washington's current political climate, we are not likely to see any significant overall increases in federal research funding, which accounted for some 90 percent of Stanford's total research support of $136 million in 1981-82," Lieberman said.

Last year, for the first time in recent history, Stanford's direct research expenditures did not increase as rapidly as inflation. Research salaries, travel, computer time and other direct costs rose about three percent, inflation about nine.

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Senate adopts new safeguard for grad student-employees

Stanford faculty may not serve as academic supervisors of graduate students whom they employ outside the University without advance approval from their department head or dean, the Faculty Senate decided Thursday, Dec. 2.

In a divided voice vote, the Senate said: "Faculty members must be especially sensitive to potential conflicts of interest between their teaching responsibilities vis-a-vis graduate students working under their supervision and their outside consulting interests.

"To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's adviser or as a participant on that student's dissertation committee without the prior approval of the department chair—or dean, if the involved faculty member is also department chair."

The action, suggested publicly in April by Vice-Provost Gerald Lieberman, dean of graduate studies and research, was unanimously recommended by faculty and student members of the Committee on Research.

In a Nov. 16 letter to the committee, the Graduate Student Association noted there were "substantial advantages" to both faculty and students in such off-campus employment but also "inherently high potential for abuse."

"The majority of students involved in off-campus employment with their (faculty) advisers appear to be quite satisfied with the current situation, and would oppose any policy which would necessitate termination of their employment," the GSA said in a statement circulated to the Senate Thursday. The GSA favored third-party approval of such employment as a curb on potential abuse.

While students have been "very

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DNA patent file is closed to public

Stanford University Monday, Dec. 6, asked the U.S. Patent Office to close the files on the patent application for recombinant DNA from public scrutiny until action on the application is complete.

Noting that the initial decision to hold the files open to public view was "unprecedented," Robert M. Rosenzweig, Stanford vice-president for public affairs, said Monday's action was "taken with some regret."

The initial decision to keep the file open to the public was "an experiment with some risks attached," he noted. "We were prepared to take the risk because of the wide interest in the subject of the application and because we believed we would emerge at the end with a stronger patent.

"The latter may still be true, but in our judgment, the experiment has failed. It is better to recognize that fact before more damage is done.

"Unfortunately, there has been no effective way to correct the erroneous public impressions resulting from the way in which the Patent Office acquires additional information. It does that by formally rejecting the application. The reason given for the rejection then tells the applicant what new information needs to be supplied.

"In practice, however, when an application is contested, the result of this process is to separate the allegations from the answers to them. As is so often the case when this happens, the charge is newsworthy but the answer to it is not. The two should appear together.

"When the application process is completed, the file will be open for public inspection. Until then, it is better that it not emerge in piecemeal fashion."

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Jaedicke foresees increases in space, faculty, and expenses

Maintaining and building upon the quality of the Stanford Graduate School of Business will be the major concern of Robert K. Jaedicke, a Stanford professor of accounting who has been appointed dean of the school, effective Jan. 1.

In his first interview since the appointment was announced Nov. 30, Jaedicke, 53, said the School has no "glaring weakness" and he expects no major changes in direction.

"This is already a quality School and a quality University, with a high-quality faculty and student body and a very supportive alumni group," Jaedicke said.

"There's no evidence that it needs some dean to come in to shake it up or move it in a particular direction. I don't think we're in a position where there is some glaring weakness that dominates everything else."

Quality improvements

Jaedicke, who has been a professor of accounting at the School since 1961, said his central concern as dean will be to continue to improve the quality of the School, which is widely regarded as one of the top schools of management education and research in the world. "The only way that I know an academic institution can increase its productivity is through quality improvements."

Jaedicke also listed several needs facing the Business School over the next five years, including the hiring of additional faculty members and a continuing emphasis on faculty recruitment, the need for additional space, continued improvements in computer facilities, and greater focus on international dimensions of business management.



Robert Jaedicke

"There are many needs created when you go about improving the quality of what you are doing," he said.

He added, however, that those needs are built upon "a very important core of activities that are the basic strengths of this School and are ones you don't want to overlook. When you talk about what needs to be done, you can easily ignore the 80 percent of things that are already in place and of high quality. These are the kinds of things we want to keep strong, as well."

Jaedicke served as acting dean of the School in 1979-1980 and as associate dean for academic affairs from 1969-81. He will succeed Rene C. McPherson, 58, who announced his intention to resign in June for health and personal reasons.

One problem Jaedicke foresees in continuing to improve quality of the Stanford Business School is that it will become increasingly expensive to operate and more difficult to finance, he said. Unlike profit-making businesses, academic institutions aren't able to raise prices in order to fully recover their costs for improvements. "The better we get, the more money it costs," Jaedicke said. "It makes our bottom line worse in the sense that we have to raise more resources."

Faculty direction

Jaedicke also said he firmly believes that the academic direction and policies of the School must continue to be set by the faculty. "It would be foolish for this School to hire the best faculty people around and then dictate what they should be doing. You just don't play the game that way. You hire those individuals because you want their expertise; then you do everything you can to get that expertise to operate."

He said the responsibility of the dean is "to make sure that the School has the financial and other kinds of resources that are needed in order to see that the direction—as set by the faculty—can in fact be carried out by the faculty." He described the role of the dean as a catalyst to ensure that the process of faculty involvement is continually active.

He added: "The dean should also exercise some leadership in this whole process. One of the big contributions of the three deans I have served under was giving the School a sense of quality. I never heard any of them, as the first question out of the bag, ask 'What does this cost?' I heard them continually say 'Is this of high quality?' "

Jaedicke, who will become the sixth dean of the GSB since it was founded in 1925 and the first selected from its faculty in many years, said he doesn't believe his status as an "insider" will handicap him in dealing with the business community and other external groups. The previous three deans—Ernest C. Arbuckle, Arjay Miller, and McPherson—were all prominent corporate executives.

Public relations

He noted that over the past two decades, the School has developed good working relationships with external constituencies—including business and government leaders and alumni—and has also greatly intensified its ties within the Stanford University community. "If deans from the nonacademic world could strengthen internal relationships, then somebody from the academic world ought to be able to strengthen external relationships," he said.

He added that his extensive knowledge of the School and his year as acting dean will help him in dealing with external constituencies—a duty he said he enjoys. "The things that you want to talk about with people from the outside have to do with the School—what we're doing, where we're going. I think that's a comparative advantage for me. If I know anything, I ought to know about that."

He added that that knowledge will help him in his role as fund-raiser for the GSB.

On the subject of the future of management education, Jaedicke said one of the major challenges facing American business schools in the 1980s is how to react to the rapid expansion of the boundaries of management.

He said management has experienced tremendous change and growth in the last decade, becoming more international in scope, increasingly concerned with the development of new technologies, more involved with political systems, and intertwined with the world economy.

New environment

American business schools will probably all respond differently in teaching students in master of business administration degree programs to grapple with the new environment of management, Jaedicke said. He added that in the future the major business schools may specialize more since no one school will be able to teach all the extra business skills required for a modern-day manager.

"With all these things happening, they've got to be reflected in an MBA education. But the big challenge is that business schools still have a two year MBA program; there are no prospects of more than two years," he said. "In a sense, we are going to do a smaller part of the education of managers in the future."

Jaedicke said executive education programs may grow in number and scope as managers on the job return to business schools to update their skills.

McCarty heads hazardous waste group

Prof. Perry McCarty, civil engineering, will head a new faculty task force on hazardous waste management, Vice Provost Gerald J. Lieberman, dean of graduate studies and research, has announced.



Perry McCarty

Other members are Profs. Carl Djerassi, chemistry; Stanley Falkow, medical microbiology; Errol Friedberg, pathology; and Henry S. Kaplan, radiology.

Prof. Keith Hodgson, chemistry, will serve as "back up" for Djerassi. Associate Dean Pat Devaney will serve as Lieberman's representative. Alain DeCleve, director of health and safety, and Roland Finston, director of health physics, will provide staff support for the task force.

The task force will provide informed faculty views as the administration proceeds to develop a University-wide waste management system, Lieberman said.

DeCleve and Finston have proposed construction of a permanent on-campus facility to store, package, treat and incinerate all hazardous wastes generated by the University and the Hospital. Those few wastes which cannot be burned or treated would continue to be trucked off campus for disposal.

The task force will review the need for such a centralized facility, comment on proposed operations and traffic patterns involved, advise on the criteria for choosing its location, and comment on alternative sites.

The University currently has a small facility where chemical wastes are stored before they are trucked off campus for disposal. But this facility has only a temporary permit and does not provide adequate resources for packaging, treating or incinerating wastes.

While some wastes, primarily infectious agents, are now incinerated on campus, the equipment involved needs to be replaced in the near future.

The Health Physics Office now packages radiological wastes generated at Stanford which are trucked to a dump site in the state of Washington. This site will not be available to Stanford after 1986.

DeCleve, as director of health and safety, is now in the process of developing a "cradle to grave" approach for the acquisition, use, storage and disposal of hazardous agents used in research and teaching laboratories and the physical plant.

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Stanford's unique program

Environment finds new sort of friend– the engineer

BY DONALD STOKES

Stanford is training a new breed of professional who blends engineering expertise with skills in meeting the needs of environmental conservation.

"I am not aware of any other university that tries to achieve this in the way we do," says Leonard Ortolano, professor of civil engineering, who is director of the Graduate Program in Infrastructure Planning and Management.

"It is long overdue. For too long all the emphasis on environmental conservation has come from volunteer groups such as the Sierra Club. Now the thrust for preserving environmental values will come from trained professionals as well, the very people who have the responsibility of changing our world physically."

In a typical year, between 15 to 20 students are accepted into the program. About 60 percent of them are American, the rest come from countries all over the world. Roughly one third are women.

"Other universities train people in separate programs, each aimed at mastering a particular expertise such as public transportation, energy facilities or water resources development," said Ortolano. "Their faculties are in separate groups.

"We believe that every person engaged in planning public works should share a common body of knowledge. Our band of faculty works together as a group in each of the main areas.

"Our Infrastructure Program consists of faculty who specialized in particular areas. They include such people as Gil Masters and Lyna Wiggins in energy facility planning; and Greig Harvey who is a transportation specialist. I work on the water development side. We are searching for a specialist in land use problems.

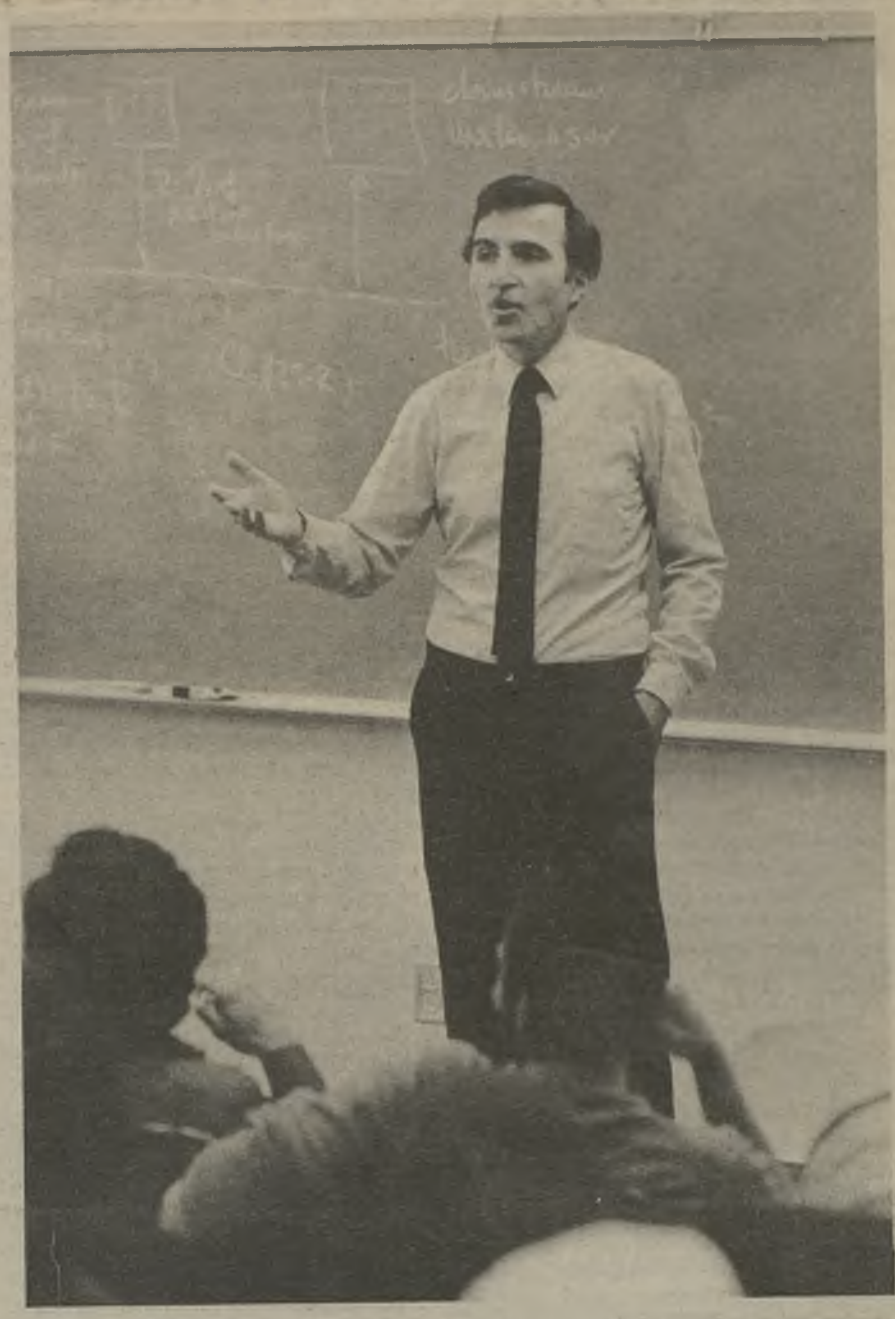
"What we are doing is innovative. It has taken quite a while to learn how to do it, and we have had some setbacks, but now we are well on our way.

"The program is becoming better known, and we are getting an increasing stream of applicants, but we take only as many as we can handle effectively.

"This is one of those developments where one is surprised that it didn't come much earlier on, for the need is quite clear. It is remarkable that although the face of the land has been changed drastically, little attention has been paid till recently to the environmental and social values entailed.

"What concern there was came from members of the public who banded together to make their voices heard. What Stanford is doing is to internalize those outside forces in the training of public works experts.

"Our training is not confined to what might be called the environmental and social aspects, we also teach the economic and financial planning consequences of public works. In other words we train people not only to create projects but to do this in a way that will affect the public in the most beneficent ways."



We believe that every person engaged in planning public works should share a common body of knowledge. Our band of faculty works together in each of the main areas.

—Leonard Ortolano

The graduate program comes out of a long tradition at Stanford which began three decades ago with the work of Clarkson Ogelsby, Ray Linsley, and Eugene Grant, all three of whom are now emeriti professors. They designed a program for engineering economic planning.

"The premise they worked on—one that still dominates our thinking—was that civil engineers have a great responsibility for the way the world is changed, in a development sense. The three professors said that it was not sufficient to train engineers technically, that they also had to be concerned with the broader needs of the community.

"Our predecessors developed programs that exposed engineers to economics and political science. By the late 1960s it became clear that what was needed was a balanced approach to the social and environmental issues involved in public works projects. This important element was added to the teaching.

"After that it became a logical step to put together the program in infrastructure planning and management. The men and women emerging from this program are a new breed. They plan with all the needs of the public in mind, not just the provision of technical services.

"Civil engineers affect the lives of the public at every turn, from highways to dams, from buildings to sewage systems, from canals to railroads and bridges."

Ortolano points out that engineers and other city planners often do not live in the locality of projected works and are unaware of neighborhood interests or feelings. "By involving individual citizens in your project planning you are able to ensure that local sensibilities are reflected in whatever public works are constructed.

"Remember the days when very little attention was paid to neighborhood feelings? This led to people laying down in the path of bulldozers, or chaining themselves to threatened trees, to try to stop projects that were alien to what the locality wanted.

"It is not enough merely to rely on random polls or to announce that the views of local people are invited. A vital part of all public works should be interaction with the public throughout the various stages of planning, with a full range of information being exchanged.

"This is a side of public works which has cried out for more attention. We have the know-how to do the work technically, but a big gap has been the lack of effective ways of involving the public in the planning process."

It was the work of people such as Ortolano that helped stop the confrontational period between the public and the authorities dealing with public works. Ortolano developed new approaches to planning which were responsive to the need (and the legal necessity) to secure public participation in water planning.

His research work became well-known and widely respected by academicians, planners, and engineers.

His work was by no means confined to water problems. Professional journals published his suggestions on ways to include environmental considerations in highway planning.

"Today environmental considerations are frequently taken into account right from the start in planning public works," said Ortolano." At Stanford we are able to take the process a step farther.

"We are now researching how to organize scientific and technical information in ways that are useful to planners. For example, I am trying to forecast more accurately changes in land use associated with large public projects. This is a very difficult forecasting problem.

"We try to look ahead and make assessments of what will happen to the areas concerned. We have to make informed guesses about the probable impact of particular developments."

The new breed of socially-conscious engineers will often have to make presentations, either orally

continued on next page

Medicare cost curbs won't work

Federal proposals to contain Medicare costs through prospective reimbursement of hospital costs at negotiated, pre-set prices "will not contain the rise in health care costs," says economist Rita Ricardo-Campbell, a senior fellow at Stanford's Hoover Institution.

The proposals, made by Health and Human Services Secretary Richard S. Schweiker, "will increase regulation and the size and costs of the bureaucracy that administers Medicare" if adopted by Congress, she predicts.

Better cost containment could be obtained by moving up existing copayments by patients under Medicare from the 61st day to the sixth or eighth day of hospital stay, Ricardo-Campbell says. "This would create a needed incentive for patients to minimize the length of their hospital stay. Medicare pays for less expensive home care and home health services."

The Schweiker plan would use nearly 500 diagnostic-related groups (DRGs) with a set schedule of fees, a pattern "very similar to rate setting as practiced by public utility commissions," she observes. Each price would be modified by the patient's age, treatment procedure, discharge status, geographic area, and the size and type of hospital.

"If this legislation is enacted, then we are talking about negotiating and setting thousands of prices," she adds. At best it would result in only a one year lag in the level of costs being reimbursed."

The Hoover Institution economist also criticized California's "czar" bill for Medicaid patients and companion legislation covering private patients.

The MediCal-Medicaid bill requires hospitals to submit closed bids on a per capita patient basis in order to be reimbursed for MediCal patients. Ricardo-Campbell says this will result in increased competition among hospitals, speed up hospital specialization, and accelerate formation of hospital systems or chains.

"It should also reveal the already large subsidies being paid by private patients to support Medicare and MediCal patients," she says. "It raises the question of who should be paying for in-hospital teaching and research."

California legislation covering private patients will result in a range of prices for different levels of care, ranging from Volkswagen to Buick to Jaguar. "It assumes that Rolls Royce quality of care is being paid for out-of-pocket by the patient," she adds.

"The bills have no quality guidelines. Competition will increase among hospitals, insurers, and pre-paid groups or health maintenance organizations who act as financial middlemen," Ricardo-Campbell says.

Industry may take advantage of the different levels of quality and prices offered, but should help employees become "prudent purchasers" of health care to contain costs.

"Employers can encourage the advertising of medical care prices even if medical, professional colleagues disapprove," she declares. "Business pays $100 billion in health care coverage annually, but business is not performing all the customary facets of a purchasing agent's job for its employees—and it should be. . . .

"As competition among prepaid arrangements increases, some will fail. Business should assess the financial status of any health insurer or provider before signing a contract."

While health maintenance organizations and others may help contain costs by referring patients to relatively low-cost specialists, there is no assurance that these savings will be passed on to consumers, she notes. While HMO's have about a 20 percent market penetration in both San Francisco and Los Angeles, the number of physicians per thousand population are among the highest in the country "and so are prices and costs of medical care," she adds. "The HMO's in California compete by product differentiation, noy necessarily by price."

Ricardo-Campbell's views were developed in an Oct. 27 talk with the Santa Clara County chapter of the Financial Executives Institute, meeting at the University Club in Palo Alto.

Writing recommendations? Read on.

Following is a Dec. 6 memo to all faculty members and administrators from Christopher J. Shinkman, director of the Career Planning and Placement Center concerning letters of recommendation:

Since my office is frequently asked to handle letters of recommendation, I would like to share with you some thoughts on the subject. Most applications for admission to graduate and/or professional schools, and some applications for employment, require one, two, or three letters of recommendation. By definition, your "recommendation" or "reference" may be positive, neutral, or negative.

It seems to me that in order to be most useful to the person who will be receiving the letter and to the person about whom the letter is being written, the letter should be thoughtful, honest, and informative. If you do not know a student, it may be better either to get to know the student before agreeing to write (perhaps ask for a transcript and/or resume) or to suggest that the student seek another letter writer. Cursory or perfunctory letters of recommendation may have a negative impact on the student's application.

Some graduate admissions officers and employers have suggested to me that the most helpful letters of recommendation are ones which not only use descriptive adjectives (bright, pleasant, hard-working, etc.), but which also cite examples to demonstrate those traits or characteristics. For example, "He has exceilent leadership ability, as evidenced by his work as captain of the varsity soccer team."

It is generally wise to ask the student for what purpose the letter will be used and to emphasize academic skills in graduate school letters and personality factors in employment letters. In either case, you may want to refer to such qualities as: 1) ability to apply general information, to extend information, and to handle abstract ideas; 2) clarity of expression, both written and spoken; and 3) perseverance, maturity and personal adjustments, self-discipline, integrity, self-confidence, resourcefulness and creativity, sensitivity and tolerance for others. It may also be a good idea to describe the context in which you have known the student.

Some practical considerations may be worth mentioning. Whenever possible, letters should be on Stanford letterhead and typed or written in black ink (in order to yield a clear copy). Needless to say, letters must be signed and dated.

The Career Planning and Placement Center serves as a repository for letters of recommendation for current students and alumni and will reproduce and mail these letters at the request of the person about whom the letter is written. Only full-time staff members in the Career Planning and Placement Center have access to these letters, except in cases legislated by the Buckley Amendment. Either the letter writer or the subject of the letter can ask that the letter be removed from the Career Planning and Placement Center files and destroyed.

The Buckley Amendment to the Family Educational Rights and Privacy Act gives students access to letters of recommendation in the files of the Career Planning and Placement Center unless they have signed a statement waiving this right.

Before agreeing to write a letter of recommendation, the letter writer is entitled to know whether the person being written about has waived or retained the right of access. If you do not wish to write a recommendation in letter format, the Career Planning and Placement Center can make available to you a supply of standard Stanford recommendation forms, on which the subject of the letter expresses his/her intention to waive or retain the right of access.

Some students at Stanford get close to their date of graduation and then have trouble obtaining recommendations. In order to help solve this problem, the Career Planning and Placement Center will announce to all entering students that we are prepared to receive recommendations written about them at any period in their stay at Stanford. We will keep those recommendations on file until such time as the student is ready to use them.

Some graduate and professional schools provide their own recommendation form as part of the application packet. Letter writers need not use that form but should staple a copy of the letter of recommendation to it and return both in the same envelope. On the other hand, some faculty members may wish to individualize their recommendations to the particular school to which admission is being sought.

Any questions regarding this memo, or reactions to it, would be welcomed.

Ortolano...

continued from page 3

or verbally, so that the public can be fully involved in the planning process for public projects. It is important therefore that graduates should be able to write and speak clearly, so as to explain their ideas at public fora.

For this reason Ortolano is keen on making sure that his students can write and speak effectively. He refutes the common belief that often engineers are unable to do so. "That may be true at other places," he says, "but not at Stanford.

"When ever it is necessary for a particular student, we see to it that he or she takes appropriate courses to improve writing or speaking skills.

"The typical engineering student is not required to use speaking and writing skills so often as, say, the typical humanities student. It is useful, therefore, for the young engineer to be given the opportunity to practice self-expression."

Ortolano played a leading part in putting together the Program in Infrastructure Planning and Management. He serves as the leader of the group, but he also has other responsibilities.

"I play two roles at Stanford" explains Ortolano. "On the one hand I teach and do research in water resources and environmental planning. On the other I am director of the Undergraduate Program on Urban Studies.

The program does not have a separate faculty, but includes professors from history, anthropology, economics, and several other departments. This undergraduate program enables those students who wish to put together interdisciplinary majors that cover particular aspects of life in cities. Up to a dozen students do so each year. They include future architects and city planners.

Ortolano was reared in the Italian area of Brooklyn, New York. He recalls fondly the crowded street markets, the rich scents of ethnic cooking, the liveliness of the community. He graduated *magna cum laude* from the Polytechnic Institute of Brooklyn and went on to Harvard, where he gained his doctorate in engineering in 1969.

By then he had accumulated considerable experience in summer work as a research scientist with the U.S. Public Health Service, later he worked for the U.S. Army Corps of Engineers, and many private firms engaged in environmental and water resources planning.

He joined Stanford in 1970. His work soon led to professional honors from several engineering societies and a fellowship from Resources for the Future. He became known as a water resources engineer-planner with special expertise in the integration of environmental factors into water resources planning and decision-making.

Ortolano made major contributions with his studies of the implementation of the National Environmental Policy Act by federal water resource agencies.

When that Act became law in 1970 all the various water agencies ran into great difficulties in deciding what was expected of them. "Many of them had a tendency to suppose that nothing much would be expected" observed Ortolano.

"We at Stanford investigated the situation to gauge the response of the agencies. Our studies showed that often their work on environmental aspects was not being used to influence decisions. In many cases the effect was to observe the letter of the new law rather than its spirit.

"It may sound amazing, but in the early 1970s environmental reports were often made *after* the vital decisions had been made. The reports were often made simply to conform to the law.

"Our team did quite a lot of work in figuring out ways to restructure planning processes, so that environmental issues would receive serious consideration in public works planning. A central feature that I advocate was the need for public participation in the planning process, started at an early stage.

Today graduates from the special program at Stanford are to be found in key posts all over the world. Their influence will help to create an environment that is more pleasing and useful to all.

Ortolano is married to Patti Walters, who is an architect in Palo Alto. There are two sons from a previous marriage: Christopher is a freshman at UC-Berkeley, and Alexander is at Palo Alto high school.

Soviet policy now more than muted echo of Byzantine, Tatar past

—BY MILLICENT DILLON

In making predictions about the future of the Soviet Union, the limits as well as the uses of history must be taken into consideration, says Stanford Soviet expert, Prof. Alexander Dallin.

"My point is of course not to discourage people from looking at Soviet history. It's obviously a terribly important part of Soviet studies. But a good historian has to know the limits of history.

"There is too much of a tendency in some quarters to see Soviet policy now as a muted echo of the Byzantine past and the Tatar yoke, and of all sorts of exotic and confused happenings of the past, which in turn are supposed to determine what Russia is going to be like in the future," said Dallin, professor of history and chairman of the international relations program, in a recent campus interview.

"If we would have applied that standard in 1945, we would have said that Germany could never be democratic and that Japan would always be as it had been.

"I don't expect any changes in Russia as fundamental as in those two countries, but it is necessary to keep in mind that the future is not just an extension of the past."

Dallin sees a clear divergence in the field of Soviet studies between those who take the determinist view and those who believe some change is possible. He suggests that it would be helpful to think of the Soviet experience as a slow and painful learning process, in which the Russians keep checking the real world to find out whether their prior assumptions have or have not been borne out by what happens.

"So, for example, it's a little hard to see how they can keep the faith in the idea of world revolution after 65 years in which their expectations have not been fulfilled.

"Or to take another example, the original Soviet expectation was that in their state crime would wither. It was regarded as a byproduct of capitalism and was to disappear with the advent of socialism.

"But they have noticed that far from withering, crime is flourishing. There is as much corruption in the Soviet Union today as in any country and they no longer try to deny it.

"So that reluctantly and piecemeal there is a learning process taking place. With each new generation there is some change in values. The changes may not always be things we're particularly fond of, but that's something else altogether. Nevertheless, people's values do normally undergo changes.

"For example, there's much more consumerism in Soviet Russia today than there was a generation ago or than Lenin had ever expected."

Commenting on the reason many historians and politicians choose to look at Russia in determinist terms, Dallin says, "I think one of the reasons is ideological. It is very convenient to have a single adversary on whom you can blame everything that goes wrong.

"Psychologically, in the American experience, the notion of a single devil has been found to be very comforting. It's much easier to deal with that than with a world consisting of many rival forces, each of which has to be recognized as authentic and indigenous."

One of America's leading experts on Soviet history, and past chairman of the National Council for Soviet and East European Research, Dallin is the author of a number of scholarly works, including *German Rule in Russia 1941-45*, *The Soviet Union at the UN*, *The Soviet Union and Disarmament*, and *Political Terror in Communist Systems*.

He has just completed an extended study on domestic sources of Soviet foreign policy.

In all of these studies he does not, of course, disavow the importance of history.

"Certainly it's true that some Soviet attitudes toward the state and toward authority come out of their past experience. You're not going to be picking up Jeffersonian tendencies there, for example.

"The Russian society never had intermediate groups, secondary associations such as Rotary Clubs or the National Association of Manufacturers, to mediate between the state and the individual. So it's long been taken for granted in Russian society that the state does a lot that Americans would be suspicious of.

"We have to be aware of that paternalistic view of authority, but we still have to guard against an absolute extrapolation from it."

Some of the most unpredictable factors that may make for future changes, according to Dallin, are linked to developments in the Soviet economy, specifically to the effects of recent slowdowns and shortfalls.

"History is no use to us here," says Dallin, "because there is no historical precedent for these happenings."

Dallin came to Soviet studies partly because of his parents, both of whom came from Russia. "Because of them I had a little language very early and also a feeling for the culture."

Born in Germany, Dallin lived in France with his family and emigrated to the U.S. in 1940. After finishing high school, he served in the Army from '43 to '46. There he was called on to act as a translator for German prisoners of war.

"By chance I also had to deal with a large group of Russians who had been captured by the Germans, put into German uniforms and forced to serve on the front. They surrendered to us and were brought over here, thousands of them. No one understood them and in fact it took a while for people to know what language they did speak.

"These Russians couldn't figure out what had happened to them. They'd traveled thousands of miles, having been brought by ship to this country. At the end of the war it was very painful. Some of them committed suicide rather than be returned to the Soviet Union, although most of them did go back.

"Through my contact with them I became more interested in the whole subject of Soviet studies."

Following his war service, Dallin went to Columbia, where he enrolled in the Russian Institute, one of the first two programs in this country.

"Those were good years, those first postwar classes at Columbia. A lot of students were older, had been in the war, had been in Europe, had met Russians, and some of them knew the language. They were people who wanted to get a systematic training in the field."

Out of that original group emerged some of the leading Soviet experts in the country today, including Walter Stoessel, a Stanford graduate, ex-ambassador to the Soviet Union, and, until his recent retirement, number two in the State Department under Secretary Haig. Also in that class was the present director of the Columbia Harriman Institute, Marshall Shulman, who went on to become Secretary Vance's major adviser on Soviet affairs.

Before this time, Dallin notes, there were no Russian studies programs in the U.S. In fact, before World War II, there were only five people in the country teaching university courses about Russia.

After the War, primarily as a result of financial support from the Rockefeller, Ford, and Carnegie Foundations, a number of programs were set up nationwide. Russian Studies flourished at American colleges and universities until the late '60s, at which time a serious decline in funding and enrollment took place.



It's a little hard to see how (Russians) can keep the faith in the idea of world revolution after 65 years in which their expectations have not been fulfilled.

—Alexander Dallin

From his vantage point as former director of the Russian Institute at Columbia ('62-67), and his current tenure as professor at Stanford (since '71), Dallin evaluated the future of scholarly needs of Soviet studies.

"Some fields have been totally neglected in this country, such as Soviet society. There are virtually no sociologists in the U.S. dealing with that subject.

"Occasionally some literary scholars will use literature as a mirror of society. But beyond that, there are perhaps three people in the whole country who spend even part of their time on this study.

"Well, it's largely the same situation in economics. Neither in sociology nor in economics are departments interested in area specialists. In economics, for example, the interest is in econometrics or in functional problems, but not in particular geographical areas. Yet there's a real need for study in these fields.

"There is nobody in Soviet economics at Stanford. Nationally, the prediction is that over one-half of those studying or teaching Soviet economics will retire in the next 10 years. And we have almost no one to replace them.

"This is partly a question of incentives. For any good economist there are many more jobs available with much more money and fewer headaches, say working for a brokerage house or for a corporation, than working on Soviet economics. Further they don't have to deal with false statistics and with the language barrier."

Another subject in the field that has been neglected, according to Dallin, is the study of nationalities in Russia.

"We've been so preoccupied with high politics, with the question of who is doing what to whom in the Kremlin, that we've neglected the other 250 million people in the country.

"Three or four people in the country are

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Brian Reid wins ACM's Hopper Award

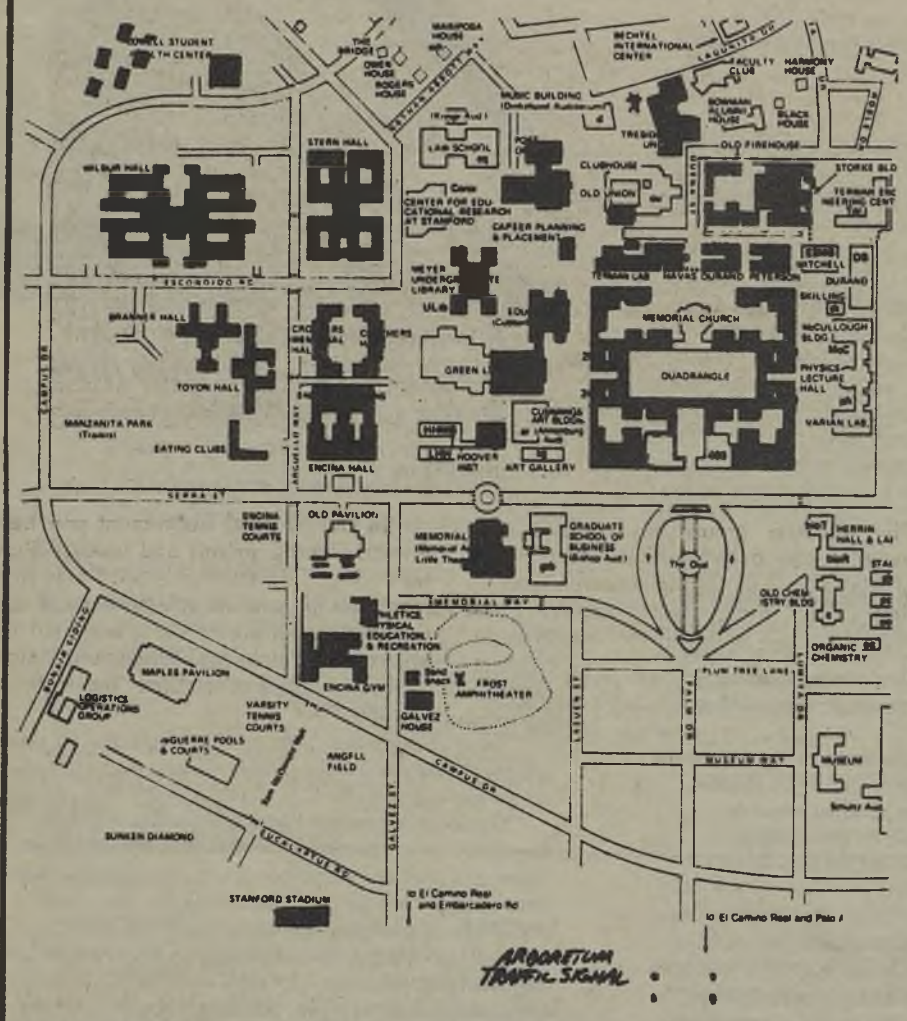
Prof. Brian K. Reid, electrical engineering, is the recipient of the 1982 ACM Grace Murray Hopper Award of the Association for Computing Machinery.

The ACM Awards Committee cited Reid for "his contributions in the area of computerized text-production and typesetting systems, specifically Scribe. . . (which). . . represents a major advance in this area. It embodies several innovations based on computer science research in programming language design, knowledge-based systems, computer document processing, and typography. The impact of Scribe has been substantial due to the excellent documentation and Reid's efforts to spread the system." Scribe is now marketed by Unilogic, Ltd., Pittsburgh.

Reid received a B.S. degree with honors in physics from the University of Maryland in 1970 and designed and implemented the Scribe system as a graduate student/research programmer at Carnegie-Mellon University. He received his Ph.D. in 1980, and joined Stanford's Computer Systems Laboratory the same year.

The ACM Grace Murray Hopper Award has been presented annually since 1971 to recognize achievements in computing made by persons before their 30th birthday. The award includes a check for $1,000 donated by the Sperry Univac Corporation in honor of Dr. Hopper, a computer pioneer who is currently serving as a captain in the U.S. Navy.

Central campus blackout



Power will be off to the main quad and other areas shown in black on the above map, including the arboretum traffic signal on

Sunday, December 19
from 8 a.m. to 5 p.m.

Power to Tresidder Union only will be off from 8 a.m. to 12 noon.

This shutdown is required for substation construction and equipment maintenance. For additional information, call the Utilities Department at 7-3765.



Thomas Henrikson

Henrikson named to Hoover post

Hoover Institution Director W. Glenn Campbell has announced the appointment of Thomas H. Henriksen as senior research fellow.

Henriksen began his Hoover Institution career as the peace fellow in the 1979-80 National, Peace, and Public Affairs Fellows Program. He was appointed a research fellow in 1980, and continued his studies at the Institution while he held the position of senior auditor in the Internal Audit Department of Stanford University.

On march 1, 1980 he returned to the Hoover Institution on a full-time basis, assuming certain administrative duties in addition to his academic research.

He is the editor of *Communist Powers and Sub-Saharan Africa* (Hoover Institution Press, 1981) and the coauthor, with Senior Fellow Lewis H. Gann, of *The Struggle for Zimbabwe* (Praeger 1981), among other works.

Before coming to the Hoover Institution, Henriksen was professor of history at the State University of New York at Plattsburgh. He served in the U.S. Army as an airborne infantry officer, 1963-65. Henriksen received his B.A. degree from the Virginia Military Institute in Lexington and his Ph.D. degree from Michigan State University.

Library closure

The Green and Meyer Libraries will be closed on Thursday, December 30th, while the buildings are being fumigated. This is in addition to the already scheduled New Year's holiday closure December 31st through January 2nd. Other libraries will maintain their regular intersession hours on the 30th.

Dallin reviews Soviet studies...

continued from page 5

beginning to specialize in the study of Central Asia. Partly, of course, it's a language problem. What graduate student in this country can be expected to spend years studying Uzbek in addition to Russian?"

In connection with future funding Dallin emphasized the importance of cooperation between universities, as is currently taking place between Stanford and UC-Berkeley.

"Together with the people in Soviet Studies at Berkeley we have the critical mass we need. Neither place alone can do all the things that need doing.

"This kind of cooperative venture is, I suspect, something that the foundations will encourage us to do. It makes for better use of scarce resources, even in graduate student training.

"We already have an arrangement whereby students can take courses at either campus and get credit at their home campus. We're likely to start several joint research projects soon.

"We do have a faculty seminar joining the two programs and joint conferences. The two libraries have coordinated acquisitions in this field so there will not be duplicate purchasing. So we're moving more and more toward coordination. I think it makes sense.

"Realistically, at this point, we're not going to have the money or the green light from the Administration to hire half a dozen more people in fields where we don't have them.

"The group at Berkeley is a large one and a good one. They have excellent people in a variety of disciplines.

"But they don't have anything like our arms control program, or anyone like the people here at Stanford Linear Accelerator Center. Our collection at Hoover is also unique. Each side has something to contribute that the other doesn't have, so it makes good sense to work together."

Theodore Anderson gives Wald lectures

Theodore W. Anderson, professor of statistics and economics, gave the Abraham Wald memorial lectures at the 1982 annual meeting of the Institute of Mathematic Statistics together with the American Statistical Association at Cincinatti this fall.

Anderson was president of the Institute of Mathematic Statistics in 1963 and vice president of the American Statistical Association in 1971-73.

Personnel update

Enroll in health plans by December 10

Health Open Enrollment ends December 10. Faculty and staff who want to change base health plan participation (Bay Pacific, Blue Cross, Kaiser or TakeCare) or who want to add dependents need to do so by December 10.

Faculty and staff may call the Office of Benefits and Records at ext. 7-1776 between the hours of 9 a.m. and 4:30 p.m. to obtain necessary forms and information. Employees located at SLAC should call ext. 2357.

New coverages and monthly premium rates become effective January 1, 1983. Faculty and staff who did not receive the information packet mailed in early November should contact the Office of Benefits and Records in the Old Pavilion.

Fiber optics research at Ginzton Labs suggests new kind of gyroscope

Researchers here, probing the new technology of fiber optics, have developed new devices for sensing and signal processing, including an accurate optical gyroscope with potential advantages over mechanical gyros.

Still in its experimental stages, the new gyro may soon be competitive with conventional gyros or even the new laser gyros constructed for navigation on the new Boeing 757 and 767 and Airbus A-300 jets.

The new gyroscope will fit into a container the size of a box of chocolates, according to Adjunct Prof. John Shaw, associate director of Stanford's Ginzton Laboratory. Shaw says the new technology overcomes various disadvantages of the mechanical gyros: their large mass makes them sensitive to acceleration, and they require a long start up time.

Uses of technology

The fiber optic technology is being used here to construct optical memories for high-speed data storage and interferometers for accurate sensing of temperature, pressure, magnetic fields, inertial rotation and the like.

The Ginzton Lab devices make use of the ability of light to be guided along paths of arbitrary shape when contained in a flexible glass fiber. The light hits the walls of the fiber and can be guided in any direction the fiber is aimed. The fiber is quartz glass, about one millimeter (.04 inches) thick, slightly larger than a human hair.

Shaw and his associates send beams of polarized light clockwise and counterclockwise through hundreds of yards of fiber wrapped around a cylinder.

In the case of the gyro, the technique works this way:

When the cylinder is made to rotate, the light beam going in the direction of the rotation has to travel slightly further than the length of the fiber to reach the starting point. Similarly, the beam traveling counter to the rotation does not have to travel as far. The rotation rate of the gyro can be measured by determining the difference in travel time for the two beams, Shaw says.

Shaw and his colleagues felt that a gyro made on this principle had real promise and decided to take the technology as far as it would go. The gyro is "the system we started earliest and have carried the furthest," Shaw said. "We have a state-of-the-art system that is competitive."

"When we started, the thing could not even measure the earth's rotation. Now it can measure rotation a thousand times smaller," Shaw says.

"Through the efforts of Ralph Bergh and Herve Lefevre, the device can now measure rotation at a rate of about one revolution in four years."

New devices

Many new types of prototype devices applicable to the sensing, signal processing and communications fields are emerging from the Ginzton Lab group on glass fiber device research, which in addition to Shaw involves participation of some half dozen faculty people principally Prof. Marvin Chodorow and Chapin Cutler, and 15 graduate students. . . .

"We are always talking about devices that have not been explored," Shaw says, and added that the direction of the research can "change almost overnight. . . .

"We never commit ourselves to doing anything, but at the same time we always look at what's needed out there."

Interesting physics

Although the physical phenomena studied are not new, they do involve some interesting physics because they have new characteristics, Shaw says.

"In terms of physics, it is very delicate and very precise work. Distance changes are measured in thousandths of angstroms (and angstrom is 100,000,000th of a centimeter).

But the lab's main purpose is "to find out how far we can go, how far this technology can go. . . . The lab has always worked in one kind of wave propagation or another, microwave propagation, acoustic propagation in crystals."

What made Shaw and his colleagues interested in fiber optics was the vast improvement in the technology in recent years. Ten years ago a fiber would lose most of the light put in because of impuritiers. "The ratio of what you put in to what you got out was many millions," Shaw says. "Nothing came out. All of it was lost in the glass."

"What has happened is that there has been a tremendous break-through in glass technology," Shaw continued, "if you can imagine a glass window a kilometer thick that you can see through just as well as an ordinary glass pane," he adds with a smile.

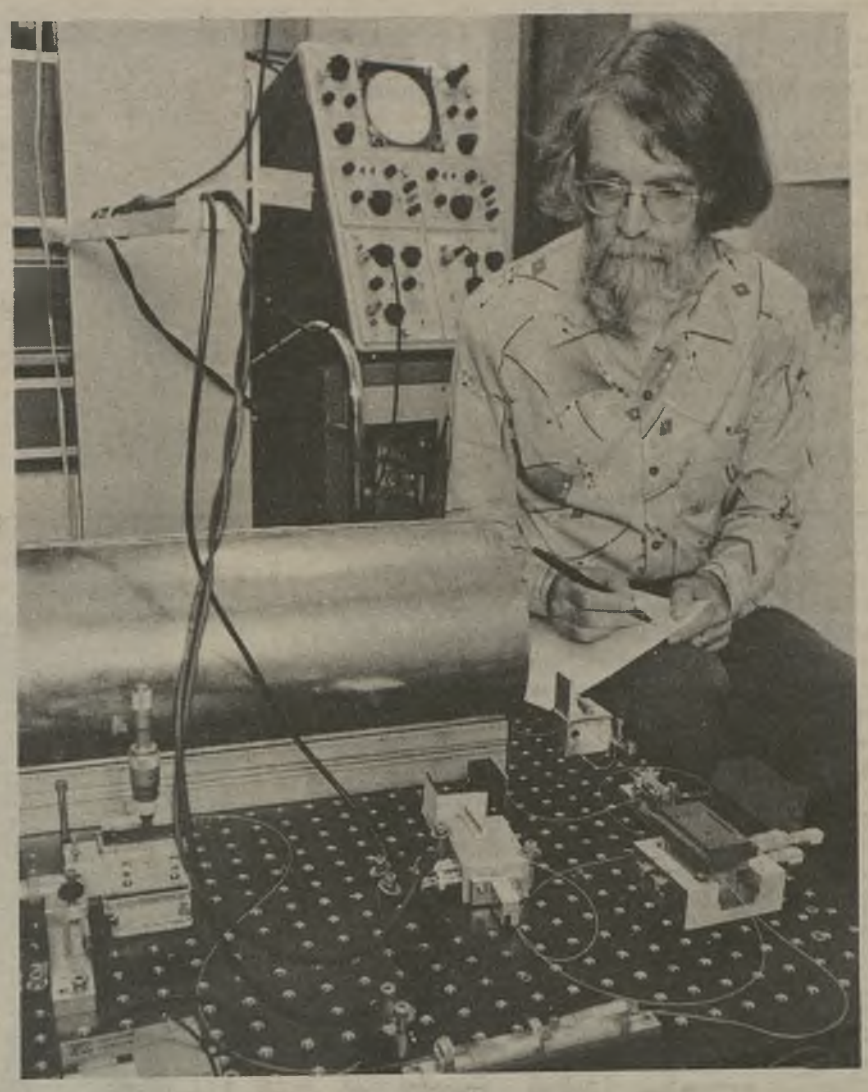
It is this improvement in technology that has made the gyro possible.

Current exploration

Another property of fibers is currently being explored at Ginzton labs: "light travelling in an optical fiber, it turns out to the dismay of some, is sensitive to the environment."

Even small variations in pressure, vibration and temperature affect optical propagation in the fiber. This sensitivity is due to the physical properties of the material itself, Shaw says.

The sensitivity is important for fiber sensors, such as thermometers or magnetometers, but one must be selective.



John Shaw

The Ginzton group has evolved new techniques to make the fibers insensitive to gyrations in fluctuating environments so that they are stable, rugged and responsive only to the desired inputs.

Another area of research is the development of fiber signal processors. For example, the interferometers that measure the minute phase shifts in the light in fiber sensors, can themselves be made from fibers.

"In the classical instrument you have mirrors, lenses, prisms and lasers," Shaw says. "We make analogs in solid state fiber form, the circuits are relatively small and the light never leaves the fiber from the source to the detector. These components behave much better than the classical counterparts."

The fiber optics work is being funded Lytton Industries and the Department of Defense.

—Jiri Weis



The Stanford Sierra Camp at Fallen Leaf Lake will be open for winter sports, primarily Nordic skiing, for four weekends in January and February. This trial winter operation is open to members of the faculty and staff. Further information may be obtained by contacting the camp staff at Bowman Alumni House, 497-2021.

Longterm measures proposed to cure our economic woes

Michael Boskin and his colleagues suggest new ideas for the national budget, Social Security, and research and development

BY DONALD STOKES

There can be no quick fixes for the economic woes of the nation. The remedies may take several decades.

Our problems go well beyond the current recession, which overlays enormous upheavals that have occurred in the economy.

America's position in the world, and on the home front, have changed profoundly in recent years. To adjust, we must develop new longterm methods of government spending, taxation and ways of generating new technology.

One of the leading younger economists of the nation, Prof. Michael J. Boskin of Stanford, proposes a corrective set of principles, in which he is joined by several colleagues, both at Stanford (some in its newly created Center for Economic Policy Research), and elsewhere, including the National Bureau of Economic Research.

They have developed research which can produce a business-like national budget for the first time in this century; ideas on how to make the Social Security system more equitable and financially solvent; policies to attract more funds into the research and development which is vital to the progress of America.

One of the first essentials, say these younger economists (Boskin is 37), is to modernize the often archaic methods now used to show the national balance sheet.

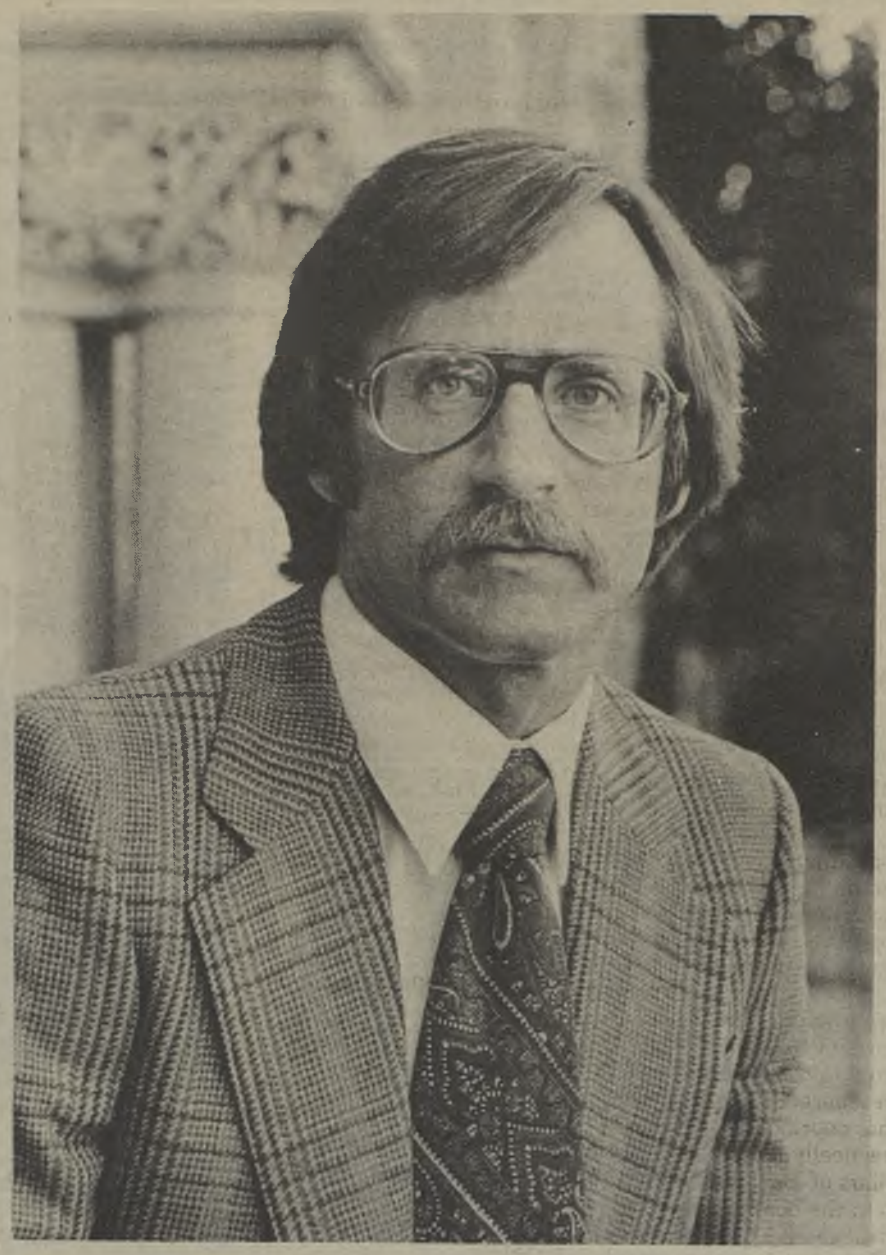
Boskin is writing a book which will attempt, on both practical and conceptual levels, to explain the nature of government spending, quasi-spending, revenues and fiscal policies. In effect he is recasting the postwar fiscal history of the U.S. and drawing a true statement of the financial condition of the nation.

"The documents we now rely on to report those things are seriously misleading for a number of reasons," Boskin told a campus interviewer.

Boskin believes that the government should develop better information about its finances and investment. He is working on a project, funded largely by Stanford's Center for Economic Policy Research—to develop a more realistic method of showing the national balance sheet and income statements.

"I would like to see a separate capital account which values assets and liabilities at their market rather than book values, and deals with contingent liabilities such as loan guarantees and deposit insurance.

"We should try to make sense out of off-budget borrowing and adjust assets and liabilities for inflation. There is a whole slew of such measures, some of which the government requires of private business, but does not carry out itself."



We shall hopscotch our way toward more sensible policies. We shall be sidetracked on occasion, but we shall get there.

—Michael Boskin

Boskin was asked whether younger economists such as he feel that traditional methods of tinkering with tax laws, deficit spending, and wage and price guidelines, have outlived their usefulness.

"Most serious economists feel that tinkering doesn't make much sense, and that only when the economy is way off its normal performance should the government actively intervene in macro-economic affairs."

And are we in that position now?

"Probably. Nobody forecast that this recession would be so deep or so long. I think it would be a mistake to go back to the era of rapidly-changing fiscal and monetary policies every time the economy changes course.

"Many high-quality younger economists are now concentrating their attention on policy issues.

"There are no quick fixes available for our condition. The remedies will span several decades. Our problem is much more than the current recession, which overlays an enormous series of structural changes in the economy.

"Among these are our changing comparative position in world trade, what we can produce efficiently, and a very severe long-term growth slowdown. Some of these have to do with insufficient rates of capital formation and with the generation of new technology.

"We must take adequate steps to adapt to these new conditions.

"Even if we were not in this recession our economy would still have these underlying problems. It will take a long time to deal with them. To do that there will have to be gradual changes in our tax laws, and changes with regard to government spending in general."

Surely this will require a bipartisan approach in Congress?

"No doubt about that. I think we shall be moving back and forth over the next 20 years over where the pendulum will light, but it is my opinion that we shall hopscotch our way toward more sensible policies. We shall be sidetracked on occasion, but we shall get there. I think we are moving, albeit slowly, toward more sensible tax laws and more sensible budgetary controls.

"I think many people will get hurt during the transition, and we shall have to absorb more people in the labor force who are no longer eligible for certain benefit payments. That is easier to do in a robust economy than a sluggish one. But I think it would be a mistake to view our economic problems as exclusively the current recession. The recession is made worse by other problems."

Which economic problem most urgently requires solution?

"Our long-term growth slowdown. If that is not solved we shall end up a generation from now like the U.K. in relation to the wealthier members of the Common Market. The most immediate problem is the recession. A more stable and predictable monetary policy would have helped to lessen its severity.

A principal reason for the recession was not only the tightness of the monetary policy but also its lack of predictability. In late 1980 the Fed had a very severe monetary expansion which had to be matched eventually with a much tighter clamping. I think that is partly why interest rates were driven up.

"We did not do a good enough job in controlling the growth of government spending, as was anticipated when the Reagan administration came into office. The tax cuts were larger, the spending cuts were less, hence the deficits boomed substantially.

"The combination of a tight monetary policy and the very loose fiscal policy drove up real interest rates. As a result we had a nastier recession than anticipated.

"The first steps that need to be taken are a more stable monetary policy and a fiscal policy that focuses on slowing the growth of government spending from its current levels."

At the moment, Boskin emphasizes, the government cannot even tell exactly what its expenditures and income are.

Boskin...

continued from page 8

"Today the U.S. is one of the few industrialized nations that lacks a capital account. It lumps together all capital and operating expenses, although it does separate budget items by categories such as defense, energy, and income security programs.

"The federal budget treats the construction of a new bridge in the same way it does the purchase of a head of lettuce for the White House kitchen. No corporation in the nation could make rational investment decisions if it were run that way."

Boskin would solve this problem by adopting an income statement that would include a current operating account, listing revenues separately from outlays. The income statement would also have a capital account, showing net new investment in infrastructure after subtracting depreciation.

Boskin says that many economists believe a properly constructed balance sheet might have alerted officials earlier to the seriousness of the crisis facing the Social Security system. He wants to see a balance sheet addendum showing long-term economic and demographic forecasts for federal pension program. He would then keep track of the potential liabilities accrued in these funds, by adding a below-the-line reserve to the annual budget deficit.

Boskin gives other examples of outdated accounting methods used in preparing U.S. budgets. "We don't adjust any of our figures for inflation," he said. "In highly inflationary times such as the late 1970s, the inflation-adjusted value of the national debt fell considerably.

"In the 1970s we had a very substantial real decline in government investment and R. and D. spending and this was not reflected in the official accounts because of the lack of a separate capital account. Also, the government has enormous contingent liabilities which it practically ignores.

"It has over half a trillion dollars of loan guarantees which don't show up in the books. We don't even have a sensible bad debt reserve.

"The central point is that making decisions about fiscal policy, based on misleading and inaccurate information is at best foolish, and at worst dangerous.

"Forget about making forecasts—we can't even evaluate accurately what we did in the past, say in 1975 or 1978. At the most fundamental level we have to improve the flow of information."

Political maneuvering will be a serious obstacle to secure reforms, particularly in Social Security?

"An immense amount of emotional political capital has been made out of Social Security. It has been quite distressing. I have lost much respect for a variety of public officials who have made statements about Social Security that have no factual basis.

"There are immense problems of solvency ahead for the Social Security program, and also major short-term problems. I find it startling that some people will ignore these problems in a blatant political way in order to, in effect, buy votes from certain groups of voters.

A window of opportunity is opening up for changes in the Social Security system, based on economic, demographic and political considerations. Over the next seven years we shall have major short-term problems. Starting in 1990, for the following 15 to 20 years, the system will be in relatively favorable short-term shape.

"After that the enormous problem of the postwar baby boom will hit us, and unless we do something in the near future to anticipate that there will be very little pressure, say in the 1990s, to do anything about it, and our options will be severely limited.

"We shall find ourselves, on the eve of the baby boom generation's retirement, having to impose drastic, probably disruptive tax increases—either that or drastic benefit cuts.

"We have about eight years, the balance of this decade, to begin to phase in sensible reforms for the long-term problems. We have until July 1st of next year to cope with the short-term problem. For on that day the Old Age and Survivors Insurance Fund will no longer be able to meet its obligations. There will have to be a tax increase, or benefit cuts, or some other measure such as borrowing."

Boskin and his Stanford colleague. Prof. John B. Shoven, together with prof. Laurence J. Kotlikoff of Yale, have put forward a proposed method for rationalizing the Social Security system. Their proposal initially leaves unaltered Social Security treatment of households currently headed by those over 55, while for young people the proposals tightly link the future benefits they will receive to their credited lifetime Social Security contributions. This will allow the system to pay the highest uniform return to all participants.

Boskin explained it this way: "We propose that Personal Security Accounts (PSA's) be created to keep track of specific Social Security coverage for every member of the system on an annual basis. PSA dollar credits would be the basis for the particular benefits to be received later.

"Every dollar of PSA credits would provide actuarially determined, inflation-indexed benefits for old age, spouse-survivor, disability, child-survivor, and health insurance.

"We think our proposal offers a fundamental, sensible approach to reform that would remedy the system's defects. Many of the other ideas for solving the problems are piecemeal proposals that would leave the country burdened with an inequitable, inefficient system well into the next century."

Should our first priority be to curb the growth of government spending on big-ticket items, such as Social Security, which takes up a quarter of all government spending?

"You have to evaluate the respective benefits and costs of the various programs," replied Boskin. "As the public sector gets larger and larger, and we have to raise tax rates higher to finance those programs, the costs to society for each dollar we devote to the public sector becomes progressively greater because it creates increasingly large distortions in the economy.

"The extra costs, beyond those of raising the dollar, are proportional to the tax rates. The higher the tax rates the worse the distortions. Further, we have recently reduced the growth of the modest-ticket items substantially, so there is not much room left to deal with overall spending growth unless we deal with health, social security and defense.

"People can reasonably differ on the respective costs and benefits of those programs, but I think that, especially in health care and social security, they have been sacred cows for a long time. Defense has the appearance of being a sacred cow at the moment, though basically it was neglected for a decade.

"In health care and social security, we have hundreds of billions of dollars of spending, much of which is not very cost-conscious nor target-effective. Sometimes it goes to people who don't need it or don't pay for it. It does not give much to people who are most needy, and it is transferring our assets around in 'leaky buckets.' "

What led Boskin to study economics, particularly his research into the effects of alternative tax and government spending policies on capital formation, inflation and U.S. economic growth?

"The opportunity to be somewhat rigorous, scientific and empirical about issues that are of importance to society," he replied.

Boskin received his B.A. *summa cum laude* at UC-Berkeley, where he received the Chancellor's Award as the most outstanding undergraduate of 1967. He also received his M.A. and Ph.D. in economics at Berkeley. His doctoral dissertation was awarded the first annual Outstanding Doctoral Dissertation Award of the National Tax Foundation.

He has published more than 40 books and journal articles in the fields of public finance, labor economics and econometrics. Some of these articles have been reprinted by the U.S. Treasury Department and also by the U.S. Congress. He has frequently been a witness before House and Senate Committees.

He is a consultant to the U.S. Treasury on tax policy, to the Department of Health and Human Services on Social Security, and to the Joint Economic Committee.

He was a principal figure in the formation of Stanford's Center for Policy on Economic Policy Research.

Boskin was asked to overcome his stated reluctance to making forecasts, and to give some idea of how America would fare economically in the next few years.

"We have to deal with the structural problems I've mentioned, we have the changing mix of industrial output and our changing position in the world. We have to move from an economy where we heavily finance consumption by borrowing to one where we generate saving so as to create investment and research and development, to increase capital formation.

"All that will take a long while. Partly because of this recession we shall be in a position to take advantage of unutilized investment opportunities by the middle and end of this decade.

"Therefore I see us doing well in the long term, but I think we are going to have a long and rough interim period.

"Anybody who thinks that making such policy changes as dramatically changing the growth rate or the composition of government spending, or changing the tax laws, are going to change things around instantly, is wildly optimistic.

"I think the important thing is to evaluate the sensibility of these policies on a long-range basis and not hold them up as the answer to our current short-term problems."

Campus crime report

Nov. 15-Dec. 6

Burglary/residence	2	Phone harassment	0
Burglary/nonresidence	9	Controlled substance	0
Burglary/Vehicle	19	Felony arrest	2
Theft/under $200	6	Misdemeanor arrest	12
Theft/over $200	4	Adult booking	9
Bicycle theft	19	Adult cite/release	4
Vehicle accident	17	Juvenile booking	0
Bicycle accident	0	Juvenile citation	1
Indecent exposure	0	Warrants served	4
Assault	0	Driving under influence	3

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
11/20	Even.	Stern Hall	Cash	
11/21	Day.	500 blk Alvarado	Cash	

Medical Center MEMO



Levy in lab

Stanford scientist honored for cancer research gains

A Stanford cancer researcher became the first beneficiary last week of an annual prize established by the Armand Hammer Foundation to reward "the person or persons deemed to have made the greatest contribution to the cure for cancer."

Dr. Ronald Levy, a Stanford associate professor of medicine (oncology) will share the first $100,000 prize with an Australian researcher, George Telford Stevenson, for their research using polyclonal and monoclonal antibodies in the treatment of cancers of the blood and lymph glands.

First developed in England in 1975, monoclonal antibodies are proteins made by "hybridomas," biological factories created when scientists fuse an antibody-producing cell of the human immune system with a cell from a mouse tumor. Inheriting characteristics from both parent cells, the new hybridomas are able to produce virtually unlimited quantities of a desired antibody.

Once released in the blood stream, such antibodies travel throughout the body, seeking cells that carry matching protein "antigens" on their membrane coats. The antibody locks on to the antigen, labeling the cell for destruction by other cells of the immune system.

Levy and Stevenson adapted monoclonals for use as weapons in fighting leukemia and lymphoma of B-cells—blood cells in the human immune system that normally produce infection-fighting antibodies.

Stevenson found that leukemia cells of the B-cell type have proteins on their surface, called "idiotypes," which are not found on normal cells. In effect, these idiotypes serve as a fingerprint for the leukemic cell—a B-cell turned cancerous will produce millions of descendants all with the same fingerprint, and therefore all distinguishable from the normal B-cells and every other cell in the body.

Levy and his colleagues produced monoclonal antibodies against such idiotypes and are using the compounds in treatment. One patient with B-cell lymphoma was given multiple doses of such antibodies in 1981 when conventional therapy failed to halt his cancer. Eighteen months later, the patient is still in complete remission.

Though monoclonal antibodies seem promising in treating B-cell lymphoma, Levy cautioned earlier this year when the case was reported in the *New England Journal of Medicine* against making generalizations about the experimental therapy.

"The improvement of this patient's lymphoma with monoclonal antibody administration is a single observation that must be confirmed in other patients before we can draw any conclusions about the effectiveness of this technique," he said, adding that the characteristics of B-cell malignancies make them especially responsive to treatment with the custom-made antibodies in ways that other types of cancer might not be.

Levy, 41, graduated from Harvard University and received his M.D. degree from Stanford University in 1968. From 1973-75 he served as a fellow of the Helen Hay Whitney Foundation in the department of chemical immunology at the Weizmann Institute of Science in Rehovot, Israel.

A member of the Stanford faculty since 1975, Levy has served on the editorial boards of the medical journals *Hybridoma* and *Blood*.

—Deborah Franklin

Sweet, quiet dreams. . .

Loud snoring, sleep apnea curbed by simple operation

Snoring affects nearly half of all adults and can often threaten the snorer's health. But doctors at a recent conference of Ear, Nose and Throat specialists in New Orleans, La. were told that snoring can be cured.

Severe cases of snoring can now be cured by a simple operation, long used in Japan and called palatopharyngoplasty, said Dr. F. Blair Simmons, professor of surgery at the Stanford University School of Medicine.

The procedure, said Simmons, was recently "discovered" in this country and it always works. In many cases, it stops snoring completely. In others, it significantly reduces the sounds of snores, "to levels that allow these patients' bed partners to sleep in the same room."

The jawbreaker word for snore-stopping surgery eliminates the problem by removing the offender's noise-maker—unneeded tissue in the upper throat.

As the sleeper breathes, the tissue vibrates and produces the nocturnal snorts and snuffles in much the same way blowing against the reed in a horn produces more melodious sounds. Snoring is an involuntary process and snorers cannot be conditioned to stop. The so-called "heroic" snorers are typically male and have their onset of snoring in their midthirties.

According to Simmons, who has operated successfully on more than 80 patients, when one has an excessive amount of upper throat tissue, "excessive snoring always accompanies the condition."

"Anyone who snores in every position, is loud enough to be heard at least one or two rooms away and whose bed partner has moved elsewhere to sleep is a candidate for the treatment," Simmons added.

The operation was originally applied by specialists at Henry Ford Hospital in Detroit to treat sleep apnea. This is a life-threatening condition marked by cessation of breathing during sleep.

Earthquake-scale snorers actually may stop breathing for 15 seconds or more, several hundred times a night, then wake up with a loud snort as their blood's oxygen level drops. Sleep apnea causes daytime sleepiness and seriously taxes the heart and lungs.

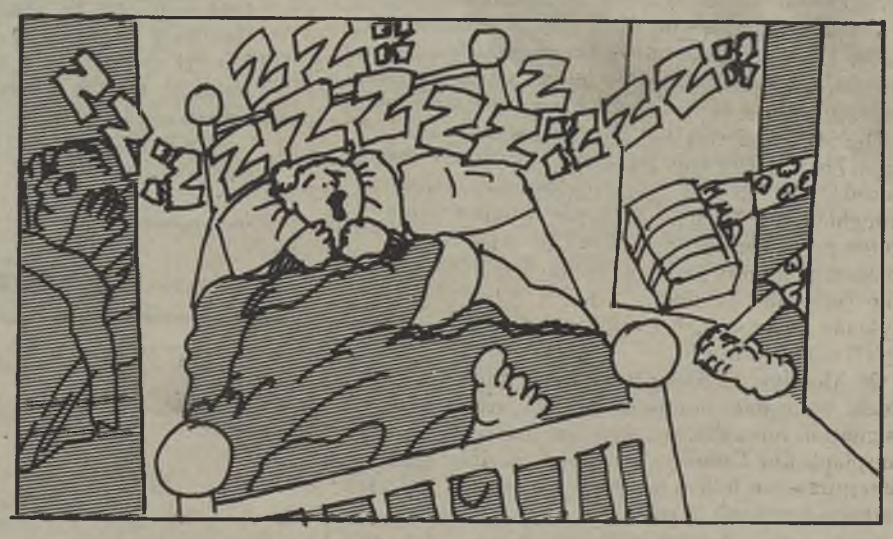
At Stanford, Simmons said, half of the patients suffering from sleep apnea have benefitted from the operation. But the results also showed clearly that the social snoring problem of most other patients could be corrected with the new procedure.

"Snoring is socially a very big problem," Simmons noted. "It has been neglected by medicine because nobody knew how to treat it and it was considered funny to even try it."

Palatopharyngoplasty is as simple as removal of the tonsils. It is performed in a hospital under general anesthesia. It involves removal of about the back half of the soft palate, tonsils if they are present, and any extra tissue on the sides and back wall of the throat. After the unneeded tissue is removed, what remains is stretched and sutured together again. Postsurgical discomfort may involve a sore throat which requires a four- to five-day hospitalization.

"It's actually nothing more than a kind of facelift of the oral pharynx," Simmons explained.

—Spyros Andreopoulos



"Anyone who snores in every position, is loud enough to be heard at least one or two rooms away, and whose bed partner has moved elsewhere to sleep is a candidate for the treatment. . ."

—F. Blair Simmons

Goldstein reviews actions of Senate under his lead

Stepping up Stanford University School of Medicine's minority recruitment program, revamping the admissions procedures, and officially documenting the School's primary commitment of providing a research-oriented medical education to produce as many researchers and academicians as possible were just some of the Faculty Senate's achievements during the last three years under the leadership of Dr. Avram Goldstein, professor of pharmacology.

Goldstein, who relinquished the chairmanship earlier this year to Dr. Roland Ciaranello, associate professor of psychiatry, summarized the accomplishments of the Senate—the governing body of the Medical School Faculty—in an open letter to alumni, faculty, and students in the latest issue of *Stanford MD*, the School's alumni magazine.

"The changes accomplished in these past three years clearly represent the majority of the faculty's wishes," wrote Goldstein.

The Senate "has made a major commitment to the intensive recruitment of research-oriented academically qualified minority students," the letter stated. Specific recommendations included establishing a research scholarship program to meet the needs of minority and disadvantaged students, and appointing an assistant dean for minority affairs. Currently, 21 percent of Stanford's medical students are from minority backgrounds (other than Asian).

The admissions procedures have been extensively revised, Goldstein wrote. The admissions committee has been reduced to nine full-time or emeritus members of the Academic Council and one upper-class student; a computer system has been introduced to help initially screen the nearly 6,000 applications the School receives each year; and a preferential policy for children of medical alumni, faculty, and staff, "all other considerations being equal," has been established.

Other actions included:

- adopting new Articles of Organization giving the Senate full authority over admissions, curriculum, and evaluation of student performance; and giving alumni and voluntary clinical faculty non-voting representation;
- approving in principle a core curriculum in basic medical science, clinical medicine, and investigative medicine to ensure students' competence in these areas;
- recommending a single global tuition so students can spend more time completing their education without prohibitive costs;
- expanding the Medical Scholars Program;
- reinstituting a core of required clinical clerkships and establishing a requirement for all students to be competent in Basic cardiopulmonary resuscitation (CPR) and Advanced Life Support;
- taking full responsibility for incoming students' orientation program.



"The changes accomplished in these past three years clearly represent the majority of the faculty's wishes. . ."
—Avram Goldstein

"The past few years have witnessed a period of unprecedented productivity on the part of the Medical Faculty Senate in matters of academic policy and school governance," said Dean Dominick P. Purpura.

—Shirley Kraus

National study spurs coming symposium

A day-long symposium to discuss aspects of the general professional education of the physician will be held Jan. 22 at the Stanford University School of Medicine.

The purpose of the meeting is to generate ideas that might be useful to a national study of medical education in the United States now conducted by the Association of American Medical Colleges (AAMC), according to Dr. John Steward, associate dean.

The symposium, chaired by Dean Dominick Purpura of the Medical School, will be held at Fairchild Auditorium. It will consist of three panels, each dealing with a specific aspect of medical education.

A panel led by Dr. Robert Cutler, associate dean for medical education, will address these issues: promoting broad baccalaureate education, essential biomedical science knowledge, and teaching of essential concepts in medicine.

A second panel, chaired by Dr. Roy Maffly, chairman of the Medical School's admissions committee, will review the development of clinical skills during medical school and the acquisition of computer technology skills by medical students.

Dr. Steward's panel will examine personal qualities, values and attitudes of medical students, as well as the problems of students in dealing with emotional stress.

The AAMC-sponsored national study will be conducted by an 18-member panel of administrators and medical educators. Dr. Steven Muller, president of Johns Hopkins University, chairs the panel. The three-year project, the first such comprehensive review of medical education since 1932, is jointly funded by the Henry J. Kaiser Family Foundation of Menlo Park, and the AAMC, which represents 127 medical schools in this country and 16 in Canada.

The review is necessary, the panel recently stated in an overview paper, because since 1932, the purpose of the educational program leading to a medical degree has changed.

"Specialization and the rapid rate of advancement of knowledge and technology," the panel said, "may tend to pre-empt the attention of both teachers and students from the central purpose of medicine, which is to heal the sick and relieve suffering."

The 60-page overview paper, along with a questionnaire, has been distributed to medical educators and students in the United States and Canada.

The AAMC panel plans to hold regional hearings for the purpose of allowing medical school administrators, faculty, students and others to present views. Results of the Stanford symposium will comprise part of Stanford's contributions to the regional proceedings.

The first regional meeting has been scheduled Jan. 27-28 at the University of California in San Francisco.

Other hearings will be held in various parts of the country through May, 1983.

The final project report will be presented at the annual meeting of the AAMC in November, 1984.

—Spyros Andreopoulos

Stanford's 10th heart-lung transplant

Because of the increasing frequency of heart-lung transplants, the News Bureau will no longer routinely report each one that occurs. Naturally, we will provide stories when conditions make a particular transplant newsworthy for scientific or human interest reasons.

A San Rafael, Calif. man Monday, Dec. 6, became Stanford's 10th heart-lung transplant patient, the third recipient of such surgery here in just over a month.

The patient, Frank LaForge, was born with a heart defect which had relentlessly caused his health to deteriorate throughout his 27 years, said Dr. Stuart Jamieson, assistant professor of cardiovascular surgery and head of the heart-lung program. Jamieson led the five-physician team which performed Monday's five-hour surgery.

On Monday, LaForge was reported in critical but stable condition, the standard designation immediately after the double transplant. On Tuesday, he was taken off the respirator at 6:30 a.m., and still listed in critical but stable condition.

Two other heart-lung transplants, Philip McGrath, 22, East Islip, N.Y., and Ronald Grunden, 40, Ventura, Calif., were reported in stable condition Tuesday. McGrath, who received his replacement organs Nov. 9, and Grunden, whose operation occurred four days earlier, were both progressing and are able to walk around as they gain strength, the doctor said.

All three of the most recent recipients suffered from ventricular septal defects (VSD), characterized by holes between the left and right chambers of the heart. This allows blood to flow between the chambers, resulting in too much blood entering the blood vessels in the lungs. Eventually, the overcirculation causes pressure to increase in the pulmonary arteries, and the right ventricle of the heart is unable to overcome the pressure.

In recent years, surgeons often have been able to correct the condition in infants. If left uncorrected, however, both the heart and the lungs become irreversibly damaged.

"We and the families of our recipients are indeed grateful to families who make this program possible. . ."
—Stuart Jamieson

LaForge is married and had worked as an accountant until his condition deteriorated and he was forced to restrict his activities severely. Jamieson said his life expectancy was estimated at only a few months without the operation.

"Our research and clinical experience indicate that the heart-lung procedure is a viable therapeutic treatment for these patients," Jamieson added.

"We are limited in our efforts to perform these procedures by the number of families who are unaware of the urgent need for donors. We and the families of our recipients are indeed grateful to families who make this program possible."

Despite the encouraging prognosis for the latest patients, Jamieson cautioned that all three men face lifelong regimen of monitoring and medication intended to prevent the body's tendency to reject the new organs.

LaForge is the 10th heart-lung transplant patient since Stanford began its program March 9, 1981. Seven of the patients, including the first recipient, are doing well. Three of the patients died, all within a month of their operations.

Heart-lung transplants were first performed 12 years ago, but all three patients—transplanted in South Africa, Texas and New York—soon died.

The procedure was revived here last year with the discovery of Cyclosporine (formerly called Cyclosporin A), which allows the windpipe to heal while working to prevent rejection.

Cyclosporine has also been used at Stanford since December 1980 on heart-only transplants, and Jamieson and his colleagues credit its use in helping to increase the one-year survival rate to approximately 80 percent. Stanford has performed 248 heart transplants since Dr. Norman Shumway pioneered the procedure in this country in January, 1968.

—Mike Goodkind

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Hepatitis B vaccine available

The Medical Board has approved hepatitis B vaccines for two categories of Hospital employees.

The board decided this month to accept a recommendation of the Hospital infection control committee and offer the vaccine without charge to lab employees who have contact with human sera, as well as persons working in the hemodialysis unit.

The board also recommended a study of the desirability of vaccinating surgical housestaff, a group considered especially vulnerable to the infection.

Carol Oakes, assistant director of Care Review/Risk Management, added that other employees who want the vaccine must contact their personal physician and be responsible for related expenses.

Death meetings for case review

The Department of Pathology has started monthly conferences on death, Dr. Charles Carrington, director of the autopsy service, has announced.

Carrington, associate professor of pathology, said that two cases will be chosen each month for discussion by community and full-time faculty attending staff, housestaff, and medical students. The cases, he added, will come from a variety of services in the Hospital.

"We hope that members of the clinical staff will participate in these discussions so as to make them more meaningful," Carrington said.

The conferences, which began in October, are being held the second Monday of each month at 5:30 p.m. in room M104.

Each session is expected to last one hour, but Carrington said informal discussions may continue afterward.

Medical Faculty Openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

Applications or nominations are invited for a faculty position in Stanford's department of biochemistry at the level of assistant, associate or full professor, depending upon qualifications and experience.

Applicants should have demonstrated ability to perform important original research and show promise of excellence in teaching. Candidates should submit a curriculum vitae including a list of publications and a description of research interests to: I.R. Lehman, Department of Biochemistry, Stanford University School of Medicine, Stanford, CA 94305. They should also provide the names of three individuals who can serve as references.



Care for homebound cancer patients

Isabel Walker, a social worker at Stanford's Oncology Day Care Center, looked pleased as Joan McVicker took the temperature of her daughter Lori, a cancer patient. Stanford and the American Red Cross joined forces in 1979 to provide training for friends and relatives of cancer patients, like Lori's mother, who now cares for her daughter at home.

The short course, initiated at Stanford and offered by the Palo Alto Chapter of the American Red Cross, is an attempt to "extend services to the home using existing community resources," says Walker.

Many cancer patients can leave the Hospital but still require some nursing care at home. Lori's mother was trained to give Lori her medications, take her temperature and blood pressure, give her bed baths, monitor her nutrition and do all the things a home nurse would do.

More than 100 families have taken part since the home care course, now also offered to hospice volunteers, began. Sharon Hedden, an East 1A nurse, and Barbara Reville, a Stanford oncology nurse, both became volunteer instructors for the course.



Walker adds a section on the psychosocial aspects of cancer.

The next six-hour class is scheduled for Jan. 15, and they will then occur on various Saturdays throughout the year. Anyone interested is encouraged to call 322-2143 for further information.

Lori, says Walker, has been free of disease for over a year, and is living an active life. But Mrs. McVicker still thinks about the course and how it helped them both through a very difficult time. "When I took the course I felt I was the only person facing a loved one with cancer. I discovered a lot of other people were there for the same reason and that we had a special bond," she says.

News Notes

Peter O'Connell has been appointed director of Dietetics effective Nov. 15, announced Donald Utt, associate director of SUH. O'Connell, who has been director of Food Service Operations since arriving at Stanford in September, 1981, is replacing John Varnado in his new position.

Varnado, director of Dietetics since June, 1980, has been promoted by SAGA Corporation to a position of district manager. In his new role Varnado will continue to work at Stanford two days a week, while the remainder of his time is spent at his other responsibilities.

O'Connell's office is located in C108. Paul Harvey, assuming the Food Service Operations position, is located in C105.

* * * *

Dr. Willard Fee, Jr., chairman of Stanford's division of otolaryngology/head and neck surgery, was voted chairman-elect of the American Academy of Otolaryngology-Head and Neck Surgery's newly created Board of Governors, at its first meeting this fall in New Orleans.

The function of this group is to provide communication between the Academy's Board of Directors and the membership through the approximately 120 local, state, regional, national and international otolaryngological societies.

Also, Dr. Richard Goode, professor of surgery at Stanford and chief of the division of otolaryngology at the Veterans Administration Medical Center in Palo Alto, was reelected at the Academy's annual business meeting as its Coordinator for Program, for a three-year term to begin in January.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, DECEMBER 8

Div. of Hematology Conference: "ASH meeting review"—Dr. Tom Kipps. Noon, S102d.

Basic Science Research Colloquium: "Immunochemistry of Actin, Clathrin and HLA"—Dr. Peter Parham. 5 p.m., Fairchild Auditorium.

Physicians for Social Responsibility Meeting and Lecture: "Social Responsibilities of Scientists"—Linus Pauling, Ph.D. 7-10:30 p.m., Fairchild Auditorium. Includes an 8:15 p.m. talk by Pauling on "Reversing the Present Arms Race."

THURSDAY, DECEMBER 9

Dept. of Medicine Grand Rounds: "Tuberculosis, or 'The White Plague'"—Dr. Jack Leventhal. 8:30 a.m., Fairchild Auditorium.

Div. of Otolaryngology/Head and Neck Surgery Lecture: "Surgical Treatment of Chronic Aspiration"—Dr. Charles Cummings (of Univ. of Washington). 6 p.m., Wang Library, R117.

FRIDAY, DECEMBER 10

Dept. of Dermatology Lecture: "Modern Aspects of Skin Pharmacology and Pharmacokinetics"—Dr. Hans Shaefer. 8 a.m., Dermatology Library, R136.

Div. of Otolaryngology/Head and Neck Surgery Lecture: "Surgery of the Paralyzed Larynx"—Dr. Charles Cummings (of Univ. of Washington). 5 p.m., Wang Library, R117.

Dept. of Obstetrics and Gynecology Grand Rounds: "Toxic Shock Syndrome"—Dr. R. David Miller (of UC Irvine). 8 a.m., A336.

Dept. of Pediatrics: "Pelvic Inflammatory Disease"—Dr. Paula Duke. 8 a.m., M106.

WEDNESDAY, DECEMBER 15

Div. of Orthopedic Surgery Basic Science Grand Rounds: "Orthopedics in Singapore"—Dr. N. Balachandran (of Nat'l Univ. of Singapore). 8:30 a.m., M114.

Dept. of Neurology Grand Rounds: "Local Cerebral Glucose Metabolism in Epilepsy Using Positron Computed Tomography"—Jerome Engel, M.D., Ph.D. (of UCLA). 5 p.m., Palo Alto Veterans Administration Medical Center, Bldg. 7, B108.

Dept. of Pharmacology: "Regulation of Plasma Protein Gene Expression in Acute Inflammation"—Dr. John Taylor (of Gladstone Foundation, San Francisco). 4:15 p.m., Pharmacology Library, R358.

Basic Science Research Colloquium: "Regulation of the Immune Response by the Major Histocompatibility Complex"—Dr. Hugh McDevitt. 5 p.m., Fairchild Auditorium.

WEDNESDAY, JANUARY 11

Nursing Educational Services Critical Care Course Level II: "Abnormalities of Coagulation." Course will include background information, theory, and case study exercises. Fee required. Registration deadline is January 2, 1983. For further information, call Carole Kidder at 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Michael Ray unlocks creativity in Business School class

BY MARCIA TANNER

Twenty-seven second-year MBA students sit in a darkened classroom at the Stanford Graduate School of Business. Eyes closed, they listen to tape-recorded sounds of ocean surf and sea gulls, overlaid by the quiet voice of the instructor, a woman's, urging them to "let go."

They are asked to breathe deeply, thinking "let" as they inhale, "go" as they exhale. "Let go of judgments, obstructing thoughts, bodily tensions, past perceptions, whatever is keeping you from tapping that reservoir of magnificence within you," she intones. "Reach the place that simply is, the point of equilibrium."

These future managers haven't wandered accidentally into a misplaced class on transcendental meditation. They are enrolled in Creativity in Business, an elective which, since its inception two years ago, has become one of the more popular courses at the Stanford Business School.

Brainchild of Michael L. Ray, professor of marketing and communications at the School, the creativity course may at first glance seem an unorthodox blip in the MBA curriculum. Stanford business students normally expect courses that emphasize the quantitative and analytical aspects of management functions. And they themselves are perceived as goal-oriented, competitive, and analytical individuals.

It's precisely for those reasons, Ray believes, that such a course is necessary. Finding imaginative solutions to old and new problems; discovering one's own intuition, flexibility, and entrepeneurial instinct; and stimulating the daring required to take a creative leap and the courage to propose the unorthodox are not abilities ordinarily nurtured within a business school environment, Ray believes—though they are all acquiring a premium in the turbulent and unpredictable economic climate of the 1980's.

In response, he and his colleague Rochelle Myers, director of the Myers Institute for Creative Studies in San Francisco and co-instructor for the course, have developed a syllabus whose eclectic approach is designed to awaken those creative capacities slumbering inside each student. Its basic premise, Ray says, is that "creativity is within everyone, and is essential to happiness, health, and success in a business career."

"This seminar goes deep into the thought processes which relate to creativity," according to the course description. "Topics include the creative process, conceptual blockbusting and lateral thinking, the inner world of problem solving, the creative organization, the negatives of creativity, creativity versus rationality, the great creative ideas."

Even that somewhat startling entry in the current Business School catalog—sandwiched between descriptions of electives on Regulatory Policy and Politics and Consumer Analysis—gives little indication of the flavor of the course. "Other people are trying to teach creativity, but I don't think anyone is doing it exactly like this," Ray says.

Ray's approach to the course is a rich and heady mixture of lectures by invited guests, weekly papers documenting students' reactions to their "live-with" assignments and to the "creative tools, techniques, and activities" to which they are introduced; reports on assigned reading; and, finally, students' individual answers to the question "How can I bring personal creativity into the business world?"

"In the speakers' series," Ray says, we invite people who've either been extraordinarily creative in business, or who have special insight into the creative process, and ask them to be publically introspective." Guest lecturers have included Paul Cook, founder and president of Raychem Corporation; Steven Jobs, founder and president of Apple Computer; Nolan Bushnell, founder of Atari Inc. and Pizza Time Theater; Joe McPherson, director of Innovation Programs at SRI International; a professional psychic; and a woman whose book on dream interpretation was used as a class text.

"The idea of this course is to get to the.core of the person's creativity," Ray explains, "so we give the students 'live-with' assignments. For a week at a time they have to observe themselves as they live with injunctions that may be radically difficult for their personalities to accept: "Destroy Judgement, Don't Improve, Be Ordinary, Ask Dumb Questions, Do Only What Is Easy, Effortless, and Enjoyable." Ray thinks of these as "creativity heuristics," rules which serve "to guide, discover, or reveal," (Webster's *Seventh New Collegiate Dictionary*).

"We give them techniques for doing this, all of which are meant to remove the blocks that get in the way of their creativity." Ray explains. Among the techniques and tools Ray and Myers teach are meditation, chanting, art work, dream interpretation, body movement, and Oriental systems such as Hara and the I Ching.

Students are also expected to read extensively; the reading list is possibly the longest and most recondite of any MBA course offered at Stanford. Minds accustomed to texts on financial accounting and microeconomics find themselves confronting *Mandala* by Miriam and Jose Arguellos; Swami Muktananda's *I Am That*; Gayle Delaney's *Living Your Dreams*; Francis Vaughan's *Awakening Intuition*; and books on Zen, Yoga, and the Tao Te Ching, as well as more standard approaches to creativity and problem solving like James Adams' *Conceptual Blockbusting*, de Bono's *Lateral Thinking*, and Gary Steiner's *The Creative Organization*.

How do MBA students react to this full-scale, frontal assault on their personalities and modes of consciousness?

"We get really hostile, aggressive attacks at first," Ray admits. "They feel threatened; they want to approach this intellectually, talk philosophy or something, but it's not intellectual. Or they want to say it's against their religion. One student handed in a paper in which he said that his wife wanted him to drop the course; she liked him the way he was, she didn't want him to change, she felt he was happy. He stayed in the course and in his marriage, by the way.

I think they're all frightened like that to some extent. It's a frightening thing, to face that aspect of yourself. They know they have these capacities, and they may have a feeling that they're not being themselves completely. But they're making money, moving ahead; they've been able to get along without that part getting in their way. They've got it controlled.]

"Most of them stay in the course, though. After a while they calm down and start to understand what it's all about. After getting a hostile weekly report from a student, we thought she would drop the course. But she didn't; she stayed, and since then her papers have been really positive."

In fact, students' evaluations proclaim the course a tremendous success. Since its inception, 75 percent of the participants have awarded it the highest marks on the seven-point scale used for all GSB courses, while the rest have given it a "6." Even more telling are the glowing individual responses of students.

"I wish I'd had this course before, or perhaps during my first year here," said one. "It would have helped a lot. The 'live-with' assignments are ideal. One real problem at the Biz School is that you can't remember more than five percent of what they throw at you. Here, there's a real emphasis on working on it every day, taking it home with you. These are things that should not be foreign to you, you shouldn't be fighting them. They should become a part of you. And the class atmosphere encourages that.

"The creativity aspect of a business education will be particularly useful in the kinds of things I'll be



Michael Ray

doing," said another student. "I intend to get into one of the fast-growth areas—alternative energy or communications—where it certainly pays to be innovative. There's also a very good chance that I'll continue in politics—government is another area that's crying out for new approaches to traditional problems.

"Another reason I really like the course," he adds, "is that you deal an awful lot with getting to know yourself and your own feelings, learning how you can operate at perhaps your highest potential."

Others are even more lyrical in their praises. "I didn't consider myself much of an artist," one student wrote, "but through the art assignments I was surprised that I was able to create images that were substantive and worthwhile, and found that I could relate that experience to my business experience. This taught me that one could not survive in business unless one added value—if possible, unique value—by being creative. Not for competitive reasons, but because that is the essence of life."

The most commonly heard comment from students, according to Ray, is that "This course changed my life."

Ray continued: "I don't see it (the course) as subversive. It's like the conflict going on in that student's marriage, or within the heads of our students: The dominant culture sees that it needs this (creativity)—the School and our economy would atrophy without this other side."

Ray is also quick to point out that the GSB has a strong tradition of attending to both the analytical and nonanalytical sides of management, which is evident in course offerings on interpersonal dynamics, organizational cultures, and decision sciences approached as "decision arts and sciences," acknowledging the intuitive aspects of decision-making.

"We've done a lot of continuing education for faculty on the nonanalytic side of management," he says, "and faculty members like Harold Leavitt, James March, David Kreps, Jerry Porras, and David Bradford are all involved in maintaining the balance in the School."

Ray, whose major research explores strategies for improving the effectiveness of advertising, first got the idea for his course while teaching basic advertising at Northwestern University. He developed a technique to encourage his class to think

continued on page 17

Growth fosters separate faculty, staff cultures

High-level self-study suggests ways to reduce conflict between traditional academic culture and increasingly professional staff. The 'academic imprint' should permeate our activities.

Introduction

In January, 1981, President Kennedy announced that he and a small group of colleagues would undertake a study of Stanford's organization and management. (The membership, in addition to Donald Kennedy, consisted of Albert H. Hastorf, Raymond F. Bacchetti, Gerald J. Lieberman, William F. Massy, Kent Peterson, and Joel P. Smith who served as the group's initial chairman. Michael Oman was the staff director).

The intention was to form a group that could regularly put some distance between itself and immediate problems, so as to gain perspective on the requirements of administering a modern research university and on whether our present organization and style of interaction succeeds or fails in meeting those requirements.

In addition, the study made an effort to analyze the relationships between parts of the University's political economy, in an attempt to understand and locate sources of internal inefficiency—economic "hotspots"—where resources were being consumed at a rate out of proportion to the importance of the activity.

The study concentrated more on defining and understanding issues than it did on sketching solutions to particular problems. As a result, in what follows there will be more emphasis on the definition of issues than on particular recommendations for change.

However, the report does cite a number of specific actions already taken and recommendations for future steps. We indicate these in italics.

In a number of additional areas, the study asked existing groups to undertake particular efforts of their own. The study's major accomplishment may, in the end, consist of just that set of derived efforts, out of which may evolve significantly improved understanding and conduct of the University's business. These are also set out in italics.

As central issues, the study group considered a number of general features of the organization and management of Stanford and similar institutions, in an effort to separate those that seemed especially important and accordingly might deserve more detailed attention.

Some of these turned out to be trivial or intractable, others simply unproductive. But the group returned repeatedly to several topics, from which it began to distill themes and to construct a sense of interconnectedness, if not of perfect order.

Among the recurring themes was the coexistence of two cultures at Stanford—a traditional academic culture, and an increasingly professional managerial culture—between which there is both a record of cooperation and collaboration *and* an incidence, perhaps increasing, of conflict and misunderstanding.

A second theme centered on the forcing function provided by rapidly-changing external events, including an insistent regulatory climate, and the new abrasions these forces produce.

But arching over both of these, and related to them in multiple important ways, was a third issue which came up repeatedly in the biweekly discussions and which, more than any other single matter, captures the Study's central focus. It is the single fact of size: Stanford's administrative agenda has become so large that the University can no longer be run, as it once was, by a few part-time or former faculty people in the central administration.

Administrative growth and complexity are unavoidable by-products, as much of Stanford's own academic goals as of significant driving forces in the world outside. As a consequence, managerial responsibility must be distributed more widely through the organization in order to guarantee the competence, breadth, and responsiveness needed to run the university.

No single event in the last decade or so of its history catapulted Stanford into a new class of organization requiring a larger and more broadly distributed administration. Over the years there has been a gradual accretion of complexity brought on by the combined forces of internal growth, new enterprises, inflated costs, external regulations, and our own heightened standards and expectations.

In light of the cumulative force of these requirements there is no reasonable alternative to a large, competent, highly trained, authoritative, and increasingly specialized administrative staff. Without it the University's affairs would not be cared for properly, nor would the University stand a good chance of achieving its goals.

In reflecting on this relatively new fact of institutional life, the study group was aware that the conspicuous presence of administration—not simply the apparent growth and cost of administration, but the academic community's awareness of the significant role of administrative staff in many major University decisions—is a serious concern to some, particularly to those faculty who believe that some staff members relatively distant from the University's academic enterprise tend to be insensitive to its purposes.

The potential divisiveness that can grow out of real or imagined failure to keep academic values foremost is a concern about which we heard a good deal during the study. The arrangements by which universities blend the capabilities of nonacademic staff with the work and objectives of the faculty to support basic teaching research have not been lightly nor easily evolved.

There are always situations where administrative and professional work can develop a life of its own and veer in directions that detract from academic goals. For example, as the University's staff has grown more professional, managers have been held to account more rigidly by an internal hierarchy. And some of Stanford's professional managers may—like the "invisible colleges" of faculty peer groups—look to external standards and values that may relate only distantly to the institution's "academic" values.

These tendencies are, we believe, neither greater nor less here than in our sister institutions. That observation is not intended to give comfort; rather it is an acknowledgement that one of the built-in characteristics of our associated life at Stanford is the need always to integrate the intrinsic value of the faculty's role in teaching and research and the instrumental role of the staff in sustaining the environment within which the academic purposes prosper.

The study group believes, therefore, that two critically linked challenges confront the management of a major research university. The first is to achieve maximum effectiveness from a strong staff that actively supports the primary place of academic values in University decisions and enjoys good relationships with faculty; the second is to create better understanding and acceptance of administration by the faculty.

These ideas introduce the central focus of the study. En route to even such a modest advance in its understanding of the current status of administration at Stanford, the study group looked at a number of difficult and elusive themes. The remainder of this paper will summarize the most important of them, one by one.

Accepted Conditions

Before turning to these themes, however, we noted that there are several aspects of Stanford's governance and management that we take quite for granted, even though different patterns are in place and apparently functioning effectively in other institutions of quality. What, we may ask at the outset, are the "givens" about Stanford's organization and management that we accepted and left unchallenged?

* *Governance*—Stanford is governed by a traditional arrangement of a single Board of Trustees and a presidential chief executive officer. This structure has served Stanford well, as it has served most other American universities; but it is not the only available model. Harvard and Brown, for example, both have "bicameral" governing boards. At Harvard, the smaller and the more active Board—the Corporation—amounts to a managing directorate, with the president *primus inter pares*. At the University of Rochester and at Duke, the top leadership is shared by an officer accountable for operations and a chief executive who has relatively less hands-on responsibility.

* *Vice Presidential Organization*—At Stanford much policy development is undertaken by the vice-presidents as a collegial group or "cabinet." Among the vice presidents the Provost is the senior officer, an arrangement that has effectively guarded the primacy of academic priorities. The Study Group believes that this mechanism has worked effectively.

Now we want to turn to a thematic summary of the work of the Study.

MAJOR THEMES

1. The Primacy of Academic Goals and Values—In the course of our discussions we adopted the phrase "the academic imprint" as a shorthand reference for an extremely important concept: the process by which the values and goals of the academic sector of the University are impressed upon the plans and operations of the professional and service sectors, so that the latter support the former instead of taking on lives of their own.

This process should be an unquestioned premise of decision-making in academic institutions. However, the Study Group was especially concerned about changes in the University that have made academic imprinting more difficult, thus permitting more and more distance to develop between the administrative and academic sectors.

The forces which seem to be driving Stanford toward greater divergence are:

* *Multiple goals and objectives*—Stanford has become many things besides an educational institution; thus the daily life of the place necessarily reflects diverse points of view, operating procedures, and objectives.

* *Scarce resources*—Fragmentation is further encouraged by scarce resources, which can lead to factional competition and constituency politics. Moreover, pressures to find additional resources drive us toward activities (e.g. aggressive investment and development programs), which, however much they may contribute, are nevertheless perceived by some as inconsistent with academic principles and values.

* *Professionalism and accountability*—Growth of staff professionalism has led to an emphasis on accountability, more rigid in some administrative areas than others, which narrows perspectives and can make the pursuit of higher goals and the consideration of longer-range issues more difficult. The force of accountability is focused rather than distributed: some vice presidents necessarily feel more accountability to the Board of Trustees and its committees than others. The experience of Board members on specific matters (e.g. real estate, investments, etc.) sometimes gets translated into standards of accountability that do not emphasize academic sensibility; indeed, they may be viewed by some trustees as especially valuable precisely because they reflect the "real world" rather than the academic culture.

The Study Group believes that the sensitivity of the senior administrative officers of the University to academic values is high; but it does recognize the existence of pressures within the University that require continual vigilence if the academic imprint is to be maintained and protected as an imperative.

In response to concerns about academic imprinting, the President resolved to increase the representation of the academic sector in the Vice President's Group. This small group had been the final point of review and approval for a wide range of administrative proposals and issues on their way to formal action by the Board of Trustees. The President added two vice provosts and renamed the Vice President's group, calling it the Administrative Council.

Other changes aimed at clarifying the objectives and effectiveness of the Council are under consideration. Guidelines indicating which matters do and which do not require review by the Administrative Council will be developed, along with suggestions to staff for preparing background material.

The Council's meeting schedule and agenda will be coordinated with other groups and meetings (e.g. the Capital Budget Group and the Pre-Agenda meeting prior to the Board of Trustees) to streamline the pathway of decision and to reduce potential redundancy. (The group that prepares the facilities funding forecast and gives preliminary approval to capital projects.)

In order to engage the school deans directly in a wider range of issues—especially those concerned with planning and policies of broad institutional consequence—the Administrative Council will meet periodically in joint session with the Dean's Council.

2. *Cultural Challenges to Faculty/Staff Relationships* Organizations (universities, banks, manufacturing companies) and professions (lawyers, teachers, accountants) have standards, traditions, values, heros and folklore—in short, cultures—that determine how things get done and provide valuable clues to those who succeed in them.

Within universities the coexistence of two subcultures—the faculty and staff, each with substantially different workstyles and objectives—can produce stress. Universities are characterized by a predisposition toward consultation and consensus building, open debate, participative decisionmaking, and an uncommonly non-hierarchial, nonauthoritarian outlook.

When confronted with these aspects of University life the astute administrator recognizes that they differ from the working conditions found in profit-making enterprises and modifies his or her behavior accordingly in the pursuit of strategies and goals, especially those that impinge directly on the faculty. But many feel that responsiveness to faculty values, emphasizing increased participation and consultation, carries a cost represented both by frustration over how long it takes to accomplish things, and over the dollars lost occasionally through less efficient approaches to solving problems.

On the other hand, faculty members confront sophisticated University support services and auxiliary enterprises that require professionals and specialists to run them—managers who have been trained to value productivity, efficiency, and accountability.

These objectives are comfortably endorsed by all, but they can become a source of stress when in real situations they run counter to the style of the place—as when, for example, the person held accountable for cutting certain amount of grass each day by a computerized schedule runs a noisy mower next to a lecture. Such examples risk trivializing a very real problem; a good deal of pent-up frustration within the institution is due to the failure of one culture to understand the needs of the other.

In order to sharpen its perceptions of administrative services and faculty-staff relationships, the Study Group decided to commission a series of case studies. We were eager to understand how people on campus feel about the administrative services they receive and deliver.

Interviews were conducted with staff in several central administrative offices, and with administrators and faculty at school and departmental levels. The interviews were conducted

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Management/ continued from page 14

Case studies reported localized but fairly widespread concern about a variety of personnel matters—staff turnover, burnout, understaffing, workload, etc.—that together suggest Stanford may have serious human resource problems.

in May and June of 1981 by 20 members of the University's Management Development Program.

At the end of the interviewing the MDP teams were asked to write up case studies which were subsequently read and discussed by the Study Group. We learned much from the case studies; here we share a few of the central ideas and impressions reported in them with a wider audience.

The following case study themes have broad institutional significance. Although they are stated separately, it will be obvious that they are closely interwoven.

A. Those interviewed did perceive separate faculty and staff subcultures; some mentioned the strengthening of central administration and the efficiency measures undertaken during BAP and BEP as a major contributing cause of a "we/they" attitude at Stanford. Complexity, size, different goals, and economic constraints were cited also as underlying causes of this phenomenon.

Some staff felt that the faculty fails to recognize as clearly as it should that the University, and the environment in which the University operates, have changed so as to require a different style of management. Some staff expressed frustration about inconsistant faculty attitudes concerning administration.

Faculty members sometimes accuse administrators (especially when the two are at odds) of shallow thinking; but at other times faculty members seem unwilling to spend the effort necessary to understand complex administrative issues (i.e. cost accounting). While some felt this paradox could be minimized by greater communication, others felt that the fundamental cultural gap dooms such efforts to failure.

B. A number of faculty (and faculty administrators) charged that the administration lacks a positive orientation toward its clients, and that the situation is getting worse. Some felt that the clients most actively served by the University were not faculty and students but were external agencies, or even internal line management.

Several staff recognized this issue also, and argued that it is compounded by the central administration's obligation to enforce University-wide rules, sometimes at the cost of not understanding or responding to the needs of departments.

C. Some of the faculty interviewed were critical of various administrative and service departments. These departments are sometimes seen as unduly costly, unresponsive, and insensitive to academic values.

D. Among both faculty and staff, there are various definitions of administration. Depending on one's perspective, the term "central administration" can refer to the Department Chairman, the Dean, the Provost, the Vice President for Business and Finance, or to the President.

Nor is it the case that all criticism of administration comes from the faculty. In fact, the cases suggest that some members of central administration are occasionally dissatisfied with the capability and responsiveness of department administration; and conversely, that department administrators sometimes feel more closely in tune with department faculty than with administrative colleagues at the central level.

As the University continues to struggle with the ebb and flow of decentralized authority, it will be important to resolve these identity issues and to make sure that appropriate human and financial resources exist throughout the institution to accomplish expected levels of service.

E. The case studies report localized but fairly widespread concern about a variety of personnel matters (e.g. staff turnover, burnout, understaffing, workload and pace, recruitment, and career development) that together suggest that Stanford may have serious human resource problems.

The administrators now being hired are perhaps more systematic about their own career advancement than they were 20 years ago, and it appears that Stanford's prestige and ambience are no longer as significant in attracting and retaining people, and keeping them happy, as they once were.

F. The case studies raise questions as to whether stress between the academic and administrative subcultures may be exacerbated by a failure on the part of University leaders to clarify expectations, establish guiding principles, and set goals which provide a supportive context for administration.

Some staff perceived a lack of guidance, and felt that the signals they were receiving from top administration were more mixed, perhaps suggesting a lowered concern for administrative processes themselves.

Some felt that major changes in leadership in the offices of the President, the Provost, and in several schools have created uncertainty regarding the strength of institutional commitment in such vital areas as salary equity, affirmative action, and compliance with various federal and state regulations.

3. *Resource Allocation*—The formal decision processes we employ to allocate scarce financial resources in the interest of pursuing various competing objectives provide a means of reviewing the balance between the academic and the administrative sectors of the University.

The comments of faculty interviewed for the case studies illustrate the sensitivity of this issue. One noted, "the University has an external, showy notion of what needs to be done—consistently building fountains, but not improving teaching space."

Another said he had a "feeling that the Business area has it pretty good; there aren't dollars available for an undergraduate advising secretary but the University can afford green posts around campus."

Although we take such comments seriously, we believe, nonetheless, that they represent misunderstandings—which we suspect may be shared by many.

In the first instance, restricted gifts are sometimes received for projects that would not ordinarily receive funding through normal University budget channels. These gifts would not otherwise be made; they consequently represent no loss to established fundraising objectives. Nor do they indicate a tilt in the budget process toward nonessential functions. They *do* represent our willingness to capitalize on opportunities to enhance the quality of campus life.

The second comment, which deals more directly with the budget allocation process, reflects the disagreement that reasonable people may have about specific allocation decisions. But it is a mistaken perception that allocations for administrative service divisions are for their benefit only. These are reached after careful considerations of the needs of the *academic* enterprise they support.

The study group wanted to assure itself that the merits, rather than the characteristics, of competing claims for resources determine the outcome of budget decisions. For example, requests from administrative areas are often backed up by specific data (e.g. figures on transaction volume) establishing not only the validity of the claim but often the consequences of a decision not to fund.

In contrast, requests from the academic sector are generally unsupported by extensive data and tend to be based on assertions regarding program requirements and benefits. The study group wanted to assure itself also that the various allocation processes (e.g. capital budget, operating budget, general plant improvements) are comparably competitive—i.e., is the degree of difficulty encountered by the last item funded in one process equal to that in another?

After looking at this issue, the Group concluded that there is no significant weighting of budget decisions in favor of the administrative and service sector, and that the combined, but separately determined, set of choices produce generally satisfactory results. In other words, style doesn't dominate outcome, and at the margin the different allocation processes are roughly equally competitive.

Moreover, it would seem inappropriate to link academic departmental requests to such numerical indexes as enrollments or numbers of majors, the rigid application of which would undercut the University's commitment to certain disciplines that may be less popular but are of intrinsic value.

One exception to the foregoing was the group's concern about the rules governing the allocation process for pro rata general plant improvement (GPI) funds. Heretofore, these funds, which are generated in connection with specific building projects and which are used for the construction or improvement of commons spaces, have been limited to outdoor spaces and utility applications (e.g. road improvement, parking, lighting, etc.).

A proposal was developed in the study to include other kinds of commons spaces: namely, classrooms and auditoria. This proposed change was analyzed and endorsed by the capital budget staff and forwarded to the Administrative Council for approval. That group subsequently adopted the recommendation, so that now general plant improvement funds will be available for a wider range of uses—including academic purposes.

Since budget requests for improvement and consolidation funds for academic programs and administrative services are developed through separate processes, there is little opportunity to compare competing claims (either collectively or separately) until the final stage of the annual budget.

As the number and complexity of these requests has grown, the budget officers have found it increasingly difficult to make item-by-item decisions in order to produce a merged list. These decisions involve trade- offs between needs that are often quite disparate in nature and that require specific technical knowledge to evaluate.

The study Group asked two of its members to work with the Budget Group on strategies that would alleviate these difficulties. While no decision on changes in the budget setting process has been reached, several alternatives are under consideration.

The objective is to develop program themes under which specific items could be combined in broader categories and reviewed at an early stage in the cycle as well as at the point of final allocation decisions. It is hoped that early emphasis on a higher level of aggregation will allow judgments to be made with greater confidence on specific program components within each vice presidential group. We expect that the 1983-84 budget process will be altered to fit this general objective.

Resources are allocated through fundraising as well. For many years the University has maximized gift revenues by letting donors restrict gifts to specific purposes (e.g. schools, departments, programs).

As the result of uneven fundraising capacities in schools and other University units, and the near impossibility of securing gifts for administrative activities, the benefits of fundraising are not equally distributed.

In addition, unrestricted gift income has fallen as a proportion of total gifts, further reducing internal flexibility. The budget process has been used to sort the internal equity issues, and to provide resources whenever necessary to support those units lacking fundraising capacity.

However, we find that internal fungibility of the kind needed has become more difficult to guarantee and that the operating budget no longer works as a smoothing mechanism with the effectiveness it once had. But to reverse this condition completely would require an undesirable loss of fundraising incentives which have resulted in higher gift totals.

The study group identified this loss of flexibility as a serious problem and launched a study of one strategy for ameliorating the imbalance between restricted and unrestricted funds.

Many sister institutions are more advanced than Stanford with respect to applying administrative use charges against restricted funds. Current practices in this area at Cornell, Harvard, MIT, Pennsylvania, Princeton, USC, and Yale were studied.

Based on the information gained from these inquiries, we are likely to modify Stanford's policies and to be more aggressive about charging appropriate administrative costs to restricted funds. Specific recommendations will be forthcoming in 1982-83.

Our examination of the use of restricted funds led to consideration of the life cycle of centers, institutes, and other non-departmental programs that rely principally on restricted gift support.

By their nature many organizations of this type carry out their activities without close decanal supervision or the scrutiny that results from competition for operating budget allocations within a school. They are often established to answer emerging needs whose longevity is impossible to predict. Some might be recognized at the outset to have a fixed life, while others might be expected, if they prove successful, to receive long-term budgetary commitments.

Under these circumstances we were concerned that there is no University policy that mandates review of these organizations or that establishes guidelines and criteria for determining whether they should be closed down, assimilated in a regular department, or given a permanent identity of their own.

A policy statement on the review and reauthorization of centers, programs, and other non-departmental academic organization has now been sent to the deans from the Provost which clarifies these issues.

4. *Administrative Growth and Costs*—The Study gathered data about administrative costs in order to understand the basis of apparently widespread concern about growth of administration at Stanford. As the authors of one case study put it; "there is an inevitable feeling that there are a lot of administrators, whether that's objectively true or not."

The data in the table below indicate that administrative costs remained an approximately constant fraction of the operating budget during the '70s. The combined cost of general administration and Business and Finance remained at 26.9% (see categories 4 and 5).

Such a large fraction as that might seem to argue that the cost of administration at Stanford is too high, even if it has not grown disproportionately. Much of this total, however, is comprised of expenditures for materials and services, not administrative personnel.

Even the portion that is, strictly speaking, administration is magnified by a pecularity of Stanford's presentation of the relationship between the operating and consolidated budgets.

The consolidated budget (which includes the hospital, SLAC, sponsored research and auxiliary activities such as student housing) has grown at a considerably faster rate than the operating budget, and in so doing has required a higher level of administrative support services, most of which are carried in the operating budget.

For example, auxiliary accounting is done in the Controller's Office and paid for out of the operating budget—even though its services are delivered outside that budget. And whereas the number of invoices processed by the Accounts Payable Section for sponsored research has grown, the cost of salaries for paying these bills is included in the operating budget.

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Organization and management/ continued from page 15

Operating Budget 10-Year Comparisons 1971-72 through 1980-81

Category or Group	% Adjusted Oper. Budget* 1971-72	1980-81	Change	Index of Growth: '71/'72 = 100
1. School & Other academic programs**	54.2	52.6	-1.6	213
2. Student Services	7.8	7.6	-0.2	215
3. Libraries	11.1	12.9	+1.8	256
4. General Administrative Support***	7.8	10.0	+2.2	280
5. Business & Finance	19.1	16.9	-2.2	195
Total	100.0	100.0	0.0	220

Growth in the Consolidated Budget, 1980-81 over 1971-72: 246

* *Figures exclude School of Medicine, Financial Aid, and Utilities.*

** *Excludes School of Medicine*

*** *Includes central administration, Public Affairs, Development, and University Counsel.*

The Study compared in greater detail the rates of growth (measured by increases in salary expenditures) of some two dozen administrative units from 1974-75 through 1979-80 in order to identify any points of overheating among them.

We found that growth rates vary widely, with some exceeding the baseline increase in inflation, and with others showing quite constrained rates of growth. In the former category, the Office of the University Counsel stood out; but on further analysis it was found that although the University has indeed added staff to handle an increased workload, that expansion has been cost effective and has reduced expenditures for external legal services. In some areas of the Controller's Office such as payroll and Processing, Billing, and Reporting, improved methods and automation along with continued hard work, have helped to keep growth and costs at a low level.

After looking at these data and considering the factors requiring real growth in the cost of administration at Stanford, we concluded that these patterns and rates of growth cannot be considered unusual or unjustified. They nevertheless present a challenge to contain future growth within reasonable boundaries and to increase productivity and efficiency.

5. *Planning*—Much of the study group's thinking on this topic was presented to the Board of Trustees in September 1981 in a paper by Donald Kennedy and Joel Smith entitled, "Planning at Stanford."

That paper emphasized how significantly planning is influenced by the academic culture, with the result that "the style and method of much of the planning here is different from that done in more hierarchial organizations where authority is centralized and the management style is top-down."

In his fall speech to the Academic Council that year, the President added, "Given the special considerations that apply to an academic institution like this one, we should probably not engage in a massive effort to evolve a comprehensive plan for Stanford."

He was referring to an antipathy toward centralized, comprehensive planning common among faculty "who work, not according to conventional notions of productivity and accountability, but instead with career-long licenses and maximum professional freedom. Discipline is provided not by instructions from above, but rather by peer review."

Still, planning is imperative for the purposeful accomplishment of goals and the question is not whether we plan, but how. Conventional planning is required and can be undertaken in administrative support units with less consideration of the academic culture. But even in those circumstances effective planning will account for academic values as important determinants of eventual success.

In the absence of a comprehensive plan, the study group is confident that the University can be directed effectively through the definition of broad objectives, and—at a lower level—the pursuit of detailed plans in support of activities instrumental to the accomplishment of those objectives. For example, attracting first-class faculty will require careful planning about housing.

In consultation with others the Study Group drafted a statement of the University's mission. This paper sets forth purposes, principles, and objectives for Stanford.

6. *Client Relations and Administrative Responsiveness*—Service organizations face a dilemma when it comes to balancing client satisfaction against cost effectiveness. Given enough resources (i.e. budget, personnel) they can be responsive and provide a degree of local and personal service that results in a high level of satisfaction. Conversely, client relations in service organizations where budgets and other resources are in short supply can be a difficult proposition—especially if the clients approach their day-to-day activities from a different cultural perspective, or if they nourish and hold unrealistic expectations.

Based on its own perceptions, inputs from other faculty and staff, and the case studies, the Study Group believes that relationships between many of the supporting administration services and their clients could be improved.

While our discussions and actions concentrated mainly on nine divisions of Business and Finance, administrative responsiveness is clearly an important concern throughout the University.

We believe that there have been changes over the last decade in the way administrative services are managed, and that some of the negative impressions reported to us regarding a lack of responsiveness and poor client relations are valid.

These complaints may have been an inevitable consequence of pushing for greater cost consciousness, accountability, and efficiency as the University moved away from an era of comparatively abundant financial resources into one in which budgets had to be closely controlled.

It was necessary to develop centralized administrative services that were more highly organized and efficient; but they also became recognizably more impersonal and bureaucratic.

Also during this period, service level expectations and requirements increased due to such factors as the greatly expanded scope and complexity of the physical plant and compliance regulations imposed by various state and national agencies. Difficult decisions had to be made about the allocation of funds that were insufficient to meet all the expectations of the community.

Under these circumstances it has proven to be an extremely vexing managerial task to meet longterm, but less visible service requirements (e.g. maintenance of heating, ventilation, and air conditioning systems) while responding adequately to the highly visible and more personal needs (e.g. cleaning classrooms).

Some alienation may also have been caused by perceptions of an immovable bureaucracy, run by assertive and specialized staff who have been granted a considerable degree of freedom—even though the purpose of that freedom was to obtain more effective decisionmaking, efficient administration, and the assumption of responsibility and accountability.

On balance we believe that the University must continue to search for ways of increasing efficiency while also listening more carefully to the client's point of view.

To signal our commitment in this area, we asked the Vice President for Business and Finance to prepare a strategy for improving client relations in the facilities and services divisions. This project is underway, and we hope it may provide a model for similar efforts in other parts of the administration.

With the assistance of a consultant a responsiveness measurement system is being developed and tested which will monitor and encourage client feedback, something that has been completely lacking heretofore.

Client relations will be introduced into the performance evaluations of managers.

Finally, the University Committee on Land and Building Development will be requested periodically to discuss the general appearance of the University's grounds, signs, and buildings and to comment on the performance of the custodial services.

The study group is also concerned about the related need to lower expectations of clients wherever a mismatch arises between those expectations and a lowered level of service that the institution has chosen to provide.

For example, if budget dollars are scarce, an institutional decision may be made to reduce the cleaning of faculty offices from several times a week to once a week; the service department should not be blamed for what is in fact an allocation choice.

Accordingly, the information provided about budget decisions should highlight reductions in service levels, so clients will know what changes to expect and not place blame unfairly on the service departments.

7. *Organization Structure and Size*—We concentrated our organizational analysis in two broad areas. The first involved discussing the organization of specific units or the relationships among several units with similar goals.

For example, we considered undergraduate education and student services by focusing on the relationships among the Undergraduate Dean, the Graduate Dean, the Dean of Humanities and Sciences, and the Dean of Student Affairs. At issue was rationalizing these relationships, clarifying reporting lines, and eliminating administrative redundancy. We looked in a general way at the organization of various student and undergraduate service functions such as admissions, housing, placement, overseas studies, health services, the registrar's office, financial aid, and advising.

Two key issues emerged: the relationship between the Undergraduate Dean and the Dean of Humanities and Sciences, and the division of responsibilities now lodged in the office of the Dean of Students into those related to the curriculum and those having to do with administration.

Subsequently, a Provost's Committee made recommendations, which have now been implemented, for a major reorganization of the duties of the Undergraduate Dean, passing many of these responsibilities to the School of Humanities and Sciences.

No action was taken—nor is any contemplated—regarding the responsibilities of the Dean of Students, although this may be an area that the Undergraduate Cabinet will consider.

Finally, without reaching any conclusions or deciding on future steps, we discussed the organization of the Center for Information Technology and the policy and governance structure through which CIT sets its goals and receives direction.

The second area of organizational analysis dealt with the size of the University enterprise as a whole. We considered the argument advanced by one of the group that most of our present difficulty in controlling costs and in generating efficiencies is related to size—that is, size as measured by number of positions. In effect, this means the number of staff positions, since the student body and the faculty have grown only by small amounts in recent years and are not expected to change.

This argument holds that every member of an organization produces some work that is useful and some that is not. When a new staff member is added, the proportion of non-useful work increases, because the non-productive activities are proportional to the size of the organization as a whole.

Larger organizations, it is argued, generate more mistakes because they are more confusing and because there is more to be wrong about and more chances for misunderstanding. They also generate more self-justifying activity such as protective memoranda, the pursuit of personalized arguments and the like. The result is a more costly and less efficient organization.

This argument stimulated discussion of the merits of a formalized staff billet control system based either on regulation or an incentive mechanism. Although we reached no consensus on the need for rigid staff billet control or on a feasible method for achieving it, there was general agreement that diseconomies of scale do exist and that there is an external cost associated with each incremental position.

We concluded that the cost of size should be emphasized by requiring more rigorous justification in the budget process of requests for new positions and that, whenever economies and improved productivity would result, incentives should be provided for substituting capital for labor.

8. *Administrative Decentralization*—We found it productive to examine management and organization issues within a conceptual framework based on the locus of responsibility and authority within the organization for making key decisions. Over the years, and especially during the last 15 years of strict budget control, Stanford has developed a comparatively centralized approach to administration. But with a larger and far more complex organization, we must consider whether the present degree of centralization is functional.

Stanford is changing and undertaking new initiatives at a rapid rate. The senior officers are required to make decisions across an increasingly broad and technical spectrum, and about issues that range far up and down the scale of importance.

A greater degree of decentralization could help us avoid overload and improve the quality and legitimacy of the many decisions and actions that will have to be taken during the next few years.

Decentralization would put a greater degree of responsibility in the hands of those with the expertise, access to data, and time to deal with issues effectively. It could further the sense of participation in an enterprise with worthy goals and fair processes.

On the other hand, there are compelling reasons for maintaining a substantial degree of centralized authority. Limited resources, central planning, interrelatedness of decisions, and the necessity of asserting control in order to achieve certain institutional goals are factors that should be recognized in reaching an appropriate balance.

Some degree of centralization is needed to sort out the interplay of market and equity considerations in the determination of policies governing differentiated school tuition rates and faculty salaries, for example, and in the resolution of questions involving the academic calendar, faculty titles, and access to prospective donors.

As we come to an understanding on what should be decided centrally, what should be guided centrally but decided locally with post-performance evaluation, and what should be left to local initiative, it is important to recognize that these movements can take place side by side.

For instance, more decentralization in budgeting does not necessarily imply a decentralized staff compensation policy. And we could have relatively centralized strategy formulation and policy-making in certain areas while sharply decentralizing implementation. continued on next page

Management...

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We recognize that specific steps toward greater decentralization in certain areas (e.g. personnel) would require clarification of the role of deans as administrative line officers and would probably necessiate strengthening the capacity of decanal staffs to handle increased delegation of certain administrative tasks.

Redefinition of the dean's role along these lines would probably result in a different type of faculty member choosing to fill the dean's chair. Whether this would be in Stanford's best interests in the long run is an important question.

Summary and Conclusions

As the result of the study several improvements have been made in the way the University is administered. Among these accomplishments we include the reorganization of the Administrative Council; broadened use of GPI funds for academic commons spaces; a policy calling for systematic review of nondepartmental centers and institutes; a statement of University mission and objectives; and procedures for improving relations with the clients of service divisions within Business and Finance.

A number of other initiatives have been set in motion which will result eventually in other changes. These include establishing a new policy governing an administrative charge on the use of restricted gift funds; and changes in the procedure employed in the operating budget process to determine consolidation and improvement funds allocations.

The study has not demonstrated any equivalent arguments to make sweeping changes in the way the University is organized or is governed. We believe the University is in good shape administratively and that it will be able to cope with the challenges and opportunities of the next decade without undergoing a major reorganization.

We do see a number of issues, however, that we suspect will form the core of an agenda that will continue to concern the administrative for some time—control over growth in size; truly cost effective methods for increasing productivity and efficiency; and the proper degree of decentralization for an organization of Stanford's type.

These matters will not be dropped at the conclusion of the Study of Organization and Management. The value of a discussion group that can help the President evaluate policy options and define issues and problems at an early stage of their development has been well established. In all likelihood some comparable group will serve this purpose, though perhaps on a less formal basis. A second mechanism for continuing to give these and other comparable issues the attention they deserve is the fall retreat of the vice-presidents and deans, which was inaugurated last year and which is planned now as an annual event.

Finally, we hope that everyone in the community will continue to be concerned about these topics and will share their ideas with us and with other colleagues.

Complexity, size, economic constraints contribute to 'we-they' attitudes

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Massy and Associate Vice-President Kent Peterson, both business and finance; and Associate Vice-Provost Michael Oman, staff director for the study.

Interviews conducted by 20 members of the University's management development program in 1981 indicated that complexity, size, and economic constraints contributed to a "we-they" attitude between faculty and administrators.

Some staff felt faculty failed to recognize that the University's environment now requires a different style of management. "Faculty members sometimes accuse administrators of shallow thinking; but at other times, faculty members seem unwilling to spend the effort necessary to understand complex administrative issues, such as cost accounting," the report noted.

Administrators criticized

On the other hand, several faculty charged that the administration lacks a "positive orientation towards its clients and that the situation is getting worse." Some felt those most actively served by the University were not faculty and students but external agencies or even internal line management.

The interviews showed "localized but fairly widespread concern" about staff turnover, burnout, workload and career development that "together suggest that Stanford may have serious human resource problems," the report said.

"The administrators now being hired are perhaps more systematic about their own career advancement than they were 20 years ago. It appears that Stanford's prestige and ambience are no longer as significant in attracting and retaining people, and keeping them happy, as they once were."

Between 1971-72 and 1980-81, the combined share of the University operating budget devoted to General Administrative Support and Business and Finance remained stable at 26.9 percent. General administrative support rose from 7.8 to 10 percent, while Business and Finance declined from 19.1 to 16.9 percent.

Excluding the School of Medicine, financial aid expenditures, and utility costs, the proportion of the operating budget devoted to School and other academic programs dropped from 54.2 to 52.6 percent. The fraction devoted to student services declined from 7.8 to 7.6 percent.

Library expenditures rose from 11.1 to 12.9 percent of the operating budget during this decade.

While the total share devoted to general administration, business and finance may appear high, the study noted that "the consolidated budget—which includes the Hospital, Stanford Linear Accelerator Center, sponsored research, and auxliary activities such as student housing—has grown at a considerably faster rate than the operating budget and, in so doing, has required a higher level of administrative support services, most of which are carried in the operating budget."

Improvements made

As a result of the study, several improvements already have been made in the way the University is administered, the report noted:

1) To increase the "academic imprint" on decisions considered by the University's vice-presidents, two academically-oriented vice-provosts were added to the group, which has been renamed the Administrative Council. The enlarged group will meet periodically with Stanford's deans.

2) Funding for general plant improvements will be expanded from roads, parking, lighting, and other outdoor utilities to include classrooms and auditoria.

3) Following the established practice of many other universities, Stanford may apply appropriate administrative use charges against restricted funds. This change would reduce the differences in treatment of restricted and unrestricted funds, permitting a little more flexibility in budgeting. Current practices at Cornell, Harvard, MIT, Pennsylvania, Princeton, Yale and USC have been studied.

4) "Sunset" rules for reviewing centers, institutes and other non-departmental programs that rely mainly on restricted fund support have been established by the Provost. After review, these programs may be closed down, assimilated in a regular department, or given a permanent identity of their own.

5) Client relations will be introduced into the performance evaluations of managers in the facilities and services divisions of Business and Finance. With help from a consultant, a responsive measurement system is being developed to monitor and encourage feedback from clients.

6) When budget decisions result in reduced service levels, information about the change will be provided to clients, so they will not unfairly blame those responsible for providing the services.

While the University appears "in good shape administratively. . .able to cope with the challenges and opportunities of the next decade without undergoing a major reorganization," the study says three issues form the core of an agenda for the future:

1) Control over growth in size;

2) Truly cost-effective methods for increasing productivity and efficiency; and

3) The proper degree of decentralization for an organization of Stanford's type.

The combined forces of internal growth, new enterprises, inflated costs, external regulations and "our own heightened standards and expectations" have left "no reasonable alternative to a large, competent, highly trained, authoritative and increasingly specialized administrative staff," the report says. "Without it, the University's affairs would not be cared for properly, nor would the University stand a good chance of achieving its goals."

Where the University was once run "by a few part-time or former faculty people in the central administration," now "managerial responsibility must be distributed more widely through the organization in order to guarantee the competence, breadth, and responsiveness needed to run the university."

As the University's staff has grown more professional, some managers may—like the "invisible colleges" of faculty peer groups—"look to external standards and values that may relate only distantly to the institution's 'academic' values," the report says.

"These tendencies are, we believe, neither greater nor less here than in our sister institutions."

But the values and goals of the academic sector of the University should permeate the plans and operations of the University's professional and service staff, the report adds. This "academic imprint" should be "an unquestioned premise of decision-making in academic institutions."

End tax on unrelated business income for nonprofit groups, scholar suggests

Taxes on unrelated business income of nonprofit organizations should be repealed, Columbia University Prof. Susan Rose-Ackerman suggests in a recent issue of *Stanford Law Review*.

"Tax-exempt firms must now concentrate their profitable endeavors in those few lines of business judged to be 'related,' " she notes.

"The growth of gift shops and vacation tours operated or sponsored by nonprofit organizations may be, in part, a response to the conditions of the tax law. Such concentration in a few areas makes it much more likely that the business activities of nonprofits will impose losses on competitive for-profit firms. . . .

"By permitting nonprofits to enter any profit-making industry, repeal will reduce the pressure on for-profit firms in areas that are related to the primary activities of nonprofits.

"While this new freedom may increase the overall level of nonprofit entrepreneurial activity, the diffusion of this activity throughout the economy reduces the chance that investors in a particular industry will suffer substantial, unanticipated losses from nonprofit entry."

A graduate of Wellesley and Yale, Rose-Ackerman is a professor of law and political economy at Columbia. Her research was supported by Yale's program on nonprofit organizations.

Her article on "Unfair Competition and Corporate Income Taxation" appears in the *Stanford Law Review* for May, 1982, just published (Vol. 34, No. 5 pages 1017-1039.

Future executives learn creativity...

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creatively by asking them to trace the genesis of any good idea they'd ever had.

"People would describe their ideas; you could see what an idea was, how it differed from imagination or production, what steps were required for getting there. So when I came to Stanford in the '70s, and taught Marketing Communications, I used the same approach." Students wanted more, and Creativity in Business evolved.

Currently working on a book based on the talks given in the creativity course, Ray recently published a textbook on *Advertising and Communications Management* (Prentice-Hall, Inc., 1982). The new book, tentatively titled *Awakening Business Creativity*, "might be better called *How to be Yourself in Business*," says Ray.

"That's what it, and the course, is really about. If you can be yourself, then you can be creative, and there's no barrier, no distance between you and your creative self."—**Marcia Tanner**

Indirect costs top $60 million annually, Lieberman says

Following are comments by Vice-Provost Gerald Lieberman, dean of graduate studies and research, on indirect costs at the Faculty Senate Dec. 2:

Purpose

The purpose of this discussion is to give the Senate a better understanding of what indirect costs are, how the indirect cost rates are determined, and the importance of indirect cost, or "overhead," recovery to Stanford.

As you are aware, the primary reason for our projected Operating Budget deficits is because Stanford is collecting less overhead on sponsored research projects than had been predicted.

What are Indirect Costs?

As described in the accompanying paper, indirect costs are those costs that are not themselves a direct expense of doing research or teaching, but are the costs of providing services or contexts, without which the research or instruction could not be done.

Examples of direct costs are faculty and student salaries, travel expenses, etc. Costs which we refer to as "indirects" include school and department administration; student services; the library; depreciation on buildings, some equipment, and some land improvements; the operations and maintenance of the University's physical plant, sponsored projects administration, and general and administrative offices.

If we look at the appropriate table *(see page 19)*, we can see the actual breakdown of indirect costs which conform to the federal government's definition of "allowable" indirect costs—i.e., those overhead items the government is willing to fund in the form of indirect costs on projects they sponsor.

Every activity that the University performs (government or nongovernment supported) draws its share of the total overhead. The numbers in the left hand column show the total indirects as defined above which were estimated to be incurred this year in support of Stanford's primary activities of teaching and departmental research, organized research, and other such activities as conferences, SLAC, RLIN, and auxiliary activities such as housing and food service. These primary activities of the University are referred to in the paper as "direct cost objectives."

The numbers in the middle column represent those indirect costs which support "organized," or sponsored, research; that is, research which is funded by outside grants or contracts. The numbers in the right hand column show the breakdown of indirects allocated to on-campus sponsored research as expressed in terms of the overhead rate. This rate calculation assumed a total (modified) direct research volume of $89 million for this year.

As you can see from these figures, almost half of all indirect costs associated with sponsored research are space related; that is, operations and maintenance of buildings and grounds and depreciation account for about $28 million of indirect costs in support of research activities.

Administration of general University activities related to research and administration of departments, sponsored projects, and student services related to research account for another $26 million. And about $6 million in costs of the library are associated with sponsored research.

Thus, for the current year we expect $60.6 million in costs to be incurred which indirectly support sponsored research activities, counting only those costs which the government has agreed are allowable under our government indirect cost rate structure.

How Are Indirect Cost Rates Determined?

In order to derive an indirect cost rate which will recover the above costs, we have to estimate the volume of direct cost expenditures for the year.

This we do on the basis of the volume of prior year research expenditures, proposals and awards of sponsored projects, taking into account to a limited extent the level of funding anticipated that will be appropriated by Congress for the federal R&D funding agencies.

In theory then, the indirect cost rate is achieved by dividing the estimated volume of indirect costs by the estimated volume of direct costs for any given year. I say, "in theory," because the actual process is extremely complicated, involving a bewildering "stepdown" schedule and a cast of cost accountants. This rate is then charged to each direct cost as the direct funds are expended for every sponsored project.

At the end of each year we see what the actual indirect costs were. If we collected less than the actual amounts incurred to which we were entitled, we add the amount of underrecovery in that year to the next year's overhead rate as a "carryforward." If we overcollect in any given year, we reduce the next year's rate by the amount of the prior year's overrecovery.

This process assumes that each sponsored research project incurs indirect costs in proportion to the direct costs of the project. While we realize that in fact some projects take up proportionately more or less space, use more or less library resources, etc., than others, this averaged method of collecting the overhead recovery is what is mandated by the federal government.

The Problem

The problem we are now experiencing is that recovery of indirect costs from sponsored research projects is less than the actual costs incurred.

To just increase the indirect cost rate in order to collect what we refer to as "full recovery," is not a simple solution: as you know only too well, both researchers and their sponsoring agencies are concerned about universities' rapidly-rising indirect costs, arguing that every dollar going into overhead is simply one less dollar going into the direct support of research.

In Washington's current political climate, we are not likely to see any significant overall increases in federal research funding, which accounts for some 90 percent of Stanford's total research support of $136 million (in 1981-82). However, to deliberately not try to collect full recovery from our research sponsors would be disastrous, since virtually our only other sources to cover such costs would be through increased gift support or higher tuition.

Thus, we are in a dilemma which is compounded in three ways: first, when the volume of direct research expenditures drop, the indirect cost rate must go up if we are to recover all the overhead costs.

Second, indirect costs are rising faster than inflation, a phenomenon which has been true for many years. This is because such costs as utilities have skyrocketed, salaries go up faster than inflation, more and more space is required for modern research, and because of government requirements for more and more accountability re the use of their funds, all of which drive the indirect costs up.

As long as the direct research expenditures also rise faster than inflation, the indirect cost rate can remain stable. Last year, however, for the first time in recent history, Stanford's direct research expenditures did not rise as much as inflation; they rose only about three percent when inflation was around nine percent.

Furthermore, we don't see any signs for increases in direct research expenditures this year. Thus, we are faced with a double whammy. We see a dropping (in real terms) of direct research volume without a corresponding drop in indirect costs.

This is then compounded by the issue of carryforward: that is, the process of adding to future year indirect cost rates that amount of money to fund those indirect costs incurred in prior years but not collected. All these factors push the indirect cost rate up.

I would very much appreciate the Senate's thoughts on this problem and possible solutions to it. But I must warn you that the apparent "obvious" solution of merely cutting indirect costs is not as obvious as it might seem.

First of all, many of the indirect costs are fixed, such as those related to space; we incur them regardless of the research volume.

Second, to cut those overhead items which might be possible to cut may require a significant change in our lifestyle, our physical environment, and in the Stanford we have come to know and love. . . .

Frank Riddle, associate controller, (will) explain in some more detail (not to mention accuracy) the process I briefly described above of arriving at our indirect cost rates.

Frank has been one of the most influential people from all universities working with the federal government to keep as low as possible both the overhead rates and the administrative burdens on the faculty associated with government-sponsored projects.

Indirect cost calculation quite complex: here's a brief guide to the accounting

Following is a background paper on indirect costs circulated to the Senate:

I. Introduction

One of the fundamental assumptions made in government as well as in most industries is that each activity in an organization is allocated its total cost. This includes the costs directly attributable to that activity and its proportionate share of the general costs of running the organization (indirect costs).

These general or indirect costs at Stanford include such items as Building Depreciation, Operations & Maintenance, General University Administration, School and Department Administration, Libraries, etc. These costs are allocated proportionately to all of the direct cost objectives of the University; i.e., instruction, research and other direct activities, on the bases explained in this paper.

In the case of grants or contracts to universities, the federal government and most non-government entities assume that they will pay the *direct costs*, which include research salaries, travel, expendable materials and supplies, computer time, etc., as well as an allocable share of the allowable general costs of running the University (*indirect costs*).

The federal government does not recognize (nor do many businesses) an incremental type of costing policy whereby one would allocate to a new activity only its direct costs and the "added" or "incremental" general costs due to that new activity.

In the case of the federal government, quite specific regulations exist as to which of indirect costs may be assigned to government grants and contracts.

In fact, substantial indirect costs are not allowable for allocation to the government. These are real costs of running the University which cannot be included in the calculation of the indirect cost rates for federal grants and contracts. A higher rate for non-government grants and contracts has been calculated without excluding these government unallowable costs.

The non-government rate does not, however, include any of the costs considered allocable but unallowable to federal grants and contracts. That is, the unallowable portion of costs allocable to federally-sponsored projects is totally subsidized by the University from general funds; these unreimbursed costs are *not* added back to the non-government projects in calculation of that rate. Likewise the allocation of indirect costs to Instruction and Department Research is paid for with University unrestricted funds.

In order to show how the indirect cost rates are calculated, the following three sections will discuss the individual components of the indirect rate; the direct cost objectives, the indirect cost pools, and the indirect cost allocation bases (how the costs in each cost pool are distributed to each cost objective). The discussion of indirect costs will continue by addressing how the allocated costs are converted into indirect cost rates.

II. Direct (Final) Cost Objectives

The direct or final cost objectives of the University, to which the indirect costs are allocated, are as follows:

1) **Instruction & Department Research**—all instruction and research funded by general funds and gifts to the University.

2) **Organized Research**—all research funded by grants and contracts which are so classified because they generally bind the University to a specific line of inquiry; make specific personnel commitments, items of output, or specific performance targets; contain detail budgets for expenditure and require return of unspent funds; and/or contain reporting or disposition of property requirements.

3) **Sponsored Instruction, including Educational Service Agreements (ESA)**—all instruction or educational service projects funded by grants and contracts so classified because they have the characteristics enumerated above under Organized Research.

4) **Other Sponsored Activities (OSA)**—all projects funded by grants and contracts not included in Organized Research or Sponsored Instruction. Included are travel grants, conferences, public service projects and the like.

5) **Stanford Linear Accelerator Center (SLAC)**—all SLAC activities associated with the Department of Energy contract.

6) **Research Library Information Network (RLIN)**—all activities of RLIN managed by Stanford under agreement with Research Libraries Group, Inc. (RLG).

7) **Auxiliary Activities and Other Institutional Activities**—Auxiliary Activities are self-supporting Stanford activities existing to furnish goods or services to students, faculty, staff or others who are charged a fee. Included are the Housing and Food Service, Faculty Practice Plan, Tresidder Union, part of the Athletics Department, etc. Other Institutional Activities do not necessarily relate to the University, but receive some services therefrom. Included are the Faculty Club, Bookstore, Alumni Association, ASSU, Stanford Hospital (in its new status), Children's Hospital, Non-Stanford Library Users, etc.

III. Indirect Cost Pools

There are seven indirect cost pools that collect indirect costs for subsequent allocation to cost objectives. Listed below are these indirect cost pools with a brief explanation

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Indirect costs...

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of what each contains:

1) **Depreciation**—For indirect costing purposes, depreciation of capital assets is recognized as a cost; depreciation is not recorded as a cost in the University's external financial statements. Stanford has three main categories of depreciable assets:

* buildings
* capital equipment (non-government funded purchases)
* land improvements (such as roads, pathways, street lights, etc.)

2) **Operations & Maintenance (O&M)**—The O&M cost pool contains costs incurred for the administration, supervision, operation, maintenance, preservation and protection of the institution's physical plant. At Stanford it includes:

* the normal costs of utilities
* building and grounds maintenance
* janitorial and custodial contracts
* fire and police protection
* plant insurance
* parking and transportation
* major repairs and alterations to buildings

3) **General & Administrative (G&A)**—G&A expenses represent those costs incurred for the general executive and administrative offices and other expenses of a general character. At Stanford these are represented by the following offices:

* Board of Trustees
* President's Office
* Provost's Office
* Office of the Academic Deans
* Legal Counsel
* Part of the Office of the Vice-President for Business & Finance
* Personnel Office
* Office of the Vice-President for Public Affairs
* Office of the Vice-President for Development
* Controller's Office
* Procurement Office
* Insurance & Risk Management Office
* Part of Facilities Office (not charged to facilities projects)
* General and Administrative Costs from Academic Schools and Departments.

4) **Sponsored Projects Administration (SPA)**—Sponsored Projects Administration expenses represent those costs incurred by separate organizations established primarily to administer sponsored projects. This cost pool currently consists of:

* Sponsored Projects Office
* Part of the Office of the Vice-Provost & Dean of Graduate Studies and Research

5) **Department Administration**—Departmental Administration expenses are incurred at the school or department level for administrative and support services that benefit common or joint departmental activities or objectives. The following activities are considered Departmental Administration:

* Planning and administration of department curriculum, research and facilities
* Guidance of students
* Selection of new graduate students
* Department personnel functions
* Maintenance of department records
* Review of library needs of the department
* Accounting and purchasing for the department
* Preparation of proposals for sponsored instruction or sponsored research
* Planning and administrative duties for the department, school and University
* Work on all department committees
* Paid leaves, such as sabbaticals

6) **Student Administration and Services**—This cost pool contains those expenses incurred for administration of student affairs and services to students. Student Services expenses include expenditures for the following:

* Dean of Students Office
* Placement Office
* Admissions Office
* Registrar's Office
* Student Financial Aid and the Financial Aids Office
* Student Health
* Student Activities

7) **Library**

Expenses included in the library cost pool are those incurred for the operation of the Stanford University Library System, which includes Meyer Undergraduate Library, the Cecil H. Green Library, ten branch libraries (Art and Architecture, Cubberley Education, Music, Falconer Biology, Swain Chemistry, Branner Earth Science, Engineering, Mathematical and Computer Sciences, Physics and Hopkins Marine Station), and the six Coordinate Libraries (Food Research Institute, Hoover Institution, Jackson Library of Business, Lane Medical, Law, and Stanford Linear Accelerator Center).

IV. The Allocation Process

Each of the indirect cost pools has one or more bases on which the expenses in the pool are allocated. The development of these allocation bases comes from the requirements of Federal Office of Management & Budget Circular A-21, which outlines costing principles for educational institutions.

A-21 provides as its preference for indirect cost allocation the use of special cost allocation studies produced in accord with a set of requirements. If special studies are not conducted, the cost pools must be allocated on bases prescribed by A-21. Stanford has chosen to use the special study approach to produce more equitable allocations to our cost objectives.

The descriptions of the allocation bases presented below are simplified summaries of the actual complex methodologies developed in compliance with A-21 requirements.

1) **Depreciation allocation**

* Buildings—depreciation of each building is allocated based upon net assignable square footage of space occupied by each academic cost objective or indirect cost pool within the building.
* Equipment—depreciation of equipment in a department is allocated based upon net assignable square footage of space occupied by each cost objective or indirect cost pool within the department.
* Land improvements—depreciation of non-auxiliary land improvements is allocated in the aggregate based upon net assignable square footage of space occupied by each cost objective and indirect cost pool throughout the academic and administrative buildings.

2) **Operations & Maintenance**

A special study was conducted for the O&M cost pool to associate the costs incurred more closely with the cost objectives. O&M costs are allocated using several bases; each allocation method used is one considered to be most accurate in matching O&M costs with the benefits received by the user.

The allocations are based primarily on net assignable square footage by cost objective or indirect cost pool. For utility costs, square footage of each applicable cost objective or indirect cost pool is weighted by the amount of utility usage derived from a special engineering study. Police and Fire Protection costs are allocated on the basis of replacement value of buildings by cost objective or indirect cost pool.

3) **General & Administrative**

For allocation, this cost pool is divided into a number of cost groupings which are determined by analysis and discussions with representatives of various General & Administrative offices and of the University cost objectives served. Most of these cost groups are allocated to benefitting cost objectives based upon their respective Modified Total Direct Cost (MTDC) bases. For a few of the cost groupings, however, other allocation bases are used. For example, non-faculty salaries are used to allocate the Personnel Office cost grouping. No allocation is made if little or no benefit is attributable to a cost objective relative to its base.

4) **Sponsored Projects Administration**

This cost pool is also broken down into cost groupings which are then allocated to benefitting functions of the University where Sponsored Projects are conducted. These cost groupings are allocated on the basis of the Modified Total Direct Cost (MTDC) of sponsored activities.

5) **Department Administration**

The allocation of the Department Administration cost pool is on the MTDC bases of the following: Sponsored Instruction, Organized Research, Other Sponsored Activities and Instruction & Department Research on a department-by-department basis.

6) **Student Services**

This pool is allocated on the basis of the ratio by cost objective of graduate and undergraduate student hours—both course credit hours and employment hours.

7) **Library Allocation**

The allocation basis for the cost pool is developed through a special study under A-21. Library costs are first separated into library functions: (a) **Collection Development/Processing and Maintenance** (CD/PM), defined as costs of obtaining and maintaining the Library collections; and (b) **Public Service** (PS), defined as costs associated with serving the users of the Library materials once the materials are available for public use. Second, cost of CD/PM and PS are allocated to user groups (undergraduates, graduates, faculty/staff and non-Stanford). CD/PM is allocated primarily on the basis of the target population for each library. PS is allocated based on the results of library user circulation surveys.

The resulting graduate and undergraduate user costs are allocated to the University academic cost objectives based on student hours, both employment and course credit hours. Faculty/Staff user costs are allocated to the University academic cost objectives based on faculty/staff salaries. Costs allocated to non-Stanford users are absorbed by the University.

V. Calculation of Rates

Indirect costs allocated to Organized Research on the bases described briefly above are divided by the Modified Total Direct Cost of Organized Research to develop the Indirect Cost Rate. The rate is the mechanism by which costs allocated to Organized Research are distributed to individual projects.

The table below shows indirect cost projections used in the January, 1982 negotiation of the FY83 rate. The first column contains the total costs of each indirect cost pool prior to allocation among the cost objectives, but after removal of the government-defined unallowable costs. The second column shows the dollar amount from the first column which has been allocated to Organized Research. The third column is the on-campus Organized Research Rate by original indirect cost pool component. The rate calculation assumed on Organized Research MTDC volume for FY83 of $89 million for both on- and off-campus work.

The components of the on-campus rate below are calculated by determining the portion of the indirect costs allocated to Organized Research in column 2 that are applicable to on-campus projects and dividing it by the appropriate MTDC base. Although simple in concept, the process involves numerous calculations which are handled by a computer program.

Note that the projected rate for Fy83 was 71.5 percent, whereas the negotiated rate is 69 percent. The University and the government negotiated a slightly lower rate than projected in exchange for expediting the timing of negotiations. The rates are fixed with carryforward. The carryforward is the difference between the negotiated rate based upon estimates and the precisely calculated and audited rate determined after the close of the year when actual costs and bases are known, applied to the actual MTDC base. The carryforward may be an overrecovery or an underrecovery of costs and becomes an adjustment to future years' rates.

VI. Treatment of Indirect Costs in the Operating Budget

Reimbursed indirect costs are treated as unrestricted

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FY83 Indirect Costs (in thousands of $)

	(1) Total Allowable Indirect Cost Pools*	(2) Indirect Costs Allocated to Organized Research	(3) On-Campus Organized Research Rate
Depreciation:			
Buildings	$ 6,407	$ 3,128	3.84%
Equipment	10,462	5,201	6.44
Improvements	990	459	.56
Operations & Maintenance	39,975	19,409	24.11
General & Administrative	27,636	11,486	13.08
Sponsored Projects Admin.	1,496	1,288	1.45
Department Admin.	26,536	11,324	12.72
Student Services	11,795	2,385	2.68
Library	21,182	5,924	6.66
	$146,479	**$60,603**	**71.54%**
Negotiated Rate			69%

Cost pools* **exclude *unallowable costs of $42.428 million.*

Siegman suggests every budget should bear overhead costs

Following is a proposal drafted by Prof. Anthony Siegman, electrical engineering, on overhead and indirect costs at Stanford.

The primary objective of this document — in addition to giving a brief tutorial for the uninitiated on what the term "overhead" means —is to present a proposal for a new approach to the overhead system at Stanford.

This new approach will by no means solve all the University's financial problems. It will, however, the author is convinced, change the environment and the approach to budgeting and to cost containment within the university in the only way that can make the overhead rate a constructive rather than a contentious and divisive subject within the university.

The problem of overhead, or more precisely of indirect costs, is by no means of concern only to sponsored researchers at Stanford. It touches directly on the interests of all of us at Stanford in being able to accomplish the maximum amount toward the University's (and our own) goals, within the resources available to us; and we should all be concerned about it.

Why Discuss Overhead Now?

This seems a particularly appropriate time to discuss the overhead problem at Stanford. The university has once again raised its indirect cost rate or "overhead rate" on government-sponsored research contracts, from 58% to 69%, and has also for the first time imposed a still higher overhead rate of 73%, going to 79%, on industrially sponsored research.

The rate for government-sponsored projects threatens to go as high as 85% within the next few years. Yet despite these increases university officials have warned of impending budget problems, which they attribute in large part to reduced indirect cost recovery on sponsored research contracts, caused by lower than expected volume of sponsored research on campus.

President Donald Kennedy has meanwhile called for uniform treatment of university overhead rates by all government agencies, after the National Institute of Health nearly succeeded in adopting a policy under which NIH would have simply refused to pay 10% of the University's negotiated overhead rate. And, Representative Bedell of Iowa has given wide publicity to some essentially trivial but embarrassing audit findings, which seem to show that Stanford accidentally included charges for the *Stanford Magazine* and a golf course irrigation system in its government overhead rate proposal.

The most recent rate increase has produced the angry complaints from Stanford researchers heard each time the overhead rate is raised (this rate was only 42% as recently as 1968). There is, however also a growing conviction among faculty members active in sponsored research that the University simply cannot follow the present course of apparently never-ending overhead increases forever. Overhead consumes such an increasing fraction of contract funds, especially when coupled with the effects of inflation, that at some point Stanford will no longer be competitive for research funding with other universities or with industry.

More serious than that, for some of us the rewards of obtaining and managing sponsored research funds may become just no longer worth the headaches involved. The present system is just not stable in the long term. It is likely to come apart in a very serious fashion at some time in the future — a time which may come sooner rather than later.

What Is Overhead?

Perhaps it will be helpful if, before proposing solutions, we first walk through a quick elementary explanation of what the term overhead" really means at Stanford.

Income in the form of dollars which can be spent for university purposes comes into Stanford from many sources — tuition, endowment income, gifts, government and industry sponsored research contracts and grants, and educational contracts and grants. Some of this income is unrestricted, while other parts of it are sharply restricted in how they can be used. Although overhead is a very complex topic, we will get all the essential features if we think of the Stanford faculty and administration as spending all of this university income for either *direct* or *indirect expenditures*.

Direct expenditures occur when the Stanford administration, or one of its departments or schools or laboratories, spends money to accomplish any of the direct missions, such as teaching or research or scholarship, of the university. *Indirect expenditures* occur when the Stanford administration, through one of its support branches, spends money to carry out any of the support and administrative tasks that are necessary to maintain or support or manage these direct expenditures.

Faculty salaries, student salaries or fellowships, supplies and equipment, travel and computer costs — all of these when carried out in direct pursuit of research or educational objectives are (or should be) direct costs.

In addition, under Stanford's accounting system salaries for employees and staff members who work directly on these objectives —secretaries, technicians, machinists — are also direct costs or expenditures. Direct expenditures are made, for the most part, by individual faculty members, or by schools or departments or laboratories, as when a researcher buys research supplies or hires a staff member, or a department appoints a faculty member.

On the other hand, the costs of running Stanford's central accounting and payroll system, and its Health and Safety offices; the central university administration generally; the Office of Development; the costs of heating, lighting and maintaining buildings; the costs of roads, landscaping, and grounds maintenance; certain departmental and School administrative costs; and many of the costs associated with the library system — all of these are considered to be indirect costs.

Indirect costs for the most part are for facilities or services which support the primary missions of the university; which benefit all or a large number of the direct-cost activities on campus; and which would be difficult to assign or charge out to individual direct activities on campus. Appendix A lists all the categories of indirect costs, which together constitute the overhead.

How Is the Overhead Rate Calculated?

During each year the university pays all of these indirect costs out of university funds. At the end of each year, however, the university adds up all these indirect-cost expenditures, and assembles them into various "indirect-cost pools". For each pool it then estimates, using various formulas, what fraction of that pool of indirect costs should be fairly assigned to unsponsored direct-cost activities, like teaching and unsponsored faculty research (which are in essence paid for by university tuition, gift and endowment funds); what fraction should be assigned to *sponsored* research and teaching activities (which are paid for through grant and contract funds the university has received from outside sponsors); and what fraction should be assigned to other institutional activities (such as residences and food service, to Hospital, and the Athletics Department). Federal-government-sponsored research is of course by far the biggest contributor to this latter category.

Indirect expenditures made on road maintenance, for example, may be divided between sponsored and unsponsored categories in proportion to assigned square footage of space. Costs of heating and building maintenance are allocated on the basis of a complex inventory of building usage and the square feet of floor space allocated to each kind of activity. Certain library costs may be allocated on the basis of student head count. All these allocation procedures, whatever they are, must be negotiated with government officials and auditors, who must agree that the allocation of indirect costs to government-sponsored activities is reasonable.

The university determines from these formulas the total dollar amount of the indirect costs that should be allocated to sponsored projects (sponsored research or teaching), and then divides these indirect costs for sponsored projects by the total expenditures for *direct costs* on the same sponsored projects during the same period, to get a *percentage overhead rate* for sponsored projects on campus. This overhead rate is currently 69% on government-sponsored research projects on campus, and 79% on industrially sponsored projects, as mentioned above.

plicated than this, because of "cross-correlation" effects. For example, staff workers in the Controller's Office (an indirect cost area) use the roads (another indirect cost area); while the road maintenance workers have their paychecks prepared by the university payroll system.

Each indirect cost activity or indirect cost pool must thus be cross-assessed for part of the indirect expenditures in the other pools, in a complicated "step-down" calculation, to determine the final overhead rate. The final results of this process for 1982-83 (based on cost data from 1980-81) are tabulated in Appendix A.

Who Pays Overhead?

Once the overhead rate has been determined, any direct expenditures made by anyone spending *externally sponsored* research and teaching dollars on campus are then assessed an indirect cost rate or "overhead rate" — in essence, a spending tax—on almost every direct expenditure as it is made.

Every dollar a researcher spends out of a sponsored research contract, for example to pay for summer salary or for academic year salary offset, or to pay a student research assistantship, or to buy supplies, or whatever, thus incurs 69 cents in overhead.

(Note that many faculty members in Engineering and other departments pay up to 50% of their academic year salaries from contract funds; this is referred to as ååsalary offset". Salaries of adjunct research faculty are of course paid entirely from contract funds. All these salaries carry overhead.)

This 69 cents of overhead is immediately taken out of the sponsored contract and transferred into university general (unrestricted) funds. When a sponsored researcher, for example, travels on contract funds to Washington to report to the sponsoring agency, the airline tickets, hotel bill, and taxi rides all bear this 69% overhead. The only expenditures not taxed are purchases of equipment items above a certain minimum dollar value (typically $500 to $1,000) and outside subcontracts.

Direct expenditures for research, teaching, supplies or travel by faculty members or others using university funds derived from tuition or endowment (or gifts, or foundation grants) do not, however, pay such an overhead — at least not directly or visibly. There is no visible "overhead rate" assessed on such nonexternally-sponsored activities, (even though it is calculated in the overhead determination process).

The effects of overhead on a typical research budget for an experimental project in science or engineering are illustrated in Appendix B attached to this report.

What Is the Problem?

The final result of all this is quite clear. Those faculty members who attempt to achieve fundamental university goals by raising and using outside sponsored funds pay an immediately visible 69% (or79%) tax as they spend each dollar they have obtained.

Other faculty members who work toward the same goals using funds derived from university sources (tuition, endowment or gifts) do not directly pay, and in many cases are not aware of, this indirect cost burden. The indirect costs associated with their activities are still paid, of course, by university funds, but without their being directly aware of it or seeing it happen.

This system is perceived as very unfair and very inequitable by many of the principal investigators on sponsored research projects. Some will assert (incorrectly, I believe) that the overhead on their contracts is a "ripoff," used to support the rest of the university. Many others believe the university manipulates the overhead rate to at least some extent, in order to achieve the same objectives.

Whatever the truth in these complaints — and I am only reporting, not supporting them here — it is true that principal investigators have no opportunity to control or to reject any of the services contained in the indirect cost rate, or to shop for alternative ways of obtaining these services at lower cost.

The overhead process is essentially open-ended: the university administration carries out the indirect functions; sees what they cost; and then assesses the sponsored projects for those costs, whatever they come to. The principal investigators must then attempt to do the research they proposed, as best they can, with whatever funds are left.

Given the university's financial problems, moreover, there certainly would be at least a temptation to manipulate indirect cost allocation formulas, within the limits set by government

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Indirect costs/

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income in the budget process. Indirect cost recovery is second only in magnitude to tuition and fees as a source of unrestricted funds and, therefore, is very important to funding the University's operating budget. It is important however, to remember that indirect cost recovery is a reimbursement of identifiable costs rather than an income item in the usual sense.

* The Indirect Cost Rate is sensitive both to changes in the dollar level of each indirect cost pool and to changes in the direct cost objective dollar levels. An increase in the volume of direct research base greater than the increase in indirect cost pools will cause the rate to stabilize or even decrease. This was evident in the 1977-80 period when just such events occurred and the indirect rate was almost unchanged from year to year. FY83 indirect rates assume a direct cost base increasing at a rate lower than the last four years, leading to a multiplier effect on the FY83 rate, i.e., continued increasing indirect costs and a slowing in the growth rate of the Organized Research direct cost base produce increased indirect cost rates.
* The goal of indirect cost recovery and indirect rates is, simply stated, full and equitable cost allocation and recovery of legitimate University costs.

VII. Conclusion

There are several concluding points which will consolidate information and provide insights into the necessity for, and the future of, indirect costs.

* Indirect costs are carefully allocated "real" costs; they are not a tax or profit for the institution. Through the Operating Budget, indirect cost recovery is used to fund the costs incurred in each of the indirect cost pools to maintain acceptable levels of service and provide a physical environment to contribute to Stanford's continuing preeminence as an instructional and research institution.
* Stanford is not alone in experiencing rapid increases in indirect cost pools. Everyone, not just universities, can attest to skyrocketing utility costs. Additionally, all educational institutions are subject to A-21 cost accounting requirements and the ramifications of this change on indirect rates. Educational institutions that don't pursue a full cost recovery policy may place greater pressure for increase on tuition and fees, endowment income, gifts, and other sources to fund the budget. Years of study and development of the financial equilibrium concept have shown that failure to pursue full cost recovery jeopardizes the financial future of the institution.

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oversight, to load as much cost as possible onto outside sponsored funds. Suspicions of this are not helped by the administration's tendency in some instances to describe indirect cost recovery as a kind of "income."

The most serious problem, however, is not with the principal investigators who pay overhead, or with the devisiveness and hostility that this engenders. It lies instead with all those individuals in any area of the university *who do not pay overhead, and thus are not as aware as they should be of the indirect cost burden.* Some of these individuals are aware of the reality and the magnitude of indirect costs, and of the indirect cost burden carried by all university activities — but in my experience such awareness is still limited.

In any case these individuals do not share, I suggest, the same real understanding of the necessity of paying indirect costs, nor the same real commitment to *reducing* the indirect costs associated with the functioning of the university. This is a political question. *You have to pay overhead to be really concerned about overhead.*

What Should Be Done?

As a much younger faculty member I spent many years berating university administrators and provosts about the inequity of the overhead rate. With age I came to accept that the university's overhead process for sponsored research was more or less honest.

That does not, however, make it fair or equitable, or effective in its objective — which should be to support the indirect needs of the university's operations with the minimum financial burden on university funds and on the fundamentally important direct-cost functions of the university.

The overhead situation will not begin to improve, I am totally convinced, until the university moves to an accounting procedure in which *all* direct allocations of university funds are made only to direct-cost expenditures, and the indirect costs in the university are covered entirely by an overhead rate *which is imposed, uniformly and without exception, on every direct-cost expenditure in the university* (including the Stanford Museum, Memorial Church, and even if possible the Sunday Flicks and the *Stanford Daily*!).

This would be accomplished in essence by taking all the university funds now used to support nonsponsored indirect costs; reallocating those funds to the nonsponsored direct activities; and then collecting them back as overhead on the nonsponsored activities. In other words, we must have a policy of "overhead for all," in which *every expenditure of funds within the university would either be overhead or bear overhead.*

It must be emphasized at once that this is (a) *not* merely an accounting gimmick, and (b) *not* a proposal aimed in any way at redirecting the flow of resources among different direct objectives or areas within the university.

What a policy like this would mean in practice, for example, would be that next year's budget allocation for, say, the English Department would be immediately increased by 69%; but then each month, every time the English Department paid a professor or bought a ream of paper, every such expenditure would be taxed with exactly the same overhead as comparable expenditures on a sponsored research project.

Adoption of this system thus would not — at least initially —necessarily lead to any changes in the net flow of resources in the university. No department or activity would become either richer or poorer (and no more dollars in total would flow either into or out of the university). But many more people would become directly aware — as they now are not — that if the indirect costs in the university could be reduced, or at least kept from growing, they would be able to retain more of their money" to spend on things they would like to spend their money on.

Possible Disadvantages?

Before arguing in more detail the real advantages that this new approach would bring, let us first dispose of some of the objections that are likely to be raised:

1) Imposing overhead on everyone will require much more accounting. This is simply not true. In order to compute the overhead rate for sponsored projects under the present system, the university must already keep detailed records of all the indirect costs in the university, and then go through the complex process of allocating them between sponsored and nonsponsored activities. An overall uniform overhead rate will be both conceptually simpler and simpler to operate. Actually collecting the overhead, as a computerized bookkeeping transaction, is no more difficult than the present necessity to keep track of whether every expenditure does or does not bear overhead.

2) Certain funding sources, for example foundations and many gift donors, simply won't pay overhead. This is true, but it is in fact an argument for rather than against a uniform overhead rate. If there is any point that university officials have consistently (and validly) made in overhead discussions with sponsored researchers over the years, it is that *indirect costs are real costs.* Somebody has to pay those costs. If a donor or a foundation sponsors an activity at Stanford without paying overhead, the additional indirect costs must still be paid somehow, behind the scenes, from university funds. The deception is that many of the people involved (including the donor), who should recognize this fact, do not do so.

> ***...we must have a policy of "overhead for all," in which every expenditure of funds within the university would either be overhead or bear overhead.***
>
> ***—Anthony Siegman***



3) A uniform overhead rate would actually be higher than the present sponsored research overhead, since there are real indirect costs (fund-raising and interest costs, for example) which the government refuses to pay. The answer to this is the same as for the previous objection. If this is true, let's get it out on the table. If sponsored researchers are in fact getting hidden subsidies from university funds, let these be instead explicit direct allocations of university funds.

What Will Be the Advantages?

These can be very briefly stated, but are not therefore to be minimized:

1. A uniform and universal overhead rate will bring perceived fairness and equity to the overhead collection process throughout the university. This is not the case now. There is suspicion at best, and hostility at worst, among the overhead-paying principal investigators.

2. Everyone in the university will become equally aware of the reality and the importance of indirect costs in the university. It seems worth making this point once more: you have to pay overhead to be really concerned about overhead. When you become concerned about overhead, you begin really looking for ways to reduce it — especially if you know that this will benefit you directly.

3. All university budgeting and financial planning can be carried out in real, comparable dollars. When an allocation of $10,000 of unrestricted university funds is made to some project at present, this really means that in excess of $17,000 of university funds is going toward that project, counting the hidden indirect cost subsidization. In the future everyone will realize that this subsidy is present — and also that so long as the overhead rate stays at 69% a $10,000 total budget has only about $5,900 worth of buying power toward the real objectives of the project.

4. Our position vis-a-vis external agencies will be strengthened. The validity of the overhead rate we charge to external and especially governmental agencies will be much less assailable if we charge exactly the same rate on the spending of all of our own funds internally.

5. Most important of all, it will give everyone on campus an equally heartfelt motivation to reduce unnecessary indirect costs. This is of course the real objective, or should be, for all of us. If we want to continue to do the things we think important within our available resources, we've got to turn off the lights when they're not needed; consider the hidden indirect cost implications of the policies we adopt; and increase our concern for indirect cost control.

What About Loopholes?

When and if such an "overhead for all" system is finally adopted, it will be very important (a) that the indirect cost rate be essentially uniform across all activities in the university, and (b) that every activity be assessed overhead.

As with every tax system, there will be enormous pressures for special exemptions from the tax, for "poor" departments, or for student activities, or for what are perceived as particularly meritorious programs, whether these be affirmative action appointments, or scholarships, or whatever. These must be resisted if the system is to achieve its objectives of perceived fairness, genuine fairness, and uniform treatment across the university community.

Special support for especially meritorious programs should come through direct allocation of additional university funds in the regular budget process, visible and understood by all. The overhead system should be an accounting mechanism for paying the unavoidable indirect costs in the university, and nothing more — in particular, it should not become an indirect way to differentially allocate university resources.

Visibly perceived equality of rates and of treatment is also much more important than accounting sophistications. If a History graduate student receives a fellowship support check through the university accounting system, that check should bear the same overhead rate as the paycheck received by an Electrical Engineering graduate research assistant, even though the funding source for one may be a Ford Foundation gift and for the other an AFOSR research contract.

If a student activity requires university facilities and administrative time and effort, the funds involved should pay for those indirect costs through the same overhead rate as everyone else. Recipients of gifts from donors who "will not pay overhead" should have to seek the necessary allocation of university operating funds to pay that overhead — not receive it as a hidden subsidy.

Some categories of direct expenditures in the university may seem to justify an additional indirect cost burden, because they consume special resources or require special administrative services. Solving these problems through differential overhead rates should be avoided if at all possible. If a differential overhead rate seems the only solution, then the people in these higher-overhead categories should have exceptional opportunities to question and control those differential indirect expenditures, and even to reject them in favor of purchasing the same services independently.

What Are the Alternatives?

If the university professes to be unwilling or unable to move to a visibly uniform, fair and equitable overhead structure of the type proposed here, what then are the alternatives? I can see only a few, none of them very acceptable.

I believe the university should in any case attempt to close at least part of our present financial gap not just with another "Budget Adjustment Program" or BAP, but with a specific "Indirect Cost Adjustment Program" or ICAP. This ICAP should focus specifically, and with a goal, on the reduction of indirect costs rather than the reduction of the university budget in general.

Beyond this, the university could conceivably set a target, in the form of a permanent cap, on the maximum overhead rate it would regard as tolerable; and then determine what would have to be done to live within the income that overhead rate would generate. This would not mean giving up the principle of full recovery of indirect costs; it would mean however forcing those costs to stay within the available income, come what may (as indeed most principal investigators must do now with the direct cost portions of their research budgets).

But suppose none of these are done; the overhead rate on sponsored projects climbs in a few years time to 85% and beyond; the situation deteriorates in the fashion that this would cause; and my colleagues in engineering and science then ask me what I think we should do.

My answer at present would be that the principal investigators on campus must then realize that determination of the overhead rate under the present system is essentially an adversary process, in which the sponsored researchers have no lawyer in the courtroom.

This is not to attack in any way the motives or the performance of any of the dedicated university administrators who struggle with the university's difficult financial problems. It is to recognize, however, that existing university officers, such as the Vice Provost for Research in particular, must both represent principal investigators to the university central administration and represent the university central administration to the principal investigators. They must thus consider and attempt to reconcile the interests of both.

What one must have in an adversary proceedings, however, is an advocate who is strictly concerned with one's own interests, and nothing else. My advice, therefore, would be that the principal investigators in the university must then join together to hire a skilled and knowledgeable representative, a full-time advocate, who would represent and be responsible to them alone. The principal investigators must then insist to the university administration that they be given the opportunity, through this advocate, to examine, question, quarrel with, and if necessary to reject every single point of indirect cost in the overhead. There must be the opportunity to say, "we don't accept that allocation formula as equitable", or "we don't want that particular service, we can't afford it, we'll do without it, or take care of it ourselves — please count us out on that particular indirect cost".

These last few paragraphs do not, I would strongly emphasize, represent the kind of considered response to the overhead problem that I would want to urge now, or even later. My strongly held conviction is that the "overhead for all" approach is the only approach that will serve the interests of all of us. Lacking this, however, or at least some close facsimile to this, the situation may indeed deteriorate in this direction in the future.

Anthony E. Siegman, Director
Edward L. Ginzton Laboratory
26 November 1982

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Appendix A: What Makes Up the Overhead?

To set the overhead rate, the university's actual expenditures for various indirect costs are collected into indirect cost categories or "pools", which are then added together to make up the total overhead rate. The second and third columns of the following table show the projected contributions each of these categories will make to the total overhead rates for government-sponsored projects and industrially sponsored projects during the academic year 1982—83, based on 1981—82 expenditures. The fourth column shows the approximate fraction of the total overhead rate contributed by each of these indirect cost categories. The overhead rates actually being used in 1982—83 are 69% and 79% respectively.

The expenses included in each of these pools can be briefly summarized as follows:

Depreciation includes depreciation and use allowances for capital assets, including buildings (2.3%), university-owned capital equipment (4.1%), and roads, pathways and other improvements.

Operations and Maintenance (O&M) includes utility costs, building and grounds maintenance, janitorial, fire and police, insurance, major repairs and alterations.

General and Administrative (G&A) includes the central administration from the Board of Trustees down through the Dean's Offices, plus Personnel, Controller's Office, Procurement, and Risk Management; plus some costs at the school and department level.

Departmental Administration includes activities at the school and department level such as planning, advising, graduate admissions, department record keeping and accounting, proposal preparation, all departmental committee work, and sabbatical leaves.

Student Services includes Dean of Students, Office of Admissions, Registrar, Financial Aid, Health, Student Activities, and Placement.

Library Expense covers operation of the Stanford University Library System.

Carry Forward represents costs from earlier years not recovered because of inadequate earlier overhead rates.

TABLE A

	Gov't Rate	Indus. Rate	
Depreciation	6.8	6.8	10%
Operations and Maintenance	16.6	17.3	24%
General & Administrative	12.9	13.7	19%
Departmental Administration	20.0	22.8	29%
Student Services	3.2	9.5	5%
Library Expense	10.3	10.7	16%
Carry Forward	2.1	2.1	3%
Total Overhead Rates	73.7%	84.7%	100%

Appendix B: A Typical Research Budget

It may be of some interest to look at a typical sponsored research contract budget, such as might apply to an experimentally oriented research program sponsored by NSF or by a DOD agency, which supports two Ph.D. students in a Stanford science or engineering department. A copy of such a budget follows.

As a representative example we have assumed a research contract with total annual budget of $120,000. The research is carried out by a faculty member with an academic year salary of $40,000 plus two Ph.D. students who have 50% research assistantships during the full year (for which they are generally expected to work 100% time, if not more!).

The faculty member, as is common in such departments, pays from contract funds 20% of academic year salary and 50% of summer salary on this contract (plus probably equal amounts of salary from a second contract of comparable magnitude). The contract also supports 1/6 of a laboratory technician or machinist, 1/6 of a departmental or laboratory administrator, and 1/6 of a secretary.

Representative Contract Budget for Calendar Year 1983

TABLE B

Representative Contract Budget for Calendar Year 1983

A. Salaries and Wages:	
Faculty salary (3.5 months at $40,000/9 months)	15,600
Two Graduate Research Assistants (50% time)	16,100
Two Technician months at $2,900 per month	5,800
Two Direct Administrative months at $2,050 per month	4,100
Two Secretary months at 1,950 per month	3,900
Total Direct Salaries	$45,500
B. Staff Benefits	
21% of salaries (and rising); also carries over head.	9,600
C. Expendable Materials and Supplies	
Chemicals, gases, metals, glassware, electronic parts	6,000
D. Travel	
To professional meetings or the sponsoring agency	1,000
E. Reports and Publications	
Preparation and mailing of reports and publications	800
F. Communications	
Telephone, shipping, mailing delivery costs	1,000
G. Computer Cost	
Computer charges, supplies, maintenance contracts	1,200
Modified Total Direct Cost, or MTDC (sum of all above)	$65,100
H. Indirect Cost	
Overhead at 69% of MTDC	44,900
I. Capital Equipment	
Apparatus costing over $1,000 (does not incur overhead)	10,000
Total Contract Cost	$120,000

Comments:

Several significant aspects of this budget may be worth noting for those not familiar with such research contract budgets:

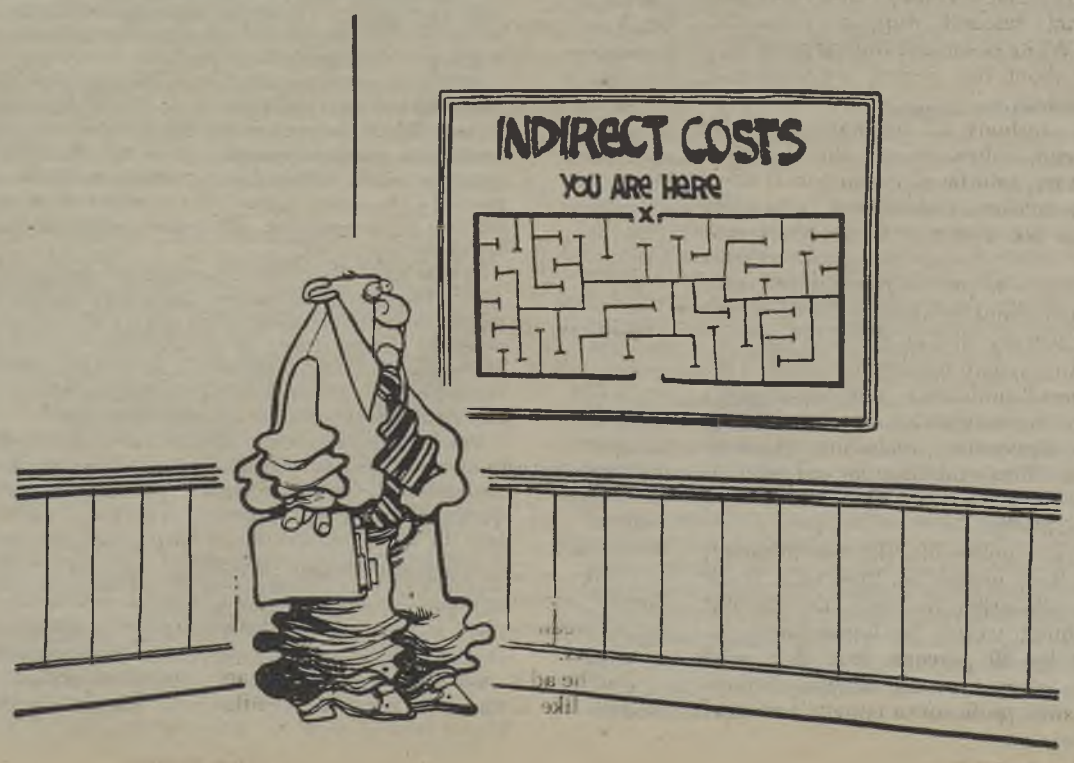
1) This is a relatively modest budget. The amount of supplies, technical support, and capital equipment are modest, if not really inadequate, for an experimental program supporting two Ph.D. dissertations. The impact on such a budget of raising the faculty salary rate to a more senior level — or of supporting an adjunct faculty member or research associate, whose entire salary must be paid — can readily be judged.

2) A number of items in this budget — such as secretarial costs, direct administrative costs, reports costs, and telephone service — would in many other organizations be considered indirect costs, to be covered by the overhead. In the university, however, these are all direct charges paid by the contract funds — and indeed overhead is paid to the university on these direct charges.

3) The central administrative and accounting services provided by the university within the indirect cost pools are generally not adequate to meet the full administrative needs of even a modest project such as this. Nearly every faculty member, department or laboratory doing sponsored research must purchase as a direct expense (and pay overhead on) additional direct administrative assistance, to interface with the university administration.

4) Perhaps it needs to be said that all those laboratories and technicians and computers and machine shops that one sees in the research-active parts of the university are *not* in general provided by university funds. They are bought, or paid for, or maintained directly by contract funds, on which overhead is paid.

5) Finally, what every principal investigator finds continually distressing is the appallingly small amount of research that a budget of this size — supported in most cases by taxpayers' funds — will accomplish. If one sets aside the other salaries, overhead, and miscellaneous costs, then the items that are really directly useful in doing an experimental research project — the supplies and expendables, computer costs, capital equipment, technician support and the graduate students —add up to less than $38,000 out of a $120,000 total budget. These amounts, moreover, as most researchers will recognize, are really not adequate for a state-of-the-art research program. The rule of thumb for a minimal experimental research program is something like $75,000 to $80,000 of research support per Ph.D. project per year — and that only with the assumption of 4 to 6 such Ph.D. projects per faculty member.



Full cost recovery on research increasingly difficult, Lieberman

Continued from page 1

For the current year, these direct expenses are expected to total about $89 million.

For many years, Lieberman noted, indirect costs associated with research have risen faster than inflation. These include skyrocketing utility costs, expansion of physical space for research, and greater accountability to the government.

Space-related expenses account for almost half of all indirect costs. Building operation, maintenance, and depreciation were projected last year to total about $28 million in 1982-83.

General administration, departmental administration, sponsored projects, and student services related to research were projected at $26 million. About $6 million was estimated for library costs associated with sponsored research.

Total indirect costs allocated to research are projected to exceed $60 million this year, amounting to about 69 percent of the direct expenditures. This rate, negotiated with the federal government, excludes those costs not allowed by federal rules.

This "arbitrary underrecovery" is similar to such federally funded programs as Medicare, President Donald Kennedy told the Senate.

Earlier this year, Kennedy and several other university presidents successfully argued against an arbitrary 10 percent cut in payments on the federally negotiated rate proposed by the National Institutes of Health.

"To just increase the indirect cost rate in order to collect what we refer to as "full recovery' is not a simple solution," Lieberman told the Senate. "As you know only too well, both researchers and their sponsoring agencies are concerned about universities' rapidly rising indirect costs, arguing that every dollar going into overhead is simply one less dollar going into the direct support of research."

Industry rate higher

Prof. Robert White, chairman of electrical engineering, asked why the indirect rate charged on industrially sponsored research at Stanford now is 79 percent. Associate Controller Franklin Riddle replied that this includes costs related to research which are not allowed under federal rules.

The difference in indirect rates raises questions when Stanford researchers seek additional research support from industry, White observed. Industry last year funded about five percent of Stanford's total research.

Prof. Anthony E. Siegman, electrical engineering, director of the Ginzton Laboratory, said faculty members funded through tuition, endowment, and gifts often are not aware of this indirect cost burden.

"You have to pay overhead to be really concerned about overhead," he declared. The University should move toward an accounting system where an overhead rate "is imposed uniformly, and without exception, on every direct cost expenditure in the University, including Stanford Museum, Memorial Church and even, if possible, the Sunday flicks and *The Stanford Daily*.

"What a policy like this would mean, in practice, would be that next year's budget allocation for, say, the English Department would be immediately increased by 69 percent. But then each month., every time the English Department paid a professor or bought a ream of paper, every such expenditure would be taxed with exactly the same overhead as comparable expenditures on a sponsored research project."

Initially, at least, this would not necessarily lead to any change in the flow of resources within the university. But it would greatly increase awareness that "indirect costs are real costs."

"Somebody has to pay those costs," Siegman noted. "If a donor or a foundation sponsors an activity at Stanford without paying overhead, the additional indirect costs must still be paid somehow, behind the scenes, from university funds. . . .

"A uniform overhead rate would actually be higher than the present sponsored research overhead, since there are real indirect costs—fund-raising and interest costs, for example—which the government refuses to pay. . . . If sponsored researchers are in fact getting hidden subsidies from university funds, let these be instead direct allocations of university funds."

A uniform, universal rate would increase the perceived fairness and equity in collecting overhead, he added. "This is not the case now. There is suspicion at best, and hostility at worst, among overhead-paying principal investigators."

Such a change would strengthen the University's position in dealing with external agencies, he noted. "Most important of all, it will give everyone on campus an equally heartfelt motivation to reduce unnecessary indirect costs."

Lieberman said MIT had considered a similar change, but dropped the idea as "too complex." He announced appointment of an advisory group on indirect costs including Engineering School Profs. Robert Street, James Meindl, and William Reynolds; Humanities and Sciences Profs. Robert Simoni, Richard Zare, Jeffrey Ullman, and Theodore Geballe; and Medical School Profs. David Korn, Donald Harrison, and Dale Kaiser.

Prof. Nathaniel Gage, education and psychology, suggested the group needed an "accountant counsel," since "one side has all the expertise" at present.

Kennedy praised the comments made by Siegman, White and Gage. Provost Albert Hastorf said to Siegman "I'm not at all sure your idea is workable, but I support the notion back of it."

"What we don't want is more divisiveness," Siegman said in reply.

—Bob Beyers

Harding book examines Chinese communist bureaucracy

Future performance of the Chinese Communist Party bureaucracy depends largely on its own self-control, Stanford Prof. Harry Harding indicates in a new Stanford University Press book, *Organizing China: The Problem of Bureaucracy 1949-76* (418 pp. cloth $29.50).

"Under Communist Party rule, China has been transformed from what Sun Yat-sen described as a 'sheet of loose sand' into one of the most highly organized societies in the world," Harding notes.

Besides moving rapidly to create a "closely meshed system of mass organizations" after coming to power, Chinese Communist leaders created "an administrative apparatus, centering on the state and party bureaucracies, that has exercised broader and tighter control over Chinese society than any previous government in the country's history. . . .

"China today is a society without powerful legislative bodies, an independent press, autonomous mass organizations, or a visionary charismatic leader.

"Unless Mao's successors are willing to undertake fundamental institutional reforms, the prospects for subjecting the Party and state to effective external controls are bleak indeed."

Without such reforms "performance of the communist bureaucracy will depend largely on its own self-control, just as the behavior of China's imperial government depended largely on the self-discipline of its officials.

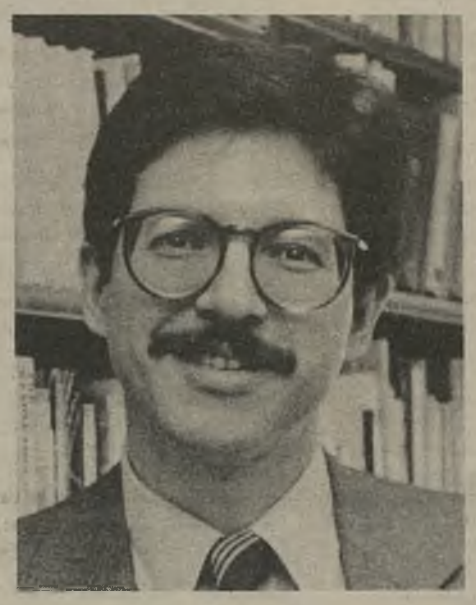
"In the past, bureaucratic self-control produced both periods of benevolence and periods of despotism. The question for the future is whether an ethos of public service will ensure humane government, or be too weak to prevent China from evolving into an unresponsive and inflexible authoritarianism."

Social welfare

Harding believes that "the organizational network established by the Chinese Communists has been able to promote a reasonably high rate of economic development and has created an even more impressive degree of social welfare and economic equality for a developing society. . . .

"Chinese leaders have usually been harsher critics of the performance of their own bureaucracies than have most outside observers."

But he adds that "a poor and backward society like China will inevitably suffer



Harry Harding

from shortages of trained and skilled officials as long as its educational system remains relatively small and primitive. . . .

"The Party's suspicion of 'bourgeois intellectuals' has often prevented it from using available human resources in the most effective manner."

The party's reliance on indoctrination, rectification, and mass campaigns to ensure flexibility, commitment, and efficiency in the bureaucracy has had "serious unintended consequences," he adds.

"Indoctrination and rectification have often produced stifling conformity among officials, a reluctance to take risks or independent initiatives, and disillusionment and cynicism at frequent shifts in the official line.

"The campaign style, in turn, has often led cadres to ignore routine work, provide their superiors with exaggerated and distorted information, apply directives blindly and unquestioningly, and employ coercion to force the people to accept rapid change. . . .

"The personal costs associated with such mechanisms are also high. An organization that demands commitment to a single set of absolute political and social values. . .and is prepared to subject its officials to intense psychological and social pressures to achieve that commitment can only trouble those who value intellectual freedom and individual human dignity.

"Chinese leaders are engaged in their most sweeping reassessment of organizational policy since the early 1950s. In so doing, they have compiled a long list of organizational shortcomings. An unacceptably small number of officials, they now reveal, have received middle-school or university educations. Few understand even the rudiments of administrative science or of substantive policy issues.

"Cadres are selected on the basis of class background rather than managerial ability, are promoted on the basis of seniority rather than achievement, and enjoy lifetime tenure regardless of performance. Many officials are now too old and feeble to put in a full day's work.

Organizational reform

"The Chinese are now considering a number of significant organizational reforms, including electing top officials at all levels of government to fixed terms of office, retiring cadres who are too old to work efficiently, removing or reassigning officials who do not perform effectively, promoting younger cadres to positions of greater responsibility, and retraining promising men and women in administrative practice, science, and technology.

"It is still far too early to know the effect of the reforms that Chinese leaders are now considering.

"It may be that, with the death of Mao Tse-tung, China's organizational policy has passed a crucial turning point, and that ideological indoctrination and mass campaigns will be set aside in favor of rationalization, formalization, and specialization.

"Or it may be that we are simply witnessing one more short-lived organizational experiment, after which the (bureaucracy) will once again return to its own center of balance, regardless of the suitability of that balance for a more modern and complex society."

The book is based on Harding's Ph.D. dissertation at Stanford. An initial draft was written in 1975-76 under a program of research leaves for junior faculty made possible by the Andrew W. Mellon Foundation.

Harding wrote a second draft while on leave as a national fellow at the Hoover Institution during 1977-78, receiving additional support from the Stanford Center for Research in International Studies and the Arms Control and Disarmament Program.

Senate report

Senate adopts policy on faculty hiring grad students outside Stanford

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 6

Summary of Actions Taken 12/2/82

At its meeting on December 2, 1982, the Senate took the following actions:

1. The Senate approved, by divided voice vote, a modification in the University Faculty Consulting Policy, subject to Professor E. Traugott's amendment that the last sentence in the modification be worded as appears below:

> Faculty members must be especially sensitive to potential conflicts of interest between their teaching responsibilities vis-a-vis graduate students working under their supervision and their outside consulting interests. To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's adviser or as a participant on that student's dissertation committee without the prior approval of the department chair (or dean, if the involved faculty member is also department chair).

2. The Senate approved, by unanimous voice vote the modification of the Secrecy in Research Guidelines as presented in Appendix B of the Annual Report of C-Res for 1981-82.

3. The Senate approved, by unanimous voice vote, the Annual Report of C-Res for 1981-82.

Minutes of the Fifteenth Senate
of the Academic Council
December 2, 1982
(Subject to approval 1/6/83)

A meeting of the Fifteenth Senate of the Academic Council was held on 12/2/82, beginning at 3:17 p.m. in Room 180 of the School of Law with Chairman A.L. Fetter presiding. Present were 32 Representatives, 8 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 11/11/82 were subject to one correction and one comment for the record. The correction pertained to page 2, Preliminary Long Range Financial Forecast, paragraph 2, line 2, where the end of that sentence should read ". . .and to expect to do so again for 1982-83." (not 1983-84, as the draft minutes stated). The comment for the record was made by the Associate Dean of Humanities and Sciences for Undergraduate Programs, Professor C. Lougee, who pointed out that though the minutes correctly recorded what had been reported to the Senate, it should be noted for the record and for the Senate's information that there are two errors of fact about the C-US agenda for 1982-83:

> 1. SWOPSI and SCIRE are not under review this year; Undergraduate Special Programs and the Learning Assistance Center are, and
> 2. The second matter of report for the Subcommittee on Residential Education and Advising is not Ethnic Studies but Ethnic Theme Houses.
> The minutes were accepted as amended.

Report of the Steering Committee

Chairman Fetter called attention to the fact that the Annual Report of the Committee on Computing and Information Technology (C-CIT) will be on the agenda for the first Senate meeting of Winter Quarter, January 6, 1983.

Report of the Committee on Committees

Chairman A. Mellor reported that *Rosters* has now been printed and distributed. There are a few committees for which membership lists do not appear in *Rosters*, but appointments to even those committees are now virtually completed.

Report of the President and the Provost

The President indicated his willingness to respond to questions, but said that he had no formal report to make to the Senate at this meeting. There were no questions.

The provost commented on three items:

1. He announced his pleasure that Professor Robert Jaedicke has been appointed Dean of the Graduate School of Business.
2. He stated that the report of the *Ad hoc* Committee on Overseas Studies chaired by professor A. Inkeles has now been received, and has been distributed to C-US, to the committee chaired by professor D. Rosenhan which is advisory to the Overseas Studies Program, and to the Director of the Overseas Program, Professor M. Mancall. It is expected that comments and recommendations based on the Ad Hoc Committee's report will reach the Senate, via C-US, sometime late Winter Quarter.
3. Finally, he remarked on the continuing publication of ratings of academic departments, reporting that ratings of Humanities and Sciences departments and of Engineering departments had now been published, with ratings of Biological Sciences departments and Behavioral and Social Science departments yet to come. He noted the superb ratings given Stanford Engineering departments (three of the four departments rated were rated in the top five), and also noted that six of the nine H & S departments rated were rated in the top ten. He congratulated colleagues in those departments and schools.

Annual Report of the
Committee on Research (C-Res)

The Annual Report of the Committee on Research (C-Res) for 1981-82, which appeared in *Campus Report* on December 1, 1982, was presented by the committee's chair, J. Keller. Concerning the recommendations for Senate action, Professor Keller noted with regret that the last portion of the final sentence was omitted in the revised paragraph on Faculty Consulting Policy in *Campus Report* and on the first page of the Annual Report. He pointed out that it does appear correctly in its proposed context on page 5 of Appendix A of the Annual Report. The final sentence of that recommended paragraph should have read: "Exceptions to this provision must be approved prospectively by the department chair (*or dean, if the involved faculty member is also department chair*)." (The portion earlier omitted appears here in italics.)

He noted that both recommendations for Senate approval are for modifications in official University policies (one pertaining to Faculty Consulting Policy and the other pertaining to the Secrecy in Research Policy) and briefly detailed the background which led to each recommendation for policy revision. He then called attention to a formal statement prepared and distributed to the Senate representatives at this meeting by the Graduate Student Association. The statement supports C-Res in addressing the problems of potential conflict of interest arising from outside consulting activities, but questions an absolute ban on the student's off campus employment in such circumstances. Invoking a third party (the department chair or the dean) is seen as one way of protecting the junior party's interests, not as a way of preventing his or her employment off campus.

Chairman Fetter assumed Senate consent to deal with the action items separately before proceeding to the acceptance of the Annual Report. He first called on William Smith, a graduate student guest of the Senate who was representing the Graduate Student Association, to comment on the GSA statement which was before the Senate representatives. He commented that graduate students in general favor the spirit of this recommendation, though some who would be directly affected feel that it may be premature and not entirely beneficial to their interests. The larger issue, the GSA feels, is unregulated and unobserved faculty consulting, and this particular problem may be only one of a number which derive from the larger issue. This is why the GSA report in the November 24, 1982 *Campus Report* makes a series of recommendations related to faculty consulting policies.

Following these reports, Professor Keller was asked how strong the evidence was that a problem exists. He responded that, unfortunately, the evidence was largely second-hand, mostly because affected students are hesitant to call attention to themselves by protesting their circumstances. Their concerns are apparently expressed through their peers on C-Res and through the Ombudsman. Dean Lieberman reinforced the point that students feel very vulnerable in such situations; they are reluctant to make their circumstances public knowledge and it is virtually impossible for them to decline to work for an advisor off-campus.

The question was asked if department chairs were likely to prove effective watchdogs on this kind of potential student exploitation, and also why the recommendation was couched in prohibitive terms if most cases were expected to be exceptions to the rule. Professor Keller responded that C-Res expected the rule to sensitize the faculty member to assume responsibility for requesting a third-party review when conflict-of-interest potential became apparent.

There was some discussion of the similarities and differences between potential conflict of interest problems on and off campus. Both clearly exist, but the off-campus potential for conflict of interest, President Kennedy pointed out, is clearly intensified by a professor's equity relationship or lucrative consultantship with industry. This opens up additional opportunities for conflict of interest. He further commented that in paying particular attention to such problems over the last couple of years, he had become convinced that there were real problems; that students do feel considerable pressure when they are asked to serve a faculty member in an outside context for pay. The fairness of such a situation is a matter for concern.

It was pointed out that the evidence presented by student members of C-Res and by GSA representatives at earlier meetings on this problem seems to contradict the written statement presented by the GSA to the Senate at this meeting. Prior testimony has indicated a serious conflict-of-interest problem and the need for University consideration of measures to alleviate it.

To avoid the apparent prohibition of all such outside professional employment, Professor E. Traugott offered a friendly amendment, rewording the last portion of the paragraph to read:

> "To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's advisor or as a participant on that student's dissertation committee without the prior approval of the department chair (or dean, if the involved faculty member is also department chair.)"

This would make it a regular procedure, not an exception, that a chair or dean always has to approve of such outside appointments.

While Professor Keller personally found the amendment acceptable, neither he nor Professor J. Meindl, Chair of the 1982-83 C-Res, felt free to accept the amendment without consulting the committee again.

There was further discussion of the wording of the C-Res recommendation and that of the amendment. There was support for the C-Res wording as fostering equity and serving as a safeguard against the exploitation of students, and also as promoting faculty awareness of the potential dangers of conflict of interest better than a standard review procedure would. There was also a suggestion that disclosure practices would solve the problem more appropriately than regulatory practices. It was pointed out by Professor B. Roth, however, that disclosure is often not sufficient control. The problem appears to be a larger one: we have problems with ambiguous policy and with unenforcible policy regarding conflict of interest. The GSA report (*Campus Report*, November 24, 1982) addresses the larger problem, but this C-Res recommendation appears to be a step in the right direction.

The question was asked why resistance to this recommendation is reported by the GSA when the policy change appears to be motivated solely to protect students from exploitation by faculty members. The response was that the recommendation is so worded that most people affected by it will be exceptions to the law, and the strength of the wording will cause some students to believe they can't get a job under these circumstances.

Dean Lieberman reminded the Senate that the students under discussion are engaged full time at Stanford (50 percent as students and 50 percent as TA or RA) with an opportunity to work up to eight hours per week outside without jeopardizing their Stanford status. He expressed his view that chairs or deans would be expected to act on these cases not in a routine fashion but rather by considering whether or not the outside work experience would be beneficial to the student.

Related questions were asked regarding other aspects of potential conflict of interest (involving summer employment, e.g., with the same faculty-student relationship pertaining). While some of the same potential problems exist, the University has no jurisdiction over a non-registered student and has no option but to consider him/her a free agent. W. Smith, speaking for graduate students, commented that a major concern for students is preferential treatment for students who do consent to work for advisers off-campus. That serves as a powerful motivation to accept such an offer, even when they prefer not to do so. He also pointed out that he had reported both sides in earlier testimony, both that there were serious problems perceived as motivated by conflict of interest, and that there were many students who want to work with their advisers off campus, and see no problem in so doing. Graduate students do want a third party informed about these situations, but at this

continued on next page

Senate/ continued from page 24

point they don't want such outside work prohibited.

It was pointed out in further discussion that the policy change contains no guidance for chairs or deans in making a decision in such cases, or in determining in what ways a work experience is to be judged as beneficial to the student. The recommendation was criticized as setting up a prohibition to which the majority of cases would be exceptions, and defended as raising faculty consciousness, offering a mechanism for control and, in the absence of a better alternative, better than doing nothing about a recognized problem.

It was pointed out again that there are conflict-of-interest problems which go beyond this specific issue, that the possible exploitation of students and the question of equity in the treatment of students (regarding, for example, access to equipment and proprietary information) are separate though related issues, and that when a relationship is both commercial and academic there is a greater potential for the relationship to go sour. When that happens, the commercial issues can cloud the academic association, and the student could feel victimized.

At the close of the discussion, Chairman Fetter presented the C-Res recommendation for modifying the Faculty Consulting Policy to the Senate for a vote. At this point, Professor H.C. Heller seconded the Traugott amendment to the C-Res paragraph. The voice vote on the amendment was divided. The Chair ruled that the amendment failed, and a show of hands on the vote was requested. The amendment passed on a divided vote.

The amended modification then read as follows:

> Faculty members must be especially sensitive to potential conflicts of interest between their teaching responsibilities vis-a-vis graduate students working under their supervision and their outside consulting interests. To avoid such conflicts, a Stanford faculty member may not hire or directly supervise a Stanford student in employment activities outside the University while simultaneously serving as either the student's adviser or as a participant on that student's dissertation committee without the prior approval of the department chair (or dean, if the involved faculty member is also department chair).

The amended version passed on a dvided voice vote.

Chairman Fetter then called for a vote on the C-Res recommendation for a Modification of the Secrecy in Research Guidelines as presented in Appendix B of the Annual Report. It passed unanimously on a voice vote.

Chairman Fetter then inquired about the present status of the GSA report which appeared in *Campus Report* on November 24, 1982. It is currently before the C-Res for discussion, and includes consideration of the larger issue of conflict of interest in general.

There being no further discussion of the Annual Report, Chairman Fetter put the question of its acceptance to a vote. The Annual Report of C-Res for 1981-82 was accepted by unanimous voice vote.

Report on Determination of Indirect Costs

Chairman Fetter then called upon Vice-Provost G. Lieberman to present his report on the Determination of Indirect Costs. The full text of that report appears in the December 8, 1982 issue of *Campus Report*. The report focused on an explanation of the relationship between direct and indirect costs, the process of how indirect costs rates are determined, and the importance of indirect cost (overhead) recovery to Stanford.

He defined indirect costs as expenditures which are not a direct expense of doing research or teaching but are the costs of providing services or contexts without which that research or teaching could not be done. As examples of indirect costs, he cited School and department administration, student services, the library, building depreciation, some equipment and land improvements, the operations and maintenance of the University's physical plant, sponsored projects administration, and general and administrative offices.

His handout (SenD#2452) gave the breakdown of the total of the University's indirect costs which conform to the Federal Government's definition of "allowable," i.e., recoverable indirect costs on federally-sponsored projects, as estimated about a year ago for Fiscal Year 1983. It then gave the portion of the total in each category which was allocated to organized research, together with the on-campus organized research rate for each category. The sum of this latter column (71.54 percent) served as the base for the University's negotiator (F. Riddle) with the Federal Government in the establishment of the negotiated cost return rate for Fiscal Year 1983 (69 percent). This overall rate calculation was based on the assumption of a direct research volume of $89 million for this year. (The ratio of indirect costs divided by the estimate of research volume gives a rough estimate of the cost return rate.) Thus, for 1983, Stanford expects $60.6 million in costs which indirectly support sponsored research activities (counting only those costs which the Federal Government allows to be recoverable). Almost half of that $60.6 million in costs represents expenses which are space-related.

If, in a given year, Stanford collects less (or more) than the total indirect costs incurred, that amount is added (or subtracted), from the next year's overhead rate as "carryforward."

Even though it is recognized that research projects vary in the actual indirect costs they incur, the calculation of one overall cost recovery rate for all projects is mandated by the Federal Government.

The problem at the present time is that the recovery of indirect costs has fallen below the amount of the actual costs incurred, because the volume of research dollars has diminished. Raising the indirect cost rate in an attempt to establish full indirect cost recovery is not a simple solution. Both researchers and sponsors are concerned about high, and rapidly-rising, indirect costs. Nor is the current federal climate likely to foster significant increases in federal research funding to stimulate greater research volumes.

Multiple factors push the indirect cost rate up: the volume of direct research expenditures drops; certain indirect costs (utilities, salaries, etc.) rise faster than inflation; more and more space is required, as is greater accountability for the use of government funds. All this is complicated by the issue of carryforward (adding to future years' indirect cost rates the costs incurred but not collected in prior years).

Simply cutting indirect costs is not as obvious as it may seem. Space-related costs, for example, are fixed; cutting other costs may have significant consequences.

At this point, Vice-Provost Lieberman introduced Associate Controller Frank Riddle as one of the most influential people from all universities working with the Federal Government to keep the overhead rates as well as the administrative burdens on faculty researchers both as low as possible.

Mr. Riddle defined direct costs in federal (A-21) terms as those costs which can be associated with a cost objective with a high degree of accuracy and relative ease, e.g., salaries, supplies, etc. used for a given project. Indirect costs are joint-benefiting costs, i.e., costs associated with more than one cost objective, e.g., library, student services, building maintenance). The term "cost objective" specifies the functions of a university (e.g., instruction and department research, organized research), and, at another level, the diverse functions of a given faculty member (e.g., specific contracts or grants or departmentally-budgeted instruction).

The allocation process to determine cost return rates starts with the accounting record of the institution because indirect costs, like direct costs, are real. The institutional budget, structured for University purposes along organizational lines (departments, Schools, etc.) is reanalyzed in cost-accounting terms along the government-preferred functional lines. From this restructured budget form (considering cost objectives and cost pools), the Controller's Office staff derives both a cost study and a cost-rate proposal for future rates. Federal auditors spend from 90 days to over a year auditing the cost study. (Stanford still has no audit report, for example, on the 1980 cost study given the government auditors a year and a half ago.) Concurrently, Stanford projects a proposal for the future indirect cost rate, so that principle investigators will have appropriate figures for budgets on grant applications for the future.

The federal auditors propose changes, either in the cost pools or the base, which are advisory to the federal negotiators and are given to Stanford for comment. This is preliminary to the negotiation on the federal audit position and the University position for reaching a compromise agreement. Any adjustments agreed upon for the cost study are also made in the proposal rate. This results in a rate which is "fixed with carryforward," i.e., fixed for a given fiscal year. After that year, another cost study is done and the difference between the cost study done prospectively (the estimated costs) and the cost study done retrospectively (the actual costs) for a given year results in a carryforward amount, either positive or negative, which is normally carried forward through a three-year period into the future, e.g., fiscal 1981 would be carried over into 1984 or beyond. Since we are in an under-recovery mode currently, that can have a significant effect on the rate. Our goal is to have very little carryforward because its effects can be disruptive.

Once those rates have been negotiated, the information is disseminated to faculty through the Sponsored Projects Office and incorporated into grant proposals for future funding.

He briefly outlined the rate components, using SenD#2452, p. 3, pointing out that the two major items in Operations and Maintenance are the first and last items listed (normal costs of utilities, 53 percent of that pool, and major repairs and alterations to buildings, 18 percent of that pool). He also pointed out that demonstrating relatively stable Department Administration expenses had allowed the Stanford negotiator to win the consent of the government to the elimination of Faculty Effort Reporting, thus easing a burden for the faculty and administration and eliminating one whole section in the Controller's Office which had been needed to implement that federal regulation.

In a comment on why indirect cost rates increase, he pointed out that even with no greater expenses incurred, given an inflation rate of nine percent and a flat research volume, the indirect cost rate will increase, i.e., the rate is an expression of the cost pools divided by the bases. If one base increases more rapidly than another, it will cause a subtle shift in indirect costs from one cost objective to another and the overall rate will increase because of varying rates of growth. Carryforward impact from prior under-recovery of indirect costs will also increase the rate.

Professor R. White commented that freedom from the indirect cost burden for certain sectors of the University is a matter of great concern to those who must pay for indirect costs. He also asked why, if the actual rate calculation for FY 1983 is 71.54 percent, the overhead on industrial contracts is set at a rate of 79 percent. The response was that the calculated rate of 71.54 percent did not include those indirect costs which the government refuses to allow. A calculation of normal indirect costs comes out at the higher figure, and is a truer reflection of real indirect costs.

President Kennedy pointed out that these government disallowances of true full recovery are not unlike those practiced by Medical and Medicaid in refusing to allow the full costs of patient care. He also recognized that inequity in indirect costs assessment is a problem, but stated his belief that the calculation of separate indirect costs rates for different sectors of the University would lead to unacceptable administrative increases. He pointed out, as one example of that inequity, that RA-ships contribute to the indirect cost rate through the tuition remission and staff benefits pool, a fact which works to the advantage of Schools which have a lot of RAs (like Engineering) and to the disadvantage of Schools which have relatively few (like Medicine). Another indirect cost pool might shift that particular balance of advantage, but the cost-accounting expense of disaggregating and analyzing differential expenses across the University would, in his opinion, make the situation even worse and drive the cost return rate even higher.

Mr. Riddle pointed out that the appearance of a "free ride" in relation to overhead may not reflect the real situation. Indirect costs are actually charged to auxiliary activities in the University. Normal instructional functioning in the University is not charged overhead, even though the rate is calculated. Overhead charges here are met through tuition and fees.

At this time, chairman Fetter called on Professor A. Siegman to outline his perspective on overhead and its impact on the University. (A position paper detailing Professor Siegman's views appears in the December 8, 1982 issue of *Campus Report*.) He expressed concern about the divisive effect of inequities in indirect cost assessments, and also about the direct threat of rapidly-rising recovery rates to the future of organized research. One of his major concerns is that so many in the University remain oblivious to the problem; in his words, "you have to pay overhead to be concerned about overhead." His proposed solution is that the University should adopt an accounting procedure which allocates all funds "in loaded dollars," i.e., which budgets full costs (direct and indirect) to each activity, and subsequently charges the appropriate overhead on every direct expenditure. Every expenditure would thus either be overhead or would bear overhead.

The advantages of such a practice are many: 1) It would bring perceived equity to the process of assessing indirect costs; 2) Everyone would become aware of the reality and importance of indirect costs; 3) All University budgeting and financial planning could be carried out in real, comparable dollars; 4) The validity of our true indirect costs rates would be apparent to the government and to other sponsors; 5) It would give all of us a strong motivation to reduce indirect costs wherever possible.

The accounting this requires is already being done.

Vice-Provost Lieberman reported that he had appointed a faculty consultative group to advise him on these matters and that he is presenting the Siegman proposal to them for their comments. (This group includes Professors R. Street, J. Meindl, W. Reynolds from Engineering, R. Simoni, R. Zare, J. Ullman from Humanities and Sciences, and D. Korn, D. Harrison, D. Kaiser from the Medical School.)

He also commented that MIT is reported to have considered and dropped this idea as too complex.

Professor Roth agreed that there is a widespread feeling of unfairness about indirect costs, and expressed his concern that there appears to be no advocate for the research faculty in these allocation processes. Someone closer to the actual research might be better able to assess the validity of the indirect costs assigned to that objective.

Professor R. Street expressed his commendation of the Siegman position. It is important to recognize that all of the costs are real both the indirect costs and the direct costs. The issue is not so much how the costs are allocated as it is whether or not we are getting what we pay for and what we

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Conflict of interest rule sparks broad debate among faculty representatives

continued from page 1

reluctant to step forward publicly, (they) really are very vulnerable" if they refuse an adviser's request, Lieberman said. "It's virtually impossible to say 'no.' "

President Donald Kennedy said there is "substantial, convincing evidence that this is not an empty problem" nationally. Graduate students "feel under considerable pressure" when asked to serve the faculty outside the University for pay.

Lieberman noted that graduate students employed as teaching assistants or research assistants on campus could work outside up to eight hours per week. There should be "good reason" for approving outside employment by faculty as "beneficial for students," he said. "I'd be unhappy if the department chair routinely approves" such arrangements.

Senate discussion indicated the great majority of outside employment of students by faculty would be approved.

William Smith, graduate student in chemical engineering and GSA spokesman, said some students are concerned "that those working for their advisers (outside) get preferential treatment" from the faculty.

Prof. Jonathan Roughgarden, biological sciences, a former member of the Committee on Research, said unequal access to outside employment could lead to "severe distortion" in student access to equipment and proprietary information. There have been "very reliable" reports that some laboratories are divided into "haves" and "have nots," he added.

Engineering Dean William Kays expressed concern about "promulgating new rules without strong evidence of a problem." He would "have a hard time imagining any department head (in his school) turning down outside employment of students by their faculty advisers. As a professor, "I'm much more concerned about others using my students," he observed.

Prof. Robert White, head of electrical engineering, noted that typically students in engineering or the physical sciences could earn much more from consulting, which is "lucrative" in comparison to minimum wage jobs. This leaves more time to study and often enhances education.

Prof. Joseph Keller, mathematics and mechanical engineering, 1981-82 head of the Committee on Research, said there was "no strong evidence" of abuse, but emphasized that students could be reluctant to make these known for "fear of the potential consequences." For example, he noted, a student might be asked by a faculty adviser to work on a problem "not of intrinsic scientific interest" that might be related to the professor's consulting.

Prof. Merrill Carlsmith, psychology, noted that when he writes a textbook he often has a student write an accompanying guide for instructors. Presumably, this would fall under the new rule if he simultaneously advised the student academically and supervised the same person writing the guide.

Prof. Elizabeth Cohen, education and sociology, noted that even on campus professors were in a position to "bully" graduate students to work on their pet problems, regardless of their academic merit—a source of past grievances.

Prof. Craig Heller, biology, asked what's different between hiring off campus and hiring teaching or research assistants on campus. While both have potential for abuse, Kennedy replied, professors hiring students for their own firms have "an entirely new set of motivations."

Education Dean J. Myron Atkin suggested that there was a greater potential for commercial relationships to "go sour" than academic ones.

Prof. Anthony Siegman, electrical engineering, said he generally favored disclosure, rather than regulation, especially when the consequences of a new rule were not thought out.

Prof. Bernard Roth, mechanical engineering, said the rule "could be a help," even though it was both "ambiguous" and "unenforceable."

Prof. Carl Degler, history, favored the new rule as "a step in the right direction," helping to create greater awareness of potential conflicts of interest.

Prof. Leonard Ortolano, civil engineering, noted that no guidance was provided for department heads, who probably would have few questions if both the faculty member and the student concerned favored the arrangement.

The Senate narrowly approved a change in the language proposed by the Committee on Research before endorsing the overall motion by a substantial margin in a voice vote.

It then quickly and unanimously approved a change in research policy, reducing the delay in publication of research to protect the patentability of an invention from the previous limit of one year to 90 days.

In a unanimous report to the Senate, the Committee on Research noted that since the previous policy was adopted in 1969 "experience. . .has taught us that decisions to file patent applications, and the filing process itself, can reasonably be accomplished within a three-month period.

A series of recommendations from the GSA for further changes in consulting policy remain before the Committee on Research, which is now headed by Prof. James Meindl, electrical engineering.

In brief, the GSA believes:

1) Faculty should make annual reports on their outside professional activities to their department heads;

2) Faculty should be prohibited from assuming managerial functions in commercial ventures while serving the University full-time;

3) Companies in which faculty have a major equity position should be prohibited from sponsoring the same faculty member's university-based research; and

4) Peer review should be extended to include all sponsored research, industrial as well as governmental. —**Bob Beyers**

Self-sufficiency in rice production should be regional goal in West Africa

West Africa should work toward regional rather than national self-sufficiency in rice, a major study by the Food Research Institute at Stanford indicates.

The findings of a three-year $702,000 research project funded by the U.S. Agency for International Development are reported in a new Stanford University Press book, *Rice in West Africa: Policy and Economics* (482 pp., cloth $38.50) by Scott R. Pearson of FRI, J. Dirck Stryker of Tufts, Charles P. Humphreys of the World Bank, and others.

Between 1960 and 1980, sub-Saharan Africa was the only region in the world to experience a decline in food production and consumption per capita.

While rice is commonly viewed as an Asian staple, its production, consumption and trade have a significant impact on West Africa's ability to feed itself.

Working in collaboration with the West Africa Rice Development Association, an intergovernmental organization of 15 countries, the Food Research Institute found that Sierra Leone and especially Mali are the best potential exporters of rice within the region.

Given its wealth of land and shortage of labor, West Africa should place greater emphasis on use of animal traction and improved manual techniques in raising rice production, the study indicates.

Increased control of water supplies is necessary in drier regions to improve the security of production and to take advantage of other technical innovations, the study suggests.

But water control should be limited to relatively low cost systems. Where more expensive, total control structures are necessary, their potential benefit should be weighed against the corresponding costs for their construction.

Many of the conditions that make irrigated rice production in the more arid regions unprofitable now—high construction costs, lack of river regulation, and low population density, for example—will change as the major river basins are developed, the study notes.

Better food security can be obtained in many places by small irrigation projects, the study indicates.

The Ivory Coast and Liberia have a strong comparative advantage in crops other than rice. Hence, rice should be promoted only as a local crop in these countries.

Peanuts and cotton are Senegal's most competitive crops. Here, too, the only potential for profitable rice development is where it is grown as a local food crop.

In general, cultivation for on-farm or local consumption is profitable nearly everywhere. This generally improves equality of income distribution and the security of food production.

The study is based on a novel approach to agricultural policy which has wide applicability throughout Africa and in other low income, predominantly agricultural countries.

Initially, microeconomic analyses determined the economic efficiency of alternative techniques and locations of production in integrated systems of farming, processing, and distribution.

Next, the incentives incorporated in government trade, price, tax subsidy, and investment policies were analyzed by measuring transfers of income to or from farmers, millers, and traders.

Finally, comparative analyses were made of the efficiency of various techniques and locations and of the effectiveness of these policies—first, within individual countries, then among several countries within the region.

The authors observe that the Green Revolution, which took place mainly in Asia during the 1960s and 1970s, was well suited to a region where land is scarce and labor relatively cheap.

Mechanized techniques have been developed in the U.S. and other countries with relatively abundant capital and the ability to maintain machinery efficiently.

West Africa, however, with abundant land and labor shortages, requires an intermediate technology which has yet to be designed.

Critical areas for research include chemical and mechanical techniques to substitute for labor, more efficient use of irrigation water, additional investment in infrastructure, and cost-reducing changes in food processing and distribution.

In Asia, the authors note, research and price policy studies were critical preconditions for the success of rice production programs. In some instances, 20 to 30 years were required for developing effective varieties of rice and irrigation facilities.

"Most Asian technologies for rice production are not transferable without substantial sacrifices in economic efficiency," the authors note. "Hence the successful development of rice production in West Africa will likely prove to be a highly indigenous process.

Such revolutions in farming "did not occur overnight," they conclude.

Senate/

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need to operate as a first-rate institution. That may mean hard looks at expenditures for teaching, for research, at how much administration and services we need, and how to get those costs down. The only way the rate will come down is if the costs come down.

Professor Gage suggested that one member of the Vice-Provost's advisory group might play the role of advocate for principal investigators, and that person should have sufficient accounting expertise to ask the right questions.

President Kennedy commended the focus on examining spending incentives. That is what produces our problems and there must lie the solution, he felt.

Professor Madix pointed out that a certain amount of teaching is embedded in research activities, and that in fact the early years in a research assistanship are the joint product of education and research, i.e., the RA, while doing research, learns how to do research better. A more equitable system of allotting indirect costs might take those combined functions into account.

As the discussion drew to a close, Provost Hastorf commented that even if the Siegman notion does not prove workable on closer study, the idea behind it is terribly important. It is absolutely crucial that everybody understand that there are costs to doing all of our business, that since World War II indirect cost structure has been an integral part of our research organization, and that if that structure changes radically, the character of our institutions (including our own) is going to change. Everybody ought to be aware of that.

There being no further business, the meeting adjourned at 5:25 p.m.

Clara N. Bush
Academic Secretary

Influence of tests in admissions exaggerated—Hargadon

"In no major system of higher education in the world is access to higher education less dependent on the results of a single examination or set of exams than in the U.S.," says Stanford Admissions Dean Fred Hargadon.

Head of the trustees of the College Board nationally, he discusses "Tests and College Admissions" in a recent issue of *American Psychologist* magazine.

While many colleges require applicants to take Scholastic Aptitude Tests or the American College Testing Program, he notes, the U.S. has no single national exam that even closely approximates the Baccalaureat in France, the Abitur in Germany, the "A" level exams in England, or China's three-day national exams.

While tests and their uses "rank with religion, politics and sex" as topics for debate, "test scores, taken by themselves, hardly constitute the barrier to higher education that is sometimes alleged," he observes.

Research by others suggests that there are probably fewer than 10 colleges in this country that find themselves in the position of being able to admit only a relatively small fraction of applicants from an applicant pool that is both large and at the same time very highly qualified academically."

A 1979 survey by the College Board and the American Association of Collegiate Registrars and Admissions Officers showed that colleges "are far more concerned with the strength of a student's academic program in high school and the level of achievement in that program than with the student's test scores," Hargadon says.

Critics' error

"Critics of college admissions tests have committed a fundamental error by assuming that the significance colleges attach to test results can be inferred simply by looking at the large number of students who take the tests.

In some instances, these tests may free some students from the "personalism" of school authorities and parents. Students can gain a sense of how they compare with the fellow students, those from other schools, and those in other parts of the country.

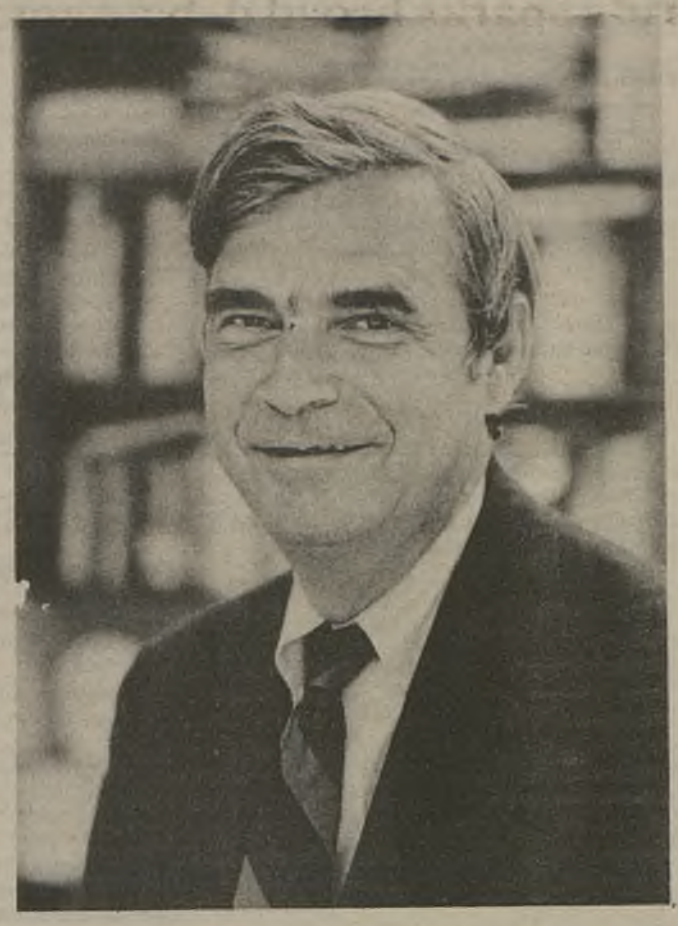
Tests also may help students allocate their intellectual resources more effectively. Low math and science scores may make students think twice about pursuing physics in college, for example, a path which might look more attractive based on an inflated grade in a less rigorous high school course.

Students similarly may find their test scores helpful in finding a college that "fits"—one that is neither lacking in challenge nor clearly unmanageable.

"High school transcripts are not always adequate reflections of the intellectual skills and abilities of students," Hargadon says. "There are more than 20,000 secondary schools in this country. Course content varies considerably from school to school as does the quality of teaching.

"There is a lack of comparability of grades not only between schools, but between departments in the same school and between teachers in the same department.

"If one starts with the proposition, as I do, that it is unconscionable to admit a student who does not have a reasonable chance of successfully pursuing the curriculum of a given college, and if one accepts the additional proposition that a student with considerable intellectual ability should not be overlooked simply because circumstances not under his or her control dictated attendance at a secondary school less richly endowed than most, it is hard to escape the conclusion that some form of standardized tests, available on a national basis and administered impartially, are a necessary, if insufficient, component for assuring an element of fairness in admissions."



It is evidently not very difficult for even the minimally motivated student to gain admission to some college in the U.S.

—Fred Hargadon

Survey results

In the College Board-AACRAO survey, 31 percent of the colleges said the single most important factor in admissions was academic performance in high school, as seen in grade averages or rank in class. An additional 34 percent said this was a very important factor.

Test scores were considered the single most important factor by two percent of the colleges, and very important by an additional 43 percent.

Four-year private colleges were more likely to give considerable importance to high school academic performance than four-year public institutions, which gave somewhat greater weight to test scores.

Among the colleges surveyed, 34 percent were "open door" colleges, admitting all who wished to enroll without review of conventional academic qualifications or admitting any high school graduate or equivalent.

An additional 56 percent of the colleges, termed "selective," admitted the majority of applicants who met some specified level of academic achievement or other qualification above and beyond high school graduation. These requirements may be nothing more than completion of certain high school courses or subjects, or attainment of a particular grade average or rank in class, or some combination of factors, including test scores.

Only eight percent of the colleges surveyed were "competitive." They normally have more applicants who meet their specified requirements than they can accommodate. Thirteen percent of the four-year private institutions fell in this category, as did 10 percent of the four-year public institutions.

Many options open

"It is evidently not very difficult for even the minimally academically motivated student to gain admission to some college in the U.S.," Hargadon observes. "This is so even at the selective and competitive levels. About half of the competitive institutions and about three-fourths of the selective institutions surveyed require a minimum grade point average of 2.0 or less out of a possible 4.0."

The average of the lowest combined SAT scores (summing verbal and math) reported by four out of 10 competitive institutions was 838 out of a possible 1600 total. The average minimum SAT test reported by 44 percent of the selective institutions was combined score of 733.

"Even the most idealistic among us would be hard put to underestimate the accessibility to some institution of higher education for the great majority of students," he observes.

A 1980 survey published by the American Association for Higher Education found that only 17 of 200 randomly chosen, four-year institutions accepted fewer than 50 percent of their applicants. Four out of five accepted at least 70 percent of their applicants and one third accepted 90 percent of those applying.

With a very small number of exceptions, the degree to which U.S. college admissions can be characterized as "highly selective" is "greatly exaggerated," Hargadon says.

And even the highly selective institutions do not stack their student bodies with those scoring highest on the tests, as only they could afford to do, Hargadon notes. "It is precisely in such colleges that large numbers of students with high test scores fail to gain admission, while at the same time large numbers with lower test scores are admitted."

State influence on private colleges studied by Fullmer

While New York has long asserted the value of independent colleges and universities, in fact, it has eroded their autonomy more than most states, a new Stanford analysis indicates.

In a doctoral dissertation for the School of Education, Kenneth Fulmer said "independent institutions are not fighting hard enough to protect their autonomy," especially in New York. "State governments are good friends of higher education," he observed, but "even good friends can misbehave."

"All colleges have had their autonomy in some way affected by state government," he added. "Decision-making of independent institutions is most affected by the promise of state rewards for a certain type of behavior."

Admissions is the policy area most affected by the state, with "increased parochialism" one result. Curriculum and student policy also have been "considerably impacted," he said.

In all, 28 states offer only scholarship aid to the independent sector. A detailed study of two states in this group—California and Wisconsin—indicated that private colleges were slightly more influenced by all types of state activity than was the case in Minnesota and Maryland, two of nine states which provide both scholarships and institutional aid to the private sector.

Findings in these states suggest governments are respecting the freedom of the colleges they assist. "Institutional aid, as well as scholarship aid, can be offered responsibly," Fulmer explained. "Neither aid type more clearly protects autonomy than the other."

However, it appears institutional aid does intensify political relationships by expanding the scope of accountability. In institutional aid states, the amount of reporting required is clearly higher. Additionally, dependence on state funds is greater.

But the autonomy of independent institutions was "much more adversely affected" in New York than the other four states, Fulmer said.

Among the five states studied, "Maryland's government has least affected the autonomy of independent colleges," he said. "Wisconsin is a close second."

Carpools

Ride or form a carpool from Fremont to Stanford. M-F, 8-5. Call Evelyn, 7-1555.

Stanford Staff Development Courses *January through March 1983*

WORKPLACE SKILLS DEVELOPMENT

Challenges of the workplace will be explored in the following courses, each of which is structured to develop skills helpful to effective work performance in many different kinds of jobs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore, please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Telephone Techniques—This workshop focuses on using the telephone and having an effective telephone personality. Topics include an overview of the skills required, tactful phraseology, and examination of issues and problems.

- Friday, 2/4, 1:00-3:00

Office Interaction: Getting and Giving Cooperation—Does your job include answering questions, giving information, assisting people who call or come to your office? This workshop focuses on how to make these interactions both efficient and productive. Participants will explore the ways that they and the people they work with experience the communication/problem solving process.

- Schedule to be arranged

Office Interaction: Working With Pressure—How to function at your best in spite of the pressure of continuous office interactions. Participants will examine ways to increase concentration and patience for effective workplace relations.

- Schedule to be arranged

Assertiveness Training—Assertiveness Training introduces verbal and nonverbal skills for handling uncomfortable situations. As a result of active involvement in this course, participants will be able to ask for what they want in clear statements, assertively deal with conflict on the job, maintain a feeling of self-worth while effectively dealing with manipulative demands, and make assertive decisions.

- Friday, 2/11, 8:30-4:30
- Friday, 2/18, 1:00-5:00
  (Attend both sessions.)

Career Exploration Workshop assists staff members in making more effective career decisions. It consists of seven sequential one-hour workshops which provide methods for self-assessment (interests, skills, values, career motivations, interpersonal skills), information about Stanford career possibilities, and practice in decision making and development of action plans. Checking ideas against job market reality is emphasized.

Some of the tools used in the self-assessment process include the Strong-Campbell Interest Inventory Test, the Quick Job-Hunting Map, Firo-B and problem-solving and values clarification exercises. Discussion includes reality testing of the kinds of skills the University looks for, the kinds of jobs on campus, and the personal qualities necessary to get ahead. Exercises on strategizing and decision making are used along with the development of short and long term career goals. Instruction and information on resume writing and interviewing are included, with information on the use of the Stanford Employment Department and its organization.

- To register, call Marilyn Gilla, ext. 7-0659.

On-The-Job Goal Setting—How can you focus your energies and skills more effectively to increase the satisfaction you get from your work, as well as the contributions you make? Susan Strong will provide practical steps for setting and reaching well-stated workable goals.

- Schedule to be arranged.

Skills Development Center—The clerical skills program upgrades skills of employees on their present jobs, helps them prepare for additional responsibilities, and provides clerical training specifically related to Stanford's policies and procedures.

For information about the clerical skills program,
call Marilyn Gilla, clerical skills program coordinator,
ext. 7-0659.

Is lack of typing skills getting in the way of effective use of your computer terminal? Marilyn Gilla teaches both beginning and intermediate keyboard skills for staff members starting to use a terminal. For information, call ext. 7-0659.

SUPERVISORY DEVELOPMENT PROGRAM

The supervisory development program includes a two-session orientation to the personnel administration aspects of supervision, two intensive supervisory skills courses, and shorter workshops on specific aspects of supervision. All courses and workshops combine theory and practice and apply directly to participants' on-the-job experience.

Supervisory courses and workshops are given regularly through Staff Development. They may also be adapted to specific departmental needs and presented in departments. New workshops are developed to meet general and departmental needs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Supervisory Orientation explains general personnel processes (employment, classification and compensation, staff development, employee relations, benefits) and outlines supervisory responsibilities in personnel administration. This program is especially useful for supervisors recently promoted or new to Stanford.

- Schedule to be arranged.

Fundamentals of Supervision is a course in how to develop employee performance, establish effective supervisor-employee communication, and establish and maintain the supervisory role. Participants learn through discussion and practice of skills, incorporating new skills into their own supervisory style. An orientation meeting prior to the sessions introduces the basic principles on which the course is based.

Participation in the course requires at least three months of experience as a supervisor. Attendance at all sessions is also required.

Session topics are:

Session 1, Setting Job Standards
Session 2, Teaching a New Job
Session 3, Communicating about Performance
Session 4, Improving Performance
Session 5, Handling Performance Problems, Giving Recognition
Session 6, Managing Change

Fundamentals of Supervision (A)
- Wednesday, 2/2-3/16, 2:00-5:00

Fundamentals of Supervision (B)
- Thursday, 2/17-3/31, 9:00-12:00

Supervisory Problem Solving is designed to help supervisors increase their ability to make sound judgment in personnel matters and increase their confidence in handling the predictable and not-so-predictable problems involved in supervising others. Topics covered include complaints, conflicts, problem performance and behavior, discipline, and establishing methods for solving problems.

Completion of Fundamentals of Supervision is prerequisite for participation.

- Tuesday, 3/1-3/29, 1:30-4:30

Effective Interviewing introduces methods for making productive hiring decisions by getting sufficient appropriate information in interviews. The workshop is centered around practice exercises that are progressively more complex; participants will learn to plan and conduct interviews related to the specific responsibilities and duties of open positions.

- Thursday, 2/10, 8:30-4:30

Giving Directives is a practical three-step procedure for giving directives of all kinds. Participants will also learn the specific effects of language on directives.

- Friday, 1/28, 8:30-4:30

Managing Conflicts which can and do occur in any work setting, and when well handled can renew motivation and be a catalyst for innovation. When ignored or mismanaged, however, conflicts can cause serious damage to morale, productivity and well-being. Effective conflict management involves guiding the disputants to solve their own problems. In this workshop participants will learn how to find out the nature and scope of the conflict, how to elicit suggestions, and how to get agreement to an action plan while controlling bickering and outbursts without taking either disputant's side.

- Friday, 2/25, 8:30-4:30

SPECIAL INTEREST COURSES

Courses from the Learning Assistance Center

The following courses have been developed by the LAC to respond to specific staff training requests. Each course combines classroom instruction and individual tutorials with the instructor. Class size is limited to provide for maximum participant involvement, and enrollments are accepted in the order received.

Effective Reading—Designed to help individuals with their reading rate and comprehension. Emphasis is on reading ideas, not words. Designed to help you save time, as well as reduce confusion and anxiety.

- Monday & Wednesday, 1/10-3/2, 12:00-1:00
- To register, call Staff Development, ext. 7-0657.

Effective Writing: Letters, Memos, Minutes (A)—Is writing an increasingly important part of your work? In Effective Writing, participants review fundamentals of skillful writing, analyze and develop their writing style, and practice purposeful writing of letters, memos, and minutes. The class meets for one hour a week for eight weeks, and the instructor meets with each participant for five individual half-hour sessions.

- Friday, 1/14-3/4, 12:00-1:00
- To register, call Staff Development, ext. 7-0657.

Time Management—Is a day simply not long enough? This workshop helps participants discover where their time goes, set up a schedule and establish priorities, and become more effective at accomplishing what they decide to do. The class meets four times (one hour each time), and the instructor meets with each participant for three individual half-hour sessions.

- Tuesday, 1/11-2/1, 12:00-1:00

Effective Writing: Letters, Memos, Minutes (B)—Is writing an increasingly important part of your work? In Effective Writing, participants review fundamentals of skillful writing, analyze and develop their writing style, and practice purposeful writing of letters, memos, and minutes. The class meets for one hour a week for eight weeks, and the instructor meets with each participant for five individual half-hour sessions.

- Friday, 1/14-3/4, 12:00-1:00
- To register, call Staff Development, ext. 7-0657.

ESL I—Speaking and Understanding Conversational English—One hour a week of class, five

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Staff Development Courses

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30-minute conferences, plus language lab. Practice in pronunciation and listening skills. Some work with English spelling as related to pronunciation of written words. Limited to 15. Those interested in ESL II should meet with the instructor before the class begins in order to take a screening exam to insure placement in the class best suited for their needs. Please contact the Learning Assistance Center (497-2207).

- Friday, 1/14-3/4, 12:00-1:00

Courses from the Association for Continuing Education

The Association for Continuing Education delivers courses accredited by local colleges and universities. For more information call ext. 7-0657.

Golden Gate University MBA Program:

Planning & Control
Policy Formation & Administration
Law & The Free Enterprise System
International Marketing

College of Notre Dame:

Managerial Accounting
Introduction to Probability & Statistics
Introduction to Computer Technology

Foothill College:

Principles of Accounting II
Business English II
Human Relations in Business II

Also from ACE:

CPL 102—Introduction to BASIC—A good beginning course in BASIC, the most popular and easily understood computer language available today. Students will learn the computer operations they seek for a given application through a process of self-checking exercises and flow-charting. It will not be necessary for students to have access to a computer to learn from this course. (Certificate only.)
(Tuition $90; textbook additional.)

CPL 105—Introduction to PASCAL—An introductory course in PASCAL for people who want to acquaint themselves with modern programming tools and concepts. It will give students with no previous programming experience a good grasp of the fundamentals and provide a foundation for learning correct and disciplined programming skills. (Certificate only.)
(Tuition $90; textbook additional.)

For additional information or to register for ACE courses call Staff Development, ext. 7-0657. The Staff Training Assistance Program provides reimbursement to $75 per quarter for cost of courses related to employee's job performance.

Resources for disabled on computer list

A public, computerized file of resources for disabled people should be operational by the end of this week, according to William H. Seidman, specialist on programs for the disabled at Stanford.

Modeled after the community information program developed by San Mateo County's Peninsula Library System which is already accessible through Stanford's CIT system, the file will include a list of on- and off-campus people, organizations and services which serve disabled people in the Stanford community.

Seidman explains that the extensive list will eventually range from sign-language interpreters, to the Sensory Aids Foundation services, to information on getting around in the area, such as which transportation services provide wheelchair access.

Expenses for the project, estimated now at about $500 to start up with an annual cost of between $150-200, are being shared by the Dean of Student Affairs Office, the Personnel Office and the Affirmative Action Office.

Those using the service—including students, staff and members of the community—will have to pay the same amount as those using other CIT public access files, approximately $4-12 per search. Those with personal or departmental CIT accounts can access the file using the "Disabled" subfile of the SPIRES system.

For more information, contact Seidman at 497-3483.

Geothermal workshop

The eighth Workshop on Geothermal Reservoir Engineering will be held Tuesday through Thursday, Dec. 14-16, in the CERAS building (LGI Room), with about 40 technical papers accepted for presentation or publication.

Besides the paper, the schedule includes several lunches plus a reception, a wine tasting, and a banquet.

Each day will feature a keynote speaker: M. L. Sorey of the U.S. Geological Survey in Menlo Park on "Hydrothermal Convection Systems"; Franco d'Amore of the International Institute of Geothermal Research in Pisa, Italy, on "Reservoir Chemistry"; and A. S. Batchelor of the Camborne School of Mines, England, on "The Stimulation of Hot-Dry Rock Geothermal Reservoir in the Cornubian Granite, England."

The banquet speaker will be R. P. Wischow of the PG&E Geysers Project.

Participants must register for the workshop; information is available at 497-1218 or 497-4744.

Silicon Valley executives speak at GSB on computer developments

A Stanford Business School computer course this year includes some of the best known executives in Silicon Valley as teachers, thanks to the energetic efforts of a group of students.

Gregory Young, who is scheduled to receive an MBA degree from Stanford in June, a year ago took Decision Support Models and Optimization, an introductory course in managerial use of computers. Young lamented the fact that the course had little to do with the use of computer technology in managing organizations and was focused instead on building, using, and interpreting computer models.

When the course was over, he had an idea. Why not invite some of the top executives of high technology firms in the Silicon Valley to give lectures which could run in tandem with the course material.

"Here we are in the middle of the second coming of the Industrial Revolution, located next door to some of the best managed companies in the world," he said. "I saw this as a chance for the students to get a better idea of what is going on in the field, and to stimulate more interaction between industry and the Business School."

Faculty members teaching the course were enthusiastic and asked Young to help work out the details. "The executives liked the idea of talking to students and, obviously, their coming to the School is good visibility for them and their companies," said Young. "And the School gains by getting some state-of-the-art knowledge."

The result is a series of eight lectures on the theme, "Management, Computers and Information Technology in the 1980s," which runs through fall and winter academic quarters.

The students taking the computer course are required to attend each lecture. Questions based on the lectures were included on the recent midterm examinations, said Jeffrey H. Moore, the Business School's assistant dean for computing.

"Basically, the series amplifies topics taken up in the course," said Moore. "The speakers generally deal in more detail than we take up in the course. For instance, we discuss the various generations of computers, and they have filled that out with the development of semiconductors. They will give makret forecasts and other situational-specific material that we don't have access to."

Sometimes it has worked in reverse, with the School presenting the details and the executives offering a broader view, said Moore. "Where we talk about various types of software for decision-making, one of the speakers discussed the nature of software," Moore said.

So far, the series has included talks by Dr. Gordon Moore, chairman and chief executive officer of Intel Corp., on the development and growth of the semiconductor; by Dr. David Crockett, senior vice-president of Dataquest, Inc., on trends in computation; and by Dr. Daniel Fylstra, chairman and chief executive officer of VisiCorp, on the microcomputer software revolution; and John D. Couch, vice-president and general manager of the P.O.S. Division of Apple Computer.

Future speakers will include Steven P. Jobs, chairman of Apple Computer, Inc., on technology and society, January 25; Dr. Kenneth Oshman, president and chief executive officer of Rolm Corp., on communications technologies, February 1; Edward McCracken, general manager of the business computer group of Hewlett-Packard, on "Putting it All Together," February 22; and John A. Young, president and chief executive officer of Hewlett-Packard, on technology and the world competitive environment, March 8.

Want help on micros? CIT may assist

Responding to the growing use of microcomputers by Stanford faculty, staff, and students, the Center for Information Technology has established a new microcomputer program, CIT Director Edward E. Shaw has announced.

Headed by Michael Carter, CIT's director of instruction and research information systems, the new program will include a newly organized Stanford Microcomputer Instructional Laboratory Experiment (SMILE) to support special projects in training and use of micros in instruction and research.

Located in Jordan Quadrangle, SMILE will be used initially as a training site for the Tiro Project, a program to introduce the use of microcomputers in the humanities. Starting in winter quarter, SMILE will house a variety of experiments, including the teaching of writing using microcomputers.

During winter quarter, a microlab will be opened in Forsyth Hall for the evaluation, demonstration, and development of microcomputer systems and software.

"The uses of these devices range from text editing and file storage, through analyses of data, to use as a means of accessing larger computer systems and services," according to the new program's charter. "There is reason to expect that microcomputers will become an essential component of most, if not all, University programs and activities."

The Department Information Systems unit of CIT's Administrative System's Division will provide support for administrative staff use of microcomputers.

The new program also will develop the most appropriate ways of supporting microcomputers on SUNet, the Stanford University Network. "We expect SUNet to become operational, in phases, over the next 24 months," Shaw said.

Financial support for CIT's new microcomputer program comes from reallocation of staff from more traditional computing activities, one-time funds, and support from external sources, including the participation of some microcomputer vendors.

A steering committee for the new program will be appointed in the near future. It will include representatives from the School of Humanities and Sciences, Engineering, Education, Computer Sciences, LOTS (Low Overhead Time Sharing System), Interactive Educational Technology Program, Academic Council Committee on Computing and Information Technology, Administrative Systems Policy and Planning Group, and four faculty with specific interest and expertise in microcomputers.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

36549-AW (JCC:4084) PROGR/ANALYST GEN III: Evaluate needs for micro-computer applications, terminal installations & use of other user tools by personnel in Controller's Offc, such as use of EASYMARK, MARK IV, SCRIPT, WYLBUR & SAS; recommend approp solutions to meet needs of Controller's Offc in areas of local automated offc tools; identify vendor support for maintenance & application program support needed for micro-computer users; prov on-site support to these functions; asst in developing & monitoring documentation of micro-computer application; QUALIFICATIONS: 3-5 yrs exp as programmer/analyst working w/ user software tools; exp in an acctg sys environ preferred, using automated offc tools & one that meets audit requirements; familiarity w/ programming langs (BASIC, PASCAL, COBAL, APL); exp in use of micro-computers & familiarity w/ micro-software offerings helpful; significant commu & teaching skills to work w/ a broad range of users.; C07; $2113-2724.

33234-LL (JCC:5596) LIFE SCI RES ASST II: 50%; exp in biochemical tech incl HPLC, GLC, Radioisotope applications, electrophoresis, immunochemical applications & & enzyme technology; flexible scheduling & respon for independent work; QUALIFICATIONS: require BA/BS in Biochemistry or similar degree plus min of 3 yrs exp in a Biochemical Research Lab or equiv combination of educ & exp; expected to be sufficiently exp'd; prov theoretical input relating to the duties to be performed; capable of exercising independent initiative & judgment in performing work of a non-routine nature, relating to various ongoing res projs.; C06; $927-1156.

33235-LL (JCC:5596) LIFE SCI RES ASST II: LSRA for Premature Res Ctr to work specifically in infant clinical physiological res studies; main areas of res incl eval of intensive care monitoring, pulmonary function, sleep, respiratory control, & temperature control in preterm & term infant; polygraphic & minicomputer tech used for data collection; use of pressure transducers for measuring various pressures as well as endosophageal pH; maint lab equip't; independence in setting work prior; interaction w/ clinical fellows, clinical personnel; data compilation & interpretation; implementation of new res strategies/tech; QUALIFICATIONS: BS in Engr or Biosci desirable or equiv exp; working knowl of varied testing & recording instruments; some knowl abt microprocessor acquisition sys & interfacing w/ electronic recording equip't nec; good organizational skills; able to make judgments; good interpersonal skills.; C06; $1854-2312.

Bargaining unit

35058-FM (JCC:7936) Groundskeeper/Laborer: TMS Unit; 7-3:30; pulls, hoes, or cuts w/ a rotary mower -common weeds; waters lawn & shrub areas; occasionally mows small lawns & edges all lawns in area regularly; operates mobile & non-mobile power equip't; some tree work, equip't operation, irrigation repairs, spraying, etc; moving furniture in bldgs & new locations; install & maintain street & traffic signs, jump post, parking bumpers on campus & post in cement; set up for commencement & registration, set up chairs, trash cans, & signs for programs for each quarter; QUALIFICATIONS: able to follow job-related instructions; able to perform work in all types of weather conditions; extensive standing, stooping, squatting, pushing & pulling.; A16; $7.16.

17845-LL (JCC:5638) LIFE SCI TECH I: TMS Unit; Generation & maintenance of murine T cell clones reactive w/ soluble antigens & analysis of these cells using T cell proliferation assays; production & maintenance of hybridomas which are somatic cell fusions between drug marked myeloma cells & antibody producing spleen cells; extensive mouse work involving antibody production, immunizations, collection of serum & minor surgery involving removal of lymph nodes & other organs; analysis of cell surface antigens of T cell clones by fluorescence activated cell sorting using reagents prep in lab as well as commercially available; QUALIFICATIONS: prior lab exp using biochemical or molecular biology tech important; exp w/ cell culture tech helpful.; A18; $7.5.

42879-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; construct cDNA libs for insect & bloodstream forms of Trypanosoma brucei; identify, map & seq stage-specific recombinants; growth of T. brucei in rodents & culture; purification of T. brucei; prep of mRNA & DNA fr T. Brucei; cDNA synthesis; molecular cloning; restriction mapping; DNA seq; in vitro expression of recombinants; QUALIFICATIONS: molecular biologist w/ exp of all DNA seq & gene cloning tech plus some exp of chromatography, analytical biochemistry, cell culturing, animal handling & microbiological tech.; A24; $8.65.

42878-PB (JCC:5835) ANIMAL CARE ASST I: TMS Unit; 50%; T 8-5, Th 8-5, F 12-4; maintain clean environ for lab mice & rats; change dirty cages, feed & water; wash all cages & bottles; do basic daily chores; sweep & hose floor; take trash out; QUALIFICATIONS: no allergies to animals & be able to lift 50 lbs; requires manual dexterity; able to follow detailed oral & written instructions in English; able to learn tech & procedures in caring for & handling the animals; able to operate related equip't.; A12; $6.54.

33565-JB (JCC:6596) S&E TECH - ELECTRO MECH: TMS Unit; 50%; pick up chemicals fr labs; segregate chemicals by reactive groups; able to recognize hazards & chemical compatibilities; interact w/ lab personnel & edu them in proper packaging & storage of chemical waste; recognize chemicals that could be recycled & encourage recycling in the labs; perform inspections & report problems; order & maintain supplies for waste disposal; collect environ'l samples; analyze & test samples under direction of Health & Safety professionals; QUALIFICATIONS: must be exp'd in handling chemicals; college chemistry nec; accuracy, neatness, atten to detail, self-direction desirable; 18 yrs of age or older; licensed driver; physical strength needed to handle containers of up to 55 gallon drums, manual dexterity required.; A28; $9.5.

SLAC

94755-JM (JCC:6604) SR. S&E TECH/TRAINEE - ELECTRO MECH: TMS Unit; rotating shifts; operate & repair liquid helium refrigerators & sys; operate & maint cryogenic, hydraulic & pneumatic equip't; leak check high vacuum equip't; use machine tools; bend tubing; do silver solder & braze; read blue prints; fill & transport liquid hydrogen trailers; keep records; related industrial courses desirable; college or military tech sch'l helpful; exp w/ hydrogen & helium refrigerators, high pressure gas, photography, optics, hydraulics & cryogenics desirable; skills in leak detection & lab vacuum practices.; A34; $1901. APPLY AT SLAC

91781-JM (JCC:8586) HEAT VENT A/C MECH MAINT: TMS Unit; troubleshoot, serv & repair a variety of HVAC equip't & sys, i.e. compressors, heat pump units, electrical & gas heating apparatus, etc; operate & overhaul fans, blowers, etc; perform preventative maintenance; QUALIFICATIONS: high school or equiv; several yrs related exp; able to qualify for gov't driver's license.; A35; $1945. APPLY AT SLAC

95029-JM (JCC:7082) STOREKEEPER II: TMS Unit; independently perform supply tasks incl stocking items, inspections, inventories incoming shipments, wait on customers, etc; several yrs exp in storekeeping; mechanical aptitude & ability to organize records & mat'ls; able to qualify for gov't driver's license.; A22; $1430. APPLY AT SLAC

94328-JM (JCC:7166) DELIVERER II: TMS Unit; collect scrap & salvageable mat'l or equip't, disassemble as required & store; maintain salvage facility & scrap yard in neat & efficient order; maintain records; be alert for & report conditions of property & recommend corrective action if nec; ability to comprehend & commu both orally & in writing; ability to perform arithmetic calculations; exp in or ability to learn rapidly; the safe & efficient use of forklift equip't; ability to move heavy objs or mat' when use of forklift is not efficient or possible; prior exp in plant protection or property responsibility desirable; able to qualify for gov't driver's license; A17; $1271. APPLY AT SLAC

93255-JM (JCC:7736) MAINT PERSON II: TMS Unit; change filters in heating, ventilation & air conditioning sys; make minor repairs; inspect blowers, lubricate bearings, change belts, change bearing where nec; clean & flush water chiller condensers; asst HVAC mechanics; perform variety of preventive maintenance tasks; a couple yrs related exp or training sch'l or mechanical apprentice sch'l may substitute for part of job exp; ability & knowl to perform duties; good reading & writing ability; able to climb ladders & work outside on roof tops during inclement weather; able to qualify for gov't driver's license.; A26; $1577. APPLY AT SLAC

93256-JM (JCC:8594) HEAT VENT A/C MECH SPEC: TMS Unit; troubleshoot, serv & repair a variety of HVAC equip't & sys, i.e., water cooling sys, heating, electronic & pneumatic control sys, etc; install, operate & overhaul HVAC sys & components; high sch'l or equiv; journeyman level HVAC training; several yrs exp; able to qualify for gov't driver's license.; A36; $1997. APPLY AT SLAC

95077-JM (JCC:2136) ACCOUNTANT III: Maintain acctg records, controls & reconciliations of Stores Inventories & all related transactions in a fully automated inventory control sys; supv acctg work order sys; maintain input controls for all journal vouchers; prep original input & changes for computer prepared billings & oversee the distribution of invoices & related records; QUALIFICATIONS: BS in Acctg or equiv; several yrs exp in multi-phase computer oriented acctg operations & in specific areas of cost, inventory control & fixed asset acctg; understanding of computer programming & analysis; supvry exp desirable.; C07; $2113-2800. APPLY AT SLAC

Rental housing

HOUSING AVAILABLE

□ **Regularly Available:** 1 & 2 BR furn. & unfurn. apts. & twnhses, and 3BR/2BA hses in Palo Alto & Menlo Pk. In good neighborhoods and close to campus. $525 to $800/mo. Call Shirley (415) 493-2321 or Jane (415) 968-4957.

□ **Now:** SKI CABIN, So. Lake Tahoe. 2BR, frpl, color TV, phone, Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Dec. 22 for 1 yr (flex):** Fully furn contemp. campus hse. 2BR + 2 studies (1 can convert to BR), 2BA, FR, piano, lush atrium, wooded lot. $1350/mo. incl. grdnr, water. Call (415) 857-0479.

□ **Feb. to Mar. '83:** Furn. lux. apt. 1BR/2BA, study, Palo Alto, 3 mi. to campus. $1,000/mo. Call Knoles (415) 493-4964.

□ **Winter Qtr.:** Coastal hse, so. of Carmel, 1BR. $1,000/mo. Call Knoles (415) 493-4964 or (408) 624-7290.

□ **NOW:** Guest cottage, cntry setting, 7 mi. to Stanf. Furn. incl. dishes, pans, toaster, blender, linens. LR, ktchn, BA, 1½BR, gar. Pool. Nonsmokers, adults, no pets. $475/mo. incl util. Call 941-3501.

□ **NOW:** SKI NORTHSTAR AT TAHOE. 2BR/2BA condo, sleeps 8. W/D. Dwnhill, Xcntry. Free shuttle to slopes. Ideal family resort. Day care. Avail. holidays. Call (415) 564-5324.

□ **Jan. to June, '83 (flex):** Furn. campus hse. 4BR/3BA LR, DR, FR w/frpl, shop, carport. Auto sprinklers. Nonsmokers. $1400/mo + elec., gas, gardening; 1st & last mo. + dep. Call 857-9185 or 497-1663 (day).

□ **Mid-Jan. to mid-June '83:** Contemp. hillside hse w/view in Portola Valley. 4BR/3BA fully furn; conversation pit w/frpl. 2 lge decks , spa. 5 mi. to campus. $1500/mo. Call 327-8615 (eve) or 858-4035 (day).

□ **NOW:** Prof. woman has rm. to rent w/priv BR/BA, W/D, ktchn. priv. Female, nonsmoker. Furn. except for bed. 10 min. to campus. $325/mo. incl. util. Call 969-5870 (after 7 p.m.).

□ **Beg. Jan. 1, '83:** 4BR/2BA partly furn (or unfurn) hse. Spanish style, in Redwood City. All appl., frpl, alarm system, encl. yd., B-B-Q. Mt. Carmel area, 15 min. to campus. Xclnt for sharing. $1100/mo. Call Carol 327-5670 (eve).

□ **NOW:** Share hse rental, for grad. stud. Mt. View/P.A. border. 10 min. to campus. Priv. BR, ktchn. priv., W/D, good jogging area. $337.50/mo. + ½ util. Call 857-5445 (day), 949-2609 (eve).

□ **Beg. Jan. 1, '83:** Fully furn. apt. w/sports facil, at Oak Creek. 5 min. to campus. Avail 6 mos. (flex). $675/mo. Call 326-3684 (a.m. & eve).

□ **Jan. to June '83:** Palo Alto, furn hse. 4 BR/3BA, LR, DR, FR w/frpl, study. Pool w/solar cover. Close to campus. $1650/mo., incl. pool ser. Call 493-1179

□ **Jan. to Sept. '83 (flex):** Fully furn. 4BR/2BA lge campus hse. Frpl, gardn w/auto sprinklers, view of hills. Nonsmokers, no pets. $1400/mo incl. grdnr. Call 497-3987 (day), or 494-0362 (eve).

HOUSING NEEDED

□ **Now:** Prof. Stanford MBA seeks 1 or 2BR w/BA unfurn. condo, apt., twnhse in dwntwn Palo Alto for 12 mo. Local refs. Call Steve, 321-2303.

□ **Jan. to Mar. '83:** Retired cpl seeks furn 1 or 2BR apt. condo or hse. on or nr. campus, Palo Alto, Menlo Pk. Nr shops. Pkge deal to include car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Apr. 1 to June 15, '83 (flex):** Visit. Prof. seeks apt. or cottage on or nr. campus. Call John Felstiner, 497-4722 (day), 322-7727, or msge. at 497-2635.

□ **Jan. 1, '83 thru Mar. '83:** Winter Qtr. Visit Prof., wife, 15 yr. son seek furn. 2BR hse or condo on or nr. campus. Nonsmokers. Call COLLECT to Paul or Suzanne (303) 444-1979.

□ **Jan. & Feb. '83:** Prof. man seeks small apt. or hse-sit during sabbatical educ assignment. Call (415) 361-1406.

□ **Dec. 19 thru 26, (or longer), '82:** Staff mbr, Stanford seeks hse. for parents and adult siblings. Will pet/plant sit. Call Susan 327-4667 or 497-1743 (day).

□ **Beg Apr./May '83:** Finnish-French family, 2 daughters (6 & 4 yrs.) seek 2 to 4 BR hse/apt. in Bay area. Will care for pets & garden. Chldrn used to strict limits at home. Local refs. EXCHANGE 3BR/BA apt. + 2 cars in beautiful area 5 mi. from ctr. Paris. Wkly cleaning incl. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **NOW:** Cultivated female, business person, age 26, w/elegant furn. seeks to share Peter Coutts unit w/faculty mbr. A.S.A.P. Call Janel, (415) 441-7337 or 321-2469.

□ **Sept. '83 to June '84:** Approx 50 fully furn hses needed for Fellows & their families coming to Ctr for Advanced Study in Behavioral Sciences. Call Frances Duignan, 321-2052 (day).

□ **Xmas Vacation:** Out of the area univ. fac. person seeks HOUSESIT for this Christmas vacation. Local refs & contact at 851-1361.

□ **June '83 to Aug. '84 (flex):** Visit Prof in Elec. Engr seeks hsng for self, spouse & 12 yr. old daughter. Nonsmokers. Call COLLECT (505) 294-7758, after 5 p.m., or write: Prof. Etter, EECE Dept., Univ. New Mexico, Albuquerque, NM, 87131.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Nonexempt

30502-BP (JCC:2462) OFFICE ASST III: Receive, verify, code, approve, distribute, & post forms related to empl & benefit plans; heavy filing; answer questions fr univ employees & administrators at all levels relating to benefit plans & forms processing; distribute nec paperwork to carriers; review, sort, & date stamp all incoming mail; check all incoming forms for completeness & accuracy; ability to become familiar w/ health & life insurance, disability & plans & retirement plans; calculate dollar adjs for insurance plans; QUALIFICATIONS: ability to deal w/ people tactfully; discretion w/ highly confidential informa; requires accurate filing & typing abilities; basic math skills; requires good interpersonal skills; atten to detail; ability to perform in a busy offc environ; contact: Andrea McMahon, Old Pavilion, Stanford University.; B11; $1246-1310.

33791-BP (JCC:2470) OFFICE ASST IV: Prov clerical support to Mgr of Campus Properties in admin of Stanford Shopping Ctr, Stanford Res Park, commercial & other land development properties; asst in prep of leases, promissory notes, default notices, etc; prov liaison w/ Acctg Offc as required; process invoices, maintain budget & other files & records as required; typ corresp; QUALIFICATIONS: typ 60; 2 yrs sec'l exp; ability to handle pressure & meet dead-

continued on next page

Okimoto, Yawata discuss Japanese technological challenge

"My English is made in the USA—his was made in Japan. We all know the difference that makes."

With this quip, Stanford Prof. Daniel Okimoto, political science, opened a discussion of Japan's high technology challenge with Keiske Yawata, president of NEC Electronics U.S.A., Inc. before an audience of about 200 at Stanford Thursday, Dec. 2.

Discussing semiconductors, Yawata later replied that U.S. product quality has greatly improved, though the bad image of a few years ago lingers.

The quality problem has been "mostly, if not totally cured," creating a "very healthy" competition, he added.

Yawata said "most Japanese companies are aware of the importance (of semiconductors and related technology) to U.S. security...

"The flow of information from the U.S. to Japan actually ends there. We do not export integrated circuits to communist countries."

While Japanese firms have had "several inquiries" they do not transfer technology or information to communist countries, he added. There should be "no fear" that "information is leaked by the Japanese to the other side of the fence."

Integration an advantage?

Responding to concerns that large, integrated Japanese firms have an exceptional advantage over smaller but more innovative American companies, Yawata said that "in the next decade or two, custom-designed requirements (at which smaller companies excel) will be much greater because the scale of (chip) integration will increase."

Small companies may find it advantageous to remain small with high quality, customized chips and good service.

Okimoto, author of a new book on *Japan's Economy—Coping with Change in the International Environment*, said Japan's practice of targeting specific industries for government support has drawn increasing criticism from the U.S. and other Western countries because

1) It encourages world-wide overinvestment in the selected industries;

2) It distorts trade and encourages overproduction; and

3) It results in "export downpours" from Japan when several companies simultaneously release a "torrent of goods" that "flood foreign markets."

Yawate replied that consumers should welcome the competition. At present, there still is not enough capacity world wide for building 64K chips and other high density memories.

The best way to reduce economic distortion is for Japanese firms to build plants in the U.S., and vice versa. NEC is currently building in Roseville, Calif., he noted, while Fairchild is building in Japan.

Okimoto suggested that Japanese firms still benefit from "a legacy of unfair practices," particularly close government regulation of the financial markets there. Interest rates may be kept artificially low and key industries insulated from foreign competition, at least until they have adequately matured.

Japan also benefits from the strategic protection provided by the U.S., which spends six percent of its gross national product on defense, compared to less than one percent by Japan.

Yawata replied that the Japanese government is "trying to find logical ways to liberate the financial industry."

He personally is "completely against military spending. We don't need another military power in Asia. I'm sure we have another (better) way of spending taxpayers' money."

Free ride on research

Responding to concerns expressed by Okimoto that Japan gets a "free ride" on basic research done in the U.S., Yawata said funds allocated to this purpose in Japan have been "too small" but are now "increasing rapidly as the technology gap narrows."

NEC spends more than 10 percent of its total sales income on research and development, and 13 percent of semiconductor sales. About one-fifth of these funds go to basic research in the company. In the early 1960s, Japanese firms paid about 12 percent of sales on licensing arrangements with such American firms as Bell Telephone, Texas Instruments, and Fairchild, he noted.

Targeting undesirable

Following the formalized debate, Okimoto suggested that targeting of industries might prove increasingly undesirable politically. While there clearly would be short and intermediate-term problems in providing foreign firms easier access to the Japanese financial market, providing this could be "an important step in limiting frictions" especially with the U.S.

Prof. William F. Miller of the Stanford Graduate School of Business, president of SRI International in Menlo Park, said that the U.S. could respond to "targeted" competition in one of three ways:

1) By doing nothing, "in which case we'd lose;"

2) By persuading Japan to do less "targeting;" or

3) By adopting the same practice, which would lead to "government-to-government competition."

The best course would be to encourage more free market competition in Japan, he said. In a subsequent conversation, Miller expressed concern that a full scale trade war could erupt.

Lowering the capital cost differentials for U.S. firms in Japan would be "a significant modification," Okimoto said. The more foreign investment occurs in Japan, the less homogeneous and less susceptible to "targeting" its industry will become.

Yawata suggested that U.S. managers should educate private investors to look more for long-term gains than short-term profits.

Okimoto noted that U.S. firms cannot borrow heavily from banks on a long-term basis and that banks are forbidden from directly owning equity in companies.

The debate was sponsored by the Northeast Asia-U.S. Forum on International Policy and moderated by Prof. John Linville, head of the Stanford Center for Integrated Systems. —**Bob Beyers**

Health and safety report

Accidents and Injuries Occurring Nov. 22-Dec. 3

Type of accident or injury	Number of incidents	Days Lost
Contact with object:		
impact with object	3	0
cut by sharp object	3	9 (0, 9, 0)
Fall from height (incl. stairs)	1	0
Lifting improperly	2	5 (5, 0)

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lines; good verbal skills; familiarity w/ computer acctg applications required; knowl of real estate practices desirable; send appl/resume to Rosemary McAndrews, 209 Hamilton Ave. Palo Alto.; B14; $1440-1514.

33531-BP (JCC:2454) OFFICE ASST II: Fixed term 1/1/83-6/30/83; send official transcripts for Stanford students to places they request; make receipts for fees; organize all requests; separate, alphabetize, & locate records & check for errors/accuracy; typ ltrs of transmittal to accompany transcripts; bill students for requests & refund when nec; reproduce transcripts on photocopier; sign, seal, & date records by machine; mail transcripts; much interaction w/ students via telephone or in person; QUALIFICATIONS: typ 40-50; prev exp working w/ people in person or over phone; accuracy & dexterity in working w/ details; send appl/resume to Glenda Greer, Old Union, Room 133.; B09; $1130-1189.

29617-PM (JCC:2512) OFFICE ASST III-SPEC: Answer phones (6 lines); sorting mail; typ ltrs, discharge summaries, grants, manuscripts & statistical rprts; order supplies; bill patients for use of intraaortic balloon; enter into correct acct donations received fr public for Cardiac Surgical Res Fund; mail out informa re organ donations; act as bkup for other offc staff during their absence; QUALIFICATIONS: typ 70-80; well-trained & exp'd in med sec'l duties; med terminology; use of dictaphones; good phone answering skills; good typing skills & speed essential; heavy work load; capable of taking over respon of other offc staff; exp w/ word processor preferred; contact: Nina Bonomo, 497-5771.; B12; $1310-1373.

32872-PM (JCC:2562) SECRETARY III: Sec to a prof. & his res staff; independently typ corresp, manuscripts, grants, univ forms & rprts fr rough draft & dictaphone; screen calls; answer questions & inquiries about Lab res projs; maintain central filing sys & personnel files, incl time cards & record keeping; prep budget statements for grants; distribute funds; arrange site visit mtgs & travel accommodations; order supplies; prev exp w/ SU & Veterans Admin not essential, but will have to become familiar w/ policies & procedures of both; QUALIFICATIONS: typ 70+; excel knowl of grammar & letter composition mandatory; 3-5 yrs of strong sec'l exp essential; good typing fr dictaphone skills nec; some acctg bkground helpful; contact: Dr. John Finney, 858-3996.; B14; $1440-1514.

19957-PM (JCC:2596) SECY II-SPEC: Coordinating Ophthalmology Matching Program (i.e. screening resident appl calls, maintaining files of resident appl; arranging interviews for appl, etc); aid in screening of incoming calls to Div; handle sec'l duties of patient corresp & res manuscripts for physicians; bkup for other sec; maintaining files of clerkship register of med students who are assigned to ophthalmology; QUALIFICATIONS: typ 60-65; knowl of med terminology essential; requires skills w/ IBM sel II & dictating equip't; accuracy & neatness required for manuscript & med corresp; send appl/resume to Mariann M. Crane, Div of Ophthalmology A227, SUMC.; B12; $1310-1373.

33194-PM (JCC:2596) SECY II-SPEC: Receptionist/-Sec in Admin offc of Neurology Dept; answer phones; sort mail; answer corresp; maintain conference room calendar; maintain dept'l lib; maintain offc supplies; transcribe all corresp & patient related dictation; arrange conferences & mtgs; maintain files; reconcile res budgets; act as bkup for resident sec & for other sec in offc; maintain student course informa not handled by curriculum advisor's sec; QUALIFICATIONS: typ 65; accurate typing & proofreading a must; med terminology preferred; ability to transcribe fr dictaphone in finished form; willingness to share duties of other secs when needed; send appl/resume to Phyllis Friedman, Neurology Dept, Med Ctr C338, Stanford, CA 94305.; B12; $1310-1373.

32116-VW (JCC:6204) PATIENT TEST TECH SPEC: Perform conventional ultrasonic exams of the human abdomen & pelvis, using real-time sector scanners, & to acquire in digital form, the data to be processed by a dedicated computerized data acquisition sys; require to scan & collect data fr in vitro tissue specimens; entry of patient data into a computerized data recording & analysis sys is involved; QUALIFICATIONS: must be a registered ultrasound technologist; have formal training & exp in clinical ultrasound of abdomen & pelvis; exp using real-time sector-scanning equip't nec; exposure to tissue characterization res, & exp using a lab & an offc computer sys highly desirable.; B19; $1847-1940.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Dec. 14, in Room 132, Tresidder Union.

The sessions are open to all new employees without preregistration.

30556-BP (JCC:2562) SECRETARY III: Manage offc of interdisciplinary program; perform wide variety of admin duties; inform undergrad students of program requirements; advise on application procedures; asst students in course sel & informa of scholarship, intern & job opportunities; coord course listings & prep Courses & Degrees & Time Schedule copy; produce program brochures, newsletters, conference programs & publicity; arrange receptions, graduations & conferences; attend Committee mtgs & take minutes; supv student organization & newsletter; admin program budgets; prov clerical support for chairman & vice-chairman; QUALIFICATIONS: typ 60; Univ exp, esp w/ undergrad programs desirable; relate well w/ faculty, students & staff in assoc depts; excel English, oral & written commu skills required; accurate typing; work independently; send appl/resume to Emily Hallin, Administrator, Program in International Relations, Bldg. 200, Room 19, 497-4547.; B14; $1440-1514.

30036-BP (JCC:2562) SECRETARY III: Fixed term present-5/1/85; sec to proj mgr who is responsible for the Multi-million dollar Electronic Commu Media projs; monitoring/reporting all functions (budget, schedule, content) for electronic commu media projs; supv & control proj records maintenance; coord timely prep & dissemination of monthly financial reports pertinent to projected vs actual expenditures; monitoring proj budgets; schedule appts & mtgs; take & transcribe dictation; operate word processing equip't; QUALIFICATIONS: typ 65-70; s/h 90; prev sec'l & stenographic exp & knowl of offc procedures; word processing exp helpful; demonstrated problem solving capabilities; ability to work independently, prioritize projs & follow thru to completion; ability to deal comfortably w/ a wide range of personalities & staff at all levels; send appl/resume to Susan Sterner, Old*Pavilion, Stanford University.; B14; $1440-1514.

31080-PM (JCC:2562) SECRETARY III: Sec to Dir of Libs; typ all corresp, reports, etc; answer phone & routing calls; greet visitors to offc; sort mail; order supplies; make travel arrangements for Dir; process expense reports; handles Dir's calendar; maintains all committee rosters; compiles & issues master admin calendar, etc; QUALIFICATIONS: typ 60; require prev sec'l exp; good commu skills, both orally & in writing; ability to learn automated sys; ability to use transcribing machine; ability to maintain confidentiality; prev public serv exp; knowl of English grammar, spelling & syntax; s/h skills & prev exp w/ RLIN, WYLBUR or SPIRES desirable; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B14; $1440-1514.

19964-PM (JCC:2562) SECRETARY III: 50% Univ position & 50% Vet Admin Med Ctr posiiton; sec to the Chief of Ophthalmology at Vet Admin Med Ctr in Palo Alto; able to prov full range of sec'l duties; able to work w/ grant/contract budgets & speak for the Chief of the Section; entail letter/memo composition; dealing w/ internal as well as external admin & funding agencies; med terminology; edit manuscripts & papers; QUALIFICATIONS: typ 70-75; good sec'l skills & med terminology; able to edit manuscripts & papers; requires a CIVIL SERV RATING for VAH portion; send appl/resume to Mariann M. Crane, Div of Ophthalmology A227, SU Med Ctr.; B14; $1440-1514.

Elizabeth Cheney receives first Mendelowitz scholarship

Senior painting and printmaking student Elizabeth Cheney is the first recipient of the Daniel M. Mendelowitz memorial scholarship, made possible by gifts from family members and friends of the late Professor Mendelowitz, well-known portrait painter and watercolorist of mostly Bay Area subjects, who was a member of the Stanford Art Department faculty from 1934 to 1969.

The scholarship award was "a complete surprise, and wonderful" to Cheney, an independent 26-year-old from Berkeley, who is working her way through Stanford in the Art Department photo lab and as a lifeguard at deGuerre pools.

A nonrepresentational painter who "works quite large in oils and also in monoprints," she is getting married to a Stanford graduate student at the end of this year, plans to go on to graduate school, and wants a career as a studio artist "insofar as possible." She previously studied photography and design here.

Dan Mendelowitz

Dan Mendelowitz was born in Linton, North Dakota in 1905 and died in February 1980. He was educated at Stanford (AB '26, AM '27), won a New York Art Students League scholarship in 1931, and taught at San Jose State before joining the Stanford faculty.

The author of *Children are Artists*, *A History of American Art*, and the popular college text *Drawing*, Mendelowitz once wrote, "Nowhere is the spirit of adventure more certain than in the arts. People derive great satisfaction from exercising their manipulative skills in this age of mechanization."

He was a very effective teacher, revered for his natural, forthright manner. As a painter, although he also treated other areas of California, and of Mexico and Europe as well, his long-time friend Stanford physics professor Robert Hofstadter said, "He knew the Bay intimately. He loved the mist in the air and he had the sense of California."

With the first award of the Mendelowitz scholarship, Professor of Studio Art Matt Kahn thanked Mrs. Mildred Mendelowitz, her son, Palo Alto sculptor and painter Louis Mendelowitz, and other relatives and friends whose gifts "made it possible for the department to honor Professor Mendelowitz in the most appropriate way imaginable: by helping an outstanding young artist carry on with her work in the studio."



Elizabeth Cheney in the studio

"Additional gifts to the Mendelowitz Fund are most welcome," he added, "and will eventually enable us to award the scholarship more frequently."

Help Center hosts holiday workshop

"Exploring the Realities of the Holiday Season," a one-session workshop with John Preston Jr. and Larry Starkey, will be given from noon to 1:30 p.m. Wednesday, Dec. 15, at the Stanford Help Center.

The workshop will cover issues which commonly arise during this season, such as: frantic activity (too much to do in too little time); childhood holiday memories vs. present day realities; holiday loneliness and depression; holiday crutches, such as alcohol and drugs; and ways to create a more personally satisfying holiday season.

Call the Help Center, 497-4577, to reserve a place in the workshop. Coffee and tea will be served.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Stanford Medical Center, and SLAC employees and their immediate families. All workshops, seminars and counseling sessions are free of charge.

The Help Center entrance is at the rear of Galvez House, near Frost Amphitheater. Parking is available at Angell Field.

Perelman to speak

Prof. Chaim Perelman of the Université Libre de Bruxelles will speak on "Rhetoric and Legal Reasoning" at 4:15 p.m. Thursday, Dec. 9, in room 280 of the Law School.

The talk is sponsored by the Stanford Law School.

Recreation facilities

Finals Week, December 13-17

Encina lockers and showers—7:30 a.m.-9 p.m.
Roble complex (lockers, showers, gym floor, dance studio, studio 42, and room 33)—8 a.m. to midnight.
Encina weight room—Noon to 2 p.m., 3:30-8:30 p.m.
Maples Pavilion—Noon to 1 p.m.
deGuerre pools—Noon to 2 p.m.
deGuerre courts—11 a.m.-7:15 p.m.
Golf course—T-F, first available starting time.
Tresidder recreation center—M-Th 8 a.m. to midnight, Fri. 8 a.m. to 1 a.m.
Open: Olympic Gamefield, Perrier Parcourse, Angell Field, and tennis courts
Closed: Roble Pool

Calendar

Calendar items should be delivered to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline, the last of fall quarter, is Wed., Dec. 8, to cover the **three weeks** *of Mon., Dec. 20, through Sun., Jan. 9.*

Events must now be submitted on forms supplied by Events and Services. Forms will be sent to major presenters. Others wanting copies should call Events and Services, ext. 7-2551. When the Calendar is finally on-line, *Campus Report* **will provide directions on calling it up.**

LATE ANNOUNCEMENTS

Wed., Dec. 8. EE 380 Computer Systems Laboratory Seminar: "NMOS II and the HP 9000 Development" with Dr. Fred Clegg, section manager, Technical Computer Group Engineering, Hewlett-Packard, Cupertino. 4:15 p.m. Terman Aud.

MONDAY, DECEMBER 13

Biological Sciences Dept. Seminar: "Plant Studies on Jasper Ridge" with Dr. Hal Mooney, S.U. 4:15 p.m. Room T175, Herrin Hall. Open to the public.

TUESDAY, DECEMBER 14

WEDNESDAY, DECEMBER 15

Basic Science Research Colloquium: "Regulation of the immune responses by the major histocompatibility complex" with Dr. Hugh O. McDevitt, Dept. of Medical Microbiology. 5 p.m. Fairchild Aud.

THURSDAY, DECEMBER 16

FRIDAY, DECEMBER 17

Women's Basketball: Vs. USF. 7:30 p.m. Maples Pavilion.

SATURDAY, DECEMBER 18

Men's Basketball: Vs. CSU Dominguez Hills. Maples Pavilion. 3 p.m. Ticket information at 497-1021.
Women's Basketball: Vs. Pepperdine. 7:30 p.m. Maples Pavilion.

SUNDAY, DECEMBER 19

University Public Worship: Ernle D. Young, 11 a.m.; Catholic Mass, 4:30 p.m.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.
Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.
Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.
The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. Through January 11.
Japanese Brush Painting by Ami Wada. Reception, Fri., Dec. 3, 5-7 p.m. Bechtel International Center. Dec. 3-30.
Melange of Paintings. By several artists who have had exhibits in 1982. Faculty Club Gold Lounge.
Contemporary Chinese Paintings by Anna Wu Weakland. Tresidder 2nd floor gallery. Month of December.
Photographs by Matthew Schwartz. Coffee House Gallery. Month of December.

CAMPUS REPORT

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Trustees approve selective stance on stock proxy votes

The Stanford University Board of Trustees has adopted a more selective policy on stock proxy issues.

The board's action Tuesday, Dec. 14, followed the unanimous recommendation of the Commission on Investment Responsibility, an advisory group of faculty, staff, students and alumni, made after a year-long study.

Modifying its 1977 statement on investment responsibility, the board said "trustees shall normally not vote on any shareholder resolution involving social issues unless they conclude a company's activities cause substantial social injury."

Any member of the Stanford community may request action under this policy in a written statement to the CIR. By majority vote, the commission may then decide to investigate and analyze the allegation "in whatever manner it deems appropriate." (Unless a majority votes to investigate the allegation, no further action will be taken unless persuasive additional evidence or arguments is given the CIR.)

By two-thirds vote—or eight of its 12 members—the CIR may subsequently recommend that the trustees 1) vote Stanford's shares, 2) make representation to management, 3) divest the University's shares, or 4) take any other action the commission deems appropriate.

The board then makes the final decision.

Otis Pease, head of the Trustees Subcommittee on Investment Responsibility (SCIR), said "not voting on shareholder proxy issues would be the norm" for the trustees.

The change gives the commission "a vote of confidence" with broad freedom to "pick and choose" those issues of greatest significance, he added.

"The trustees will see fewer recommendations, but what they see will have greater clout.

"The likelihood is that the trustees will find themselves more in agreement with the CIR's recommendations.

"In the past, when the CIR recommendations were close to unanimous, the trustees usually agreed. Otherwise, they did not."

In the past, both the commission and the trustees "felt pressured to vote" on a wide variety of issues "even though they were not ready to do so," Pease said.

In its 1980-81 report recommending a year-long study of the proxy process, the CIR said the past practice was "too hurried and too limited to do justice to the issues involved." A majority felt "as a

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This Christmas card is one of a collection of those sent or received by the Stanford family in the early 1880s. The group may be seen outside Archives on the third floor of Green Library.

Our warmest greetings for the holiday season.

Jeanne & Donald Kennedy

New phone, electronics net planned for $15-18 million

Stanford trustees have approved the concept of a new electronics communications project with an estimated cost of $15 to $18 million. The proposal faces further review by the board in February.

The project includes installation of a new telephone system, estimated at $13 to $15 million; SUNet, a broadband network for video and computers, estimated at $1 to $1.5 million; and an energy management and control system, estimated at $1 to $1.4 million. Costs for improving the underground conduits shared by all three of these systems are included in these estimates.

The existing telephone system is "obsolete. . .not cost effective. . .and must be replaced within two years," according to a report submitted to the trustees.

While voice traffic cannot yet coexist economically on the same cable with digital and video, the report adds, all three may be integrated by the end of this decade. This projection has been incorporated in planning the new telephone and SUNet systems.

So far as the phone system goes, the

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This is the last issue of Campus Report for fall quarter. The next issue will appear Wednesday, Jan. 5, 1983. The deadline for items for that issue is Thursday, Dec. 30.

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Cable service interest high, new survey shows

Two-thirds of Stanford's resident faculty and staff are interested in subscribing to cable communications systems, not only as a source of new TV programs but also as a working link between home and office, a new survey shows.

Conducted by graduate students Hugh Daley and Donald Case of the Institute for Communication Research, the survey covered all faculty and staff living on campus and half those living in Palo Alto.

Among those residing on campus, 40 percent said they were "extremely likely" to subscribe to a basic cable service at $10 to $15 per month. An additional 28 percent said they were "somewhat likely" to do so. *(See text, page 14.)*

The University's Cable TV Steering Group, headed by Associate Provost Michael Oman, currently is working with Palo Alto officials on plans for a cable system which might include campus subscribers. The University also is exploring commercial interest in using Stanford as a test-bed for new, interactive cable services.

Overall, three-fourths of the survey respondents were interested in interactive cable services. Home security (77 percent) and electronic banking (70 percent) were the most desired services.

About 60 percent of the respondents now use a computer terminal or word processor at work. Twenty-five percent use a terminal at home.

Twenty percent of the campus residents and 12 percent of Stanford faculty and staff in Palo Alto own personal

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Williams named first holder of Paradise professorship in resources law

A new professorship in natural resources law has been established at Stanford University by the Board of Trustees, it was announced Tuesday, Dec. 14.

The professorship is the result of a gift from Robert E. Paradise, an attorney, and his wife Ione, of Arcadia, Calif.

Howard R. Williams, a noted Stanford Law School professor, was appointed first holder of the endowed chair, which is titled the Robert E. Paradise professorship of natural resources law.

"This new chair will help ensure Stanford's continued leadership in a legal field that vitally affects the future of the West and the nation," John Hart Ely, dean of the Law School, said.

Natural resources law includes oil and gas law, water law, hardrock mining, other possible energy sources, and management of the public domain.

Paradise earned both his undergraduate and law degrees at Stanford, where he was elected to Phi Beta Kappa and the Order of the Coif.

He is currently a co-owner of Anacapa Oil Corporation, which is active in drilling for gas in the Sacramento Valley.

Paradise retired in 1974 after eight years as general counsel of the Ralph M. Parsons Company, an international engineering and construction firm.

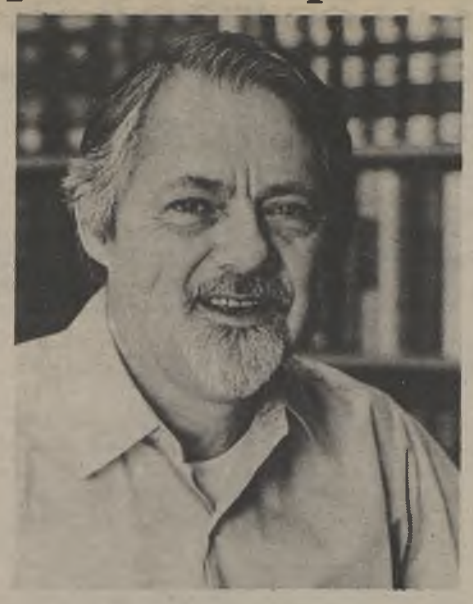
A specialist in oil and gas law, he also served, from 1937 to 1944, as assistant general counsel with Richfield Oil Company, predecessor to ARCO.

Paradise was previously (1929-37) with the law firm of Gibson, Dunn & Crutcher in Los Angeles. He returned to private practice in 1944 as a partner in Krystal and Paradise.

Paradise has been an active supporter of Stanford for many years, and a member of the Law School Board of Visitors from 1972 to 1975.

Mrs. Paradise, who graduated from UCLA, is a former president of the California division of the American Association of University Women.

The Paradises have two daughters, Lisa (Mrs. Gus Van Der Stad) and Carol (Mrs. Leo C. Black).



Howard Williams

Professor Williams is a nationally known expert in oil and gas law who frequently serves as a consultant to governmental agencies and law firms.

He was a member of the California Law Revision Commission from 1971 to 1979, including four years as vice-chairman and the final year as chairman.

He has also been a trustee of the Rocky Mountain Mineral Law Foundation for the past 15 years.

A Stanford Law faculty member since 1963, Williams was named in 1968 the first holder of another endowed Stanford chair, the Stella W. and Ira S. Lillick professorship in law, and remains Lillick professor emeritus.

He became an emeritus professor upon his official retirement earlier this year, but was promptly recalled to teach his specialty of oil and gas law.

Williams was born in Indiana and educated in Missouri, earning his bachelor's degree at Washington University in St. Louis.

He studied law at Columbia University in New York, where he was a member of the law review.

During World War II, he saw active duty as a member of the Army field artillery.

Williams joined the law faculty of the University of Texas in 1946, serving for a time as acting dean of the School.

He was appointed to the Columbia Law School faculty in 1951 and held its Dwight Professorship from 1959 until his departure for Stanford in 1963.

Williams has written several books, including the definitive *Oil and Gas Law* (with Charles J. Meyers), an eight-volume work with annual supplements and an abridged edition. Among his other works are a *Manual of Oil and Gas Terms* (also with Meyers), which has had five editions.

In his memorandum to the faculty announcing Williams' appointment to the Paradise professorship, Dean Ely stated that "The chair will always be more distinguished for having had as its first holder the nation's most distinguished natural resources law professor."

Williams has also published in the areas of property, trusts, wills and estates.

He and his wife, the former Virginia Merle Thompson, were married in 1942 and have a son, Frederick.

People

Keith Copeland has been named assistant manager of employment in the University Personnel Office effective Dec. 1.

Formerly coordinator of systems for the Employment section, Copeland will directly supervise the staffs of the Employment section and the Stanford Employment Experience Program. In addition, he assumes responsibility for all operational aspects of the Employment function and for its staff planning, budgeting, and policy formulation under the direction of Employment Manager Linda Haines.

Prior to joining Personnel in 1979, Copeland held personnel-related positions with the Fremont Union High School District and the City of Sunnyvale.

He earned an A.B. in political science—international relations from Stanford in 1977.

Janet McNeil, director of public information and publications at the University of Redlands, has been named director of Stanford University Publications Service, effective Jan. 3.

She succeeds Robert McCann, who asked to be relieved of his administrative responsibilities but will continue with the Publications Service staff.

Grand award winner in the 1982 publications competition of the Council for the Advancement and Support of Education (CASE), McNeill created publications which sharply increased both the number and caliber of applicants to Redlands.

She previously served as director of public relations for the Eastman School of Music in Rochester, N.Y., and for the St. Paul, Minnesota, Chamber Orchestra.

She has been an adviser on programs at a wide variety of colleges and universities, including Rochester, Columbia, Barnard, Oberlin, Minnesota, Wisconsin, and South Dakota, among others.

A 1967 graduate of Oberlin, where she majored in philosophy, McNeill did graduate work in student personnel administration at Columbia in 1968-69. She has held scholarships from the National Science Foundation, National Merit Corporation, and American Field Service.

Richard Reis to recruit EE grads, help CIS with career development

Richard Reis, director of career planning and placement for engineering and science for the past five years, has been appointed chairman of the Graduate Recruitment Committee in the Electrical Engineering Department and director of career development at the Center for Integrated Systems.

His fundamental objectives in both jobs are to make sure that the brightest and most promising graduate students come to Stanford, that they have a satisfactory and rewarding experience while here, and that some contact is maintained with them when they leave.

The Electrical Engineering Department, second largest on campus with nearly one-tenth the graduate student population, has for years attracted and admitted an outstanding applicant pool. However, a number of the top candidates, once admitted, choose to go to other institutions for a complex of reasons—including the availability of financial support, their perception of the department's research programs, and subjective factors which lead them to an overall judgement on the attractiveness of Stanford as a place to study.

Reis will contact outstanding applicants, develop fellowship, RA-ship or TA-ship packages, and make appropriate faculty aware of outstanding applicants interested in their research areas.

Large-scale integration

The Center for Integrated Systems (CIS) under the codirectorship of Prof. John Linvill and James Meindl, was established to expand research in the area of Very Large Scale Integration (VLSI). The major goal of VLSI research is to place more than a million integrated circuit elements on a one-square-centimeter silicon chip and to make systems that can use those chips.

Possible future application areas of VLSI include entire books stored on a single chip and available for less than a quarter, superfast computers that can be used to improve weather forecasting, recognize objects in a televised scene and conduct research into controlled nuclear fusion, "friendlier" computers that can recognize and understand human speech, and a variety of "smart" consumer products, communication services, and medical instruments.

CIS will serve as an umbrella organization to stimulate the flow of ideas among various disciplines. CIS does not have faculty or students of its own and does not grant degrees. Reis will help develop ties between graduate students, affiliated faculty and the industrial sponsors of CIS. He can be contacted at ext. 7-0409.

Overseas applications

The deadline for applications from Stanford faculty to teach overseas during academic year 1984-85 has been extended to December 27, 1982.

Forms may be obtained in the Office of Overseas Studies in the Old Union. For further information, please contact Daryl Sawyer, ext. 7-3555.

Research associate in opthalmology

Research Associate for studies on transduction mechanism in the corneal nerve terminals. Experienced in electrophysiological techniques; a background in neuropharmacology or psychophysics would be an advantage. Send CV to D. Maurice, Div. Opthalmology, Stanford Med. Ctr., Stanford, CA 94305. Telephone (415) 497-5844. Stanford is an equal opportunity/affirmative action employer, eager to identify qualified women and minority candidates.

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Indian professor shows a better way for Americans to market their goods

BY DONALD STOKES

An Indian who spent the first 17 years of his life in a small town in southern India is today an honored expert in discerning the needs of the American people.

Venkataraman ('Seenu') Srinivasan, aged 38, has introduced remarkable new ideas into one of the pursuits in which America feels it leads the world—how to market.

Advertising is not the best way, he says. Nor is "salesmanship."

What is more important is to find out exactly what consumers really want. If the product policy is based on consumer preferences then sales will follow with comparative ease.

Establishing consumers' real needs is a complicated process that requires all the latest techniques of in-depth market surveys and computer-aided analysis.

Srinivasan explains that a key factor is not to ask those surveyed to pick between competing brands, but to probe deeper and more tangentially, so as to uncover broad patterns of individual thinking that in effect reveal the consumer's preferences more accurately than he can articulate himself.

Srinivasan, who is professor of marketing and management science at Stanford's Graduate School of Business, is in charge of the doctoral program at the School.

This means that he has responsibility for overseeing the quality of the highest ranking students produced by the nation's top-rated graduate school of business.

This post is in addition to his teaching and research, which has produced some notable awards both for himself and his students.

In research he specializes in quantitative techniques in marketing; multiple attribute decision-making models; measurement of consumer preference structures, plus (as the advertisers he looks on coldly would say) much much more.

The threads of destiny which led a foreigner halfway round the world to the top of an American profession began in a social paradox of modern India.

Born a Brahmin, an Indian of the highest caste which for centuries had been the administrative elite until the birth of the Indian republic, Srinivasan found himself the victim of "backlash" caste prejudice.

The mass of the Indian people resented the fact that five percent of the population, the Brahmins, had been their leaders before independence.

This prejudice was so marked that although Srinivasan was a top student at high school he was denied entrance to any of the engineering colleges in his native state of Madras.

"Fortunately, there was a national competition for entry into the Indian Institute of Technology, so I studied for this and passed," he said.

He spent five years at the Institute in Madras and gained his B.Tech. in mechanical engineering. He received a gold medal as the top student of all those graduating in his year.

He was offered admission by several American colleges, but none of them had a graduate program dealing with his particular interest at that time—mechanical vibrations and turbo-machinery. He decided to join a Bombay firm of large-scale engineers and to specialize in machine design.

However, when he started work in the firm's training program he was put into the section dealing with production planning and management. He complained, but was asked to continue there for a few weeks until suitable arrangements could be made for him to transfer to the section he wanted.

He found that he liked production planning so much that he never again raised the matter of a transfer. This was his first taste of business administration. "I found it fascinating because I could find analogs in business administration of what I was doing in engineering."

After two years of this experience he came to the U.S. in 1968, and studied industrial administration at Carnegie-Mellon where he gained his doctorate in 1971, the university having granted him his M.S. in 1970.

In 1971 he joined the University of Rochester's Graduate School of Management as assistant professor of marketing, operations research and operations management; he was soon promoted to associate professor. Two years running he won the Best Teacher award from graduating students.

He came to Stanford Graduate School of Business in July 1974 and two years later was named professor of marketing and management science.

His interest in marketing had been sparked at Carnegie-Mellon where his roommate, Allan Shocker, was absorbed by the subject. The two men used to spend hours discussing ideas. As a result of those discussions they focused on what was to become the central theme of their research; this was to try to understand the consumer's preference structure.

"This boils down to finding out why the purchaser chooses one brand or model over another" he explained."Autos, for example, can be viewed as a bundle of attributes, such as seating capacity, price, gas mileage, acceleration and so on. In our research we tried to understand how people trade off these attributes against each other.

"Basically, what Allan and I worked on was whether it was possible to construct and parametrize a model of a consumer's behavior, so that we could establish those trade-offs for each member of a sample of consumers.

"If we had this model, and also the knowledge of the sort of offerings already on the market, we should be in a position to forecast what would happen if we introduced the new product. Ours would not be perfect predictions, for we dealt with human nature, but we could capture a good deal of what was likely to happen.

"Not only that, but we could also find out what particular niche in the market was not covered by a suitable offering."

How could such a structure be built up?

"We give the potential consumer a list of hypothetical options. We might for example give him 25 options in the purchase of a car, by handing him cards on which all the various attributes were listed for each option. Then we would ask the person to rank-order the options in order of overall preference.

"Having collected the data we then apply a procedure developed by us to infer the consumer's trade-offs. The procedure uses the mathematical technique known as linear programming.

"It is more useful to do market research this way than to ask people outright to name one product as prefered over the others. One reason why the latter method is unreliable is that those asked to name a favorite often try to give socially acceptable answers.

"Our methods catch people with their guards down, so to speak, and we tend to get more truthful answers."

Srinivasan has used his model not only to find how particular products would find acceptance, but also to seek areas where no suitable products would gain an advantage over competitors, and why.

"The key point is that if the product policy is based on a proper understanding of consumer preferences, there is a minimum need for 'selling.'



A product policy based on a proper understanding of consumer preferences minimizes the need for 'selling.'

—'Seenu' Srinivasan

You will have fought your battle so well that there is sufficient attraction to a sizeable segment of consumers to make your product the preferred one."

Srinivasan has been involved in several marketing projects, usually in an advisory role. The surveys were comprehensive, and involved in-depth questioning of many hundreds of people.

He believes that real marketing, in the sense of finding out what consumers really want, is far more useful than advertising.

"Often advertising is done with financial excessiveness. Some of the money would be far better spent on finding out what products were needed, or how existing ones could better meet the requirements of consumers."

Asked how he could be expected, as a foreigner, to have the ability to predict the reactions of Americans, Srinivasan said that much of his work came under the heading of psychometry, that is, the measurement of psychological phenomena.

Srinivasan feels it has often been an advantage to him to be a foreigner who has had to study the American scene from a completely detached view, taking nothing for granted. "I have no inbuilt feelings that would lead me to regard any particular aspect of the market as unnecessary to examine.

"I am also able to ask questions of potential consumers which probe their basic reactions, without assuming attitudes that a native-born questioner might reflect as a result of his own life experience and inculcation."

In any case, people's behaviors change under the impact of events, says Srinivasan, and here again, behavior changes can be predicted. As an example, he mentioned his research into public attitudes toward using autos in preference to public transport, in the face of rising fuel costs. He carried out research into this just before the Iran crisis.

The accepted wisdom at that time was that most people would continue to use their cars, out of habit, in spite of rising fuel prices. Srinivasan constructed a model based on in-depth surveys and found that people did in fact worry about rising

continued on next page

Srinivasan...

continued from page 3

costs, and that a significant number would switch to public transport if costs rose beyond certain points.

"We estimated that mass transit ridership would nearly double if a 60-cent surcharge were put on gasoline. After we had finished the study the Iranian crisis broke out, the price of gas did go up and the increase in demand for public transport was just about what we had predicted.

"The point is that if you had simply asked people beforehand what they would do if the price rose you may or may not have received an accurate answer. A more in-depth study did reveal what would happen.

"One typical result of not listening to the public, or not trying to find out what it really wanted, was seen in the reluctance of Detroit to build compact cars. They did this finally only after foreign rivals had successfully demonstrated the wishes of the U.S. public."

Srinivasan found that his method could be used in areas which have almost nothing to do with marketing. "For example, at one time the federal government was giving money to rural areas to improve primary health care, with the stipulation that the money was to be spent in a way that yielded maximum benefit.

"The question arose: 'How to figure out the benefit to people if certain actions are taken?'

"Clearly there were millions of options, and the danger was that things would become politicized. What my student Barnett Parker and I tried to do was to apply the same sort of methodology that I had done in more traditional areas of marketing.

"We asked all the questions that would build up an effective model of what people felt they needed. We included questions to get at the trade-offs on the type of health care facility, hours of operation, appointment and visiting times and so on.

"Our research did not simply ask people to choose between existing types of service. We tried to establish what the real needs were, whether some new sort of service, such as a central health care center which costs a lot, or a registered nurse's office, which costs less, might meet the needs beter on a cost-benefit basis.

"Economists often talk about cost-benefit analysis, but I think that in our approach to marketing we have a method of quantifying the benefit which is in consumers' terms. We were able to maximize the potential benefits to the future patients, and to do it within the budget stipulations."

The Stanford authorities realized that Srinivasan's methods of research would help them to establish long-range strategy and priorities. This has in fact occurred.

Part of the success of Stanford in maintaining financial equilibrium has been the way it carefully considers probable future trends, says Srinivasan. He pays warm tribute to the work of William F. Massy, vice-president for business and finance at Stanford, who has been one of those principally responsible for gathering all the possible facts about likely changes in conditions.

"One of the factors in forward planning is that each of the planners has a particular perspective, according to his or her field of responsibility," said Srinivasan. "It is important to feed into the model as much as possible of those perspectives, together with assessments of how much support and demands will come from outside.

"Each player in the campus game has particular priorities which may conflict with those of others. The history professor will probably have very different wishes and expectations from, say, his colleague in the Medical School.

"Bill Massy was very keen on putting together the same sort of methodology that would provide as many as possible of the necessary facts. A considerable number of appropriate staff and faculty were interviewed."

Srinivasan made it clear that he had not himself carried out that particular research, but had simply made some suggestions as to how it could be done.

With the growth of conglomerate corporations, Srinivasan has become involved in considering marketing strategies of those firms with their widespread interests and operations. In particular, he has become very interested in the intersection of business policy with market strategy.

The question that the boards of management have to consider, says Srinivasan, is 'which are the business areas where we should thrust most vigorously in the next few years?' "

To answer the questions, Srinivasan has given much attention to decision support systems. "In areas where you cannot get hard objective data you could ask managers to supply subjective data. For example, if a firm has a 10 percent share of a particular market, what would have to be done to increase that share to 15 percent?

...I think that in our approach to marketing we have a method of quantifying the benefit which is in consumers' terms.

"You might find that it would be necessary to spend 10 million dollars to achieve that, whereas if a minimal amount was spent the share was unlikely to fall below eight percent.

"What the decision support system does is to pull all the relevant data together so that a model can be created. One can then think much more clearly about taking decisions on whether and how to enter new markets, whether to close out marginal operations. The group of planners are enabled to see more clearly the respective effects on longterm profits and short-term cash flow."

In the fall of 1982 Srinivasan took over as director of the doctoral program of the School. There are 72 students in residence who are part of the program, and some 10 others who are not in residence, and who are completing their theses. About 20 doctoral candidates enroll each year although, as with all doctoral programs, there is a high attrition rate.

Srinivasan has some changes in mind for the doctoral program. He would like to see the candidates do more research and to focus less on structured work. "They tend to take a lot of courses, so that by the time they do get to their theses they have not much research to build on."

Since he began supervising doctoral candidates about ten years ago Srinivasan has been responsible for six candidates. Of these, three won top awards for their dissertations.

"I believe in the apprenticeship method, which gets the candidate involved in work with his adviser. One of my present doctoral students has worked with me so closely that he might almost be called a research colleague."

Srinivasan is regarded as one of the better teachers in the School. He finds teaching a great stimulus to his own thinking. "Interaction with the students is vital to me, if only because of the indepth questions I get from them. They make me think, and often have caused me to think in new ways and to develop ideas."

The Stanford Graduate School of Business has developed a systematic evaluation system for applicants to its M.B.A. program; Srinivasan was one of the principal architects of this.

"We have about 5,000 applications each year for some 300 places in the School" said Srinivasan. "Our criterion is that the person we enroll has high potential for management, and is also academically sound.

"That rules out some people who may very well rise to high positions but who are not academically viable."

He has developed an actuarial model that attempts to predict the academic performance of applicants to the M.B.A. program. It builds in several indicators such as undergraduate grade-point average, test scores, business experience and undergraduate major. The factors are weighted, instead of being used as raw statistics.

The model was used for the 1981 applicants as a part of the total admissions process and will be an ongoing operation.

During the academic year 1978-79 Srinivasan was visiting professor at the European Institute for Advanced Studies in Management in Brussels, and also at the Catholic University of leuven, Belgium.

Srinivasan has few hobbies, but loves to travel, and is very interested in Indian classical music. He talks fondly of such Indian instruments as the veena, which has been in use in southern India for over 3,000 years.

Srinivasan is married to Sita, whom he met in India. They have a six-year-old son Ramesh. His older brother, Balachandran, is a professor of accounting at the business school of Northwestern University.

...and now Srinivasan is named first holder of new endowed chair

Stanford Business School Professor Venkataraman Srinivasan has been named the first holder of the new Ernest C. Arbuckle Professorship, which has been established to honor the dean of the Stanford Graduate School of Business from 1958 to 1968.

The appointment and creation of the chair were approved by the University Board of Trustees at their meeting on Tuesday, Dec. 14.

The professorship was funded by eight major donors: William R. Hewlett, Belton Kleberg Johnson, Edmund W. Littlefield, David Packard, the Grace Foundation Inc., Hewlett-Packard Co. Foundation, International Business Machines Corp., and Wells Fargo Foundation.

The professorship honors Arbuckle, 70, who as dean directed the School's greatest period of expansion. He is generally credited with being the key figure in the School's surge to international prominence.

During the decade of Arbuckle's leadership, the size of the faculty doubled, the number and quality of applicants for the MBA and Ph.D. programs rose sharply as the School greatly enlarged its base of teaching and research, the operating and capital budgets increased sevenfold, and the School constructed its present building at a cost of $5.5 million.

Arbuckle also worked to increase the School's relationships with the community through the establishment of the Stanford Business School Advisory Council, a group of top executives and government leaders, and creation of the Affiliate Program, which strengthened ties to businesses and dramatically increased corporate financial support of the School.

Arbuckle came to the deanship directly from W. R. Grace and Co., where he had been an executive vice-president. After leaving the Business School, he became chairman of the board of Wells Fargo Bank and Wells Fargo & Co., a position he held until 1977.

In 1978, he became chairman of the board of Saga Corp., a position he left last year. He is currently chairman of the executive committee of Saga. He also holds the title of GSB dean and professor of business management emeritus.

Say hello to new Tresidder group—SCAR

Tresidder Outdoor Programs have changed their name to Stanford Outdoor Adventures and Recreation (SCAR). In January they will teach beginning clinics for both downhill and cross-country skiiers. They also will visit the elephant seals at Ano Nuevo, as well as view California grey whales close-up in kayaks.

For more information, call 497-4316 between 10 a.m. and 2 p.m. any Monday, Tuesday or Friday.

Palo Alto mayor stresses communication, cooperation in talk with trustees

Communication and cooperation are vital to Palo Alto and Stanford as they face several major issues in the coming months, Mayor Fred Eyerly reported to the Stanford Board of Trustees Monday, Dec. 13.

Eyerly, in the first meeting in history of a Palo Alto mayor with the Board, called for new steps to increase understanding between the two communities.

He suggested including a City Council member on the Stanford Hospital Board, having a Council member attend the liaison meetings between University and city staffs, developing a Council relationship with the Trustee's subcommittee on real estate, and providing close contact between the Council and the Stanford Office of Business and Finance.

"Stanford has done an admirable job with its recent handling of Stanford West," Eyerly said. "The open planning process has helped raise the confidence level of the community. Further confidence would be gained with involvement of the public where possible in longer range planning."

The Stanford Board received Eyerly and City Manager William Zaner warmly, applauding them at the conclusion of their presentations.

Trustee Parmer Fuller, retiring from the Board after 24 years of service, congratulated University President Donald Kennedy and his staff for arranging the meeting.

"There is a definite need for cooperation in view of the areas of mutual benefit," Eyerly said. "Current examples are your proposed modernization of the Stanford Hospital. . .Stanford West, the connection of Willow Road to El Camino Real, and the addition of a Neiman-Marcus store to the Shopping Center."

The provision of cable television and gas and electric utilities by the city are other areas of potential cooperation.

In the past, Palo Alto has tended to ignore the economic and cultural benefits flowing from the University because of the change in the "quality of life" that Stanford land development helped bring about, Eyerly told the Trustees.

Relations improved

Since the mid-1970s, however, relations have improved with the start of the staff liaison meetings, the consolidation of the Stanford-Palo Alto fire departments, and the signing of waste water and garbage disposal contracts, Eyerly said.

Zaner reported to the Trustees on recent demographic and economic shifts in Palo Alto. He cited the various services supplied to the campus under contract with the city.

"The Stanford West housing project you have proposed can be a welcome addition to our housing efforts," Zaner said. "It is an example of Stanford's willingness to accept a share of the responsibility in the housing area. You rightfully deserve recognition for accepting that responsibility and for taking steps to deal with it.

"However, it is important to note that a project of this magnitude—it is the largest residential project in Palo Alto history—carries some drawbacks with it. An endeavor of this size must have side effects, some of which will in themselves be significant and possibly undesirable. . . . I suspect that we may come to the point where we disagree about those side effects and the means to mitigate them."

Responding later to questions from the Board, Zaner said he saw "no fatal flaw" in the project, however.

The proposed Hospital Modernization Project and Willow Road extension are other major efforts looming ahead, Zaner said.

"We see clearly the potential benefits of (the HMP) to the community at large," Zaner said. But, "while the University and the Hospital focus on the medical and teaching aspects of the project, the City is concerned about the availability of service to our citizens, the physical impact of the structure itself, and the traffic that will be associated with it."

As for the extension of Willow Road from Arboretum Dr. to El Camino Real by the University, "I look forward to the day when we will have that exquisitely complex tangle of interests resolved and put to rest."

The city staff favors the extension, Zaner said, given the facts presently in its possession.

Zaner said that the Trustees would find the city "anxious to listen and to work with you to find mutually acceptable solutions" to the Stanford West and other problems. But, "you will find us equally resolute in our insistence that solutions to problems" be found before the projects move ahead.

"We are unashamedly proud of Palo Alto," Zaner concluded. "It's an outstanding city in every way, and it is made all the richer by having Stanford as its closest neighbor. We don't promise you a neighborhood without some occasional discord. What we do promise is that we'll always be anxious to listen thoughtfully to what our neighbor has to say and to consider his interests as well as our own."

Over the past several years, President Kennedy and several Stanford vice presidents have made "State of the University" reports to the Palo Alto City Council. Eyerly and Zaner offered to reciprocate this year by appearing before the Trustees to discuss issues of mutual interest.

—Andy Doty

Technology licensing income tops $2.5 million, leads U.S.

Stanford's gross income from technology licensing topped $2.5 million during 1981-82, ranking first among 20 major U.S. research universities.

Initial licensing of the basic patent on gene splicing and cloning accounted for nearly $1.5 million of the total. So far, 73 firms have paid an initial $10,000 fee and an additional $10,000 annually.

The University of California received $471,843 as its share of the DNA licensing program. An additional $200,000 was established as an interest-bearing "litigation reserve" to protect the patent.

After deducting direct licensing expenses and administrative costs, $1,358,401 was distributed to Stanford inventors ($141,595), their departments ($605,150), and their schools ($611,656).

Ordinarily, inventors, their departments and their schools each receive one-third of net income. But Drs. Stanley Cohen of Stanford and Eugene Boyer of UC-San Francisco gave their share of the recombinant DNA patent income to their respective institutions.

In his annual report, Director Niels Reimers of the Office of Technology Licensing notes that "we are in the third year of a very high rate of discoveries—two or three per week—which shows no sign of abating in the near term.

"Molecular biology and information sciences are the areas of greatest activity.

"In these areas, the technology often involves tangible research property (TRP), such as a piece of biological material or a computer software program."

The University recently announced a TRP policy designed to make TRP promptly available to scientific colleagues while protecting its commercial value.

The Office of Technology Licensing recently established a Software Distribution Center to help meet these objectives. More than 25 software packages are now being distributed.

Biological products of greatest research and commercial interest are hybridomas, DNA probes, and plasmids. So far, researchers have made more than 100 disclosures of biological materials to the Office of Technology Licensing.

Diverse sources

During 1981-82, Stanford received income from 56 separate technologies. Earned royalty income on sales came from such products as a biological cell sorter instrument, text editing software, chemical reagent, infant hearing detection system, insect attractant, hybridomas, and an infant transporter.

Advance payments were received on FM sound synthesis for musical instruments, human hybridomas, acoustic microscopes, computerized axial tomography (CAT) technology, blood flow detection systems, cryptology systems, and computer-aided design software.

"The gestation period of a university discovery until significant income from sales is received is generally long," Reimers observes. "In 1981-82, more than 88 percent of the income came from cases first disclosed to the Office of Technology Licensing in 1974 or earlier. For 1980-81 income, it was nearly 60 percent."

Since 1969, the Office of Technology Licensing has received gross income totalling $6.4 million. Net income topped $5 million, of which $2 million was realized in 1981-82 prior to payments to UC and creation of the DNA litigation reserve.

Investments...

continued from page 1

method of influencing corporate behavior, the proxy process seems very weak indeed."

Pease called the 1982 report and recommendations from the commission, headed by Prof. Alexander Dallin, "highly admirable," both in reaching unanimity on a new process and in candidly discussing very different rationales for socially responsible investment by the University.

In an interview, Pease noted that "there is nothing (in the new policy) to give preference to certain issues over others." This is left entirely to the commission to determine.

Pease said the CIR's record shows students, faculty, alumni, and staff tend to vote across "bloc" lines. His impression is that student votes tended to be the "most clustered" as a group, with faculty the least clustered.

There is "no evidence" that the requirement for a two-thirds majority on future recommendations was designed to permit any group to stymie action by simply not voting or acting as a bloc.

"What clearly has driven both the commission and the board is the overwhelming load of work" in considering the growing avalanche of stock proxy issues, Pease said. "On balance, the changes suggest the board is willing to place greater credence in the commission." Focusing greater attention on fewer issues may improve the University's effectiveness as an ethical investor.

The Board of Trustees adopted an initial statement on investment responsibility in 1971 and a revised document in 1977. That same year, 294 students were arrested in a peaceful protest against U.S. investments in South Africa, the first major demonstration on that issue nationally.

During the 1981-82 moratorium on stock proxy votes by the University, the CIR held 16 meetings, including one with six former heads of the commission. It reviewed extensive literature on investment responsibility, including books on this subject and policy documents produced on other campuses in the 1970s.

Despite repeated advertisements in three Stanford campus publications soliciting opinions, expressions of concern, or questions from the community, it received no responses at all. Bob Beyers

Trustees expand COIN $9 million

The Stanford Board of Trustees has approved a $9.3 million expansion of the University's coinvestment mortgage program for faculty and senior staff.

This will bring total investment in the COIN program since 1980 to its authorized ceiling of $21 million.

Robin Hamill, director of housing programs, will head a task force to recommend a successor program to COIN.

The present program will be closed at the end of the current recruiting season June 30, 1983, except for commitments made prior to that date.

To stretch the remaining funds to benefit as many participants as possible, the average amount lent to each individual will be reduced.

The reduction will affect only those homes purchased for more than $200,000. The maximum COIN loan on houses priced at $400,000 or higher would be $80,000, instead of the present $100,000.

Since faculty salaries have increased at a faster rate than local housing prices in the past year and since interest rates have declined, the purchasing power of COIN borrowers under these guidelines will be equivalent to that of a year ago. Prices of lower cost homes have remained stronger than those of higher cost homes in the past year.

To improve the loan-to-value ratio of COIN loans, 15 percent down payments will be required on homes priced at $350,000 or more under the program. At present, 10 percent down payments are required, regardless of price.

One fourth of faculty, staff have home computers; many more plan to buy

continued from page 1

computers, using them an average of 2.5 hours a day.

Within five years, the survey indicated, 60 percent of the faculty and staff expect to own a microcomputer or home terminal device. Respondents predicted doing about 20 percent of their work at home with a cable link to their office.

Potential users of cable-based computer services showed the greatest interest in text-editing (81 percent), transmitting to a remote high quality printer (81 percent), access to Stanford and other library catalogs (72 percent), data storage and management (70 percent), office communications (64 percent), and Stanford data bases (64 percent).

According to Paul Kaufman, staff to the University's cable steering group, the interest shown in an interactive system was unusually high by national standards. However, he cautioned that the overall high interest in cable indicated by the survey might reflect the tendency of very interested people to return the questionnaire. The survey was completed by 48 percent of those living on campus and 35 percent of those in Palo Alto.

Kaufman, Oman, William Yundt, director of network development for the Center for Information Technology and Prof. Henry Breitrose, chairman of the Communication Department, were responsible for the intitial survey design, while Daley and Case conducted the study and analyzed the data.

The survey coincides with initial planning for a prototype broadband network providing video, and computer links between several buildings on campus.

"The survey was designed to find out what people wanted, what services were appropriate," Kaufman said. The resulting information will be used in planning and negotiations with Palo Alto officials and commercial vendors.

The University currently is working with city officials on a request for proposals for a cable TV system which would include faculty and staff residences on campus. Whether such a system would be owned by the city, a private firm or some form of joint venture will not be known until fall, Kaufman said. Meanwhile, the University also is exploring the interest of outside vendors on its own.

The cost of cabling residences would be borne by the city or an outside vendor.

The University's own institutional cable—called SUnet—presumably would be designed to link up with the residential system.

Survey respondents showed a strong interest in cable TV programs originating on campus. The Lively Arts programs led, with 83 percent, followed by lectures of campus visitors (82 percent), campus music and drama performances (77 percent), and Stanford lecturers (74 percent).

Four-fifths of the faculty and staff living in Palo Alto were interested in a "video community bulletin board" of local events, housing, want ads, and emergency "hot line" information.

Among all respondents, 97 percent had TV sets. Use averaged 2.7 hours per day, compared with the national average of six hours daily. Most respondents were dissatisfied with present TV programs.

About 65 percent of the faculty and staff might access a cable system for computer-based services within five years, the survey indicated. About a third of all respondents currently have access to a University terminal which they could take home to use.

Among those who have a terminal at home (one-fourth of those responding), nearly 50 percent said they used their terminal about one hour per day, 20 percent use it about two hours per day, and four percent use it five hours or more per day.

One-third of those with a terminal at home had a separate phone line for computer use.

Twenty percent of the Stanford campus group and 12 percent of those faculty and staff living in Palo Alto own a home computer, used by an average of two or three people.

The most prominent uses, in order, were: 1) work-related word processing; 2) entertainment and games; 3) programming; 4) scientific calculation; and 5) personal word processing. Average reported usage for each of these purposes was greater than two hours per week. Total usage of microcomputers for all purposes averaged 17.6 hours per week per household.

Half the respondents expect to purchase a home computer in the foreseeable future. Of these, more than 60 percent—or more than a quarter of all respondents—expect to buy within the next two years. Most expect to pay between $1,000 and $3,000, but 20 percent plan to spend more than $4,000.

An alternative means of linking to a cable network is through a keyboard terminal used in conjunction with a TV set. Forty-five percent of the faculty and staff in Palo Alto expressed an interest in such a device, as did one quarter of the Stanford residents. Most of those interested were willing to pay $200 to $500 for a keyboard.

A total of 55 percent either own a computer now or will within five years. Adding those interested in a keyboard-TV unit brings this total up to 60 percent.

"Video technologies and computers, along with cable, may increasingly be viewed as part of an integrated home information and entertainment utility," the report said.

—Bob Beyers

Super Bowl coming Jan. 20, 1985; Geiger praises community support

Stanford will host Super Bowl XIX Sunday, Jan. 20, 1985.

Athletics Director Andy Geiger said he was "delighted" with the decision made Tuesday, Dec. 14, by the National Football League.

Geiger said: "The achievement of this bid has come through the significant community efforts led by the Super Bowl Task Force, headed by San Francisco Supervisor Quentin Kopp. The additional enthusiastic support of Mayor Diane Feinstein was essential.

"We believe that the visibility engendered by hosting the Super Bowl will be extremely beneficial to Stanford and its athletic program. We are looking forward to the devotion of energy and community cooperation that will make Super Bowl XIX the best ever."

The NFL requires dressing rooms on the site, so new locker rooms will be built within the stadium. Concessions and the restroom facilities will be improved. The upper level of the press box will be renovated and a fourth deck may be added to the press box.

The NFL will provide lighting on a temporary basis to both the stadium and surrounding areas.

Geiger said traffic density may be somewhat less than that surrounding Big Game or USC, since many more busses may be involved.

He indicated the facility improvements would be a joint venture, with the Stanford portion raised through the efforts of the University and the Bay Area Super Bowl Task Force.

The 84,892-seat stadium is the largest privately owned college stadium in the U.S. Construction of the original 60,000-seat stadium began in 1919, with mule power used for excavation. It was dedicated to Big Game Nov. 19, 1921, won by Cal 42-7. The stadium was expanded to its present capacity in 1927-29. Herbert Hoover accepted the GOP Presidential nomination in 1928.

The largest crowd was 94,000 at the 1935 Big Game. The stadium was used for the 1960 U.S. Olympic trials, the 1962 U.S.-U.S.S.R. track meet, and the East-West Shrine Football Classics in 1969, 1975-78, and 1980-82, and is scheduled for 1983.

Personnel update

Official University holidays for 1983

The Administrative Council has approved the following dates for the observance of the designated University holidays in 1983.

New Years 1983—Friday, Dec. 31, 1982;
Washington's Birthday—Monday, Feb. 21;
Memorial Day—Monday, May 30;
Independence Day—Monday, July 4;
Labor Day—Monday, Sept. 5;
Thanksgiving—Thurs. and Fri., Nov. 24-25;
Christmas—Fri. and Mon., Dec. 23 and 26;
New Years 1984—Monday, Jan. 2, 1984;
Birthday Holiday.

The birthday holiday may be taken on the employee's birthday or any other work day mutually agreed upon by the supervisor and the staff member.

Frequently staff members ask to have time off to observe days of religious or other special significance, other than those days designated as University Holidays. Because of the flexibility in scheduling the birthday holiday, staff members should be reminded that the birthday holiday can be scheduled to provide paid time off on a day which has special significance to them.

Supervisors are also encouraged to accommodate staff requests for vacation or personal time off to observe days of religious or other special significance.

Payroll deadlines for 1983

b. Specific Deadlines for 1983 — Forms must be *received* in the various offices as follows:

Action forms for changes from 1st to 9th or 16th to 24th of month to Personnel by 10 a.m.	Action forms for changes from 10th to 15th or 25th to last day of month to Personnel by 10 a.m.	Hourly forms to PBR by 1 p.m.	Paycheck Delivery
Jan. 10, 1983	Jan. 14	Jan. 17	Jan. 21
Jan. 25	Jan. 31	Jan. 31	Feb. 7
Feb. 10	Feb. 16	Feb. 15	Feb. 22
Feb. 25	Feb. 28	Feb. 28	Mar. 7
Mar. 10	Mar. 15	Mar. 16	Mar. 22
Mar. 25	Mar. 31	Apr. 1	Apr. 7
Apr. 8	Apr. 15	Apr. 15	Apr. 22
Apr. 25	Apr. 29	Apr. 29	May 6
May 10	May 16	May 16	May 20
May 25	May 31	June 1	June 7
June 10	June 15	June 16	June 22
June 24	June 30	June 30	July 7
July 8	July 15	July 15	July 22
July 25	July 29	Aug. 1	Aug. 5
Aug. 10	Aug. 15	Aug. 16	Aug. 22
Aug. 25	Aug. 31	Sept. 1	Sept. 7
Sept. 9	Sept. 15	Sept. 16	Sept. 22
Sept. 26	Sept. 30	Sept. 30	Oct. 7
Oct. 10	Oct. 14	Oct. 17	Oct. 21
Oct. 25	Oct. 31	Nov. 1	Nov. 7
Nov. 10	Nov. 15	Nov. 16	Nov. 22
Nov. 23	Nov. 30	Dec. 1	Dec. 7
Dec. 9	Dec. 15	Dec. 16	Dec. 22
Dec. 27	Dec. 29	Dec. 29	Jan. 6, 1984

World looks to U.S. to spark economic recovery—Hoadley

BY DONALD STOKES

Many U.S. firms seem to be shying away from taking more international risks.

Simultaneously, a new wave of comfortable provincialism is settling over much of the American public, with growing support for protectionism.

Carried to extreme, this trend would mean an increasing vacuum in global economic and political affairs.

So says Walter E. Hoadley, globally known economist and financial executive, who was executive vice-president and chief economist at the Bank of America from 1968 until 1981, when he became a senior research fellow at Stanford's Hoover Institution.

Among his many high offices are adviser to the U.S. Congressional Budget Office and vice-chairman of the Commission on International Monetary Relations of the International Chamber of Commerce. He is widely regarded as the "dean" of business economists.

"Selling U.S. recession surpluses abroad is not likely to be as easy this time as in previous downturns," Hoadley said. "World markets are depressed, particularly in Western Europe and Latin America. The overvalued U.S. dollar hurts trade. Foreign companies and governments are prepared to counterattack.

"Consequently, we had better sharpen both our strategic and tactical thinking to meet long standing charges from these companies and governments that most American firms are unreliable suppliers to the world's markets.

"Over the years, the approach to overseas markets by American companies has been markedly different from that of their foreign competitors. The foreign executive starts with a global or major country perspective and evaluates his own country's prospects last. The typical U.S. executive—for understandable but still provincial reasons—does the reverse.

"Rising world uncertainty makes more U.S. shareholders, directors, regulators and employees prefer to concentrate on the domestic market. Fewer Americans seem willing to live abroad long enough to become fluent in foreign languages and knowledgeable in non-U.S. cultural and political affairs.

"Foreign rules and regulations make it costly for Americans to compete. Personal security overseas is becoming a more threatening and expensive problem. So the easy answer for U.S. companies is to lose interest in foreign business.

The time has come to: 1) document what our international presence or absence abroad means corporate-wise and personally; 2) update American understanding of international risks and rewards; and 3) challenge a new breed of Americans, especially in business, to pursue the opportunities now going by default outside the U.S.

"No one can deny that risks are rising on many global fronts for Americans to do business, negotiate agreements or even travel. But the answer is not to start building a wall around ourselves.

"In my international travels I find little or no evidence that economic developments outside the U.S. will help lift our economy. On the contrary, almost everywhere there are expressions of major dependence upon economic recovery in the U.S. to help bring about recovery within most industrial nations.

"My analysis provides some encouragement for global recovery but not a vigorous upturn in 1983. The year 1984 now looks more promising.

"Unfortunately, slow irregular recovery in the U.S. and elsewhere is certain to aggravate some credit and liquidity problems already evident in many depressed industries and financially weak developing countries. The global recession and past heavy borrowing have raised the debt service ratio from 16 percent in 1980 to about 25 percent at present.



Walter Hoadley

"Similarly, the ratio of interest payments on foreign debt to total exports has advanced from eight percent in 1980 to roughly 14 percent currently. These are danger signals of more liquidity problems ahead.

"In my view, the prevailing sharp reduction in private lending to many developing countries will very likely necessitate some type of summit meeting of world leaders to resolve the emerging liquidity problems. A more rapid and general global economic recovery than now expected and lower interest rates could ease or prevent this occurrence.

"Possible solutions would include: 1) added member funding or borrowing from the global money markets by the official world financial organizations; 2) grants of special drawing rights by the International Monetary Fund; 3) a new system of credit insurance for private loans; and 4) some redefinition of quality standards for new or old credits, or some combination of these.

"Naturally, any liquidity crisis of major proportions would impact global financial markets, thus tending to strengthen the already overvalued U.S. dollar.

"In periods of economic and political uncertainty, funds move from weaker to stronger currencies—in the current situation mainly to the U.S. dollar. Once the overall problem is resolved and more confidence restored, a reverse correction—against the U.S. dollar—should occur."

Asked what effect the recent world economic conference would have on U.S. trade policies, Hoadley said, "The question of how U.S. companies can hope to operate successfully on market principles in a world of ever increasing government ownership and subsidy is moving from general to pointed discussion. Similarly, the proper role of foreign investment in the U.S. and American investment overseas is attracting interest.

"How foreign nations control the value of their currencies, especially as regards the U.S. dollar, and what if anything should be done about it is now being debated at a high level.

"The use of more U.S. government credit in competing for foreign trade has been generally rejected, but continuing loss of major contracts to overseas firms may prompt some reconsideration.

"U.S. policy makers will be under more pressure to limit foreign imports and to give more government assistance to U.S. firms to meet what is termed unfair competition from abroad.

In many foreign policy issues, Americans tend to take rather provincial or defensive positions. This is often because of their belief that the U.S. has few real friends abroad, that a substantial portion of U.S. funds sent for overseas relief is wasted, and that most foreign political leaders speak out against our country rather than in support of U.S. leadership.

"Accordingly, there is dangerously little political support within the U.S. for our country to continue to exert the leadership which so many other nations implicitly or explicitly want or take for granted.

"At the same time as world support for U.S. leadership is weak, too many Americans are currently waiting for things to get better or for the wolrd to 'settle down.'

"The conditions we face now are unhappily far more likely to be the new normal than an aberration before a return to the comfortable conditions of the past.

"Many major governments now find their countries in recession because of revenue and expenditure limitations. Accordingly, the hopes for new global growth and lowered inflation depend increasingly on what private initiative can add, reinforcing the trend toward more supply side governmental policies.

"In this challenging atmosphere, the U.S. now has a striking opportunity to strengthen its relative position in the world as well as its home economy, and thus its global bargaining position.

"Unhappily far too many Americans fail to recognize their heavy personal stake in the successful revitalization of the U.S. economy and the improvement of its global image in the ever increasingly competitive and more hostile world.

"The time has come, therefore, for all of us to try harder to ensure our future growth by putting back more into our economy rather than take it for granted and continue to milk it.

"No surge in the world economy is in the offing to lift the U.S. economy and solve our problems. Indeed, the opposite is true, because the world at large is waiting for a new surge of economic expansion in the U.S., and a moderation of our high interest rate—strong dollar dampening impact on other economies.

Americans must come to understand that worldwide perception of greater U.S. revitalization in itself will serve significantly to deter further economic and armed attacks against our interest in world affairs as well as at home. Further evidence of weakness, incompetency and poor productivity can only cause misery for us.

"U.S. citizens are already paying a high price for our persistent provincialism in many policies and attitudes. As negative perceptions overseas have mounted concerning the future strength and power of the U.S., critics and avowed enemies have felt less and less constrained to respect our leaders and ordinary citizens alike, to attack our friends, to recognize our investments, technology and related interests, to fulfill agreements and to accept U.S. views and recommendations on almost any issue.

"A new surge of American homegrown confidence—based upon a more realistic appraisal of our capability and resources relative to all others—could touch off a wave of new expansion of enormous value to our people. Almost certainly it would be followed by a similar wave in many other parts of the world, helping to ease many political and economic tensions.

"Each American should be asked to state the conditions which must prevail to cause him or her to

continued on next page

Law School professorship gift of Calder Mackay, attorney, Stanford parent

A Stanford Law School professorship and scholarship fund in memory of A. Calder Mackay was established by the University Board of Trustees Tuesday, Dec. 14.

Mackay, who died in 1981 at the age of 90, provided the endowment for the fund in his will.

"We are delighted and grateful to be the beneficiaries of Mr. Mackay's generous bequest," said Dean John Hart Ely of the Law School.

"The new A. Calder Mackay professorship endowed through his gift will help us attract and hold outstanding faculty members.

"And the endowment income designated for Mackay scholarships will help make a Stanford legal education available to talented students of limited means," Ely said.

Mackay, a prominent Los Angeles tax attorney, developed close ties to Stanford first as a parent of Stanford students and then as a volunteer and major donor.

Both his sons, John Calder Mackay and Richard N. Mackay, earned their bachelors and law degrees at Stanford, and his daughter Leah married Stanford law graduate F. Lee Coulter.

Mackay was born in 1891 on a farm in Granger, Utah.

He received his bachelor of arts degree from the University of Utah in 1915 and his law degree from George Washington University in 1917.

Following a tour of duty with the Army in World War I, Mackay served as secretary of the Italian War Damages Board of the American Peace Commission.

In 1919 he returned to Utah and began the general practice of law.

Three years later, he was named special attorney to the Bureau of Internal Revenue in Washington, D.C., where he successfully litigated many issues raised by the commissioner.

He was selected to represent the I.R.S. commissioner in the first case tried before the Board of Tax Appeals, now known as the United States Tax Court.

He entered private practice in 1926, specializing in the field of taxation, and was a founding member of the Los Angeles law firm of McGregor, Bennion & Higson.

Mackay contributed to the growth of many business organizations, not only as a lawyer but also as a director.

He played an important role in the development of Don Baxter, Inc., the company that pioneered the commercial preparation of intravenous solutions, and in Pharmaseal, a leader in the disposable health care products field.

After these two companies merged with the American Hospital Supply Corporation, Mackay served on the American board of directors, until becoming, at the age of 76, an honorary director for life.

Before retirement he also served on the board of Pendleton Tool Industries, Inc., and Pacific Employers Insurance Company.

Mackay was president and director of the Donald A. Baxter Foundation for 15 years, during which the Foundation endowed the Donald A. Baxter professorship in pharmacology at Stanford Medical School.

Mackay was also a donor to the Hoover Institution at Stanford.

He was named a Stanford Associate in 1951 in recognition of his continuing service and generosity to the University.

Mackay's large bequest to Stanford was motivated by "appreciation of Stanford's commitment to excellence in education and of the education Stanford provided his sons and grandchildren," according to his son Richard N. Mackay.

Richard, who graduated from Stanford Law School in 1949, is a partner in Mackay, McGregor, Bennion & Higson, the Los Angeles law firm which his father helped found.

His brother John Calder Mackay, a 1948 Stanford Law graduate, is a noted real estate developer and founder of Mackay Homes.

Their sister Leah Mackay Coulter was widowed in 1957 and lives in Los Angeles.

Two of A. Calder Mackay's nine grandchildren—Sally Ann Coulter and Calder Mead Mackay—attended Stanford.

Faculty consulting activities, companies student use audited

Stanford currently is conducting an internal audit of outside consulting activities among a randomly chosen sample of 60 faculty members, according to Vice Provost Gerald J. Lieberman, dean of graduate studies and research.

The audit, first of its kind since 1977, covers the 1981-82 academic year.

"New questions of apparent or potential conflicts of interest are arising as a result of unusual potential for financial gain stemming from University research results," Lieberman notes.

"Thus it is important that we be able to assure ourselves, our external sponsors of research—most notably the federal government, and the public of compliance to our policies (concerning) outside consulting."

University policy limits those on full-time appointment to one day per week consulting, or 13 days per academic quarter.

The audit questionnaire asks faculty to name the companies for which they consulted last year, if any; the number of days spent consulting per quarter; the general nature of their role; and their title while consulting.

It also asks faculty to describe any formal agreements between Stanford and the companies for which they consulted involving them in their role as faculty members. Examples might include serving as principal investigator on a research project sponsored by the company; serving as faculty representative to the company as part of a University-sponsored industrial affiliates program; or being responsible for directing or managing gift funds to Stanford provided by the companies.

It also asks whether faculty created or invented any intellectual property licensed to the company by Stanford while the faculty member was a consultant to the firm. If so, the identity of the agency sponsoring the research, the general nature of the intellectual property, the faculty member's role in developing the intellectual property, and the terms of the licensing agreement should be described.

Finally, the questionnaire asks if faculty hired or supervised any Stanford students in their outside consulting activities while simultaneously acting as their academic adviser or serving on their doctoral dissertation committee.

Lieberman himself is among those expected to reply to the questionnaire by Dec. 23. His name was among those randomly chosen for the audit.

Carpools

Ride or form a carpool from Fremont to Stanford. M-F, 8-5. Call Evelyn, 7-1555.

Hoadley...

continued from page 7

make some new plans and expenditures. Then let's compare these minimum conditions for more positive decisions with those prevailing or in prospect. Where they are deficient, we should either temper our desires or seek to alter the conditions which retard our decision-making.

"Where else is the initiative for a better tomorrow to come from than the U.S.?

"Europe seems overwhelmed by its past traditions and lacks cohesiveness and determination to take many needed bold new steps for change and progress.

"The Muslims in the Middle East are beset with enormous internal problems and exhibit little desire to take responsibility for broader leadership. Africa is plagued by strife and slow economic growth.

"The Communist-Socialist nations are generally in economic disarray and can hardly be expected to provide positive global leadership with their anti-capitalist doctrine.

"Japan has achieved great economic power and wealth, but still is reluctant to accept major leadership roles in global affairs. Unfortunately, too often Japanese policies and actions also tend to cause misunderstanding and thus continue to engender ill rather than warm feelings. Nowhere else in Asia, including China and the new industrial countries, are there near-term prospects for strong regional or global catalytic leadership.

"Latin America has considerable long-term promise, but inflation, political problems and innumerable financial adjustments leave little room for global leadership.

"Only in the U.S. do most observers find the potential for setting new directions and demonstrating by example new economic courses and leadership for tomorrow's world.

"Will that potential be realized? What concerns me is that some foreigners now have more confidence in the future of the U.S. than most Americans. Admittedly, we face tough basic or structural adjustments and our national life is not ideal—but we still have much more opportunity to meet and resolve our problems than any other nation."

Asked whether a great deal of world trade was now being carried on under some form of nontariff restraint, Hoadley replied, "All those aged over 50 must remember that this has been going on for a long time, and up till the time GATT (the General Agreement on Tariffs and Trade) started was a major influence on world trade."

"Much of the present trouble is due to the fact that the dollar is overvalued, possibly by as much as 10 percent. The reason is that in spite of our troubles the U.S. is still one of the most stable currencies, and much of the rest of the world values it because of its stability.

"There have been allegations that the Japanese have manipulated the yen so that it has grown weaker on the world markets in recent months, and thereby helped Japanese exports. There is little evidence for this. What is more to the point is that a major key to world recovery would be for the dollar and the yen to be valued more closely to their real worth.

"The key to world recovery is for the U.S. to resume its productivity and its competitiveness. There was a time when the U.S. represented half of the total gross product of the world. Today it is about one-fourth.

"In the past America was able to use its trade strength to make arrangements with other countries, particularly less developed countries, in a way that meant we were extending significant support to those countries.

"Partly as a result of that many countries were unable to build up their industries at the cost of our own. We have now reached a stage where some of these countries have developed to a point where it is no longer desirable to continue the favorable arrangements we formerly extended to them. Naturally, they do not like this at all, and this has led to a good deal of dispute."

Asked to sum up what lay ahead, Hoadley said:

"Economic recovery in the U.S. is assured by strong underlying economic forces. The recovery will be slow and irregular. This slow recovery will contribute only modestly to near-term global recovery, and poses some important financial problems both for international lenders and borrowers, especially involving Third World countries.

"But difficult problems are seldom resolved in any atmosphere other than crises. So the time is at hand for some major constructive policy and institutional decisions.

"During 1983 the U.S. almost certainly will evaluate and modify its foreign economic policies, so it would be useful for the leaders to international trade to meet together to discuss the effects of changing U.S. policies on the world situation.

Board approves concept of $42 million cogeneration facility

The Stanford Board of Trustees has approved the concept of building a new cogeneration plant to produce electricity for the main campus and steam for both the main campus and Medical Center.

No final decision on the project will be made until May or June.

Preliminary estimates indicate a total project cost of $42 million. The cogeneration plant would be located next to the existing Central Energy Facility near Jordan Way and Campus Drive.

The University currently purchases electricity at an annual cost of $7.8 million and natural gas to fuel boilers for $4.8 million annually. By 1986, these energy costs are expected to exceed $22 million.

Cogeneration—the production of both electricity and steam from a single fuel—could reduce the current $12.6 million energy cost to $4.8 million, an annual savings of nearly $8 million, according to Jack Barkle, project manager in the Facilities Project Management Office.

A report submitted to the trustees indicates that a cogeneration plant sized to meet the University's steam requirements offers the maximum gain in efficiency, together with an opportunity to realize revenues through the sale of electricity.

Public utilities face mounting problems in expanding electrical generating capacity, the report notes. These include problems in obtaining site approvals, rising fuel costs, uncertain fuel availability, rate regulation, and capital shortages.

"The prospect of starting construction of a new large generating unit, whether nuclear or another type, on the Pacific Gas and Electric system within the next 10 years is remote indeed," the report states.

"As demands for energy continue to increase and as the economy recovers from the recession, this area—as well as most areas of the nation—may find the capacity is insufficient to meet the demand with the reliability and service continuity provided in past years. . . .

"Regulators, legislative bodies, and environmental agencies are creating a favorable climate and encouraging cogeneration plants.

The cogeneration plant would use natural gas to fuel an electric power generator. High temperature exhaust gases, which otherwise would be wasted, would be used to create steam. This results in much more efficient use of fuel.

"Gas turbine plants, using natural gas as the primary fuel, are environmentally acceptable, are clean in a housekeeping sense, and are simple to operate and maintain," the report to the trustees notes.

The ultimate economic benefit to the University depends a great deal on long-term trends in fuel costs and in the sale price for surplus capacity and energy sold to others. Negotiations are continuing with both Pacific Gas and Electric and the City of Palo Alto.

Anticipated net reductions in utility costs to the University are substantial, ranging from a net present value of $35 to 75 million for the first 15-year operating interval.

Besides the economic benefit, the University will gain an independent source of electricity. It will not be subject to curtailed service because of supply or capacity shortages. As a cogenerator, the University also would move one step higher in priority to receive natural gas supplies. The plant would be designed to use oil in the event natural gas were not available.

The University currently is seeking permits to build the cogeneration plant from the Environmental Protection Agency, the Bay Area Air Quality Management District, and Santa Clara County. "We consider the probability is very good that all permits will be obtained," the report states.

"Project Cogen will result in an overall area reduction in emissions of some of the regulated pollutants and only small increases in others."

A request for proposals on financing plans has been sent to individuals, banks, financial institutions, insurance companies and credit corporations. University ownership, third-party ownership, and joint ownership all are being considered.

The trustees authorized an additional $370,000 to continue design, permitting, financing and contracting activities, bringing the total authorized to date for this purpose to $1,120,000. Lease purchase agreements and tax-exempt debt financing are among the alternatives for permanent funding of the project.

The present $42 million cost estimate is based on starting construction by the third quarter of 1983, with completion by the first quarter of 1985.

During the ensuing 20-year period, steam requirements are expected to peak at 250,000 pounds per hour, with an annual consumption of 1.3 billion pounds. Electrical demand will approach 30 megawatts with annual consumption above 170 million kilowatt hours.

Trustees approve $3 million Shopping Center parking deck

The Stanford Board of Trustees has authorized $3 million for construction of a parking facility in the Stanford Shopping Center.

At their meeting Tuesday, Dec. 14, the trustees also approved the concept of extending Willow Road from Arboretum to El Camino at an estimated cost of $1.8 to $2.2 million.

Both projects would be paid by revenues from Shopping Center tenants and other beneficiaries.

Subject to signing a lease with Neiman-Marcus, the University now plans to start construction of a parking deck in the Shopping Center in January, with completion in June. Major areas of the Shopping Center parking lot are being restriped as part of a continuing resurfacing project. Additional parking at grade level will be built in late 1983, at the earliest.

The new, 402-car, single story deck would be located above the present lot at the intersection of Arboretum and Quarry Rds.

The board approved a sale-leaseback of the parking structure if this results in net savings to the University. The Shopping Center, which already has benefitted from a $17 million renovation program, is one of the largest revenue producers for the University and the City of Palo Alto, which benefits directly from sales tax revenues.

For 27 years, the Shopping Center's parking lot has served as a surrogate road for traffic from Willow Road and Quarry Road bound toward El Camino, a report to the trustees notes.

Future developments, including the hospital modernization program and Stanford West, a major housing development on Willow Road, may add to this traffic. With the contemplated addition of Neiman-Marcus to the Shopping Center, use of the parking lot and internal traffic lanes as a surrogate road will become "untenable," the report suggests.

Noting that extension of Willow Road to El Camino has been discussed for more than 50 years, the report says special emphasis has been placed on design of an intersection which would require traffic to turn north or south on El Camino, rather than proceeding east to Alma Street. The proposed alignment of the Willow Road extension is designed to preserve as many trees as possible in the area.

The proposed design was submitted to the Palo Alto Architectural Review Board last month. City staff has indicated an environmental impact report will be required. Its preparation and approval is expected to take six or seven months. The University hopes contruction will start in July.

Tennis court expansion approved

The trustees also approved the concept of a tennis improvement project, including construction of a 12th court and a new office, lounge and team room facility at the tennis stadium, located at the corner of Sam McDonald Road and Campus Drive.

The new court would permit equal space for men's and women's practice and allow simultaneous dual matches (of six singles matches each). It would be built on the southeast corner of the present courts.

The new office would replace the wooden structure built around 1926 now used for this purpose.

Costs of $200,000 to $300,000 would be met through gifts anticipated for this purpose. Design is expected to be complete by May with occupancy in the fall of 1983.

Purchase of IBM 3081 approved

The trustees also approved purchase of an IBM 3081 computer for an amount not to exceed $1,960,000 by the Center for Information Technology.

IBM has recently lowered its purchase price on 3081s while raising lease prices. The company also has offered universities a one-time increase in its educational allowance for installed 3081s.

Purchase is expected to result in budget savings of $600,000 annually over the next three years. The purchase will be financed through external borrowings for general and research equipment authorized by the board in October. It may prove eligible for tax-exempt financing at lower rates. Debt service will be funded through the rate structure of CIT.

California Energy Commission Loan

The trustees also authorized a $74,800 loan agreement with the California Energy Commission. This will provide about one-third the funds needed for converting 760 lighting fixtures on major access roads, Campus Drive, and parking lots to high pressure sodium devices. These will increase the lighting level by more than 15 percent while reducing energy use by one half.

The total project cost is $221,000, with an internal rate of return of more than 30 percent.

Campus power out 8 to 5 Sunday

Power will be off in the main Quad and other areas from 8 a.m. to 5 p.m. Sunday, Dec. 19, for substation construction and equipment maintenance.

Other areas include Memorial Hall, the 500 buildings, Wilbur, Stern, Crothers, Branner, Toyon, and Encina Halls, the Undergraduate and Green Libraries (except for the new wing), and others. Please refer to the map in the Dec. 8 issue of *Campus Report* for details.

For additional information call the Utilities Department, ext. 7-3765.

Buck estate hosts academic functions

Stanford University has applied to San Mateo for a permit to use the Buck estate mansion between Alpine and Sand Hill Roads as a center for academic functions.

Vice-President and Provost Albert Hastorf said that the main use of the 60-year-old home on the estate will be the daytime seminars, conferences, receptions, and other activities related to the University's academic programs.

The meetings normally will accommodate 20 to 50 people, he said, with the likelihood of receptions for up to 150 people three or four times a year. There will be no overnight guests.

The San Mateo County Planning Commission will take up the use permit application at its meeting of Dec. 17, as well as an application for a 50-car parking lot in an open area west of the home.

The lot is needed to replace parking lost on Alpine Road through the widening of that route at the Alpine-Junipero Serra intersection by the city of Menlo Park. An entrance to the lot from Sand Hill road will be required because the former driveway into the estate from Alpine Road also has been restriction by the intersection improvements.

The 13-acre estate includes a 3,600-square-foot home, a single family cottage, a garage, storage buildings, and a barn. It was given to Stanford under the wills of E. Olga Meyer, who died in 1970, and Alice Meyer Buck, who died nine years later.

The property is known for its beautiful grounds, which will be maintained by the University. Two full-time gardeners are employed at the estate.

Medical Center MEMO

Boswell Clinics renovation work to begin this month

A construction firm in Foster City has signed a contract with Stanford to undertake a major program to extensively upgrade the physical facilities of the Stanford University Clinics.

The project involves renovation of the first two floors of the Boswell Building, the facility adjacent to Stanford University Hospital where a majority of the 82 outpatient medical clinics will be located.

The $6.5 million construction, equipment and remodeling program was approved last June by the University's Board of Trustees. Improvements will include completely redesigned and larger patient treatment rooms, achieved in part by construction which expands clinic space into a few feet of what is now the building's courtyard.

Other improvements will be: decongested corridor traffic; a larger outpatient pharmacy; expanded office and storage space; four treatment rooms and five recovery spaces in a special procedures suite, to accommodate minor surgical procedures not requiring overnight hospitalization; and a better overall atmosphere. The renovation plan includes increasing the size and number of clinics to be accommodated in the Boswell Building by moving certain academic and research functions elsewhere.

The firm S.J. Amoroso signed as general contractor for the project Tuesday, Dec. 7, following signatures a week earlier by Dr. Lawrence G. Crowley, vice president for medical affairs at Stanford, and William Massy, vice president for business and finance. The total construction contract is for $3,852,600, according to Betty Rose, assistant director of Facilities Projects at SUMC.

"The modernization of the Boswell Building is a first step in our efforts to expand the dimensions of faculty medical practice in order to serve the community more effectively, and with the maximum comfort for our patients," said Donald Tower, director of the Stanford University Clinics and Faculty Practice Program.

"The Faculty Practice Program is being reorganized," he added, "to provide comprehensive medical care, consultation, diagnosis and treatment, sharing responsibility for the sustained good health of families choosing faculty physicians as their doctors.

"These physicians will work as a team to bring their specialized areas of knowledge and experience to the patient's medical problem."

Presently, the specialty and subspecialty clinics, staffed by faculty physicians, receive about 135,000 visits per year, with patients referred from all over northern California, the west, other states and even other countries, Tower noted.

Patient care unimpaired

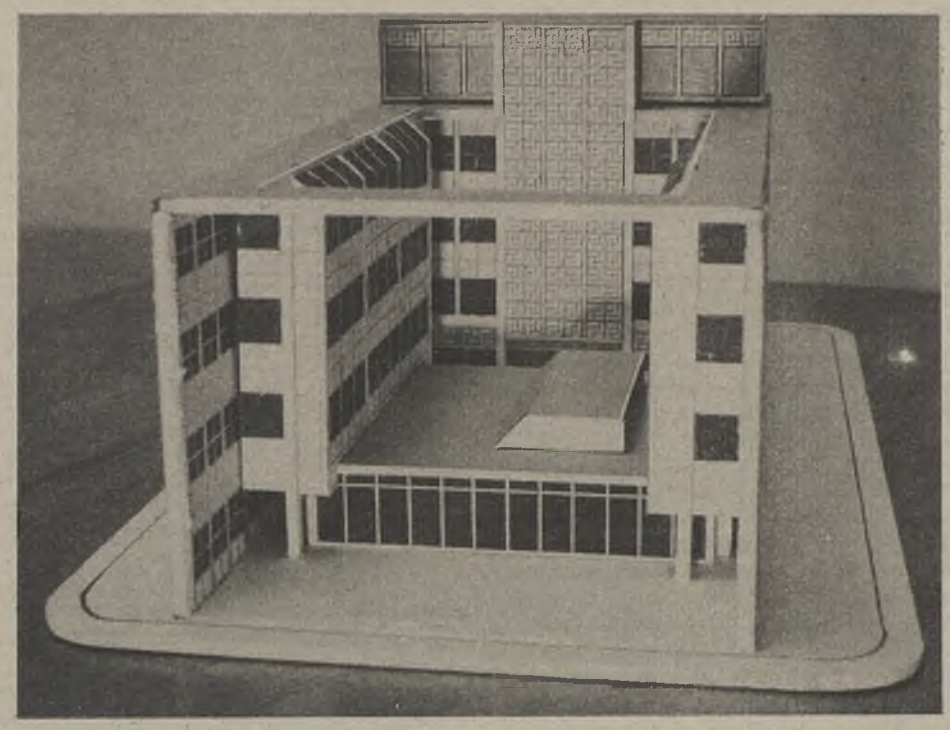
Work will begin under the 880-day contract Dec. 22, although the beginning stages of construction are not expected to impact the normal activities of patients and staff. In fact, said Langston Trigg, Jr., assistant director of Facilities and project manager, there will be little disruption of patient care throughout construction, because of the staged approach to the project.

Periodic updates on the status of construction will soon be available to patients and others at an information booth located near the front entrance of the Boswell Building.

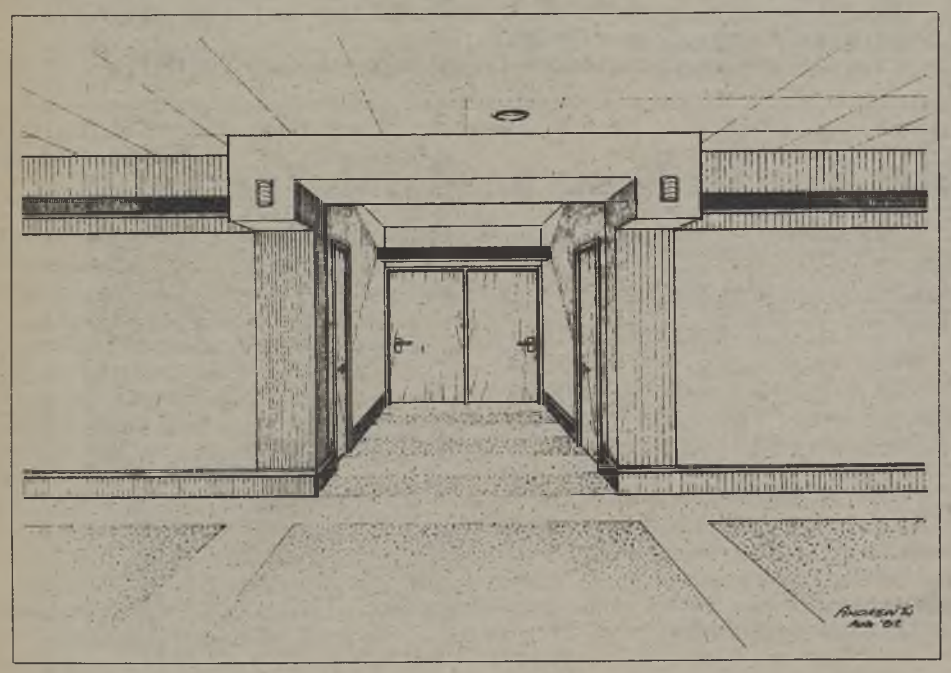
The Boswell Building was built in 1959, and has had only minor, occasional renovation since. The present renovation is intended to make the Clinics a more comfortable and efficient place for patients to seek medical care.

The Boswell Renovation and related projects will result in relocation of many of the clinics. The clinics to move are: Cardiovascular Surgery; Dermatology; Medicine (allergy, cardiology, chest, endocrine, gastroenterology, hematology, immunology, internal medicine, nephrology, preventive medicine, and Stanford Medical Group); Neurology; Pain Clinic (already moved); and Surgery (eye, general surgery, hand, orthopedics, plastic and reconstructive, thoracic, and urology).

The clinics to remain where they are include: Gynecology/Obstetrics; Medicine (oncology); Pediatrics; Psychiatry (including Sleep Disorders); and Surgery (audiology, ENT, neurosurgery, and pediatric surgery).



Architect's model shows planned exterior of the Boswell Building. Enclosed balconies are intended to expand usable space inside.



Architect's sketch shows view of improved corridor space, planned as part of the renovation.

Background

The Clinics are a separate outpatient care facility from Stanford University Hospital since September, 1981. They have a close relationship, however, with both the Hospital and the Stanford University School of Medicine, the three interdependent components together comprising the Stanford University Medical Center.

"For the past two and a half years we have been analyzing the Clinics' needs," said Trigg, who will be assisted by Erik Lund of Facilities. (Lund will handle the project once construction begins.)

"For example," said Trigg, "among changes will be a shorter journey for orthopedic patients from their clinic to X-ray. The ophthalmology clinic, which obviously serves the largest percentage of visually impaired patients, is specifically being placed in an easy-to-find location," he added.

"A lot of changes which superficially might be seen as technical or procedural will in fact make visits to the Clinics more comfortable for patients."

For example, Vera Waechter, R.N., assistant FPP director for the Clinics, said that patient registration is being decentralized to the individual clinic areas.

"This will reduce the amount of time patients will have to wait before seeing their doctor, since they will no longer have to check in with a central desk and then with a receptionist at their individual clinic," Waechter said.

She added, "We're proud of the quality patient care provided at our clinics by Stanford medical faculty, and we'd like the physical setting to reflect that high quality." In that respect Waechter hopes to see positive results for the Clinics over the next few years.

Designers of the Boswell Clinics Renovation Project are Almeter and Finley, Architects of Palo Alto.

Funding will come from private sources, including a major gift from the James G. Boswell Foundation, the original contributors to the existing facility. Additional gifts to Stanford University Medical School for the Boswell Clinics Renovation Project are still being sought and gratefully accepted. Part of the costs will be covered by the Faculty Practice Program and the Medical School's capital budget.

Inspector for the project will be Morrie Grove of the SUMC Facilities Projects Office, under the direction of Howard Mark, manager of construction.

Outcome benefits

The improvements are intended to prepare the Clinics for technological advances in medicine in the coming years. They are also designed for greater flexibility than is now provided. Additional conference rooms will be added for teaching purposes in the Clinics area, said Trigg.

During construction, things may sometimes seem hectic in the Boswell Building, he added. There will be some noise, and perhaps some dust near construction areas. The final benefits, however, are hoped to outweigh the temporary inconveniences which may occur.

"Since greater convenience for all is the ultimate goal, everyone's cooperation and patience should prove more than worthwhile," added Tower.

—Lisa Ames

Clue to risks of whooping cough vaccine

When a few healthy British infants developed brain damage and epilepsy a few days after routine whooping cough immunization, some parents panicked and refused to have their children vaccinated.

The result: more than 100,000 children contracted whooping cough, and at least 30 died.

Controversy over the vaccine continues, although most physicians agree that the dangers of the disease outweigh the risks of immunization. Now, by studying the effects of the vaccine in mice, a Stanford neurologist has found a way to predict which animals, and perhaps which children, are most likely to be harmed by the vaccine.

The clues are in the genes, said Dr. Lawrence Steinman, assistant professor of neurology, and the answers may help doctors decide who should be vaccinated and who shouldn't.

"The whooping cough vaccine is one of the crudest vaccines currently given to kids," Steinman said. "It's the whole organism, killed and ground up for injection. But for now, the vaccine has to be used because the risk of reintroducing the natural disease in the community is higher than the rare complications from the vaccine."

While whooping cough is not itself fatal, it can leave a child vulnerable to viral pneumonia and other infections that can kill.

In a study published in a recent issue of the British journal *Nature*, Steinman reported injecting several inbred strains of mice with the vaccine.

Genetic control

While a fraction escaped unscathed from the experiment, all the animals possessing specific factors in their genetic code suffered convulsions and died within two hours of immunization. Autopsies of the mice showed physical and chemical changes in their brains that were "nearly identical," Steinman said, to the damage found in the brains of children who died after receiving the vaccine.

The genetic factors that the stricken mice had in common were located on the "immune response chromosome," the cluster of genes in every cell that seem to control how an animal responds to infection.

Humans have an analagous gene cluster called the "histocompatibility complex." In the last decade, scientists studying the complex have recognized that some genes appear more frequently in persons with certain diseases.

Multiple sclerosis, juvenile diabetes, and "poker spine" all are associated with specific genes which physicians can sometimes use as easily detected signposts



Lawrence Steinman

for disease susceptibility. But Steinman's work is the first hint that adverse responses to routine immunizations might also be under genetic control.

Research teams in England have just begun studies of children who develop complications from the vaccine, in hopes of finding a similar genetic marker. "We hope to identify a subpopulation of children who are at greater risk and exclude them from immunization," he said.

Currently one in 1,000 children who receive the vaccine will develop mild fever or irritability, and one in 50,000 will suffer severe brain damage.

"One out of 50,000 is not very many except that when every kid gets the vaccine, it takes its toll," Steinman said. "But five times that number will be damaged if we don't immunize. It's a risk that I think is worth taking, but it's a situation that should be improved."

The vaccine research was funded by a grant from the National Institutes of Health. —Deborah Franklin

Final planning stage for underground animal facility

Stanford University School of Medicine Monday, Dec. 13, received approval by the University Board of Trustees to proceed with final planning for a new, modern animal research facility.

The project, estimated to cost between $10 and $12 million, envisions a single-level underground facility located south of the Sherman Fairchild Auditorium. The facility of approximately 32,000 gross square feet will be connected to the main Center by an underground tunnel, and will replace approximately half of the existing animal research facilities of the School of Medicine, which do not meet present codes.

The facility would be equipped with ventilation stacks about 40 feet above ground and located in the greenbelt near Campus Drive. Parking space adjacent to the Fairchild Auditorium would be restored after construction of the facility is completed.

The trustees approved the building site based on drawings prepared by the architectural firm of Stone, Marraccini and Patterson of San Francisco, the project's consultants. Completion of design is expected by early summer of 1983, with construction scheduled to begin shortly thereafter. The building is expected to be completed in late 1984.

The project will be funded by about $3 million of University and Medical School reserves, and the balance will be a candidate for financing by tax-exempt bonds through the California Educational Facilities Authority (CEFA), according to David Mendelow, associate dean for administration.

"Laboratory animals are an essential component of biomedical research," said Dean Dominick Purpura of the School of Medicine. "Virtually every new surgical procedure is first tested for feasibility and safety in animals. No new medication is ever released for application in patients without extensive animal testing for efficacy and toxicity.

"In the basic sciences, advances in such fields as immunology, physiology, and microbiology are owed to studies in animals.

"A prerequisite to the use of animals in research is that they be maintained in excellent health and as free from stress as possible. While there is active research to find alternatives to animal experimentation when possible, it is fair to say that for the foreseeable future, laboratory animals would continue to play an important part in basic and clinical research."

Three quarters of the Medical School's principal investigators make use of laboratory animals in their studies. On the average, close to 30 different species or types of animals totalling 8,000 are accommodated within the facilities of the Medical School's division of laboratory animal medicine. An additional 45,000 animals, principally rodents, are held in departmentally administered facilities within the Medical School, according to Mendelow.

"Existing facilities do not properly support the extensive animal-related research programs of the School," Mendelow said. "They are not in compliance with applicable codes and guidelines, and are difficult to maintain and poorly designed for effective use.

"External agency reviews in the past two years have substantiated the urgency of instituting corrective measures," he added. "While temporary measures at a cost of $1.3 million have been taken to alleviate deficiencies, these are not sufficient."

The proposed facility, Mendelow said, would permit improved quality animal care and centralized operations, with greater efficiency.

—Spyros Andreopoulos

Everyone wins at gift shop!

One busy spot in the Hospital this time of year is the Auxiliary-run gift shop, where lovely holiday gift selections (including some Christmas lingerie) abound. This year the shop will sponsor a drawing, Dec. 20, for a big stuffed teddy bear. One free chance for the bear is given out with every single item purchase of $5 or more, said Auxiliary member Janet Whittaker.



Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, DECEMBER 15

Div. of Orthopedic Surgery Basic Science Grand Rounds: "Orthopedics in Singapore"—Dr. N. Balachandran (of Nat'l Univ. of Singapore). 8:30 a.m., M114.

Dept. of Neurology Grand Rounds: "Local Cerebral Glucose Metabolism in Epilepsy Using Positron Computed Tomography"—Jerome Engel, M.D., Ph.D. (of UCLA). 5 p.m., Palo Alto Veterans Administration Medical Center, Bldg. 7, B108.

Dept. of Pharmacology: "Regulation of Plasma Protein Gene Expression in Acute Inflammation"—Dr. John Taylor (of Gladstone Foundation, San Francisco). 4:15 p.m., Pharmacology Library, R358.

Basic Science Research Colloquium: "Regulation of the Immune Response by the Major Histocompatibility Complex"—Dr. Hugh McDevitt. 5 p.m., Fairchild Auditorium.

Div. of Clinical Pharmacology Seminar: "Effect of Salicylic Acid Analogs on the Renal PAH Transport Systems"—Solomon S. Tse, Ph.D. 4 p.m., M110.

DECEMBER 15, 16, 17, 20, 21, 22

Christmas Caroling in the Medical Center: All interested employees are invited to meet at 11:30 a.m. outside the "Brown Bag" room in the Hospital for an hour of caroling. For further information, call Bill Gilmore at 497-6251.

THURSDAY, DECEMBER 16

Dept. of Medicine Grand Rounds: "Hepatitis B Vaccine"—Dr. William Robinson. 8:30 a.m., Fairchild Auditorium.

FRIDAY, DECEMBER 17

Dept. of Gynecology and Obstetrics: "The Use of Monoclonal Antibodies in Developing Assays for the Clinical Laboratory"—Marcia Federici, Ph.D. (director, Monoclonal Antibodies Inc., Mountain View). 8 a.m., A336.

Holiday Door Decorating Contest Judging: Doors will be judged Friday morning and winners announced that afternoon for "Most Traditional," "Most Humorous," and "Most Modern" categories. For further information, call Susan Cabral in Employee Relations at 497-6251.

Dept. of Pediatrics Grand Rounds: "Cystic Fibrosis"—Dr. Richard Moss. 8 a.m., M106.

Div. of Orthopedic Surgery Grand Rounds: "Treatment of Acute Spinal Cord Injury"—Dr. Norman Kane. 7:30 a.m., M114; and "Ligaments"—Dr. James Gamble. 8:30 a.m., M114.

TUESDAY, DECEMBER 28

Stanford University Blood Drive: 11 a.m. to 4 p.m., second floor of Hospital, above cafeteria. For an appointment, call 497-7831. Drop-ins are welcome. (See *News Notes* for new Blood Center hours.)

TUESDAY, JANUARY 11

Nursing Educational Services Critical Care Course Level II: "Abnormalities of Coagulation." Course will include background information, theory, and case study exercises. Fee required. Registration deadline is January 2. For further information, call Carole Kidder at 497-6366.

THURSDAY, JANUARY 20

Dept. of Pharmacology Windsor C. Cutting Memorial Lecture: Featured speaker will be Dr. Stanley Cohen, of the dept. of biochemistry, Vanderbilt University. Reception will follow. 3:30 to 7 p.m., Fairchild Auditorium.

SATURDAY, JANUARY 22

Association of American Medical Colleges: A day-long symposium on medical education, chaired by Dean Dominick Purpura, with panels led by Drs. Robert Cutler, Roy Maffly, and John Steward. Topics will include promoting broad baccalaureate education, acquisition of computer skills, and problems of dealing with stress. Fairchild Auditorium.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Medical faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members or applications from them.

The department of pediatrics at Stanford University School of Medicine seeks candidates for appointment to the full-time faculy at the assistant professor level in the division of general and ambulatory pediatrics.

This division, which is based primarily at the Children's Hospital at Stanford, is responsible for the Primary Care Clinic and for supervision of patients hospitalized from this clinic, the program in Adolescent Medicine, and teaching activities in the Well Baby Nursery.

The appointee will share in the management of the Primary Care Clinic, supervision of the 37 pediatric houseofficers in their weekly continuity clinics (within the Primary Care Clinic), teaching of medical students, and participation in the Robert Wood Johnson funded fellowship program for Academic Development in General Pediatrics.

Candidates should be certified or eligible for certification in Pediatrics and should have completed a fellowship in General or Ambulatory Pediatrics. Stanford's division has a strong research orientation, and is seeking a person with research training and demonstrated ability to conduct independent research in an area of general or ambulatory pediatrics.

Interested candidates should send curriculum vitae and names of references to: Ruth T. Gross, M.D., professor of pediatrics, Children's Hospital at Stanford, 520 Willow Road, Palo Alto, CA 94304.





A warning about holiday crime

"Christmas is coming, and so are the thieves. . .It's a time for giving, and a time for taking!"

So reads a flyer from Hilary Ryniewicz, director of Safety/Security Services, warning employees that this busy holiday time of year is "even busier for thieves."

His pointers for security follow:

- Not all delivery people are who they claim to be, especially this time of year. Charitable appeals may not be legitimate.
- Be alert for strangers in your building, especially during vulnerable hours: 30 minutes before work, lunch hour, and 30 minutes after closing.
- Don't leave your wallet or purse out. Lock them in your desk. Don't leave wallets in jackets or coats. Lock up personal or office cash; watch your checkbooks, credit cards and I.D.
- Don't leave gifts out or in cloakrooms. Lock them in your desk or keep your eye on them *at all times* until you take them home.
- Don't leave your office unattended. Lock your door even if you're momentarily absent.
- When you place purchases in your automobile, lock them in your trunk. In station wagons conceal gifts by covering with car robe or blanket.
- Keep your ignition key on a separate keyring. Then parking attendants or others can't open your trunk. If you're at home and office keys are left with strangers during the day, they could be copied—and you could be burglarized.

"You're filled with the spirit of goodwill," Ryniewicz noted, "but don't let your guard down, when you should be *especially* alert!"

Holiday fun and goodwill spread by various Hospital activities

Poinsettias for patients, decorated office doors and windows, egg nog and Christmas trees are among the many efforts under way to spread some holiday cheer in Stanford University Hospital.



The Hospital auxiliary members are decorating 35 Christmas trees throughout the Hospital, and as in past years the volunteers will bring individual poinsettia plants to each patient Dec. 23.

Instead of having their own gift exchange, nurses, physicians, residents and others in the SUH Delivery Room purchased gifts for several elderly and needy Peninsula residents. Nurses Gwen Anderson and Bea Covara coordinated the collection and shopping for individuals recommended by the Homemaker Service of Santa Clara County.

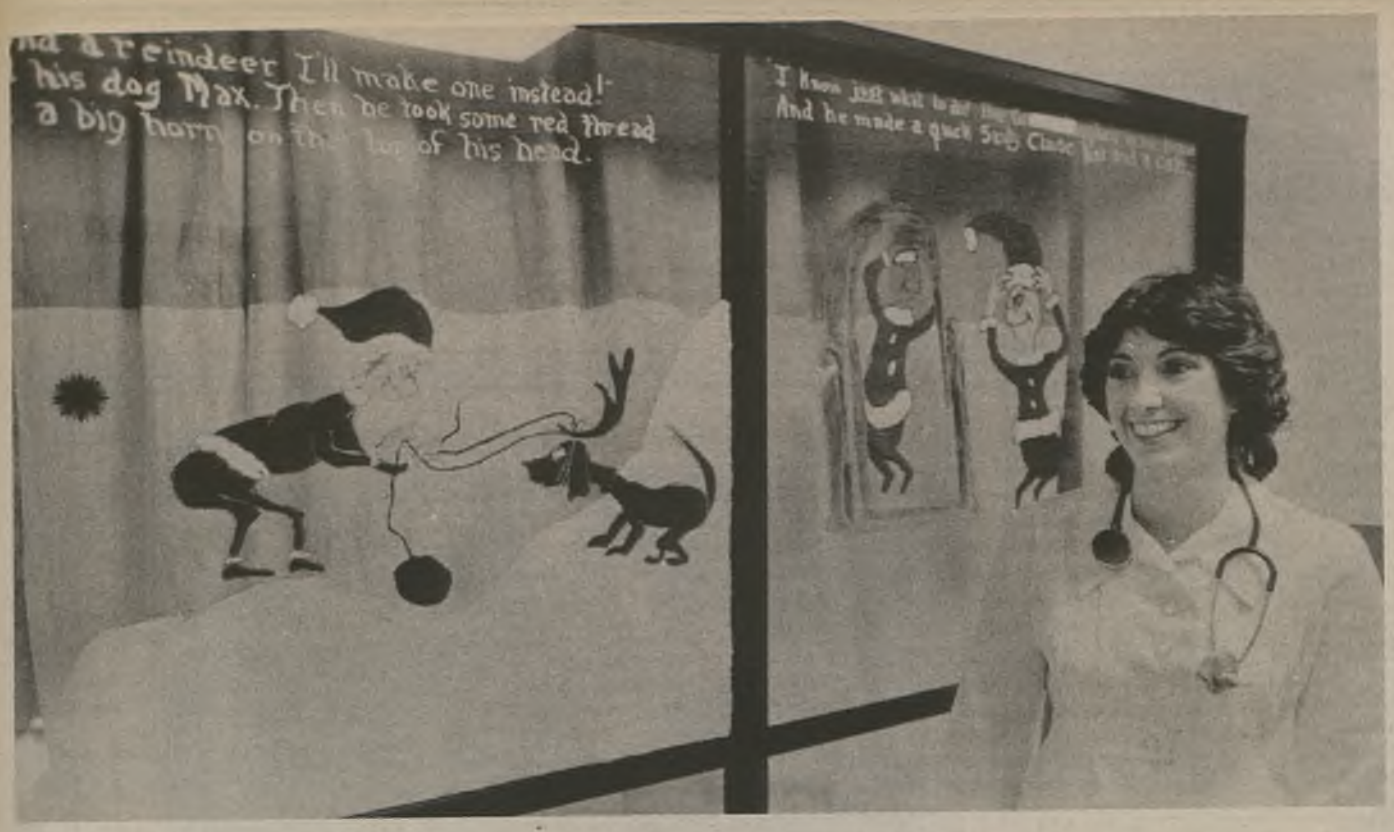
They purchased and wrapped gifts chosen to meet each recipient's own special needs, such as an electric blanket for a bedridden woman, a room heater for another, and clothing and food baskets for several. The Delivery Room staff have helped in this way for the past ten years.

One of the biggest parties in the Hospital may be in the Pediatric Playroom Dec. 21, when former patients are invited to join in with visits from magicians, Palo Alto High School carolers, and many others. A special addition this year will be dozens of stuffed Christmas toys donated by the George Collier family of Fremont and the Dakin company. Many community groups and businesses in the area contribute to the holiday cheer for pediatrics patients, according to Colette Case, recreation therapist.

Employees throughout the Medical Center are invited to take part in caroling Dec. 15, 16, 17, 20, 21, and 22. Caroling books will be provided to those who meet at 11:30 a.m. outside the Hospital's "brown bag" lunchroom.

Judging of the annual holiday door decorating contest is set for Friday morning, Dec. 17, with winners to be named in three categories: most traditional, most humorous, and most modern. Susan Cabral of Employee Relations, who can be reached at 497-6251, coordinates the event.

For those who will be at work in the Hospital Dec. 23 and 24, holiday punch and egg nog will be available free in the main center and Hoover cafeterias.



Nurse Cheri Slee said she never knew she could draw, but you'd never guess it looking at the windows in the North Intensive Care Unit. Slee, with the help of the other nurses on the unit, has painted the story of *The Grinch Who Stole Christmas* on the windows, for their entry in SUH's decorating contest. This is the third year the unit is featuring Slee's artistic talent, which she said she discovered one night at work "when I was really bored." (In a similar effort, the clerical support staff of the General Internal Medicine Clinic have painted their window area with colorful holiday scenes.)

Construction Corner

Item: The remodel of the Hoover Nurses Cottage for the Division of Plastic and Reconstructive Surgery is nearing completion. The area under construction will provide office and laboratory space for personnel being relocated from the Edwards Building. John J. Daly Construction is the general contractor, and Gordon MacLachlan is the construction coordinator from the SUMC Facilities Office.

Item: The clinics of the Division of Plastic and Reconstructive Surgery will be relocated to the third floor of Hoover Pavilion in the middle part of January. Erik Lund, senior project manager of SUMC Facilities, has been responsible for coordinating this effort. The area on N3C in Hoover is presently under construction by R.L. Cerruti Builders.

Item: Construction in the southwest corner of the Phase I Building will soon provide an expansion of cafeteria space for the Department of Dietetics. R.L. Cerruti Builders, under the direction of Richard Booth, Facilities Office, is completing the first floor area, which will allow additional seating for approximately 150 people.

...News Notes...News Notes...News Notes...

Effective Jan. 1, 1983, by California law, it will be illegal for an unrestrained child (through four years old) to ride in a car without being buckled into a child's safety seat, according to ICN discharge planner Kathy Petersen.

Car seats, she said, may be purchased for about $40 through Central Supplies in the Hospital. While parents are already informed of the importance of safety matters upon leaving the Hospital, she said, and most do make the necessary arrangements, the new law will actually enforce the use of child car seats.

* * * *

Pest and rodent control programs are conducted regularly at SUMC in order to protect patient care and research activities. However, recent weather conditions and ongoing construction projects around the Medical Center have led to an increase in the wild rodent and pest population throughout the Center, according to associate dean for administration David Mendelow and director of Health and Safety Alain Decleve.

Increased trapping efforts, they said, as well as the application of approved pesticides and intensive preventive measures, are now under way, in order to contain both wild and research animals.

All employees should report the presence of any pest problems in their working areas to the Housekeeping Department, at 497-6896. Employees are also requested to return food trays to Dietary in a timely fashion and to store personal food items in appropriate containers and dispose of them in designated refuse containers.

Employees should not keep pet animals at work, and they are asked not to interfere or tamper with the trapping equipment and methods set up. Short-term and long-term strategies for pest and rodent control are being implemented.

For further questions or information, call Ruben Perez at 497-7225, Donald Utt at 497-5661, or Al Perez at 497-0448.

* * * *

"Radiation Effects: Separating the Facts from the Myths" is the focus of a two-unit winter quarter course being offered to medical and graduate students at Stanford Tuesdays and Thursdays from 4:15-5:05 p.m., in room M114 of the Medical School.

According to the course description, the radiation used in radiotherapy cures or helps to cure about 100,000 cancer patients each year in the U.S. But radiation also causes cancer, and this argument is used against the use of nuclear power. At present, more radiation is received by the public from diagnostic X-rays than from all other man-made sources. What are the risks and benefits, for example, of mammography screening of women?

Such questions and topics will be examined in depth, with a particular focus on the mechanisms involved in cell killing, mutagenic and carcinogenic effects of radiation. The course, entitled "Biological Effects of Radiation" (Radiology 201; Biological Sciences 201), is offered by the division of radiobiology research in the Department of Radiology. The first class will meet Jan. 4.

* * * *

In order to minimize excessive noise pollution throughout the Medical Center, paging via overhead loudspeakers will be reduced to use only when other methods are not available, announced SUH associate director Mary Catherine Krawec.

Radio-pagers (beepers), telephones, electronic mail, and memos are encouraged to be more fully utilized prior to activation of an audible page. One of the following numbers should be called if locating by overhead page is needed: Emergency (86), Cardiac Arrest (66), or Non-Emergency (88).

Effective Dec. 20, overhead paging will be provided only for the following groups of personnel: physicians, senior administrative staff, medical students (third year and over), emergency/disaster team members, interns and residents, and security staff.

Announcement paging will be allowed only for patient care related activities.

Overhead paging will no longer be provided for the following persons: therapists, dietitians, housekeepers, social workers, unit managers, nurses, Central Service staff, employees, outside vendors, medical students (first and second year), visitors, patient families, and patients.

This policy has been approved by the senior staff of the Medical Center. Questions should be referred to the Telecommunications supervisor at 497-5931.

* * * *

The Stanford Blood Center has announced new hours for accepting donations. They are: noon to 6 p.m. Mondays; 8:30 a.m. to 7:30 p.m. Tuesdays and Thursdays; 8:30 a.m. to 6 p.m. Wednesdays; and 8:30 a.m. to 3 p.m. Fridays.

Donors are invited to call 497-7831 for further information or to make an appointment. Drop-ins are also welcome. **See Dec. 28 calendar item for special Hospital blood drive.**

Mr. Ronald Kepner has been appointed director of Materials Management effective Dec. 1, announced SUH associate director Donald Utt.

Kepner comes to Stanford from U.C. Davis Medical Center, where he served in several functions since 1977. He received his B.S. in Business Administration at California State University, Sacramento, and his M.B.A. from Golden Gate University, San Francisco.

Kepner is located in Trailer A, and may be reached at 497-5412.

Ophthalmology receives grant

Stanford University Medical School's ophthalmology department has received a $14,000 unrestricted grant from Research to Prevent Blindness (RPB), announced department chairman Dr. A. Ralph Rosenthal.

RPB has given the department a total of $86,000 since 1970, he said, for use by researchers exploring new concepts in the prevention and treatment of eye diseases.

"The application of research funding to the clinical needs of patients has been more rapid in ophthalmology than in any other area of medicine," Rosenthal said, speaking of recent advances in the treatment of cataract, glaucoma, retinal diseases and other ocular disorders.

Stanford is one of more than 50 medical institutions that receive support from RPB each year. The group has channeled more than $40 million into the study of all blinding diseases.

Cable communications survey report

Two-thirds of campus residents likely to subscribe to cable

Following is a report on the Cable Communications Survey:

EXECUTIVE SUMMARY

Survey questionnaires were mailed to all faculty and staff living on campus. One-half of the faculty and staff living in Palo Alto were also surveyed. Surveys were completed by 48 percent of the Stanford residents and 35 percent of the Palo Alto group. The majority of on-campus respondents (67 percent) were faculty members, while most off-campus respondents (79 percent) were staff members.

Interest in Cable Programs

Sixty-eight percent of the faculty and staff respondents, resident at Stanford, indicated they would be either "extremely likely (40 percent) or "somewhat likely" (28 percent) to subscribe to a basic cable service at a cost of between $10 and $15 per month.

Respondents rated their interest in Stanford originated cable programs. Lively Arts programs (83 percent interested), lectures by visitors to the campus (82 percent), campus music and drama performances (77 percent), and Stanford lecturers (74 percent) were the most desired programs. Faculty and staff residing in Palo Alto showed a significant interest (81 percent) in a "video community bulletin board" of local events, housing, want ads, and emergency "hot line" information.

Overall, 75 percent of the respondents were interested in having interactive cable services. Home security (77 percent) and electronic banking (70 percent) were the services most desired.

Among the special programs offered in the basic cable package, the most popular were 24-hour news (72 percent), old feature films (72 percent) and FM radio (71 percent).

The preferred optional (requiring payments in addition to the fee charged for basic service) programming were: an arts-cultural channel (47 percent) and first-run movies and specials (41 percent).

Cable and Computer Services

Cable can provide communication between home and work. About 60 percent of the respondents now use a terminal or word processor at work. Twenty-five percent use a terminal at home. Twenty percent of the Stanford residents and 12 percent of the Palo Alto respondents own personal computers. Owners reported an average of 2.5 hours per day of personal computer use in the home.

An estimated 60 percent of the faculty and staff residents on campus and in Palo Alto can be expected to own a microcomputer or home terminal device within the next five years. Respondents could predict doing about 20 percent of their work at home using a cable system that could provide a link between home and office.

Potential users of cable based computer services showed greatest interest in: text-editing (81 percent) transmitting to a remote high quality printer (81 percent), access to Stanford and other library catalogs (72 percent), data storage and management (70 percent), office communications (64 percent) and Stanford data bases (64 percent).

I. INTRODUCTION

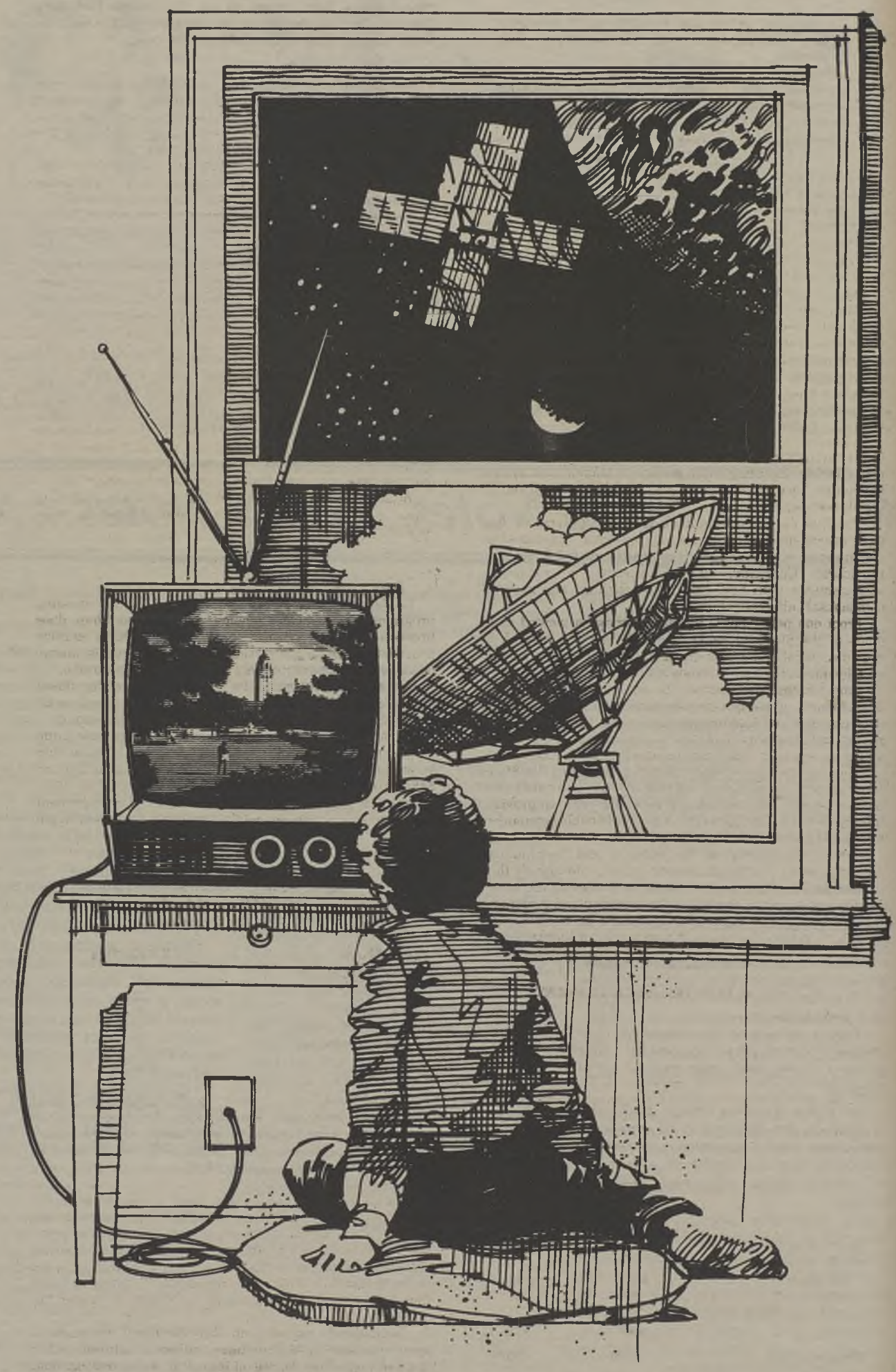
In May 1982 the Stanford University Task Force on Cable Television recommended:

> Stanford should work toward development and early installation of a two-day interactive residential broadband cable communications system for resident students, faculty and staff; and should investigate opportunities for interconnection with systems which serve those who reside in surrounding communities, primarily Palo Alto.

Broadband communication was recognized as a versatile and economic means of providing the Stanford community with data and video channels of potential use in four areas:

> **Entertainment and Personal** needs including television programming, access to data bases, electronic mail, banking and business transactions, home security and fire alert systems.
> **University Events and Services** such as sports, drama, music, public lectures, community bulletin boards, class scheduling information, and employment opportunities.
> **Administrative and Utility** uses including energy

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Cable TV survey

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management, safety and security, voice telephone circuit multiplexing, and administrative data processing.

Instruction and Research uses such as the distribution of Stanford educational materials, teleconferencing, access to student computing facilities, and expanded opportunities for research and preprofessional study in communications.

Following publication of the Task Force Report, the University initiated technical surveys and economic analyses aimed at developing a financially viable system design which would meet Stanford's requirements for video and two-way data transmission.

In June 1982, the University sent survey questionnaires to faculty and staff residents of Palo Alto and Stanford. The objectives were 1) to ascertain the level and nature of interest in cable communications on the part of the Stanford residential community, 2) to obtain accurate data on current uses of home terminals and personal computers, 3) to determine interests in Stanford originated data services and programs on the part of faculty and staff living on campus and in Palo Alto, and 4) to deepen the University's understanding of future patterns and trends in media and home computer use—information essential to the planning of a flexible system which would serve the community's needs through the next decade. (At the time of the survey, policy issues regarding cable service to student residences had not yet been addressed. Therefore only the faculty staff population was surveyed.)

The Task Force had recommended that Stanford develop clear overall objectives for its cable system and prepare for negotiations with potential franchisees or cable service providers. Currently, the University is exploring arrangements with both local municipalities and several commercial cable operators.

From one perspective, the survey may be viewed as a study of the Stanford cable television market. As such it provides useful data about the likely number of subscribers and the interest in various types of programming.

From another perspective, the survey is a guide to the development of cable services drawing upon Stanford's own cultural and intellectual resources. The Task Force recognized Stanford originated programs as an asset to any larger system with which the University might interconnect.

This document is a report to the members of the Stanford community, many of whom took the time and care to fill out the lengthy questionnaire. It may also serve to provide information to public agencies and private cable companies interested in collaborating with the University.

Forty-eight percent of the surveys sent to Stanford residents were completed. Among cable professionals this is considered a very good response rate. Among the staff, faculty and graduate students who prepared and evaluated these surveys, the high rate of return is a source of gratification for which we wish to express our thanks.

II. METHODOLOGY (omitted)

III. CHARACTERISTICS OF RESPONDENTS

A. Demographics

Four hundred and sixty households on the Stanford campus returned the survey questionnaire. The Palo Alto version of the questionnaires was returned by 372 households. Of the 832 total respondents, 47 percent were staff, 44 percent were faculty and 4 percent were retired from University work. The majority of on-campus respondents (67 percent) were faculty members, while most off-campus respondents (79 percent) were staff members.

TABLE 1. RESPONSE TO THE SURVEY

	Stanford	Palo Alto
No. Surveys Sent:	955	1062
No. Surveys Returned:		
Faculty	309	57
Staff	93	294
Other e.g., Retired	58	21
	460	372
Response Rate	48%	35%

Almost two-thirds (62 percent) of those who completed the questionnaire were males, but this varied between the two groups: 24 percent of the campus respondents were female, compared to 53 percent of those off-campus.

Average age of the total sample was 48, with a modal response of 42 years. Age also differed between the two samples, with the on-campus group reporting an average age of 51 and off-campus respondents an average of 43.

Overall, 40 percent of the respondents lived in two-person households. Fourteen percent lived alone, 16 percent with two other persons and 18 percent in a four-person household. Eleven percent lived in a household of more than four persons, with on-campus households more likely to fall into this category. Sixty-four percent of the respondents had no children, 16 percent had one child and 15 percent had two children. Five percent of the respondents had more than two children. Again, on-campus households were more likely to have children than those off-campus.

B. Media and Computer Use

Ninety-seven percent of the respondents had television sets, and reported that their sets were used an average of 2.7 hours per day. (The national average is about six hours per day.) Most respondents were dissatisfied with the programs available on broadcast television.

About 60 percent of the respondents indicated that they used a terminal or word processor at work. Twenty-five percent used a terminal at home. Nearly 50 percent said they used their terminal about one hour per day and about 20 percent use it about two hours per day; four percent use it five or more hours per day.

Twenty percent of the Stanford group and 12 percent of the Palo Alto respondents reported owning a home computer. A large majority of respondents who do not presently own a home computer or terminal expressed an interest in acquiring a home computer or keyboard device which, in conjunction with a television set, could access a cable network.

About 60 percent of the Stanford faculty and staff can be expected to own a microcomputer or home terminal within the next five years. Taking into account respondents who reported using terminals at home (but did not indicate plans to purchase a home computer or cable terminal), a total of about 65 percent of the faculty and staff surveyed might access a cable system for computer based services.

Additional data on computer and media use, including video recorders, magazines, and professional journals appear in Section V.

IV. SURVEY FINDINGS

A. Basic Cable Programming

Cable television offers better reception of existing programs and a wider choice of programs than does broadcasting. A subscription to a **basic** cable service provides the familiar television channels plus sports, music, news, and films available only through the cable service.

Since cable offerings in Palo Alto might be independent of any Stanford University system, questions about basic cable programming were restricted to Stanford residents.

After a typical basic service had been described, the respondents were asked how likely they would be to subscribe to a basic cable service at a cost of between $10 and $15 per month. Sixty-eight percent said they would be either "somewhat" or "extremely likely" to subscribe, 16 percent were unlikely to do so, while another 16 percent were uncertain.

TABLE 2. LIKELIHOOD OF SUBSCRIBING TO BASIC CABLE SERVICE (Stanford residents)

Likelihood	% Responding
Extremely likely	40
Somewhat likely	28
Uncertain	16
Somewhat unlikely	6
Extremely unlikely	10
	100%

Stanford respondents were asked to indicate their level of interest in standard components of a basic service (other than regular broadcast channels). These included: news, films, sports, children's, community, educational, science, music, and religious programming, as well as FM radio reception via cable.

Responses were collected along a five-point scale reflecting level of interest. The two lowest points on the scale (indicating no interest or minimal interest) were grouped to represent a "not interested" response, while the three highest points (indicating at least moderate interest) were pooled to form an "interested" category. The following results are discussed in terms of those two categories.

Seventy-two percent of the Stanford respondents showed interest in **24-hour news and news features,** half of them stating a high degree of interest in such programming. For **sports programming** the percentage of interested respondents was 59, with about two-thirds of these reflecting a high degree of interest.

Of the three questions dealing with regular entertainment offerings, older **feature films** were the most popular with 72 percent indicating interest. **FM radio reception,** which can be substantially improved through cable hookup, attracted a similar 71 percent. Twenty-five percent were interested in **music television channels** (such as taped rock performances broadcast in stereo).

Another three items inquired about educational programming. For general **educational programming from local schools and college,** 58 percent said they were interested. **Children's educational or entertainment programs** drew a positive response from 33 percent of the Stanford group, representing almost all of that group who have children. A more specialized form of educational programming focusing on **health, science, and nutrition** appealed to 57 percent of this audience.

Community affairs (such as City Council and School Board meetings) appealed to 30 percent of the respondents, while **religious programming** was of interest to 6 percent of the Stanford residents.

TABLE 3. INTEREST IN TYPICAL CABLE SERVICES (Stanford residents)

Programming	% Interest
24-hour news features	72
Old feature films	72
FM radio	71
Sports	59
Educational	58
Health, Science, etc.	57
Children's	33
Community affairs	30
Music TV channels	25
Religious	6

B. Optional Programming

Stanford respondents were also asked about five kinds of **optional** cable programming. These included channels devoted to un-cut first run films, opera and theater, and adult entertainment. For each, a typical price was given and respondents were asked how likely they would be to subscribe.

The most popular of the five offerings described was "Bravo," the **arts/cultural channel,** with 47 percent likely to subscribe and 22 percent unsure about subscription. Following closely behind was a **movie and original entertainment** channel, such as Home Box Office. This channel drew a positive response from 41 percent of the respondents, while 26 percent were uncertain.

The other three suggested services were not as popular. A **family entertainment channel** (such as Theater Network Plus, including "G" and "PG" rated movies) was attractive to 20 percent, while another 24 percent were uncertain. A **pay-per-view** channel, in which subscribers pay for special programs on a "per-event" basis, attracted 29 percent of the respondents. Twenty-two percent were uncertain whether they would subscribe to such a service, which would also involve a monthly fee. Finally, the **adult entertainment channel,** which would include "R" and "X" rated films, drew a "likely to subscribe" response from 13 percent of those surveyed, while 12 percent were undecided on this offering.

TABLE 4. LIKELIHOOD OF SUBSCRIBING TO OPTIONAL SERVICES (Stanford residents)

Programming	% Likely
Arts/Cultural	47
Movies/Specials	41
Pay-Per-View	29
Family	20
Adult	13

C. Stanford Programs and Services

It would be possible to televise some of the many performances and events that take place on the Stanford campus. We asked residents of both Palo Alto and Stanford to indicate their level of interest in eight types of university events and services.

Campus music and drama performances were of interest to 77 percent of the combined sample of respondents. The Palo Alto group showed more interest than those on the Stanford campus, with 86 percent expressing interest compared to 70 percent of the Stanford group. This was true to an event greater degree with **Lively Arts performances:** 91 percent of the Palo Alto residents and 76 percent of the Stanford ones indicated interest in those performances. Overall, 83 percent of the sample found Lively Arts Performances attractive.

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Cable TV survey

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Athletic contests showed a similar trend: 66 percent of Palo Altans were interested as compared with 56 percent of Stanford respondents, an average of 60 percent of the total sample.

Visiting artists (such as the Pilobolus Dance Company) often offer **master classes and demonstrations.** A total of 68 percent of the respondents were interested in receiving telecasts of these demonstrations, with the Palo Alto residents more so (77 percent) than the Stanford respondents (61 percent).

The questionnaire also inquired about interest in televised **lectures,** both by Stanford faculty and by visitors. **Visiting lecturers** were slightly more popular, with 82 percent interested versus 74 percent for **Stanford lecturers.** In both cases the off-campus sample indicated more interest, especially for seeing Stanford professors: 82 percent compared to 68 percent on-campus.

A **video community bulletin board** (listing Stanford and Palo Alto events, governmental and emergency numbers, and advertisements) was attractive to 81 percent of the off-campus sample and 55 percent of the on-campus group. **A Stanford originated news program** interested 65 percent of the Palo Altans and 41 percent of the Stanford residents.

D. Interactive Cable Services

Respondents were given a short explanation of interactive cable, which can provide information retrieval and transactional services to the home. They were asked if they were interested in having this service which could include such specialized services as financial information services, electronic newspapers and banking, teleshopping, video games and home security.

Overall, 75 percent of the respondents indicated an interest in having interactive services as a part of the cable system. This differed by place of residence, with 83 percent of the Palo Alto residents interested versus 70 percent of the Stanford group.

Financial services (e.g., stock and commodity prices) were of interest to 52 percent of Palo Altans and 39 percent of Stanford residents. Sixty-nine percent of the Palo Alto group found an **electronic newspaper** (such as the *New York Times* or the *San Francisco Chronicle*) appealing as did 57 percent of Stanford residents.

Electronic banking, which would allow bill paying and other account transactions from the home, interested 79 percent of the Palo Altans and 63 percent of the Stanford residents. **Teleshopping,** ordering products via cable, was less popular: 63 percent interested in Palo Alto and 48 percent in Stanford.

Forty-two percent of the Palo Alto sample and 28 percent of the Stanford group were interested in **video games** on cable. **Home security** was the most popular of this group of services: 77 percent of the combined sample was interested (this varied only slightly by place of residence).

E. Computer Services

A cable communications system can provide services to home users of computers, terminals, and "television terminals." Respondents were presented with a list of currently available services. Of the Stanford residents, 58 percent indicated interest in **accessing on-campus data bases** while 72 percent of the Palo Alto residents were also interested in this service. Interest in **accessing national data bases** was slightly lower: 55 percent of the Stanford respondents and 67 percent of the Palo Alto respondents were interested in this capability.

A third, and more popular, type of computer service would be **access to Stanford and other library catalogs.** Sixty-eight percent of the Stanford residents and 78 percent of the Palo Alto residents stated that they would be interested in using this service. Seventy-seven percent of the Palo Alto group and 64 percent of the Stanford respondents were interested in **data management and storage** through the cable system.

Collaborating "on line" with colleagues or students interested 55 percent of the Palo Altans and 49 percent of the Stanford residents. A more popular service was the capability to **communicate with an office computer system.** Fifty-nine percent of the Stanford residents found this option appealing, while 70 percent of the Palo Alto respondents were interested.

Interest in text editing and word processing capabilities was high in both groups. Eighty-one percent of all respondents found this option appealing. Between the two groups, 85 percent of those interested in text editing were Palo Altans, and 78 percent were Stanford residents.

Transmitting to a remote high quality printer, a service that enables the user to produce publication-quality manuscripts, was appealing to 70 percent of the Stanford respondents and 78 percent of the Palo Altans. Finally, **financial management services** were attractive to 53 percent of the Stanford residents and 68 percent of the Palo Altans.

TABLE 5. INTEREST IN STANFORD EVENTS AND COMMUNITY PROGRAMS
Percent Interested in Programs

Programming	Stanford	Palo Alto	Combined
Lively Arts	76	91	83
Visiting lecturers	78	88	82
Campus music/drama	70	86	77
Stanford lecturers	68	82	74
Master class/demo	61	77	68
Bulletin board	55	81	67
Athletic contests	56	66	60
Stanford news	41	65	52

**Note: These figures were arrived at by using the three highest points on a five-point scale reflecting level of interest. Each figure represents the percentage sum of those who indicated they were moderately, very, or extremely interested in the service.*

TABLE 6A. GENERAL INTEREST IN INTERACTIVE SERVICES

Interest Level	Stanford	Palo Alto	Combined
Extremely interested	19	32	25
Very interested	25	24	25
Moderately interested	26	27	26
Minimally interested	18	13	15
No interest at all	12	4	9
	100%	100%	100%

TABLE 6B. INTEREST IN SPECIALIZED INTERACTIVE SERVICES

Service	Percent Interested Stanford	Palo Alto	Combined
Home Security	75	79	77
Electronic banking	63	79	70
Electronic newspaper	57	69	62
Teleshopping	48	63	55
Financial Information	39	52	45
Video Games	28	42	34

TABLE 7. DESIRED COMPUTER SERVICES

Service	Percent Interested Stanford	Palo Alto	Combined
Text editing	78	85	81
Printing	70	78	81
Library catalogs	68	78	72
Data Storage and management	64	77	70
Office communications	59	70	64
Stanford databases	58	72	64
National databases	55	67	60
Statistical analysis	57	62	59
Electronic mail	54	63	58
Financial management	53	68	60
On-line collaboration	49	55	52

V. RESPONDENT USE OF COMPUTERS, VIDEO TECHNOLOGIES AND PRINT MEDIA

In addition to ascertaining cable communications needs and interests, the surveys were used to develop profiles of present and future media and computer uses. Some of these data were presented earlier.

A. Use of Computers and Data Communications

Stanford's planned cable system will include an institutional communications network. Ideally, the University network will link terminals in every campus building, including residences. Any point on the Stanford campus, **institutional** or **residential**, would be able to both send and receive text and data signals.

Interest and Access

Respondents were asked: "If you had a home computer or terminal that could be linked to your office computer system, approximately what proportion of your work would you be likely to do at home?" On average, respondents could predict doing about 20 percent of their work at home. Most estimates fell between five percent and 30 percent. However, fully one-quarter of our respondents, both on campus and in Palo Alto, did not anticipate doing any work at home. Probably the work activities of these respondents are not affected by access to computer services.

About a third of all respondents currently have access to a University terminal which they could take home to use.

Computer Use and Experience

A series of questions was directed to those who use a computer or terminal at home or in the office.

About 60 percent of the respondents indicated that they use a terminal or word processor at work, and about 25 percent said they use a terminal at home.

The most common use in the workplace is for text editing (50 percent). Each of the following was mentioned as a primary use by roughly 10 percent of the sample: access to a database, programming, data analysis/research, and electronic mail or "bulletin boards." Scientific computation

continued on next page



Cable TV survey

continued from page 16

was mentioned by about six percent of respondents. Less than three percent reported terminal or computer use at work for finance, education, business management, consulting and professional work, or data storage.

Respondents were asked whether anyone else in their family used a computer terminal or word processor at work. In the Palo Alto group, about 30 percent of those who use a computer at work also had a family member using a computer in the workplace. Among the Stanford respondents, less than one-fifth reported an additional family member using a computer at work.

Those who do use a terminal at home were asked to indicate how many hours per day it was in use. Nearly 50 percent said they used their terminal about one hour per day, approximately 20 percent used it about two hours per day, and four percent used it five or more hours per day.

One-third of those having a terminal in the home had a separate phone line for computer use. Half of the modems are 300 baud while the other half operate at 1200 baud. (A modem is a device that allows a terminal to communicate with a computer over conventional phone lines. "Baud rate" refers to the number of characters per second that can be transmitted by the modem.) Half of the respondents with terminals in the home were dissatisfied with their transmission speed, while one-third were dissatisfied with the reliability of their data transmission.

Few of those who had a modem used the capability to access commercial data services such as Dow Jones, the Source, or Dialog: 10 percent in the Palo Alto group, and one percent among Stanford respondents.

Home Computer Ownership and Use

Twenty percent of the Stanford group and 12 percent of the Palo Alto respondents report owning a home computer. More than two-thirds of the home computer owners reported one or more other users of the home computer in their households. On average, each home computer is used by two or three individuals.

We asked home computer owners to estimate the number of hours a week their home computer is in use for each of a number of functions such as word processing and programming: The most prominent uses, in order, are: 1) work-related word processing, 2) entertainment/games, 3) programming, 4) scientific calculation, and 5) personal word processing.

Average reported usage across all respondents for each of the above was greater than two hours per week. For each of those uses, respondents who reported at least some usage typically estimated between one to five hours per week.

There were some differences in the pattern of usage between our two respondent groups. Stanford home computer owners reported significantly more usage for work-related word processing—6.4 hours versus five hours per week. Among Palo Alto respondents, reported usage for business management averaged 1.7 hours per week, with .4 hours by the Stanford group. The total number of hours of home computer use in each household averaged around 18 hours per week.

Respondents who did not own a home computer were asked about their likelihood of purchasing one. They were also asked about their anticipated uses of the computer. Further, they were questioned about their willingness to invest in a keyboard terminal which would allow them to access computer services on a cable network.

Fifty percent said they expected to purchase a home computer in the foreseeable future. Of these, more than 60 percent—one quarter of all respondents—expected to buy one within the next two years. Most expect to pay between $1,000 and $3,000 for their home computer, but as many as 20 percent plan to spend over $4,000.

Table 9 shows that these respondents expect to use their home computer primarily for word-processing, home finances, and research.

An alternative to the home computer may be a keyboard terminal unit used in conjunction with the TV set as a link to computers on the cable network. Forty-five percent of Palo Alto respondents showed interest in such a device. One-quarter of the Stanford group was interested. Most of those interested indicated willingness to pay between $200 and $500 for the terminal.

Considering these responses together, a majority of the respondents will own some kind of computer terminal within the next few years. A total of 55 percent of all respondents either own a computer now or will within the next five years. Adding those interested in a TV-keyboard unit brings this figure to about 60 percent.

TABLE 8. USE OF THE HOME COMPUTER IN 143 HOUSEHOLDS

Types of Use	Percent of Owners Who Report at Least Some Use	Mean Hours of Use for All Owners	Range in Hours Of use Per Week
Entertainment/Games	47	2.7	0-25
Personal Word Processing	54	2.1	0-30
Job Word Processing	58	5.9	0-60
Home Budgeting	23	0.5	0-20
Child Learning	24	0.9	0-15
Adult Learning	23	0.6	0-8
Business Management	25	0.9	0-50
Programming	57	2.6	0-40
Scientific Calculations	48	1.9	0-20
Database Access	20	0.6	0-12
Other Micro Use	**11**	**0.6**	**0-20**
TOTALS	91	17.6	0-82*

**Total household usage may in some cases reflect the use of more than one micro computer in the home.*

TABLE 9. PROJECTED USES OF THE MICROCOMPUTER IN THE HOME*

Type of Use	Count	Percent of Responses	Percent of Cases
Word Processing	172	29.0	53.1
Budgeting & Accounts	135	22.8	41.7
Research	43	7.3	13.3
Entertainment	39	6.6	12.0
Work	34	5.7	10.5
Computation	25	4.2	7.7
Programming	24	4.0	7.4
Education	21	3.5	6.5
Learning	19	3.2	5.9
Business	16	2.7	4.9
Database	15	2.5	4.6
Mail	9	1.5	2.8
Data Storage	8	1.3	2.5
Other	**33**	**5.6**	**10.2**
TOTAL	593	100.0	183.0

**324 respondents gave these projections regarding the primary uses they would have for a home computer.*

B. Use of Video Technologies and Print Media.

Video technologies and computers, along with cable, may be increasingly viewed as part of an integrated home information and entertainment utility. The cable communications survey has gathered data which through subsequent analysis can illustrate correlations between uses of diverse technologies. In addition, patterns of print media use can be helpful in predicting future demands upon the information services supplied by a cable communication system.

Video Technologies

We asked those participating in the survey about ownership of three home video products: **video recorders**, **video game players** and **videodisc players**.

In each we asked respondents to indicate the year in which they would purchase (or had purchased) the equipment. Fifteen percent already own a **video recorder**, while another 13 percent expect to buy one within the next ten years. The modal response for year of purchase was "1983." Seven percent of the sample expect to purchase a video recorder in the next year; 32 percent indicated they would never buy one and 40 percent didn't know.

Video game players drew a less positive response: 57 percent felt certain that they would not buy a video game player, while 25 percent couldn't say. Video game players are owned by 15 percent of the respondents. Three percent expect to purchase one sometime in the future.

The **videodisc** received the least enthusiastic response. Fifty-four percent of the respondents thought that they would "never" own one, while 42 percent didn't know. Less than one percent of the total sample own a **videodisc player**, and three percent expect to purchase one in the next eight years.

Print Media

We asked respondents about their rates of subscription to five categories of print media: newspapers, news magazines, other mass-circulation magazines, technical/professional journals and consumer information magazines.

Thirty-nine percent of those queried subscribed to one **newspaper**, 36 percent to two, and 15 percent to three or more. On-campus respondents tended to receive more newspapers than those off-campus. About a third of our sample did not subscribe to any **news magazine** (such as **Time** or **Newsweek**). Forty-two percent subscribed to one news magazine, and 24 percent to two or more. Again, on-campus respondents subscribed more heavily than Palo Altans.

For other **mass-circulation magazines** the responses varied more widely: 13 percent did not subscribe to any general magazines, while 32 percent subscribed to four or more. Fifty-five percent of the sample subscribed to between one and three such publications. Less than a third (31 percent) of our sample subscribed to any **consumer information magazines**, and nearly all of these to only one consumer publication.

Technical and professional journals is an area in which the place of residence made a large difference. While the modal response was "zero" for both groups, a few of the on-campus respondents subscribed to a large number of journals—some as many as 20. On the average, on-campus residents subscribed to twice as many (about four) journals as the Palo Alto residents. Overall, 38 percent of the sample subscribed to between one and three journals, while 39 percent subscribed to four or more.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

30534-DS (JCC:2036/2044) Admin Serv Mgr II/III Manage Business & Admin affairs of Dept of Chemistry in support of the res & teaching activities of its 20 faculty, 140 grad students, 75 undergrad majors & numerous postdoctoral fellows & visiting scholars; advise on budget develop't & budget analysis; asst Chairman in long-range planning; oversee dept accts, grants & contracts, serv ctrs; assure accurate forecasts & the prevention of cost-overruns; organize & implement dept & Univ personnel policies for non-teaching staff of 50; directly supv 5 cost ctrs, etc; QUALIFICATIONS: edu & substantial exp in financial & business admin activities in an academic setting; knowl of Univ finance & genl acctg procedures; ability to define problems, propose effective solutions, & implement new or modified procedures; exp in facilities mgmt and/or knowl of chemistry & physical sci lab facilities desirable; knowl of sound supvry practices & effective application of Univ Affirmative Action; C07/C08; $2113-2724/2464-3139

36356-JB (JCC:2160) ACCOUNTANT II Respon for acctg serv to Operations & Maintenance offices & shops & the Utilities group; prep monthly journals; analyze accts; work w/ mgrs to res & reconcile balances; monitor & clear clearing accts; reject lists & suspense accts; respon for acctg customer serv for serv ctrs; access information on HP3000 database; Job Cost Acctg sys reports; facilitate timely processing of 1 procurement, acctg, & payroll documents to insure highest possible level of accuracy in financial statements; supv staff of 3, etc; QUALIFICATIONS: BA/BS in Acctg or Business Admin or equiv practical exp; familiarity w/ complex acctg sys, computer applications in acctg fields & principles of cost acctg/fund acctg; able to meet deadline; have strong interpersonal & commu skills for dealing w/ a wide variety of customer inquiries.; C06; $1854-2312.

23594-AW (JCC:5042/5050) Sys Programmer II/III Maintain Xerox ALTOs, hardware & software; maintain & enhance an ETHERNET commu network among the following machines: PDP-11, DEC System-20, DECSystem-10, VAX 11/780, Xerox ALTO, Mortorola M6800 microprocessor; some UNIX sys programming; QUALIFICATIONS: familiarity w/ microprocessors, hardware/software sys design, & networks; should have programming exp w/ one or more of the following: UNIX, TOPS-20, TOPS-10, XEROX ALTO; some exp w/ graphic sys also desirable.; C06/C07; $1854-2733/2113-3344.

21062-AW (JCC:5042/5050) Sys Programmer II/III Respon involve any tasks needed to maintain the functionality of the computer sys; primary emphasis is on software but consulting for users & hardware repair also important; update, maintain & modify portions of TOPS-20 operating sys, RSX20F, compilers, & other sys programs; write utility programs as 1 needed; asst in facility operations; QUALIFICATIONS: 2 to more yrs of TOPS-20 assembly lang programming exp essential; exp in PDP-11 assembly lang & a variety of high-level lang desirable; hardware knowl desirable; requires commitment to substantially more than 40 hrs/wk; working conditions are peculiar; prep to avoid smoking during working hrs.; C06/C07; $1854-2733/2113-3344.

24765-LL (JCC:5588) LIFE SCI RES ASST I Assay drugs in biological samples, using gas chromatography; develop new chromatography methods as needed; prep cell fractions by differential centrifugation & gradient tech; administer drugs to mice & observe behavioral & physiological effects; analyze data statistically; use inhalation & diet tech for drug admin; develop new methods for study of drug concentration in membranes using radiolabeled drugs; assay proteins & lipids in cell membranes; supv part-time animal caretaker; genl lab & equip't maintenance; ordering supplies, inventory; scheduling; QUALIFICATIONS: undergrad degree in chemistry or biology or equiv exp in lab res; exp w/ gas chromatography, thin layer chromatography, differential centrifugation & scintillation counting would be helpful.; C05; $1670-2086.

33195-TC (JCC:5588) LIFE SCI RES ASST I 75%; 8-3; asst in prep & carrying out of cellular electrophysiological experiments; surgical prep & animal care; construction of microelectrodes; maintenance of a cellular physiology lab & data analysis; required to help in the design of new approaches to experimental problems independently; analyze data & perform in a highly independent manner; QUALIFICATIONS: BA/BS degree in life sci field or equiv combination of edu & exp; must have exp in electrophysiological tech & animal surgery, w/ a bkground in chemistry or physics; some exp w/ histological tech desirable.; C05; $1253-1565.

43504-TC (JCC:5588) LIFE SCI RES ASST I Respon for maintaining tissue culture cell lines & aiding in prep of primary cell cultures; perform receptor & enzyme assays which will require familiarity w/ ultracentrifugation & thin layer chromatography; screening & maintenance of monoclonal antibodies; design or modify experiments; analyze results & contribute to publication of the results; supv student employees; QUALIFICATIONS: BS degree or equiv exp & have a familiarity w/ basic lab skills; willing to work w/ 125I, 3H, & 14C labelled chemicals.; C05; $1670-2086.

27178-LL (JCC:6314) R & D ENGR III Prov high level engrg support of a 'state of the art' clinical echocardiography lab & work w/ cardiology faculty & staff to plan, design & develop advanced electronic instrumentation for acquisition & analysis of cardiovascular data; principal technological collaborator on several projs fr conception to final stages of clinical testing & prep of manuscripts & tech reports; QUALIFICATIONS: BS & MS in Electrical Engrg, Biomedical Engrg or related discipline w/ several yrs of exp in software design & computer programming in biomedical areas; demonstrate a high level of analytic capability; familiarity w/ cardiovascular anatomy/physiology & w/ M-mode & sector echocardiography desirable.; C99; EN.

Next deadline Dec. 28

This is the last issue of *Campus Report* for fall quarter. Jobs to be listed in the Jan. 5 issue must be received at the University or SLAC Personnel Office by noon Tuesday, Dec. 28.

Next orientation Jan. 4

There will be no more new employee orientation sessions for the rest of 1982. The next orientation will be held at 9 a.m. Tuesday, Jan. 4, in room 282, Tresidder Union.

Nonexempt

31082-PM (JCC:1747) LIBRARY SPEC I Fixed term, 1/10/83-6/9/83; perform duties in Technical Operations Div of Meyer Lib; process orders for Meyer Lib librarians; type orders & searches Books in Print for reserves; sort, route & process new lib mat'ls; file & maintain catalog cards in Supplementary Card Files; search RLIN & shelves for catalog maintenance tasks; build & modify reserve records on SPIRES; searches on-line & manually for mat'l needed for reserves; supv student assistants, etc; QUALIFICATIONS: typ 45; demonstrated clerical & organizational skills; atten to detail; ability to learn & use RLIN & SPIRES; prev public serv exp; prev exp w/ RLIN & SPIRES; knowl of and/or exp w/ libs, catalogs, bibliographic citations & lib resources; send appl/resume to Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $1189-1246.

33240-PM (JCC:2058) ADMIN ASST I (N) Admin Asst for Div of Genl & Ambulatory Pediatrics; respon for supvn, training, monitoring & review of Sec IIS & Sec III who prov clerical support for faculty & fellows; prep & monitoring 1 of $200,000/yr. Robt. Wood Johnson Foundation General Pediatrics Academic Development Fellowship Program budget; analyzing & recommending efficient use of offc space, personnel & equip't for faculty & fellows; serving on Ambulatory Care Committee; serv as resource person; arranging mtgs; coordinating travel plans, etc; QUALIFICATIONS: typ 55; demonstrated ability to analyze, organize & direct varied admin functions; understanding of acctg & distribution of funds w/ ability to assume fiscal respon; supvry exp, professionalism & discretion; knowl of Univ admin procedures, policies & guidelines desirable; send appl/resume to Cay Hassler, Children's Hospital, 327-4800 x541.; B16; $1593-1671.

24211-BP (JCC:2058) ADMIN ASST I (N) 75%; 9-4pm; require evening & wkend work during peak seasons; respon for identifying & organizing volunteer support for Cardinal Club events; represent Dept of Athl, w/ ability to articulate its policies & procedures at all mtgs; plan, organize & execute, in conjunction w/ a volunteer committee, a series of fundraising events; interface directly w/ the nec Stanford offices & external agencies; prep all mailings & printer mat'l for each event; help develop new ideas for increased income fr events; make recommendations to Cardinal Club Dir based on reviews, etc; QUALIFICATIONS: typ 70; demonstrated exp in 1 setting objectives, organizing, coordinating & directing spec events; exp in fundraising organization indicating work w/ volunteer groups preferred; knowlof Stanford athletics & familiarity w/ local community helpful; send appl/resume to Y.S. Klemm, Athl Adm Bldg.; B16; $1195-1253.

44477-BP (JCC:2462/2512) Offc Asst III/III-S Prov offc assistance to CIT & RLG Human Resources Offc; works w/ coord Staff Develop't program; monitors Staff develop't budget; responds to questions concerning personnel & payroll policies & procedures; reviews timesheets for accuracy & completeness; resolves payroll problems; assts in maintaining personnel data base for CIT & RLG; at OA III-S understands tech for inputing informa, correcting errors by using SPIRES & WYLBUR commands; produces complex reports fr SMAS; QUALIFICATIONS: work effectively w/ a variety of people on all levels; familiarity w/ personnel procedures desired; knowl of WYLBUR & SPIRES required for OA III-S level & willingness to learn for OA III; excel attendance record; knowl of SU policies & procedures desired; good oral & written commu skills; willing to work overtime as needed; exp working as a sec or offc asst; access to transportation in order to make deliveries as required; send appl/resume to Tahitia Kremer, Pine Hall 175.; B11/B12; 1246-1310/1310-1373.

23191-BP (JCC:2554) SECRETARY II Receptionist/-sec for Dept of Linguistics & various programs; asst Dir of English for Foreign Students program & coordinator of Spec Language Program; answer phone;

continued on next page

Rental housing

HOUSING NEEDED

□ **NOW:** or a.s.a.p.: Stanf. artist seeks non-live-in space for painting/writing. Quiet, reasonably nr. campus. Call Nora, 858-0174.

□ **Dec. 20 to Jan. 30, '83:** Visit. prof., MIT seeks furn. 2BR (min.) rental. January only. Will EXCHANGE, or rent Boston 1BR furn. apt., waterfront Bayview, xclnt bldg. $1000 incl. util. Call (617) 367-3192 COLLECT.

□ **CHRISTMAS VACATION HSESIT:** Out of the area Univ. faculty person available to hsesit this vacation. Local contact and refs at 851-1361.

□ **Jan. thru Mar. '83:** NYC Prof. & wife, no children or pets, seek fully furn. & equipped sublet; apt. or hse. Call Claire, 326-7160 (day), 854-3762 (eve & wknd).

□ **Now:** Prof. Stanford MBA seeks 1 or 2BR w/BA unfurn. condo, apt., twnhse in dwntwn Palo Alto for 12 mo. Local refs. Call Steve, 321-2303.

□ **Jan. to Mar. '83:** Retired cpl seeks furn 1 or 2BR apt. condo or hse. on or nr. campus, Palo Alto, Menlo Pk. Nr shops. Pkge deal to include car best. Call Dave Marimont, 497-3796 (day), 325-7182 (eve).

□ **Apr. 1 to June 15, '83 (flex):** Visit. Prof. seeks apt. or cottage on or nr. campus. Call John Felstiner, 497-4722 (day), 322-7727, or msge. at 497-2635.

□ **Jan. 1, '83 thru Mar. '83:** Winter Qtr. Visit Prof., wife, 15 yr. son seek furn. 2BR hse or condo on or nr. campus. Nonsmokers. Call COLLECT to Paul or Suzanne (303) 444-1979.

□ **Jan. & Feb. '83:** Prof. man seeks small apt. or hse-sit during sabbatical educ assignment. Call (415) 361-1406.

□ **Dec. 19 thru 26, (or longer), '82:** Staff mbr, Stanford seeks hse. for parents and adult siblings. Will pet/plant sit. Call Susan 327-4667 or 497-1743 (day).

□ **Beg Apr./May '83:** Finnish-French family, 2 daughters (6 & 4 yrs.) seek 2 to 4 BR hse/apt. in Bay area. Will care for pets & garden. Chldrn used to strict limits at home. Local refs. EXCHANGE 3BR/BA apt. + 2 cars in beautiful area 5 mi. from ctr. Paris. Wkly cleaning incl. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **NOW:** Cultivated female, business person, age 26, w/elegant furn. seeks to share Peter Coutts unit w/faculty mbr. A.S.A.P. Call Janel, (415) 441-7337 or 321-2469.

□ **Sept. '83 to June '84:** Approx 50 fully furn hses needed for Fellows & their families coming to Ctr for Advanced Study in Behavioral Sciences. Call Frances Duignan, 321-2052 (day).

□ **Xmas Vacation:** Out of the area univ. fac. person seeks HOUSESIT for this Christmas vacation. Local refs & contact at 851-1361.

HOUSING AVAILABLE

□ **Feb. to Mar. '83:** Furn. lux. apt. 1BR/2BA, study, Palo Alto, 3 mi. to campus. $1,000/mo. Call Knoles (415) 493-4964.

□ **Winter Qtr.:** Coastal hse, so. of Carmel, 1BR. $1,000/mo. Call Knoles (415) 493-4964 or (408) 624-7290.

□ **NOW:** Guest cottage, cntry setting, 7 mi. to Stanf. Furn. incl. dishes, pans, toaster, blender, linens. LR, ktchn, BA, 1½BR, gar. Pool. Nonsmokers, adults, no pets. $475/mo. incl util. Call 941-3501.

□ **NOW:** SKI NORTHSTAR AT TAHOE. 2BR/2BA condo, sleeps 8. W/D. Dwnhill, Xcntry. Free shuttle to slopes. Ideal family resort. Day care. Avail. holidays. Call (415) 564-5324.

□ **Jan. to June, '83 (flex):** Furn. campus hse. 4BR/3BA LR, DR, FR w/frpl, shop, carport. Auto sprinklers. Nonsmokers. $1400/mo + elec., gas, gardening; 1st & last mo. + dep. Call 857-9185 or 497-1663 (day).

□ **Mid-Jan. to mid-June '83:** Contemp. hillside hse w/view in Portola Valley. 4BR/3BA fully furn; conversation pit w/frpl. 2 lge decks , spa. 5 mi. to campus. $1500/mo. Call 327-8615 (eve) or 858-4035 (day).

□ **NOW:** Prof. woman has rm. to rent w/priv BR/BA, W/D, ktchn. priv. Female, nonsmoker. Furn. except for bed. 10 min. to campus. $325/mo. incl. util. Call 969-5870 (after 7 p.m.).

□ **Beg. Jan. 1, '83:** 4BR/2BA partly furn (or unfurn) hse. Spanish style, in Redwood City. All appl., frpl, alarm system, encl. yd., B-B-Q. Mt. Carmel area, 15 min. to campus. Xclnt for sharing. $1100/mo. Call Carol 327-5670 (eve).

□ **NOW:** Share hse rental, for grad. stud. Mt. View/P.A. border. 10 min. to campus. Priv. BR, ktchn. priv., W/D, good jogging area. $337.50/mo. + ½ util. Call 857-5445 (day), 949-2609 (eve).

□ **Beg. Jan. 1, '83:** Fully furn. apt. w/sports facil, at Oak Creek. 5 min. to campus. Avail 6 mos. (flex). $675/mo. Call 326-3684 (a.m. & eve).

□ **Jan. to June '83:** Palo Alto, furn hse. 4 BR/3BA, LR, DR, FR w/frpl, study. Pool w/solar cover. Close to campus. $1650/mo., incl. pool ser. Call 493-1179

□ **Beg. Jan. 7 , '83:** Furn. hse. in Pine Hill area of campus. 3BR, or 2BR + study, 2BA. Glassed Liv. & Din. area open to lrge. so. facing patio. Parklike grnds w/orchard, 1/3 acre. Passive solar heat. Nonsmoker, adults pref. $1400/mo. incl. grdnr & firewood. No pets. Call 857-0295.

□ **Jan. 10 to June 20, '83:** Lux. condo, fully furn. 2BR/2½BA, study, LR, all appl. Pool, sauna, 24 hr. security. Adult cpl. Call 324-0457.

□ **Regularly avail.:** 1 & 2BR furn. and unfurn. apts. & twnhses, & 3BR/2BA hses. in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $525 to $800/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **NOW:** So. Lake Tahoe, ski cabin. 2BR, frpl, color TV, phone. Adj. to Nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk. (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3142).

□ **Jan. to Sept. '83 (flex):** Fully furn. 4BR/2BA lge campus hse. Frpl, gardn w/auto sprinklers, view of hills. Nonsmokers, no pets. $1400/mo incl. grdnr. Call 497-3987 (day), or 494-0362 (eve).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

New phone system, SUNet, energy management seen as communications package

continued from page 1

present Centrex 701 equipment has been discontinued by Western Electric, which means availability of spare parts for normal maintenance is not assured.

The existing system can handle only 600 more lines, which is marginal for the expected increase in demand over the next two years. A new system would reduce the cost and ease of installations, moves, and changes in equipment as well as providing enhanced call-handling services.

At present, most data communication is handled on telephone twisted pair wire. This cannot support expansion of inter-computer signals, cable TV, closed circuit TV, and energy management systems. SUNet will provide a single data and video "highway" with a small number of coaxial cables linking well over 100 academic and administrative buildings.

A more modern energy management and control system will increase present savings of $400,000 annually in energy costs. It will monitor critical alarms in academic and research areas and be capable of providing additional services, like fire and intrusion alarm systems and more accurate control of building heating and cooling systems.

The new telephone system would be funded through external borrowing or a combination of borrowing and a lease. Costs will be recovered through telecommunications system charges to users.

The broadband communications network portion of SUNet will be funded by debt as a general plant improvement project. A business plan to recover capital costs is being studied.

The energy management and control system will be funded by an energy conservation loan, to be repaid through savings in electrical, steam, and chilled water budgets.

All three projects are planned for completion by November, 1984.

In January, 1981, the Task Force on the Future of Computing recommended development of a campus-wide, high-speed digital data communications network, noting that "the effectiveness with which we manage computer-based information technology will, in large measure, determine the future strength of our instructional, research, and administrative programs."

Since then, the report to the trustees notes, "the technologies have advanced sufficiently to add video-based resources and services" to SUNet.

At present, there are 17 large computers on campus, 340 medium or minicomputers, well over 200 small or microcomputers, and more than 145 computer-based word processors or office information systems.

"The advent of personal computers suggests there will be hundreds, if not thousands of computers in use by our faculty, staff and students," the report notes. SUNet would be designed to provide campus-wide access to the network, links to external networks and computers, and ties to a residential cable TV system and the phone system.

In a recent survey on cable communications, campus residents expressed a strong interest in using a residential system to access departmental and university-wide information sources, such as an online library catalog. SUNet will provbide such a capability.

Besides a broadband "backbone" network between buildings, SUNet will use baseband cable to connect computers and network servers where high speed data transmission is important. Baseband also will be used for some networks within buildings, as will twisted-pair cable

Total capital costs for SUNet are estimated at $3.5 to $5.5 million. Only the broadband component of $1 to $1.5 million is included in the electronic communications media project.

The broad range of cost estimates reflects a series of decisions to be made on the number of intra-building networks needed. SUNet has an estimated internal rate of return of 26 percent on this investment, compared with providing digital connections on the telephone system.

By using a common distribution system of conduits, there will be significant economies for the new phone system, SUNet, and the energy management and control system.

Jobs...

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sort & route mail; maintain files; typ corresp & class mat'ls; keeps dept rosters & mailing list; maintain supply areas, bulleting boards, copy equip't,etc; QUALIFICATIONS: typ 50; good receptionist skills; able to interfac well w/ public; good typing skills (accuracy more important than speed); word processing exp desirable; send appl/resume to Gina Wein, Dept of Linguistics, Bldg. 100.; B11; $1246-1310.

44326-PM (JCC:2596) SECY II-SPEC Prov genl sec'l duties; answer & screen calls; schedule & greet visitors & resident applicants; at time arrange housing; keep appt book; open & sort mail; make travel arrangement; typ letters, manuscripts, grant applications; organize & maintain files; record keeping; prep expense reports, check requests, purchase requisitions, etc; QUALIFICATIONS: typ 65; med terminology essential; use of word processor desired; exp as med typist preferred; accurate typing skills; mature judgment; ability to set prior & work independently; sec'l exp; send contact: Leslie Culligan, 497-7211.; B12; $1310-1373.

Bargaining unit

33237-LL (JCC:5644) LIFE SCI TECH II TMS Unit; prep cultured amniotic fluid cells for chromosome exam, analyze under microscope chromosomes of cultured amniotic fluid cells & prep karyotypes fr the cultured amniotic fluid cells; prep peripheral blood lymphocyte & bone marrow cultures, etc; chromosome banding, photographing cells under microscope, developing & printing photographs; karyotypic analysis; autoradiography & sex chromatin analysis; required to prep reagents, solutions & media used in tissue culture & for various tech; QUALIFICATIONS: knowl of & exp w/ analysis of human chromosomes essential; courses in college level chemistry & biology & exp w/ standard lab techniques are requlred; some knowl of tissue culture procedures desirable.; A24; $8.65.

22915-PB (JCC:5786) LAB ASST I TMS Unit; 75%; 8-3; sterile media prep for tissue culture work; absorption of fetal calf serum; prep of pooled human serum; buffer prep for lymphocyte separation; maintenance of liquid nitrogen tanks; large volume glassware washing; autoclaving of lab glassware; QUALIFICATIONS: dependable individual to assume tissue culture lab support function; exp w/ sterile procedures desirable.; A13; $6.68.

33689-PB (JCC:5835) ANIMAL CARE ASST I TMS Unit; 7:30-4; basic husbandry & care of lab dogs & other species; cleaning cages; watering; feeding; conducting observations for signs of illness or disease; work w/ a variety of animal species; respon for maintaining assigned animals & areas in an extremely clean & sanitary condition; conduct assigned duties on wkends under a reduced level of supvn; able to lift 50 lbs or more; able to follow written & oral instructions in proper animal care tech; QUALIFICATIONS: prior animal handling exp; possess some mech. ability; requires personal habits of cleanliness, neatness & atten to details; able & willing to read, write, understand & commu in English, & follow written & oral instructions; free of allergic reactions to animals; capable of undergoing physical exam & immunizations; able to work some holidays on a rotating schedule.; A12; $6.54.

25918-AW (JCC:7794) MAINT PERSON II PREM TMS Unit; fixed term to 8/31/83; 60% Recreation Ctr Maintenance; solve & prevent bowling machine maintenance problems incl training pin chasers on basic function of the machines needed to make minor repairs & to reset the machines to zero position; perform preventative maintenance on all machines; 40% Bldg Maintenance replace air handling filters; tighten fan belts; check heating valves; replace thermostats; check & change motor oil; fix furniture; patch & paint 1 walls; unclog drains; treat plumbing sys; QUALIFICATIONS: 1 yr exp w/ 82-30 pinspotters desirable; some electrical & mechanical skills needed; ability to identify & solve work related problems; able to follow written & verbal instructions; valid Calif Driver License desirable.; A29; $9.73.

Breast cancer workshop slated

"New Options for Women with Breast Cancer," a Help Center workshop, will be presented from noon to 1:30 p.m. Thursday, Jan. 6, at the Center on Galvez Street.

The film "One in Ten," made by Kate Sphor with the Film and Television Production Center of the Department of Communication, will be shown as a vehicle for promoting discussion of breast cancer and the multiple options for treatment.

To register, call the Help Center at ext. 7-4577 by Tuesday, Jan. 4, 1983.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Medical Center, and SLAC employees and their immediate families without charge. Parking is available near Angell Field.

Ph.D.orals

MONDAY, DECEMBER 20

Daeje Chin, electrical engineering, "Two-dimensional Oxidation," 1:30 p.m., AEL Lounge.

Health and safety report

Accidents and Injuries Occurring Dec. 6-10

Type of accident or injury	Number of incidents	Days Lost
Impact with object	1	0
Lifting improperly	1	0
Overexertion	1	3
Stress	1	55

Campus crime report

Dec.6-13

Burglary/residence	0	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	2	Felony arrest	0
Theft/under $200	4	Misdemeanor arrest	4
Theft/over $200	3	Adult booking	4
Bicycle theft	3	Adult cite/release	0
Vehicle accident	4	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	3
Assault	0	Driving under influence	1

Dance! Both now and in New Year

... holiday workshop

A Holiday Dance Workshop sponsored by STARTS, Students Arts at Stanford, features classes in ballet, modern, jazz, and floor barre alignment taught by Elizabeth Larkam, Lisa Burnett, and Elizabeth Gustafson.

The classes meet Monday through Thursday evenings after work, Dec. 13-29, in the Old Union Clubhouse on White Plaza.

For additional information and registration contact Lisa Burnett, 854-4163, or Elizabeth Larkam, 321-3883.

... noon dance

Dance Quorum will sponsor two noon-hour dance classes during winter quarter in Studio 42 of Roble Gym.

Beginning Jazz Dance, with instructor Kim Morris, will meet Tuesday and Thursday, beginning Jan. 4.

Intermediate Modern Dance, with Joy Weston, will meet Wednesday and Friday, beginning Jan. 5.

The class fee is $40 for the 10-week quarter.

Both classes offer a thorough workout within the framework of dance technique. Participants should wear leotards and footless or stirrup tights.

To register, send a check for full tuition (payable to Dance Quorum) to the instructor at Roble Gym. For further information, call 497-4254.

...children's courses

Children's Dance at Stanford offers classes in creative movement, modern dance, and ballet for girls and boys ages 3 to 13. During the nine-week winter session beginning classes will meet once a week on Wednesday and Friday afternoons and Saturday mornings.

Classes are designed to suit different age groups: Rhythms and Movement for 3- to 5-year-olds, Movement and Music 6- to 8-year-olds, and Modern Dance and Ballet for 9- to 13-year-olds.

A Dance and Sculpture Workshop for boys and girls ages 6 to 13 features improvisation in galleries and at outdoor sculpture sites. Dance for Boys features a curriculum in rhythmical, creative dance for 6- to 8-year-olds.

All classes utilize recorded and live music and children's instruments. Tuition is $31.50 for the winter session beginning Jan. 5. For information and registration call Children's Dance at Stanford, 497-4254.

Bechtel International Center lists 'Holiday House' programs

It's time again for "Holiday House," when the International Center becomes a beehive of activity during the winter break.

In its fourth consecutive year, Holiday House (December 18 to January 2) features a variety of activities for Stanford students, staff scholars, faculty and their families.

In addition to planned programs, Holiday House provides a place where the Stanford community can just drop by to relax and enjoy a warm fire, cookies and coffee and the company of those who remain at Stanford during the holidays.

Holiday House is cosponsored and supported by the International Center and put together by many volunteers from Stanford and neighboring communities. Committed to providing a retreat for the Stanford community while the rest of the university closes down for the holidays, these volunteers organize an array of activities, such as trips to nearby places of interest, international cuisine, and Christmas caroling.

Chitra Subramaniam, a graduate of the Department of Communication, is coordinator of Holiday House. She is responsible for the implementation of the programs that have been planned for the two weeks and will be at hand at Holiday House during that time.

The schedule follows:

Saturday, Dec. 18
Family Festival Day, 2-5 p.m. Tree trimming, crafts, refreshments, and more!

Sunday, Dec. 19
Chamber music and tea, 5:00 p.m. Relax with tea as chamber musicians entertain.
***Sunday supper, 6:30 p.m.** Buy tickets on Wednesday prior, $3.25.

Monday, Dec. 20
***Tour of Sunset Publishing, 9:45 a.m.**
International Folkdancing, 7:30 p.m. Learn folkdances from around the world; children are welcome.

Tuesday, Dec. 21
***Tour of Stanford Museum, 10:30 a.m.** See Rodin sculpture and 20th century paintings.
Walk Down Palo Alto's Christmas Tree Lane, 7:30 p.m. Warm refreshments afterwards!

Wednesday, Dec. 22
International Bazaar, 10 a.m.-2 p.m. Crafts, wares, and food for sale.

Thursday, Dec. 23
Christmas Caroling at Escondido Village, 7:30 p.m. (Meet at Pepper Tree House).

Friday, Dec. 24
***Christmas Eve Potluck Supper, 6:30 p.m.** Bring your best holiday dish for this special occasion.

Saturday, Dec. 25
Christmas Day. Holiday House will be open from noon-6 p.m. Find friends and relaxation on Christmas afternoon.

Sunday, Dec. 26
***Sunday Supper, 6:30 p.m.** Buy tickets on Wednesday prior, $3.25.
Silent Movies, 7:30 p.m. Buster Keaton in "The General" and Laurel and Hardy in "Angora Love," with oldtime piano accompaniment and popcorn, $1.

Monday, Dec. 27
***Walking Tour of San Francisco, 8:30 a.m.**
International Folkdancing, 7:30 p.m.

Tuesday, Dec. 28
Game Night, 7:30 p.m. Play backgammon, chess, Monopoly, and other games.

Wednesday, Dec. 29
***Day trip to Half Moon Bay**

Friday, Dec. 31
***New Year's Eve Party, 9 p.m.** Food and drinks served. Purchase tickets in advance, $4.

Saturday, Jan. 1
New Year's Day. Holiday House will be open from 11 a.m.-11 p.m. Drop by and watch the football games on the I-Center TV.

Saturday, Jan. 1-Monday, Jan. 3
***Trip to Monterey-Carmel.** Accommodations at Asilomar for this weekend excursion in this beautiful coastal area. Hike, visit historical spots, shop, and relax.

Sunday, Jan. 2
***Sunday Supper, 6:30 p.m.** Buy tickets on Wednesday prior, $3.25.

*Events marked *require prior sign-up at Holiday House (I-Center). Unless indicated otherwise, all events and excursions begin at I-Center.*

Call Holiday House, 497-1831 for more details.

Holiday House Hours: Holiday House will be open daily from Dec. 18 through Jan. 2. Check schedule at I-Center for specific hours.

Meal Service Available on Campus

Tresidder Main Course

Closed Dec. 18-25; 26, 10-6:30; 27-30, 9-6:30; 31, 9-5; Jan. 1-2, 10-6:30.

Coffee House

Dec. 18-19, 10-6:30; 20-23, 9-6:30; 24, 9-4:30; Dec. 25-Jan. 1, closed; Jan. 2, 5-midnight.

Marcel's

Closed Dec. 18-19, 23-Jan. 2; Dec. 20-22, 7-4.

Encina Station

Closed Dec. 18-19, 23-26, 31-Jan. 2; Dec. 20-22, 27-30, 8-2.

Tresidder Store

Closed Dec. 25; Dec. 18-24, 26-Jan. 1, 8-6; Jan. 2, 8-11.

Recreation facilities

Encina lockers and showers: M-F 7 a.m.-9 p.m.; SS 9 a.m.-6 p.m.; closed Dec. 24, 25, 31, and Jan. 1. (Reg. day 7:30 a.m.-9 p.m.)
Roble complex: lockers only, M-F 11:30 a.m.-1:30 p.m.; closed SS and Dec. 24, 25, 31, and Jan. 1-2. (Reg. day, lockers 8 a.m.-5 p.m.)
Encina Weight Room: M-F noon to 5 p.m.; SS noon to 3 p.m.; closed Dec. 24-26, 31, and Jan. 1. (Reg. day noon to 2 p.m.; 3:30-8:30 p.m.)
Olympic Gamefield, Perrier Parcourse, Angell Field, and tennis courts: all open.
IM Fields and Taylor Field: reserved; call 497-0505.
Roble Pool and Maples Pavilion: closed.
deGuerre Pools: M-F noon to 2 p.m.; closed SS and Dec. 24-25, Jan. 1-2. (Reg. day noon to 2 p.m.)
deGuerre Courts: M-F 11 a.m.-7:15 p.m.; closed SS, Dec. 25-26, Jan. 1-2. (Reg. day 11 a.m.-7:15 p.m.)
Golf course: T-F first available starting time after 11 a.m. (Closed Reg. day.)
Tresidder Recreation Center: Call 497-4316 for schedule information. (Reg. day 8 a.m. to midnight.)

Calendar

Calendar items should be delivered to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the events occur. The next deadline is Wed., Dec. 29, to cover the week of Mon., Jan. 10, through Sun., Jan. 16.

Events must now be submitted on forms. Those wanting copies should call Events and Services, 497-2551.

FRIDAY, DECEMBER 24

University Public Worship: Family Service and Pageant, 7 p.m. Christmas Eve Service, 11:30 p.m.

SUNDAY, DECEMBER 26

University Public Worship: The Rev. D. Caughey, retired Presbyterian minister, 11 a.m.

MONDAY, DECEMBER 27

Women's Basketball: Vs. Las Vegas. 7:30 p.m. Maples Pavilion.

TUESDAY, DECEMBER 28

Men's Basketball: Vs. Brown Univ. 8 p.m. Maples Pavilion. Ticket information at 497-1021.

SUNDAY, JANUARY 2

University Public Worship: Wendy Smith, assistant dean of the chapel, sermon and eucharist, 11 a.m.

MONDAY, JANUARY 3

Discovery Film Series: "The Danube—Vienna to the Black Sea" with Gene Wiancko. 2:30 p.m., Kresge Aud., $3; and at 7:45 p.m., Memorial Aud., $4.

TUESDAY, JANUARY 4

Applied Physics Colloquium: "Fractals, Fractons: Thermodynamic and Transport Properties" with Prof. Raymond Orbach, UCLA. 4:15 p.m. Applied Physics 200.
January Chinese Film Festival: 'New Year Sacrifice" (1956). Lu Hsun story of a young maidservant gradually destroyed through the cruelty of fate and the callousness of society. In Chinese; no subtitles. 7:30 p.m. Memorial Aud. $1.50 donation.

WEDNESDAY, JANUARY 5

CROW **Women in the Performing Arts Lecture Series:** "Women's Role in the Performing Arts" by Vicky Holt, director, University Events and Services. Noon. Terman Aud. Open to all.

THURSDAY, JANUARY 6

January Chinese Film Festival: "Two Stage Sisters" (1964). During the turbulent years of 1935-50, two sisters take separate paths in pursuit of stage careers. 7:30 p.m. Memorial Aud. $1.50 donation. (English subtitles.)

FRIDAY, JANUARY 7

The Lively Arts at Stanford: Oscar Shumsky, violin. Assisted by David Gross, piano. J. S. Bach: Partita No. 1 in B minor for violin solo; Beethoven: Sonate for Violin and Piano, Op. 96, in G Major; Smetana: "From the Homeland"; Franck: Sonate in A Major, for Violin and Piano. 8 p.m. Memorial Aud. $11.50, $10.50, $9.50, $8.50; students $3 off these prices.

SUNDAY, JANUARY 9

University Public Worship: Robert G. Hamerton-Kelly, dean of the chapel, 11 a.m.
ASSU Sunday Flicks: "Star Trek II: Wrath of Khan." 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Paul Harris—Still Life. Stanford Museum. Through January 2.
Venice in the 18th Century. Paintings, drawings, prints and decorative arts. Stanford Art Gallery. Through December 19.
Wood Construction and Process Sculpture by E. David Camardo. For library environment. The Jonsson Library of Government Documents, Green Library. Through December.
The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collections of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collections, second floor, West Wing, Green Library. Through January 11.
Japanese Brush Painting by Ami Wada. Reception, Fri., Dec. 3, 5-7 p.m. Bechtel International Center. Dec. 3-30.
Melange of Paintings. By several artists who have had exhibits in 1982. Faculty Club Gold Lounge.
Contemporary Chinese Paintings by Anna Wu Weakland. Tresidder 2nd floor gallery. Month of December.
Photographs by Matthew Schwartz. Coffee House Gallery. Month of December.
The Big Squeeze and Other Works by Dolly Du Prau. Acrylic on canvas. Reception, Fri., Jan. 7, 5-7 p.m. Bechtel International Center. Jan. 5-30, 1983.

CAMPUS REPORT

Volume XV, Number 14 | A publication for Stanford University faculty & staff | January 5, 1983

Stanford wins four 'Rhodes' in two years

For the second year in a row, two Stanford students have received Rhodes scholarships.

They are Richard Klingler, senior history major from Cincinnati, Ohio, and William Amos Halter, political science and economics major from North Little Rock, Ark.

They are the 46th and 47th recipients nominated by Stanford.

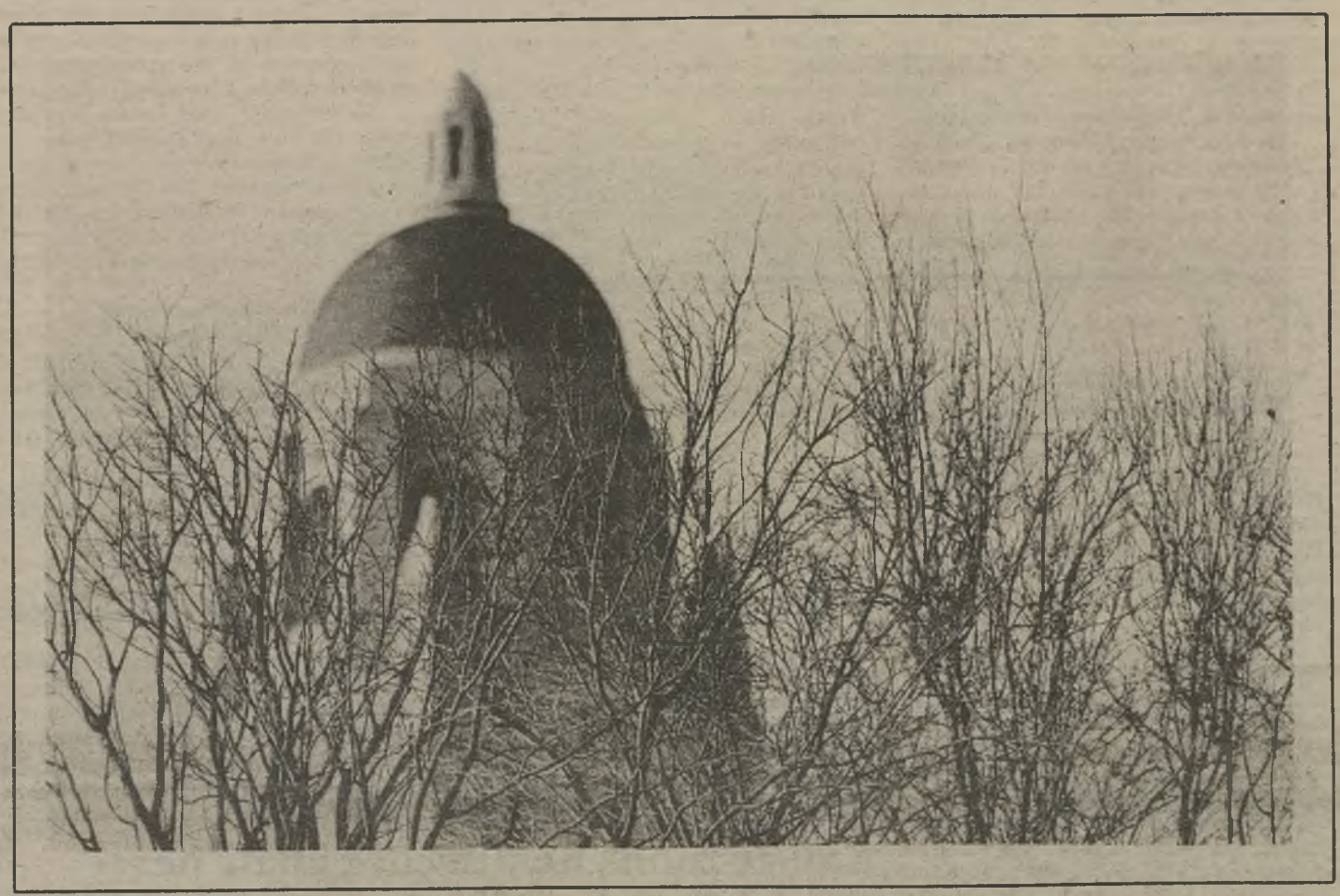
Klingler, editor of *The Stanford Daily*, was described as "supremely intelligent and unusually mature" by Prof. David Kennedy, history, his academic adviser for the past four years.

Halter, co-director of the advising associates program, was praised for his "absolutely genuine altruism and an intensity of commitment that's hard to believe" by Prof. Hugh Marshall, political science.

Halter is the third successive Stanford Rhodes scholar to have taken Marshall's seminar in Administrative Responsibility. Marshall uses case studies of decision makers in the Executive Branch to examine conflicting personal loyalties—to bureaucratic superiors, Congressional representatives, special interest groups, professional standards, and personal concepts of the public interest.

Halter worked last summer for the

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Seven in 10 students get financial aid

More than 70 percent of Stanford's undergraduates received financial aid last year, an all-time high, according to Financial Aids Director Robert Huff, editor of *The Journal of Student Financial Aid*.

Stanford is one of a handful of universities nationally which remains committed to meeting the computed financial need of undergraduates. Admissions decisions are made without regard to need.

The recession has created "a real problem" for many students, Huff says. Where the University had expected about 50 more undergraduates would require University funded help this year, the actual total may reach 200.

"It's clearly the state of the economy," Huff says. "In some cases, a family member loses a job. Other expected income may not materialize. Property may not be sold."

Many more students than normal were not able to find summer jobs, were employed at lower wage rates, or were otherwise unable to obtain the summer savings expected to help meet their educational costs. Through mid-October, 119 students, including both graduates and undergraduates, reported this problem.

The number of individual cases is "far more than I can remember in any previous year," he adds. Huff became financial aids director 25 years ago in January.

He's requested an additional $200,000 in University general funds to meet recession-related needs. "We look at each case individually, and make mid-year course corrections as necessary," he comments.

Undergraduates are expected to meet 25 percent of their educational costs through self-help. That amounts to $3,225 at present. In the standard case, this is met through $1,825 in long-term loans and

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Emeritus Provost Frederick Terman dies in sleep at 82

Frederick E. Terman, emeritus provost of Stanford University and academic architect of Silicon Valley, died of cardiac arrest while sleeping at his campus home about 8 a.m. Sunday, Dec. 19. He was 82.

He had no history of heart disease but had been in declining health for several years. His three sons—Frederick, of Carmel; Terence, of Mt. View; and Lewis, of South Salem, N.Y.—and their families had joined him for the holidays.

Besides the three sons, survivors include five grandchildren. Terman's wife, Sibyl, died in 1975. Memorial services will be held at Stanford Memorial Church in early January, at a time and date to be announced. The family prefers contributions to the Terman Deanship Fund in the Stanford School of Engineering.

Born June 7, 1900 in English, Ind., Frederick Emmons Terman was the son of Lewis M. Terman, the psychologist who developed the Stanford-Binet intelligence quotient after moving here in 1910.

Because of his father's belief in Rousseau's notion of natural education, young Fred was not sent to school until age nine and a half, when he had learned to read and was qualified for third grade.

He entered high school at age 13, and graduated from Stanford at age 20 with a bachelor's degree in chemical engineering. Terman earned his engineer's degree in electrical engineering two years later under Prof. Harris J. Ryan, America's first professor of electrical engineering.

He earned his doctorate in 1924 at MIT under the tutelage of Prof. Vannevar Bush. He accepted a teaching position there, but was stricken with tuberculosis on a visit to his Stanford campus home. He spent the next year with sandbags on his chest, getting up only two hours a day to teach after Ryan offered him a half-time job at Stanford.

By 1926, he was able to teach full-time. The following year, he was appointed assistant professor. He married Sibyl Walcutt, a graduate student in psychology, at Memorial Church in 1928.

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Landau gives $1 million to Center for Economic Policy

Ralph Landau, award-winning chemist, entrepreneur, philanthropist, and academic, has given $1 million to Stanford's Center for Economic Policy Research to study the sources of technological innovations and their impact on American life.

The gift will provide $250,000 annually for four years, starting Jan. 1, 1983, toward a new Technological Innovation Program (TIP) at the Center. Additional support will be sought from private foundations, industry, and government according to Prof. Paul David, chairman of the Economics Department and the William Coe professor of American economic history.

He and Nathan Rosenberg, Fairleigh Dickinson professor of economics and public policy, will guide TIP under the Center's auspices. The equivalent of three full-time faculty and four or five graduate students will be involved annually, drawn on a part-time basis from departments throughout the University and from outside Stanford.

Landau, a self-made millionaire, has gained worldwide recognition for his laboratory and entrepreneurial achievements in high technology chemistry. He is the first individual in 35 years to receive both the Perkin medal of the Society of Chemical Industry, American section, and the Founder's Award of the American Institute of Chemical Engineers. He holds six major patents, among many others.

He cofounded the Halcon SD Group, a firm which pioneered advanced technology in petrochemicals, and has been a leader in developing about one-fourth of the important processes in the petrochemical industry in the past 25 years.

A consulting professor both in chemical engineering and economics at Stanford, he currently is vice-president of the National Academy of Engineering. He recently coedited a 288-page issue of *Technology in Society* magazine on taxation, technology, and the U.S. economy.

Technologic innovations

His decision to underwrite a major independent academic research program reflects Landau's belief that the most important public policy questions arise at the intersection of "the technological and economic spheres," according to David.

"He has many good friends here and shares the view that Stanford offers an almost uniquely favorable setting for a program of this kind. The University has a strong faculty in the natural sciences and in engineering, as well as in economics, finance, decision sciences and operations research.

"The University's leadership has given continuing encouragement to public policy studies, as reflected in creation of the Center for Economic Policy Research, under the directorship of Prof. James Rosse and Prof. Michael Boskin, who chairs its steering committee."

"Stanford's situation in Silicon Valley and its connections with the innovative and entrepreneurial activity in high technology areas makes this a natural site for a project devoted to studying how economic policies can effect technological innovations.

"We still know remarkably little about the sources of invention, about the conditions governing entrepreneurial success and failure in the management of technological innovation, or about the appropriate goals of national technology policies.

"This need is sharpened by the growing importance of the multinational corporations in international scientific and technological affairs.

"We have to find out the connection between investment in new products and processes and what these bring in terms of industrial opportunities for new growth, profits and higher productivity. The connections between such opportunities and public and private 'investment' in education and worker training, also need to be re-examined.

"We can study three ways in which new technology affects the economy. One involves the allocation of economic resources to the search for improved technologies. We can investigate how expensive that is, how resources are consumed and the return in terms of new products and processes.

"The second one concerns the way in which new products or processes come into action in the economy. It is not sufficient simply to invent something; one has to find a niche in which its use could dominate alternatives. And, even then, it may take a longer or shorter span of time before innovations displace old methods or products. We want to know what factors determine the speed of displacement.

"Third, we plan to examine the actual impact made by new products on people's earning capacity, their working environment and on them as consumers.

"Our research will attempt to form a basis for making better predictions about the outlook for technological innovation."

David emphasized that he and his colleagues would "not seek quick—and probably misleading—generalizations" about technological innovation as a uniform phenomenon. "Rather, we shall consciously be trying to identify similarities and differences among industries (and even among various technological fields within the same industry) in the effects of given sets of policy measures."

—Donald Stokes

People

Stanford Business School Professor **Robert T. Davis**, 62, has been named director of the Stanford Executive Program (SEP), the Business School's eight-week general management course for senior level executives, effective immediately.

He replaces Robert K. Jaedicke, who had been scheduled to direct the SEP until his appointment as dean of the Business School late last month.

Davis has been highly active in executive education throughout his academic career, having taught executives at Stanford since the late 1950s, and having previously directed the Stanford Executive Program from 1962 to 1964 and again from 1967 to 1968. He was also director of the Stanford Sloan Program, the School's nine-month degree program for mid-career executives, from 1971 to 1975.

One of the School's most popular professors, Davis has been a recipient of the Salgo-Noren award for distinguished teaching. In class, he has been described by a colleague as a "rare merging of scholar and super salesman."

Davis, who started his teaching career in 1946, has also blended his academic career with work as a corporate executive, taking a two-year leave of absence form 1964 to 1966 to become a vice-president for marketing of the Varian Corp. in Palo Alto. In addition, he is currently a member of the board of directors of Saga Corp., Omark Industries, Kaiser Cement Corp., International Game Technology, and Plantronics, Incorporated.

Davis holds the Sebastian S. Kresge Professorship in Marketing at the Business School.

CIT's **Jon Sandelin** has been appointed associate director of the Center, CIT Director Ed Shaw has announced.

Sandelin will assume a number of duties in his new position. He will act as principal liaison with external associations in the computing arena, especially EDUCOM and EDUNET. He will also lead the development of the proposed SPIRES consortium, and will be responsible for the services CIT extends to external, non-University, account-holders.

Shaw stated that Sandelin will "continue his activities as a program planner and program catalyst in text handling, electronic printing and publishing, and related areas. These types of programs become operational within one division but often involve planning and coordination across division boundaries and throughout the University. Jon's responsibilities include bringing these various communities together into an effective planning effort."

Kaiser funds health care chair here; Hastorf to pick first endowed holder

With a $1 million grant from the Henry J. Kaiser Family Foundation of Menlo Park, the Board of Trustees of Stanford University has established an endowed professorship to be awarded to a faculty member whose research pertains to health care policy, administration or management.

The foundation made a similar grant to Harvard University simultaneously.

Founded in 1948 by the well-known industrialist Henry J. Kaiser, the Foundation's primary interest is in promoting pre-paid medical care. Its grants for the current year total some $15 million.

Foundation president Dr. Robert J. Glaser said: "Preparation of leaders in health care administration and management necessarily involves the acquisition of knowledge and skills in various disciplines.

"We are pleased that the chair funded by this award will be occupied by a distinguished faculty member with interests and expertise in the subject of health care administration and management, without restriction as to the particular school or department of the University in which he or she holds appointment."

The new Stanford professorship is named for the late chairman of the board of Kaiser Industries, Edgard F. Kaiser, Sr. (1908-1981), eldest son of Henry J. and Bess Kaiser, who organized one of the first pre-paid medical plans—the forerunner of Kaiser-Permanente—for Grand Coulee Dam workers and their families in the 1930s.

The first holder of the chair will be selected by Provost Albert Hastorf with a view to achieving the greatest impact in strengthening the University's teaching and research in the area of health care policy. This currently involves faculty in the Medical School, the Graduate School of Business, and the Departments of Communication, Economics, Psychology, and Sociology.

Nine separate research programs on issues of national health, including disease prevention, health care organization and delivery, health economics, legislative reform, physician and patient behavior, and technology assessment, were recently brought together into the Stanford Consortium for Health Research and Policy, to facilitate interaction among the groups and strengthen Stanford's position as a resource for scholars and leaders in this field.

"The Edgar F. Kaiser, Sr. professorship will be an invaluable instrument in these efforts," Stanford President Donald Kennedy said.

Two of Stanford's interdisciplinary undergraduate majors—Human Biology and Public Policy, masters degree specializations offered by the Graduate School of Business, and several Medical School teaching programs deal with health policy, administration or management.

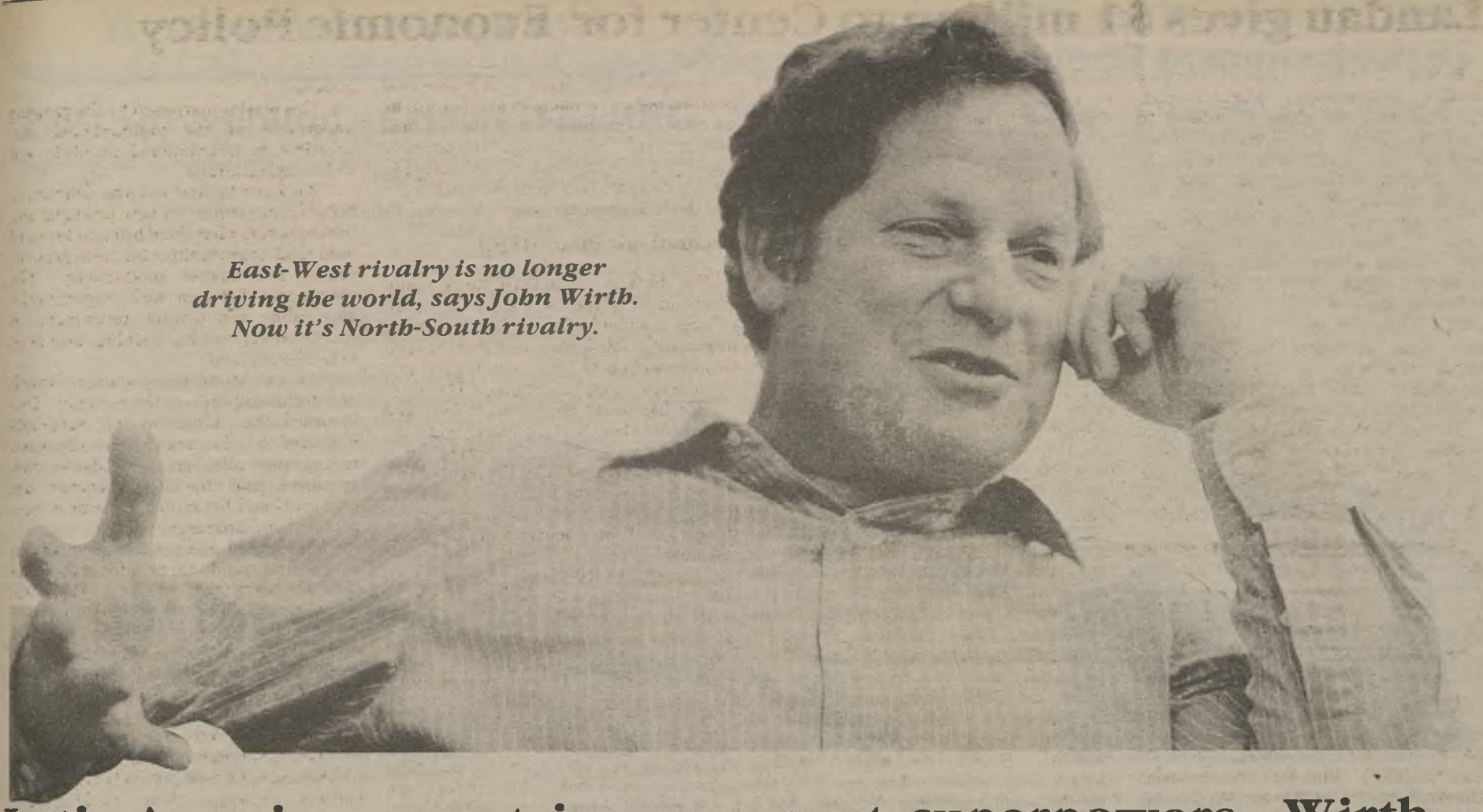
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East-West rivalry is no longer driving the world, says John Wirth. Now it's North-South rivalry.

Latin American countries may upset superpowers—Wirth

BY MILLICENT DILLON

New actors are appearing on the world scene. We now have intermediate sized states capable of forcing profound changes in the economic policies of the superpowers, says Stanford history Prof. John Wirth, director of the Center for Latin American Studies.

"In the past few months Brazil and Mexico have pushed the U.S. to redefine its entire policy toward foreign lending and finance in the world economy.

"Faced with the possibility of economic failure in these countries, Reagan and his people have done things they would never have conceived of earlier, doubling the capital for the International Monetary Fund, issuing U.S. government loans on an emergency basis, and putting pressure on private bankers to keep the flow of funds going to these countries.

"It's fascinating to think of this very self-confident group of people who were sure that the world was defined by East-West rivalry. Now it turns out they are jumping to a different tune, that of North-South.

"For the East-West rivalry is no longer driving the world. Just as crucial are these new economic issues arising out of developing countries as they expand."

Recently returned from Brazil, where open democratic elections were held for the first time in years, Wirth spoke in a campus interview of new developments and expansions in that country. As a new intermediate power, Brazil has neither the responsibility of an old colonial power nor the weight of a new super power, he says. In its dealings with African and Latin American nations, it portrays itself as a new kind of entity.

"The are reaching markets that Europe and the U.S. have had a hard time serving. The Africans are suspicious of the Europeans, in any case, and American prices are often too high for them.

"The Brazilians have gone into Africa and Latin America with financing through the Bank of Brazil. They have also set up information agencies and sent in cultural missions.

"They are the only country in the Western hemisphere, excepting Canada and the U.S. and, I suppose, Cuba, that has a global policy."

With the latest economic developments, the whole new policy of development and global planning is at stake.

"The situation came up so fast and unexpectedly," says Wirth. "In Mexico the difficulty was in part caused by the unexpected leveling off in the price of oil but it also had a good deal to do with internal mismanagement.

"But the Brazilians have actually been good managers. Still they are now suddenly unable to sell enough."

The possibility of economic failure threatens the newly emerging democratic policies of the country. "Now for the near term, at least, the external financial situation is driving internal politics."

As far as international repercussions are concerned, "the possibility of failure draws into question the entire future of the world trading system. How will countries on the rise be able to find a place in the world order?"

Emphasizing the emerging role of intermediate states, Wirth notes, "In the 70s, it was expected that multinational corporations would dominate the nation states, but that has turned out not to be so.

"In countries like Brazil the state has turned out to be very powerful, powerful enough to set the conditions for the multinationals.

"What the multinationals want is the internal market of a country like Brazil's, which is rapidly growing. But the Brazilians are making the price of entry very high for the multinationals, saying, 'If you want to come in here, you have to agree to do a certain amount of exporting.'

"None of this was supposed to happen 10 years ago. Then everyone was sure the nation states were too weak to impose their own rules.

"Now in Latin America, people no longer talk so much about the multinational corporations and their potential threat. The crucial question in Brazil now is the question of the pace of technological innovation. The big issue there is data processing and computers.

"The military too is very interested in this field as a direct result of the Falkland conflict.

"One of the military lessons of the Falkland war, as Brazil sees it, was that the Argentinians failed because for the most part their air arm did not have modern computing equipment. They say that even if you have brave pilots, you'll still lose the war if your electronics are not good enough."

To insure that they have a modern data processing and communication network, the Brazilian National Security Council is taking a key role in the new Secretariat for Informatics.

"If they pull it off," says Wirth, "they will be the first Western government to have such a comprehensive information policy, and one different from the American system of free flow of information and technology.

"The Brazilians have in mind very strong state control for military reasons and also to protect the domestic market. Not only would the government get a share of the revenue on all flow of information but it would control what is coming in and going out.

"Essentially they are trying to set up a gateway system in which all the data processing would come in through a central source controlled by the government.

"It's such a new field, I just have a hazy outline of what's going on. But I do know the U.S. government is watching this very closely. It affects our export markets and is a challenge to our own model of trade. It was an issue at the recent GATT meeting."

Wirth notes, however, that there is considerable controversy in Brazil about the government plan. "What happens to a society which has a relatively large and growing modern sector up to U.S. and European standards of consumption, training, and aspiration but that also has a large archaic sector living back in the late Middle Ages in terms of its social rhythms, when you impose a system like this one upon it? Will it allow a small elite to get even further ahead, to get so far ahead in fact that they will be out of touch with the social basis of the society, so eventually that elite won't be able to run the society any more?

"The Brazilians are thinking about this, but they don't have any good answers.

"But then we don't even know what our own technology in this field is doing to our own society."

CPPC's Career Week will present 28 professions at Tresidder Union

In order to provide students with information about a variety of career opportunities the Career Planning and Placement Center will sponsor a Career Week Monday through Thursday, Jan. 10-13, in Tresidder Memorial Union.

"Students need to thoroughly assess their skills, values, needs, goals, and interests. The next step is to obtain information about careers which may satisfy those areas," says Renee Filice, director for liberal arts majors and coordinator of Career Week.

"The purpose of this four-day program is to reach as many students as possible with information about a great variety of careers. They don't have to read about what a technical writer does; they can hear three professionals describe their responsibilities and give advice on how to enter the field."

Twenty-eight career fields will be covered. Professionals from the Bay Area (many are Stanford graduates) will talk about their careers. They will not be promoting or recruiting for their organization but providing valuable inside information.

Panels will be offered at 3-4 p.m. and 4:30-5:30 p.m. Students will be able to select two workshops from approximately seven offered each day.

The Career Planning and Placement Center staff has found that the programs benefit students in two ways. One is obvious—students can learn about new career fields to pursue after graduation and make some good contacts with representatives.

The second is more subtle. After meeting and talking with students, many panelists follow up their visits by contacting the CPPC when they have job openings or want to establish internships.

"Until we contact these professionals for Career Week, many are unaware that we exist. They find we can become a pipeline to provide outstanding future employees," Filice maintains.

In addition to organizing Career Week in January and the Career Faire in October, the CPPC offers many other services designed to ease the transition from Stanford student to employee or graduate student. Career counseling, mailing letters of recommendation, providing job listings, and scheduling recruiters are a few of many services offered. The CPPC is located in White Plaza, between Cubberley and the Bookstore. Hours are 8 a.m.-4:30 p.m.

Nonacademic paths for degree holders

The Career Planning and Placement Center will sponsor a three-person panel on "Professional Opportunities for Ph.D.s and Master's Students: Nonacademic Careers" from 4 to 6 p.m. Wednesday, Jan. 12, in Tresidder Room 270.

The panel will discuss career alternatives for those with advanced degrees who do not go into academic areas.

Games tournaments begin Jan. 15

If billiards, foosball, table tennis, chess, or backgammon are your pleasure, the all-campus games tournaments sponsored by Tresidder Union's Recreation Center may offer some lively competition.

Beginning Saturday, January 15, tournaments for these games will be held for all members of the Stanford community. The winners, if they are currently registered Stanford students, will be eligible to compete on the regional level, playing students from other colleges throughout California, Hawaii, and Nevada. The regional competition will be held at Cal State-Fullerton on the weekend of February 19-20.

The tournaments begin with a four-round Swiss Chess Tournament starting at 11 a.m. Saturday, January 15. Rounds will be played weekly at the players' convenience.

Other tournaments include backgammon on Monday, January 17; billiards on Monday, January 24; table tennis on Thursday, January 27; and foosball on Monday, January 31. All begin at 7 p.m. in the Tresidder Recreation Center or its conference rooms.

A $2.50 entry fee per participant will be charged. Entry forms, rules and additional information may be obtained at the Tresidder Union Recreation Center, or by calling 497-4316.

The tournaments are sponsored by Tresidder Union's Recreation Center in conjunction with the Association of College Unions International.

Masayo Duus wins Japanese prize

Masayo Umezawa Duus, author of *Tokyo Rose: Orphan of the Pacific*, has been named winner of the 44th Bungei Shunju Readers Prize. The prize is awarded annually to the best article appearing in *Bungei Shunju*, the leading monthly magazine in Japan, with a circulation of over 1,000,000.

The winner of the prize is selected from a panel nominated by the magazine's readers, who vote for the article they think the best. The winner is selected from the nominees by a committee of top Japanese writers and critics. The first prize was awarded in 1949.

Duus' prize-winning article was a series on the Japanese-American combat units during World War II. It was based on three years of research, during which she interviewed nearly 300 veterans of the 442nd Regimental Combat Unit and the 100th Battalion. She also visited the sites where the units fought in France.

The series was unusual because no Japanese woman non-fiction writer had written about war and combat before.

The author's previous books include *Tokyo Rose*, which won the first annual Kodansha Non-Fiction Prize in 1977. She has also written *Haisha no okurimono* (*Gift from the Defeated*) on prostitution during the American Occupation of Japan. A collection of her essays on life in the U.S. was published in 1980, with a sequel in 1982.

Mrs. Duus lives in Stanford, Calif. with her husband, Prof. Peter Duus of the History Department, and their son.

Personnel-Payroll

Official University holidays for 1983

The Administrative Council has approved the following dates for the observance of the designated University holidays in 1983.

Washington's Birthday—Monday, Feb. 21;
Memorial Day—Monday, May 30;
Independence Day—Monday, July 4;
Labor Day—Monday, Sept. 5;
Thanksgiving—Thurs. and Fri., Nov. 24-25;
Christmas—Fri. and Mon., Dec. 23 and 26;
New Years 1984—Monday, Jan. 2, 1984;
Birthday Holiday.

The birthday holiday may be taken on the employee's birthday or any other work day mutually agreed upon by the supervisor and the staff member.

Frequently staff members ask to have time off to observe days of religious or other special significance, other than those days designated as University Holidays. Because of the flexibility in scheduling the birthday holiday, staff members should be reminded that the birthday holiday can be scheduled to provide paid time off on a day which has special significance to them.

Supervisors are also encouraged to accommodate staff requests for vacation or personal time off to observe days of religious or other special significance.

Payroll deadlines for 1983

Specific Deadlines for 1983 — Forms must be *received* in the various offices as follows:

Action forms for changes from 1st to 9th or 16th to 24th of month to Personnel by 10 a.m.	Action forms for changes from 10th to 15th or 25th to last day of month to Personnel by 10 a.m.	Hourly forms to PBR by 1 p.m.	Paycheck Delivery
Jan. 10, 1983	Jan. 14	Jan. 17	Jan. 21
Jan. 25	Jan. 31	Jan. 31	Feb. 7
Feb. 10	Feb. 16	Feb. 15	Feb. 22
Feb. 25	Feb. 28	Feb. 28	Mar. 7
Mar. 10	Mar. 15	Mar. 16	Mar. 22
Mar. 25	Mar. 31	Apr. 1	Apr. 7
Apr. 8	Apr. 15	Apr. 15	Apr. 22
Apr. 25	Apr. 29	Apr. 29	May 6
May 10	May 16	May 16	May 20
May 25	May 31	June 1	June 7
June 10	June 15	June 16	June 22
June 24	June 30	June 30	July 7
July 8	July 15	July 15	July 22
July 25	July 29	Aug. 1	Aug. 5
Aug. 10	Aug. 15	Aug. 16	Aug. 22
Aug. 25	Aug. 31	Sept. 1	Sept. 7
Sept. 9	Sept. 15	Sept. 16	Sept. 22
Sept. 26	Sept. 30	Sept. 30	Oct. 7
Oct. 10	Oct. 14	Oct. 17	Oct. 21
Oct. 25	Oct. 31	Nov. 1	Nov. 7
Nov. 10	Nov. 15	Nov. 16	Nov. 22
Nov. 23	Nov. 30	Dec. 1	Dec. 7
Dec. 9	Dec. 15	Dec. 16	Dec. 22
Dec. 27	Dec. 29	Dec. 29	Jan. 6, 1984

Clip and save the above listings

Campus crime report

Dec. 13-Jan. 3

Burglary/residence	4	Phone harassment	3
Burglary/nonresidence	8	Controlled substance	0
Burglary/Vehicle	2	Felony arrest	0
Theft/under $200	5	Misdemeanor arrest	14
Theft/over $200	3	Adult booking	10
Bicycle theft	9	Adult cite/release	4
Vehicle accident	12	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	8
Assault	0	Driving under influence	1

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
12/14	Even.	800 blk Tolman	Food	
12/28	Day	Escondido Village	Jewelry	
12/31	Unkn.	Peter Coutts Circle	Jewelry	
1/1	Unkn.	Escondido Village	Purse	

Academic groups decide to flex their muscles nationwide

'New conditions call for advocacy functions'

BY MILLICENT DILLON

Scholarly organizations nationwide are assuming a more active role as advocates with respect to the government and the public, says Dorothy Atkinson, executive director of the American Association for the Advancement of Slavic Studies, currently based at Stanford.

"For a long time professional scholarly organizations have taken it for granted that advocacy of any kind was not their appropriate function. In part this conviction grew out of an ivory tower mentality.

"When education was riding easier, we could afford to take that view, but we no longer can.

"What happens in the educational establishment is directly affected by decisions at the governmental level. So it is certainly a legitimate function for us to express our opinions on legislation relating to education, to seek representation for our views, and to keep our members informed of what is happening," says Atkinson.

Referring to a recent announcement by the American Historical Association of "its rapid and productive plunge into the role of advocate for the historical profession," Atkinson said, "This is a tendency we will see more of in the scholarly field.

"When the federal government proposes, as the current administration has done, drastic cuts in international exchange programs, in the National Endowment for the Humanities and in other agencies that support scholarly work in the field, scholars have to let their representatives know the implications of these cuts."

Nationwide several organizations have sprung up recently to represent scholarly interests in all disciplines. One of these, based in Washington, is the National Humanities Alliance, an umbrella organization. Among the other associations supporting it are the American Council of Learned Societies, the Association for Asian Studies, the Modern Language Association, and many others.

"We are all nonprofit organizations dedicated to the advancement of scholarship, and we are careful to observe the line between political and scholarly interests very clearly."

The present increasing advocacy in scholarly circles follows a decade of particular constraint, even inertia, that succeeded the extreme divisions in the academic community at the time of the Vietnam War.

"During that troubled period," says Atkinson, "there were a number of activists in the American Historical Association and in other organizations who insisted that these groups take stands on various political issues.

"This appalled many of their colleagues who were equally insistent about the need to keep scholarly organizations completely out of the political arena. The debates so polarized the academic community that little middle ground was left open for legitimate advocacy on the part of the organizations. A more balanced perspective has been gaining ground lately."

The AAASS was spared some of the earlier controversy. "The Soviet field has always been one of high political sensitivity and our awareness of that has made us extremely cautious about dealing with matters that might be viewed as political, even when that meant not pursuing our own interests as scholars."

Atkinson points out that a recent major innovation in the field of Slavic studies has been the setting up in Washington of the National Council for Soviet and East European Research, a group of academics who disburse certain government funds to the field.

"Its executive director, Vladimir Toumanoff, has had considerable experience in government services as well as having taught at Harvard," she notes.

The AAASS itself became directly involved last year in a problem that arose for some scholars out of a political situation. When visiting Polish scholars were unexpectedly stranded here due to developments in their own country, the Association sought assistance for them.

"We asked our members to look for temporary research or teaching appointments that could be made available to these scholars so they could continue their work here.

"Several foundations, including the Rockefeller and Ford Foundations, made support money directly available to the Polish scholars here and in Canada. They were funded through IREX (the International Research and Exchanges Board) which is based in New York and is the principal organization for scholarly exchanges between Soviet and East European countries and the U.S.," notes Atkinson.

The Bibliography and Documentation Committee of the AAASS also worked to promote the collection of documentary materials on the Solidarity movement in Poland.

"Through all of this our objective has been to help scholars and facilitate scholarship."

Atkinson, a former professor of history at Stanford, is the author of *The End of the Russian Land Commune*, to be published by Stanford University Press next month. She was also the editor (with Alexander Dallin and Gail Lapidus) of *Women in Russia*.

Shortly after she took office in the AAASS in 1981, Atkinson became aware that "there was a lack of communication among institutions in the field."

At her instigation a meeting was held at Stanford in July, under the sponsorship of the AAASS, with representatives from many Soviet studies programs nationwide. Discussion was focused primarily on problems facing the field and on current legislative proposals to remedy the situation, as well as on the critical need for increased fellowship aid.

Atkinson's own major involvement at the moment is with the question of the steep decline in Russian language enrollments in this country over the past decade. She is currently organizing a National Committee on Russian Language Study with representatives from government and secondary schools as well as higher education.

"I've been digging out the data and by bringing together concerned people I hope to help them construct an effective program of action. A well-designed proposal is likely to find support among public and private agencies at this point, I think, because the situation and its implications have become increasingly evident."

The AAASS also acts as the organizational representative for American scholars in the International Committee for Soviet and East European Studies, made up of scholarly organizations worldwide. The Committee includes representatives from Europe, Canada, Japan, and Australia, among others, but none from the Soviet Union.



The (Vietnam) debates so polarized the academic community that little middle ground was left open for legitimate advocacy on the part of organizations. A more balanced perspective has been gaining ground lately. ***—Dorothy Atkinson***

ICSEES holds international congresses every five years; the next is scheduled for 1985 in Washington, D.C. and will be hosted by the AAASS. Scholars from all countries, including the USSR, are invited to participate.

Recently the Stanford office of the AAASS was visited by Xu Kui, deputy director of the Institute of Soviet and East European Studies of the Chinese Academy of Social Sciences in Beijing. "China is just beginning to develop programs in Soviet studies and he was eager to learn about the Association and Soviet studies in the United States.

"Chinese scholars are interested in setting up an organization similar to ours and in increased cooperation with American scholars. Xu Kui took a complete set of our *American Bibliography on Slavic and East European Studies* and our *Slavic Review* with him back to China."

Health and safety report

Accidents and Injuries Occurring Dec. 13-30

Type of accident or injury	Number of incidents	Days Lost
Animal/insect contact	3	0
Chemical inhalation	2	0
Impact with object	3	0
Pinched, squeezed, crushed	1	0
Fall from same level	2	(4,0)
Lifting improperly	4	(0, 0, 7, 0)

Frederick Terman's formula to make Stanford great

continued from page 1

Terman worked seven days a week and felt no need for vacations. "Why bother," he once remarked, "when your work is more fun?"

He liked to cannibalize radio parts and build his own sets at home. He worked hard at developing courses and writing textbooks. Rising through the ranks to full professor, he was named head of the Department of Electrical Engineering in 1937. Four years later he was elected president of the Institute of Radio Engineers, the first person so chosen who lived further away from New York City than Rochester.

Tired of the brain drain of students from Stanford to the East, he began to take a direct hand in encouraging local industry. "Small business always interested me," Terman said, "so I helped five or six of my students establish companies of their own. I assisted with encouragement, advice and ideas."

The prewar electronic laboratory at Stanford was an attic under the eaves. The roof leaked, and there was no money for repairs. Students built big wooden trays and lined them with tar paper and tar to catch the water. One winter Bill Hewlett stocked the trays with goldfish.

Following a suggestion by Terman, Hewlett designed and built an audio oscillator, a device that generates signals of varying frequencies. Then they enticed David Packard, a 1934 graduate, to return from General Electric, spending $500 for materials and $500 for Packard's salary—at $55 a month. Hewlett and Packard then started business in Packard's garage, creating what is now a multi-billion dollar, world-wide corporation.

When Edward Ginzton needed a research assistantship, Terman teamed him up with Physics Prof. William Hansen. Russ Varian worked with Hansen to invent the klystron tube during the 1930s. This was used in radar during World War II, provided the technology for the Stanford Linear Accelerator, and now is also used for cancer treatment in clinic machines (or clinical linear accelerators).

Varian moved East at the start of the war, but later returned to establish Varian Associates on the Peninsula. Ginzton subsequently became the firm's president and a Stanford trustee.

When war broke out, Vannevar Bush asked Terman to organize a radio research laboratory in Cambridge, on Harvard turf. During his first winter there, Terman completed one of his best known books, *The Radio Engineer's Handbook*, often called the "Bible of its field."

Terman recruited more than 800 people, including 225 with degrees in engineering or science. His staff included 41 Stanford faculty or former students.

The lab devised jammers for enemy radar and made tunable receivers for detecting and analyzing enemy radar signals. Narrow strips of aluminum, called "window" or chaff, were devised to reflect radar. A six-ounce bundle scattered from an airplane looked like three heavy bombers. The demand was so great there was no tinsel for wartime Christmas trees or foil wrapping for chewing gum.

"The war made it obvious to me," Terman said, "that science and technology are more important to national defense than masses of men. The war also showed how essential the electron was to our type of civilization. Our method of fighting the war was to an amazing degree built around, and determined by, electronic devices. . . .

"The idea of peacetime support of university research by the government was new. The U.S. had never before World War II provided any substantial support for basic research in universities except in the field of agriculture." Food production is one field in which the U.S. maintains "unequivocal superiority to Russia on every count," he added. The earliest government contracts negotiated at Stanford set the tone for times to follow. Sponsored



Frederick Terman surveys Terman Building construction in 1976

projects would be part of education, performed by students and faculty with a minimum of full-time professional staff. Research would be built around the competence and interests of individual faculty members. No extra salary would be given for doing sponsored research. Graduate students could work part-time and use the results in dissertations as appropriate.

When Terman returned to Stanford as dean of engineering in 1946, the university was "an underprivileged institution," he recalled. "But we had a chance to achieve a stronger national position. . . .

"We started off with three projects. The one in chemistry fizzled. The physics project led to the Nobel Prize for Felix Bloch, who discovered nuclear magnetic resonance. The project in electrical engineering was the seed that blossomed into today's nationally recognized research program in engineering. . . .

"The universities came into the picture only because it has been found that they are the most effective places that we have to carry on fundamental research. Private philanthropy would have been inadequate. Industrial concerns' needs must be profit oriented. States could not assume this national responsibility.

"A natural result of this situation is that government money tends to flow to universities and to those parts of universities that possess strength. They want first class faculty members to carry on their research."

Terman practiced and preached a principle he called "steeples of excellence." Its cardinal rule is go for the best. Academic prestige depends on high but narrow steeples of academic excellence. It is not possible to cover all the bases.

By paying the best people well, the experts themselves will attract grant money, graduate students, and promising junior faculty. If a university in those days had $90,000 to spend on five salaries, Terman advised hiring one for $30,000 and four others for $15,000, rather than simply paying all five $18,000 each.

It's better to have one seven-foot jumper on your team, he explained, than any number of six-foot jumpers.

As early in 1947, he started making speeches that "the West has long dreamed of indigenous industry of sufficient magnitude to balance its agricultural resources. The war advanced these hopes and brought to the West the beginnings of a great new era of industrialization.

"If western industry and western industrialists are to serve their own enlightened and long-range interests effectively, they must cooperate with western universities and, wherever possible, strengthen them by financial and other assistance."

The West was wide open but "we won't make the most of this opportunity if we operate a pauperized electronics industry in which workers are expected to take a disproportionate part of their salaries in a climate which God and not the electronics industry gave us."

New companies found it more important to locate near a center for brains than raw materials, transportation, factory labor, or even markets.

The Stanford Industrial Park, which Terman and others established in 1951 now has 90 firms employing 25,000 adjoining faculty housing on campus lands.

"Universities are more than a place for learning," Terman said in the 1950s. "They are major economic influences in the nation's industrial life, affecting the location of industry, population growth, and the character of communities. Universities are a natural resource."

Terman encouraged faculty to get acquainted with their counterparts in industry, to cooperate with industry without jeopardizing the integrity of the University.

Terman was instrumental in opening up Stanford's classrooms to academically qualified industry engineers. He started the honors cooperative program in 1953-54, enabling engineers to sit in class directly or via a television network in their companies. Industrial affiliates programs started. Corporate gift support rose steadily.

In 1955, Terman was named Stanford's provost, the University's second ranking academic officer. President Wallace Sterling called this a turning point in Stanford's history.

Ernest Hilgard, emeritus professor of psychology, said Terman's contributions to selecting faculty were "tremendous. He brought historians Gordon Graig

continued on next page

Terman/ continued from page 6

from Princeton and David Potter from Yale. We didn't have distinction in the early 1950s. Although some joked that Stanford was becoming Terman Tech, he was concerned with all aspects of the University."

Soon after the transistor was invented at Bell Labs in 1955, coinventor William Shockley returned to Palo Alto as a Stanford faculty member and set up Shockley Transistor. More than 55 Silicon Valley firms trace their origin to that move.

In chemistry, Terman brought in Carl Djerassi and William Johnson, who attracted further strength. The Stanford Industrial Park, formed in the 1950s, began to reflect this pool of talent. Syntex, whose research Djerassi headed, moved here. New companies such as Zoecon, Alza, Syva and Dynapol were established.

By 1974, *Fortune* magazine observed, Santa Clara County enjoyed "the densest concentration of innovative industry that exists anywhere in the world." The concentration of 800 pioneering technology firms "has created an innovative ferment without precedent in industrial history." The buildup was "almost wholly the handiwork of Frederick Terman, an enthusiastic and inspiring teacher at Stanford," writer Gene Bylinsky declared.

Terman saw this "community of technical scholars" as the modern counterpart of medieval scholars whose work culminated in such academic centers as Oxford, Cambridge, Heidelberg, Bologna, Gottingen, and Paris.

"In these modern communities of technical scholars there is a continuous ferment which makes them intellectually stimulating for people having the qualities that are the basis for growth industries.

"In such a community, the innovative sources existing in industry are contagious. . . . To a creative mind, a new idea coming from outside is likely to impact in ways that leads to additional ideas, which stimulates more ideas and mounts new challenges. . . .

"As long as we maintain the practices that have made us what we are today, there is no limit to the longevity of this situation."

Terman believed that knowledge is the new focal point for national growth. Where railroads and autos once generated growth, now the focus is on information.

Terman was fascinated by the Russians. He admonished this country not to underestimate them. The Russians, he said, have a long tradition of quality engineering. Under the Czars, engineers had higher status than doctors or lawyers.

As early as 1962, he noted that if the Soviets sustained their efforts in physical science and engineering, they could surpass the U.S. within two decades, at least in military technologies.

"Events of the next several decades will probably determine what kind of world is going to exist for the next 100, or 500, or even 1,000 years, just as did the struggle between Rome and Carthage."

The U.S. has greater depth and diversity in science and technology, but the challenge posed by the Soviets should be taken deadly seriously.

A founding member of the National Academy of Engineering, he and his father formed one of the few father-son combinations in the National Academy of Sciences. In 1976, President Ford awarded Terman the National Medal of Science. The following year, Stanford dedicated its new $9.2 million Terman Engineering Center.

When Terman retired as provost of the University in 1965, he said: "If I could relive my life, I believe I couldn't do better than play the same record over again."

—Bob Beyers

Earthquake expert Harry Williams died on Xmas Day

Emeritus Prof. Harry Andrew Williams of the Stanford Department of Civil Engineering, an early expert on the effects of earthquakes on buildings, died Christmas night, Dec. 25, at his campus home of a brain tumor. He was 80.

A native of Nevada, Williams came to California with his parents in 1916 and settled in Santa Clara Valley. He spent most of his adult life at Stanford.

He received a bachelor's degree in engineering in 1925, then worked five years with Standard Oil Company of California.

He returned to Stanford as a graduate student and part-time instructor in 1930, received the degree of Engineer in 1933, and remained as an engineering faculty member until his retirement in 1966. He kept in touch with some of his first students all his life.

Williams' early research was in soil mechanics and vibrations-the effects of earthquakes on various structures and resistance to fatigue of various building materials. His later work was in stress analysis of structures and in port and coastal engineering. He published numerous articles in technical journals in these fields.

He was a consultant to Douglas Aircraft, Corps of Engineers, U.S. Army, U.S. Air Force, Tracerlab, Westinghouse, U.S. Bureau of Reclamation, and the California Division of Architecture. He spent 15 months as a visiting professor at MIT and two years at the University of Hawaii, where he helped organize a new Department of Ocean Engineering.

He was a member of Sigma Xi and Tau Beta Pi honor societies, the American Society of Civil Engineers, the Stanford Faculty Club, SIRS, Palo Alto Senior Men's Golf Club, and the Commonwealth Club. After retirement, he pursued his interests in golf, travel, book-binding, and Spanish literature.

He is survived by his wife, Gertrude Smoyer Williams; a son, Brian Kirk Williams, and a daughter, Susan Williams Lyon, both of San Francisco; two sisters, Mrs. Gladys Gerritsen, of Petaluma, and Mrs. Ida Fritschy, of Tucson; and five grandchildren, Sylvia and Kirk Williams, and Jesse, Jacob, and Amanda Lyon.



Harry Williams

A memorial service will be held at 3:30 p.m. Thursday, Jan. 6, in Stanford Memorial Church, with the Rev. Robert Minto officiating. Speakers will be emeritus engineering Profs. Clarkson Oglesby and Louis London, and Dr. Paul Holmer of Marin County. The family prefers memorial donations to the Stanford School of Engineering Library or the Sempervirens Fund.



Terman eulogized at memorial

The Stanford community paid its combined tributes Tuesday to Frederick Terman, one of the greatest men in the history of the University.

Memorial Church was filled with mourners who heard eulogies to the man who changed the face of Stanford and was largely responsible for the creation of Silicon Valley.

Terman was provost 1955-65 and professor 1926-65.

Terman died in his sleep at his campus home on Dec. 19, at the age of 82. The private interment has already taken place.

The first eulogy at the Memorial Church service was given by Donald Kennedy, president of the University; the second by William M. Kays, dean of the School of Engineering; and the third by David Packard, chairman of the Board of Hewlett-Packard.

Kennedy said that Terman gave Stanford much of its shape. "He had the power to see the qualities of people, sometimes qualities they were not aware of themselves. He built a team which was able to accept his vision of the future."

David Packard said: "He was responsible more than any other single person for the position of excellence Stanford now enjoys."

The three sons were present, together with their families. The service was conducted by the chaplain of Memorial Church, Robert Hamerton-Kelly. The organist was Herbert Nanney and the soloist Caterina Micieli.

There are five grandchildren, of whom four are now visiting at the Terman home on campus.

Rhodes scholars...

continued from page 1

chief administrative assistant to Supreme Court Chief Justice Warren Berger. He served earlier as a Congressional intern and plans to attend law school after two years at Oxford University. As a sophomore, he won a Truman scholarship, covering his junior and senior years at Stanford and two years of graduate work.

Klingler worked in Washington last summer with the House Wednesday Group, self-described as liberal to moderate Republican representatives. The previous summer he worked with Common Cause in Washington.

Klingler was one of several *Stanford Daily* staffers who recently produced a bogus issue of *The Daily Californian*, giving Stanford the last laugh in the 1982 Big Game. Its banner headline falsely proclaimed "NCAA Awards Big Game to Stanford." Copies now sell for $5 at Cal, $1 at Stanford.

Klingler plans to study English history at Oxford. He has no specific career plans, but expects to pursue public policy concerns through journalism, law or government itself. Besides *The Daily*, his interests have included working for Amnesty International, playing intramural soccer and squash, and backpacking.

Halter plans to enroll in Oxford's philosophy, politics and economics program. He's considering law, teaching, and public service as possible careers. A resident assistant in Roble Hall, he formed the Stanford Partners Project with Jeff Maltzman in their sophomore year. This group works with juveniles age eight to 18.

Halter was attracted to Stanford by its engineering program. He chose the University over CalTech because of its broader options.

His predecessors in Marshall's course included Peter Stamos, who was named a Rhodes scholar in 1980 and Mark Kramer, who received the same recognition last year. Werner Disse, a 1981 economics graduate who worked as an assistant to the University ombudsman, also received a Rhodes last year. He was nominated by his high school in South Africa.

More than 30 Stanford students expressed interest in the Rhode competition this year, twice last year's total. About half were invited to regional interviews. Assistant Prof. Stephen Ferruolo, history, heads the Rhodes-Marshall panel at Stanford.

The scholarships were funded by the will of Cecil Rhodes, who made a fortune in diamonds in South Africa. He hoped the scholarships would contribute to world understanding and peace.

Sharp rise in aid to students, while federal help drops

continued from page 1

$1,400 through employment at the equivalent of 10 hours per week during the school term.

This year, undergraduate financial aid from all sources totals about $27.7 million. It has been received by 4,683 students, or 71.1 percent of those enrolled.

The total includes $19.2 million in scholarship and grants-in-aid to 3,200 students (46 percent of those enrolled) and $8.5 million in loans for 3,878 undergraduates. Many received both kinds of help.

"Need is at the heart of the undergraduate awards," Huff emphasizes.

The basic student budget of $12,738 includes tuition, $8,220; room and board, $3,423; books, $350; and personal expenses, $745. To this is added transportation, generally two round-trip coach fares for those living far from campus, an average of about $450.

The expected family contribution toward these costs is "quite steep" under the uniform methods used by the federal government, the state and the University, Huff says. As costs have risen, he's begun to see "a new clientele" of families with incomes of $50,000 to $70,000.

At these levels, Huff believes, strict needs analysis may not be equitable. Students should be able to work or borrow to help meet their educational costs, even when they are not eligible for scholarship support.

"Loans are really deferred earnings," Huff says. "Some students want to help shoulder more of the family burden in financing their education. This should be possible, so long as loans are used for educaticnal purposes."

Abuses in liberalized loan programs created during the Carter Administration led Congress to curtail the guaranteed and federally insured student loan programs this year. Where 4,774 Stanford graduate and undergraduate students borrowed $14.2 million in 1981-82, this year's total is estimated at $11.3 million for 3,825 students.

$1 million more in loans

Federal funding of national direct student loans at Stanford is expected to increase by more than $1 million this year, reflecting the University's excellent record on repayments. Less than four percent of Stanford's loans default, compared to a national average of 10 to 12 percent.

Total direct student loan funds, including repayments and University matching funds, are expected to increase from $2.1 to $3.2 million. Total student recipients is expected to increase from 975 to 1,400.

On the other hand, total funds available for college work-study programs at Stanford will drop from more than $1 million to $683,900—less than half the level of 1980-81.

Overall, the University estimates term-time jobs at the University provide about $2 million in aid. Cornell recently announced a $7 million, five-year program to reduce student debts through subsidized summer jobs in the public and private sectors.

During the past four years, the share of undergraduate scholarships and grants-in-aid paid by Stanford itself has risen from less than 60 percent to more than 70 percent. Federal grants have declined while California state scholarships and other outside awards have risen moderately. *(See table below.)*

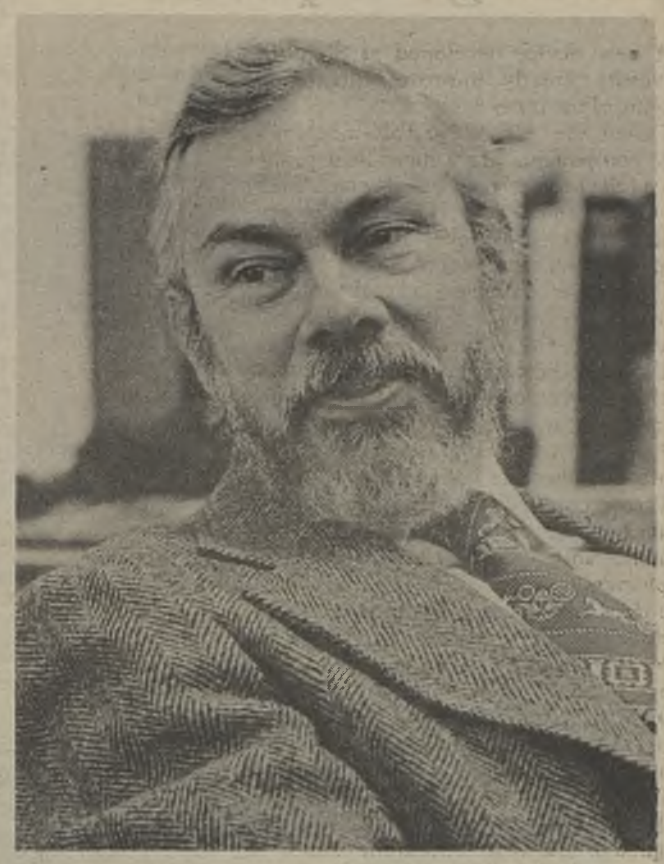
The outlook for state scholarship is "bleak," since California faces a $2.5 billion deficit, Huff observes. Previous limits on the amount of individual Cal grants are believed to have contributed to a shift toward enrollment in public institutions among talented students with financial need. While this trend is not apparent at Stanford, University officials have repeatedly expressed concern at its long-term impact on maintaining a strong, diverse system of higher education in California.

The outlook for federal student aid funding remains uncertain, but the government is moving toward verification of all information provided by grant applicants.

Huff doesn't quarrel with this in principle, but notes that it requires considerably more administrative effort, since any differences between information reported on tax forms and finacial aid applications must be reconciled.

The fact that federal student aid programs are funded through continuing resolutions tends to protect the status quo, he notes. But if total aid funding remains flat, the result will be greater pressure on University resources as tuition and other student costs increase. Most institutions simply pass the higher costs through to students.

While cuts in federal funding for the current year were not as severe as expected, the initial uncertainty had a "very adverse effect" on student access and choice, particularly in private institutions, Huff notes.



Funding outlook 'bleak,' 'uncertain'...

—Robert Huff

No aid for draft dodgers

Starting next July, federal aid may be denied students not registered for the draft, a linkage sharply criticized by Stanford officials prior to its enactment by Congress this year.

No federal regulations have been issued on how this will be verified and enforced. Huff hopes the question of verifying whether or not a student is in fact registered for the draft will not be left to the universities. The House of Representatives made quite a point of this, urging the Secretary of Education and director of selective service to handle verification, before the law passed.

According to *The Chronicle of Higher Education*, the Education Department is considering a plan where draft-age men would have to provide campus financial aid officers a copy of a letter from Selective Service indicating they were registered for the draft before receiving any federal aid.

But some aid officers have expressed concern that many students may not be able to offer such proof, since they have not been required to save the letters proving they are registered. Others have voiced skepticism that Selective Service's plan to provide copies of such letters within two weeks, on request, actually would work.

Unfair burden of proof

According to *The Chronicle*, some college officials and student leaders charge the proposed procedures would unfairly place the burden of proof on students, rather than requiring federal officials to demonstrate aid applicants had not registered for the draft.

A public interest law firm in Minnesota has filed suit charging that the new law discriminates against low income men who need financial aid.

Earlham College in Indiana is considering a court challenge of the law and has told current students they will not be penalized for acting on the basis of their conscience.

Yale has indicated that those not registered for the draft could meet financial needs through non-federal funding sources, adding an estimated $3,000 to $4,000 to their educational cost over four years because of higher interest costs.

Haverford College in Pennsylvania, Whittier College in California, George Washington University and Princeton are among the institutions considering aid for students not registered for the draft, according to *Higher Education Daily*.

The proposed regulations may be issued by the end of December, according to James Moore, director of student aid programs for the Department of Education.

Higher Education Daily reports that the Department currently leans toward having aid applicants sign forms saying they have complied with registration and intend to use the federal aid for educational purposes. How these statements would be checked remains unclear.

—Bob Beyers

UNDERGRADUATE SCHOLARSHIP SUPPORT

	1979-80	1982-83
Trustee appropriations	$ 3,524,917	$ 6,971,123
Gifts and endowments	3,451,555	6,668,300
California state	2,093,871	2,500,000
Basic Ed. Opportunity	1,183,998	800,000
Supplemental Ed. Opptny	567,835	628,000
Other outside awards	1,041,049	1,637,000
TOTAL	11,863,225	19,204,423

Two grants for Lively Arts

Vicky Holt, director of the Lively Arts at Stanford, has announced the awarding of two grants for 1983-84 from the National Endowment for the Arts. A multidisciplinary cultural program, the Lively Arts presents 35-40 music, dance, and theater events a year at Stanford. In addition, through its Community Outreach Program, it presents 75-100 events in the community at senior centers, schools, hospitals, dormitories, and private homes.

The first grant award is for $6,000 and is for the development of a generic program for computers based on the Lively Arts model. This model has been used by the Lively Arts for nine years to forecast season attendance and income.

The other grant, also for $6,000, is for the expansion of the Community Outreach program into local corporations and the business community.

For further information about either of these grants, contact Sally Mentzer, 497-2551.

Ph.D.orals

FRIDAY, JANUARY 7

Mohamed T. Hadidi, electrical engineering, 10 a.m., Durand 450. **Hamid R. Amirazizi**, electrical engineering, "Cryptanalytic Tradeoffs and Cryptographic Systems," 3:15 p.m., Durand 450.

Looking deep into the eyes, Stanford builds new probe

A new device developed at Stanford University greatly improves ultrasound imaging of the inner eye.

Called the A/B Scan, this machine's basic components are a hand-held probe and a television screen, but its electronics are so complex they will enable opthalmologists to make more precise diagnoses than ever before.

Doctors can now view a "real-time" or television-like picture of events in the eye, thanks to the work of electrical engineering Prof. James Meindl, Alan Susal, a physician specialist in opthalmology, and Terry Walker, a senior engineering research associate at the Stanford Electronics Laboratory.

The group began work on the B scanner in the spring of 1977, after the National Institute of Health issued a supplemental grant to Meindl and the Electrical Engineering Department. The machine was licensed through Stanford's Office of Technology Licensing and is being manufactured and shipped by STORZ Instrument Company of St. Louis, Mo., which specializes in the sale of opthalmic equipment.

The scanner may be used for imaging small body parts, Walker said, but it was designed primarily for opthalmic exams.

The machine is used every Tuesday at the Stanford Eye Clinic under Susal's direction. "It has the clinical features that one would expect from a whole new generation of technology," Susal said.

The patients examined by the scanner have special problems, according to Walker.

"Usually the nature of the problem is that there is something wrong with the eye that makes it difficult or impossible to see into it visually," he said.

For example, the patient might have a cataract or a hemorrhage from an accident. The opthalmologist then needs to determine the feasibility of surgery, and "the only way to find out is to use ultrasonic imaging," Walker said.

Machines called static B-scanners have been used in the past but they are not able to provide any information about movement within the eye, which is important in telling if a retinal detachment can be repaired.

A B-scan instrument is one which produces a cross-sectional image of the part of the body that is being studied.

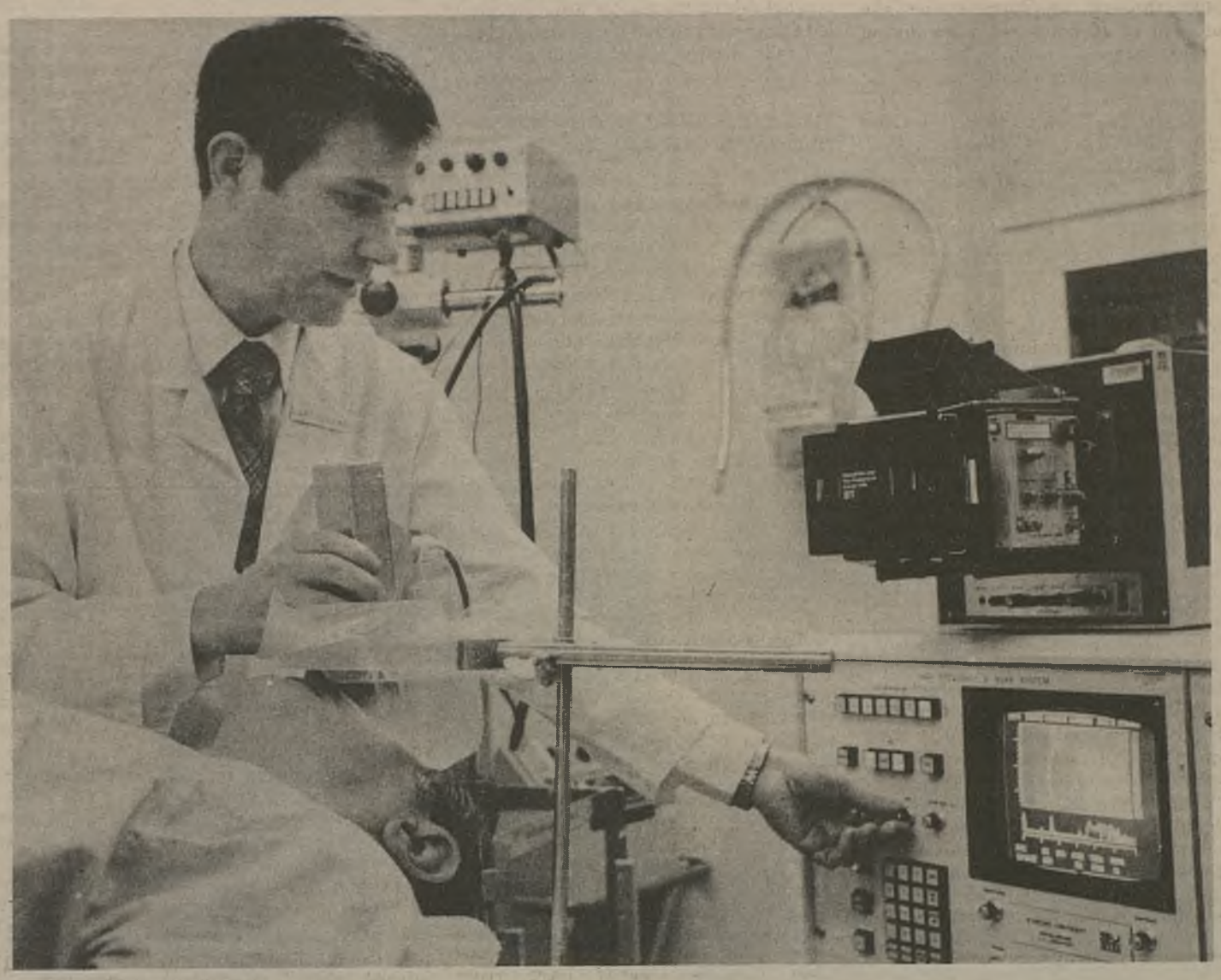
The probe has 32 transducer elements on the front of it, and in the case of the eye, the transducer face is placed against a special liquid on either the cornea or the eyelid, depending on the case. Ultrasonic beams are sent out from the transducer elements in a sequence, forming the scanning process.

"Works like radar"

"It works like a radar system, so if there's anything out there that produces a disturbance in the medium, either a tissue or changes in the type of medium, like going from water to the vitreous humor that's inside the eye, you get an echo," Walker said.

The transducer is a special type of electronic material which translates an electrical force applied to it into sound waves. When ultrasonic echos come back from the eye, they are converted back into electrical signals and then amplified in the probe and sent to the computer behind the television screen.

Each transmission and echo sequence takes 80 millionths of a second. The entire sequence occurs 60 times per second, and the television display that is on the main instrument is synchronized with this time period.



Alan Susal, a physician specialist in opthalmology, views a television-like picture of events in the eye using the A/B Scan.

Usually the nature of the problem is that there is something wrong with the eye that makes it difficult or impossible to see into it visually.

—Terry Walker

"So you get 60 complete ultrasonic images a second on the screen so that it produces a real-time moving image on the display, and that's an important feature," Walker said.

Machines in the past were only capable of displaying an image eight of 10 times per second, according to Walker, and therefore, the image would jump or flicker on the screen. "On this one the scanning is fast enough at 60 times a second so that you get a perfectly smooth motion, just like watching ordinary TV or a movie," he said.

A problem in producing a real-time image is that it is necessary for the returning echo to be matched up with the transducer element it was sent from. The matching process, called electronic multiplexing, is done with special integrated circuits developed in the Integrated Circuits Laboratory at Stanford.

The circuits, which Walker referred to as "a key ingredient to the production of this type of instrument," were first developed by electrical engineering Prof. James Plummer under an NIH grant on ultrasonic imaging. Walker and Plummer modified them for the A/B Scan and they are now being produced for STORZ by a commercial firm.

When the echos from the transducer get to the main instrument, they are amplified and processed by a "fairly sophisticated radio receiver."

"That's all handled by complex digital electronics custom-made specifically for this," Walker said.

Stored memory

By designing a memory unit that is divided into many sections, the scan's designers were able to produce another innovation: the data is stored into a memory unit at the same time it is being presented on the television screen.

The information is not only stored in the computer, but it can also be put onto a videotape, which can be used in any standard video player. "The doctor can then play it back at his convenience later and reexamine the patient and see if he missed anything," Walker said.

Markings, such as patient number and lines indicating measurement, normally on the machine's screen are also put onto the tape.

The screen has two main displays: the upper region corresponds to the B-scan. The lower to something called an A-scan.

The A-scan is generated by a separate circuit, "which allows you to select some part of the center of the image and display as a function of distance, the strength and echo," according to Walker.

The computer that controls the whole system is "user-friendly" or user-oriented, Walker said. "That is to say all of the controls on the control panel were thought out very carefully as towards what the user wants to do, not necessarily what the machine wants to do."

Three buttons on the probe also provide a convenience for the physician. They are duplicates of buttons on the main instrument but allow the doctor to examine the patient and look at the display without having to reach over to it.

One of the buttons is for "frame freeze," which allows the doctor to study an image for a longer period of time. Walker said that an opthalmologist might stop the picture and then instruct the computer to set some marks on the screen and measure the distance between them, equivalent to the distance in the eye.

Precise measurements are important when a patient needs a cataract lens replacement, Walker said, "because the lens which is put in has to have the proper strength or the person won't be able to see without using strong glasses."

—Kristen Christopher

Five Stanford experts discuss whether growing trends to ...

BY DONALD STOKES

The possibility of a world trade war, sparked by the growing wave of protectionism in many countries, including the U.S., was discussed by five Stanford experts on the economics of world trade.

They were interviewed after the virtual deadlock which occurred at the December meeting of 88 of the world's trade and foreign ministers at Geneva. The meeting was unable to agree on any measures to stop the drift to protectionism, a drift that could wreck the free trade which has marked the postwar prosperity of the free world.

The world economic conference did not address itself to the real problem, said **Gerald Meier**, professor of international economics at Stanford's Graduate School of Business.

"We are in a worldwide depression," he said. "World trade is absolutely flat. Nations profess free trade but they practice protection, including this country, which has quotas on auto, steel, sugar and so on.

"The crucial problem at the ministerial meeting in Geneva was what to do about market safeguards, and nothing was done about it. The fact is that countries are bypassing GATT (the General Agreement on Tariffs and Trade). What is needed is to bring them back under some code of conduct as to when to impose market safeguards, and under what conditions. Of course, it is all aggravated by this worldwide depression.

"The 5,000-word statement issued at the end of the conference simply said in effect that the problems would be considered by the interested parties."

Asked whether a world trade war was in prospect Meier replied: "We are already in a trade war. We are all acting in a competitive beggar-your-neighbor fashion. We have quotas, import duties and export subsidies—nothing was done at the world conference about export subsidies.

"Here in the U.S. we have had a bill introduced for 'reciprocity,' which in fact is direct retaliation against Japan. The United Auto Workers are proposing local content legislation, and so on."

Meier agreed that part of the problem lay in the overvaluing of the dollar, and high interest rates. "What is needed is growth in the economies of the O.E.C.D. (Organization for Economic Cooperation and Development) countries. We have all been worrying about this for some time, largely because we are in an anti-Keynesian world. In the Keynesian world we had growth.

"Now we must replenish the International Development Association under the direction of the World Bank. We must also increase quotas under the International Monetary Fund."

Prof. Ezra Solomon, Dean Witter Professor of Finance at Stanford's Graduate School of Business, said:

"The possibility of an international trade war may seem a very tangible thing, but I do not think such a war is actually coming. Especially as I expect that the Japanese will soon be delivering something on a bilateral basis.

"We have been growing increasingly edgy with the Japanese and have made our feelings known to them increasingly sharply. By dint of repetition I think we are getting our message across.

"One hopeful fact is that the Japanese now have a new leader who is in a position to take a position that is different from his predecessor. I was in Japan a few weeks ago and I realized that the Japanese are aware they have a serious problem on their hands.

"Protectionism in any form would be a disastrous way of settling our problems. Its net effect would be to increase the already high level of unemployment all over the world. Protectionism simply passes the burden of unemployment from one country to another, and that is a game anybody can play.

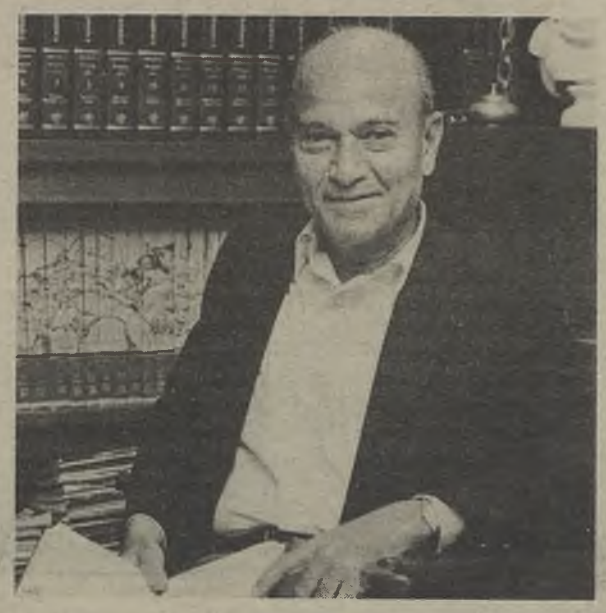
"It is foolish to expect that any nation is smart enough to get the edge over all other nations. We have an enormous trade surplus with Europe, for example, and if we misbehave with the Japanese, with whom we have a deficit, we obviously would be inviting the Europeans to misbehave vis a vis us.

"Protectionism was tried in the 1930s, when there were similar problems of worldwide recession, and the results were disastrous. It is possible that protectionism was one of the seeds of World War II.

"I hope that the world is not going to try protectionism again, that short-term politics are not going to triumph over the long-run interests of the world.

"However, the bigger the world's problems become, the more chance there is that people will seize on dumb solutions."

Asked whether the dollar was overvalued, and so caused much imbalance in world trade, Solomon said: "That is a temporary problem and is not likely to last. The dollar has already come down quite a bit relative to the Japanese yen.



Ezra Solomon

"Return to Keynesiasm? That is a vague label. Keynes wrote for 30 years and said many things. I do not think that if Keynes were alive today he would suggest larger budget deficits than the world is running already. The U.S. budget this fiscal year will be just under $200 billion!

"There is a deep structural adjustment that will have to be faced over the next four to five years. I refer to the change in energy prices. I don't see how the price of oil can go from $2 a barrel to $32 without having a profound effect on the viability of many industries throughout the free world. We have to face up to this fact.

"It was not so much the transfer from oil importers to oil exporters (which was disruptive enough) but the fact that, at the current price of oil, much of the plant and equipment which had been put in place based on $2 oil, is no longer economically viable.

"A large part of our mainstream technology in this country was critically based on cheap oil.

"The Russians have a surplus of oil, but they too are suffering from the same industrial problem. Because the value of oil is now so high, they also have to conserve on its use."

Asst. prof. John Cuddington of the Economics Department believes that the world economic conference at Geneva was held at a very unsuitable time. "With the world in its present recession it was very difficult for the negotiators to talk about further trade liberalization, because of the fears that liberalization would hurt their domestic industries."

Asked about the various measures which many countries were now taking to restrict imports outside tariffs, Cuddington replied that there were many rules under the GATT which controlled them. "They have been in force at least since the 1974 Tokyo round of GATT talks.

"Many of the protectionist policies now in force are flagrant violations of GATT, although individual countries have justification for what they are doing, or think they have, in terms of escape clauses, etc.

"One of the problems is that the enforcement mechanism and ways of complaining about violations of GATT rules are not as good as they could be. There is no international policing mechanism which can determine that the rules are being broken and impose sanctions for their violation.

"Rather, the countries involved must reach negotiated settlements. One of the hopes of the U.S. delegates to the conference was that they would be able to establish a better mechanism for dealing with GATT violations.

"The Europeans, in particular, were quite reluctant to put any teeth in the existing rules. So I would say that, rather than new rules the major problem is in enforcing the rules we do have, particularly in enforcing the rules on non-tariff barriers.

"In the 1962 round of GATT talks, tariffs were cut to pretty low levels. In the 1974 round the attention was focused on those non-tariff barriers. It is much more difficult to negotiate reductions of these sorts of impediments to world trade, and to enforce them.

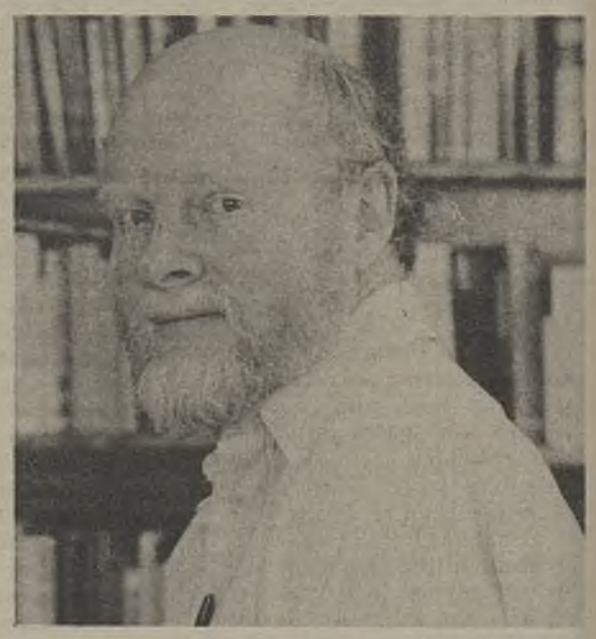
"Current examples of non-tariff barriers abound, such as the French directing that all Japanese videotape recorders must clear the French customs at the small out-of-the-way inland town of Poitier.

"This is only one example. The Japanese restrict imports in their own subtle ways. I hear all sorts of anecdotal stories about the measures which the Japanese use to make it difficult for imports to get into Japan."

Ronald McKinnon, professor of economics, believes that the overvalued dollar is the source of most of the economic woes of the world.

"The global depression has a clear monetary origin which is not visible in American monetary statistics but becomes obvious when one looks at the monetary contractions going on in other reserve-currency countries," he said.

"Because of unduly tight American monetary policy, the dollar has overappreciated on the foreign exchanges, and foreign central banks have been forced to reduce their own money supplied to



Ronald McKinnon

prevent their currencies from depreciating further.

"Because of the overvalued dollar, the major burden of adjusting to unduly tight money in this country has fallen disproportionately on our tradeable goods industries—farming, manufacturing and mining, whether they be exporters or import

continued on next page

...economic protectionism is heading world into a trade war

substitutes.

"Not surprisingly, the severe depression in these industries has heightened calls for protectionism. The call is for quotas or tariffs on imports and subsidies to exports. There is the program to dump butter abroad, the politically taxing demands on foreign governments, such as Japan, to open their markets further to American products.

"But of course these protectionist programs seriously undermine our free-trade stance (and that of GATT) and are likely to be with us indefinitely, long after the monetary disalignment, giving rise to the overvalued dollar, may have disappeared.

"Clearly, the preferred solution is for the Federal Reserve Bank to expand the U.S. monetary base *relative* to those of the German Bundesbank and the Bank of Japan, so that the dollar comes down against the deutschemark and yen.

"The aggregate monetary base of the three countries would then expand somewhat, but to an extent carefully delimited so as to allay fears of future inflation."



Yuan-Li Wu

Yuan-Li Wu, consultant and visiting professor at Stanford's Hoover Institution from University of San Francisco, said:

"I think the inability of the world conference to resolve the various differences really reflects the longstanding problems that exist, and which have been made worse by the worldwide recession. This is particularly so in connection with agriculture.

"If you look at the auto problem we have with Japan, or the steel problem with Europe, these are really issues of Detroit or Pittsburgh workers against Japanese workers. Whom of these should lose more or get more out of the world economy?

"In the long run it is really a struggle for a larger share of the world's product, and over who should bear more cost in adjusting to changing conditions.

"The same is true not only of our relations with the free market countries, but also with the Soviet-type countries. In our dispute about the pipeline sanctions problem, for example, should Germans and Italians be allowed, from our point of view, to supply the Soviet Union in a way that strengthens the U.S.S.R. militarily? In effect to increase our own arms burden and make our taxpayers pay more?"

Asked his assessment of the possibility of an international trade war, Wu said: "I believe that the economic relationship and the defense relationship are part of the same problem. We cannot resolve either one separately. In the past we have always thought that we could separate them. We continue to hope that. But directly or indirectly we have always been forced to face the fact that if we do not resolve our economic disputes we shall weaken our alliance.

"If we do not have an understanding of how to deal with the Russians, and have a uniform approach to them, then we shall all have to suffer the consequent impact on our economic relations with them.

"We keep on trying to separate the two issues of economic and defense relationships, when really they cannot be separated.

"It is not enough to say to ourselves, 'We have NATO to take care of our defense, so now we can fight over economic matters among ourselves.' "

— **Donald Stokes**

Tresidder Union plans big celebration of 20th birthday

Tresidder Memorial Union celebrates its 20th anniversary this quarter with a celebration of the arts which will include a jazz series, classical music, and a film series.

As a special treat, Tresidder will offer a free trip for two to New York City, through the generosity of Sequoia Travel.

Highlights of the anniversary program schedule include an Espresso Jazz Series in the Coffee House, the Sunday Festival Series (classical music), and the Great Directors Film Series featuring films by Godard, Antonioni, Oshima, and the American avant garde.

A dance lecture/demonstration, a lecture/slide presentation by Aldo Rossi, a student spotlight program, and the Jing Lyman lecture series on Women and the Performing Arts sponsored by CROW and the Lively Arts are other offerings during winter quarter.

A schedule of events and information are available at the Tresidder Information Center, 497-4311.

* * * *

Tresidder Union's groundbreaking in April 1961, came after 14 years of planning that began with President Donald Tresidder's vision of a student activities center which would include the Bookstore, post office, Old Union, Dinkelspiel, and Tresidder Union.

As president of Stanford from 1943 to his death in 1948, Tresidder was noted for his commitment to serving the needs of students and enhancing their academic, social, and recreational experience at Stanford.

His ideas prompted the Board of Trustees to establish Tresidder Union and to determine its mission to be "part of the informal educational program of the University. Its committees, boards, and staff shall present a social, cultural, recreational, and intellectual program for the whole campus."



Tresidder opened its doors in October 1962, and in its first year housed 290 programs or events (128 of them sponsored by the Tresidder Programs Board) and 1,383 meetings.

Dr. Chester Berry, Tresidder's first director, had the goal of balancing retail services and programming—"The policy is to make money downstairs and spend it upstairs." He was enthusiastic about the Union's potential for attracting student involvement and providing high quality programs.

Although Tresidder has not undergone any major expansion in its first 20 years, its service areas have constantly evolved as the needs of the campus community evolved. A full-service bank, ticket office, and the information desk were added on the upper level.

Downstairs, a small, informal coffee house that began in the cafeteria moved into the table tennis area, and the overwhelming popularity of pinball and video games has crowded out most of the other table tennis and billiards tables. Only the bowling alley and hairstyling have remained virtually unchanged.

Currently, Tresidder Union offers a coffee house, cafeteria, store (the service with the highest customer usage), a travel agency, pastry shop, recreation center, ticket office (handling Ticketron and BASS as well as campus events), information center, full-service bank, hairstyling shop, meeting rooms, lounges, patios, office space, and a satellite food service at Encina Station. Also housed there are the ASSU office and the Office of Student Activities.

"Staying responsive to the campus community is a continual process," says Director Ellie Oppenheim. "As quickly as some needs change or diminish, others become evident and need attention."

A recently completed long-range space use plan for Tresidder by its Union Board includes prompt attention to the design and purchase of additional furniture for the outdoor patios and refurbishing of the second floor meeting rooms.

Other, longer-range plans include the remodeling of the lounge spaces, relocating the information desk to the first floor, and the elimination of bowling so that the store can be moved to the bowling area.

The fight against gonorrhea:

turning up new genetic clues

Stanford microbiologists are using genetic engineering techniques in an attempt to "pull the teeth" of the organism that triggers gonorrhea.

By manipulating the genes of gonococcus bacteria, the scientists have, for the first time, found a way to test an enzyme long suspected to be a weapon the bacteria use to produce the malady.

"If the enzyme turns out to be as important as we think it may be, it could be useful in constructing new ways to provide protection against gonorrhea," said Dr. Stanley Falkow, chairman of Stanford's department of medical microbiology.

Knowledge about the enzyme may lead to a vaccine or similar combatant against gonorrhea, Falkow said.

A major obstacle to creating a useful gonorrhea vaccine has been the gonococcus bacterium's ability to disguise itself, said Falkow.

Most bacteria wear a membrane coat that is studded with protein tags. Cells in the human immune system use these tags to identify the foreign bacteria, which they then destroy.

But the gonococcus can mutate and subtly change the configuration of its proteins, effectively camouflaging itself against the body's defenses.

"What you would like to do with an organism that can change its face like that is pull its teeth so that it can't cause an infection," Falkow said. "In other words, it could still multiply in the body, but not cause tissue damage."

The "tooth" in the case of gonorrhea may be an enzyme, called "IgA1 protease," that Falkow and a graduate student, J. Michael Koomey, have studied.

The bacterium uses the enzyme as a chemical cleaver that snips in two the normal antibodies a healthy person makes to fight off infection.

In response to an increasing number of invading bacteria, the human body produces more antibody. In turn, the bacteria produce more enzyme to destroy the antibody. The infected person loses the battle as he develops the genital sores and sometimes serious complications associated with gonorrhea.

Koomey and Falkow have identified the gene that is responsible for "telling" the bacteria how and when to produce the enzyme. Through a series of steps, described in the December *Proceedings of the National Academy of Sciences*, the scientists have been able to eliminate that single gene from the bacteria, creating an organism that is like gonococcus in every way, except that it can't make the critical enzyme.

The "impotent" organism now serves as a research tool in understanding the role of the enzyme in causing disease.

Normally, the next step in research would be to compare the responses of laboratory animals injected with either



". . .The whole basis of medicine really should be preventative."

—Stanley Falkow

gonococcus or the engineered bacteria. But the crucial enzyme destroys only one specific human antibody, which is not present in animals.

This specificity makes the usual testing of the virulence of the bacteria in rodents and primates impractical, Falkow said, and has slowed research.

"If we can prove that the enzyme plays a role in disease, there are research groups interested in carrying the work a step further, to determine whether or not the engineered bacteria could be useful in providing protection against disease," Falkow said.

Although penicillin and its derivatives can effectively stop most acute bouts of gonorrhea, the antibiotics are only a temporary solution to the sexually transmitted disease, he added. Already, virulent strains of the bacteria have evolved that are resistant to penicillin.

"Another important reason we're interested in this particular enzyme is that it is also found in several organisms that cause meningitis (a dangerous infection of the membranes that surround the brain and spinal chord)." In contrast to gonorrhea, meningitis is not easily treated with antibiotics and is often fatal.

"The three major forms of bacterial meningitis all probably have this enzymatic strategy," Falkow said. "So we aren't just addressing the problem of gonorrhea, but also the more general question of the strategies bacteria use to cause disease.

"From the 1940s through the '60s, it was usually felt that through the use of antibiotics, infectious diseases caused by bacteria would be conquered, that we'd simply be able to treat them," Falkow said. "But through the advent of resistance, it became apparent that this was not going to be possible in many cases.

"There's another fundamental flaw in antibiotics," he added. "You have to wait for someone to get ill, and the whole basis of medicine really should be preventative."

—Deborah Franklin

HMP update. . .

Revised plans retain scope, but reduce initial activity

Planning for the new construction and remodeling of Stanford University Hospital continues, though with some reductions in the amount of initial work to be done.

The Hospital Modernization Project staff reported at the regular Dec. 15 meeting of the Board of Hospital Directors that these revisions would not reduce the scope of the master plan for the Hospital.

Planners and architects had been working during the past several months on belt-tightening measures for the project. The revised plans are designed to take into account uncertain future reimbursement levels and a changing economic climate, according to Elvia Garwood, director of the project.

"Our needs for a project of the same scope as originally planned have not changed," she said. "But we wanted to prepare for a less favorable financial climate, and build into the plans somewhat reduced initial construction and modified remodeling phases. This will extend the time for completion of some parts of the project, but preserve the modernization program objectives. The design takes into account construction options which may be included when the financial picture improves."

The new plans call for construction of a new addition near the north end of the present Hospital which would be devoted entirely to direct patient care. Earlier plans had called for three structural elements with part of each devoted to administrative and support activities.

A planned new wing for diagnostic and treatment services is also reduced in the initial construction phases. Eighteen new operating rooms would be constructed, instead of the original 22. Four existing operating rooms, two at the main center and two at Hoover, would be maintained.

The modernization is designed to take place in three steps, beginning with completion of the Phase I building expansion of 1978, then adding in new construction a diagnostic and treatment wing and the first segment of eight new nursing units of 22 to 24 beds each, and lastly remodeling existing areas to meet building codes.

Other features of the revised project are:

- relocation of some acute care and intensive care nursing units, the coronary care unit, and pediatric nursing unit to what will be newly constructed areas;
- a centralized Materials Management area;
- expansion and remodeling of the Dietary Department;
- consolidation of clinical laboratory functions;
- relocation of some medical/surgical beds from Hoover Pavilion;
- closer proximity of new nursing units to existing units;
- reduction of the proposed connecting atrium;
- location of a heliport on the roof of the diagnostic and treatment wing.

These first steps allow for the closing of 83 beds at the Hoover Pavilion. The long-range plan calls for complete closing of Hoover and the beds are accommodated in subsequent new construction at the main center.

Current plans also take into account the consolidation of Children's Hospital at Stanford that ultimately will be located adjacent to the new nursing units at SUH.

The HMP staff will be meeting with Medical Center departments and services during the next several months to develop detailed department layouts. During that time materials are being prepared to submit to state and local agencies for Certificate of Need review. Construction documents also will be developed and submitted for local and state approval. Construction could begin as early as April, 1984.

As outlined to the Board of Hospital Directors, the initial stage of the project would have a construction budget of $62 million and a total project budget of $100 million. Earlier budgets were $78.4 million for construction and $123.9 million total project cost.

Sheldon King, executive vice president and director of SUH, said the new directions represent "a very solid plan, which meets our critical needs for bringing the physical structure of the Hospital into balance with the advanced state of care provided to our patients."

The project focuses more on modernization than expansion of services, with only six new beds (for neonatal intensive care) added to the total current bed capacity of 663.

The Hospital modernization is being designed by the Naramore Bain Brady Johanson Group, an architectural firm based in Seattle with an office in Palo Alto.

—Barbara Battino

Medical Faculty Openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

A tenure track faculty position at the assistant professor level is available in the division of emergency medicine, department of surgery, at Stanford University School of Medicine.

Candidates should have strong interest in basic or clinical research, and/or EMS health services delivery research. The position comprises half-time research, and half-time clinical care directly supervising housestaff and students. There will be limited administrative responsibilities.

Candidates must be emergency medicine board eligible. Candidates with demonstrated research experience or training will be preferred.

Applicants should send current curriculum vitae, bibliography, and three reference names to: Michael Eliastam, M.D., M.P.P., Division of Emergency Medicine, P1016, Stanford University Hospital, Stanford, CA 94305.

Low cal diets and heart attacks: a warning

Persons on diets of 800 kcals or less per day may be endangering their health even if under a doctor's supervision, say both a physician and a dietitian at Stanford University Medical Center.

"It is certainly sound advice for persons to work with their physician when starting a diet. But extremely low calorie diets may cause a breakdown in structural protein, including heart tissue," said Dr. Peter Rudd, assistant professor of medicine.

"With a breakdown in heart tissue comes a risk of cardiac problems. These can occur suddenly and without warning. Even if a patient is hospitalized and constantly monitored, heart problems may still occur. Some are easily corrected, but others could be fatal," said Rudd, an internal medicine specialist.

Rudd and Stanford University Hospital registered dietitian Jane Woeckener were interviewed separately in the wake of public interest triggered by the death of a Bay Area woman who reputedly adhered to a low calorie diet and by articles offering reassurances about various diet plans.

"There are no easy answers when it comes to dieting," said Woeckener, who serves as assistant director of dietetics at SUH. "But the safe and sensible way to lose weight involves eating a wide variety of low calorie foods from the basic four food groups (dairy, meat, fruits/vegetables, breads/cereals) and planning a slow, steady weight loss of about two pounds per week.

"Diets below 1,200 kcals for women and 1,500 kcals for men are generally not recommended because they almost always are lacking in important nutrients needed to meet minimum Recommended Dietary Allowances (RDAs) and to maintain health." (Kcal is short for kilocalorie and is the commonly accepted measurement of the energy value of food.)

"Behavior modification and changing the attitudes and habits which lead to being overweight in the first place are crucial components of weight loss. Crash diets with temporary results do not significantly lower the risks associated with obesity," Woeckener added.

Both Woeckener and Rudd cited recent studies suggesting that diets of fewer than 800 kcals per day are potentially dangerous. These studies, Rudd noted, examined several different nutritional regimens. The number of calories and variety of components appeared to be more important than the specific content of the diet, he said.

Woeckener and Rudd said that an extremely low calorie diet may be desirable only when someone is so obese that the risk of sudden death is high unless weight loss begins quickly.

"In these circumstances, the patient frequently is already hospitalized. Close observation will not eliminate the risk of sudden death while rapidly losing weight but would at least permit health professionals to respond quickly to a cardiac arrest," Rudd said.

He added that the heart is especially vulnerable to damage on a low calorie diet, even if protein is its main component. The addition of modest amounts of carbohydrates may reduce breakdown of the body's structural protein and may help protect the heart.

"But there have been reports of lowered potassium, calcium and magnesium, which could make irregular heart rhythm more likely. These electrolytes (blood minerals) are necessary, and they are best provided within the context of a well balanced diet," he added.

Among the studies cited by Rudd and Woeckener was one published in the April 1981 edition of *The American Journal of Clinical Nutrition*. Authors included Harold E. Sours, M.D., formerly of the Bureau of Epidemiology of the Center for Disease Control in Atlanta, and Victor P. Frattali, deputy director of the division of nutrition of the Food and Drug Administration, which currently is examining low calorie diets.

The article studied 17 individuals who died of heart attacks suddenly after long periods on very low calorie diets, consisting entirely or primarily of protein.

"The deaths appeared to be independent of type of medical supervision received during the diet, daily dosage of potassium supplementation and biological quality of the protein product used," the authors said. The 17 individuals had been on diets of about 300 to 400 kcals per day.

"We conclude," the article stated, "that use of very low calorie weight reduction regimens should be curtailed until further studies determine what modifications if any can insure their safety."

Contacted in Washington, Frattali said the article represented the research of himself and colleagues and did not indicate an official agency endorsement or warning. Officially "we're trying to keep ourselves informed in regard to low calorie diets," he said.

On Dec. 30, the FDA issued a public statement that diets under 400 kcals per day "are physiologically unsound regardless of their overall nutrient composition.

"FDA believes their use should be considered experimental and patients should have full knowledge of the risks, and undertake the diet only with proper medical supervision."

Diets under 800 kcals per day should be used only under proper medical supervision, the FDA said.

—Mike Goodkind



Laurence Kedes



Roger Allen Warnke



Andrei Calin

Trustees approve faculty promotions

Three Medical School faculty members have received advancements approved last month, Dec. 13, by the Board of Trustees.

Dr. Laurence Kedes became a professor of medicine (hematology), Dr. Roger Allen Warnke was promoted from assistant to associate professor of pathology, and Dr. Andrei Calin was appointed associate professor of medicine (clinical).

Kedes' primary research interests lie in the fields of molecular genetics and molecular embryology. He has achieved national recognition for his studies involving genetic engineering.

In recent years he has expanded his interests into application of artificial intelligence and computer programming to biology.

Kedes has served as director of admissions of the Medical School. He received his M.D. from Stanford in 1962. He joined the Stanford faculty as an assistant professor in 1970, when he also began serving as a staff physician at the Palo Alto Veterans Administration Medical Center. He became an associate professor in 1976.

Warnke has been recognized as a leading researcher into diseases of the blood, particularly the classification of lymphoid tumors.

He became an intern in pathology after receiving his M.D. from Washington University, St. Louis, in 1971. He became an assistant professor in 1976.

Calin serves as chief of the rheumatology section at the PAVAMC. He received his medical training in England and joined the Stanford faculty as an assistant professor in 1976. He has published numerous articles and book chapters in his primary field and on medical anthropology.

County facilities to care for working poor

Stanford University Medical Center physicians were notified last week by Chief of Staff James Silverman that because of the state's restructuring of the Medi-Cal program January 1, the responsibility for care of Medically Indigent Adults (MIAs) is being transferred to county governments.

This means that there will be no reimbursement to the Hospital for any care given to such patients, and they should be referred to county health facilities.

MIAs are generally low income adults between 21 and 64 years of age, who have major medical needs, are not otherwise eligible for Medi-Cal, and who cannot pay their hospital or doctor bills. They are often called the "working poor."

The MIA program is separate from a program that grants contracts to hospitals for inpatient care of remaining Medi-Cal patients. Announcement of hospitals to be awarded Medi-Cal contracts in Santa Clara County is expected soon.

Both community and faculty physicians at Stanford were sent information about the new law in a letter from Dr. Silverman. He noted that patients who are not covered by private health insurance, Medicare, Medi-Cal, or who cannot pay for hospital health care services, will be referred to county health facilities, based on their county of residence.

The physicians were asked to refer MIA outpatients to county clinic facilities. Inpatients will only be admitted to Stanford if emergency care is needed, and they will need to be transferred when their condition stabilizes. Emergency care will be provided regardless of the patient's ability to pay.

Santa Clara county residents will be directed to Santa Clara Valley Medical Center, 751 Bascom, San Jose, telephone (408) 279-5100.

San Mateo county residents, to Chope Community Hospital, 222 W. 39th Avenue, San Mateo, telephone (415) 573-2222.

Residents of San Francisco county will be referred to San Francisco General Hospital; Marin county residents to Marin General Hospital; Alameda county residents to Highland General Hospital, Oakland; and Contra Costa residents to Contra Costa County Hospital in Martinez.

Before the new law, MIAs could receive Medi-Cal benefits at any hospital in the area. The state reimbursed the hospital a percentage of its cost of providing the care. Under the new law, these patients can no longer receive public assistance benefits at whatever hospital they or their physician choose, but must use county-designated facilities.

MIAs comprise about three percent of the total patient population at Stanford, or about 1,000 patients per year.

In the Emergency Department, Stanford emergency physicians will continue to treat all patients, including MIAs. But MIAs who need hospital admission will be treated and then will need to be transferred to a county facility when their condition is stabilized and they can be safely transported.

According to Dr. Michael Eliastam, director of Emergency Services, "conditions such as serious trauma, heart attack, or any other situation where immediate care is required, will certainly be treated at Stanford." However a patient who may need elective surgery, as for hernia repair, which is not an emergency, will be informed of the need for surgery or other care and will be advised to go to a county facility.

The change in law will affect approximately 270,000 Californians. For many it may mean changing the doctors and hospitals they are accustomed to.

According to the law, some persons in the MIA category will continue to receive Medi-Cal benefits after Jan. 1 at whatever facility they or their physicians choose. These include individuals in skilled nursing or intermediate care facilities, medically indigent children, pregnant women, and refugees in the United States less than 18 months. —Barbara Battino

Medical School's affirmative action gets mixed acclaim

Despite inflation, cuts in funding, and an adverse climate for higher education, the School of Medicine has maintained its commitment to affirmative action, according to a faculty report recently made public.

Still, the Faculty Affirmative Action Committee added, there is much progress to be made in the area of minority recruitment at the Medical School, especially for minority faculty.

Minority representation in the various student categories as percents of the totals for 1981-82 was as follows (figures include Asian Americans, who, although not considered a disadvantaged minority by Stanford's internal criteria, must be included in statistics for federal reporting purposes):

- **M.D. degree candidates:** 34 percent;
- **Masters candidates:** 9 percent;
- **Ph.D. candidates:** 12 percent;
- **Housestaff (interns and residents):** 13 percent;
- **Postdoctoral fellows:** 7 percent.

Discounting Asian Americans, however, under nine percent of the total number of masters candidates, medical students, Ph.D. candidates, housestaff, and postdocs was comprised of minorities.

The percentages for women were:

- **Medical students:** 34 percent;
- **Masters candidates (mostly physical therapy students):** 81 percent;
- **Ph.D. candidates:** 31 percent;
- **Housestaff:** 27 percent;
- **Postdoctoral fellows:** 30 percent.

According to Dr. John Steward, associate dean for student affairs, "Women, like Asian Americans, are not considered a disadvantaged group, and there is no longer a special effort required to recruit them as students."

"All statistics on health, education, income, welfare, etc., identify the Black Americans, the Hispanic Americans, and the Native Americans as our currently disadvantaged citizens," states the report.

As documented, disadvantaged minorities were rarely found in the graduate programs or postdoctoral fellowships, where they could be prepared for academic posts.

"Changing this situation should be a top priority in affirmative action in the coming years," the report asserts.

"Faculty members traditionally come from a pool of postdoc M.D.'s and Ph.D.'s, so it's important to see who is 'in the pipeline' for future appointments at Stanford and elsewhere," explained committee chairwoman Alberta Siegel, professor of psychology.

The School made no progress in recruitment of minority faculty in 1981-82, as was true the previous year, the report found.

Women, however, comprised 23 percent of the 22 faculty members appointed, compared to 15 percent the previous year.

Still, the report indicates that for the past two years all faculty appointees at a rank higher than assistant professor were white males.

Siegel explained her committee's role in seeing to it that all faculty searches are widely advertised, and conducted along affirmative action guidelines.

Dr. John Wilson, associate dean for academic affairs, said, "As I sense it, the faculty and department chairmen are committed to affirmative action and the spirit of it as well."

The problem with disadvantaged minorities, he said, is "not that we don't look for them, but there really aren't large numbers of them to consider for the posts we have available."

He explained, "The standards for faculty appointment at Stanford are the same for all applicants. It's when you have two equally qualified candidates—which would happen very rarely—that you'd apply the principles of affirmative action in the selection process."

Steward said, however, that in considering disadvantaged minority students' applications to the M.D. program, the Admissions Committee may place a different emphasis on some of the information it is reviewing. "We tend in these cases to look more at the 'distance traveled'—the promise and potential of an individual—as opposed to tangible achievements."

This fall's entering class, he said, enrolled 65 percent of the minorities who had been accepted to the School; the figure for non-minorities was 53 percent. "I think this had to do perhaps with the fact that we made a large effort to recruit minorities," he said, adding that there are "few medical schools in the U.S. that do better than we do in meeting financial aid needs."

Still, "One major reason we lose many medical students who would otherwise come here is the cost of coming to Stanford, considering tuition and other living expenses," said Diane Winkle, director of the Office of Student Affairs.

The Medical School tuition for the 1981-82 year was $8,340. Currently it's $9,591, and the estimated tuition for the 1983-84 year is $10,932.

More than 80 percent of Stanford's medical students receive at least some financial assistance. Proposed federal legislation may result in a 50 percent decrease in available low-interest funding for student loans, according to the School's financial aid administrators' predictions.

Students and administrators fear that the number of applicants to medical school—at Stanford and elsewhere—will decrease. Those who do apply will most likely be from a more homogeneous segment of society.

Steward noted that the current year's minority representation in the School's student body has dropped by one or two percentage points since 1981-82. "This is a national phenomenon right now, which we're hoping is not a trend," he said.

"Stanford traditionally has done very well in recruiting disadvantaged minority M.D. candidates. National figures for the 1980-81 year indicated that of the 117 medical schools in the U.S. (excluding three with predominantly minority student bodies), Stanford had the third highest percentage of minority students." Only three of the 117 schools had greater than 20 percent disadvantaged minority enrollment, Steward said, and Stanford was one of these.

He added, "Our financial aid programs are adequate for awhile, but we aren't sure what will happen after the next couple of years. But with the School's goal of producing academicians and researchers, who are among the lowest paid in medicine, we must provide aid to encourage students to pursue these areas."

The hiring of an assistant dean for student affairs to attract outstanding minority students headed for academic careers was recommended by the School's faculty senate last spring. While no formal search is yet under way, a committee headed by Dr. Roy Maffly, director of Admissions, is defining criteria for such a post.

For the 1981-82 year, the members of the Faculty Affirmative Action Committee were the following members of the School's tenured faculty: Margaret Billingham, M.B., associate professor of pathology; Byron Brown, Jr., Ph.D., professor of biostatistics; Gary Gray, M.D., professor of medicine; Michael Marmor, M.D., associate professor of surgery; Eric Shooter, Ph.D., professor and chairman of neurobiology; and Dr. Siegel.

—Lisa Ames

Psychiatrist advocates relaxation for tension headaches



"People feel so much better when they're not dependent on drugs. . ."

—Stewart Agras

The best aspirin substitute for a tension headache might be relaxation training, biofeedback, or perhaps even a nice hot bath, says a Stanford psychiatrist.

Besides avoiding the small but ever present medical risks of any medication, people who turn to nonpharmaceutical solutions for simple tension headaches receive "an extra dividend, a philosophical advantage.

"People feel so much better when they're not dependent on drugs," explained Dr. Stewart Agras, professor of psychiatry and director of Stanford's behavioral medicine clinic.

"There is a growing feeling that people should take control of their own health care. What better way than to shift from drugs—a passive solution—to self-management."

The holiday season is a time of high stress for many people, a time when the muscles in the neck and head are prone to stiffen, producing a classic tension headache.

"For many people the answer is as simple as a warm, relaxing bath. Or perhaps they just need to stop for a moment and take the time to calm down."

For more persistent headache problems, Agras said, relaxation training or biofeedback might help.

"Although we do not have scientific research comparing the effectiveness of these techniques with such drugs as aspirin, aspirin substitutes or mild tranquilizers, we have found in the clinical setting that many patients have had excellent results. Some patients have become headache-free using these techniques after having used medication for years without success.

"We also have 15 or 16 thorough studies conducted around the country which show that biofeedback and relaxation training are more effective than placebos ("fake" pills which subjects believe are real medicine)."

Typically, relaxation training involves seven or eight weekly sessions where patients are coached in how to consciously make various muscles of their body become tense and then relax. Patients practice at home for 20 minutes every day using tape recordings which reinforce the message learned in class.

Biofeedback involves many of the same techniques but uses electronic equipment to show a visual picture or audio interpretation of blood pressure or heart beat. This enables the patient to strive consciously to alter symptoms of tension positively.

"Most people would want to try relaxation training first before being hooked up to $20,000 worth of equipment," Agras said.

Agras cautioned that "since headaches can sometimes be symptoms of more serious problems, people might be well advised to check with a physician to rule out the possibility that their headaches are being caused by something more serious than tension."

Everyone clearly is not a candidate for relaxation training or biofeedback, Agras said, "but if you're getting a tension headache just about every day for about 20 minutes, it might be something to consider."

Agras said relaxation training and biofeedback are becoming widely available through clinics, community colleges or on referral from physicians. Stanford provides such services under the auspices of its behaviorial medicine clinic.

The psychiatrist said he won't rule out the use of an occasional aspirin, aspirin substitute or mild tranquilizer. He said aspirin itself seems to be the most effective of the three groups, and that its potential side effects—such as stomach upset or ringing of the ears—are usually not serious.

And for non-tension headaches, the ones that occur in minor epidemic form during the holidays from overeating or too much drinking, Agras recommends:

"Moderation, or if that fails, a large glass of water or perhaps juice. These headaches are caused by a loss of body fluid."

—Mike Goodkind

Distressed economy witnesses present oversupply of nurses

Two years ago Stanford University Hospital, like all hospitals, faced a severe nursing shortage. Today, in a completely reversed situation, it is finding itself with too many nurses.

"We are not doing any hiring," said Duane Walker, R.N., M.S., director of SUH nursing services. "Two years ago the turnover rate was 37 percent, which was very low nationally. Now it is less than one percent."

What's more, Walker added, nurses want to work more hours. "Sixty percent of the nurses here are the primary wage earners. They can't afford to work less than full-time anymore," he said.

Three units at SUH have closed indefinitely because of low patient census. The nurses and patients have been transferred to other units. Unlike many other hospitals, Walker said, SUH has not laid off any nurses. Instead, they are being asked to take a day off—about one each month—to compensate for the decreased need for their services.

"The nurses are responding very well. They would rather take a day off than see their colleagues laid off," Walker said.

"It's much more difficult to have too many nurses than not enough nurses. The feelings are much more intense when they see less money in their paychecks. We are trying to be fair, however. We're working closely with the nurses' union to ensure job security," he continued.

With the oversupply of nurses, the massive recruiting efforts of two years ago have been cut back as well. SUH representatives used to go on about 20 recruiting trips each year, in addition to attending all nursing conventions, Walker said.

Now, they have combined their efforts in about ten trips per year. "We still want to maintain our visability," he explained, "so we can continue to attract the best nurses."

In order to do this, they are keeping up their marketing efforts. "Rather than saying 'come to Stanford,' we market the research, education, and work programs we have here. We still get a lot of inquiries from nurses all over the country," he said.

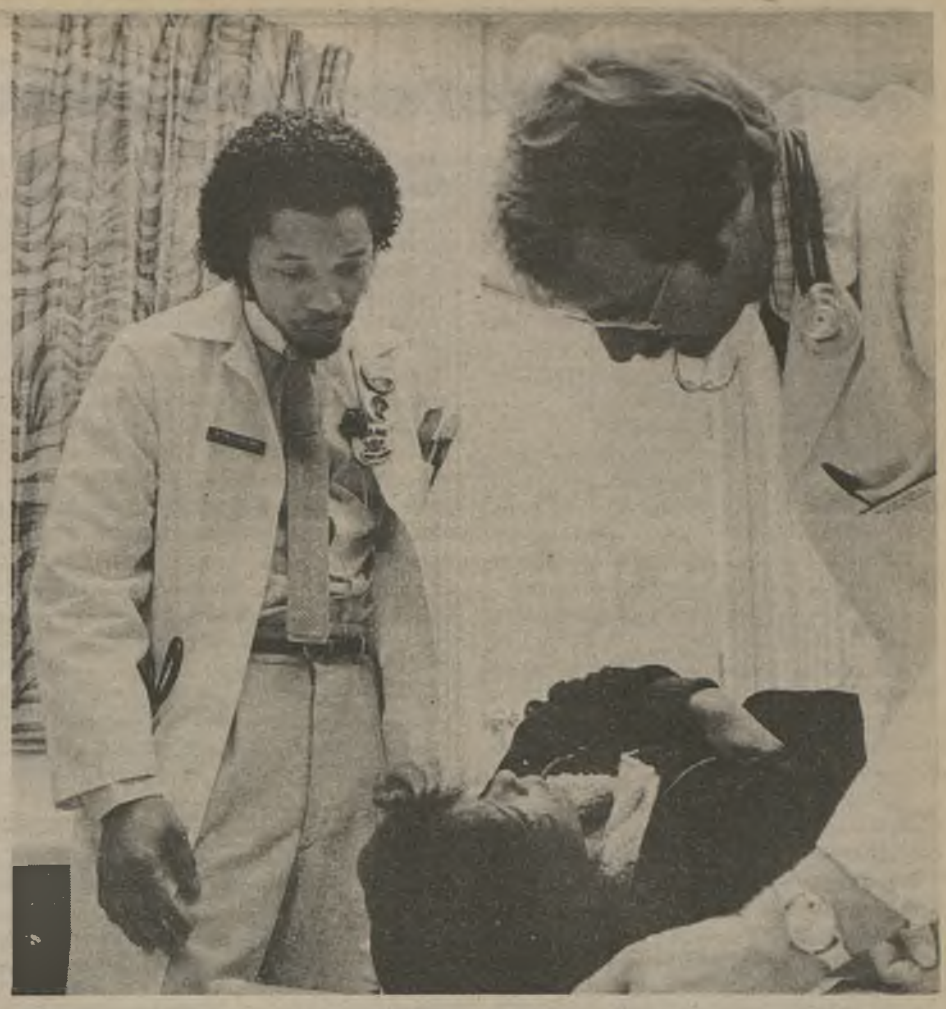
The current situation is the opposite of two years ago, when nurses had their pick of jobs. Hospitals actively recruited them, offering every possible incentive from flex-time scheduling to monetary bounties to get them to come to work.

Walker credits the distressed economy with causing the oversupply. People are unable to afford health care, foregoing elective procedures and keeping essential hospital stays to a minimum.

The result is too many empty beds; many hospitals have been forced to close entire units due to low census. An annual American Hospital Association survey showed a 13 to 21 percent decrease from 1980 to 1981 in the number of nursing job vacancies. And high unemployment rates are forcing many nurses, who would otherwise choose not to work, back into the job market.

Nursing schools are responding to the oversupply by cutting back on their programs and the number of students they accept, Walker said. "If the economy comes around the situation will change, and there will be a shortage again," he predicted.

—Shirley Kraus



Physician assistant Al Coleman (left) and Dr. Malcolm Gordon tend a patient at Drew Medical Center in East Palo Alto. Coleman is a graduate of the Stanford-Foothill Primary Care Associate Program.

Applicants sought for PA program

Qualified minority candidates for the Primary Care Associate Program are currently being recruited by the Community Outreach Project at Stanford University Medical Center.

Application forms for the first-year class beginning September, 1983, are now available upon request, and along with all supporting documents must be returned by March 15, 1983.

The two-year program trains highly skilled health providers called physician assistants (PAs). Selected are mostly students showing a strong commitment to work in medically underserved communities. Through the program, they gain the academic and clinical experience they need.

PAs and family nurse practitioners function in association with physicians in the maintenance and delivery of primary health care in areas—primarily rural or inner-city—in which there is a shortage of physicians. PAs can handle many medical tasks.

The Primary Care Associate Program was established at Stanford in 1973, and is administered in cooperation with Foothill Community College in Los Altos. The program is run jointly with a consortium of community colleges around the state.

The first year of training is spent in pre-clinical classroom work at one of the consortium colleges. Clinical work carried out during the second year is coordinated through Stanford and consists of didactic and clinical teaching at the Medical Center as well as preceptorship training with a physician in the community.

The Community Outreach Project was initiated in 1980 by the Primary Care Associate Program specifically to recruit minority applicants.

To obtain application forms or for further information regarding a career as a PA, contact George Villaneuva at the Primary Care Associate Program, 703 Welch Road, Suite F-1, Palo Alto, CA 94304; or phone him at (415) 497-6431. Applicants must be U.S. residents or have a permanent visa.

...News Notes...

In its latest newsletter, the Medical Center Auxiliary instructed its volunteer members to go directly to Emergency if they have chest pains, bypassing Personnel Health. Auxiliary members are responsible for their own bills, it said, but immediate medical attention is important.

* * * *

The Human Resources Development Department (HRD) now has available its winter schedule of classes, to run from January through March for interested employees.

Classes include such topics as Spanish for Medical Personnel; Anatomy and Physiology; and more.

To obtain a listing of courses and/or to register, call HRD at 497-6868.

* * * *

A financial planning model for estimating hospital debt capacity has been developed and published by Dr. David Hopkins, director of analysis and planning at SUMC; Dan Heath, associate director of finance at SUH; and Peter Levin, formerly executive director of SUH and currently dean of the School of Public Health at the University of Oklahoma.

The model described was formulated during the early stages of planning for Stanford University Hospital's major renovation and construction program, the HMP. Computer analysis was used.

The Stanford administrators' paper was published in the July-August issue of Public Health Reports. *A more simplified version of their model is now being used in projects at a number of other hospitals.*

* * * *

The Recreation Center at Tresidder Union is seeking members for a new Medical Center bowling league to begin Jan. 20. The league will consist of four-person mixed teams and will bowl 5:30 p.m. Thursdays.

Beginners and intermediates are encouraged to join, since this league will give teams at all skill levels a chance to win trophies donated by the Tresidder Recreation Center. Those interested may sign up as a team or individually.

An organizational meeting will be held 5:30 p.m. Thursday, Jan. 13, with free bowling to follow. League play will continue for 14 weeks, with championship games on April 21. Total cost is $3 per bowler per week. Discount cards are available to league bowlers for special open play rates.

Other leagues are also available at other times. For further information contact Cheryl St. Clair at 497-4616.

Wanted: Research Subject Volunteers

Female volunteers aged 40-80 are being sought by the division of clinical pharmacology to participate in an ongoing drug study at Stanford. Needed are healthy, Caucasian, non-smoking females, who are currently taking birth control pills or estrogen.

Entitled "Comparative Drug Metabolism: Effects of Aging in Man," the study examines age-related changes in liver clearance of drugs metabolized by different pathways. Principal investigator is Dr. Terrence Blaschke, chief of the division and associate professor of medicine and pharmacology.

The study began in January, 1981, and plans are to recruit 13 more subjects within the next four to six months.

Subjects will spend one week in the clinical research center at Stanford. Three relatively non-toxic drugs will be administered to the volunteers. (Side effects, if any, are minimal, according to research nurse Marni Brown.) Blood samples will be taken, with the purpose of observing how the different drugs are broken down in the liver.

Subjects are currently sought for the weeks of Jan. 17 and 24. Participants will receive compensation.

For further information, call Brown at 497-5266.

Clinic to focus interdisciplinary treatment of diabetes

A new clinic to specifically address the health care needs of the diabetic patient will open Thursday, Jan. 6, at Stanford University Medical Center.

An idea that's been considered for some time in the Division of Endocrinology, the Diabetes and Metabolism Clinic is finally coming to fruition for a variety of reasons, according to Dr. Fredric Kraemer, the endocrinologist slated to head it.

"Until now we've treated diabetic patients in the Endocrinology Clinic, but we were unable to deliver as comprehensive care as we'd like to." This, he said, was because of complications associated with the disease, and because of the necessary patient education involved.

"But besides directly helping patients, the new clinic will help investigators to gather more of our own data by concentrating all diabetic patients within a single unit where their problems can be studied by the variety of specialists who have interests in them."

Until now, he said, "We would refer diabetic patients with neurological complications to the Neurology Clinic, renal complications to the Renal Clinic, and so forth. With the new clinic, we plan to include experts from a variety of specialties on the regular staff.

"We hope that communication among the various physicians will be improved," he added.

Some of the specialists participating in the clinic will be podiatrists, nutritionists, nephrologists, neurologists, and ophthalmologists. Drs. Gerald Reaven, professor of medicine and chief of the Gerontology Division, and Michael Greenfield, clinical assistant professor of medicine, will be the two other staff endocrinologists.

"Most of the major complications associated with diabetes," explained Kraemer, "affect a patient's renal function, peripheral nervous systems, or eyes. There can be peripheral vascular disease too, showing up symptomatically first as infections or sores on the feet, and sometimes leading to amputation."

But if physicians can identify these problems early in treatment of the diabetic, he said, "we can try to prevent their progression, although success with this type of intervention remains to be proven for all of the symptoms."

Thus the major impact of the new clinic, as Kraemer sees it, will be in the aggressive metabolic control of glucose levels in hard-to-manage diabetic patients.

"Although we'll be seeing all diabetic patients, the uncomplicated ones will return to their primary physicians for follow-up care," he said.

The Diabetes and Metabolism Clinic is being set up as part of the Endocrinology Clinic. "Our division has recently been expanding," Kraemer explained, "and with the addition of new faculty we have increased clinical capabilities which allow us to undertake a project like this.

"It was decided that when new faculty members with interests in metabolism were added, we'd head the Endocrinology Clinic in this direction," said the newly appointed assistant professor of medicine, who for the past four and a half years has worked as a postdoctoral fellow at Stanford.

The new clinic will improve comprehensive care for diabetic patients, Kraemer predicts, since the care will be delivered in a focused, "rather than in a scattered fashion."

He is hoping, for example, to effectively involve the nursing staff in educational efforts, such as the teaching of home glucose monitoring.

The clinic will see adult patients with both insulin-dependent and non-insulin-dependent diabetes, said Kraemer. The former type, he explained, usually but not always begins in childhood, while the latter type is often "adult-onset."

"Insulin-dependent diabetics absolutely must have insulin for their entire lives," he said. "Non-insulin-dependent diabetics have increased blood glucose, and while they're sometimes treated with insulin, they can also often be treated with oral agents or diet."

The reasons for the two types of diabetes are different and their management is often different, Kraemer said, but they can lead to the same kinds of complications.

The clinic will also treat non-diabetic patients who have lipid abnormalities, such as elevations in cholesterol or tryglycerides, Kraemer said.

It is to be located at the Medical Specialties Clinic on the first floor of the Boswell Building. To make appointments, patients or referring physicians should call Ingrid Gallo, at 497-5947.

—Lisa Ames

Students learn medical cost containment

The education of most medical students includes anatomy, pathology, and the usual basics. Students at Stanford University School of Medicine learn the basics, and much more.

In a novel addition to what perhaps is the core of medical education, clinical medicine, students are learning how to make clinical decisions incorporating a relatively new medical concept—cost containment.

"Health care costs have become a real concern in the past decade, so there is a big interest in cost containment," said Dr. Harold Sox, Jr., associate professor of medicine (clinical).

"The course we teach has come into its own time. It wouldn't have been taught five or ten years ago," added Dr. Keith Marton, assistant professor of medicine.

The concept behind the course, Sox explained, is that costs are generated by physician decisions about the treatment of their patients. What test to administer, whether to admit patients to a hospital, and how long to keep them there, for example, all affect the total cost of health care. If physicians learn to make the best possible decisions, the costs will be kept to a minimum.

Physicians, estimates show, control as much as 91 percent of expenses for hospital services, and 76 percent of expenses for physician services.

Sox and Marton teach students to make decisions by using probability to express their uncertainty about the diagnosis, and something called Bayes Formula, an algebraic formula that "allows the clinician to answer the all-important question: 'how likely is it that my patient with this test result has disease X?' "

Consider, for example, a patient in the hospital recovering from a hip replacement, Sox said. Suddenly, he experiences shortness of breath, and his heart rate elevates. His physician immediately thinks he may have pulmonary embolus, a blood clot that starts in the legs and sometimes travels to the lungs.

Any of three tests could possibly determine the cause of the patient's symptoms. To determine which test to give, Sox continued, the physician must know how likely it is that the patient does, in fact, have pulmonary embolus, based on the history and physical examination; the frequency of false positive and false negative results; and the minimum probability at which the physician would treat the patient for pulmonary embolus.

On the basis of this knowledge, the physician can determine which of the three tests will be of most value, and administer it without wasting time and money administering the other two.

While this formal procedure may seem unnecessary for physicians with years of diagnostic experience, it is a boost for medical students or new physicians.

Sox and Marton also teach students decision analysis, using a "decision tree" to weigh the benefits and doubts of alternative treatments.

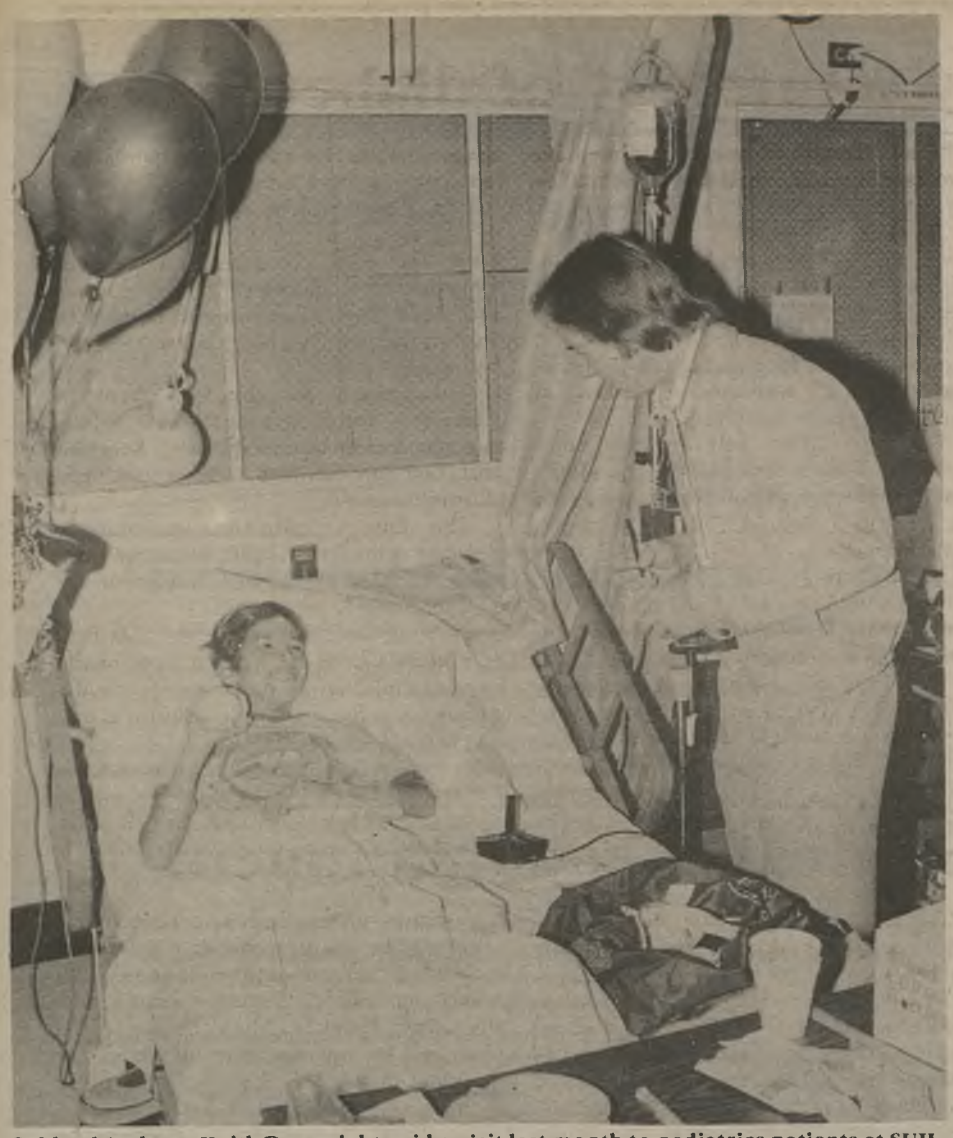
"The attitude used to be to try one alternative, and if that didn't work, try the next option on the list," Sox said. "We teach students to determine which test is best to administer, and to forecast the effects of various tests' results on what they would do for the patient, in order to decide which is the best treatment option."

Not only is the subject matter innovative, but the way in which it is taught is unique also. Sox, who started researching medical decision making about 10 years ago, got together with Marton and Michael Higgins, Ph.D., a medical decision analyst.

continued on page 17



Medical Center employees gathered at noon several days last month to sing holiday songs and carols in patient and visitor areas of the Hospital. "More employees joined in the caroling this year than in previous years," said Bill Gilmore of Personnel, coordinator of the event, "and we found it very satisfying." Besides the employee singing, there was caroling at SUH throughout Christmas week by many visiting community groups.



Oakland A player Keith Drumright paid a visit last month to pediatrics patients at SUH. Here, Anthony Longo of Phoenix, Arizona, gets a chance to chat with Drumright, who gave out autographed baseballs along with the team's totehags.

Cost control. . .

continued from page 16

With a two-year grant totaling almost $59,000 from the Schering-Plough Foundation through the National Fund for Medical Education, they put together a series of lectures on medical decision making, and recorded them on videotape.

Over the past two years, they've tested various methods of teaching the material. The best, they've concluded on the basis of a controlled study, is tutored videotape instruction. A small group of students watches the videotapes, and a tutor is present to answer questions, emphasize specific points, or be of assistance in any other way necessary.

"We are really impressed by the students' interest in the material," Sox said.

The team has already sent the videotapes to two other medical schools, and is working on a handbook to go along with them. "There is no comparable opportunity at other medical schools to learn about medical decision making in this way," Sox said.

"We've gotten a lot of requests for the materials. We'd like to make them more available to other schools."

—Shirley Kraus

Construction Corner

The Boswell Building Renovation activities to take place this month are:

Information Booth: This modular work station is situated at the front entrance. It is being installed during the first stage of construction so that patients will have a convenient spot to inquire as to the construction or location of their clinics. The construction for this area was scheduled to begin Jan. 3, to take approximately one week. The project involves drilling through the floor to install cables for the CRT, electricity and telephones.

Balconies: The footings will be poured for the enclosed balconies, four of which will be inside the Radiation Therapy area and six outside Radiation Therapy by the landscaped area. Although clinic space will not be involved, the clinic atmosphere will be affected. The construction activities involved in this stage are saw cutting, use of jack hammer and roto hammers, low velocity shots, compressors and welding machines. Noise and dust may be expected.

Pasteur Drive: The construction group has been assigned temporary space to store supplies and trailers in the center divider. Though not an attractive addition to landscaping, this was considered more desirable than utilizing space in a parking lot.

The planned construction hours are 7 a.m. till 4:30 p.m., Monday through Friday.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

WEDNESDAY, JANUARY 5

New hours effective at the Stanford University Blood Bank: noon to 6 p.m. Mondays; 8:30 a.m. to 7:30 p.m. Tuesdays and Thursdays; 8:30 a.m. to 6 p.m. Wednesdays; and 8:30 a.m. to 3 p.m. Fridays.

Basic Science Research Colloquium: "T-cell Receptor for Antigen A Conundrum"—Dr. C. Garrison Fathman. 5 p.m., Fairchild Auditorium.

Div. of Orthopedic Surgery Grand Rounds: "Biomechanics of Acetabulum"—Dennis Carter, Ph.D. 8:30 a.m., M114.

Dept. of Neurology Grand Rounds: "Acetylcholine Receptors in Myasthenia Gravis"—Dr. Marjorie Seybold (of UCSD). 5 p.m., C364.

THURSDAY, JANUARY 6

Stanford HELP Center: "One in Ten," a film—New Options for Women with Breast Cancer. Discussion will follow, led by Dr. Anthony Howes of the Department of Radiology. Noon to 1:30 p.m., small lounge, Tresidder Union.

Dept. of Biochemistry Seminar: "*In Vitro* Analysis of Methyl-Directed Mismatch Repair in *E. coli*"—Dr. Paul Modrich (of Duke University). Noon, M316.

Dept. of Medical Microbiology Seminar: "The Molecular Basis of Antibiotic Resistance in Streptococci"—Dr. Vickers Burdett (of Duke University). 9 a.m., 3rd floor conference room, Fairchild Bldg.

Registration deadline: Nursing Educational Services course on "Burnout: Treatment and Prevention," to be held Jan. 20. Course will address causes of and "intervention methods" for burnout in oneself and others. For further information, call Carole Kidder at 497-6366.

Special Seminar: "Cytometry in Haematology and Immunology"—Professor J.S. Ploem (of Univ. of Leiden, The Netherlands). Topics to include: combining of flow cytometry with image analysis, cytometry in transplantation research, and reticulocyte testing. 4 p.m., Genetics Library, S336.

FRIDAY, JANUARY 7

Dept. of Structural Biology: "Molecular Mechanisms of Promoter Selection in Gene Transcription"—Dr. Cheng-Wen Wu (of SUNY at Stony Brook). Noon, Fairchild Building, D102.

MONDAY, JANUARY 10

Dept. of Structural Biology Seminar: "Maximum Entropy and the Foundations of Direct Methods in the X-Ray Phase Problem"—Dr. Gerard Bricogne (of Columbia University). Noon, Fairchild Bldg., Rm. D102.

TUESDAY, JANUARY 11

Nursing Educational Services Critical Care Course Level II: "Abnormalities of Coagulation." Course will include background information, theory, and case study exercises. Fee required. For further information, call Carole Kidder at 497-6366.

Dept. of Dermatology Special Lectures: "Treatment of Active Disease of the Nervous System"—Dr. Lawrence Steinman. 10 a.m., R136.

Dept. of Biochemistry Colloquium: "New Rapid DNA Sequencing Methods, and Analysis of Genes and Processed Genes of Cytochrome C"—Dr. Ray Wu (of Cornell University). Noon, M114.

WEDNESDAY, JANUARY 12

Dept. of Structural Biology Seminar: "Splicing of the Ribosomal RNA Precursor of Tetrahymena: RNA Recombination Directed by a Ribosyme"—Dr. Thomas Cech (of Univ. of Colorado at Boulder). Noon, M114.

MONDAY, JANUARY 17

Dept. of Cardiology John Kent Lewis Memorial Lecture: "Age Associated Alterations in Cardiac Function and Exercise Response"—Dr. Myron Weisfeldt (of Johns Hopkins University). 5 p.m., Fairchild Auditorium.

THURSDAY, JANUARY 20

Dept. of Pharmacology: Windsor C. Cutting Memorial Lecture. Featured speaker will be Dr. Stanley Cohen (of dept. of biochemistry, Vanderbilt University.) 4:15 p.m., Fairchild Auditorium.

SATURDAY, JANUARY 22

Association of American Medical Colleges: Symposium on medical education, chaired by Dean Dominick Purpura, with panels led by Drs. Robert Cutler, Roy Maffly, and John Steward. Topics will include promoting broad baccalaureate education, acquisition of computer skills, and methods of dealing with stress.

WEDNESDAY, JANUARY 26

American Heart Association—Fifth Biannual Symposium on Cerebrovascular Disease: Speakers will include several Stanford faculty members. CMA credit toward certificate is available. Reservations are required before Jan. 21, and there is a fee. 8:30 a.m. to 5 p.m., LeBaron Hotel, 1350 N. First Street, San Jose. For further information, call the AHA at (408) 247-8555.

SATURDAY, JANUARY 29

"Medical and Health Care Uses of Cable Television"—A community conference sponsored by the Palo Alto Medical Foundation and Stanford University Hospital. 8:30 a.m. to 1 p.m., Palo Alto Medical Foundation Auditorium. For reservations and information, call Carroll Harrington at 326-0882.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Board of Trustees report

Research grants rose during past year to monthly average of $14,615,621

The Board of Trustees took the following actions at its meeting on December 14, 1982:

1. Approved actions already taken by the Office of the Vice Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of September, 1982, totaling $4,444,268 and for the month of October, 1982, totaling $27,490,203. The monthly average of such awards for the twelve-month period ending October 31, 1982, was $14,615,621, compared with $12,378,173 for the corresponding period the year before.

2. Accepted gifts received during the month of October, 1982, totaling $7,584,845 and during the month of November, 1982, totaling $8,728,920.

3. Accepted statements that:

a. Autumn revisions in the Operating Budget for 1982-83 provide for a net increase of $1,010,858 or 0.49 percent of the budgetary base (compared with a similar net increase of $2,704,000 in 1981-82).

b. Needs for expenditure in the Conditional Budget for 1982-83 total $6,237,000, and income is expected to be $5,068,000, leaving a gap of $1,169,000.

c. The balance of the Operating Budget Reserve for 1982-83 was $2,695,000 on August 31, 1982, and is projected to remain that at the end of the fiscal year on August 31, 1983.

4. Authorized the addition to Unrestricted Funds Functioning as Endowment of fifty percent of net rental income earned after September 1, 1983, from the Stanford Endowment Lands (other than residential areas for faculty and staff and from investment in the Stanford Shopping Center).

5. Authorized the vice-president for business and finance to invest an additional amount of up to $9,300,000 from the Merged Investment Pools to provide funds for second-mortgage coinvestment to eligible faculty and senior staff; also authorized various modifications in the program.

6. Authorized the vice-president for business and finance to provide additional parking at the Stanford Shopping Center through construction of a parking structure and approved the option of a sale and leaseback with option to repurchase if this transaction results in a net savings to the University.

7. Ratified action taken between meetings to permit the vice-president for business and finance to convert investment in Property Capital Trust from convertible preferred shares into common shares.

8. Heard a report on revenue from holdings in oil, gas, and minerals.

9. Approved the concept and site for the Research Animal Facility I.

10. Heard a report on the Long-Range Financial Forecast.

11. Approved the concept for renovation of the south wing of the building at 800 Welch Road and authorized further planning.

12. Approved the concept and site for a new tennis court and a new office and players' lounge for the varsity tennis program.

13. Approved the concept and site for a new cogeneration plant to produce electricity for the main campus and steam and chilled water for both the main campus and the Medical Center; authorized additional funding of $370,000 (for a total of $1,120,000) to continue design for it; and authorized provision of the additional funds from an interim advance from external borrowings for General and Research Equipment.

14. Approved the concept for the Electronic Communications Project consisting of new systems for telephone and Energy Management and Control and of the Stanford University Network (SUNet); authorized additional funding of $600,000 (for a total of $782,000) for design; and authorized provision of these funds from an interim advance from external borrowings for General and Research Equipment.

15. Approved the concept for connection of Willow Road from Arboretum Road to El Camino Real.

16. Approved the purchase of the IBM 3081 computer, presently leased from the IBM Corporation, for an amount not to exceed $1,960,000 and authorized financing the purchase from external borrowings for General and Research Equipment.

17. Authorized the transfer to endowment of $1,231,587 from the Stanford Land Development Fund to meet the requirements of a grant from the Ford Foundation for support of "training and research on international security and arms control.'

18. Authorized the vice-president for business and finance to execute agreement for a loan of $74,800 with the California Energy Commission.

19. Received annual reports from the Auxiliaries and Service Centers and the Office of Technology Licensing.

20. Established the Edgar F. Kaiser, Sr., Professorship.

21. Established the A. Calder Mackay Professorship in Law.

22. Established the Ernest C. Arbuckle Professorship in the Graduate School of Business.

23. Established the Robert E. Paradise Professorship in Natural Resources Law.

24. Bid a very fond and respectful farewell to Trustee W. Parmer Fuller III who leaves the Board on January 6, 1983, after many years of distinguished service.

25. Heard a report from Fred S. Eyerly, mayor, and William Zaner, city manager, of Palo Alto.

26. Heard a report from John Freccero, Rosina Pierotti professor of Italian literature, on "The New Alliance: Comparative Literature in the Eighties."

27. Amended its "Statement on Investment Responsibility Concerning Endowment Securities" of December 27, 1977, to reflect recommendations from the Commission on Investment Responsibility (CIR) of 1981-82.

Five promotions, 13 appointments announced

On December 14, 1982, the Board of Trustees made the following appointments, effective January 1, 1983, unless indicated otherwise:

PROMOTIONS:

Savas Dimopoulos, associate professor of physics, effective 12/1/82; John L. Hennessy, associate professor of electrical engineering, effective 9/1/83; Thomas J. Hughes, professor of mechanical engineering; Laurence J. Kedes, professor of medicine; Roger A. Warnke, associate professor of pathology.

REAPPOINTMENTS:

David K. Larue, assistant professor of geology, effective 4/1/83.

APPOINTMENTS:

Joan Bresnan, professor of linguistics, effective 9/1/83; Andrei Calin, associate professor of medicine; Mark M. Davis, assistant professor of medical microbiology, effective 5/1/83; Stephen P. Fortmann, assistant professor of medicine; Peter Galison, assistant professor of philosophy and, by courtesy, of physics, effective 12/1/82; James S. Harris, professor of electrical engineering; Fredric B. Kraemer, assistant professor of medicine; John M. J. Madey, professor of electrical engineering and the High Energy Physics Laboratory; Edward S. Mocarski, assistant professor of medical microbiology; Robert V. Rouse, assistant professor of pathology; Stephen D. Smith, associate professor of pediatrics; Eckard Weber, assistant professor of psychiatry and behavioral sciences.

REPORT MATTERS:

Richard V. Allen, appointed senior fellow, by courtesy, in the Hoover Institution, effective 11/14/82.

Annelise G. Anderson, appointed senior research fellow in the Hoover Institution, 1/1/83 to 12/}1/87.

Timothy F. Bresnahan, assistant professor of economics, appointed assistant professor, by courtesy, of economics in the Graduate School of Business, 9/1/82 to 8/31/85.

Dennis R. Carter, associate professor of mechanical engineering (research), appointed associate professor, by courtesy, of surgery (research), 10/1/82 to 8/31/87.

David R. Cheriton, assistant professor of computer science, appointed assistant professor, by courtesy, of electrical engineering, 9/1/82 to 8/31/84.

George M. Homsy, professor of chemical engineering, appointed professor, by courtesy of petroleum engineering, effective 1/1/83.

Thomas H. Henrikson, appointed senior research fellow in the Hoover Institution, 11/1/82 to 10/31/87.

Venkataraman Srinivasan, professor of marketing and management science, GSB, appointed the Ernest C. Arbuckle professor of marketing and management science in the Graduate School of Business, effective immediately.

Susan M. Treggiari, professor of classics, appointed professor, by courtesy, of history, effective 12/1/82.

Howard R. Williams, Stella W. and Ira S. Lillick professor of law, emeritus, appointed the Robert E. Paradise professor of natural resources law, 9/1/83 to 8/31/84.

EMERITUS FACULTY APPOINTMENT:

Dudley Kirk, Dean and Virginia Morrison professor of population studies and professor of sociology, emeritus, effective 1/1/83 (early retirement).

DuPrau exhibits work at I-Center

The big Squeeze and other acrylic paintings on canvas by Dolly DuPrau of Atherton will be exhibited at Stanford's International Center from Jan. 5-30. A reception for the artist will be held from 5-7 p.m. Friday, Jan. 7, at the Center.

A suggestion that a common household object might serve as the stimulus for a painting brought about DuPrau's series based on an orange squeezer. Continued study of the squeezer's shape and function led to an imaginative exploration of its possible role in a fantasy world. Selecting a single "still-life object" for repeated representation in this inventive group of paintings has freed the artist to explore some of the more formal considerations of painting and her own sense of whimsy.

The exhibition will also include a number of DuPrau's landscape paintings of nearby California scenes and figure paintings.

Born in Pittsburgh, Pa., the artist is a graduate of Carnegie-Mellon University. She has lived and painted in the Bay Area for many years and her award-winning watercolor and acrylic paintings have been exhibited throughout Northern California.

The exhibit is open for viewing from 8:30 a.m. until 11 p.m. on weekdays and from noon until 11 p.m. on weekends.



A *Big Squeeze* by Dolly Du Prau

Recreation facilities schedule

Encina lockers and showers—M-F 7:30 a.m.-9 p.m.; SS 9 a.m.-6 p.m.

Roble lockers and showers, weight training facilities—M-F 8 a.m.-12 midnight; Sat 9 a.m.-8 p.m.; Sun noon-8 p.m. Lockers available beginning Jan. 10.

Olympic Gamefield (starts at Angell Field), **Perrier Parcourse** (starts near Roble dorm), and **Angell Field track**—Open every day during daylight hours.

Angell Field infield, Taylor Field, and **IM Fields**—Reserved only; call 497-0505.

Maples Pavilion—M-F noon-1 p.m. (Show ID)

Roble Gym floor—Morning, afternoon, and evening hours for open recreation, volleyball, badminton, and basketball posted at Roble Gym for every day except Sunday. (Show ID)

Roble Pool—M-F noon-1 p.m. faculty/staff only; TTh 1-4:30 p.m.; M-W,F 3-4:30 p.m.; closed SS. (Show ID)

deGuerre Pools—M-F noon-2 p.m.; M-F 5:30-7 p.m.; SS family swim, 50-meter pool noon-4 p.m. (Show ID)

deGuerre Courts—M-F 10-11 a.m. phone in reservations only (497-2210); M-F 11 a.m.-11 p.m.; SS 9 a.m.-11 p.m. (Show ID)

Tennis courts—Sign-up sheets are posted on court bulletin boards for the next day's play: Encina Courts 8:30 a.m.; Roble Courts 7:45 a.m.; Varsity Courts 5:10 p.m. FSS sun-up to sun-down; M-Th when no classes are scheduled; M-F noon-1 p.m. reserved for faculty and staff only at Roble and Encina courts.

Encina Volleyball Courts—Every day during daylight hours.

Encina Weight Room—M-Th noon-2 p.m., 3:30-8:30 p.m.; F noon-8:30 p.m.; SS noon-5 p.m.

Roble Field—Check schedule at Roble Gym office.

Roble Gym dance studio, studio 42, and room 33—Check at Roble Gym office.

Golf Course driving range—M-F 8:30 a.m. to one hour before dark; SS, holidays 7 a.m. to one hour before dark.

Golf Course—Closed Mondays; Tuesdays, priority ladies; T-F first available starting time; SS, holidays first available starting time after 11 a.m. You must obtain the starting time in person and show ID at the Pro Shop.

Tresidder Recreation Center—M-Th 8 a.m.-midnight; F 8 a.m.-1 a.m.; Sat 10 a.m.-1 a.m.; Sun 10 a.m.-midnight (no bowling unitl 10 a.m.).

Check the boards at any facility for the current hours. For more information or to tender suggestions or comments, call Recreation Coordinator Shirley School at 497-3089.

HIP wants to keep you feeling good

The healthiest lunch break around is offered by the Stanford Health Improvement Program (HIP), with the goal of helping the Stanford community to maintain or improve personal health.

The side effects are ominous: you may meet like-minded people, enjoy fun activities, learn more about yourself, utilize campus facilities, and feel and look better.

The following HIP courses are offered winter quarter to all faculty and staff and their families.

Walk/Jog/Run—(Walking 1 plus miles, beginning jogging 0-2 miles, jogging 2-3 miles, and running more than 3 miles); M-W-F 12:10-12:50 p.m., Jan. 17-Mar. 25, at Roble Field. Fee $5.

The Joy of Swimming—(Individualized instruction at all levels), M-W-F noon to 1 p.m., Jan. 17-Mar. 25, at deGuerre Pool. Fee $5.

Aerobic Movement/Workout—Stretching, aerobic and toning exercises to music), three sections:

Section 1—T/Th noon to 1 p.m., Jan. 18-Mar. 10, Roble Gym room 33. Fee $20.

Section 2—T/Th 1-2 p.m., Jan. 18-Mar. 10, Encina Gym wrestling room. Fee $20.

Section 3—M/W 5:30-6:30 p.m., Jan. 17-Mar. 9, International Center assembly room. Fee $20.

Weight Management for Health—Increases awareness of eating habits and develops individualized strategies for modifying these behaviors using a problem-solving approach. Th 5:15-7:15 p.m., Jan. 27-Mar. 3, Cowell Student Health Center meeting room. Fee $25.

Q.U.I.T. Smoking—Problem-solving skills and an array of strategies for resisting the urge to smoke, from which members develop individual plans. T/Th 5:15-6:45 p.m., Jan. 25-Feb. 22, at the Stanford Heart Disease Prevention Program, 730 Welch Road, Suite B. Fee $30.

How to Manage Stress—Increases awareness of stress-producing situations and replaces stressful response behaviors by teaching a variety of methods for eliminating or coping with stress. M 5:15-7:15 p.m., Jan. 24-Mar. 7, at Med Center M121 conference room. Fee $25.

The courses offered by HIP focus on increasing awareness of unhealthy habits and presenting a how-to approach for maintaining a healthy lifestyle. HIP is sponsored by the Benefits and Records Office and administered by the Stanford Heart Disease Prevention Program.

To register send name, ID mail address, campus phone number, the class you want to register for, and a check payable to Stanford University through Campus Mail to HIP, 730 Welch Road, Suite B.

For more information phone the HIP office at 497-7940.

Roble dance classes begin

Stanford Dance Quorum offers a variety of classes for students, faculty, staff, and their families. The winter quarter schedule includes instruction in ballet, jazz, and floor barre alignment. All classes meet in Roble Dance Studios, 375 Santa Teresa Street, beginning Tuesday, Jan. 4.

Elizabeth Larkam teaches two levels of ballet on Monday and Wednesday evenings 6-7:30 p.m. and 7:30-9 p.m. Ballet for all levels meets Saturdays, 1:15-2:45 p.m. Lisa Burnett teaches floor barre Tuesday and Thursday evenings, 6-7 p.m. and Saturdays 12 noon-1 p.m. Jazz with Elizabeth Gustafson meets Monday and Wednesday, 6-7 p.m.

There are quarterly membership dues for Stanford Dance Quorum and a fee for classes. Stanford Dance Quorum is a nonprofit student organization in operation the entire calendar year. Stanford students, faculty, staff, and their families may register for classes. The public is invited to participate in special events such as master classes, workshops and film series.

For additional information and registration, call Stanford Dance Quorum, 497-4254.





Left,
Hsueh-Yung Shen

Right,
Helene Wickett

Wickett, Shen in four-hand concert

A rare opportunity to hear music for piano four-hands, performed by Hsueh-Yung Shen and Helene Wickett, will be presented free by Stanford's Music Department at 8 p.m. Saturday, Jan. 15, in Dinkelspiel Auditorium.

The program will include Schubert's ambitious *Grand Duo, op. 140*; the world premiere of Shen's *Diurne*, written expressly for Shen and Wickett; and Stravinsky's *Rite of Spring*.

"I picked the title *Diurne* to mean the opposite of *Nocturne*," explains Shen. "The piece is French-influenced—lush and impressionistic.

"*Rite of Spring* is, of course, an orchestral ballet, but Stravinsky also wrote a four-hand version of it. He did it in haste, though, and Helene and I have made certain revisions of his score, so it will be a very personal version of the work."

Shen, formerly on the music faculty at Stanford, is presently a freelance pianist, percussionist, and composer.

Wickett is a young pianist of international repute from the Peninsula. She has soloed with the San Francisco Symphony and many European orchestras, and leaves in February for her fifth annual European concert tour.

Shen and Wickett both studied with Boulanger in Paris in their early teens. "We speak the same language," says Shen—very important when sharing a keyboard!

Pottery workshop welcomes potters

The Stanford Pottery Workshop will offer beginning courses this quarter, on Tuesday or Thursday evenings.

Classes will emphasize wheel-thrown ware, including specific forms such as teapots, mugs, juicers, and casseroles. No prior experience is necessary. All tools are provided (wear old clothes).

Sign up at 7 p.m. Thursday, January 6, in the basement of the Wilbur dormitory complex (across the hall from the student laundry facilities), or call 497-1471 between 4 and 5 p.m. weekdays, for early registration or further detail. Faculty, staff, spouses, and any other members of the Stanford community are welcome to join the Workshop and take the class.

Bowling leagues want new members

The Tresidder Recreation Center is seeking members for its faculty and staff bowling leagues, now getting under way for winter.

Daytime leagues with current openings include the "Bowl for Lunch Bunch" offered on Tuesdays, Thursdays or Fridays at 12 noon. These leagues consist of two-person teams bowling two games over lunch hour.

Evening leagues with current openings include the 6 p.m. mixed fours or 8:30 p.m. trios on Mondays and Tuesdays; 8:30 mixed fours on Wednesdays; and the 5:30 p.m. Stanford Hospital mixed fours or the 7:30 p.m. faculty/staff mixed fours on Thursdays.

All leagues are handicap and include three games per week.

Discount cards are available for all league bowlers. Prearranged teams or individuals desiring placement with a league should sign up at the Recreation Center or call 497-4316.

Tennis lessons

Tennis lessons (six pupils per group) will again be offered to staff and/or their families on weekday mornings or Saturday mornings. Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed, printed information and registration form. Lessons begin week of January 17.

More dance...

Noon classes

Dance Quorum will sponsor two noon-hour dance classes during winter quarter in Studio 42 of Roble Gym.

Beginning Jazz Dance, with instructor Kim Morris, will meet Tuesday and Thursday, beginning Jan. 4.

Intermediate Modern Dance, with Joy Weston, will meet Wednesday and Friday, beginning Jan. 5.

The class fee is $40 for the 10-week quarter.

Both classes offer a thorough workout within the framework of dance technique. Participants should wear leotards and footless or stirrup tights.

To register, come to a class. Checks should be made payable to Dance Quorum.

Children's dance

Children's Dance at Stanford offers classes in creative movement, modern dance, and ballet for girls and boys ages 3 to 13. During the nine-week winter session beginning classes will meet once a week on Wednesday and Friday afternoons and Saturday mornings.

For information on all dance classes, call 497-4254.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

42430-LL (JCC:5588) LIFE SCI RES ASST I: 75%; work both w/ lab mice & w/ mammalian cells in tissue culture; perform theory-related work requiring initiative & judgment based on an understanding of sci involved; work involves a study of modifying influence of selected compounds on response of cells, tumors & normal tissues to radiation & to some chemotherapeutic drugs; investigations will involve quantitative assays for tumor cell killing & DNA damage & its repair; QUALFICIATIONS: Bachelor's degree or equiv exp; exp w/ clonogenic assays of mammalian cells in tissue culture; exp w/ biochemical assays, mouse surgery, record keeping & data analysis also an advantage.; C05; $1253-1565.

33241-TC (JCC:5588) LIFE SCI RES ASST I: A lab position studying somatomedin, a peptide growth factor & its inter-relationship w/ other hormones; setting up radioreceptor & radioimmunoassays of hormones, calculating & analyzing results; as part of radioreceptor assays, column chromatography of plasmas & lypohilization of samples are nec; expected to aid w/ bioassay & animal procedures & participate in genl lab duties; will plan & carry out experiments based on broad protocols, etc; QUALIFICATIONS: familiarity and/or exp w/ radioimmunoassay tech required; BS in basic sci or equiv in exp; prefer some lab exp.; C05; $1670-2086.

25921-AW (JCC:7694) PLANT MAINT SUPVR ASST: Bldg Services Mgr is respon for the overall cleanliness, sanitation, & appearance of Tresidder Memorial Union; He/she is respon for maintaining all physical area of the facility including but not limited to furnishings, fixtures, carpeting, drapery, floors & walls; includes all exterior areas, including but not limited to patios, loading docks & deck; maint cleaning schedules, suprv custodial staff, make approp expenditures; maint inventory control & conduct regular bldg inspections; QUALIFICATIONS: Min 2 yrs institutional cleaning & maint exp required; min 2 yrs suprv exp including surpv full-time permanent staff in an instutional setting required; fluency in written & spoken English; prov ability to organize & follow through detailed projects w/ genrl suprv required; Univ exp pref.; S10; $1716-2150.

32586-JB (JCC:2120) ACCOUNTANT I: Responsible for filing grant fiscal reports in an accurate timely manner, having a thorough knowl of agency & univ requirements, & prov backup to contract report desks; prep grant/contract financial reports to agencies; review documentation of expenditures to ascertain allowability; work w/ dept's to resolve problems; assist in reconciling cash on hand to general ledger; review policy changes & alert suprv to possible problems; answer agency correspondence & questions about policy & procedures; etc; QUALIFICATIONS: B.A. acctg or 4 yrs of acctg exp; knowl of univ acctg/reporting for government grants/contracts helpful; must be able to work independently; must use tact and good judgment; must be able to communicate effectively orally & in writing;; C05; $1670-2086.

32592-JB (JCC:2120) ACCOUNTANT I: Responsible for filing grant fiscal reports in an accurate timely manner, having a thorough knowl of agency & univ requirements, & prov backup to contract report desks; prep grant/contract financial reports to agencies; review documentation of expenditures to ascertain allowability; work w/ dept's to resolve problems; assist in reconciling cash on hand to general ledger; review policy changes & alert suprv to possible problems; answer agency correspondence & questions about policy & procedures; etc; QUALIFICATIONS: B.A. acctg or 4 yrs of acctg exp; knowl of univ acctg/reporting for government grants/contracts helpful; must be able to work independently; must use tact and good judgment; must be able to communicate effectively orally & in writing;; C05; $1670-2086.

29255-JB (JCC:6306) R & D ENGR II: Must work independently to create original designs for experimental robot equip't; make decisions concerning inhouse fabrication of parts or procurement fr outside vendors; vendor liaison; supv & participate in fabrication of parts & in bldg the product; QUALIFICATIONS: must have Mechanical Design exp; prefer an engrg degree & extensive exp in area of controls & robotics.; C99; $2113-2724.

33328-LL (JCC:6406) SCI & ENGR ASSOC I: Design, assemble & maintain high pressure & temperature equip't used to measure physical properties of rocks; design & run data acquisition sys, using minicomputers; work w/ grad students to develop & implement their experimental res programs; supv tech activity in lab involving 8-12 students & sr. technician; QUALIFICATIONS: strong bkground in computer controlled physical data acquisition & exp in high pressure & temperature equip't; bkground in geology, geophysics or petroleum engrg desirable; ability & interest to guide grad students in tech aspects of their res essential; ability to solve problems & innovate important; exp in res highly desirable.; C99; $1854-2312.

36357-JB (JCC:2160) ACCOUNTANT II: Forecast cash requirements for gov't grants & initiate cash requests when approp, based on analysis of expenditures & knowl of applicable gov't regulations; reconcile cash receipts to awarding agency records; report cash transactions as required; monitor availability of funds on each letter of credit to insure cash can be drawn when needed; supv 2 acctg assts; review & approve acctg documents; work w/ Sponsored Projs Offc & academic depts to resolve funding problems; prep mgmt reports as needed; QUALIFICATIONS: BA/BS in acctg or equiv work exp, plus 3 yrs of prof'l acctg exp; analytical ability & familiarity w/ computerized acctg sys essential; knowl of microcomputer applications & gov't regulations helpful; supvry exp desirable; requires good oral written commu skills, tact & sound judgment; must be detail-oriented, and extremely accurate.; C06; $1854-2312.

36287-JB (JCC:6306) R&D Engr II: Work closely w/ scientists to develop conceptual designs for precision optical/mechanical research instrumentation for use in synchrotron radiation beam lines & then calculate temperature distributions & thermal & mechanical stresses & accompanying deformations of metal surfaces & optical components heated by intense x-ray beams; will also expedite procuremt & fabrication of new eqpt as needed; perform mechanical engrg analysis of proposed future designs of synchrotron radiation sources, beam lines, windows, monochromators & related instrumentation, in support of proposals for future facilities; QUALIFICATIONS: M.S. or Ph.D. in Mech Engrg w/ ability to perform complex heat transfer & material stress calculations essential; working familiarity w/ computer solutions of such problems highly desir; ability to read & interpret engrg drawings; familiarity w/ machine shop & fabrication techniques essential; C99; $213-2724

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Jan. 11, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

SLAC

95044-JM (JCC:6646) SR S&E TECH - ELECTRON OR TRAINEE: TMS Unit; serv simple & complex trouble calls of installed commu equip't, such as computer terminals, printers, cables, etc; perform maintenance on terminals & assoc equip't; make field connections, terminations & test remote terminals & spec interface equip't; write diagnostic routines; QUALIFICATIONS: AA degree in electronics or equiv knowl plus a couple yrs related exp; basic ability to use test instruments; exp installing/maintaining computer terminals; able to lift & transport approx 50 lbs & work in confined areas & in excess heat, cold, & dust.; A34; $1901. APPLY AT SLAC

91998-JM (JCC:2596) SECY II-SPEC: Prov sec'l serv to large group of physicists; type forms, corresp & manuscripts using physics/engrg terminology; screen phone calls; make travel arrangements & prep expense reports; keep time reprts; arrange conferences & mtgs; maintain files & offc supplies; operate various offc machines; QUALIFICATIONS: ability to carry out a wide variety of duties independently; ability to operate word processor/computer or be willing to learn; typ 60; several yrs offc exp; knowl of punctuation, syntax & spelling; exp in tech typing using Greek & math symbols.; B12; $1310-1440. APPLY AT SLAC

93353-JM (JCC:8880) Theoretical Physicist: Work on advanced concepts of high gradient accelerators & high power radio frequency sources; first respon to develop analytic and/or numerical techniques to design & diagnose high power klystron tubes needed for energy upgrading of a linear accelerator; QUALIFICATIONS: Ph.D. in physics or EE or equiv w/ extensive exp in areas of plasma physics, electrodynamics & particle beam transport; expertise in application of electromagnetic modeling methods required; familiar w/ field of high intensity accelerator theory & beam transport.; C99; $2600-3800. APPLY AT SLAC

Bargaining unit

31086-PB (JCC:1728) PORTAL MONITOR: TMS Unit; 50% time; various hours; occupies Portal Monitor Booth at lobby entrance during assigned hours & examines patrons' briefcases & bookbags, etc to determine that lib mat'ls are properly charged out; enforces lib regulations; transfers turnstile sount of patrons to tally sheet for each hour & maint other stats as apporp; answers questions regarding lib services, locations, etc; opens or closes bldg as scheduled; performs misc tasks as scheduled; other duties assigned; QUALIFICATIONS: Previous public service experience; punctuality & dependability; some college and/or lib experience is desirable.; A09; $6.08.

24645-PB (JCC:5786) LAB ASST I: TMS Unit; M-F, 8-5 or 1-10 pm; Assist in the preparation for undergraduate student laboratory course; prepare and sterilize solutions; pour media, set our glass ware and equipment; keep lab clean; some dishwashing; work with minimal supervision; QUALIFICATIONS: Prefer some familiarity with biology and chemistry; able to use balances, ph meter, autoclave; familiar with simple scientific terminology.; A13; $6.68.

32393-PB (JCC:5835) ANIMAL CARE ASST I: Responsibilities will include custodial care for animals (rats, mice) housed in the animal care facilities; clean cages, feed and water, perform general cleaning of areas; sterilizes cage equipment, botties and sawdust; QUALIFICATIONS: Ability to follow very detailed and written instructions; habits of cleanliness and neatness; willingness to handle animals; familiar with animalfacility and use of autoclave; has to handle 25-30 lb bags of feed; must be able to where there is sawdust;; A12; $6.54.

43537-AW (JCC:5308) Sr. Computer Operator: TMS Unit; shift work, wkends, & holidays; journey level position requiring considerable judgment in analyzing/resolving processing needs & problem conditions; operate in an environ housing several processing units fr several different vendors; make alterations or adjmts to sys w/in prescribed limits to improve overall computer performance; able to perform all requisite console operations; prov tech guidance to & limited coord of a group of operators; clean equip't; locate/file magnetic tapes, etc; QUALIFICATIONS: 33 mos exp in computer operations or equiv work exp; able to operate computer I/O console equip't so as to demonstrate knowl & understanding of computer fundamentals; demonstrated proficient application & comprehension of English lang & arithmetic skills; knowl & exp w/ IBM hdwr & in operation of sys using MVS/JES2; familiarity w/ Data Genl, HP, or Digital equip't preferred; ability to lift 50 lbs; may require working alone, odd shifts, overtime & holidays.; A30; $ 9.97.

33347-LL (JCC:6604) SR S&E TECH - ELECTRO MEC: TMS Unit; construction & operation of sys to measure wave propagation in rocks, as well as fluid flow, deformation & strength; help res assistants w/ various experiments in rock physics; prov tech support for a comprehensive study of physics of wave attenuation in porous rocks w/ fluids; help design mech transducers for rock deformation studies; prov tech assistance in studies of the role of pore pressure in rock deformation; may help in designing & running data acquisition sys using minicomputers; QUALIFICATIONS: knowl of application of piezoelectric & other electrical-mechanical transducers; exp in bldg & using liquid & gas pressure vessels; ability to analyze wave forms to obtain velocity & attenuation in rocks; knowl of physical processes involved in fluid flow thru rocks; exp in rock physics highly desirable, particularly in sedimentary rocks; bkground in computer controlled physical data acquisition desirable.; A34; $10.97.

33565-JB (JCC:6596) S&E Tech: TMS unit; 50%; pick up chemicals fr labs; segregate chemicals by reactive groups; able to recognize hazards & chemical compatibilities; interact w/lab personnel & edu them in proper pkging & storage of chemical waste; recognize chemicals that could be recycled & encourage recycling in labs; perform inspections & rept problems; order & maintain supplies for waste disposal; collect environmental samples; analyze & test samples under direction of Health & Safety professionals; QUALIFICATIONS: must be exp'd in handling chemicals; college chemistry nec; accuracy, neatness, attn to detail, self-direction desir; 18 yrs of age or older; licensed driver; physical strength needed to handle containers of up to 55 gallon drums, manual dexterity reqd; A28; $9.5.

1349-AW (JCC:3606) MAILING MACHINE OPR I: Receive mail fr Univ Dept; organize mail by Univ acct/type & destination of mail; affix postage & place in sacks for delivery to Post Offc; keep daily logs of all postage transactions; operate a limited number of mailing machines & related equip't; sorting mail by zip codes; QUALIFICATIONS: some knowl of postage rates & mailing machine helpful; ability to do simple math calculations & pay atten to detail; must have equiv to high sch'l reading & math ability.; A12; $6.54.

33289-TC (JCC:5638) LIFE SCI TECH I: 50%; simple cell culture: prep of media, solutions, sterilization of apparatus, cell counting; use of basic lab equip't: balance, freeze-drier, sterile hoods, filtration, etc; DNA & protein assays, on a routine basis, supervised; use of spectrophotometer; prep of human & animal skin for cell harvest; QUALIFICATIONS: high sch'l diploma or equiv w/ chemistry; prev lab exp desirable.; A18; $7.5.

18939-PB (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; Mon, Tues, Wed, 6-3pm; Sat, Sun, 7-3:30pm; high quality food prep, portion control, & sanitation procedures required; cooks breakfast & lunch for 350 to 400 people; prep all hot food on wkdays & for brunch on wkends; brunch counts are about 400-500 people; respon to open kitchen; work w/ other cooks & helpers; give instructions to student helpers or kitchen helper when working w/ you; English instructions; must work on clean up of kitchen & equip't; QUALIFICATIONS: exp in large volume cooking & basic knowl of high quality food prep; able to read & speak English; able to stand for long periods & lift heavy loads; must work wkends.; A20; $7.91

29676-JB (JCC:7654) CUSTODIAN: TMS Unit; 7:30-4pm; performs daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial equip't; spot cleaning, shampoos, waxes, dusts & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in light cleaning; knowl of related safety procedures.; A13; $6.68.

Nonexempt

29960-BP (JCC:2078) ADMIN ASST I (N): Grant & contract admin for entire faculty, incl prep of budgets, coord of submission of proposals to granting agencies; monitor monthly budget statements for dept operating, salary & gift accts; monitor 6 profs' res grants using budget statements; supv half-time offc assistant & offc staff; answer questions requiring judgment, knowl & interpretation of Univ policies & procedures; keep personnel & payroll records; act as dept contact for maintenance of physical facilities; act as dept property administrator; QUALIFICATIONS: typ 65; excel verbal & written skills required; proven ability to prep financial reports; work accurately w/ detailed information; prev exp in academic environ extremely desirable; familiarity w/ Univ procedures & policies helpful; send appl/resume to Sally Tremaine, Chemistry Dept.; B16; $1593-1671.

36583-BP (JCC:2454) OFFICE ASST II: Assist admin assistant w/ daily maintenance of automated student record file; expected to become familiar w/ guidelines governing the aid programs available to Stanford students & procedures followed in making award; assist w/ output of automated sys; proofread aid notices; respon for mailing of notices; prov assistance w/ other program functions, such as assessment of financial aid applications using Uniform Methodology, typing, phone work & some filing; QUALIFICATIONS: typ 50; clear, legible handwriting for preparing of key punch documents; demonstrated ability, w/out close supvn, to work accurately w/ numbers & repetitious assignments; exp w/ an automated sys helpful, but not nec; send appl/resume to Sue Wood, 214 Old Union.; B09; $1130-1189.

29256-BP (JCC:2596) SECY II-SPEC Prov full sec'l serv to 1 professor in conjunction w/ 3 other profs; typ corresp class notes, reports, proposals & tech papers; maintain files; make travel/hotel arrangements; proofread articles for journals; plan & coord seminars; keep track of profs' calendars; screen phone calls; QUALIFICATIONS: typ 70; s/h helpful; min 3 yrs sec'l exp; fast accurate typing (tech typing exp, equations, tables, figures, or willing to 1 learn); ability to exercise judgment; well organized/ability to handle work-flow fr various sources; facility in use of English grammar & spelling in editing/writing required; good inter-personal skills; send appl/resume to Prof. Hesselink, Durand 377.; B12; $1310-1373.

29443-PM (JCC:2596) SECY II-SPEC: Sec to several faculty members in different GSB teaching areas; prep & typing of course mat'ls, manuscripts, drafts, res papers & genl corresp, incl tech equations (Greek & mathematical); tape transcriptions; make travel arrangements, keep calendars, & other routine sec'l duties; QUALIFICATIONS: typ 60-70; several yrs of sec'l working exp, preferably in an academic enviorn; excel typing, spelling & grammar skills; self starter; familiar w/ or willing to learn MUSE word processing; history of dependability also desirable; send appl/resume to Katherine Bostick, Room 248K, Grad Sch'l of Business or call 497-2187.; B12; $1310-1373.

Hospital

COORDINATOR OF VOLUNTEER SERVICES—COMMUNITY RELATIONS (B-304): Responsibilities: The Coordinator of Volunteer Svcs is responsible for the appropriate planning, implementing, monitoring, & coordinating of volunteer svcs in Stanford University Hospital. This dept manager's main function is to assist Hospital in delivery of health care by instituting, monitoring, and/or carrying out programs that recruit, retain, & reward volunteers. The Coordinator reports to the Director of Community Relations & works closely with the SUMC Auxiliary, The Chaplaincy Office, & other ongoing volunteer activities of the Hospital. Qualifications: Graduation from an accredited college or univ with degree in sociology, psychology, or mgmt, or appropriate experience preferred. A minimum of 5 yrs of administrative or supervisory experience in health care institution or in Community organization setting as a volunteer. Demonstrated supervisory ability & effective basic communication skills, reqd. Ability to use tact & develop the capabilities of others is essential. Thorough knowledge of the local community. Permanent. M-F, $25,209-$37,814 annually. Please contact Bradlee Yochem at 497-6361 or send resume to Employment & Recruitment (SUH), 770 Welch Rd, Suite 100, Palo Alto, Ca. 94303.

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Staff employment opportunities

Jobs/continued from page 21

27089-PM (JCC:1747) LIBRARY SPEC I: Work in Catalog Dept of Western Lang Collections, Hoover Institution Lib; keys in bibliographic records fr worksheets into RLIN database; corrects coding error that are received on-line during inputting process; files catalog cards, etc; QUALIFICATIONS: typ 45+; atten to detail; good clerical skills; demonstrated ability to learn RLIN II or other automated sys; reading knowl of one or more foreign langs; send appl/resume to J. Kladko, Hoover Institution, Stanford, CA 94305, 497-2054.; B10; $1189-1246.

31083-PM (JCC:1755) LIBRARY SPEC II: 50%; fixed term 1/5/83-8/31/83; performs duties in Genl Reference Dept; searching & verification duties; searches automated data bases such as RLIN, SPIRES & RLG conspectus on-line; searches card catalog & bibliographic tools; prov clerical support in completing forms such as transfer, cancel conservation forms; retrieves & charges mat'ls, both fr STK & other campus libs; typ & photocopies bibliographic instruction mat'ls; reserves rooms & equip't 1 for bibliographic instruction sessions, etc; QUALIFICATIONS: typ 40; ability to learn a variety of sys & procedures; ability to work independently; prev public service exp; prev lib exp; bkground in Social Sci desirable; exp in a univ or res lib also desirable; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $655-687.

31084-PM (JCC:2454) OFFICE ASST II: 50%, fixed term 1/1/83-8/31/83; 9am-1pm; performs duties in Lib Personnel Offc; answers, screens & routes incoming phone calls; receives visitors to offc and/or prov informa as requested; typ routine forms, memos & corresp; peforms genl filing; sort mail, etc; QUALIFICATIONS: typ 45; demonstrated clerical & organizational skills; atten to detail; prev exp in dealing w/ the public; ability to maintain confidentiality as demonstrated in prev exp; prev lib exp desirable; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B09; $565-595.

32379-PM (JCC:2454) OFFICE ASST II: 50%; filing, prep of letters for consult case; answer phones; xeroxing, etc; locating mat'l in lib as needed for faculty; helping offc sec w/ various minor duties; QUALIFICATIONS: typ 50+; able to work independently; judgment in dealing tactfully & informatively w/ matters pertaining to autopsies as well as other dept matters; ability to learn quickly; contact: Phyllis Abuan, 497-6265.; B09; $565-595.

6623-PM (JCC:2554) SECRETARY II: 50%, 1-5pm; typ corresp, forms & manuscripts for prof & members of group fr dictaphone & rough drafts using dictaphone, typewriter & word processing sys; handle dept mail; make travel arrangements for prof; act as bkup when needed for other members of offc staff; answer phones; xeroxing; genl offc duties; prof's lab is engaged in research on psychophysiological aspects of sex; QUALIFICATIONS typ 55-60; good typing skills; exp w/ word processor preferred; use of dictaphone; good phone answering skills; good interpersonal skills; send appl/resume to Gweneth Wood, Physiology Bldg Room 2.; B11; $623-655.

32256-BP (JCC:2554) SECRETARY II: Sec to the Fellows; 9 month continuing position during academic yr; accurate finished typing of manuscripts, class mat'ls, corresp; serve as receptionist, screen variety of calls/inquires concerning programs; sort mail; make travel arrangements; prep univ forms; asst w/ conference/lecture arrangements; set up & maintain file sys; maintain offc supplies; QUALIFICATIONS: typ 65; knowl of word processing (IBM Displaywriter preferred); excel English grammar & spelling essential; ability to carry out wide range of assignments w/ min of supvn; prev exp in academic setting desirable; 2-3 yrs of approp sec'l exp; able to deal effectively w/ a variety of people; send 1 appl/resume to Virginia Shrader, Humanities Ctr, Bldg 300, Rm 302.; B11; $1246-1310.

43503-PM (JCC:2562) SECRETARY III: Sec to Chairman, Dept of Medicine; respon for high volume dictation, manuscript, grant typing; complex scheduling of appts & mtgs; handle confidential informa & calls w/ tact & discretion; interaction w/ faculty, housestaff, students, Univ & other officials in connection w/ Chairman's work; QUALIFICATIONS: type 75; s/h optional; strong typing & English skills; exp w/ dictation equip't & business corresp; knowl of or willingness to learn Xerox 860; flexible; ability to work under pressure & use independent high level judgment; send appl/resume to Sally Mixer, SU Med Ctr, S-102.; B14; $1440-1514.

22521-PM (JCC:2562) SECRETARY III: Full-range sec'l serv for profs & chairman; handle diverse set of assignments on an equal prior basis; prep of draft & final copy manuscripts, reports, speeches, grants, fellowship proposals using IBM word processor; mgmt of substantial corresp incl screening & organizing large volume of mail; answer calls; make appts; set-up mtgs; make travel arrangements & accommodations; scheduling seminars' & Wednesday Club speakers respon, etc; QUALIFICATIONS: excel typing, grammatical & proofing skills; ability to compose letters fr oral instructions; ability to use word processing equip't or willingness to train; knowl of scientific 1 terminology helpful; prior exp in academic setting desirable contact: Lore Karrer, 497-6559.; B14; $1440-1514.

32942-PM (JCC:2596) SECY II-SPEC: Prov full sec'l serv to Faculty in Endocrinology Div of Dept of Med; typ corresp & manuscripts fr long hand & transcription, incl careful proofreading of final drafts; use Xerox word processor; answer telephones; screen & route calls, incl some patient consultation requests; set up & maintain filing sys; sort mail; make travel arrangements & prep expense reports; prep purchase reqs for lab supplies; QUALIFICATIONS: typ 65; fast accurate typing; knowl of or ability to learn Xerox 860 word processor; well organized & able to handle work coming fr several people; good interpersonal skills; knowl of scientific & med terminology desirable; good written & oral commu skills; send appl/resume to Mary Driscoll, Med Ctr S005.; B12; $1310-1373.

29442-PM (JCC:2596) SECY II-SPEC: Sec to several faculty members in different GSB teaching areas; prep & typing of course mat'ls, manuscripts, drafts, research papers & genl corresp; tape transcriptions; make travel arrangements; keep calendars; very heavy technical typing load (equations, use of math & Greek symbols); QUALIFICATIONS: typ 60-70; several yrs of sec'l working exp; preferably in an academic environ; excel typing, spelling & grammar skills; have initiative, be able to prior & to work under pressure; familiar w/, or willing to learn MUSE word processing; history of dependability also desirable; send appl/resume to Katherine Bostick, Rm. 248K, GSB or call 497-2187.; B12; $1310-1373.

33331-PM (JCC:2596) SECY II-SPEC: 50-75%; sec'l serv for a faculty member & a group of grad students; typ tech manuscripts, res proposals & reports, using a computer text editor; make travel arrangements; answer phone; maintain files; mail reprints; maintain mailing lists & reference lists; QUALIFICATIONS: typ 65; good verbal & written commu skills; good English usage & spelling; able to interface effectively w/ faculty, staff, & students; familiarity w/ Univ forms highly desirable; computer text-editing exp or willingness to learn required; send appl/resume to Amos Nur, 365 Mitchell.; B12; $655-687.

30391-TC (JCC:5932) CLINICS STAFF NURSE III: Survey Ctr Supvr in Salinas for Stanford Heart Disease Prevention Program's Community Study; daily mgmt & supvn of 3 proj staff (incl major respon for hiring, training & evaluating performance); recruitment & scheduling of participants in survey, conducting med & behavioral interviews, obtaining med & physiological measurements on survey participants; maintaining records & files, etc; QUALIFICATIONS: valid RN license in Calif w/ at least 3 yrs' exp in a public health setting; supvry & med records abstracting exp & exp in clinical research required; commu easily w/ wide range of people; perform interviews to collect accurate, standardized informa; ability to abstract med records; familiarity w/ nec equip't to obtain blood pressure, blood samples, height & weight & conduct low-level exercise test; bilingual English/Spanish preferred.; K03; $1981-2144.

33713-PM (JCC:2714) MED SERV ASST III-SPEC: 7:45-4:30; patient contact & payment arrangements on balances due dept; determines patient's ability to pay & makes approp credit arrangements if nec; review & process assignments of amounts for collection; review & maintain files of accts in which notice of bankruptcy or probate has been filed;review & maintain all delinquent amounts, etc; QUALIFICATIONS: must possess excel abilities in commu fully w/ patients, family members, peers & mgmt regarding matters of extreme sensitivity; bkground in genl health care business setting; retail-consumer credit or collection environ; good offc skills; 1 yr college exp or related exp; contact: Mike Bass, 525 University Ave. Suite 400.; B12; $1310-1373.

13017-BP (JCC:2554) SECRETARY II: Acts as undergrad sec; keeps student records; processes class records; works w/ undergrad student organization; liaison for student/alumni activities; typ letters, reports, syllabi, bibliographies & recommendations; heavy interaction w/ faculty & students; bkup for Dept Sec on phones & w/ visitors, & interprets dept & univ policies; operates offc machines, etc; QUALIFICATIONS: typ 65; excel grammar, commu & typing skills; knowl of or willingness to learn word processing; deal effectively w/ students, faculty, & staff; detail-oriented & well-organized; capable of working effectively under pressures of deadlines, interruptions & activities of a busy offc; send appl/resume to Barbara Wawrzynsk, History Dept.; B11; $1246-1310.

31085-PM (JCC:1755) LIBRARY SPEC II: Processes books on-line with MARC, LC & RLIN member copies, including: compares books to bibliographic record to ensure accuracy, makes bibliographic changes as necessary, uses RLIN II system to update descriptive cataloging for mat'l in languages & classifications to conform w/ current SUL cataloging policy; searches MARC, SUL main catalog, Lib of Congress printed copy, Name Authorities, Monograpgic Series to verify name headings & series treatment; types authority cards for personal & corporate name headings; etc; QUALIFICATIONS: attention to detail; prev lib exp, pref w/ technical processing; reading knowl of one Western European language; ability to work independently; exp w/ automated system; prev exp with RLIN II desirable; send appl/resume to Bob Johnson, Green, Room 223, (497-3152); B12; $1310-1373.

17846-PM (JCC:2512) OFFICE ASST III-SPEC: Answer phones; route calls; type messages; type routine letters, memos, forms, manuscripts grants; operate xerox 860 word processor (will train); order & maint supplies; transcribe from dictaphone; maint files; photocopy documents; handle appts, etc for Chief of Immunology; generally asst admin asst; learn medical terminology; QUALIFICATIONS: Type 65 wpm; must be an excellent typist & speller; good interpersonal skills; willingness to leran medical terminology; send appl/resume to Claire Wolf, Med Cntr M215, 497-7900.; B12; $655-687.

30479-BP (JCC:2554) SECRETARY II: W/ other sec to prov sec & clerical support to 10 professional staffin the Offc of Benefits & Records (Personnel); type correspondence & special reports from written drafts, shorthand notes, & dictating equip w/ particular attention to spelling, grammar & format; serve as receptionist for staff; screen calls & direct them (for 10 lines) & visitors; maint calendars, schedule appts, mtgs & mtg rooms; take, draft & circulate minutes for mtgs; prov admin support on spcl projects; write & run simple computer programs to produce stat reports & labels; using CRT terminal enter data into computer; QUALIFICATIONS: Min 2-3 yrs sec exp; basic skills including dictaphone; word processing skills (or willingness to learn) pref; exp with WYLBUR and/or other interactive computer system pref; send/appl resume to Jeannie Thomas, Old Pavilion, Personnel Dept.; B11; $1246-1310.

31087-PM (JCC:2596) SECY II-SPEC: Manages the Assoc Dir's calender & time, schedules & commits the Assoc Dir to mtgs & conferences; organizes & schedules mtgs of sev'l groups; manage the flow , control, prioritization & distribution of incoming & outgoing mat'ls in English & a variety of foreign languages, including correspondence, reports & publications; manages file system; types a variety of mat'ls; initiates routine correspondence w/ vendors, etc; types Latin, French & Italian on occasion; takes transcription; photocopies; asst in prep of budget; etc; QUALIFICATIONS: Prev sec exp; prev public service exp; attention to detail; demon ability to use transcribing machine; demon organz'l skills; reading ability in French, Italian, German or Latin; background in humanities or soc sci desirable; knowl of and/or exp inacademic lib; send appl/resume to Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $1310-1373.

33710-PM (JCC:2454) OFFICE ASST II: 7:45-4:30; representing Faculty Practice Program & maintaining good patient relations; respon for receiving incoming patients, vendors & visitors; notifies indiv of arrival of visitor & maintains log of walk-in patients; respon for proper appearance of lobby/reception area incl availability of coffee & magazines; operates a multiple automatic Horizon Telephone switchboard; monitors Aid sys sequencer & maintains records of calls; trains relief personnel; respon for prep & typing of requested insurance billings; QUALIFICATIONS: typ 35; requires good manual dexterity, pleasing telephone voice, & good verbal skills; min of 1 yr's training/exp in operating a telephone switchboard w/ reception respon; knowl of genl offc equip't; some knowl of med terminology; contact: Ginger Hummer or Robbin Moreno, 525 Univ. Ave., Suite 400, Palo Alto, CA.; B09; $1130-1189.

36585-BP (JCC:2462) OFFICE ASST III: Fixed term 1/1/83-8/31/83; asst Assoc Dir w/ clerical duties; letter-quality typing, filing, compitation of data, assisting w/ statistical studies; computation of student needs analysis; interfacing w/ other student services & acctg offcs, & assisting students w/ genl inquiries; QUALIFICATIONS: typ 50+; able to work w/ various types of individuals, & possess a sincere desire to contribute to the objectives of Financial Aids Offc; first rate typing skills essential; ability to follow thru & be assertive nec; send appl/resume to Vincent De Anda, Old Union, Room 214.; B11; $1246-1310.

36582-BP (JCC:2462) OFFICE ASST III: Respon for opening reception window at 8am daily; respon to basic offc inquiries regarding application procedures, the review, notification & delivery process of financial aid to Stanford students; maintain appt schedules for counseling staff & Asst Dir of Advising & Awarding; typing for the Advising & Awarding Unit; compose corresp in response to genl informational inquiries, etc; QUALIFICATIONS: typ 50+; must possess a genuine interest in serving students; able to deal tactfully, as well as sensitively, to the problems that may arise for indiv students; requires high energy level, punctuality, & ability to work independently; excel written & oral commu skills; send appl/resume to Roberta Johnson, 214 Old Union.; B11; $1246-1310.

31088-PM (JCC:2554) SECRETARY II: Performs duties for the Asst Dir for Admin Services, the Bldg Projs Mgr & the Admin Asst; opens & screens mail; answers phones; transmits mail on SU elec mail sys; takes dictation & transcribes corresp, reports & forms; develops & maintains offc databases using WYLBUR, SCRIPT & SPIRES; lays out & types complex statistical reports & budget/financial tables; organizes & maintains dept'l files; plans Asst Dir's time schedule & prepares his mtgs, etc; QUALIFICATIONS: typ 50-60; requires prev sec'l exp; atten to detail; knowl of offc procedures; good commu skills, both orally & in writing; knowl of English grammar, spelling, & syntax; prev public serv exp; demonstrated ability to use WYLBUR/SCRIPT sys; ability to handle confidential mat'l; desirable to have prev exp w/ SPIRES; knowl of lib operations; ability to use dictation equip't; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B11; $1246-1310.

Rental housing

HOUSING AVAILABLE

□ **June to Oct. 1, '83:** Furn. campus hse, 4BR/2BA, + cottage BR. 4 carport, auto sprinklers, full solar hot water. $1200/mo. incl. gardener, water. Gas & elec. xtra. Deposit + 1st mo. rent req. Call 858-3941 (day), 327-5790 (eve).

□ **Jan. 15 thru Dec. 31, '83:** Furn. contemp. hse close to campus ctr, 2000 sq. ft. 2BR/2BA, 2 studies (can convert to BR), FR, frpl, piano, lush atrium, wooded lot. $1350/mo. incl. gardener, water. Call 857-0479 or 497-9477 (day).

□ **Jan. 10 to June 20, '83:** Lux. condo, fully furn. 2BR/2½BA, study, LR, all appl. Pool, sauna, 24 hr. security. Adult cpl. Call 324-0457.

□ **Regularly avail.:** 1 & 2BR furn. and unfurn. apts. & twnhses, & 3BR/2BA hses. in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $525 to $800/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **NOW:** So. Lake Tahoe, ski cabin. 2BR, frpl, color TV, phone. Adj. to Nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk. (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3142).

□ **Now:** Furn. rm, w/ktchn priv, DW, W/D, share LR w/frpl, garden, gar. So. Palo Alto hse. $275/mo. + 1/3 util. Call Rose, 856-3792.

□ **NOW:** Prof. male seeks M/F rmmate to share lge 3BR/2BA hse in Foster City. LR/DR, atrium, frpl, skylights & more. See to appreciate, good location. $325/mo. + ½ util. Call John, (415) 572-9850 after 7 pm.

□ **Beg. Feb. 1, '83:** Studio in rear of Menlo Pk hse, fully furn. & equipped. $325/mo. incl. all util (xcept phone) wkly clean., linen change. Nonsmoker, no pets. Call Dr. Lenkey, 322-3717.

HOUSING NEEDED

□ **NOW:** Reliable Stanf. staff seeks hsesit. Pref. long term, 3 to 6 mo. but will consider shorter per. Will give excellent care to hse, pets, plants, yd. Loc. refs. Call Donna, 497-3967 (day).

□ **Sept. '83 thru summer '84:** Visit Prof, Operations Rsrch seeks 3-4BR hse on campus for self, wife & 2 girls. Stanf. refs. Write A. Tucker, Applied Math, SUNY, Stony Brook, NY 11794 or call eves (516) 751-3283.

□ **CHRISTMAS VACATION HSESIT:** Out of the area Univ. faculty person available to hsesit this vacation. Local contact and refs at 851-1361.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Carpools

Ride or form a carpool from Fremont to Stanford. M-F, 8-5. Call Evelyn, 7-1555.



St. Basil's Cathedral in Moscow is part of Jack Kollman's Faculty Club exhibition.

Kollman presents lecture, exhibit

Stanford and Palo Alto area residents will have a double opportunity to experience old Russian art and architecture in a lecture and a photographic print exhibit to be given by Dr. Jack Kollmann, associate of the Center for Russian and East European Studies at Stanford University.

On Tuesday, Jan. 11, Kollmann will give a slide-illustrated lecture entitled, "Medieval Moscow Encounters the Renaissance: Italian Architects in the Kremlin, 15th-16th Centuries," at 4:15 p.m. in Room 4 of the Cummings Art Building, Stanford University.

Kollmann will also present a color photographic print exhibit, "Photographs of Old Russia," in the Faculty Club from Jan. 17 to early March. A reception will be held at the Faculty Club from 4:30 to 6:30 p.m. Tuesday, Jan. 18.

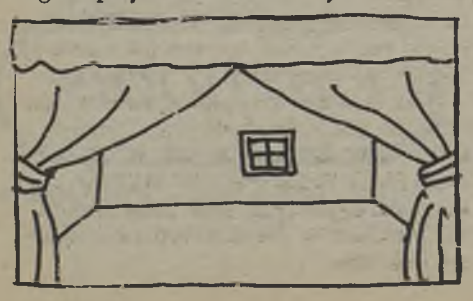
Kollmann, a specialist in the history of the Russian Orthodox Church and of old Russian art and architecture, has taught at Wellesley College, Boston College and Harvard University Extension, and has had several one-person photographic exhibits in Boston, New Haven, and New York City. He is currently working on a book on the Russian Orthodox Church under a grant from the National Endowment for the Humanities.

In his several visits to the Soviet Union, including two academic years spent there, Kollmann has studied and recorded in photographs the rich artistic and architectural heritage of traditional Russia.

Want to try out for *Don Juan?*

Auditions for the Stanford Drama Department's Graduate Directing Workshop production of Moliere's classic comedy, *Don Juan*, will be held at 2 p.m. Sunday, Jan. 9 and at 7 p.m., Monday, Jan. 10 in Room 205 on the second floor in the back hall of Memorial Auditorium.

The play will be directed by second-year graduate student Laurence Maslon, who was the associate director of *King Lear* and *The Good Soul of Setzuan*, both recently presented by the Drama Department. He has also directed several original plays off off-Broadway.



Don Juan, which will be performed March 2-5 in the Nitery, occupies a special place in the canon of France's greatest playwright. Moliere used the already famous legend of Don Juan as the basis of his play, and it proved a great success when it was first performed in February 1665.

However, the highly scandalous material caused the play to be withdrawn from the stage. Only in the last 30 years has it achieved the preeminence it deserves. It combines scandalous observations about life and religion, humanistic philosophy, and outrageous slapstick. It is a seventeenth century *Everyman*; an episodic journey through life with history's greatest lover.

This production will set the play in Sicily in 1920, supporting the modernity of the play. It will combine a Fellini-esque world with a Chaplin-esque sense of comedy.

For further information, call 497-2576.

Festival of Chinese films slated for month of January

The Center for East Asian Studies at Stanford will sponsor a Chinese Film Festival at 7:30 p.m. Tuesday and Thursdays in Memorial Auditorium during the month of January.

Six films provided by the Chinese consulate in San Francisco will be shown. All are in Chinese. Except for "New Year Sacrifice" and "Fifteen String of Cash," all have English subtitles. Synopses of these two will be available at the door. A $1.50 donation will be requested.

The schedule follows:

Tuesday, Jan. 4: "New Year Sacrifice (1956)." In this famous Lu Hsun story, the life of a young maidservant is gradually destroyed through the cruelty of fate and the callousness of society.

Thursday, Jan. 6: "Two Stage Sisters (1964)." During the turbulent years of 1935-50, two sisters end up taking separate paths in pursuit of a stage career. Voted best film to premiere in 1980 at the National Film Theater in England.

Thursday, Jan. 13: "Troubled Laughter (1979)." Nightmare and fantasy interludes are used to help convey the difficulties of being a reporter during the "Gang of Four" days in this imaginative new film.

Tuesday, Jan. 18: "The Second Handshake (1980)." The hopes and dreams of two young scientists in love are frustrated when parental interference and Sino-American hostilities change the course of their lives. Based on a popular underground novel which was banned by the Gang of Four for its focus on love and on intellectuals.

Tuesday, Jan. 25: "Fifteen String of Cash (1956)." A drunken butcher's joke turns into a complicated murder case in this creative screen adaptation of a traditional Chinese Kunqu opera.

Thursday, Jan. 27: "Li Shuangshuang (1962)." Through the use of comedy, this film highlights two real social issues that were creating problems in the countryside: male dominance and excessive Party pressure for communication.

Two experts talk about inventions

Two speakers will discuss invention in a free public program sponsored by the Associates of the Stanford University Libraries at 3 p.m. Sunday, Jan. 16, in Annenberg Auditorium.

Lynn T. White, UCLA professor of history will speak on "Technological Invention in the Western Middle Ages." Niels J. Reimers, director of technology licensing at Stanford, will cover the inner workings of a university technology licensing program from the laboratory to the market in a talk entitled "Sex Attractants, Acoustic Microscopes and Hybridomas."

A reception will follow in the Louis R. Lurie Rotunda of the Cecil H. Green Library.

White, who is both a former Stanford professor and a former president of Mills College, will emphasize specific inventions which are related to books and reading and will place them within the context of the technological movement during the Middle Ages.

The program and the reception are open to the public. There is no charge.



Jacques Taddei

French organist to perform Jan. 12

Stanford's Music Department will present French organist Jacques Taddei in a free concert at 8 p.m. Wednesday, Jan. 12, in Memorial Church.

Taddei is both an international performer and director of the National Conservatory in Rueil-Malmaison near Paris where he teaches piano and organ.

On Jan. 12 he will perform the *Fantasie and Fugue on B-A-C-H* by Liszt, the *B minor Chorale* of Franck, and several movements from Vierne's *Second Symphony for Organ*. His program will conclude with an improvisation on submitted themes.

Taddei won first prize in piano performance at the Paris Conservatory and in 1980 was awarded grand prize in the improvisation competition at Chartres Cathedral. He is a guest of university organist Herbert Nanney.

Don't fear age 39, says Help Center

"There is Life After 39!" is the title of a Help Center workshop for men and women at this crucial stage of life, to be presented from noon to 1:30 p.m. Tuesday, Jan. 18, at the Help Center.

Jean Green, licensed clinical social worker, will be guest speaker.

Participants will consider these questions: How happy are you with decisions you made in young adulthood? and are you considering some changes?

Space should be reserved before Monday, Jan. 13, by calling 497-4577.

Breast cancer workshop

"New Options for Women with Breast Cancer" will be presented from noon to 1:30 p.m. Thursday, Jan. 6, in the Tresidder small lounge.

The film "One in Ten," made by Kate Sphor with the Film and Television Production Center of the Department of Communication, will be shown as a vehicle for promoting discussion of breast cancer and the multiple options for treatment.

To register, call the Help Center at ext. 7-4577.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Medical Center, and SLAC employees and their immediate families. All workshops, seminars, and counseling sessions are free.



Vicky Holt



Bella Lewitzky

Women in the Performing Arts series; Holt and Lewitzky open Lyman lectures

"Women in the Performing Arts: Lectures and Performances" will be the theme of the winter-quarter Jing Lyman lectures, sponsored by the Center for Research on Women and the Lively Arts at Stanford.

Vicky Holt, Stanford's director of events and services, will open the series with a talk on the historical perspective of "Women's Role in the Performing Arts" at noon Wednesday, Jan. 5, in Terman Auditorium of the School of Engineering. Holt and Margo Davis, former CROW assistant director, are coordinators of the series.

Bella Lewitzky, founder of the Bella Lewitzky Dance Company, will give a lecture-demonstration at noon Wednesday, Jan. 12, in Terman Auditorium. Lewitzky chose to defy tradition by founding her dance company in the West, rather than New York, and by marrying and raising a family while continuing her career.

Nancy Reich of the Manhattanville College Department of Music, will discuss "Clara Schumann: Artist and Woman" at noon Tuesday, Jan. 18, in Terman Auditorium.

Sylvia Glickman, director of chamber music at Haverford College, will give a piano recital featuring women composers at 8 p.m. Tuesday, Jan. 15, in Dinkelspiel Auditorium. Tickets for her performance are available through the Tresidder Office (497-4317).

The Robin Flower Band will perform at 8 p.m. Tuesday, Feb. 1, in Dinkelspiel. Tickets also are available through Tresidder.

The all-women band includes a mandolin, fiddle and electric guitar. Based in Oakland, the blue grass group already has produced three albums, *Galaxia*, *Flying Fish*, and *Green Sneakers*.

Daphne Muse of the Mills College Ethnic Studies Program, will discuss "Black Women in Jazz" at noon Wednesday, Feb. 9, in Terman.

"Moments of Being," a program of music and dramatic readings based on Virginia Woolf's diary, is scheduled for 8 p.m. Tuesday, March 8 in Dinkelspiel.

Program participants from the Stanford Music department will include Lila Stuart, soprano; Jodi Gandolfi, pianist; Nancy Beagle, actress; with music by Dominic Argento.

Additional performances will be announced later.

Other winter quarter events outlined in the "CROW Newsletter" include a conference on "Communities of Women," sponsored by *Signs* magazine, from 10 a.m. to 4 p.m. Sunday, Feb. 20, in Annenberg Auditorium. Keynote speaker will be Wellesley College President Nannerl Keohane, former Stanford political science professor.

Eleanor Holmes Norton, of the Georgetown University School of Law, will speak at 8 p.m. Monday, Feb. 21, in Kresge Auditorium of the Law School. She formerly headed the Equal Employment Opportunity Commission.

"Having a Baby: Personal and Political Considerations" will be discussed from 2 to 5 p.m. Friday, March 4, in Tresidder Memorial Union Room 270.

"Women's History: The Mainstream and the Margin" will be discussed at 2:30 p.m. Thursday, March 10, at the Bechtel International Center. This program is cosponsored by the American Association of University Women.

Further information may be obtained by calling CROW at (415) 497-1994.

Oscar Shumsky, violinist, to perform Friday

The Lively Arts at Stanford will present Oscar Shumsky, violin, in collaboration with David Gross, piano, at 8 p.m. Friday, Jan. 7, in Memorial Auditorium.

The program will consist of Bach's "Partita No. 1 in B Minor for Solo Violin"; Beethoven's "Sonata for Violin and Piano, Op. 96, in G Major"; Smetana's "Aus der Heimat" ("From the Homeland"); and Franck's "Sonata in A Major for Violin and Piano."

Shumsky, long considered a "violinist's violinist" for his sensitivity, integrity, and skill, was a child prodigy. At the age of eight he appeared as soloist with the Philadelphia Orchestra under Leopold Stokowski. He became the youngest pupil ever to be accepted by Leopold Auer, the great Hungarian violinist and pedagogue. In this early career, he performed with the Boston and Baltimore Symphonies and the New York Philharmonic, as well as with the Philadelphia Orchestra.

After Auer's death, Shumsky studied with Efrem Zimbalist at the Curtis Institute of Music. In the years immediately following his graduation in 1936, he served as solo violinist for NBC Radio's weekly broadcasts, as a member of Toscanini's NBC Symphony, and as first violinist of the Primrose Quartet.

Shumsky is an outstanding violist as well as violinist, and pioneered the recital for both violin and viola in the early '50s. In 1962, he received the Ford Foundation Award for outstanding achievement as a violinist. He served as conductor and music director for the Stratford Music Festival in Canada for a number of years. Since that time, he has maintained parallel careers as soloist, chamber music performer, conductor, and teacher.



Oscar Shumsky

Shumsky has been on the violin faculty of the Juilliard School of Music, the Peabody Conservatory, the Curtis Institute, and Yale University. His recent recordings of the Bach solo violin works and Mozart Violin Sonatas with Arthur Balsam have been highly acclaimed. His latest recording project is the complete works of Fritz Kreisler, an early mentor, which includes over 100 works.

Gross studied piano with Arthur Loesser at the Cleveland Institute of Music, and has performed in concert with members of the Cleveland and Chicago Symphonies, and as a soloist with the Chicago Chamber Orchestra.

In addition, he has played with Arnold Steinhardt, Jaime Laredo, and Alexander Schneider at the Marlboro Music Festival. He is a resident of Portola Valley, was formerly on the urology and radiology faculties at Stanford Hospital, and is now a physician at O'Connor Hospital in San Jose.

For ticket information, call Tresidder ticket office, 497-4317, BASS, and other Bay Area ticket agencies.

Music Department: popular trio Sunday

A popular clarinet/cello/piano trio opens Stanford Music Department's winter quarter concert series at 8 p.m. Sunday, January 9, in Tresidder Lounge. Members of the trio are William Menkin, clarinet; Aileen James, piano; and Roger Emanuels, cello.

James and Menkin are both freelance musicians with D.M.A. (Doctor of Musical Arts) degrees from Stanford. Cellist Emanuels is a member of the San Jose Symphony.

Their program will include Milhaud's "Duo Concertant for clarinet and piano," written in 1956; the world premiere of "Trio," by Music Department lecturer Jonathan Berger; "Cello sonata, op. 40" by Shostakovich; Beethoven's melodic "Trio, op. 11"; and a lighthearted "Fantasy for clarinet and piano" by Rossini.

Tickets for the January 9 concert are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door.

Conflict in Asia talk at I-Center

"Conflict in North East Asia: The People's Republic of China, Taiwan, Korea" is the topic of the first Tuesday luncheon talk in the winter quarter series at the Bechtel International Center at noon, Jan. 11.

Harry Harding, Jr., associate professor of political science at Stanford, is featured speaker. Harding, a noted authority on Sino-American relations, is a member of the US-PRC Joint Commission on Scientific and Technological Cooperation and of the National Committee on US-China Relations. He has conducted research in Taiwan and Hong Kong and has visited the People's Republic of China numerous times.

His publications include *Maoist Theories in Policy Making and Organization*, *Cultural Revolution in China*, *China's Quest for Independence: Policy Evolution in the 1970s*, and *China Under Threat: The Politics of Strategy and Diplomacy*.

During winter quarter programs will focus on more specific regional and issue cases, and in the spring, on ideas and plans for the resolution of acknowledged problems. Future winter quarter Tuesday talks will cover India's development, new leadership in the USSR, Poland's economic problems, the superpowers and militarism, acid rain, Latin America's political and economic chaos, and the new Swedish politics.

Tickets for the luncheon, at $2.50, are now on sale. Brown baggers are also welcome at no charge. For information, phone 497-1831.

Women in Sciences: Berlin on DNA

Vivian Berlin, Ph.D. candidate in biological sciences, will speak on "Recombinant DNA Technology: the Transformation of Biology" at 4:15 p.m. Thursday, Jan. 13, in Room 420-041 (entrance in the basement of the Math Department).

Her lecture is one of a series sponsored by Stanford Women in Science and Engineering (WISE). The series is designed to promote interdisciplinary discussion by providing a regular forum where nontechnical lectures are followed by informal discussion over refreshments.

The lectures are cosponsored by the dean of graduate studies and research. Other talks this quarter will be given by math Ph.D. candidate Ruth Williams and electrical engineering Prof. Susan Owicki. All members of the Stanford community are welcome.

Calendar

Calendar items should be delivered to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Jan. 5, to cover the week of Mon., Jan. 17 through Sun., Jan. 23.

Events must now be submitted on forms. Those wanting copies should call Events and Services, 497-2551.

LATE ANNOUNCEMENTS

Wed., Jan. 5. Book Sale: Books and periodicals in many fields. Hardbound $1.50 and up, paperbacks 25 cents and up, periodicals 10 cents. 11 a.m.-1:30 p.m. Green Library, West Wing, first floor, Room 101.

Computer Systems Laboratory Seminar: "Cryptographic Protocols and Statistical Database Security" with Dr. Dorothy E. Denning, Purdue Univ. 4:15 p.m. Skilling Aud.

Thurs., Jan. 6. Solid Mechanics Seminar: "Project Cognac, the World's Deepest Offshore Platform" with Prof. Emer. Louis London. 4:15 p.m. Skilling Aud.

Stanford Film Society: "City Lights" with Charles Chaplin; and "Sherlock, Jr." with Buster Keaton. 7:30 p.m. Kresge Aud. $2.

Fri., Jan. 7. Structural Biology Dept. Lecture: "Molecular Mechanism of Promoter Selection in Gene Transcription" with Dr. Cheng-Wen Wu, SUNY at Stony Brook. Noon. Fairchild Bldg., D102.

Materials Science and Engineering Dept. Colloquium: "Semiconductor/Liquid Junctions" with Nathan S. Lewis, S.U. 3:30 p.m. Peterson Laboratory, Room 550A.

Law School Film Society: "Philadelphia Story." 8 p.m. Kresge Aud. $1.50.

Sun., Jan. 9. Music Dept. Concert: William Menkin, clarinet. With Aileen James, piano. and Roger Emanuels, cello. Milhaud—Duo Concertant for clarinet and piano; Jonathan Berger—Trio (world premiere); Beethoven—Trio, op. 11. 8 p.m. Tresidder Lounge. $4/$2.

MONDAY, JANUARY 10

Structural Biology Dept. Lecture: "Maximum Entropy and the Foundation of Direct Methods in the X-Ray Phase Problem" by Dr. Gerald Bricogne, College of Physicians and Surgeons, Columbia Univ. Noon. Fairchild Bldg., Room D102.

Biological Sciences Dept. Seminar: "Major Histocompatibility Gene Complexes: Molecular Diversity and Regulation in a Multigene Family" with Dr. Pat Jones, S.U. 4:15 p.m. Room T175, Herrin Hall. Open to the public.

Stanford Film Society: "Broken Blossoms," a story of London's Chinatown, and "Strike." 7:30 p.m. Kresge Aud. $2.

Wrestling: Vs. Arizona State. 7 p.m. Maples Pavilion.

TUESDAY, JANUARY 11

Stanford Staffers: Assoc. prof. Curtis N. Runnels, Classics Dept., shows slides and talks about the Stanford team of professors and students in the course of their archaeological research project. Noon. Anthropology Museum., Bldg. 110. Bring bag lunch. Open to all.

I-Center Tuesday Lecture-Lunch Series: "Conflict In NE Asia: The People's Republic of China/Taiwan/Korea" by Assoc. Prof. Harry Harding, Jr., Political Science Dept. Noon. I-Center. $2.50 includes hot lunch. Brown baggers welcome.

Tower Talks Presents: "A National Security Model" by Bruce Bueno de Mesquita, visiting scholar. 3:30 p.m. Lou Henry Hoover Room, Hoover Tower. Public cordially invited.

CREES Lecture: "Medieval Moscow Encounters the Renaissance: Italian Architecture in the Kremlin, 15th-16th Centuries" by Dr. Jack E. Kollman, Jr. Slide illustrated. 4:15 p.m. Room 4, Cummings Art Bldg. Public cordially invited.

WEDNESDAY, JANUARY 12

Structural Biology Dept. Lecture: "Splicing of the Ribosomal RNA Precursion of Tetrahymena: RNA Recombination Directed by a Ribozyme" by Dr. Thomas Cech, Univ. of Colorado, Boulder. Noon. Lecture Room M114.

CROW Women in the Performing Arts Lectures: "Women and Dance" by Bella Lewitzky, founder of the Bella Lewitzky Dance Company. Noon. Terman Aud. Public cordially invited.

Electronics in Medicine Seminar: "Image Processing for the Visually Impaired" with Dr. Sally Wood Stanford/VA RR&D Center. 4:15 p.m. McCullough 134.

Computer Systems Laboratory Seminar: "A Small Talk Machine" with Alan Shiffman, Fairchild. 4:15 p.m. Skilling Aud.

Basic Science Research Colloquium: "Mechanism of Sensitization of Tumor Cells in Alkylating Agents by Nitroimidazoles" with Dr. J. Martin Brown, S.U. 5 p.m. Fairchild Aud.

THURSDAY, JANUARY 13

Stanford Women in Science and Engineering Lecture: "Recombinant DNA Technology: The Transformation of Biology" by Vivian Berlin, doctoral candidate in Biological Sciences Dept. 4:15 p.m. Room 420-041 (entrance in basement of Math Dept.). All members of Stanford community welcome.

Condensed Matter Physics Seminar: "Defects in Glassy Se: An Anderson Negative-U Center?" with David van der Bilt, UC-Berkeley. 4:15 p.m. Applied Physics 200.

CEAS Lecture: "The Rise of Nakasone, Japan's new prime minister, in the Context of Japanese Political Development" by Prof. Kan Ori. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

Solid Mechanics Seminar: "Mixed-Mode Fracture of Composite Materials" with Prof. H. T. Hahn, Washington Univ., St. Louis. 4:15 p.m. Skilling Aud.

January Chinese Film Festival: "Troubled Laughter" (1979). Nightmare and fantasy interludes are used to help convey the difficulties of being a reporter in the "Gang of Four" days. 7:30 p.m. Memorial Aud. $1.50 donation.

CEAS/East House/Okada House/History Dept. Film: "Night Drum" dir. by Tadashi Imai. A woman is seduced by a charming musician and her husband kills both, destroying himself by the act. 7:30 p.m. Bldg. 420, Room 41, Psychology Dept. Free.

Observe the orchid at Green Library

The Department of Special Collections has published *The Orchid Observed: Five Centuries of Botanical Illustration*, a catalogue of the collection of orchid books it is exhibiting through Jan. 11.

Through a gift from Glikbarg Foundation, a revolving fund has been established to help underwrite costs of exhibit catalogues and publications. *The Orchid Observed* is the first catalogue produced with support from the fund.

William K. Glikbarg's collection of botanical books and several volumes from the Stanford collection are on view through next Tuesday in the Lurie Rotunda of the Green Library, surrounded by live specimen orchids loaned by Rod McLellan Co.

The catalogue presents 40 illustrations included in the exhibit, depicting the evolution of orchid illustration. Fifteen of the catalogue reproductions are in color.

The earliest illustration is a woodcut of *Triorchis sera* from Leonhart Fuchs' *De historia stirpium*. A medical doctor, Fuchs published his herbal in 1542. The genus Fuchsia later was named in his honor.

In her introduction to the catalogue, exhibit curator Sara Timby explains that the 19th century "was the orchid's grand period in Western social history. Thousands of new species were discovered around the world by highly competitive orchid hunters, and wealthy gentlemen-growers and commercial houses vied to obtain new and unique plants.

"Beautiful hand-colored engravings and lithographs were featured in the sumptuous books produced to cater to the new orchidomania, and by the end of the century the growing market for books with color plates contributed to the development of chromolithography."

in his introductory notes for the catalogue, Glikbarg says he became interested in collecting orchid books when he saw 19th century chromolithographs.

The 96-page catalogue is available for $10 at the exhibit.

I-Center Other Cultures Film Series: First night of the January Australian Mini Film Festival. "Pictures That Moved: 1896-1920" documents the film industry from its beginnings up to WWII"; and "Sydney" of the "Cities of the World" series, narrated by author/feminist Germaine Greer. 7:30 p.m. Bechtel International Center. 75 cent donation requested.

FRIDAY, JANUARY 14

Materials Science and Engineering Dept. Colloquium: "Microduplex Structures: Advantages and Disadvantages" with prof. Gareth Thomas, UC-Berkeley. 3:30 p.m. Peterson Laboratory, Room 550A.

Numerical Analysis Seminars: "Richardson's Iteration for Non-Symmetric Matrices" with G. Opfer, Hamburg. 4:30 p.m. Math 380C.

Stanford Law School Film Society: "The Front." Woody Allen in a serious role. 8 p.m. Kresge Aud. $1.50.

Music Dept. Concert: Alma Trio. Andor Toth, violin; Gabor Rejto, cello; Adolph Baller, piano. Beethoven—Trio in B-flat Major, op. 97, "Archduke"; Bloch—Sonata for cello and piano; Brahms—Trio in B Major, op. 8. 8 p.m. Dinkelspiel Aud. $4/$2.

Archaeological Institute of America Lecture: "Greek Towers (Pyrgoi)" by Mark Munn, S.U. 8:15 p.m. Room 370 (opposite the Physics Tank). Public cordially invited.

Women's Swimming and Diving: Vs. Long Beach State. 1 p.m. deGuerre Pools.

SATURDAY, JANUARY 15

Music Dept. Concert: Hsueh-Yung Shen and Helene Wickett. Music for piano four-hands. Schubert—Grand Duo, op. 140; Shen—Diurne (1982); Stravinsky—Rite of Spring. 8 p.m. Dinkelspiel Aud. Free.

Men's Rugby: Vs. Hastings Law School. 1 p.m. Maloney Field.

Wrestling: Vs. UC-Davis and Humboldt State. 5 & 7 p.m. Maples Pavilion.

SUNDAY, JANUARY 16

University Public Worship: Students Worship Service, 8:30 a.m.; Francis Geer, asst. dean of the chapel, 11 a.m.

Men's and Women's Swimming and Diving: Stanford Relays. 1 p.m. deGuerre Pools.

The Lively Arts at Stanford: Musical Offering Chamber Ensemble. Five instrumentalists playing violin, oboe, bassoon, cello and harpsichord perform a program of Telemann, Boismortier, Zelenka, Bach, Corelli and Handel. 2:30 p.m. Dinkelspiel Aud. $9.50, $8.50; students $3 off these prices.

University Libraries Associates Lectures: "Technological Invention in the Western Middle Ages" by prof. Lynn T. White, History Dept., UCLA, and "Sex Attractants, Acoustic Microscopes and Hybridomas" by Niels J. Reimers, director of technology licensing at Stanford. The topic of both lectures is "Invention." 3 p.m. Annenberg Aud. Public cordially invited.

ASSU Sunday Flicks: "Missing." Jack Lemmon in an excellent performance of political intrigue. 7 & 9:30 p.m. Memorial Aud. $1.50.

Tresidder Concert: Suzanne Macahilig, piano. Bach—French Suite in G Major; Beethoven—Sonata in E-flat Major, op. 7; Copland—Piano Variations; Ravel—Valses Nobles et Sentimentales; Chopin—Fantaisie—Impromptu, op. 66; Scherzo in B minor, op. 30. 3 p.m. Tresidder Lounge. Free.

EXHIBITS

Ski Experience. Early and rare photographs of Ansel Adams. Some sixty prints made at the request of Donald and Mary Curry Tresidder of the Yosemite Camp and Curry Company. Stanford Museum, Miedel Room. January 18-March 20.

Recent Acquisitions. Paintings, drawings, sculptures and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. January 11-February 20.

Inventions. An exhibition of books and manuscripts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. January 15-April 8.

Christmas Books from the Mary Schofield Collection. Children's books. The Exhibits Gallery, second floor, West Wing, Green Library. Through January 28. 8-6 Mon.-Thur., 8-5 Fri., 9-5 Sat.

The Big Squeeze and Other Works by Dolly Du Prau. Acrylic on canvas. Reception, Fri., Jan. 7, 5-7 p.m. Bechtel International Center. January 5-30.

The Orchid Observed. Five centuries of botanical illustration and exhibit of books from the collection of William K. Glikbarg and the university libraries. Lurie Rotunda, Dept. of Special Collection, second floor, West Wing, Green Library. Through January 11.

CAMPUS REPORT

Volume XV, Number 15 | A publication for Stanford University faculty & staff | January 12, 1983

Most faculty seen working on computer

Within four years, four out of five Stanford professors will have microcomputer-based professional work stations in their office, home, or both, the Center for Information Technology believes.

Its prediction compares with a recent survey report that 60 percent of Stanford faculty and staff now use a computer terminal or word processor at work and 25 percent use terminals at home. The survey covered only those living on campus or in Palo Alto.

Data compiled by CIT last September showed the University has 17 mainframe computers, 343 minicomputers, and hundreds of microcomputers and word processors.

In a report distributed to the Faculty Senate Thursday, Jan. 6, CIT Director Edward E. Shaw, associate provost for information systems, said a "realistic prediction" for January, 1987 is that:

1) All, or almost all students will have microcomputers or easy access to them;

2) A majority of professional staff will have microcomputer-based workstations;

3) All support staff will use, as needed, computer-based technologies in their work;

4) More than half of the University's scholarly output will be in machine readable format—and the proportion could easily be higher;

5) All of the University's 250-plus departments, academic and administrative, will have office information systems supporting departmental activities;

continued on page 17



Donald Kennedy does not empty his own wastebasket every day--this was a ceremonial act. See page 2 for the dumpster story.

University may trim tuition, salary hikes

Responding to changes in both the economic and political climate, Stanford may lower its projected tuition and salary increases for 1983-84, Provost Albert Hastorf told the Faculty Senate Thursday, Jan. 6.

The University may also move away from its long-held policy of seeking full cost recovery on government sponsored research, President Donald Kennedy said, a change he advocates "with considerable reluctance."

"I think there's a helluva big depression out there," psychologist Hastorf told his faculty colleagues.

The University may "substantially lower" its previously projected tuition increase of 12 percent for 1983-84, he said. The Board of Trustees will set the rate at its February meeting. Stanford's current tuition is $8,220.

Undergraduate admissions applications currently are running about 800 ahead of last year. But Hastorf said "I feel strongly we've been driving tuition (increases) too hard and fast. We've got to get (the rate of increase) down."

The University's long-term forecast, discussed with the Senate last fall, assumed tuition would rise six percent

continued on page 6

Substantive progress in affirmative action

During the past four years, Stanford has made substantive progress in affirmative action, according to Santiago Rodriguez, the University's affirmative action officer.

There has been "very slow but consistent growth" in the proportion of minority employees in exempt job categories (ranges C-4 through 10), he noted in an interview. This has increased from 13.6 to 16.4 percent since 1978.

"All levels of management continue to require special attention," according to the University's latest affirmative action report, published Wednesday, Jan. 12, in *Campus Report*. (See 12-page center insert).

The University needs to focus on recruitment of minorities for middle and upper level management positions, Rodriguez believes. This is particularly true for blacks and Hispanics.

For women, the focus should be on upward mobility, since "the talent is already here."

More than two-thirds of the total University workforce is female. Women now have more than half the exempt jobs outside traditional clerical areas, he noted.

On the faculty side, the report notes that there were 12 women among the tenure-track appointments in the School of Humanities and Sciences. The women included two blacks and one Hispanic. In addition, one black male faculty member was appointed.

This is the highest number of women and minorities appointed in the School during the past decade.

In addition, there were nine promotions to tenure, of which five were women, including one Asian.

The dean is considering granting additional funds for campus interviews of women and minorities who are among the finalists in faculty searches. Often departmental funds are not sufficient to cover more than one or two finalist interviews.

In the Medical School, the report notes, increased minority representation is "highly dependent" on a broader pool of research-oriented faculty candidates.

Last year's student enrollment was 34 percent female and 33 percent minority, placing Stanford "at the forefront of medical schools in the nation with respect to affirmative action in student affairs."

In other areas, Rodriguez noted that the University has appointed a policy group on programs for disabled people and may soon name a policy group on affirmative action. This would review past progress and suggest where the University should move over the next three to five years.

Pull-out center section on Affirmative Action

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Queen, Duke coming to Stanford

Queen Elizabeth and her husband, the Duke of Edinburgh, will be the lunch guests of Stanford President and Mrs. Donald Kennedy at the President's House March 3.

The visit will take place during the royal tour of California.

Guests at the lunch will include representatives from various parts of the Stanford community, including students, says Jeanne Kennedy, who is director of community relations for Stanford University Hospital.

This will be the first time that a British head of state has officially visited Stanford. A member of the royal family, Prince William of Gloucester, who was first cousin to Queen Elizabeth, was a graduate student at Stanford during the academic year 1963-64, having come from Cambridge University, England. He was killed in a plane accident in 1972.

After the lunch the royal party will visit the Hewlett-Packard plant in Silicon Valley and then return to San Francisco. That evening there will be a civic reception and dinner in their honor at the Palace of the Legion of Honor, hosted by President and Mrs. Reagan.

Hoover House

The President's House on the Stanford campus, named after its first occupants, U.S. President Herbert Hoover and his wife, was formally dedicated as a California State Historical Landmark in 1978, and is also recorded in the National Register of Historical Places in Washington, D.C.

Mrs. Herbert Hoover often sat in on the planning of the house, which was designed by A. B. Clark and his son, Birge Clark. She was supplied with sketch pads and a drafting table so that she could work along with the draftsman, Charles Davis. The plans and decor were often changed even when construction was underway.

The house is built of reinforced concrete and is embedded in the side of Reservoir (San Juan) Hill, a site chosen by the Hoovers for its magnificent view of the lower Bay and mountains.

The house has three floors: the lower level has guest rooms; the middle level includes the dining room, kitchen, master bedroom and study; there are two bedrooms and a study on the top level.

There are fireplaces in most rooms, including the lobby and main terrace. Terraces on each level are connected by staircases. The beamed ceiling in the living room is lighted by 300 25-watt lamps hidden in the coving.

NLRB charges USW

The National Labor Relations Board has set a hearing for March 24 on charges that United Stanford Workers engaged in unfair labor practices when its members and supporters picketed four construction sites during a month-long strike against the University in September.

In its complaint, the NLRB alleges that USW engaged in unlawful secondary picketing at construction sites at Stanford Linear Accelerator Center, the Cardiovascular Research Building, the Peter Coutts housing project, and the new student housing complex.

A location for the 9 a.m. hearing has not yet been announced.

Parking fines raised

Captain William Wullschleger of the Stanford Police reports that the penalty for nonhandicapped people who park in spaces reserved for the handicapped is now $52 (a $50 fine plus $2 assessment for new jails).

That gives some additional incentive to leave those extra-wide spaces available for the people who really need them. Their cars are marked by special decals, plates, etc., so that officers can tell whether to ticket or not.

Dumpster disguise duly dedicated

Two structures of "unclaimed parentage, uncertain utility, and unarguable aesthetic merit" were dedicated in a ribbon-cutting ceremony Monday morning, Jan. 10, by top Stanford officials.

The objects of the tribute were the recently built arcade connecting the President's Office to Building 170 and a nearby dumpster enclosure.

The ceremony was witnessed by approximately 25 persons.

The dumpster, President Donald Kennedy told the crowd, is a tribute to the "sensitivity of this organization. Just a few murmurs of dissatisfaction from Building 10 about the levels of trash accumulation around the unadorned dumpster resulted—presto!—in this splendid, brown metal cocoon, complete with tasteful ascending staircase for more convenient dumping."

Dubbed "Mem Dump" by Kennedy, the structure is said by some to resemble a gallows, but ceremony organizer Andy Doty of Public Affairs labeled it a "surplus paper collection station."

Also speaking at the dedication was Vice-President for Public Affairs Robert Rosenzweig, who Doty said would soon depart for the "greatest dumpster of them all" (Washington, D.C.).

Rosenzweig told observers they should be "reassured that in times of financial crisis and budget reduction, this generous University treats its trash so well."

Kennedy called the dumpster "not only a functional triumph, but an artistic one as well. Faithful to the Stanford tradition of harmonic architecture, it took its inspiration from the magnificent arcade between these two buildings—that inspiring structure which, in addition to uplifting our thoughts and gaze, permits rain to enter while allowing fire trucks to pass beneath."

Rosenzweig worried aloud that the "memory of this Taj Mahal of garbage dumps and its remarkable neighbor" would "dim" Kennedy's other presidential achievements, which "include such highlights as the singular Stanford 'Cardinal,' lunch with the Queen, and the Super Bowl."

"I dedicate myself and my colleagues to the sober task of feeding this with evermore-esoteric, higher-quality waste," Kennedy said as he dropped a basket of trash and the text of his remarks into the "Mona Lisa, not the Taj Mahal, of dumpsters."

Be a resident fellow for 1983-84

Faculty members interested in working with undergraduates in the University's residential education program are invited to apply for 1983-84 Resident Fellow positions.

Resident Fellows set the educational direction for the residence and stimulate students to value and take advantage of learning opportunities in the house. Fellows are responsible for supervising a staff of Resident Assistants (usually upperclass undergraduate and graduate students) and for planning educational programs and activities which bring faculty into the residence, encourage discussion of topical issues, supplement regular curricular offerings, and stimulate the exchange of ideas, cultural experiences, and interests.

Resident Fellows also coordinate the advising program, respond to counseling problems, encourage residents to develop a sense of community, maintain standards for student conduct, and attend to administrative matters.

Resident Fellows live in cottages or apartments in or adjacent to student residences. With the completion of the Governor's Corner neighborhood next fall, there will be 33 Resident Fellow places, with accommodations for single Fellows, couples and families with children.

Members of the faculty who are interested in sharing their academic interests with undergraduates and involving their faculty colleagues in the residence are encouraged to apply. University staff members in senior positions who have a teaching relationship with undergraduates are also eligible to apply, but preference is given to members of the Academic Council.

Appointment to Resident Fellow positions is made by the Dean of Student Affairs. For more information about Resident Fellow positions and application materials, call Norman Robinson, associate dean of student affairs for residential education, 311 Old Union, at 497-3044. Applications are due Monday, January 31.

People

Prof. Joseph B. Keller, mathematics and mechanical engineering, presented three lectures in December as the 25th annual Weizmann Lecturer at the Weizmann Institute of Sciences in Rohovot, Israel.

The first two, on mathematical aspects of animal activity, concerned mathematics of sports and the crawling of worms and other locomotion problems, respectively. The third lecture was on the theory of weak nonlinear waves and shocks.

Prof. John W. Fondahl of the Stanford Department of Civil Engineering has been elected one of the first four fellows of the Project Management Institute.

Director of the graduate program in construction engineering and management, Fondahl joined the PMI in 1949 and served as its president in 1974-75 and chairman in 1976-77.

The fellow award is based on "significant and continued contribution to the PMI" and Promoting "professionalism in the field of project management."

A fellow in the American Society of Civil Engineers, Fondahl was named the Charles H. Leavell professor of civil engineering in 1977. A director of Caterpillar Tractor Co. and Scott Company of California, he has served as a visiting professor and conducted courses in construction in more than a dozen countries since 1964.

New scholarship honors Nakanishi

Kenji Nakanishi, the first student from Roosevelt High School in East Los Angeles to attend Stanford, was a promising young executive at Occidental Petroleum Corporation in Los Angeles until the morning of Sept. 25, 1978.

On that day he boarded a short PSA commuter flight from Los Angeles to San Diego and died, along with all 143 others aboard, when their big jet collided in mid-air with a small plane. He was 31, and had earned three Stanford degrees: B.S. and M.S. in 1970, and M.B.A. in 1972.

Recently his widow, Nadine, presented Stanford University with the Kenji Nakanishi Memorial Scholarship, a permanently endowed fund contributed by hundreds of friends and classmates of her late husband. This scholarship will be awarded with preference to a student from Roosevelt or another high school in East Los Angeles.

While at Roosevelt, Kenji was one of a group of students inspired by Nina Elkind West (BA/MA '61), a dedicated teacher who was responsible for a number of students who attended Stanford. Nina, now an attorney in Orange County, and her husband Robert, a home builder, (BA '61, MBA '70) have been major contributors to the fund.

Kenji was born in Hiroshima in 1947 and was raised on a small farm. He and his parents emigrated to the U.S. in 1958, and he grew up on the east side of Los Angeles.

At Stanford, where he was a resident assistant in Burbank House, Stern Hall, he earned a B.S. in engineering and an M.S. in industrial engineering. He graduated magna cum laude and Phi Beta Kappa. After getting his M.B.A. in 1972, he worked for a CPA firm, Arthur Young and Co., and then joined Occidental, working in financial planning and analysis.

He and his wife, who met in junior high school, were married in 1971.

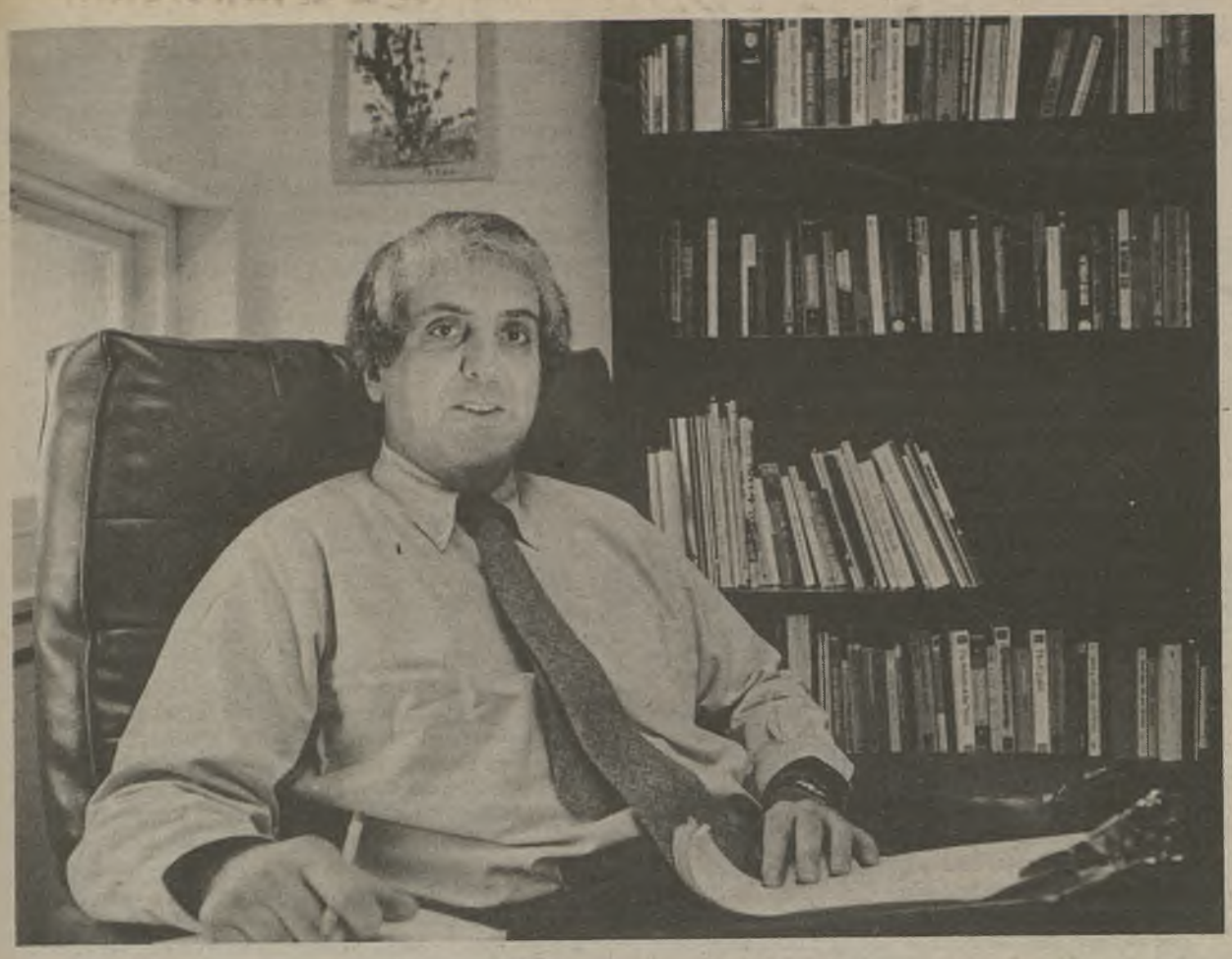
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Lucio Ruotolo

Virginia Woolf puzzle will be probed by Ruotolo and graduate students

BY DONALD STOKES

An expurgated section of Virginia Woolf's autobiographical essay *A Sketch of the Past* will soon be studied by graduate students of Lucio Ruotolo, professor of English at Stanford.

Considered by some to be a Freudian analysis of her father by the famous English novelist, essayist and critic, the essay states that she was then reading Freud for the first time.

"My students and I will consider why that portion was removed from the larger manuscript," said Ruotolo in a campus interview. "it is an extremely interesting study."

Is Woolf sympathetic to her father? asked the interviewer. What does she say about him?

Ruotolo smiled: "Take my seminar and find out!"

Ruotolo has for the past decade been a path-finder in the rise of Woolf's literary reputation, and is considered a central authority on her re-evaluation.

He pores over her manuscripts for a part of each day. "My research into Woolf is directly related to what I do in the classroom," he says. "The research is very much involved in my teaching. The ability to make use of unpublished manuscripts, such as the 14-page description of her father which surfaced recently in England, and which I shall use in this quarter's seminar, enables my students to be on the cutting edge of Woolf studies. It will not appear in print for some time.

"I have read all of Woolf's diaries in holograph, and often it takes days to read a few pages. Trying to decipher her handwriting is painful, to say the least. It becomes particularly difficult to read when she was depressed."

Ruotolo teaches a course in Virginia Woolf every year (to graduates and undergraduates in alternate years). He finds the response of students a challenging one.

"The presence at Stanford of (Prof.) Peter Stansky and Will (Prof. Wilfred) Stone, both distinguished scholars of the Bloomsbury school of Intellectuals, has made Stanford a particularly attractive center for the study of Virginia Woolf. I have been teaching about her for about a quarter of a century, and in spite of predictions that interest in her would flatten out, that has not proved to be true.

"In earlier years many regarded her as essentially a derivative writer. Yvor Winters, one of Stanford's best-known critics, referred to 'the iridescent trifling of Mrs. Woolf.' Even more sympathetic readers tended to regard her at best as a second-rate Joyce.

"One of my close friends, a very distinguished English academic, once said to me, 'Reading Virginia Woolf is like trying to negotiate an unsigned check.'

"All that has changed. Even those who dislike her writing now do so, it seems, with discernible respect."

The tumult of the 1960s caused Ruotolo to write a book called *Six Existential Heroes: The Politics of Faith* (Harvard University Press, 1973) which received Harvard's Thomas J. Wilson Memorial Prize for the best first book. The work brought his name to the attention of literary circles.

The book grew out of the notion of a hero who develops in relation to a world he seeks to remedy," said Ruotolo. "My object was to redefine the notion of an existential hero in more political terms.

"There was a tendency to think of existentialism as an essentially apolitical position, which regarded the human condition in terms that could not affect it.

"The characters in my book were committed to the idea that it was the means of social action which called for revision.

"One of the phrases I rather liked was in Ralph Ellison's *Invisible Man*: 'Can politics ever become an expression of love?' In other words does politics by definition have to become a manipulative enterprise?"

The opening chapter in Ruotolo's book concerned Virginia Woolf. This chapter caused considerable stir, and many early readers took issue with Ruotolo's views on Woolf's importance in a sociopolitical perspective. The arguments thrust Ruotolo into the center of the re-evaluation of her work then occurring.

In 1970, after he had been teaching, researching and lauding Woolf for a decade, Ruotolo joined with a small group in the Modern Language Association, members who similarly felt that her work had been neglected.

From the first meeting in New York, and a subsequent symposium at Santa Cruz, where

To me, existentialism is an affirmative optimistic position...Rejecting all aspects of stasis, is it's philosophy which celebrates change.

—Lucio Ruotolo

Ruotolo presented a paper on *Mrs. Dalloway*, a new direction in Woolf studies began to emerge.

"Partly as a result of my teaching and writing, I like to think that Woolf is now accepted as one of the great novelists of the 20th century," said Ruotolo.

For nine months, Ruotolo lived in the Woolfs' English home—Monk's House, Sussex—where he edited *Freshwater*, a humorous play Woolf wrote about her great-aunt, the famous Victorian photographer Julia Margaret Cameron. The play was discovered after Woolf's death by suicide in 1941.

The first public production of that play was given in 1974 at the Stanford Museum through the efforts of Ruotolo together with Anita Mozley, curator of photography; respectively they played the parts of Mr. and Mrs. Cameron. It was directed by one of Ruotolo's graduate students, David Richman.

While living in Monk's House, Ruotolo examined fan mail which had streamed across the Atlantic to the novelist, mostly from women living in small-town America. Their common message was that they had never written to an author whose published words were so close to their own thoughts.

It is a remarkable sociological fact that the response to Woolf has been much greater in America than in her native Britain," said Ruotolo, "and often from a class of relatively unsophisticated readers who might well have found her experimental techniques difficult if not inaccessible."

Ruotolo became involved in editing several of Woolf's more important manuscripts, in writing articles about her, and in contributing to books dealing with her works.

He is now preparing a book *Virgina Woolf: The Unguarded Moment*, on the theme of "interruption" in her novels. One chapter from the book appeared recently in Ralph Freedman's volume *Virginia Woolf: Reevaluation and Continuity* (University of California Press, Berkeley).

Ruotolo was a founding editor, in 1973, of *Virginia Woolf Miscellany*, a newsletter that was launched with two Stanford graduates, Ellen Hawkes Rogat and Peggy Comstock, and the well-known Woolf scholar J. J. Wilson (B.A. Stanford). Prof. Peter Stansky has replaced Comstock as one of its four editors.

The six heroes featured in Ruotolo's first book, *Six Existential Heroes* were, besides Woolf, Graham Greene, William Golding, Bernard Malamud, Ralph Ellison, and William Faulkner. Would most people agree that those six writers were existentialists? asked the interviewer.

Ruotolo laughed: "I'm not at all sure that the six themselves would agree! I met Malamud at a Stanford party, and it was rather an intimidating moment when we were introduced. To my relief he said, 'You hit the nail right on the head!' "

What did Ruotolo mean by his description of an existentialist hero as "enduring in the posture of

continued on next page

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faith?" Faith in what? In nothing?

"A recurring criticism of existentialism is its supposed disposition to pessimism, anarchy and disillusion, that it remains essentially a destructive posture.

"I assume that the courage to raise the question 'If not something, why not nothing?' is linked with the capacity to suspend, at least provisionally, traditional solutions and to entertain often radically new procedures.

"The existentialists I deal with tend to agree that our culture, despite its self-styled modernism, remains overly dependent upon essentialy hierarchical values, that we tend in art as in politics to risk as little as possible.

"This is a central theme in Virginia Woolf's writing. She would break a legacy of dependence, exemplified for her through women's historical subordination to men, in order to live and work more creatively.

"To me, existentialism is an affirmative optimistic position which urges us all, in D. H. Lawrence's idiom 'to recoil from things gone dead.' Rejecting all aspects of stasis, it is a philosophy which celebrates change.

"As such it remains threatening as well as dynamic; never pin things down with any certainty and say 'This is it.' "

As part of the inevitable cycle of trends, suggested an interviewer, has existentialism dropped out of the mainstream of current thinking?

"I suspect we have backed away from existentialism for understandable reasons. Frightened about the future of the species, people yearn for permanence in the world, for absolutes to replace the awful uncertainty about whether or not we are going to blow ourselves up.

"This is one of the factors which makes things difficult for the nuclear disarmament movement. People tend to shrink from the idea that there is even a possibility of our utter and complete destruction.

"The existentialist, it seems to me, makes a cogent rejoinder to this—that if one fails to raise these questions one may well be contributing to the end of the species.

"Although it may no longer be fashionable to raise such questions, it appears more critical to do so now than it was in the '60s."

Ruotolo has taught more than 40 different courses at Stanford, covering a very large range, from Shakespeare to the existential hero. He has directed 24 doctoral dissertations (Not all on Virginia Woolf, he observes). He has served as director of undergraduate studies for the English Department and as chairman of the graduate program Modern Thought and Literature.

What sort of teacher does Ruotolo think he is?

"As I get older I find the seminar setting the most invigorating. I find it exciting when we react as a body to a work, when it is the literary text that evokes thought and discourse. I love teaching and feel that I get good results."

The majority of his students give him high marks as a teacher, though a minority says that his enthusiasm sometimes makes him stray from the point.

Ruotolo was deeply involved in the ferment on campus during the 1960s. "I was among those who tried early to find an anti-war candidate to oppose Lyndon Johnson, and I worked long and hard in Eugene McCarthy's first campaign. I debated publicly with such figures as Richard Allan. In 1968 I served as co-president of the Stanford-Palo Alto Democratic Club. It was an exciting if hectic time."

Trying to decipher [Woolf's] handwriting is painful...often it takes days to read a few pages.

Ruotolo grew up in Greenwich Village, New York City, in a Bohemian atmosphere, surrounded by a host of artists, many of whom were to become eminent.

His father was the sculptor Onorio Ruotolo, and his first teacher in kindergarten was Jackson Pollock. The closest friend of the family was Thomas Hart Benton.

The father's first studio was next door to that of D. W. Griffith, the famous motion picture producer-director. Griffith made use of the sculptor's models in planning his sets.

The Ruotolo family moved frequently in a rhythm dictated by the fortunes of the father. "When commissions were coming in well we moved into good apartments, and when they were not we had to move into something less desirable," said Ruotolo.

The earliest recollections of young Lucio were of his father working on busts of well-known people. "I remember when he created a bust of the novelist Theodore Dreiser (it is now in the Smithsonian).

"I once spent a whole day with Dreiser, when my father took me as a child to an exhibition of miniature railroad cars. Father had completed his bust of Dreiser, and happened to meet him there. The two men began a long argument. It continued when the three of us went up to Dreiser's hotel, the Ansonia.

"Their dispute seemed to go on interminably and I grew very bored. Years later my father told me about the man he had argued with.

"It seemed that Dreiser had seen my father's bust of Caruso (now moved to Lincoln Center, but then displayed in the lobby of the Metropolitan Opera House). Dreiser wanted something in the same heroic manner, a classic Roman bust in the grand style, but my father evidently saw Dreiser in more impressionistic terms."

Among the other famous people who posed for works by the elder Ruotolo were Arturo Toscanini (whose bust is in New York's High School of Music and Art), Helen Keller (in the Smithsonian), and Thomas Edison.

"My mother was a Viennese Jew who had come to the U.S. to visit her estranged father," said Ruotolo. "She met my father, a Neapolitan, at the outbreak of World War I. She worked in Brentano's book store, and the family legend is that the manager of the store warned my mother that her Italian friend was 'a dangerous anarchist.' In fact, he had contributed sketches to several anarchist journals.

"After my parents married, my mother virtually became Italian. She learned to speak Italian fluently in the household, but insisted on addressing me only in English. Today, I find myself in the unenviable position of understanding Italian but not really being able to speak it."

Ruotolo remembers affectionately the polyglot world in which he was reared: "Our florist was Greek, the delicatessen was run by a Polish Jew, the newspaper vendor was Italian, and so on. Ever since my boyhood days I have been responsive to that kind of diversity."

While Lucio was still very young, his father turned his attention away from sculpture, although he had built up a considerable reputation, and founded the Leonardo da Vinci Art School. This was meant for working-class people who showed promise in any form of art, and who could not afford tuition. Onorio Ruotolo was director of the school for 25 years. It ran entirely on voluntary contributions.

When World War II came, the funding dried up and the school had to be closed. One of the saddest moments for the Ruotolo family was the closing ceremony held outside the school when the father spoke of his sorrow at being evicted.

A happier day came later, when Lucio was a senior in Friends Seminary High School. The Four Freedoms plaque designed by his father was presented to President Franklin D. Roosevelt. "It was very exciting for me to go to the White House and to meet the President.

"My father was a very close friend of New York Mayor Fiorello La Guardia, and designed his first inaugural medal."

In 1945 he was drafted into the U.S. Army Air Corps and spent two years there. He was trained as a high-speed radio operator. Returning to civilian life he gained his B.A. at Colgate and his M.A. and doctorate at Columbia.

The earliest serious novelist to capture his enthusiasm was Joseph Conrad, whom he recalls reading eagerly during summers at Martha's Vineyard. He also found great pleasure in the Romantic poets, particularly Wordsworth and Keats. He did his theses at Columbia on the English Romantics.

"I was very much influenced at Columbia by Lionel Trilling, as well as two teachers at Union Theological Seminary next door, namely Paul Tillich and Reinhold Niebuhr."

Ruotolo later served as film critic for the journal founded by Niebuhr, *Christianity and Crisis*.

In 1957, three years before getting his doctorate, Ruotolo was appointed an acting instructor of English at Stanford.

He met his wife, Marcia Mauney, an Oregonian, when she was a reporter for the *Palo Alto Times*, now the *Peninsula Times-Tribune*. She later earned an M.A. and prepared to teach French as an early student in Stanford Teacher Education Program. She has worked in area schools as a regular and substitute teacher.

The Ruotolos have three children. The eldest, Cristina, is a sophomore at Stanford, and a violinist who has been selected to solo in a Mozart concerto with the Stanford Chamber Orchestra this spring.

Vanessa, 16, a cellist, and Peter, 14, a baseball fan, are students at Gunn High School.

CIT cuts interactive computing rates on 3081 by 20%, seeks more use

Edgar S. Williams, CIT's director of computer systems and services, has announced that effective Jan. 1, there will be a 20 percent reduction in interactive rates on the 3081 Node, and also that the previously announced 30-second CPU limit on the Low Cost Interactive Computing (LCIC) service is deferred, pending further study and consultation.

CIT intends by these actions to allow the 3081 Node to be of greater service to instructional, research, and administrative users.

The 20 percent reduction in interactive CPU rates is possible for two reasons. First, University officers decided to purchase the 3081 machine and take advantage of more favorable financing alternatives and discounts. This action provides an expense savings that allows the rate reduction.

Secondly, CIT wishes to take a first step to reflect what the 3081 Node rates might be if it were to be used at full capacity. Additional rate reductions would be possible if users could be found for all of the capacity of the Node.

Over the next several months CIT will undertake some special efforts to attract new users and uses. Any assistance University staff might provide in finding new users or uses would work to their benefit through rate reductions.

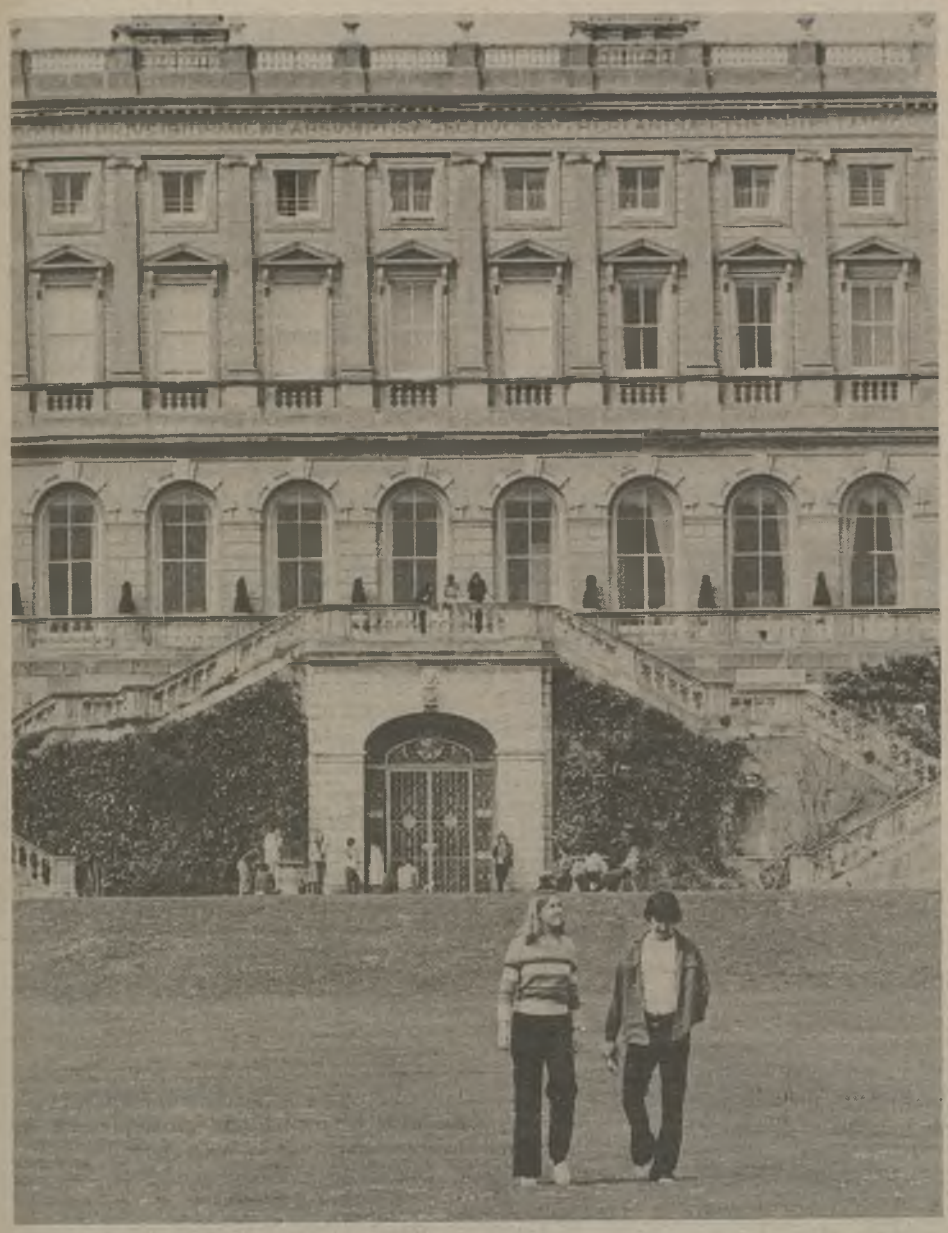
CIT has deferred the 30-second threshold on the LCIC service because such a limitation does not address all of the Center's concerns.

One of these concerns is that a small number of users might be using large amounts of the CPU during night and weekend time periods to the detriment of other users. Studies conducted by CIT indicate that this is the case. However, there is a larger group of users who require moderate amounts of CPU time in excess of 30 seconds whose needs must be met.

Deferred implementation of the 30-second threshold will allow CIT more time to work with users to investigate alternatives and select the appropriate one for implementation a few months hence. Prior to any implementation, CIT staff will meet with users who would be significantly affected by the change.

Williams welcomes any comments users may have. He may be reached at Cedar Hall, computer account gd.esw, or extension 7-3908.

Stanford in Cliveden: from polo to frisbee to Oxford



The farm country of Buckinghamshire, located 25 miles west of London, is the spectacular site of Cliveden overlooking the Thames.



Cliveden has been associated with the powerful, famous and influential—and now Stanford students are added to the list.

BY TERRY BECKER

Since the first house was built in the 17th century on this spectacular site overlooking the Thames, the name "Cliveden" has been associated with the powerful, famous and influential.

Queen Victoria herself stayed at "dear beautiful Cliveden" for a week in 1886 as the guest of her friend Harriet, Duchess of Sutherland. Oscar Wilde, Rudyard Kipling, Winston Churchill and Franklin D. Roosevelt were all here at one time or another as guests of the illustrious Astor family, the American millionaires who bought Cliveden in 1893.

Perhaps no guests have been more grateful for the chance to stay at Cliveden, though, than the hundreds of Stanford students who have flocked here since 1969 to participate in the Stanford Program in Britain.

For many of those students, the Cliveden way of life has been the highlight of their undergraduate years—a chance to make new friends, to travel and to learn about England and the English in a setting of incredible beauty and serenity.

Despite probably valid criticisms that its rural setting tends to isolate students from the real world, it is a way of life whose passing many students and alumni will mourn when the Stanford Program in Britain is moved to the city of Oxford in Autumn, 1984.

Located just 25 miles west of London in the farm country of Buckinghamshire, Cliveden is actually the second home of the Stanford Program in Britain. Before that, from 1966 to 1969, the program was based at Harlaxton Manor in Lincolnshire, about 100 miles north of London.

"The problem with Harlaxton was that it was rather in the middle of nowhere," explains George Docker, the jovial Australian director of the program since 1966. "Students who wanted to visit London were more or less forced to go for the weekend—it wasn't very satisfactory."

The move to Cliveden, Docker recalls, was prompted by a newspaper article placed by the British National Trust citing the need for tenants at Cliveden, which had been vacated by the Astor family in 1966. The house and estate had been give to the National Trust in 1942 with the fortunate stipulation that they should ultimately be used to further understanding among English-speaking nations.

Stanford seemed able to fit that requirement and after some delay a deal was struck. Stanford agreed to move into Cliveden in March 1969 at a rent of 3,000 pounds per year. A problem with the 10-year lease at Harlaxton was neatly solved when the University of Evansville, Ind., took over that house.

The current program of study at Cliveden, where students may come for one or two quarters, take the classes of their choice and travel freely when and where they choose, is very different from the one which was used at Cliveden in the early 1970s.

"Back then the students all came over together in the same plane and they all went home together, the whole lot," Docker laughs. "Everyone took the same courses and stayed for six months, either from January to June or from July to December."

British professors lived in the house with the students, Docker notes, and regulations on student activities and travel were strictly enforced.

"There were all sorts of student officers, and the student president was a man of awe-inspiring power," Docker says. "Students weren't allowed to leave the house until Friday evenings, and the president would check bedrooms on Sunday evenings to see that they'd all gotten back in time for Monday classes."

The highlight of each six-month stay, Docker recalls, was the "grand tour," a mid-quarter field trip which all the students took together, first to Rome and Venice, then to Paris and Amsterdam. Luxuries such as this were not to last long, however. First there were financial cutbacks, and then the number of students wanting to come to Cliveden began to drop, at one point to around 30, about half the number today.

"The main reason, I suppose, was Vietnam," Docker explains. "Students wanted to stay at home because that's where the action was. Also they didn't feel that they could come for a whole six months."

Numbers picked up after the introduction of the quarter system, though, and they've been increasing steadily ever since. In recent years Cliveden and Florence, Italy, have consistently been the most popular overseas campuses.

To the many British tourists who come to stroll the grounds today, the sight of 60 American students making themselves at home on this grand estate must come as something of a shock: Ultimate frisbee games have replaced polo and croquet on the lawns, students in jeans and Stanford sweatshirts curl up on the enormous ancient library sofas, joggers weave in and around the neatly-trimmed hedges and "Big Way" yachters paddle their rubber dinghys on the River Thames.

There is a serious side to Cliveden as well, of course. Students may choose from a variety of classes ranging from British history and Shakespeare to courses on the European Economic Community and, most recently, engineering.

The courses are taught in the guest wing of the house by both British lecturers and Stanford-in-California professors eager for a change of scenery and a chance to interact with students on a more personal basis. A good number of students take advantage of tutorials given at local universities as well.

The desire to improve the academic side of the program still further was a major factor behind the recent Board of Trustees decision to move the campus to a number of renovated houses on Oxford's High Street in the heart of that city, about 60 miles northwest of London.

"I am hoping that the Oxford undergraduates will be friendly and that Stanford students will get mixed up with them," Docker says. "An Oxford don will be advising part-time on the academic side of things and it is hoped that this man will bring students into the community. Magdalen College undergraduates are also making friendly noises," he notes.

Docker himself will be retiring when Stanford leaves Cliveden. "I'll move you into Oxford, say cheerio, bless you all, then send you off," he laughs.

One person who will be staying with Stanford after the move is Geoffrey Tyack, a British lecturer in history at Cliveden since 1972 and a firm believer in the value of an overseas study experience.

"In some ways life in California is marvelous, but it's a little provincial in the cultural sense," Tyack notes. "If you look at America's position in the world, it used to be she could go her own way and do just about whatever she liked. That's not so much the case any more. Americans need to have more contact with the outside world, especially Stanford students, when you consider what kind of jobs they go into after they graduate."

Tyack, who is an Oxford history graduate himself, feels that Stanford's move to Oxford will be a beneficial one. "In the academic sense, it's bound to be a good thing. On the other hand, comraderie among the Stanford students won't be so easy. It will be more of a culture shock definitely," he notes.

"You've got to remember that Oxford has an extremely high opinion of itself—it sees itself as the center of the universe. People there won't come running out to you with open arms. Students will find that it's not so easy to adapt, but those who do will be the better for it."

'In the politics of indirect costs, history is against us'—Kennedy says

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faster than inflation, which also was projected at six percent for 1983-84.

The long-term forecast projected salary increases one to two percent higher than inflation, or seven to eight percent for next year. "It is now clear to me that we cannot maintain that rate of increase," Hastorf said.

"Barring powerful contrary arguments, we expect to recommend to the trustees that we hold the indirect cost rate (on federally sponsored research) at 69 percent for 1983-84," he added.

"This is a clear commitment, on our part, of crucial importance to the research enterprise at Stanford and to the support of our federally funded investigators."

In response to questions, Vice Provost Gerald Lieberman, dean of graduate studies and research, indicated that full recovery of research costs could result in an indirect cost rate of 81 to 84 percent next year. The higher rate would include costs already incurred, which are carried forward over a three-year period. It also would reflect slower growth in total research volume than previously projected; this tends to increase the indirect rate because certain fairly fixed costs are spread over fewer projects.

Political climate

In December, Lieberman told the Senate, "In Washington's current political climate we are not likely to see any significant overall increase in federal research funding," which accounted for 90 percent of Stanford's total research volume of $136 million in 1981-82. Total indirect costs allocated to research are expected to exceed $60 million this year. Space-related expenses—heat, light, and maintenance, for example—account for almost half of all indirect costs.

"In the politics of indirect costs, history is against us," Kennedy told the Senate. "There is a perception among some Congressmen that indirect costs have risen too rapidly, that universities are somehow getting more than the amount to which they are entitled.

"The complexity of the process of indirect cost recovery makes it no easier to explain to Congressmen than it is to principal investigators (on federally funded research projects)—many of whom are also troubled, though for different reasons.

"At Stanford, we have always pursued a policy of full recovery, and that has been endorsed by the (Stanford faculty) Committee on Research and other groups that have included principal investigators.

"But to pursue full recovery now would, we think, require going to rates that would seem unacceptable to most principal investigators here, and might indeed cause damage to their programs.

"And if several universities were to engage in a round of further significant increases in indirect costs, it might well hasten the application of some arbitrary limit upon overhead rates by Congress—a limit that might prove even more damaging than restraint now."

Former commissioner of the Food and Drug Administration, Kennedy was a leader among major university presidents in successfully opposing a National Institutes of Health proposal last year to simply cut reimbursement of authorized indirect costs by 10 percent as an economy move.

This "terrific battle. . .surfaced the problem of indirect cost recovery. . .in a dramatic fashion," Kennedy observed.

"So we shall quite probably, over the next several years, forego a good deal of indirect cost recovery that government rules now entitle us to. I want it understood that I advocate this with considerable reluctance.

"But there are times in which an expedient policy is the best policy, and this is one of them."

In 1983-84, he said, Stanford finds itself caught "amidst two alarming trends": 1) the long-term effects of inflation and government reductions in "controllable" expenditures and 2) "a saturation in the volume of sponsored research" nationally.

"That means that our indirect cost recovery will not continue to increase, as it had in past years, and may even start to drop." Just last year, the University negotiated an increase in its indirect cost rate from 58 per cent to 69 percent of direct costs.

Admitting a "change of heart," Kennedy said he now has been persuaded by Lieberman and fellow faculty researchers that high indirect cost rates may be a factor in the awarding of research grants.

If the University fails to recover the full costs of research, it "pays a price" in the diversion of unrestricted funds to this purpose, he admitted.

"We're all anxious to return to full (cost) recovery," he added. "We hope (this change) is a temporary, self-denying ordinance."

Rising tuition

Hastorf said that, nationally, major research universities now are "very deeply concerned" about rising tuition and indirect costs.

"The atmosphere in the land is to get a much tighter grip on both," he observed.

"We're going to struggle mightily to get those (indirect) costs down," he emphasized. About $13 million in indirect cost pools would need to be cut to achieve full recovery without a higher rate, he indicated.

Kennedy noted that, in theory, it is possible for an institution to make cuts that are disproportionately heavy on administrative services and still experience an increase in overhead rates.

This can—and has—happened when uncontrollable components of indirect cost pools are allocated more heavily to research than to instruction. Rapidly rising energy costs are one example. Changes in accounting rules which treat depreciation differently or integrate the intensiveness of space use into the calculation of indirect costs may have this effect. "All of those things happened in the recent past," he said.

While the University will give "a good shot" in trying to reduce indirect costs, he added, "I hope my colleagues are under no illusions about what that will mean. It will mean degraded services to which we have all become accustomed.

"We will explain as best we can what the relationship is (between cuts in costs and reductions in service) as it occurs, but we want you to understand that there's no free lunch."

In November, Hastorf announced plans for a three-year $10 million belt-tightening effort, what he called "the third major budget reduction episode in 15 years."

The responses to date have been to "trim, squeeze, and shave," he said. "It does not appear that the 1984-85 budget can be balanced without more rigorous initiatives. . . .

"We are going to need to look at the overall size of the University in relation to its sustainable support. . . . We must control administrative support services and increase some of the risks we take in accomplishing our primary purposes of teaching and scholarship.

"We will not be able to monitor ourselves and plan our support services with quite the precision we have in the past. We shall strive for high quality in all that we do; it will have to be a leaner form of quality."

Faculty size

During Senate discussion Hastorf said "It may well be that. . .we may not be able to have. . .as large a faculty."

But such a reduction would be "the last one" in priority, he added.

Asked if there had been any discussion of increasing the size of the student body Hastorf said there had been none. "I'm not sure that just increasing the number of tuition payers is a real solution to the budget problem."

The only area where the University has made a "calculated effort" to expand enrollment has been in some master's degree programs.

Hastorf said he was "deeply concerned" at the possible effect of enrollment growth on the quality of instructional programs. The emphasis now is on "increasing the ambiance for undergraduates."

Asked about private gift support, Kennedy said he hopes for another record year in fund-raising. The University is making a concerted effort to obtain more unrestricted gift support.

From a financial standpoint, he said, the University's decision to permit Stanford Stadium's use as the 1985 Super Bowl will probably prove "a wash transaction."

The National Football League will help fund improvement in some "horrendously inadequate" facilities at the stadium, but this benefit may be offset by the extra cost required to produce the event.

The main reason the University agreed to host the event was "the opportunity to do something for our friends and neighbors, as opposed to being cast in the role of dog-in-the manger" with San Francisco, Palo Alto and others who expect the event will benefit the Bay Area.

—Bob Beyers

Monday seminars in radioscience

A series of radioscience seminars will be held on successive Mondays at 4:15 p.m. in Room 134 of the McCullough Building. Sponsored by the Department of Electrical Engineering, they will be followed by wine and cheese.

Jan. 17: Robert Strangeway from Lockheed; "Magnetospheric Convection and the Associated Signatures of Geosynchronous Altitudes."

Jan. 24: Alan Waterman of Stanford; "Clear Air Radar Measurements of Upper Troposphere and Lower Stratosphere from Aracibo."

Jan. 31: John Vesecky of Stanford; "Remote Sensing of Polar Ice Using Satellite Altimetry."

Feb. 7: Ken Harker of SRI International; "Radiation from Pulsed Electron Beams in Space Plasmas."

Feb. 14: Hiroshi Matsumoto from Kyoto University in Japan; "Computer Simulation of Wave-Particle Interactions."

Feb. 21: No seminar; President's Day.

Feb. 28: Jan Martin of Stanford; "Radio Occultation Studies of the Solar Corona."

Mar. 7: Vince Wickar of SRI International; "Incoherent Radar Measurements of the Ionosphere."

Health and safety report

Accidents and Injuries Occurring Dec. 13-30

Type of accident or injury	Number of incidents	Days Lost
Impact with object	2	(0, 0)
Pinched, squeezed, crushed	1	0
Fall from height (including stairs)	2	(40, + 7)
Lifting improperly	1	7
Other	1	0

Communication design series

A series of free, public Communications Design Seminars will be held on successive Tuesdays at 4:15 p.m. in Room 128 of the McCullough Building, Stanford University.

Jan. 18: Alan Podel, consultant; "A GaAs Monolithic Integrated Circuit for 4 GHz Satellite Receivers."

Jan. 25: Rafael Mantill-Montalvo of Stanford; "Performance of the LSB Speech Synthesizer."

Feb. 1: K. Mohiuddin of IBM and Stanford; "Performance of an Advanced Character Recognition-Compression Technique."

Feb. 8: Ruming Chen, visiting scholar from China; "Interference Between Satellite Systems with Different Signal Modulations."

Feb. 15: Rolf Dyce of Equatorial Communications; "The Use of Spread Spectrum Modulation in Small Satellite Earth Stations."

Feb. 22: To be announced.

Mar. 1: To be announced.

Mar. 8: Chih-Lin I of Stanford; "Power and Frequency Performance of Modems for Satellite Data Communications."

Alpha Sigma Phi's declaration of independence sent to national fraternity

The Stanford chapter of Alpha Sigma Phi fraternity has relinguished its national charter, affirming its desire to operate as a student living group open to both sexes with no subjective membership criteria.

The decision to withdraw from the national was made unanimously by 30 members at a chapter meeting Wednesday, Jan. 5. The local, which plans to call itself Alpha Sigma, has 50 members, evenly divided between men and women, at its University-owned residence, 585 Cowell Lane (off Campus Drive, near Cowell Health Center).

At Stanford since 1917, the chapter admitted women members in 1973. It has been on suspension by the national since 1981.

The chapter has about 600 alumni on its mailing list. All will be invited to celebrate the local's status Friday, Feb. 25.

Members continuing as students have priority for returning to the chapter house in the University's draw system. Alpha Sigma has consistently ranked among the top three preferences among more than 50 different housing choices for undergraduates.

Dayna Goldfine, chapter president and member of the Associated Students Council of Presidents in 1980-81, sought unsuccessfully to have the national fraternity permit chapters to admit women.

When the national suspended the chapter, it cited its initiation of women, lack of selectivity, and failure to meet minimum standards of the national, such as distributing newsletters. The national council was scheduled to review the chapter's suspension later this month.

Based in Delaware, Ohio, the national has about 50 chapters.

Brooks to speak on Martin Luther

Peter Newman Brooks from Downing College, University of Cambridge, will present a lecture on "A Lily Ungilded: Martin Luther, The B.V.M. and the Saints" on Thursday, January 20, at 4:15 on the Stanford campus, History Corner, Building 200, Room 205.

Dr. Brooks is the director of Studies in History and in Theology and Religious Studies at Downing College and has lectured in Ecclesiastical History on the Faculty of Divinity at Cambridge since 1970. He has authored several books of essays, the most recent being *Seven-Headed Luther & Other Essays for a Quincentenary*, to be released soon by Oxford Press.

STARTS sponsors many classes

STARTS—Student Arts at Stanford—is again sponsoring a diverse selection of informal, relaxing classes. All are welcome. The classes are supported by a nominal fee, payable at the first session.

Winter quarter classes include ballroom dancing, calligraphy, exercise, kundalini yoga, weaving, bridge, mime, folk guitar, recorder, crochet, and handwriting analysis.

Some are during the noon hour (weaving, recorder, crochet, and handwriting analysis), the rest in the evening.

For more information call STARTS, ext. 7-9671.

Dancer to speak at noon today

Bella Lewitzky, one of the major choreographers in contemporary dance will give a lecture-demonstration at noon Wednesday, Jan. 12, in Terman Auditorium at Stanford.

Lewitzky's lecture will be the second in a series sponsored by the Center for Research on Women and the Lively Arts at Stanford on the subject of "Women in the Performing Arts."

Lewitzky is the founder of the Bella Lewitzky Dance Company.

Her lecture-demonstration is free and open to the public.

Campus crime report

Dec. 13-Jan. 3

Burglary/residence	1	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	0	Felony arrest	0
Theft/under $200	5	Misdemeanor arrest	9
Theft/over $200	5	Adult booking	8
Bicycle theft	6	Adult cite/release	1
Vehicle accident	1	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	5
Assault	0	Driving under influence	3

Residential Burglary:

Date	Time	Location	Property Lost	Method of Entry
1/3-4	Night	Project Center	Nothing	

Letters to the editor

Dean Wessells discusses weight given University service in tenure decisions

To the editor:

This letter is prompted by various statements that have appeared in newspapers during the spring of 1982 and in more recent weeks. All of these have addressed the denial by our office of tenure to Asst. History Prof. Estelle Freedman. It would be improper for any University officer to comment publicly on the details of a specific case. Nevertheless, such confusion has been in the air that these general comments are meant to provide background on the tenure process at this University.

The primary criterion for tenure at an institution such as Stanford is *quality of mind* as demonstrated by published scholarship and the teaching record. The ways in which scholarship and teaching are evaluated and judged have been written about at length by Provost Albert Hastorf, by me and by many others, and need not be reviewed again here. However, the so-called "service" category of faculty activity does warrant comment.

Service is a part of every faculty person's professional life. It may include student advising, committee work, participation in extradepartmental programs, serving on national committees, membership in professional organizations, and a variety of other activities. While such activity is important, the service category can never overcome deficiencies in either of the two primary criteria used to judge tenure, quality of scholarship and quality of teaching.

Too many examples exist here and elsewhere of a person promoted on the basis of strong service activities in one year proving in later years to have lost the fire that made him or her so effective while young. Without the strength in scholarship that sustains fine teaching and service, such individuals short-change generations of students. In addition, those persons occupy precious faculty positions that should be available to the first-rate young people entering careers in the scholarly profession.

The important goals of Affirmative Action for minority group members and women are pertinent to the way the "service" category is taken into account in the tenure judgement. The report of the Committee on the Stanford Professoriate concluded that basic standards in scholarship and teaching should not be bent in order to achieve the goals of affirmative action.

In the years since the report, a policy on service in the tenure equation has evolved and may be summarized as follows: in cases where a candidate is judged truly "borderline" in scholarship or teaching, so that the vote reasonably might go either way, then the quality and nature of university service may be considered as a factor. This policy recognizes that minority group members and women on the junior faculty are frequently subjected to special demands on their time that necessarily detracts from time available for scholarship and teaching.

It is the obligation of reviewing bodies and deans to judge carefully whether a given candidate for tenure falls in the "borderline" category in scholarship or teaching, and if so, then to consider and evaluate any special contributions of that individual in the service category.

The reader should note that being a faculty member of physics, classics, economics, Latin American studies, human biology, and other administrative units is not a criterion for tenure. For many years it has been practice in the School of Humanities and Sciences at Stanford to make the decision about investing a tenure position in a particular field or discipline at the time an initial search is authorized to a department and an appointment is made. Thus, when a person is hired as a medieval historian, a developmental psychologist, or an organic chemist, the individual is free to work as effectively as he or she can as scholar and teacher. The young person does not work for six years under a cloud of uncertainty about whether the field itself may be judged inappropriate at the time of tenure review, with the result that tenure could be denied irrespective of the person's qualifications. In other words, we do not include an "administrative" factor in the tenure equation.

Those who argue for tenure on the basis of academic field or of service to some unit of the University are asking that such an administrative factor be used. But if it is, it can be used for or against candidates. At present, being a critically important participant in Latin American studies or feminist studies, being Stanford's only teacher of a rare language, or whatever, is not held for or against the person up for consideration. Similarly, whether the person is a Marxist, a member of the Moral Majority, or has behavioral quirks is irrelevant. By placing the administrative factor "up front" at the time of searching and hiring, we allow the tenure process to focus where I believe it should, on the individual as scholar and teacher.

Finally, those unfamiliar with the tenure evaluation process should be aware of the care with which reviewing bodies examine evidence and draw conclusions. Periodically there is controversy at research universities such as Stanford when an award-winning undergraduate teacher fails to receive tenure. How, it is asked, can this occur?

The answer is that the reviewing bodies of Humanities and Sciences draw conclusions based on a more complete set of evidence on teaching and scholarship than that available to most prize-awarding bodies. Furthermore, awards and prizes may be given for many different reasons other than the quality of scholarship or teaching in the narrow sense. Thus, our evaluators will certainly view with respect awards for teaching, from professional societies, or for books published, but will interpret those awards in light of their own conclusions, after careful examination of the primary evidence and what professional colleagues say in their detailed analyses of the underlying work.

In summary, the tenure decision process is a very complicated one that takes immense time and care. It is the most important type of decision made by university faculties and reviewing bodies. With changing retirement laws, those promoted to tenure in 1983 may still be occupying their faculty positions in 2025 or later. A good portion of their salaries over that span will come from tuition of students not yet born.

Though our system is not perfect, it is necessarily conservative. That is because the impact of mistakes is so lasting and destructive to our mission of scholarship and teaching.

Norman Wessells
Dean of Humanities and Sciences

Terman had extraordinary vision, high standards: Kennedy

Following are remarks by President Donald Kennedy at the memorial service for Emeritus Provost Frederick E. Terman Jan. 4:

For all of us who are here at Stanford to benefit from what Fred Terman did so much to build, this should not be a time of sadness, but a time of reflection on a life fully lived, and a talent successfully and creatively deployed.

It goes without saying, I think, that Fred Terman gave the University much of the shape it has today. Much to Stanford's benefit, and his, he had the good fortune to be teamed with others whose talents complemented his own, and who were able to accept and share his vision of the academic future.

The vision he provided was special and extraordinary, I think, in two particularly important ways. First, it placed great faith in the influence and creative power of particular individuals. That faith was brigaded with a capacity to search others, and see in them qualities that perhaps they didn't even see in themselves.

Of all of the things a dean or a provost must be, he must first be a picker of people. And a picker of people must be a knower and a believer in people. He must also be an astute recognizer of human limitations, alert to special pleading, and tough enough to translate those perceptions into unpopular denials from time to time.

Recognizing talent

Besides the capacity to recognize human talent, to use it creatively, and to perceive when there is not quite enough of it, academic leadership requires an ability to think about the future. In all of the jobs Fred Terman had, there were extraordinary temptations to permit the urgent to preempt the important, to solve the problems of the here and now without somehow ever quite getting to the there and then.

He always showed what I believe modern social scientists call time preference behavior that differed from most of ours. He knew that the shape of the future was likely to be determined by the success of a few initiatives, a handful of appointments, a half-dozen ideas.

He understood perfectly that if you do not give *room* to the initiatives, *attention* to the appointments, *time* for the programs, the future will somehow never get around to happening in the way you hope and expect.

The kind of thing I have just said is frequently said of men who become legends, and sometimes it is quite baseless. In fact, however, I can support my convictions on these points with experience.

I must tell you, with a candor that I think is not out of place even at such occasions, that that experience was not always pleasant. I recall that at some point in the very early sixties I was on a committee that, full of zeal, wanted to go in a particular direction; Fred just wouldn't let it.

And one of the very first faculty appointments I tried to make as department chairman came back out of the Provost's Office a little faster than it had gone in. I think I will not surprise you by telling you that in retrospect, Fred turned out to be right in both instances.

I hope you will also believe he was right when, following the first of these occurrences, he restored by faith and affection by getting my department chairman out of bed early on a Saturday morning to tell him that I had had a good offer from Cal Tech, and that he did *not* care to lose anybody to Cal Tech right then. My point is simply that Fred Terman made the time for people, and for plans.

I also know about these things through the direct experience provided by access to his own audit trail. From time to time, as this Administration plans for the future or reexamines some policy, we find ourselves looking back at the written record of what Fred Terman did or said about a particular problem.

There is, for example, a thorny and troublesome question about how to examine the fiscal relationships between a School and the central University—how to evaluate the contributions made by general University services to the School, and in turn those of the School to the University; and how to translate that understanding into a principled degree of fiscal and policy decentralization. In our thoughts on that subject, we find ourselves coming back again and again to things Fred wrote. Sometimes the concepts have different labels, but they are always there.

And we also find instructive sagas of program-and-department-building. An example is the series of decisions through which he rebuilt Chemistry at Stanford in the 1950s by appointing first Bill Johnson, then Carl Djerassi and then a phalanx of distinguished successors.

Planning far ahead

It might be easy for an outsider to conclude that the successful outcome of that project merely supplied a kind of *post-hoc* rationale that then turned obediently into legend. Not so; what Fred Terman wrote about the strategy at the time of its execution makes it clear that it was a *plan*—that the hoped-for outcome was defined, and foreseen.

There are other accomplishments—the start-ups of high technology corporations that he encouraged, his catalytic role in the development of Silicon Valley; his own pioneering efforts in the development of Electrical Engineering at Stanford. For these he is well known, and they will doubtless be discussed by others.

For me, the more limited vision suffices to make the general case. Each of us who now has responsibilities for the future of this institution owes much to Fred Terman. If we are wise, we will continue to consult his record from time to time, to discover how our present University came to be and even to get some worthwhile advice, still fresh, about particular problems.

But more than that, we had better look to Fred Terman for an example of ***how to think about the future***: about how to let our vision of what should follow guide and control our present actions, instead of merely letting the latter take us, lurching, into an uncertain world.

I suspect it is that notion, above all, that Fred Terman would like us to ponder as we remember him.

Board of visitors picked for Knight fellows program

Appointment of an 11-person "Board of Visitors," drawn from the journalism profession, to provide guidance in establishing and overseeing the new John S. Knight Fellowship program, has been announced by Stanford President Donald Kennedy.

At the same time he also named a seven person "Program Committee," composed of faculty and outside professionals, which will have responsibility for the selection criteria and process and for providing day to day advice and assistance.

Made possible by a $4 million grant from the Knight Foundation of Akron, Ohio, the program will go into effect in 1984-85 and will be named for the founder of the Knight newspaper group (now Knight-Ridder).

It will provide an opportunity for an academic year's period of study for 12 of the nation's most talented mid-career journalists who show promise of making a significant future contribution to the field.

"Both Stanford and the Knight Foundation are committed to making this a program of the highest quality and the outstanding one of its kind.

"It is our hope that the board we are proposing, together with the Program Committee, will keep us in touch with changing needs of the profession and with new opportunities and directions as they develop," Kennedy said.

The Program Committee will be chaired by the University's senior academic officer, Provost Albert Hastorf. Other members will include professors Gerald Gunther, Cromwell Professor of Law; Robert Ward, political science; and John Hulteng, communication.

Representing the profession will be Howard H. Hays, editor and copublisher of the *Riverside Press-Enterprise;* Ralph Davidson, chairman of the board, *Time*, Inc.; and Larry Jinks, vice-president news, Knight-Ridder newspapers.

Named to the Board of Visitors, which will work with the program's officers and report directly to President Kennedy, were the following:

Joann Byrd, executive editor, *Everett* (Wash.) *Herald*;

Robert W. Chandler, editor, the *Bend* (Ore.) *Bulletin*;

Robert Danzig, vice-president and general manager of Hearst newspapers;

John Dotson, senior editor of *Newsweek*;

Jay Harris, Washington bureau of Gannett newspapers;

Lee Hills, editorial chairman emeritus, Knight-Ridder newspapers;

Tom Johnson, publisher, *Los Angeles Times*;

Arch L. Madsen, president, Bonneville International Broadcasters (Salt Lake);

James H. Ottaway, Jr., president and chief executive officer, Ottaway Newspapers;

Jessica Savitch, TV news correspondent, NBC; and

Thomas Winship, editor of the *Boston Globe*.

MathFile now available by computer

MathFile, the online version of Mathematical Reviews, recently became available on the Dialog Information Service which is accessible through all the Stanford University Libraries.

MathFile provides essentially complete coverage of worldwide literature on pure mathematics and of those works in applied mathematics, computer science, physics, engineering, biology, operations research, and other fields that contain new and interesting mathematics.

Among the fields which are searchable online are authors, descriptor or subject codes, journal name, reviewer, language, and publication year. In addition, from July 1979, the full text of the evaluative reviews are also searchable online.

The American Mathematical Society is the producer of this important data base. Taissa Kusma, a representative of the American Mathematical Society, will give a presentation on MathFile at 3 p.m. Thursday, Jan. 13, on the second floor of the Mathematics Department, building 380, in the room across from the elevator.

In addition, on Wednesday, Jan. 19, there will be free searching of MathFile in the Mathematical and Computer Sciences Library on the fourth floor of the Mathematics Department.

Faculty, staff, and students are invited to attend the presentation on the 13th or to stop by the Math/CS Library anytime during the 19th to test out this new version of a well-known data base.

For more information call Math/CS Librarian Harry Llull at ext. 7-0864.

Drive to meet great blood needs

The Stanford University Blood Bank will hold a blood drive from 10 a.m. to 4 p.m. Friday, Jan. 14, in the mezzanine of the Terman Engineering Building.

Faculty and staff are urged to donate blood and, whenever possible, to announce the drive to students and colleagues.

Patients at Stanford Hospital and Children's Hospital often have complex and sophisticated transfusion needs, and the demand for all blood products is high. The two Stanford hospitals combined use more than 100 units of blood each day—in order to support this need the Blood Bank holds drives each quarter on campus.

Call 497-7831 to schedule an appointment or simply drop in between 10 a.m. and 4 p.m. at Terman on Jan. 14.

Publicity workshop set

The Office of Student Activities will present a workshop entitled "Publicity: Getting the Word Out with Efficiency and Impact" at 4 p.m. Tuesday, Jan. 18, at the International Center.

This hour-long workshop will focus on practical tips for the design and implementation of a publicity campaign at Stanford, including flyers and newsletters.

For more information, drop by the OSA or phone 497-3542.

Fred Terman's favorite stories recalled by Halamka, who lives in his basement

Stanford senior John Halamka answered an ad posted at Residential Education and has lived at 445 El Escarpado as Frederick Terman's personal assistant for 10 months.

Halamka is a man after Terman's own heart—he got involved with computers in the sixth grade and runs a $100,000 per year software-hardware business named Colossus out of Terman's basement.

Halamka, who has a double major in medical microbiology and public policy, also spent many evening hours listening to Terman tell his famous stories.

"During the final days of his life," he related, "the stories kept coming, and the sense of humor never faltered.

"On the night before he died, we discussed my impending wisdom tooth extraction and how it could prevent me from speaking for a few days. Dr. Terman countered with 'that will be nearly impossible for you.' "

Below are some of the stories Terman told Halamka, as close to the original as his memory can produce.

Hoover's revolution

Herbert Hoover really had three lives. He had his life before the presidency as an engineer, his life during the presidency, and his life after. The only time he really had fun in life was before the presidency.

One of his poignant memories of his travels and tribulations was his trip to Russia. He was traveling on horseback through the country and stopped in a small peasant village for the night.

He dined at the town's only eating establishment and was ready to leave the next morning. The villagers insisted that he stay. He couldn't miss the great revolution.

Yes, the town was going to have a revolution. Down with the imperialist mayor and town leaders.

The next day at midnight, torches filled the town. The mayor and other political leaders were yanked from their slumber and imprisoned. The people had won, the revolution had succeeded. Now the citizens gathered in the town square to install the new government of the people.

One townman yelled, "We will have a government of the workers, all will be equal!" Another yelled, "And this government of the people will have a leader to guide us!" Two women yelled, "And a council of women will join in the leadership for all!"

The yelling continued throughout the night. By 4 a.m. the townspeople had split into 40 or so different groups. One demanded no leader, others demanded councils, others demanded the old system back.

By dawn the torches faded and the groups dissipated. One unanimous decision had been made: the groups could not agree on anything but their ability to disagree. The revolution had succeeded in creating a mob of sleep-deprived peasants.

As the final diehard militant returned to his domicile, Hoover heard him comment, "Maybe we should have another revolution next week."

Lewis Terman's Ten Commandments for the Emeritus Professor

When my father retired he drew up the Ten Commandments for the emeritus professor, and I think they are true today:

1. Whatever sufferings, disappointments and griefs beset us, we will not feel sorry for ourselves.

2. While doing all in our power to combat the ills that may beset our bodies and our bodies-politic, we will strive to maintain a reasonable degree of philosophical detachment.

3. We will endeavor to keep an open mind toward the newer trends that appear in our respective fields of scholarship and research.

4. We will never commit the ancient folly of condemning wholesale the younger generation.

5. We will not allow our minds to dwell upon, nor our tongues to enlarge upon, our life accomplishments.

6. We will not cultivate the illusion that our most important achievements are probably ahead of us.

7. We will try to keep alive such sense of humor as God in His mercy may have endowed us with, but not by overmuch practice of our stored up reserves of jokes.

8. We will emulate especially those members of our emeritus group who have shown that age is no bar to zest for life and for service.

9. We will not refuse the little services we can render because we are not longer equal to the bigger things we could once have done.

10. We will allow ourselves to be beguiled by the flattery of friends who tell us that we look as young as we did 20 or 30 years ago.

Lewis Madison Terman—1942

To Build a University

Building a university is no easy task. When I was provost we had the task of planning Stanford's future. What departments would we develop? How would we make Stanford into a world-class University. How could industry help us do it?

Money. Stanford needed money in the form of grants, gifts and contributions to develop. The only way money flows into a university is by having the talent to attract it. The prestige of world-class talent, ingenuity, and insight attracts new talent, more money and builds a successful university.

That is, building a university is based on one principle—excellent people. There is no substitute for excellence.

Of course, Stanford could have hired 1,000 very good people. But in my mind the answer was to hire 10 excellent people. A few excellent people such as Bill Shockley, Arthur Kornberg, and Carl Djerassi built the foundation of Stanford. Their talent has multiplied a hundredfold by attracting gifted students and professors alike to Silicon Valley.

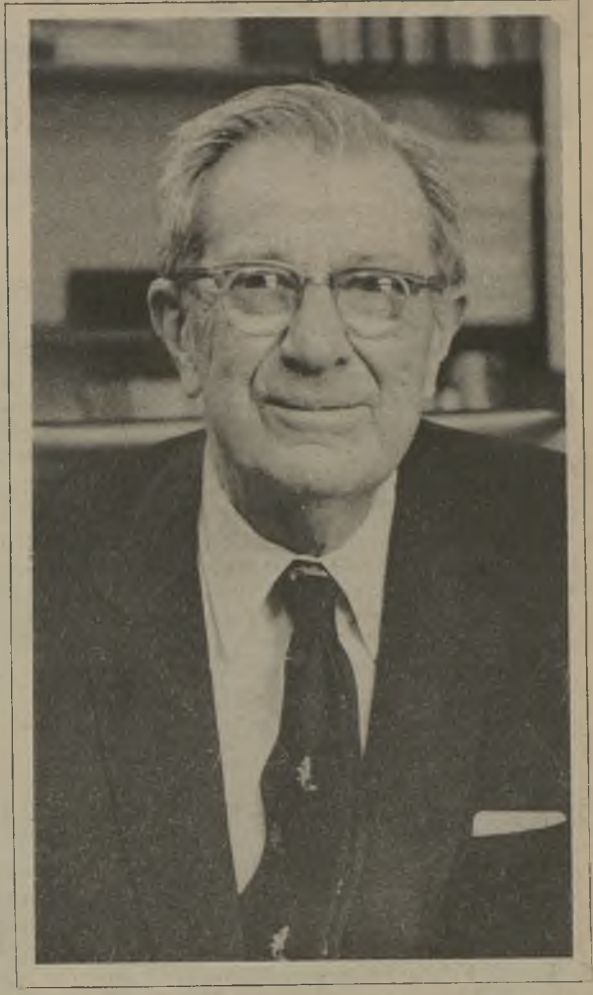
Equipment—that was another problem. Money and people weren't quite enough. They needed equipment to work well.

Al Bowker and I thought that computers would be the way of the future. We started to build a computer science department and to acquire the equipment to go with it. Stanford simply could not afford a computer. We had about $200,000 and IBM wanted a million.

Well, I met the vice-president of IBM at a gathering and found out that universities using the computer got a 20 percent discount. There was another discount of 20 percent for teaching students how to use and care for the computer. Al Bowker convinced IBM to give another 40 percent discount for allowing the night use of the computer to be dedicated to IBM work.

We bought a $1 million computer for $200,000.

Industry and Stanford seem to go together. The experience of industry can't be taught in a university and the talent that industry needs to grow won't be seeded without a university. Stanford has succeeded and I am thankful.



You really should enjoy life before it escapes you. Excellence is possible to achieve without exhausting your mind and body along the way.

—Frederick E. Terman

Fish, skunks and mistletoe

I was never really involved in any sports, except maybe fishing.

Speaking of fish, one fish story I can never forget is David Starr Jordan's. He had an incredible memory. He was the kind of man who could pass through a crowd and introduce them all by name minutes later.

Unfortunately, his real penchant in life was remembering the scientific names of fish. He could recollect everything about any species you showed him, but he had one troubling problem; every time he learned the name of a student he figured he'd forget the name of a fish, because the memory only held so much. I hope he had a few students named Perch, Halibut, and Mackerel.

When I was a boy I used to climb in the hills a lot and I guess I had an entrepreneurial instinct. I used to hunt mistletoe, for the poison oak deterred wives of professors. It was quite a healthy business. Hunting butterflies, turtles and skunks also were favorite pastimes before I got addicted to electrical engineering.

Those early days taught me a lesson. It's so easy to forget the simpler things in life when academia gets in the way. But sooner or later slowing down to enjoy the turtles is something you have to do.

Sam MacDonald, the track maintenance man at Stanford in the '20s, took to the hills in a big way. He turned the pennies he had left over every week into acres of the Santa Cruz Mountains. His legacy was left to Stanford and became Sam MacDonald County Park.

Dorothy and Russell Varian owned what is now Castle Rock State Park and enjoyed many happy moments there. You really should enjoy life before it escapes you. Excellence is possible to achieve without exhausting your mind and body along the way.

Senate report

University may trim tuition, salary increases from previous projections

FIFTEENTH SENATE REPORT NO. 7

Summary of Actions Taken by the Senate
January 6, 1983

At its meeting on 1/6/83, the Senate took the following actions:

1. On the recommendation of the Committee on Academic Appraisal and Achievement, the Senate, by unanimous voice vote, conferred bachelor's degrees on candidates who had met the various requirements for those degrees.

2. On the recommendation of the Committee on Graduate Studies, the Senate, by unanimous voice vote, conferred advanced degrees on candidates who had met the various requirements for those degrees.

3. The Senate, by unanimous voice vote, received the Annual Report for 1981-82 of the Committee on Computers and Information Technology.

Minutes of the Fifteenth Senate
of the Academic Council
January 6, 1983
(Draft subject to approval by the Senate
January 20, 1983)

A meeting of the Fifteenth Senate of the Academic Council was held on 1/6/83, beginning at 3:18 p.m. in Room 180 of the School of Law with Chairman A.L. Fetter presiding. Present were 37 representatives, 9 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 12/2/82 (SenD#2460) were approved as submitted.

Conferral of Degrees

Under the Action Calendar, the Senate, by unanimous voice vote,

1. Conferred bachelor's degrees on candidates recommended by the Committee on Academic Appraisal and Achievement in the Preliminary List (SenD#2454), a Supplementary List (SenD#2455), and a final list of one candidate added by Registrar Mahoney.

2. Conferred advanced degrees on candidates recommended by the Committee on Graduate Studies in a Preliminary List (SendD#2456), and a Supplementary List (SenD#2457).

Report of the Steering Committee

Chairman Fetter announced the names of a number of Senate representatives who are joining the Fifteenth Senate at the start of Winter Quarter, some as alternates for Winter Quarter only, some for the duration of the Fifteenth Senate. These representatives include Dean R. Jaedicke (GSB), and Professors J. Merryman (Law), D. Phillips (Education), S. Rosenberg (Medicine/Oncology) and M. Sunseri (Mathematics).

He also announced that the report to the Ad Hoc Committee to Study the Question of the Length of Academic Terms had been received and would shortly be presented to the Senate, perhaps at the next meeting.

Finally, he reported that the February 3rd meeting of the Senate would be a short one, followed at 4:15 p.m. by the Winter Quarter meeting of the Academic Council. Details of these meetings will be announced later.

Report the President

President Kennedy, after some preliminary comments about the projected British royal visit in March and the Super Bowl game at Stanford in 1985, spoke at some length about the University's budget situation. The text of his remarks appears in *Campus Report* of January 12, 1983. Since the Provost's report was to focus on recent developments in the budget process, questions were deferred until after the Provost gave his report.

Report of the Provost

Provost Hastorf presented a status report on the general budget situation. He indicated that all units have now been asked to report their views of the consequences of reducing their operating budget by 5 percent. Budget requests and proposals for 1983-84 will now be reviewed and decisions made in February about recommendations on tuition, the general salary program, indirect costs, and other major parameters. These decisions will be reported to the School Deans, the Administrative Council, and the Senate in late February or early March. Action will be taken by the Board of Trustees on tuition in February and on the Operating Budget in March.

He commented that there appears to be general understanding of the budget problems, as well as a certain level of relief that they are not even more serious, which obscures the fact that this is the third major budget reduction in 15 years. This has led to conservative responses, i.e., attempts to trim, to squeeze, to shave the budgets. Three key variables are now being reviewed: tuition, indirect cost recovery, and salaries (both faculty and staff). The hardest look is being taken at administrative and other expenses in non-academic areas. As was true in previous budget-cutting programs, proportionately heavier cuts are expected to be made in these areas.

As things now stand, the administration expects to recommend to the Board of Trustees that Stanford hold the indirect cost rate at 69 percent for 1983-84. This is a clear commitment to the crucial importance of the research enterprise at Stanford and to the support of Stanford's federally funded investigators. The administration also is examining the consequences of recommending a substantially lower rate of tuition increase than the 12 percent assumed in the long-range forecast.

The largest single expense item is salaries. Under the circumstances, it becomes clear that Stanford cannot maintain the 7-8 percent base increase projected in the long-range forecast.

Furthermore, it is apparent that the 1984-85 budget cannot be balanced by additional shaving and paring; more rigorous initiatives will be necessary.

The Provost concluded by indicating that Stanford must look at the overall size of the University in relation to its sustainable support, and at the mix between academic programs, student and administrative support services. Cost control must become a central concern. The primary purposes of high quality teaching and scholarship will need to be accomplished with leaner support services.

In the question period which followed these two reports, it was pointed out that even with heavy cuts in administrative costs, overhead rates can go up if uncontrollable expenses allocated more heavily to research than to instruction increase disproportionately, e.g., energy costs. One way to keep overhead costs down is to get the contributors to indirect costs under better control. This will mean degraded services, a consequence for which we should all be prepared.

The gifts programs are doing better, but not fast enough to solve our problems. An important secondary effort is being made to change the pattern of giving toward a pattern of more support for the operating budget—more unrestricted gifts. At present, the overall gift total is less important than the proportion of that total which represents budget-relieving gifts.

The administration was asked to clarify the reasons for the swing away from the traditional Stanford policy on full recovery of indirect costs which was being announced at this meeting, since it is contrary to the Stanford policy espoused in the past. President Kennedy responded that past adherence to a full indirect cost recovery policy was prompted by two reasons: 1) Abandonment of that policy would force us to divert general University funds to balance those costs which we had failed to recover; 2) There was in the past no evidence that a full indirect cost recovery policy put Stanford at a disadvantage in competing for federal funds. Now, under tightened federal funding, there is evidence that such a danger exists. Furthermore, since the publicity occasioned by the NIH attempt to withhold 10 percent of the indirect costs already negotiated, universities appear to be at much higher political risk on the matter of indirect cost recovery.

These historical changes led to the reluctantly—made decision that Stanford should not now push to recover the 81-84 percent of indirect costs it is legally entitled to under present government rules. We can hope to attain a return to full recovery of indirect costs in the future by two means: 1) by doing everything we can now to control the expenses that inflate overhead costs, and 2) by working at a later date to negotiate true indirect cost recovery rates.

To the suggestion that the problem isn't unique to Stanford and that a national response could be more effective, the Provost responded that all major universities appear to share a concern that both tuition rates and indirect costs have risen too high too fast; all of them seem to be struggling to regain control of the forces which have been driving those rates and costs up. Even so, President Kennedy pointed out, Stanford must act unilaterally to make its own decisions, set its own policies, and solve the perceived problem of competitive disadvantage.

Annual Report of C-CIT for 1981-82

Professor J. Miller, Chairman of C-CIT, in presenting the Annual Report, noted that it had been completed in June of 1982 and that a number of interesting and noteworthy developments concerning computers and information technology had taken place at Stanford since that time. He noted that a group of administrators from the Center for Information Technology had been invited to this meeting to talk about CIT and respond to questions about recent developments in computers and information technology. These guests included: Edward E. Shaw, Associate Provost for Information Systems and Director of the Center for Information Technology; Michael M. Roberts, Deputy Director; Michael P. Carter, Director of Instruction and Research Information Systems; David J. Ernst, director of Administrative Information Systems; and William H. Yundt, Director of Network Development.

Professor Miller then summarized the activities of C-CIT in 1981-82 as detailed in the Annual Report (SenD#2443). The committee commended the progress of the campus-wide networking plan at Stanford, but questioned the University position on instructional computing in general, particularly with respect to undergraduates. The committee expressed the view that Stanford need not assume a leadership position in the instructional use of computers but that it should move forward in the field, with planning and innovation. It also commended the administration for having decided to do so by the end of the 1981-82 academic year.

In the discussion that followed Dean Lieberman took exception to the use of the term "funny money" in the report to refer to resources made available by allocation of University funds to CIT. He pointed out that readers of the Annual Report might misinterpret the term as implying no real cost to the University. In fact, those dollars are as real as other dollars, and are generated by the University in the usual ways. If allocated to a unit other than CIT, their loss would in fact effect a reduction in the dollar-bought resources and services of CIT.

In response to a question about the CIT budget and where it is going, CIT's Director, E. Shaw, reported that the total CIT budget amounts to $19.3 million. Of this, $18.1 million (94 percent) is designated for Central Services, and $1.2 million for Investment Programs. The Center is now undergoing the same budget review as other units, with a 2 percent reduction in the budget base this year and a projected 6 percent reduction to come.

Since the Annual Report had recommended that CONTEXT be viewed as two distinct projects to be treated differently, the question was asked if that recommendation had been implemented or if CONTEXT had been eliminated before it could be. E. Shaw reported that the recommendation came at the time when CONTEXT was being reviewed for financial viability. There were not enough subscribers to support the costs, and the funds needed to subsidize it would have been prohibitive. During the summer, therefore, the decision was made to eliminate CONTEXT, transferring users to other services, with transition services provided to ease out those who couldn't transfer immediately.

It was noted that Carnegie-Mellon's leadership in the instructional use of computers came because its administration took the initiative in setting up the program. Professor Miller was asked if his committee had decided that Stanford shouldn't do that. He responded that the possibility was discussed, but not recommended. There was no strong feeling against it; at the same time, there was no strong support for it. E. Shaw added that CIT works closely with Carnegie-Mellon because of shared interests and vendors on projects. He noted that the costs of Carnegie-Mellon student-computing facilities and services are added to the charge for tuition there. Fundamental differences between the two institutions mean that some, but by no means all, of the C-MU applications in this field will be appropriate to Stanford. A relatively small, homogenous university may more reasonably try for a single solution.

Because some concern was expressed about certain of the recommendations in the 1981-82 C-CIT Annual Report, and because the Report was intended to convey information (rather than to recommend any action) and is already seven months old in a field which is experiencing rapid changes, Chairman Fetter proposed that the Senate simply vote to receive the report rather than to accept it, since the latter implies tacit approval of its June 1982 recommendations. The Senate, by unanimous voice vote, received the Annual Report of C-CIT for 1981-82. **continued on next page**

AFFIRMATIVE ACTION PLAN
for Stanford University



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Plan completed by: Santiago Rodriguez, Affirmative Action Officer

Plan approved by: Donald Kennedy, President

AFFIRMATIVE ACTION PLAN for Stanford University

I. Reaffirmation of Policy

The foundation of all policy at Stanford University is the institution's determination to maintain itself as a university of the highest quality. Implicit in that tenet is the University's determination to provide equal opportunity for all employees and applicants for employment regardless of race, color, creed, religion, national origin, sexual preference, age, or sex, except where sex or age is a bona fide occupational qualification. Similarly, individuals with physical limitations are evaluated on their ability to perform a specific job rather than on assumptions about their disability.

The plan for affirmative action described here is intended, in ways that are consistent with those premises, to increase the number and improve the relative position of minority group members and women on the Stanford faculty and staff. And while proportional representation by race and sex is not necessary in every institution in a pluralistic society, Stanford's educational goals are best served if the institution reflects the diversity of our society at all levels.

The University has frequently stated its policy of equal employment opportunity. Because we are committed to avoid discrimination in personnel decisions, we intend to remain an equal opportunity employer. But the mere avoidance of direct discrimination, even where that can be fully achieved, does not by itself guarantee the desired changes in the composition of the faculty or staff.

To achieve such changes requires affirmative action. Hiring decisions that appear to have been reached neutrally may in fact be discriminatory if the applicant pool does not include women and minority group members. The traditional "old boy" networks for establishing criteria, locating applicants, and making recommendations can perpetuate the problem. Positive recruiting is, therefore, basic, and the need for careful review of stated qualifications goes hand in hand with open recruiting. Overly narrow qualifications may artificially and improperly exclude from consideration members of minority groups and women who could assume the responsibilities of a vacant position.

The University is fully committed to an affirmative action program. It consists, in part, of the following elements: 1) a requirement for imaginative and serious search and recruiting; 2) administrative review of hiring practices; 3) analysis of faculty and staff units to determine problem areas; 4) identification of and response to undesirable practices; 5) facilitation of training where possible and consistent with the educational objectives, that permits personal development sufficient for entry to some positions and promotion to others.

Stanford's officers who are responsible for affirmative action believe that these procedures will make Stanford University an affirmative action employer in the best sense of that phrase and will improve the representation of women and minority group members in the faculty and staff.

Donald Kennedy
President
Stanford University
September 16, 1982

II. Dissemination of Policy

Regularly and as often as possible to make the necessary impact, Stanford University informs the total University community and the public of its commitment to affirmative action and Equal Employment Opportunity.

A. Internal —Throughout the University, the policy is disseminated in the following ways:

1. A current statement of Stanford University's Affirmative Action (AA) and Equal Employment Opportunity (EEO) policy statement will be included in all personnel practices and policy manuals.

2. Stanford University's policy statement will be disseminated annually to all employees through the *Campus Report*.

3. The policy will be prominently displayed on bulletin boards where employees or prospective employees enter or congregate.

4. New employees will be informed of the University's policy statement during their initial processing or orientation.

5. Periodically, the subjects of affirmative action and equal employment opportunity will be discussed at senior executive and senior staff meetings.

6. Members of the Affirmative Action Office staff will visit ethnic and feminist organizations, department and unit supervisors, and employees at all levels.

7. A non-discrimination clause will be included in the United Stanford Workers bargaining agreement.

8. The Faculty Affirmative Action Officer meets individually with Deans and Department Chairmen in order to describe the policy, discuss the importance of realistic numerical goals and assist in the development of effective affirmative action.

9. The Faculty Senate, and elective representative group from the Academic Council, has been the forum for numerous discussions of faculty affirmative action objectives. In February 1972, the Senate adopted the following resolution: To implement further Stanford's commitment to women, the Senate of the Academic Council recommends:

- that steps shall be taken that will significantly increase the number of women on the faculty;
- that as a proximal goal, the current proportionate representation of women among new appointees to faculty be maintained; and
- that the Faculty Affirmative Action Officer shall report annually to the Senate on the representation of women among faculty newly hired and promoted during the preceding year.

The annual report of the Faculty Affirmative Action Officer, along with other discussions of matters affecting women and minority faculty members is yearly presented to the University community through the *Campus Report* and the *Stanford Daily*.

B. External

1. Recruiting sources will be given notice of the University's non-discrimination policy.

2. All newspaper employment advertisements will appear in sex neutral columns (male/female) and contain the phrase "An Equal Opportunity Affirmative Action Employer."

3. The University includes an appropriate AA and EEO clause in all purchase order forms, leases, contracts, and business agreements.

4. As appropriate, the University's AA and EEO policy is communicated to schools, colleges, community leaders, and organizations.

5. Letters of compliance with affirmative action policies and the maintenance of nonsegregated facilities are required from appropriate subcontractors and vendors to the University.

III. Responsibility for Implementation

The president of the University, Don Kennedy, has the ultimate responsibility for the implementation of Stanford's Affirmative Action Program. To ensure the effective implementation of the program, he delegated authority and responsibilities as follows:

A. Affirmative Action Officer

The President of Stanford University has assigned responsibility for Equal Employment Opportunity and the implementation of Affirmative Action Programs for the entire University to the Affirmative Action Officer, Santiago Rodriguez, whose responsibilities and authority include but are not limited to:

1. Designing a meaningful Affirmative Action Program and insuring its effective implementation each year.

2. Providing direction to the University Affirmative Action Coordinating Group.

3. Designing, implementing and reviewing all reporting systems that will measure the effectiveness of Affirmative Action Programs.

4. Developing University EEO policy statements and internal and external communication techniques.

5. Assisting the Vice Presidential Groups in preparing and implementing effective review and statistical reporting systems that:

   a. measure effectiveness of University programs by monitoring progress;

   b. indicate remedial action where needed;

   c. determine the degree to which the University goals and objectives have been attained.

6. Participating in discussions with the U.S. Equal Employment Opportunity Commission, the Office of Federal Contract Compliance Programs and other federal civil rights agencies when appropriate.

7. Participating in selected community endeavors and advising management of trends within the minority community and feminist organizations, recommending University involvement with various community organizations when appropriate.

8. Identifying problem areas throughout the University.

9. Making periodic visits to departments within the University to evaluate employment practices and to assist management in arriving at solutions to problems.

10. Keeping top management advised of the adequacy of existing programs and proposing revisions or intensification of efforts to improve University posture in all areas of employee relations with emphasis on women and minorities.

11. Reviewing all informal complaints and charges alleging violation of Title VII of the Civil Rights Act of 1964, as amended; the Age Discrimination in Employment Act of 1976; the Equal Pay Act of 1963; the Rehabilitation Act of 1973; the Vietnam Era Veterans Adjustment Act; the Civil Rights Act of 1866; other applicable federal and state laws prohibiting employment discrimination in conjunction with other relevant University officials.

12. Interfacing with applicable federal and state agencies during complaint investigations.

13. Developing and maintaining an effective University-wide monitoring and tracking system of EEO-related complaints.

14. Keeping the Vice Presidential Groups and department management informed of key government agency rulings and laws affecting employment practices.

15. Providing consulting services to the Vice Presidential Groups and department management with regard to interpretation and analysis of potential discrimination issues.

16. Interfacing with compliance agencies during on-site compliance reviews.

17. Monitoring the University's programs for adherence to University employment policies, e.g., recruitment, selection, placement, hiring, promotion, layoff, termination, compensation, training and development, to insure compliance with EEO rules and regulations.

18. Preparing periodic reports of EEO progress.

19. Reviewing labor/management bargaining agreements to insure compliance with EEO rules and regulations.

20. Representing the University at national, state and local agency meetings.

B. Vice Presidents

The University Vice Presidents have these affirmative obligations within their respective areas:

1. Cooperating with the Affirmative Action Officer in implementing an effective Affirmative Action Program.

2. Becoming actively involved in EEO and affirmative action activities to insure that established goals and objectives are met.

3. Appointing Affirmative Action Coordinator as representative for the vice-presidential group.

4. Reviewing job openings and employees considered for them to insure that minorities and women are given full opportunity for transfer, promotion and training by superiors.

5. Notifying and encouraging minority and women employees to take advantage of University-sponsored training or educational assistance programs.

6. Directing the managers and supervisors to counsel employees on how to meet University performance standards.

7. Insuring that all supervisors and other employees at the University understand and observe the University's policy of Equal Employment Opportunity in performing their work.

8. Insuring career counselling is performed with employees.

9. Insuring that each manager and supervisor is aware that his/her work performance will be evaluated in part on his/her affirmative action performance.

10. Periodically discuss equal employment opportunity issues, i.e. development and status of goals, grievances resolution, training requirements, difference between nondiscrimination and affirmative action, with senior staff member.

C. All Other Supervisors and Managers and Employees

All line managers and supervisors, through orientation and regular discussions with management, are aware that their responsibilities include the implementation of EEO and affirmative action policy on a day-to-day basis.

All employees and managers are responsible for insuring that Affirmative Action Programs work successfully. All employees are expected to bring general or specific EEO/AA problems to the attention of department managers, the Employee Relations Manager or the University Affirmative Action Officer. No employee shall be subjected to harassment or retaliation for identifying problem of an EEO/AA nature to management or other responsible officials.

Periodically, all managers and supervisors should conduct meetings with all other employees to discuss the Vice Presidential Group/department/section affirmative action program, development and status of goals, internal grievance procedure and other EEO/AA related items.

D. Faculty Affirmative Action Officer

The President of the University, Donald Kennedy, has the ultimate responsibility for the implementation of Stanford's AA Program. To ensure effective implementation he delegated the responsibility and authority for Faculty Affirmative Action to the Vice President and Provost, Albert Hastorf, whose activities have included but are not limited to:

1. Developing policies and procedures for appropriately increasing female and ethnic minority representation on the faculty and to insure that the policy is implemented.

2. Reviewing all faculty appointments and promotions to determine whether they are consistent with that policy and the associated procedural guidelines.

3. Assisting search committees in their efforts to broaden the scope of their searches.

4. Designing and implementing internal review and reporting systems to measure the effectiveness of the programs.

5. Publishing EEO/AA policies and procedural guidelines related to faculty hiring and report on progress in faculty affirmative action.

6. Administering the Faculty Affirmative Action Fund.

7. Counseling faculty members who are women or members of minority grups about professional opportunities.

8. Reviewing annual reports from Deans, Department Chairmen and Faculty Affirmative Action representatives in each school on the issue of affirmative action.

E. Affirmative Action Coordinators

Each Vice President designates one or more individual as an Affirmative Acton Coordinator. Coordinators meet regularly as a group with the Affirmative Action Officer and other interested individuals, e.g., the Manager of Employment, to discuss and examine affirmative action issues of general interest to the University as well as to discuss the implementation of appropriate affirmative action in their respective areas. These Coordinators have received the delegated responsibility for monitoring affirmative action progress with Vice Presidential areas from their respective Vice President. Coordinators meet regularly with staff of the Affirmative Acton Office as needed to identify and resolve concerns involving affirmative action within their purview.

IV. Program Analysis

Personnel practices are analyzed regularly to identify possible areas of adverse impact in the affirmative action posture of Stanford University. Analysis is conducted by Vice-Presidential area for staff and by school for faculty.

President/Provost

Comparative data appear to indicate that some progress was made toward achieving affirmative action hiring goals established for 1981-82, despite on-going problems encountered with the recruitment of qualified, competitive minorities for most job groups and women for middle and senior management. All levels of management continue to require special attention. There are few opportunities to hire at the senior and middle levels of management. However, over the past year, we have had some success in placing more women in middle management positions. In the lower management group, where more opportunities to hire exist, the work force is diverse. The diversity fluctuates, however, as some of the lower management staff move to different areas within the University or leave for external employment opportunities.

We continue to encounter difficulty in recruiting programmers and engineers in general, and experience even greater problems with recruitment of minority programmers and engineers despite general recruitment efforts that have been focused on these groups over the past year. Our posture with respect to salaries in these highly competitive job markets and the high cost of housing in this area continue to impede progress toward meeting our goals.

The aforementioned factors have an adverse affect, also, on our ability to attract professional librarians, as well as staff to fill many of our vacancies in other job groups. We continue to recruit with some limited success in the south and west, but encounter problems in recruiting from the east coast because of the substantial costs associated with relocation and the high cost of living in this area. It appears that other economic factors, such as costs related to commuting, also affect our ability to recruit, and often to retain, individuals from other Bay area locations which should provide recruitment sources for minorities, particularly for clerical and other nonexempt jobs.

Business and Finance

Many goals have been met in the past year, despite a slow economy that resulted in both layoffs and low turnover. On the whole we are doing well in hiring minorities and women, but often our recruiting efforts are cancelled out by terminations of goal category employees. Minorities and women have not experienced more turnover than other employees, but their terminations are more visable because of the resulting frustration felt by hiring officers who continue to face apparently unmet goals despite successful recruiting.

We have some job classifications that continually experience underutilization. Some of these jobs share the characteristics of requiring a high level of training or specific experience in fields that offer high salaries e.g. programmers and senior management. This makes recruitment more difficult. There are other areas where these characteristics do not exist and yet where goals remain unmet. We will be concentrating on recruitment in these areas and look forward to another successful year.

AFFIRMATIVE ACTION PLAN for Stanford University

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For the most part the goals that remain in our job classifications are for one woman or minority per classification. The noteworthy exceptions are described below along with the single goals.

Underutilization of both minorities and women exists at senior, middle and lower management levels. No vacancies are projected at the senior management levels, but contingency goals have been set in the event that vacancies arise. Some vacancies are anticipated at the middle management level. Past recruitment efforts have not yielded an adequate number of black and female applicants at this level.

Women are markedly underutilized in the shop jobs, which are non-traditional jobs for women. The job groups of construction, mechanics, deliverers, maintenance, and grounds present major recruitment problems.

Hispanics continue to be significantly underutilized in protective services, general clerical, and mechanics job groups. Successful recruitment of clericals has been undone by terminations. Recruitment of Hispanics for protective services continues to be unsuccessful.

Blacks are noticeably underutilized in the facilities professional group. We offered a position to a black this past year and lost the candidate to a more lucrative job off-campus.

Two other job groups show women as being underutilized, dieticians and storekeepers. We believe that the availabilities used for these categories are inappropriate for the actual jobs as they exist in B&F. Single goals exist for the minority groups below in the job classifications listed.

Blacks: miscellaneous professionals, health professionals, programmers, grounds, and labor.

Hispanics: miscellaneous professionals, procurement professionals, programmers, and construction

Asians: Programmers, construction, storekeeper, and machine operator.

We look forward to continuing progress in meeting these goals in the coming year.

Development

The Office of Development continues to experience underutilization of minorities at the professional level, particularly in the Development Officer job group. Additionally, a distributional problem exists in that minorities are not represented adequately in the higher-level positions of the Office of Development. Women, on the other hand, are a significant portion of the exempt workforce and are not underutilized as a group.

Minorities and women are well represented in the clerical job group. However, very few minorities are found in the higher-level non-exempt positions.

Public Affairs

The Office of Public Affairs is marked by small and stable staffing in all job categories, particularly at the management levels. Nevertheless, where opportunities to hire occurred, progress toward our goals is evident.

Underutilization of women and minorities persists at both the senior and mid-management levels and for black and Asians at the lower management level. We anticipate two vacancies in the latter category within the coming year. Past recruitment efforts have not yielded adequate numbers of minorities for these positions in fields traditionally dominated by white men.

We were able to achieve our goals in the artists series and at the miscellaneous professional level (C-6's) by hiring an Asian woman, black man, and a black woman, respectively.

At the general clerical level, where significant turnover exists, we realized considerable progress. Four women (one Hispanic) and one Hispanic man was hired. We continue to be underutilized for Asians in this category.

Underutilization of women, Asians, and Hispanics exists in the Graphic Technical/Technical job group, but some progress toward our goals occurred with the hire of a black male.

It is worth reiterating that the small numbers of people in these job groups, i.e., 1-4, (with the exception of the general clerical) provides little opportunity to make dramatic progress toward our goals, but we will continue to strive or the steady progress we have achieved within the past year.

Legal Counsel

Overall minority and female utilization continues to exceed availability in the attorney category. Two anticipated openings for attorneys were filled, in addition to a third, unanticipated vacancy during the past year. From applicant pools totalling over 300, one black male, one non-minority female, and one non-minority male were hired. Despite an extensive search for qualified Hispanic applicants, which included personal communication with Hispanic lawyers and professors of law, posting of the vacancy announcements in law schools, and posting of the vacancy announcement with Hispanic Bar associations, we were not able to reach our hiring goal of one Hispanic attorney.

In the secretarial category, one Secretary II, Specialist position was filled. The vacancy announcement for this position was distributed to an extensive group of potential sources of minority candidates. The resulting group of 20 applications produced an interview pool of seven women, including one black and three Asian candidates. The successful candidate is an Asian. As in the attorney category, overall utilization of minorities and women continues to exceed availabilities in the secretarial category. In view of our inability to recruit a qualified black secretary into the legal environment, advertising of any new openings which may occur will be intensified, with additional emphasis on expanding the black applicant pool.

FACULTY

Graduate School of Business

During the past academic year the School made a total of ten new appointments. Of these, two are women, one is Black and two are Asian faculty appointments. There was only one tenured appointment and he is a non-minority male who will have a joint appointment in two schools at the University. There were three promotions to tenure and four resignations during the past year. The School has lost a nontenured Asian faculty member due to his resignation from the University.

At the tenured level, the School has set an ultimate five year goal for a woman faculty member. Few anticipated vacancies and low availabilities preclude setting realistic annual goals; however, the school believes that it may be possible to achieve utilization over the next five years. During the past year the School offered a tenured appointment to a woman. The School, the President and the Provost engaged in extensive negotiations in an effort to gain the appointment. Regrettably the candidate ultimately declined the offer and remained on the East Coast.

At the non-tenured level, the School made progress in meeting a goal through the appointment of a black faculty member to the faculty. The School realizes that it remains underutilized in terms of tenured black and non-tenured Hispanic faculty. It must be stressed that availability calculations are exceedingly low for both populations and that there are too few anticipated vacancies for setting realistic goals. There were a total 419 applicants in the searches and, of these, 113 were women, 24 were Asian, 10 were black, 7 were Hispanic and 1 was American Indian.

It is important to note that the School has made good faith efforts to identify and interview, either on campus or at conferences, women and minority candidates. Because of this the percentage of women and minorities contacted in the searches is higher than their percentage representation in the candidate pools.

Though not a goal category, the School continued to experience success in the appointment of women. The two additional non-tenured women faculty who have been offered and who have accepted appointments are to begin in January of 1983. They are noted in the numerical count.

There is also continued progress in terms of non-tenured Asians. Two additional Asian faculty have been appointed to the faculty. The resignation of an Asian faculty member explains why the numerical count has increased only by one.

School of Earth Sciences

The Dean is pleased to report some progress with regard to faculty affirmative action in the School of Earth Sciences despite unfavorable odds during academic year 1981-82. Three tenure track appointments were made within the academic year, two of which were with tenure, and one of those was Asian. One faculty member was promoted to tenure within the reporting period. No women were appointed or promoted during this time.

At the tenured level, the School is underutilized in terms of black, Hispanic and women faculty. No realistic numerical goals can be set for minority faculty given the few opportunities (3) to hire at the tenured level over the next five year period.

At the non-tenured level, women are well represented; 20% of the non-tenured faculty are female and this greatly exceeds the 4.8% availability calculations. The School remains underutilized in terms of minority faculty and the Dean has set an ultimate five year goal to make every good faith effort to reach minority availability.

The Dean recognizes the need to recruit minority faculty and the School has made good faith efforts to assure that all avenues have been, and will continue to be, explored. Unfortunately, it is still true that few minorities elect earth science for graduate study. Availability figures for faculty appointments will remain constant and low until there is a critical number of minority students as undergraduates and graduates in this area. In order to address the issue of building a pipeline of such talent in this area, the School continues to encourage promising young minority scholars to pursue studies at Stanford. The Dean and the faculty have worked with the American Geological Institute Scholarships Committee and the Minority Student Intern Program at the U.S. Geological Survey. These have been sources of favorable developments and work in this area will be continued. Efforts of this kind have been taken not only to increase minority representation within the student body, but also to increase the number of potential faculty members, both at Stanford and elsewhere.

The School's faculty affirmative action officer also serves as the Chairman of the School's Appointments and Promotions Committee. This has been a most effective dual role because the overlap assures constant vigilance with specific efforts to develop diverse applicant pools The faculty affirmative action representative has access to a roster of senior women and has also planned to keep track of promising young minority scholars. This resource was used in a search this past year but the committee found that the individuals on the roster did not meet the specific criteria in the faculty search. This activity will continue as a part of the School's good faith efforts in faculty affirmative action.

Applicant Flow Analysis—At the tenured level, there were only five candidates for the full-time position and none were female. The only ethnic minority candidate was an Asian and he was selected for the position. There

were seven candidates for the half-time tenured position including one female and one Asian.

At the non-tenured level, there were a total of 41 candidates for the full-time assistant professor billet. The pool included two women but no ethnic minorities.

The very small numbers of candidates for two of the three searches reflect the highly specialized nature of the announced vacancies. The fact that no women or ethnic minority candidates could be considered as seriously competitive for these positions is further indication of the limitations in the applicant pool for the field of Earth Sciences.

Terminations and Resignations—During 1981-82, one tenured faculty member, (a non-minority male) was appointed to Emeritus status.

Promotions—During the past academic year, one non-minority male was promoted to tenure.

School of Education

During the past academic year only one search was conducted resulting in one appointment in the School. A woman was appointed with tenure and she will be on the faculty in September of 1983. There will now be four tenured women in the School and progress has been made toward utilization. The School will continue its good faith efforts in the area of tenured women but it must be noted that there will be extremely few opportunities to hire at the tenured level.

At the tenured level, the School continues to be underutilized in the areas of black, Hispanic and other minority faculty. Because the Dean anticipates only two or three vacancies at the tenured level over the next five years, due to low availabilities, the School realizes that extraordinary efforts will continue to be needed to reach availability.

At the non-tenured level, there are a total of only thirteen faculty members and no new searches or appointments took place this year. One non-tenured woman left the faculty at the end of a nontenure track three-year appointment so there are now four non-tenured women in the School. It is important to note that two of these women are not on a tenure track appointment. The School is utilized in terms of non-tenured Hispanics but remains underutilized in the area of black and Asian faculty. The Dean notes that the School finds itself in a difficult situation because he anticipates that there will only be five new opportunities to hire over the next five years and that availabilities continue to be low for this group.

The School of Education is concerned about its lack of black faculty, even though it made progress in hiring women and Hispanics. In the one tenured search that took place this year, resulting in the appointment of a tenured woman, the Committee did make extra efforts to identify potential black applicants. The Committee advertised the position in places where it would come to the attention of black scholars and, also sent letters to black educators. A faculty member in the Committee developed this targeted dissemination list. Unfortunately, this did not result in any black candidates in the final short list. Currently, the Dean, the affirmative action officer and other faculty are seeking to identify tenurable black faculty and have found one candidate in particular of great interest with whom they have been in contact. The School has also sought the assistance of prominent national Deans of other School's of Education throughout the country in carrying this informal search to successful completion.

School of Engineering

During the past academic year, the School of Engineering made a total of six tenure track appointments. Five were made at the nontenured level, among them being two women and an Asian male. However, one of the women will not begin her appointment until the 1983-84 academic year. The tenured appointment was a non-minority male.

In the area of women faculty, the School is making excellent progress. Overall, the percentage of women on the faculty far exceeds their meager availability. This is particularly evident from the review of the six searches conducted this past year. Among the over 500 applicants, only four women were in the finalist pools. The School appointed two additional non-tenured women. However, while the School is utilized well in excess of availability for women at the non-tenured positions, the School expects that this past year's pattern is indicative of the continued progress in the future. Specifically, a woman who was hired originally several years ago at the non-tenured level was reappointed with tenure status this past year. Given the School's record on promotion and retention of junior faculty and our success in hiring women at the non-tenured level, they expect to bring their utilization at the tenured level up to the availability within five years by promotion.

There were a total of three resignations from the faculty and one non-reappointment. Three faculty retired to Emeriti status. Of the three reappointments with tenure, one was a woman faculty member.

In the area of minority faculty, the School is not so sanguine. Among the over 500 applicants to the six searches, there were six Asians in the finalist pool and one of the appointments was an Asian. However, not a single black or Hispanic was in the applicant pool. The School makes a particular effort, not only to place ads in key national journals, but also to make direct mailings to all known sources of qualified applicants, e.g., department chairs, affirmative action groups, and even to potential candidates. In one search last year, a qualified black was identified but he declined to be considered for the search. Thus, while the School finds that it is utilized at the tenured level for blacks and Asians, and at the nontenured level for Hispanics, it is underutilized in other areas. The School expects that over time it will achieve a balance in the Asian area because a critical number of Asians apply and, as evidenced by this year's search results, they have been hired. The same hope cannot be voiced for blacks and Hispanics. Unless a significant applicant pool exists, the School cannot hire them. Unfortunately, the School has found that their appearance in candidate pools is almost random rather than a regular occurrence in a bona fide pool. For example, the School did find and hire a Hispanic in 1980-81, but no black or Hispanic surfaced as applicants for searches this year. The School shall continue to make strong efforts to find qualified minorities for future faculty billets.

The School is also attacking the problem in a positive way by working hard to train minority Ph.D.'s in their own graduate programs in Engineering. In this way, the School believes that it is helping to increase the national availability to truly qualified applicants.

The Associate Dean for Research of the School continues to be the faculty affirmative action representative. He monitors each faculty search to assure that advertisements are placed and that the search committees give full attention to the affirmative action aspects of the process. In addition, he serves on the School's Executive Committee which reviews and approves all appointments. Prior to their submittal to the Executive Committee, each set of appointment papers is also reviewed by the Dean's staff to assure, among other things, that all aspects of the University affirmative action procedures have been followed.

School of Humanities & Sciences

During the past academic year the School has made a total of 27 tenure-track appointments. Of these, we appointed 12 women (2 blacks, and 1 Hispanic) and 1 black male faculty member.

At the tenured level, there were a total of 6 new appointments including 1 woman faculty member in the Humanities area. At the nontenured level, there were a total of 21 appointments. Over half (12) are women, including 1 Hispanic and 2 blacks, and 1 is a black male. This is the highest number of women and minorities appointed in the School during the past decade.

The School has also experienced continued success in its goal of retaining and promoting women and minorities. There were a total of 9 promotions school-wide and of these, 5 are women, including 1 Asian woman.

There were 7 faculty members who retired to Emeritus status, including 1 woman. Nine faculty members resigned including 1 Asian and 1 woman. Regrettably, 2 tenured women died. Fourteen assistant professors were not given continuing appointments and of these, 4 were women.

Humanities—In the Humanities, there were a total of 18 new appointments to tenure track positions. They include 11 women (1 black and 1 Hispanic) and 1 black male faculty member. At the tenured level the School appointed 1 woman and 2 men. Of the 15 non-tenured appointments, 11 are women, including 2 blacks, and 1 Hispanic.

There were a total of 5 promotions to tenure in the Humanities and, of these, 3 are women. At the tenured level, goals have been set for additional tenured women; the goal for 1981 was to have at least one additional woman at tenured status. In fact, the School exceeded this goal through the appointment of a tenured woman and the promotion of 3 other women to tenure. Regrettably, a tenured faculty woman died during the past academic year.

At this time there are appointment negotiations underway for an additional tenured woman, but the outcome of that decision will not be known until later this year. The Dean estimates that there will be about 20 opportunities to hire over the next five years, and the School has again set a goal for an additional tenured woman on the Humanities faculty. Though this area has exceeded availability and is utilized in terms of women and minority faculty members at the non-tenured level, the Dean emphasizes that the commitment to affirmative action and continued diversity on the faculty remains as an integral part of future faculty searches.

Social Sciences—In this area, there were only 2 new appointments, 1 black woman and 1 non-minority male. Both of these appointments were at the non-tenured level.

There were also 2 promotions to tenure; both are women, 1 of whom is Asian. At the tenured level, progress has been made toward reaching utilization in terms of tenured women. The annual goal of adding at least one tenured woman was exceeded, with 2 promotions to tenure. Regrettably, a tenured woman faculty member died and thus, the actual number of tenured women is only increased by 1. The Dean has set ultimate and annual goals for tenured women, and the School will continue its good faith efforts in this area.

There was also a .7% underutilization of tenured black faculty. A combination of low availabilities and fewer anticipated opportunities to hire at the tenured level do not enable us to set an annual goal. However, an ultimate goal over the next five years has been set to arrive at utilization for black faculty.

The Social Science area is fully utilized in terms of women and minorities at the non-tenured level. The School has continued to make progress in the area of non-tenured blacks. The additional appointment of a black faculty member exceeds the availability calculations.

Natural Sciences—There were a total of 7 new appointments in this area, none of whom were women or minorities. At the tenured level, there were 3 new appointments, 1 at half-time status.

Since one of the tenured women retired to Emerita status during the academic year, this exacerbated under-

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utilization of women at both the tenured and non-tenured level. There is also underutilization of minorities and the School has not yet met annual or ultimate goals in the natural sciences.

At the tenured level, the Dean estimates 10 tenured vacancies over the next 5 years and ultimate goals have been set for women and minorities. Though the School hired a tenured woman faculty member during the 1980-81 academic year, the total number of tenured women declined because of 1 retirement. Extremely low availabilities and few anticipated vacancies over the next 5 years precludes setting of realistic annual goals but there are ultimate 5 years set for women and minorities.

At the non-tenured level, the School is underutilized in the natural sciences in terms of blacks, Asians and women. The Dean estimates 15 vacancies over the next 5 years and ultimate goals have been set to meet availability for women and minorities.

The Natural Science area includes the departments of Applied Physics, Biological Sciences, Chemistry, Computer Science, Hopkins Marine Station, Mathematics, Physics, and Statistics. These areas have continued to be the most national under-represented in terms of women and minorities. Availabilities are extremely low and our own applicant pool confirmed this status. In the 7 appointment searches, there were a total of 787 applicants; of these only 82 were women, and only 1 Hispanic was identified.

Action Oriented Plans—In order to continue addressing faculty affirmative action concerns, the Dean has maintained the appointments of faculty affirmative action officers in each of the departments in the School. These faculty members serve as a departmental resource on the affirmative action aspects of faculty searches and appointments.

During the past academic year, the Dean and the Vice President & Provost met with a representative group of the School's faculty affirmative action officers. Their discussion centered around successes and problems in the area of recruitment and retention of women and minority faculty members. Several specific activities will be implemented during the 1982-83 academic year. The Dean is considering granting additional funds to facilitate campus interviews of women and minorities who are among the finalists in a faculty search. Often departmental resources are insufficient to cover the cost of campus interviews for more than the top 2 finalist. Interviews on campus are a critical factor in ultimate faculty appointments, thus, the School will undertake this added good faith effort. Several departments will make an attempt to identify promising women and minority graduate students at other national research institutions. It is important to identify early those women and minorities who show potential for future faculty appointments. Visiting appointments, replacing a faculty member who is on leave, will also be explored for promising women and minority scholars.

The Dean has continued to express a firm commitment to the School's faculty affirmative action efforts. The affirmative action aspects and the documentation of faculty searches have been strengthened.

Applicant Flow—In the Humanities, there were a total of 1509 candidates. Of these, 708 were women, 5 Asian, 8 black, 5 Hispanic and 3 American Indian.

In the Social Sciences, there were a total of 167 candidates. Of these, 7 were black, and 24 were women.

In the Natural Sciences, there was a total of 787 applicants. Of these, 82 were women; there was only 1 Hispanic and no other identifiable minorities in the pool.

Lecturers—During this reporting period there was little change in the Lecturer workforce in the School of Humanities and Sciences. There has been one resignation, that of a woman Lecturer. Note that 56% of all Lecturers with a half and full time appointment are women and that 13.7% of this group is minority. There is an underutilization of black Lecturers and the situation is exacerbated by low availabilities (3.1%) and only 4 anticipated vacancies over the next five years. The School will make every effort to achieve utilization over the ultimate goal period.

The Institution of National Searches for all new Lecturer positions has not been a significant assistance in the past. However, the School will continue to place emphasis casting the widest possible dissemination of job opportunities in this area. A memorandum describing the Lecturer category and guidelines for selection, retention and advancement is included as background in this report.

School of Law

During the 1981-82 academic year the Law School extended offers (subject, of course, to University approvals) of appointments to four people as regular faculty members. In addition, John Hart Ely was appointed to the faculty following his selection as Dean by the President. Of the four offers, one was to a tenured position and three non-tenured. The offers were made to one black male and three non-minority candidates.

The selection procedure used in searching for and appointing candidates has been described in previous reports. The process followed during 1981-82 was basically similar to that of previous years. The major difference was that more of the process focused on finding people to reach in particular departures and retirements. Thus, in addition to our general people in the fields of Asian Law and Natural Resources. As in the past, the Appointments Committee actively searched for minority candidates for every vacancy.

For the year 1981-82, the Committee was chaired by Professor Michael Wald and included Professors Thomas Grey, Thomas Jackson, and John Merryman. Acting Dean J. Keith Mann served ex officio. The Committee was looking to fill three to four vacancies at both the junior and senior levels. As noted, these included specific area searches and a search for qualified candidates regardless of area.

Altogether ten candidates were invited to visit the School, including two blacks and one woman. Several other women and blacks were contacted to determine whether they would be interested in entering teaching but none of them was at this time. Of the ten candidates who scheduled visits, eight actually came, with one woman and one black withdrawing to accept other employment. Offers were made to three of these people, including one black, but none was accepted. (The offer to the black practicing attorney was not rejected. Rather, it was mutually agreed to withdraw and to renew discussions after some six months.)

A tenured offer was also extended jointly with the Graduate School of Business to a non-minority group candidate who was visiting at the Business School and co-teaching a Law School course. This offer of a joint appointment was accepted recently.

In addition to regular appointments we also tried to recruit minority group members as visitors. One Hispanic will continue a year's visit during the first half of 1982-83. One woman declined an invitation to visit.

We are now beginning the appointments process for 1982-83. Professor Barbara Babcock will chair the Committee.

School of Medicine

Basic Sciences—According to our Faculty Utilization Analysis, the Basic Sciences had a numerical contingency goal to appoint one additional tenured woman in 1981-82.

This goal was not achieved. However, it should be pointed out that a very limited number of new appointments are made to the faculty in the Basic Sciences each year. Such appointments are usually at the level of Assistant Professor which is a non-tenured rank.

During the period covered by this report (09/02/81-09/01/82), there were only three new faculty appointments in the Basic Sciences as follows:

Genetics, Assistant Professor, Woman - white; Medical Microbiology, Assistant Professor, Male - white; Neurobiology, Professor and Dean of the School of Medicine, Male - white.

As shown in the above listing of new appointments, one woman (non-tenured) was added to the Basic Science faculty during the 1981-82 reporting period.

We will continue during 1982-83 to seek to reach the only remaining unachieved affirmative action objective in the Basic Sciences; that is, the numerical contingency goal of adding another tenured woman to the Basic Science Faculty.

Clinical Sciences—The up-dated Faculty Utilization Analysis shows the following numerical goals for 1981-82 in the Clinical Sciences:

1 minority (tenured); 1 black (non-tenured); 1 minority (non-tenured).

Additional numerical contingency goals for 1981-82 were:

1 black (tenured); 1 Hispanic (tenured); 1 Asian (tenured).

Women Faculty—The records of new appointments, promotions and terminations in 1981-82 provide the following relevant information regarding the affirmative action status of women in the Clinical Sciences:

1 woman promoted to tenure; 4 women appointed (non-tenured); 3 women terminated (non-tenured).

Net gain in Clinical Sciences: 1 woman promoted to tenure; 1 additional women (non-tenured) appointed.

The record shows that projected numerical objectives with respect to women in the Clinical Sciences have been met previously and continue to be maintained.

Minority Faculty—The above-mentioned attachments on appointments, promotions and terminations show the following changes in minority faculty representation in the Clinical Sciences:

1 Asian (non-tenured) appointed; 1 Hispanic (non-tenured) resigned.

These data indicate that there has been no change in minority faculty representation in the Clinical Sciences during 1981-82.

It can be concluded from the above statistics that:

(1) Numerical goals with respect to women in the Clinical Sciences were previously achieved and this standard was maintained in 1981-82.

(2) No progress was made in 1981-82 toward reaching the numerical and contingency goals which have been established for minority faculty in the Clinical Sciences. It is therefore necessary to carry forward into 1982-83 the above-listed numerical and numerical contingency goals for minority faculty which were established for 1981-82.

Comment—As was pointed out in the Affirmative Action Progress Report for 1980-81, the fundamental reason for difficulty in meeting minority faculty goals is the limited availability of qualified candidates in the applicant pools identified by our intensive nation-wide searches. We continue to study this problem by carefully documenting each search. The Total and Definitive Applicant Pools of candidates found on the 20

searches conducted in 1981-82 are analyzed in Attachments 4 and 5 with the following results:

- Total Pool: There were 908 applicants, 12% were women, 6% were Asian, 1% were black and 1% was Hispanic.
- Definitive Pool: One hundred and five applicants, 11% women, and 8% were Asian.
- The 3 to 8 most highly qualified applicants from the Total Pool who were evaluated as final competitors for the vacant position.

All the women and all the minority members of the faculty are listed in Attachments 6 and 7. These attachments show that there were 38 women faculty, representing 10% (38/393) of the total faculty; and that there were 16 minority faculty, representing 4% (16/393) of the total faculty in the School of Medicine on 9/1/82.

The solution to the problem of increasing minority representation on faculties of research-oriented medical schools such as Stanford is highly dependent on augmentation of the pool of speciallyqualified minority candidates for faculty appointment. This is a process that has, for historical reasons, only begun to occur to any significant degree with recent years. The preparation of colleges, universities, medical schools and graduate programs in basic medical sciences nationwide. Four years of college or university, followed by 4 or more years for an M.D. or Ph.D. degree must be followed by 3-8 years of postdoctoral training. Altogether, the time required by an individual from the beginning of college or university to eligibility for faculty appointment is at least 12 to 15 years. This approximates the duration of effective affirmative action in the institutions of higher learning in this country. The current limited availability of minority candidates for faculty appointment is the direct result of these background conditions.

Under existing circumstances, assessment of a medical school's affirmative action record should properly include a consideration of the composition of its medical student body which at Stanford in 1981-82 included 34% (134/396) women students and 33% (131/396) minority students. The comparable percentages in 1980-81 were 33% women students and 26% minority students.

These data place Stanford University School of Medicine at the forefront of medical schools in the nation with respect to affirmative action in student affairs. They are also indicative of the faculty's commitment to affirmative action goals by the education of significant numbers of women and minority physicians. This commitment is further demonstrated by the documented extent and thoroughness of searches for minority candidates for faculty appointment. We are confident that these efforts will in due course be reflected in increased minority representation on the faculty.

As an incentive and specific objective in this regard, the numerical and numerical contingency goals for 1981-82 as shown in Attachment 9 will be carried forward into 1982-83.

Academic Staff-Research

The Academic Staff-Research (AS-R) consists of Research Associates and Senior Research Associates in engineering, and the life, social, and physical sciences. Members of the AS-R normally work under the direction of faculty principal investigators and participate in externally-sponsored projects at levels usually requiring the equivalent of doctorate degrees.

Overall, the University has made significant affirmative action progress statistically according to the availability data and vacancies filled during 1981. Even so, Stanford is still concerned about the small numbers of blacks and Hispanics among the AS-R, although we are not optimistic about the prospects for improvement in the near future. In order to portray a more accurate picture of the employment of AS-R at Stanford University, data for the period 1/1/81-12/31/81 were used. There is far less activity, hiring and terminations, at the first of the calendar year than the beginning of the academic year, perhaps in large part because many new AS-R appointments tend to begin during September. In addition, any data presented effective on or around September 1 may not be complete due to inevitable delays in processing paperwork. The disadvantage to presenting data, particularly as they relate to hiring goals for the following year, is that eight months will have passed at the date of this reporting. However, the University views affirmative action as an on-going and continuing commitment. While the definition of goals using availability and anticipated vacancies is a useful measurement, the University wants to see no less than "availability representation" among the AS-R, as indicated in Table V. (Tables available from Affirmative Action Office on request.)

Table I shows the total AS-R as of 12-31-80 and 12-31-81 with new hires and terminations that occurred during that period. The proportion of non-minority women decreased one percent while minority males increased one percent. Tables II and III show in greater detail by job classification and affirmative action category the number of new hires and terminations.

Table IV shows affirmative action hires during 1981 as compared to goals for that period. While the University met or exceeded the goals in almost all cases, there remains the goal of increasing female representation among the Physical Science Research Associates by one, based on availability statistics and anticipated vacancies, as shown on Table V. All other goals on Table V were developed to bring the percentages of affirmative action representation among AS-R in line with the percentages of availability.

From 1/1/82-8/31/82 we made affirmative action progress by the appointment of one black Social Science Research Associate. However, blacks continue to be underutilized as well as Hispanics. As indicated in the Dean's report to the Senate of the Academic Council of April 15, 1982, 62% of all AS-R hires during 1981 had just completed their doctorate degrees or postdoctoral appointments at Stanford. The phenomenon is due to the training received by these individuals which makes them unique resources to be principal investigators as prospective AS-R members. Because such a high proportion of AS-R appointments are recent Stanford graduates or post-docs, one would, therefore, look at graduate student populations as an indicator of future AS-R employment—and one might then be discouraged. Given that increasing numbers of women are entering the sciences and engineering, there is optimism about achieving the goal for females. However, the same optimism can not exist regarding the prospects of increasing the number of Hispanics and blacks because of the decline in their representation in graduate schools over the last several years. Lastly, there are uncertainties about levels of federal research funding which may result in declining support for AS-R positions and opportunities for new hires during 1982.

The search requirement in the form of advertising locally and nationally have improved the affirmative action situation somewhat in that we tend to get proportionately more affirmative action hires as a result of searches than result from the graduate student/post doc pool. We, therefore, will continue the search requirements as well as encourage as many open searches as possible.

V. Establishment of Goals and Timetables

In the major organizational units, appropriate goals for minorities and women have been set where underutilization has been identified and opportunities to hire are anticipated. Where underutilization has been identifed and opportunities to hire are not anticipated, goals were set contingent upon unanticipated vacancies. In the analysis, Long Range Goals, the year the full utilization is expected, were determined by considering the following factors:

1. The job groups identified as underutilized;
2. anticipated personnel activity for the current year and forthcoming years;
3. availability trends (employed and unemployed);
4. degree of underutilization; and
5. University current and future and programmatic needs.

Efforts were made to project goals and time frames which are realistic, significant, measurable and attainable.

If there is a significant increase or decrease in the workforce which will have substantial effect on the goals established in the current plan, the goals will be adjusted appropriately and circumstances leading to the required change will be explained.

VI. Program Objectives

As in Section IV of this plan, we hve addressed each Vice Presidential area for staff separately.

President/Provost

We will continue to make a serious effort to achieve more diversity of staff. Search and selection procedures for professional positions, revised and implemented last year, will continue to be monitored closely. Emphasis will be placed on the design of search strategies, the length of search, and the scope of advertisement and general recruitment efforts will be factors emphasized for searches in job groups requiring attention to attain or make greater progress toward goals. Again this year, those job groups with the greatest impact institutionally, and which present problems with respect to goal attainment, have been designated as the highest priority for staff support for searches.

Emphasis will be placed, also, on developing trainee positions Hiring officers will be encouraged to utilize the Stanford Employment Experience (S.E.E.) program—a new University-wide program designed to recruit entry-level clerical staff. The focus of the program is directed toward the recruitment and development of minimally skilled affirmative action candidates, and it is hoped that the program will contribute significantly to our goal of attaining a more diverse clerical staff.

Business and Finance

We will continue to develop the consciousness throughout the Vice Presidential area that women and minorities should be fully utilized. To this end we will continue a training program of supervisors and hiring officers that was begun this past year. As part of the process of placing priorities on affirmative action issues, the Vice President has asked his senior staff to report at the regular staff meetings whenever an appointment or promotion is made into an affirmative action goal category. These reports are being solicited whether or not the person involved contributes to our affirmative action goals.

We will continue to place special emphasis on affirmative action in the management development program. Qualified applicants will be encouraged to apply for management positions through a development program aimed at giving them clear advancement paths.

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We will actively recruit women and minorities for all areas in the trades and crafts, and will make affirmative action in this area part of the performance evaluation of managers and supervisors.

Development

In the professional area, we will need to continue to improve our recruitment efforts to attract more minorities into Development Officer positions. In addition to utilizing traditional recruitment efforts, we will continue to refine the minority alumni recruitment effort begun last year. Strategies in this context include soliciting the support of alumni in identifying persons who, since graduation, have been exposed to fund-raising, marketing, or public relations efforts, and who might be interested in returning to work in the Development Office.

The analysis of the Development Office's training needs reported as underway in last year's report is now complete. Implementation is taking two forms: 1) Encouraging staff to upgrade skills identified as basic in development work and, 2) implementing an expanded orientation program. This process should assist minority employees in their progression toward higher-level positions.

Public Affairs

The areas of recruitment, searches, supervisors training, and staff development will be the focus of our affirmative action efforts in the coming year.

We will continue to engage in vigorous recruiting methods through vacancy announcements, newspaper ads, and networking at the personal and professional levels (professional "trade" organizations). Networking has proven to be the most successful method of recruitment in achieving our goals in the past.

The affirmative action coordinator will continue to personally participate in those searches bearing the greatest institutional impact in order to closely scrutinize and guide the process.

The supervisors training course in affirmative action methodology and issues was attended by 90% of the supervisors this past year. There will be a concerted effort to include all supervisors participation in regularly scheduled sessions in the coming year.

This year a woman will be placed in the management development program as our candidate — an occurrence we hope will become practice as we attempt to increase the presence of women and minorities in management positions. Greater emphasis will be given to staff development by encouraging and promoting the participation of clerical staff in courses and training.

University Counsel

Although no vacancies are anticipated in the department during the coming year, should openings occur, searches will again focus on meeting our established contingency goals in each category.

As has been the practice in the past, searches which may occur due to unanticipated vacancies in the attorney category will be conducted on a national level with specific emphasis on reaching our contingency goal of hiring a Hispanic attorney.

Due to the need for the exercise of increased professional responsibility in several areas of University law, a non-minority female Legal Assistant who has recently completed her law degree will be reclassified to Assistant Staff Counsel effective 9/1/82, further increasing the utilization of females in the attorney category.

As previously, contingency goals have been set for all minority groups in the Legal Assistant category although minority availabilities and turnover in this category are relatively low.

A contingency goal for the hiring of one black secretary has been set for the secretarial category.

Since availability is low for this group in this category, and our efforts to recruit a black secretary into the legal environment have not succeeded, our efforts to reach potential black candidates through advertising will be intensified should an opening occur.

ACTION ORIENTED PROGRAMS (FACULTY)

1. Financial Flexibility

The Faculty Affirmative Action Fund, created and funded in 1971, continues to function as a mechanism for taking advantage of opportunities to enhance affirmative action. There has been a consistent increase in the value of the Fund. In 1971 the amount was $50,000 and this allocation remains active for 1982-83.

The Fund's general purpose is to facilitate the appointment of individuals who are outstanding scholars and teachers, who are expected to contribute significantly to the University's educationals needs, and who may not fit exactly the specifications of an existing opening. The Fund has been used to:

a) supplement existing departmental or school budgets so that a highly desirable individual can be hired, when appropriate, at a higher rank than was anticipated when the position was defined.

b) allow departments and schools to anticipate retirement in taking advantage of available talent. Therefore, the Fund can finance the appointment of outstanding individuals whom the departments and schools want to add to their faculties but for whom no budget position will exist until a faculty member retires, perhaps three or four years later.

c) anticipate, and when appropriate, increase partial faculty billets and, on special occasians, to create a new billet.

Since its inception, several faculty affirmative action appointments have either been totally or partially supported by these budget-based funds. On a separate basis, any savings from these funds will continue to be used on a one-time basis to support activities that, in both direct and indirect ways, enhance the faculty affirmative action concerns throughout the University.

2. Faculty Review

The following activities were maintained and reviewed during 1981-82 by the Faculty Affirmative Action Office.

a) Review of faculty search committee plans. At the time that the search committees were formed, the Provost's Office was notified in writing of the names of the committee members and chairperson, and of the proposed description of the discipline or field in which the appointment was to be made. The Provost's Office then frequently called different search committee chairpersons and talked about the committee's plans for nationally disseminating search descriptions. This process enabled us to more successfully anticipate search areas and work with the faculty committees charged with conducting those searches. We will continue this activity this coming year and also work with faculty affirmative action representatives that have been appointed for each school.

b) The Provost's Office reviewed data on applicant flow showing the number of women, Blacks, Asians, Hispanics, Native Americans and non-minorities who were formal applicants for the faculty positions. We note that the search reports are more informative than in previous years and we will continue to request this information from search committee reports.

c) We have consistently reviewed each search report for new appointments in order to insure that they completely describe the specific procedures related to the affirmative action aspects of the search as described in the Faculty Handbook and in the "Appointments and Promotions" forms. The Provost and his staff have been able to more accurately determine all of the good faith efforts in the area of faculty affirmative action.

d) We have maintained annual data on new hires, promotions, terminations and resignations, and recalls by job group for faculty and other academic staff.

e) We reviewed progress on the numerical goals and the effectiveness of action oriented programs with the Deans of each School. We have found the annual report format extremely helpful with this activity.

f) We have issued the annual report to the Faculty Senate on the representation and status of women and minorities on the faculty. (A copy of this report is attached for your perusal).

g) The Provost's assistant met with the majority of faculty affirmative action representatives to discuss specific problem and progress areas in their respective disciplines.

h) The University and the Affirmative Action Office hosted a meeting of Ivy League Affirmative Action Officers in which issues and strategies for faculty affirmative action were discussed.

i) The Provost and his staff convened a series of meetings to discuss faculty affirmative action concerns. Included among the groups were the Deans Advisory Council, Senior Women Faculty, Chicano Faculty, Feminist Students and a sub-group of school and departmental faculty affirmative action representatives.

3. University Committee on Faculty Affirmative Action

The University Committee on Faculty Affirmative Action, under the general guidelines of President Kennedy's letter of August 1, 1980 was charged to make recommendations to the President, the Provost, and the Faculty Affirmative Action Officer, and appropriate administrative officers concerning the processes and results of affirmtive action (women and ethnic minorities) in appointments to the Stanford professoriate. During this past academic year, the President appointed a committee which consisted of fourteen members. They were charged with making recommendations on such matters as:

a) the identification of women and ethnic minority members for openings at both tenured and non-tenured levels in the Stanford professoriate, with the aim of increasing the numbers of women and ethnic minority members in the faculty.

b) the selection and recruitment of women and ethnic minorities for the Stanford professoriate. Recommendations should include criteria for selection and provision of appropriate incentives necessary to maintain individuals of high quality in the appropriate numbers and should also include the development of special avenues for increasing the numbers of women and ethnic minorities on the Stanford Faculty.

c) the retention and promotion of women and ethnic minorities on the faculty. Recommendations should include procedures for providing research opportunities and teaching support that will allow each individual to achieve his or her potential. The procedures should also make provision to insure that existing and/or future evaluation methods operate fairly and equitably.

d) procedures for advising and aiding women and ethnic minority members of the professoriate and for monitoring the progress of their careers and advancement through the professorial ranks.

e) procedures for identifying and eliminating the underutilization of women and ethnic minority members in the professoriate of the various departments and schools of the University.

f) procedures for dissemination of information and advice concerning the philosophy, rational, and legal aspects underlying affirmative action in professorial appointments at Stanford and for the mobilization of understanding and support of such action.

g) the establishment of a process for monitoring the progress of faculty affirmative action. Recommendations should include methods for evaluating the faculty affirmative action programs which include consideration of the processes used rather than simply the results achieved. Such methods should, for example, include publication of data in a form which would be suitable, among other things, for the inclusion in the Annual Report on Faculty Affirmative Action presented to the Senate of the Academic Council.

The Committee consisted of fourteen members of the Academic Council with at least one member from each of the seven schools, two graduate students, and a representative of the Vice President and Provost's staff who served as an ex-officio member without a vote. The Committee met numerous times during the academic year and submitted a report to the President and Provost addressing these issues.

4. Affirmative Action Efforts in Graduate Education

Graduate education of both minorities and women plays a critical role in faculty affirmative action; there can be no minority or female faculty in universities without minority and female graduate students. Stanford has recognized the importance of increasing the number of women and minority students in its graduate programs through support of the Office of the Dean of Graduate Studies and Research. 1981-82 was notable in the work of this office; for the first time, three full-time minority Assistant Deans were appointed. The Dean of Graduate Studies and Research now oversees one Associate Dean and three Assistants who together are responsible for the recruitment of women and minorities to Stanford's graduate and professional programs. In addition to the responsibilities of recruitment, the staff members provide advice and counsel to graduate students and coordinate programs to support the academic progress of the four targeted minority groups: Blacks, Chicanos, Native American Indians, and Puerto Ricans. The Dean also participates in planning and evaluation of special projects and the graduate affirmative action program; work closely with members of the University community and national and regional committees in the areas of graduate affirmative action and advancement; and participate in drafting proposals to agencies for the funding of programs relating to minority students. In 1981-82, examples of these responsibilities included:special orientation programs and workshops for new and continuing minority graduate students; recruitment trips to 81 campuses across the country and 8 American Indian reservations; participation in both the National and Western Name Exchange Programs; coordination of the summer visit of an undergraduate biologist from a Black college that participates in the NIH funded Minority Access to Research Careers Program (MARC); organization of a 2-week summer Faculty Networking Program at Stanford for faculty from institutions with large minority enrollments. This program had two goals: to inform the advisors of minority undergraduates about graduate opportunities at Stanford and to offer an opportunity for faculty development. An institutional grant to Stanford from the Graduate and Professional Opportunities Program (G-POP) covered the major costs of this workshop. Assistance with the planning and organization of the third Native American Educators Conference at Stanford, together with an American Indian Festival week that culminated in the annual Stanford Pow-Wow, and in organizing the Stanford Chapter of American Indians in Science and Engineering. Production of a new brochure and flyer to provide information on graduate opportunities for minority students at Stanford. One of these publications was particularly designed to encourage minority students to consider study for the Ph.D degree. Completion of a preliminary report on the study of the minority graduate experience at Stanford that focused on graduate students admitted between 1974 and 1979. Continued work with individual Departments and Schools to increase the number of minority graduate students. This effort has included both a University-wide graduate student recruitment committee and faculty liaison officers in individual departments in the School of Humanities and Sciences.

Affirmative Action efforts for graduate women have concentatrated on women in the sciences and engineering. A 1980 report from the National Science Foundation noted that women still remain the largest pool of talent available for increasing the size and quality of the science and engineering labor force. In addition to recruitment visits to colleges and universities, the Office of Graduate Studies and Research was responsible for the production of Stanford Women in Science and Engineering. Six thousand copies of this booklet were produced with financial support from three local corporations. A copy of the booklet was sent to the Career Center of major colleges and universities across the country and to every woman who completed an application for a Stanford graduate program in science and engineering.

We are currently seeking corporate support to begin a comparative study of graduate men and women in science and engineering programs at Stanford. This study will begin in January 1983, and two corporations have already made a commitment to help with this work. The results of the study will influence future efforts in the recruitment and retention of graduate women in science and engineering. 1982-83 will also include the introduction of a seminar series for graduate women in the mathematical sciences that we hope will reduce the academic isolation of graduate women in individual departments.

5. Research Centers

A number of research centers focusing on scholarly issues of general interests as well as specific interests to several constituencies are recognized, supported and encouraged by the University. Specifically, these bodies are: Center for Research on Women, Center for Chicano Research, and Afro-American Studies Program. While focusing specifically on intellectual issues, the Centers have also provided a focal point for staff, faculty and students for the cited communities. Stanford also maintains a Cultural Center for Native American Students that is staffed by a Dean in the Student Affairs Office.

VII. Internal Review and Reports

Staff Review

As a minimum, the following activities will be audited by the Affirmative Action Office.

Weekly:

Review data on each new applicant, showing: Name of applicant; week of application; EEO category; type of application filed (resume or application form); type (external, internal, layoff); veteran or handicap status).

Quarterly:

1. Review applicant statistics by major job group, Universitywide and by vice presidential area, showing: Number of males/females; number of black, Asian, Native American, Hispanic, non-minority applicants; number of veteran and handicapped applicants.

2. Review hire statistics by job group, University-wide and by vice presidential area, showing: Number of males/females; number of black, Asian, Native American, Hispanic and nonminority hires, number recalled from layoff hires, number of veteran and handicapped hires.

3. Review rejection statistics by job classification Universitywide, by vice presidential area and by department within vice presidential area. The reason for rejection for a particular applicant relative to a particular job will be kept manually (by departments for clerical and office).

4. Review promotion, termination and layoff statistics by job classification, University-wide and by vice presidential area, showing: Number of males/females, number of blacks, Asians, Native Americans, Hispanics, and non-minorities; number of veteran and handicapped hires.

5. Review progress towards numerical and non-numerical goals.

6. Review effectiveness of programs designed to assist in obtaining goals.

7. Review training education, supervisory, and management development programs.

8. Review procurement practices for appropriate clauses in purchase orders, lease sub-contracts, receipt of Certificates of Compliance.

9. Check technical phases of compliance such as bulletin board notices and EEO poster placements.

10. Review effectiveness of recruiting sources in referring minority and female applicants.

Annually:

1. Analyze distribution of minorities and women in the workforce.

2. Review applications forms for conformance to applicable state and federal laws and Stanford University policy.

3. Review seniority policies and practices for signs of disparate effect.

4. Review all employee compensation and benefit programs to determine equal application.

5. Review internal and external dissemination of EEO policy.

6. Review collective bargaining agreements to insure they contain the required EEO clause and do not include discriminatory provisions.

7. Review employees salaries to determine if there are inequities.

Reports:

Factual, concise, and informative reports will be prepared for management. They will include information on progress toward goal achievement, problem areas, observations recommendations, and summarized statistical data on applicant flow, new hires, promotions, terminations, tranfers, layoffs, recalls, and salary inequities.

1. Quarterly: EEO Progress Report

2. Semi-Annually: Report to the Office of Federal Contract Compliance Programs

3. Annually: Affirmative Action Program

4. Annually: EEO-6 Report

Faculty Review

As a minimum, the following activities will be reviewed by the Faculty Affirmative Action Office.

1. Review of Faculty search committee plans. At the time that the search committee is formed, the Provost's office will be notified in writing of the names of the committee members and chair, and of the proposed description of the discipline or field in which the appointment is to be made.

2. Review data on applicant flow showing: number of women, blacks, Asians, Hispanics, Native Americans, and nonminorities who were formal applicants for the faculty positions.

3. Review search reports for each appointment in order to insure that they completely describe the specific procedures related to the affirmative action aspects of the search as described in the Faculty Handbook and in the "Appointments and Promotions" forms.

4. Maintain annual data on new hires, promotions, terminations and resignations, and recalls by job group for faculty and other academic staff.

5. Annually review progress with the Deans on the numerical goals and the effectiveness of action-oriented programs designed to assist the institution in correcting underutilization where indicated.

6. Annually report to the Faculty Senate, as per its 1973 legislation, on the representation and status of women and minorities on the faculty.

7. Semi-annual report to the Office of Federal Contract Compliance Programs.

VIII. Community Action Programs

Stanford University actively supports community programs that are designed for the benefit of community members in general. Many employees participate in community programs outside of those supported by the University.

1. The Youth Opportunity Program, which began in 1968, provides work experience for financially disadvantaged high school students, coupled with educational and vocational counselling.

2. The Stanford Employment Experience (SEE) Program is a University administered program designed to assist the University in meeting staffing needs while making a positive impact on affirmative action goals. The program is focused on (but not limited to) the economically disadvantaged, handicapped, and minority populations. Program applicants are referred to the University by a group of selected community agencies working in the Stanford area to teach skills to the population groups targeted by the program. Program participants are classified as trainees for a period of six months while receiving on-the-job and other training to allow them to develop the full range of skills required for the position. The positions that the trainees occupy are full-time permanent positions. Supplemental training, evaluation, and counseling services are provided by the Stanford Employment Experience Program staff.

3. The Mathematical, Engineering and Science Achievement (MESA) Program identifies minority high school students, in the local community, and assists in preparing them to enter the mathematical, engineering and science fields.

4. Advocates for School Arts Program is a support group made up of parents, teachers and administrators advocating stronger, more comprehensive arts programs in the Palo Alto Unified School District.

5. The Community School of Music and the Arts is a non-profit community based school which provides individual and group lessons in music, drama, dance and crafts.

6. Stanford University employees and students present performances at Peninsula Volunteers Little House, which is a senior citizen center in Menlo Park, California.

7. Faculty and staff in the Department of Pediatrics participate in screening for sickle cell anemia in the local communities.

8. The Department of Family, Community, and Preventive Medicine faculty works with the Charles Drew Medical Center in East Palo Alto and the Community Health Center in Alviso.

9. Following are some organizations and programs that Stanford University utilizes and in which employees of the University participate:

A. General

Palo Alto Employment Development Division
San Jose Employment Development Division
Students Active Toward Community Health (SATCH)
American Association for Affirmative Action
Career Days at San Jose State University
Mid-Peninsula Urban Coalition
National Alliance of Business
Alameda County Human Relations Commission
American Society of Personnel Administrators
Bay Area Construction Opportunity Program

B. American Indian

American Indian Center
Society for the Advancement of Chicanos and Native Americans in Science

C. Asian American

International Rescue Committee
Chinese for Affirmative Action
Asian, Inc.
Oakland Chinese Community Council
Asian Americans for Community Involvement
Asian Law Caucus
Asian American Caucus, California Personnel and Guidance Association
Japanese American Citizens League
Southeast Asian Refugee Resettlement Center
Asian Pacific Personnel Association (APPA)

D. Black

Opportunities Industrialization Center West (OICW)
Peninsula Association for Black Personnel Administrators (PABPA)
National Urban League NAACP

E. Feminist

Mayfield Career Center
Resource Center for Women
National Organization for Women (NOW)
Federally Employed Women (FEW)
National Women's Political Caucus
Women's Opportunity Convention
Women in Apprenticeship

F. Hispanic

Chicanos for Creative Medicine
La Raza Medical Association (LARAMA)
Operation SER
American G.I. Forum
Mission Hiring Hall
Personnel Management Association of Aztlan Image
Bay Area Hispanic Employment Council
League of United Latin American Citizens (LULAC)
National Association of Latin Elected Officials
Mexican American Political Association
Vacancy Outreach Service
Society for the Advancement of Chicanos and Native Americans in Science
Council of Spanish-Speaking Mental Health and Health Services Organizations (COSSMHO)

G. Physically Limited

West Bay Committee for Employment of the Handicapped
San Mateo County Department of Rehabilitation
Electronic Industries Foundation/ADEPT
Santa Clara Committee for Employment of the Handicapped
Deaf Self-Help
Center for Independent Living
Sensory Aids Foundation
Community Resource for Independent Living

10. The Panel on External Affirmative Action appointed by the President meets regularly to review Stanford University's role in influencing the affirmative action policies of its subcontractors and vendors.

11. The Affirmative Action and Training Committee exists to resolve issues of mutual interest to the University and its largest bargaining unit. One of its chief interests is a systematic review of internal apprenticeship programs from an affirmative action perspective.

IX. Sex Discrimination Guidelines

A. Recruitment

All jobs are open to individuals of both sexes, and it is University policy that there are "no men's and no women's jobs at Stanford University." No sex preference is listed in advertising.

B. Selection and Placement

We do not have job categories for which there are bona fide occupational qualifications for sex, and all positions are open to members of both sexes.

C. Training

Currently, there are a limited number of affirmative action training programs at Stanford University. Training of all new entry level employees is a standard practice.

D. Promotion and Transfer

The University-wide employment system allows all employees, regardless of sex, to apply for positions which offer promotions or transfers.

E. Retirement Policy

The retirement policy applies equally to both men and women.

F. Physical Facilities

Physical facilities are provided equally for men and women.

G. Legal Policy

Stanford University's employment policies do not discriminate against either sex.

H. Married Employees

Married and unmarried men and women are treated equally in all personnel actions and benefits.

I. Childbirth Leave

The leave is granted at the request of the employees, for the period of time during which the employee is incapable of performing her job effectively because of disability due to normal pregnancy, delivery, or post-childbirth recovery. The leave extends until such time as the employee is capable of working once more.

1. Supervisors may request a written notification of the need for leave from the employee, identifying anticipated date of leave and date of return from leave.

2. The employee may charge against accrued sick leave the number of days on which she is physically unable to work. Vacation may be used during childbirth leave. Remaining portions of this leave are without salary.

3. If medical complications of normal pregnancy and delivery incapacitate the employee for the purposes of work after the agreed-upon date of return to work, the situation is treated like any other medical disability.

4. If the employee wishes, for the purpose of infant care, to take leave that extends past six weeks after delivery, an "infant care" leave of absence without salary must be arranged with the supervisor.

J. Infant Care Leave

Subject to departmental approval, regular employees may receive personal leave up to six months for the purpose of infant care after delivery of a new infant in the family. Either men or women may request such leave, but this leave is at the department's discretion and is not guaranteed. Days of leave for the purpose of infant care may not be charged against sick leave.

X. Minorities and Women Not Currentiy in the Workforce

We have carefully reviewed and analyzed the applicable internal utilization data and external availability and unemployment statistics included in Section IV of this AAP. There are sufficient numbers of minorities and/or women in the workforce, with either the requisite skills, who are trainable, who are actively employed, or who are seeking employment, to meet the anticipated needs of Stanford University. Therefore, we see no need at this time to undertake special programs to recruit minorities and women not currently in the workforce. Should circumstances change we will take appropriate measures and implement those programs necessary to recruit and utilize minorities and/or women who are unemployed and not seeking employment.

IX. Guidelines on Discrimination Because of Religion or National Origin

A. Policy

It is the policy at Stanford University to provide equal opportunity in employment on the basis of merit and without discrimination because of religion or national origin.

B. Implementation

Stanford University takes affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to religion or national origin. Bidders or prospective contractors or sub-contractors must submit, as part of their compliance reports, a written statement to the effect that the signer's practices and policies do not discriminate on the basis of religion or national origin, and that the signer will affirmatively cooperate in the implementation of said policy.

C. Accommodations to Religious Observances and Practices

. Stanford University will accommodate to the religious observance or practice of an employee or prospective employee as long as it is reasonable and will not cause an undue hardship on the conduct of the University's business.

XII. University Policy on Sexual Harassment

It is the policy of Stanford University to maintain the University community, as place of work and study for staff, faculty, and students, free of sexual harassment and all forms of sexual intimidation and exploitation. All students, staff, and faculty should be aware both that the University is concerned and prepared to take action to prevent and correct such behavior, and that individuals who engage in such behavior are subject to discipline. Conduct between students is governed by the Fundamental Standard.

The determination of what constitutes sexual harassment will vary with the particular circumstances, but it may be described generally as repeated and unwanted sexual behavior, such as physical contact and verbal comments or suggestions, which adversely affects the working or learning environment. Coercive behavior, including suggestions that academic or employment reprisals or rewards will follow the refusal or granting of sexual favors, constitutes gross misconduct and will not be tolerated. In such cases, a single incident would establish grounds for action.

Anyone who is subjected to offensive sexual behavior is encouraged to pursue the matter through the informal or formal procedures described below. Generally the informal procedures afford an opportunity to explore a problem and consider alternative means for its resolution.

Informal Procedures

1. The Ombudsman's Office Procedure

Without feeling constrained by specific definitions, faculty, staff, and students should feel free to make complaints concerning allegation of sexual harassment to the Office of the ombudsman. If requested, complaints will be provided by the Ombudsman's office. No investigation or action against the person accused will be taken on behalf of the person complaining, however, unless the complainant consents to be identified to the one accused in connection with the investigation.

On the request of the person making the complaint, the Ombudsman will consult with the designate of the Provost (in the case of a member of the faculty or academic staff charged with sexual harassment); the Vice President responsible for the employee's working area (in the case of a staff member charged with sexual harassment); or the Office of the Dean of Students (when the person accused is a student).

Appropriate sanctions or other corrective measures will be decided upon by these officials, if it is determined by them that proscribed behavior has occurred. As in any other case in which official action is taken, if an accused employee disagrees with the determination of the appropriateness of the corrective measures, that individual may contest them through the regular faculty or staff grievance procedures. In the case of students, or if disciplinary action is considered appropriate, the student judiciary process will be followed.

2. Other Formal Processes

Staff complaints may also be brought to an Employee Relations Representative in the Personnel Office for informal handling, in which the procedure will resemble that for the Ombudsman's Office described above. Requests for confidentiality will be observed by Employee Relations Representatives to the extent consistent with protecting the welfare of other employees.

All employees should also feel free to discuss sexual harassment problems directly with their immediate supervisors, or with the next-level supervisors (including department chairs and deans in the case of faculty and academic staff), and ultimately with the cognizant vice president, if the situation has not been resolved to the satisfaction of the complainant. Supervisors have general responsibility for the maintenance of the working environment, and have the authority to institute disciplinary procedures when appropriate.

Similarly, students may wish to consult directly with the Office of the Dean of Students, with the supervisor of the person complained of, or, for support and advice, with the Title IX Officer (Sally Mahoney, Registrar and Associate Provost), their advisors, resident assistant, or a counsellor at Cowell.

Formal Grievance Procedures

Depending on the University position of the individual who feels he or she has been sexually harassed and the particular circumstances, one of the established formal grievance procedures for faculty, staff, and students may also apply. In those cases, the formal procedures may be used either instead of or in conjunction with the informal procedures. Informal procedures will not, however, extend the normal time limit or making a formal complaint. If the individual concerned wishes to pursue the grievance, he or she should be sure to check the rules for the applicable procedure and file on time.

Formal grievance procedures at Stanford are listed below:

- Non-Academic Staff Grievance Procedure (see University Guide Memo 22.10)
- Collective Bargaining Agreement for union members
- Academic Staff Grievance Procedure (see Academic Staff Handbook)
- Faculty Grievance Procedure (see University Guide Memo 21.4)
- Student Academic Grievance Procedure (see Stanford University Bulletin, Information and Regulations Governing Student Conduct and Procedures for Their Enforcement)
- Student Employee Grievance Procedure (see University Guide Memo 61)
- Student Non-Academic Grievance Procedure pursuant to Title IX (consult Sally Mahoney, Associate Provost and Registrar).

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Kennedy, Hastorf on Super Bowl, Queen's visit, budget

Following is a report to the Faculty Senate Jan. 6, 1983, by President Donald Kennedy.

Mr. Chairman, I begin with two report items. More properly, they are items *already* well reported, on which I want to place an additional gloss of explanation. They are extraordinarily disparate, yet in one way similar. I refer to the Royal visit to take place in March, and to the less imminent—but to some, no less exciting—staging of the Super Bowl in Stanford Stadium in January of 1985.

First, regarding the visit of Queen Elizabeth and Prince Philip. Stanford—in particular Stanford Hospital—was approached in November by the British Consulate and those in our government responsible for arranging the royal visit.

A half-day on the Peninsula had already been made part of the program, and the hospital—along with several other Stanford sites—was considered as a possible place to visit. The time schedule was tight, and it was ultimately decided to drop the hospital idea on the grounds that similar visits were part of the Queen's itinerary elsewhere.

Eventually the British planners decided, wisely I think, that universities are really about people rather than places, and that the most appropriate way to include Stanford in the Queen's visit would be to have her see the campus and have lunch at Hoover House with people from this community.

That is what we are now engaged in planning. As you might well imagine, the main difficulty we shall have, apart from cramming an adequate amount of protocol into your obedient servant, is the allocation of a scarce resource, that is, places at the luncheon. All I can say at the moment is that there will be students, there will be faculty, and there will be some others. I think we can make some new friends for Stanford, and I think that for us—all of us—it will be a significant and interesting experience.

Super Bowl

The plans for the Super Bowl also involve a scarce resource—in this case, Stanford Stadium. Groups from the city of San Francisco, including the mayor and representatives of the Board of Supervisors, have been trying for some years to bring this event to the Bay Area.

This year's effort received early encouragement, and became very serious indeed. There was strong endorsement from other communities along the Peninsula, including our immediate neighbors—who think for the reasons having to do both with economics and public relations, that it will prove to be a great boon. And Stanford Stadium, it developed early, is the *only* stadium in the Bay Area that is even remotely possible as a game site.

Our own enthusiasm, understandably, was not quite as high as that in the neighborhood at large. It means, inevitably, some diversion of administrative staff time, and perhaps some commitment of University resources a little earlier than we might have chosen to commit them otherwise. On the plus side, there should be favorable attention to the University's facilities and its friendliness, and for our athletic programs. And—in my judgment, dwarfing all these—there is the opportunity to do something *for* our friends and neighbors, as opposed to being seen as dog-in-the-manger.

We therefore decided to abet these efforts, and we have now a tentative commitment to the game. I say tentative because no contract has been signed, but we expect one will be soon. We have, after all, not inconsiderable experience in putting on football games that fill Stanford Stadium. All game expenses will be defrayed. We will participate with some San Franciscans in fund-raising for physical improvements, many of which Stanford would have to make in the long run anyhow.

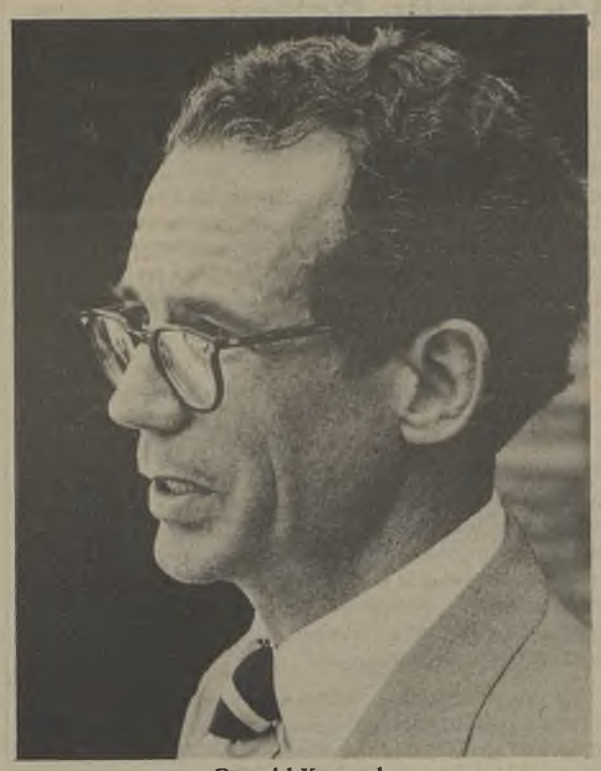
We expect the vast majority of this fund-raising to be from entirely new prospects, who would not give for other purposes. In that sense, we expect to gain something. But we shall have some limited costs as well, and I do not view it as likely that in the end we will have either gained or lost significantly in a financial way.

What in the world is similar about these two events? Simply that neither is centrally related to our academic purposes, and thus either could be termed an extra expenditure of institutional time and energy; and yet each serves, in its way, to relate Stanford in a positive way to other communities important to us. Both I think, are highly worth doing.

The budget outlook

Now I want to turn to a matter that is both more significant and more urgent: the budget situation in which we now find ourselves at Stanford. The Provost and I are both going to spend some time on this topic, I in an introductory way and he more substantively. We have agreed that I shall begin with an overview of our present budget situation, in an effort to give you some idea of its origins and its seriousness. You may have heard some of this before; but it is both important and complicated enough to risk repetition.

We find ourselves caught for 1983-84 amidst two



Donald Kennedy

alarming trends. The first, which has been in existence for several years, consists of the combined effects of inflation and government reduction in "controllable" expenditure categories—which means many of the ones most important to us.

Just to keep a balanced budget in the face of energy costs that have been inflated at a compound rate of nearly 25 percent per year for five years, of our needs to improve salaries and benefits, and of shortfalls in government support of student financial aid and other programs, has made it necessary for us to move tuition—the only revenue source over which we have any policy control—several points ahead of inflation. That experience has been common to most private universities in our quality sector.

Now we face a second phenomenon: a saturation in the volume of sponsored research. That means that our indirect cost recovery will not continue to increase, as it has in past years, and may even start to drop.

In addition to the strong budgetary challenge this gives us, it also poses a vexing policy problem. I plan to discuss this matter in my winter quarter report to the Academic Council next month, but let me give a very sketchy account of it here.

For the last few years our indirect cost rate has, for various reasons beyond the scope of this discussion, been held at 58 percent. We negotiated a new rate just last year using the new government account principles set out in the revised OMB Circular A-21. The result was an increase of 11 points in the negotiated indirect cost recovery rate. The jump came from two sources: first, some rebound from the "held" rate of the preceding few years, and second, new rules which allowed us to allocate costs more accurately to research and to recover them.

Two additional factors tend to drive the rate up further. The first is that in some of the years during which the negotiated rate was held at 58 percent, especially the last, we were in a position of under-recovery—that is, government audits of our actual costs after each year ended showed that in reality we had been entitled to *more* indirect costs than we received under the negotiated rate.

Government policy under these circumstances requires that the under-recovery be carried forward, and recaptured by the universities through a permitted increase in subsequent rates: the under-recovery is carried forward until the rate is changed and it is recaptured. We accumulated a significant carry-forward, most of it in the last year. This is money the government owes us, but which we can reclaim only by increasing the overhead rate.

Furthermore, there is a relationship between research volume and the rate. Many of the indirect costs associated with sponsored research are fixed costs. When the volume of research goes down, these fixed costs are spread among a smaller number of projects, so the rate inevitably rises.

In the **politics** of indirect costs, history is against us. There is a perception among some congressmen that indirect costs have risen too rapidly, that the universities are somehow getting more than the amount to which they are entitled. The complexity of the process of indirect cost recovery makes it no easier to explain to congressmen than it is to principal investigators—many of whom are also troubled, though for different reasons.

At Stanford we have always pursued a policy of full recovery, and that has been endorsed by the Committee on Research and other groups that have included principal investigators. But to pursue full recovery now would, we think, require going to rates that would seem unacceptable to most principal investigators here, and might indeed cause damage to their programs.

And if several universities were to engage in a round of further significant increases in indirect costs, it might well hasten the application of some arbitrary limit upon overhead rates by the Congress—a limit that might prove even more damaging than restraint now.

So we shall quite probably, over the next several years, forego a good deal of indirect cost recovery that government rules now entitle us to. I want it understood that I advocate this with considerable reluctance. But there are times in which an expedient policy is the best policy, and this is one of them.

Against this background of political economy, the provost is now prepared to discuss in more quantitative terms the most recent developments in the budget process.
1/7/82

Following is an outline of remarks prepared by Provost Albert Hastorf on the University budget for 1983-84, given to the Faculty Senate Jan. 6.

1. Where we are in the process:

Discussions about needs and budget reductions have been held with deans and other principal officers; Bill Massy has done likewise with his directors.

Their budget letters have been received. (These confirm their requests and proposals for 1983-84.)

Next stages include: 1) review of these requests and proposals and 2) examination, discussions, and decisions about recommendations on tuition (in February), general salary program, indirect costs, and other major parameters.

Reports to deans, administrative council and Senate in late February or early March.

Action by Board of Trustees on tuition (in February) and operating budget in March.

2. Our assessment of response so far.

There is general understanding that our budget problems are serious; however, a certain level of relief that they're not even more serious has obscured the fact that this is the third major budget reduction episode in 15 years.

As a consequence, the responses have been what I shall call conservative, i.e., trim, squeeze, shave, etc.

Three key variables are still being reviewed: tuition, indirect cost recovery, and salaries, both faculty and staff.

The hardest look is being taken at administrative and other expenses in the non-academic areas. As was true in previous episodes of budget cutting, we expect proportionately heavier reductions to be made in these areas.

3. What will be happening next:

A. Barring powerful contrary arguments we expect to recommend to the Trustees that we hold the Indirect Cost rate at 69 percent for 1983-84. As the President remarked this is a clear commitment on our part of crucial importance to the research enterprise at Stanford and to the support of our federally funded investigators.

B. We will be paying considerable attention in the next few weeks to the tuition recommendation that we will make to the Board of Trustees. We shall be examining the consequences of a substantially lower rate of increase than the 12 percent assumed in the long-range forecast, hoping that ways can be found to reduce the rate of increase.

C. Our largest single expense item is salaries. We have been taking a hard look at whether we can maintain the 7-8 percent base increase projected in the long-range forecast, and it is now clear to me that we cannot maintain that rate of increase.

D. Because much of the response to the need to cut budgets is, at this point, what I shall call shaving and paring, here and there, it does not appear that the 1984-85 budget can be balanced without more rigorous initiatives.

4. Conclusion:

1. We are going to need to look at the overall size of the University in relation to its sustainable support, and at

2. The mix between academic programs, student and administrative support services.

3. I believe that we must make cost control a central concern—to make it, if you will the independent variable so as to impact both indirect cost recovery and tuition. The implication is that we must control administrative support services and increase some of the risks we take in accomplishing our primary purposes of teaching and scholarship.

We will not be able to monitor ourselves and plan our support services with quite the precision we have in the past.

We shall strive for high quality in all that we do—it will have to be a leaner form of quality.

Senate/ continued from page 10

Report on the Center for Information Technology

Chairman Fetter then called upon the Senate guests from CIT to present their comments on the Center's services to the University.

E. Shaw, Associate Provost for Information Systems and Director of the Center for Information Technology, called attention to the document distributed at this meeting, entitled Institutional Programs and Services in Information Technologies and Computing at Stanford (SenD#2465). Major portions of this document appear in *Campus Report* of January 12, 1983. He presented an overview of the document, emphasizing the importance of developments occurring at individual and departmental levels and their impact on CIT's Investment Programs and Central Services. The overview included a general projection of what the information technology and computing environment would be like at Stanford four years from now, in January 1987. He pointed out that Stanford allocates its resources for information technologies in two ways: in Investment Programs (currently involving three high priority activities: SUNet, the Campus Network; the Microcomputer Program; and the Departmental Information Systems Program), and in Central Services (currently providing diverse services to over 2,000 individuals).

M. Carter, Director of Instruction and Research Information Systems, commented on the development of the Microcomputer Program in helping people learn about using technology in instruction and research and, specifically, about the establishment of a Microcomputer Instructional Laboratory as a training facility for the TIRO Project, a program of the Dean of Humanities and Sciences to introduce microcomputers into the Humanities. This project will include, for example, a program for training 130 or more Humanities professors to use computes in their research and teaching, e.g., in the teaching of writing. In this process, the CIT staff expects to gain a better background for advising individuals and departments who must make decisions about the technological equipment which is most appropriate to their needs and, at the same time, fully compatible with the projected University-wide network.

William Yundt, Director of Network Development, commented on the service objectives of SUNet and on its costs and technological aspects. Dependence on telephone wires, as at present, is an expensive and inefficient alternative. The projected SUNet conduit and cable system will be less expensive, yet will accommodate thousands of terminals for relatively easy interconnections to a variety of computers. It will also transmit video signals on the same network. It is a reliable, low-risk system, and has already been chosen by a numer of institutions, including Cornell, Brown University, the University of Arizona, and Carnegie-Mellon. The system will permit departments to make local decisions about terminals and is flexible enough to permit innovative developments. Within the next few months, CIT intends to provide more information and advisory services to departments to help them plan to take maximum advantage of SUNet.

D. Ernst, Director of Administrative Information Systems, commented on the establishment of the Department of Information Systems for the purpose of advising University departments in the purchase of equipment for information processing compatible with major University administrative systems. Fifty to 75 departments annually use this department at CIT. One recent innovation has been the development of a system for tracking expenditures on contracts and grants, a system which has proved to be very efficient and has a growing number of subscribers.

Deputy Director M. Roberts talked briefly about Central Services at CIT. Obviously, the spread of minicomputers and microcomputers has diminished the role of Central Services at CIT. It now represents less than half of the computer use on campus and is expected to decline proportionately in the future. In absolute terms, however, because of the growth rate of computer use in general, it is expected to grow about 10-15 percent annually. Maintaining full intercommunication capacity between the Central Services and individual computers is a matter of high priority.

In commenting on CIT service-charging policy, he reminded the Senate that rates are fixed by written guidelines established at Stanford with faculty assistance and that these are subject to periodic faculty review. He noted that hardware developments have permitted some substantial cuts in certain charges, while charges involving labor-intensive services have gone up. The Center has developed rate-systems to accommodate, when possible, off-hour services for those on limited budgets.

On the completion of these remarks, the CIT administrators were asked how it is possible to keep the network system from being overcome by the diversity of individual decisions now being made by people who do not know enough about the University's network plans, or who feel no obligation to consult the University's central planners before installing systems absolutely incompatible with the projected network.

E. Shaw noted that CIT offers consulting services and does not charge for them in the hope that departments and individuals will seek help in making such decisions. Computer purchases are reviewed by CIT, but that may be too late to reverse a decision.

President Kennedy expressed astonishment that any University funds were expended for incompatible equipment. University policy explicitly prohibits that, he stated. E. Shaw commented that, while current guidelines give specifications for potentially compatible equipment which the University will support institutionally, if a department or School wishes to move away from those specifications (knowing the purchased equipment will not be compatible with the University system) it is the prerogative of the administrator of that unit to do so.

Additional concern was expressed that the whole style of CIT appears to be reactive and consultative, and that these two reports are vague and unhelpful. Hundreds of faculty want to know what developments to expect in the next three years and what specific decisions they should make to take advantage of developments. The residential community as well as the academic community should have information, expressed in clear English, which would help them buy personal computers which they know would fit in to whatever network the University develops. More of CIT's work should be prospective, and aimed at helping the academic and residential community understand where we're going so we can keep from individually going off in the wrong direction.

E. Shaw agreed, and indicated that this report is intended to be a first step in that direction without seeming to promote these developments. The response was that whether or not CIT "promotes" the computer revolution is irrelevant; the point is to provide sufficient guidance in clear language so that potential users will know when they are violating a direction in which the whole University has some commitment to go. These reports are unreadable and unhelpful in that regard.

A number of other concerns were expressed: Questions about purchasing personal computers for which answers are not yet available; the fear that such questions will always be six months ahead of the answers; the possibility that we are being "sold" things which aren't usable; the suspicion that information and services promised may never be realized.

The suggestion was made that C-CIT might well follow the pattern of C-Res in holding public hearings each year to encourage feedback and questions, or might develop other ways of promoting dialogue on these issues, e.g., soliciting letters or comments to committee members as other committees have done.

As the discussion drew to a close, Dean Wessells expressed the gratitude of the School of Humanities and Sciences for the initiative taken by the CIT administration in promoting the TIRO Project. Its genesis was a grant from the Pew Foundation. E. Shaw and M. Carter undertook to increase the impact of this initial fund by approaching IBM for a gift of roughly a million dollars, permitting the purchase of 135-150 units for use among faculty in the Humanities. The idea and the follow-through on it were magnificent and the Humanities faculty owes them a debt of great gratitude.

Chairman Fetter thanked the CIT guests for their helpful presentation.

There being no further business, the Senate adjourned at 5:35 p.m.

Clara N. Bush
Academic Secretary

Kennedy, Hastorf, Massy, Bacchetti will speak at forum on tuition tonight

Stanford President Donald Kennedy and three other University officers will participate in a student-sponsored forum on tuition at 7 p.m. Wednesday, Jan. 12 in Dinkelspiel Auditorium.

Sponsored by the Associated Students Task Force on Tuition, the forum will include presentations by Kennedy; William F. Massy, vice-president for business and finance; Vice Provost Raymond F. Bachetti, director of university budgets; and Provost Albert Hastorf.

A question and answer period will follow their presentations.

Formed last year, the task force includes Jon Blum, Paul Barber, David Midgley, and Rick Newman. It seeks to research alternatives to double-digit tuition increases, emphasizing solutions that involve student participation.

The Board of Trustees is scheduled to consider recommendations for 1983-84 tuition at their February meeting.

Ph.D. oral exams

TUESDAY, JANUARY 18

Rosalind A. Grymes, cancer biology, "Molecular Characterization of RadLV (Radiation Leukemia Virus)," 3:15 p.m., Cancer Biology Research Lab Conference Room.

WEDNESDAY, JANUARY 19

Frederick P. Trebino, applied physics, "Subpicosecond Relaxation Studies Using Tunable-Laser-Induced Grating Techniques," 3 p.m., Applied Physics 200.

THURSDAY, JANUARY 20

Eric Keith Gustafson, applied physics, "CARS Spectroscopy in a Supersonic Jet," 2 p.m., Applied Physics 202. **Yvonne Ying Hsieh**, French, "Malediction, Grace and Fatalism in the Mysterious World of Andre Dhotel," 2:15 p.m., Bldg. 260, Room 274. **Roger C. Strawn**, mechanical engineering, "Flowfield Prediction and Design of Internal Passages with Strong Viscous—Inviscid Interaction," 3 p.m., Bldg. 300, Room 300.

FRIDAY, JANUARY 21

Jean-Pierre Benoit, economics, "Entry with Exit: An Extensive Form Treatment of Predation with Financial Constraints," 9 a.m., Encina Hall 414. **James E. Fields**, economics, "Essays in the Role of Quality in Oligopolized Industries," 2:15 p.m., 414 Encina Hall.

I-Center slates winter film series

The International Center's winter quarter Other Cultures Film Series features an Australian Mini-Film Festival during the month of January. Each Thursday at 7:30 p.m., beginning Jan. 13, special door prizes and Australian beer and wine tasting will provide added interest to the noteworthy film documentaries.

Pictures That Moved: 1896-1920 is the first of three films that document the Australian film industry from its beginnings up to World War II. They depict life in Australia in all its aspects through the early movie-makers and their efforts, ranging from newsreels to features.

The second film is *Sydney*, narrated by feminist, writer and professor Germaine Greer. "There are many beautiful cities of the world, but I think there is only one city whose beauty still belongs to the people," comments Greer, the keynote of whose tour of Sydney is the city's accessibility and its goal of well-being and pleasure.

There is no charge, but a 75 cent donation is requested at the door each week. For more information, phone 497-1831.

Thomas to read poetry

A free public "Evening of Poetry and Story-Telling from Around the World" will be given by Tael Thomas at 8:15 p.m. Tuesday, Jan. 18, in the Memorial Church Round Room at Stanford.

A Bay Area poet, Thomas will render ancient Greek lyrics in the original Greek, American poems, Hobo stories with shadowboxing, Hawaiian chants and pygmy songs, and loon calls and blue hoots.

Check social security!

All those who care about what they're going to live on after retirement should look at their paychecks to be sure the correct social security number is thereon.

The advice comes from Payroll Manager Bob Behr, who doesn't give a lot of advice—but what he does is crucial.

Medical Center MEMO

Examining changes and challenges in preparing future M.D.s. . .

A special day in the academic life of the Medical School

What is a proper balance between generalism and specialism? What are the requirements and skills that permit individuals to become well-educated and well-trained physicians who possess a broad perspective of society, extensive knowledge of biomedical sciences, experiences in the several defined areas of clinical medicine, and an incentive to continue their education throughout their careers?

These and other topics will be discussed during a one-day symposium on the "Education of a Physician" organized by the Stanford University School of Medicine Saturday, Jan. 22.

The meeting will begin at 8:30 a.m. in Fairchild Auditorium and will be a very special day in the academic life of the School of Medicine, according to Dean Dominick Purpura.

"During the past several decades," said Purpura, "medical knowledge, science, and technology have expanded at a remarkable rate. This expansion has had profound effects on the content of undergraduate, graduate, and continuing medical education and on the practice of medicine.

Specialism and subdivision

"Many of the changes that have occurred in undergraduate and graduate medical education were stimulated by the growth of specialism. It has led in most medical schools to multiple subdivision of the classic broad disciplines of medicine and surgery.

"The changes have led to the establishment of semiautonomous units functioning at times in less than optimal fashion to achieve the institution's educational goals.

"The hazard of excessive fragmentation is that subspecialties, as they develop administrative autonomy, often become increasingly separated from the educational philosophy of the parent discipline.



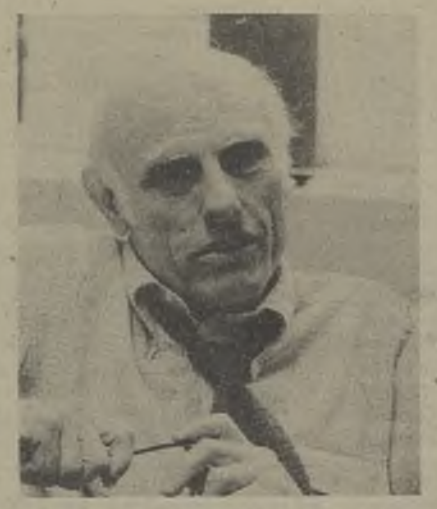
Dominick Purpura



Robert Cutler



Roy Maffly



John Steward

"Technologic skills may be emphasized at the expense of the broad education needed by graduates to select a specialty knowledgeably and to provide general medical care."

Because of these factors, Purpura explained, the American Association of Medical Colleges (AAMC) has undertaken a detailed examination of The General Professional Education of the Physician and College Preparation for Medicine.

Twenty-one professional societies and 92 medical schools have agreed to participate in the project, funded jointly by the AAMC and the Henry J. Kaiser Family Foundation of Menlo Park.

As part of the study, Purpura said, Stanford has planned the special symposium during which selected topics dealing with essential knowledge, fundamental skills, and personal qualities, values and attitudes will be discussed by faculty and student panels.

Reassessment a must

"It has been often said that one of the perennial obsessions of universities is the revision of curriculum," Purpura commented. "To this might be added preoccupation with the 'premedical syndrome,' the compulsion to reassess what skills should be taught, and the necessity for agonizing reapproval of the product of a modern science and technology-oriented medical education."

He urged all members of the Stanford medical community to attend and share their views on these critical issues.

The symposium will feature three panels: on "Essential Knowledge," chaired by Dr. Robert Cutler, associate dean for medical education; on "Fundamental Skills," chaired by Dr. Roy Maffly, chairman of the admissions committee; and on "Personal Qualities, Values and Attitudes," chaired by Dr. John Steward, associate dean for student affairs.

Dr. Purpura said ideas generated at the meeting will be part of the presentation he will be making to a regional meeting of the AAMC Task Force scheduled Jan. 27-28 at the University of California in San Francisco. *(See box below.)*

—Spyros Andreopoulos

UCSF to host regional hearings on medical education

The University of California, San Francisco School of Medicine will host Western Regional hearings of the Association of American Medical Colleges' panel on the General Professional Education of the Physician and College preparation for Medicine on Jan. 27-28, 1983. The panel is the advisory group to an AAMC three-year study, supported by a grant from the Henry J. Kaiser Family Foundation, to review and appraise the eight-year period of the general education of the physician that in most institutions begins with entry into college and ends with the award of the M.D. degree.

Steven Muller, Ph.D., president of the Johns Hopkins University and the Johns Hopkins Hospital, is chairman, and William P. Gerberding, Ph.D., president of the University of Washington, is vice-chairman of this 18-member panel. Its members are drawn from four-year colleges and universities, from U.S. and Canadian medical schools, and from the practice of medicine.

After considering a broad spectrum of concerns about the general professional education of the physician and college preparation for medicine, the panel has concluded that to adapt their educational programs to future physicians, medical school and college faculties face four major challenges:

- **the rapid growth of knowledge applicable to the care of patients and the treatment of disease;**
- **the ascendency of complex technology and procedures in the diagnosis and treatment of patients with overt or potential disease;**
- **the coalescence of physicians, other health professionals, and hospitals into complex systems, which is paralleled by a concentration of the financial support for medical care in governmental and private agencies; and**
- **the mounting evidence that physicians are having difficulty coping with the rapid progress in medical care and in adapting to demands placed upon them by their patients and by the profession.**

A total of 92 U.S. and Canadian medical schools and 21 biomedical science professorial organizations have joined this effort in initiating local discussions of faculty and students in addressing three domains identified by the panel: the essential knowledge that all students must acquire to provide the foundation for later specialized education and for continued learning throughout their careers; the fundamental skills that students should acquire to gain essential knowledge; and the desirable traits that students should develop during these eight years, and how faculty might best select students capable of cultivating these traits and foster their development.

Working Groups appointed by the panel are addressing these areas from the national perspective. Thirty-eight U.S. colleges and universities, chosen to represent the schools from which medical school applicants and matriculants are drawn, have been invited to participate in this phase of the project.

Presentations from Western region institutions and organizations in dialogue with the AAMC panel will be made in Cole Hall, Medical Sciences Building, 513 Parnassus Avenue, from 9:30 a.m. to 5 p.m. Jan. 27, and from 9:30 a.m. to noon Jan. 28. Faculty, students, and practicing physicians are invited to attend. An opportunity is being provided for comments from them as well.

The final report of the project is planned to be presented at the AAMC Annual Meeting in November, 1984. Interim reports will be disseminated for comment during the 1983-84 academic year.

Those interested in appearing at the San Francisco hearing should contact August G. Swanson, M.D., project director, AAMC, Suite 200, One Dupont Circle N.W., Washington, D.C. 20036; phone (202) 828-0430.

New season of SMASH lectures to begin this Friday in Fairchild







This week marks the opening of the 1983 winter quarter lineup of S*M*A*S*H lectures at Stanford School of Medicine.

The lecture series—whose full name is "Stanford Medical and Scientific Highlights"—was initiated in 1980 by the Medical School's faculty senate, which now cosponsors it with the Stanford Medical Students Association.

The organizing committee hopes to encourage a wide exchange of ideas, and to provide a forum by which the Medical Center community may be informed of significant medical research and developments at Stanford.

Given by both faculty members and students, the Friday presentations are geared towards all those with basic scientific understanding.

This season's lectures are as follows:

- Jan. 14: "Interferon cloned—and then what?"—Dr. Thomas Merigan, professor of medicine;
- Jan. 28: "Seashells, Vulcans, and the treatment of hearing loss"—Dr. Richard Goode, professor of surgery;
- Feb. 11: "The heart of the matter—the matter of the heart: Endomyocardial biopsy"—Dr. Margaret Billingham, associate professor of pathology;
- Feb. 25: "Custom-tailored antibodies for tumor diagnosis and therapy"—Dr. Ronald Levy, associate professor of medicine, and David Maloney, fifth year M.D./Ph.D. student.

All presentations will take place at 4:30 p.m. in Fairchild Auditorium, with TGIF gatherings afterwards in the lobby.



Photos from top:

Thomas Merigan
Richard Goode
Margaret Billingham
Levy (left), Maloney



Irving Schulman

Schulman is new chief of staff at Children's

Dr. Irving Schulman, professor and chairman of pediatrics at Stanford, has been appointed chief of staff at the Children's Hospital at Stanford, effective Jan. 1.

The announcement was made by John Williams, executive director of Children's Hospital, following approval by the hospital's board of directors.

The chief of staff position has been filled by Dr. Bruce Parker, professor of radiology and pediatrics (clinical), on an acting basis for the past two years.

Schulman will divide his time among Children's Hospital, the Medical School, and SUH, where he is chief of the pediatric service. He will also be chief of the pediatric service at Children's Hospital.

Schulman will play an important leadership role as planning for the new, consolidated Children's Hospital at Stanford gains momentum in the coming year.

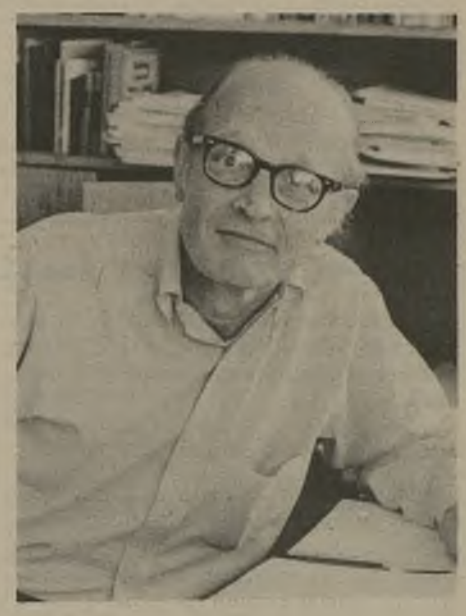
Bunker appointed acting chairman of Anesthesia

Dr. John Bunker has been named acting chairman of the Department of Anesthesia, Dean Dominick Purpura of the Stanford University School of Medicine said Tuesday, Jan. 4.

Bunker will succeed Dr. Philip Larson, who relinquished the chairmanship of the department December 1 after serving for 10 years, Purpura said.

Larson will continue his work as a professor of anesthesia. He is a nationally known expert on pharmacokinetics and pharmacodynamics of anesthetic drugs.

Bunker, who holds dual appointments in anesthesia and the Department of Family, Community and Preventive Medicine, currently directs Stanford's program in health services research. He has authored books on health policy and



John Bunker

had served as chairman of anesthesia from 1960 to 1972.

Bunker will work in consultation with Dr. Ellis Cohen, professor of anesthesia emeritus, according to Purpura.

The Anesthesia Department employs more than 30 full-time faculty members. Under Larson's direction, residency training in anesthesia at Stanford became one of the most sought after programs in the United States. (For the past nine years, up to 4 percent of the graduating students selected anesthesia for postdoctoral training; in 1982 the figure rose to 12 percent.) The department has become well-known nationally for the study of metabolism and toxicity of anesthetic drugs.

Recently, however, the department has been faced with differences of opinion over academic and financial priorities.

The dean declined to elaborate on the specific issues, but he said the appointment of an interim leadership was the best way to begin tackling short-term problems while an external committee reviewed the department as a whole for the purpose of determining its future academic thrust.

When Purpura was appointed dean eight months ago, he announced that he would institute an external review of academic departments in the School of Medicine.

Anesthesia was among the first scheduled for review, he said.

California patients gain access to medical records

As a result of a new California law effective Jan. 1, 1983, Stanford University Hospital patients and former patients now have access to the information in their medical records.

The law guarantees all patients in California the right to inspect or receive copies of their medical record information. Physicians have the alternative to provide a written summary of the record and assume the responsibility for preparing it.

Advance written request and payment of fees is required.

According to the law, requests for inspection must be granted within five working days after receipt of the written request. Requests for copies of the record must be granted within 15 calendar days. If a summary report is prepared, it must be available within 10 working days, or 30 calendar days if the patient has been discharged from the hospital within the previous 10 days or if the record is lengthy.

At Stanford, forms to request medical record information are available from the Department of Medical Records. Information is available from that office only during regular business hours, 9 a.m. to 4 p.m., Monday through Friday. Charges, to be paid in advance, are for clerical services, copying and mailing. The physician may also charge for the time spent in preparing a summary alternative.

Because many medical records are lengthy, patients may limit their request for copies to specific items they need.

Medical Records personnel will not attempt to explain or interpret anything in the record. Patients will be directed to their physician or other health professional for assistance in understanding the information contained in the record.

Access is granted only to living adult patients, unless there is a conservatorship of the person. Then the conservator has the right of access as the patient's representative. If the patient is a minor, the parent or guardian has access unless the minor had the right of consent to the treatment given.

There are special requirements relating to the release of information from psychiatric records or alcohol and drug abuse records.

The Hospital and physicians will continue to furnish information necessary for continuing a patient's care when it is requested by another physician or hospital, and consented to by the patient. Normally, insurance companies, schools, employers or other third parties who need information for a record request it directly, with the patient's written consent.

Questions concerning medical record access should be directed to the Correspondence Section, Medical Records Department, at 497-5418.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



The Fleischmann Learning Resource Center celebrated its new home in M202 with an open house Friday. The facility, which moved from M207, features a computer center, four viewing rooms, and a variety of video equipment. It is open 8 a.m.-12 a.m. weekdays, 10 a.m.-10 p.m. Saturdays, and noon till midnight Sundays. For information, call 497-5853.

Guest speaker to discuss control of cell growth

"Epidermal Growth Factor" is the title of the ninth Windsor C. Cutting Memorial Lecture, to be held 4:15 p.m., Thursday, Jan. 20, in the Fairchild Auditorium at Stanford School of Medicine.

The public lecture will be given by Dr. Stanley Cohen, of the department of biochemistry at Vanderbilt University School of Medicine. His presentation is sponsored by Stanford's department of pharmacology.

Cohen is a pioneer in researching hormones which promote the growth of different types of cells, according to Dr. Tag Mansour, professor and chairman of pharmacology. Studies of these hormones lend insight into the control of the growth of normal cells and are hoped to further an understanding of the abnormal growth of cancer cells.

Cohen was co-discoverer of the first factor implicated in the growth of the nervous system in mammals (the "nerve growth factor"), said Mansour. He recently discovered the epidermal growth factor, and is actively engaged in identifying its mechanism of action in cell cultures.

Mansour said that eventually many more of these factors may be discovered. "Cohen's work represents a very important start in the area of the development and differentiation of cells," he said. "His research on the growth and development of mammalian cells may lead us to a rational approach in finding the origin of cancer."

A graduate of Brooklyn College, Oberlin College, and the University of Michigan, Cohen has published widely and been the recipient of many awards.

He is a member of the National Academy of Sciences and has been an American Cancer Society Research Professor of Biochemistry.

The Windsor Cutting Lectureship was established in 1973 by the faculty of the Department of Pharmacology, and is supported by private contributions. It honors the memory of Dr. Cutting, professor and former chairman of the department.

Cutting, who died in 1972, also served as dean of Stanford Medical School from 1953-57, and as dean of the University of Hawaii Medical School, 1963-71.

The lectures are presented by speakers prominent in the field of pharmacology.

Lockheed employees make Hospital the gift of an ECG

Employees of Lockheed MSC donated personal funds to Stanford University Hospital in December to buy a $9,500 heart monitoring device.

The purchase is part of their effort to channel funds "back into the community where our employees reside," according to the group's chief officer.

"Stanford is a local community hospital that provides service to a large percentage of the employees at the Palo Alto/Sunnyvale site, and we want to support the service there," said Barbara Barrett, executive director of the Lockheed MSC Employees "Bucks of the Month Club."

The 16,000 member club has supported Stanford with gifts since 1959. Prior to 1980 the donations were directed toward medical research, but the last three gifts have been earmarked for the Hospital: a state-of-the-art hemodialysis machine, a "Nelson bed," designed to ease the pain of patients recovering from orthopedic surgery, and, this year, an electrocardiogram (ECG) recorder.

The ECG machine monitors the heart rate of open heart surgery patients during the first few days after surgery when the healing heart is sensitive to sudden distrubances that can progress to a full-blown heart attack if not corrected.

Coupled with a machine called a defibrillator, which uses an electrical shock to reestablish the heart's rhythmic beats, the ECG recorder helps halt heart attacks before they cause serious damage. It is a much needed addition to the Hospital's intermediate intensive care unit, according to Stephen Peeps, associate director of corporate relations for the University.

"We're trying to establish a tradition of local support for the Hospital as a unique community resource," Peeps said, "and no one could be setting a better example than Lockheed employees."

Wanted: Research Subject Volunteers

The Sleep Disorders Research Center at Stanford University Medical Center is seeking about 30 volunteers to test the daytime alertness of persons taking sleep medication.

Sue Cohen, a research assistant, said volunteers should be men or women aged 21 to 60 who are suffering from insomnia. They must be willing to take sleep medication during a 21-day period and spend 11 nights and six weekend days at the Sleep Center's lab in Palo Alto.

Three or four separate starting dates will be available through April, Cohen said.

Some volunteers will receive medication while others will get a placebo. Participants will be electronically monitored in the lab at night and perform skill tests during the day to test alertness.

Volunteers will be compensated and receive two free medical exams. Meals will be provided free during the live-in phase. Private rooms and amenities—including free movies—will be furnished.

For further information, contact Cohen at 325-4697.

Symposium on anxiety disorders

Anxiety disorders, such as claustrophobia, fear of heights, and agoraphobia, used to be considered symptoms of other diseases.

Recently, however, psychiatrists have come to view them as separate diseases, and have developed therapies with which to treat them. The Medical School's department of psychiatry and behavioral sciences is sponsoring a one-day symposium to review these developments Saturday, Jan. 15.

Psychiatrists are now using new behavior therapy treatments, in which they help patients confront their fears, said Dr. Walton Roth, associate professor of psychiatry at Stanford and chief of the psychiatric consultation service at the Palo Alto VA.

Antianxiety drugs are being refined in ways to allow their usage for specialized therapies also, Roth added.

Discussing all aspects of anxiety disorder characteristics and treatment will be some of psychiatry's leading authorities, including Drs. W. Stewart Agras, Stanford professor of psychiatry and director of the Behavioral Medicine Program; Philip Berger, Stanford associate professor of psychiatry and director of the Stanford-VA Mental Health Clinic Research Center; Robert Fowles, Stanford assistant professor of medicine and director of the VA's Noninvasive Cardiovascular Laboratory.

Also Leo Hollister, Stanford professor of medicine, psychiatry, and pharmacology and director of the VA's psychopharmacology research; Mardi Horowitz, University of California, San Francisco professor of psychiatry and director of the Center for the Study of Neuroses, Langley Porter Psychiatric Institute; and David Sheehan, Harvard assistant professor of psychiatry and director of the hypnosis and psychosomatic medicine unit at Massachusetts General Hospital.

The course, which will be held at Tresidder Memorial Union, offers continuing education credits for physicians. Tuition for the symposium is $60. Residents, interns, and medical students will be charged $10. For further information, call 497-5594.

Weisfeldt to give cardiology talk

Dr. Myron Weisfeldt, professor of medicine at Johns Hopkins University, will discuss "Age Associated Alterations in Cardiac Function and Exercise Response" at 5 p.m., Monday, Jan. 17, in Fairchild Auditorium at Stanford Medical School.

Weisfeldt serves as director of the division of cardiology at John Hopkins in Baltimore. His major areas of research interests have been in aging changes in cardiac function, ventricular function, ischemic heart disease, and more recently in certain aspects of cardiopulmonary resuscitation.

The talk is the 16th John Kent Lewis Memorial Lecture, named in honor of a Stanford physician and scholar who died in 1961. The lectureship seeks to bring outstanding cardiologists to lecture at Stanford, said Dr. Donald Harrison, chief of the cardiology division at Stanford.

The talk is open to the public, and continuing education credit is available for physicians.



Inviting the community in, to meet SUMC by tour

Linda Northway, tour director, pauses with a group of high school students near the Sherman Fairchild research building. Northway has trained a staff of volunteer docents from the Auxiliary.

The program, based in the Office of Public Events, stresses the uniqueness of a university medical center, and the way in which patient care, teaching and medical research coalesce. If a group has special interests, tours can be modified to include specific stops or speakers. For information, call Northway at 497-6389.

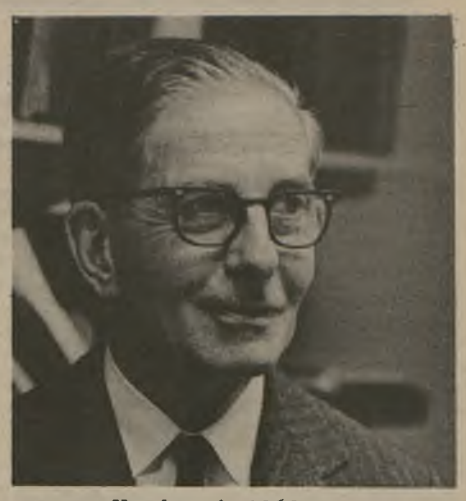
Professor emeritus dies at SUH

Dr. Cly Howard Hatcher, professor of surgery emeritus and former chief of Stanford's division of orthopedic surgery, died Dec. 29 at Stanford University Hospital from a massive heart attack. He was 82 years old.

Hatcher came to Stanford in 1960 after 30 years on the University of Chicago's faculty. Following his retirement in 1965, he served as a consultant at Stanford and the Palo Alto Veterans Administration Medical Center, and had a private practice in Palo Alto.

He was a member of numerous professional societies, including the American Academy of Orthopedic Surgeons, the American Orthopedic Association, and the American Medical Association. He was an honorary fellow in the British Orthopedic Association, and served as an orthopedic consultant to the United Nations Relief and Rehabilitation Administration in Greece in 1946.

Hatcher received his bachelor's degree from the University of California, Berkeley, in 1924, and his medical degree from the University of California, San Francisco in 1929. He did postgraduate work in pathology at the University of Innsbruck, Austria. His special interest was bone diseases, especially tumors of the bone.



Hatcher in 1965

Hatcher is survived by three children: Barbara Ann of San Francisco; Nancy Hope Kagan of Chicago; and Henry Clark of Belmont. He is survived by two grandchildren as well. His wife, Annabel Clark, died in 1980.

Memorial services were held Jan. 3. Contributions can be made to the C. Howard Hatcher Memorial Fund at Stanford University.

Thursday's Child dies 6 years later

Talcott Poole, 24, who underwent heart transplant surgery at SUH almost six years ago, died Dec. 17, 1982.

Poole's story had been recounted by his mother in the book *Thursday's Child*, which describes the experience and challenges Poole and his family faced when he had the operation. A t.v. movie based on the book will air Feb. 1 on Channel 5.

Poole's death ultimately was attributed by doctors to effects from the immunosuppressant drugs he was taking.

He had been diagnosed at age 17 as having an enlarged heart due to permanent damage to the heart muscle. After the transplant, however, he led an active life, working on several film crews, traveling, and working towards a film degree at Stanford University.

Construction Corner

West 1B Nursing Station: The installation of a new Hewlett-Packard computerized patient monitoring system on the West 1B Nursing Unit is completed. The updated telemetry system will allow the staff to monitor 18 patients at present, with the capability of expanding surveillance to 24 patients in the future.

The project was coordinated by Erik Lund, project manager, and Richard Booth, construction coordinator.

Laboratory for Division of Oncology: The space vacated by the relocation of the Fleischmann Learning Resource Center will soon be under construction for a new research laboratory for Dr. Ronald Levy of the Division of Oncology. The three-month construction period is scheduled to begin the first week of February.

The project team of Erik Lund and Richard Booth will be responsible for this renovation.

Power Factor Correction: Corrections to the transformers supplying normal electrical power to the Medical Center will be made on two consecutive Sundays in the latter part of January. Users of normal power may experience some minor interruptions of service. The emergency power source is not involved in this upgrade.

The work will be coordinated by Dave Dominguez of the SUMC Facilities Office and Bob Bohnet, foreman, Operations and Maintenance.

Escalators: Renovation of the six SUH Core escalators was completed Dec. 17 by the Schindler Haughton Elevator Co. of San Francisco. Work had begun in June, 1982. Each unit was dismantled, completely cleaned, and closely inspected. All internal parts were either overhauled or replaced. Drive chains were replaced on all units.

New vulcanized rubber handrails, equipped with directional markings, were installed, and foot lighting was reactivated at the bottom and top of each escalator to aid visually impaired patients and Hospital staff.

A contract has been established with the renovating firm for the routine performance of bimonthly maintenance. Aside from some initial squeaking, due to stretching and "seating" of the handrails, the units are performing smoothly.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard call 497-6389.

WEDNESDAY, JANUARY 12

Dept. of Structural Biology Seminar: "Splicing of the Ribosomal RNA Precursor of Tetrahymena: RNA Recombination Directed by a Ribosyme"—Dr. Thomas Cech (of Univ. of Colorado at Boulder). Noon, M114.

Seminar on Electronics in Medicine: "Image Processing in Reading Aids for the Visually Impaired"—Dr. Sally Wood (Stanford and Palo Alto Veterans Administration Medical Centers). 4:15 p.m., McCullough building (main campus), room 134.

Basic Science Research Colloquium: "Mechanism of Sensitization of Tumor Cells to Alkylating Agents by Nitroimidazoles"—Dr. J. Martin Brown. 5 p.m., Fairchild Auditorium.

Div. of Hematology Conference: "The Control of Migration and Tissue Distribution of Lymphocytes"—Eugene Butcher, Ph.D. Noon, S102d.

Dept. of Clinical Social Work Inservice Education Program Part I: "Couples Therapy"—Cleo Eulau, L.C.S.W. 8:30 to 10 a.m., TF122-C (Psychiatry Bldg.) Parts II and III to be held **Jan. 19 and 26.**

THURSDAY, JANUARY 13

Dept. of Pharmacology: "Actions and Interactions of the Receptors for Insulin and the Insulin-Like Growth Factors"—Dr. Michael Czech (of Univ. of Massachusetts Medical Center). 4:15 p.m., Pharmacology Library R358.

FRIDAY, JANUARY 14

SMASH Lecture: "Interferon Cloned—And Then What?"—Dr. Thomas Merigan. 4:30 p.m., Fairchild Auditorium.

Dept. of Gynecology and Obstetrics Grand Rounds: "Infertility—The Male Factor"—Dr. Robert Kessler. 8 a.m., A336.

Dept. of Pediatrics Grand Rounds: "Foreign Bodies of the Eye in Children"—Drs. Frederick Lloyd, Susan Ryu, and Edwin Baldrey. 8 a.m., M106.

MONDAY, JANUARY 17

Dept. of Cardiology John Kent Lewis Memorial Lecture: "Age Associated Alterations in Cardiac Function and Exercise Response"—Dr. Myron Weisfeldt (of Johns Hopkins University). 5 p.m., Fairchild Auditorium.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827. or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action*

Exempt

29677-JB (JCC:7650) CUSTODIAN WKG SUPVR: 7:30-4; supv the cleaning, training & other duties of custodians; create & maintain a clean, safe, home-like atmosphere for residents; check daily arrival & departure time of each custodian; maintain a daily check of bldgs/grounds & promptly report security, damages, maintenance & housekeeping problems to approp offc; submit monthly report; order supplies; attend approp classes; handle all emergencies at local level; when short of custodial help, perform needed work; QUALIFICATIONS: good supvry skills; demonstrated admin skills; report writing, attendance records & memos; excel commu skills a must; ability to acquire exp & knowl regarding employee relations & USW contract.; S09; $1632.

33197-LL (JCC:5596) LIFE SCI RES ASST II: Maintain cell lines, carry out radioimmunoassay, Elisa assay, T-cell proliferation assay; measure receptor w/ radiometric & morphometric tech; prep & purify protiens fr cell membranes; prep & maintain monoclonal antibodies; design & analyze experiments involving immunotherapy of autoimmune, neurologic diseases; QUALIFICATIONS: bachelor of Sci or equiv exp w/ specific training in biochemistry & immunology; should have significant exp or training in above techniques.; C06; $1854-2312.

30042-AW (JCC:7542) FACIL ENGINEER/COORD III: Fixed term 1/1/83-6/30/85; Assoc Cogeneration Engineer will perform engrg & economic analyses of alternative thermodynamic & electrical designs for a cogeneration plant; respon for proj modeling using Educom EFPM sys; prep & review documents & specifications relating to design, construc & operation of a cogeneration plant; asst in coord work of outside design engrs & consultants; also asst in field operations & inspection activities in coord w/ construc mgr; QUALIFICATIONS: an engrg or an engrg related degree & either a degree in engrg economy or substantial exp & demonstration of knowl in engrg economy analyses; familiarity & exp in modeling using EFPM sys; prior exp of at least 4 yrs working w/ congeneration projs, particularly utilizing gas turbines & waste heat recovery sys or alternatively w/ steam power generating facilities, performing feasibility studies, program planning, design studies & specification writing.; C08; $2464-3139.

25592-VW (JCC:8880) MISC PROFESSIONAL: Respon for writing & administering support for all aspects of state & federal gov't relations; administering a legislative bill serv for state legislation; establishing & maintaining an effective sys for identifying & following bills in Congress & policy initiatives in federal Executive Branch; reading source literature for state & federal issues, then analyzing, summarizing & recommending action on pertinent issues; drafting letters, testimony & other mat'ls; QUALIFICATIONS: knowl of federal & state legislative or policy-making processes essential; rapid reading & comprehension skills nec; excel writing skills; good English grammar, punctuation, spelling & syntax required.; C06; $1854-2312.

SLAC

94656-JM (JCC:1070) Mechanical Engr: Mechanical design & analysis of components & sys for linear collider project involving stress, heat transfer, vibrations, vacuum & cryogenics; coord fabrication, procuremt, assembly & installation of components & sys; supv designers & drafters; BSME or equiv; sevl yrs engrg design & analysis exp; knowl of mech design, stress analysis & shop practice reqd; familiarity w/ computer aided design, vibration analysis, heat transfer analysis & cryogenics desired; $2500-3000; apply at SLAC (854-3300, ext. 2353)

95082-JM (JCC:1070) Mechanical Engr: Conceptual design & tech implementation of linear collider alignment sys in collaboration w/ physicist; maintenance of monument sys in accelerator & storage ring tunnels & on surface & their inter-connection; coord of lab wide alignment requiremts of experimental physicists, engrs & designers; MS or equiv; sevl yrs exp in geodesy, metrology, surveying or closely related field w/ emphasis on geodesy; knowl of statistics; exp w/ use of computers & computer programming; familiarity w/ mech engrg & design functions; $2600-3400; apply at SLAC (854-3300, ext. 2353)

94653-JM (JCC:1070) Mechanical Engr: Design, analyze, construct, install, tst, maintain & improve large experimental eqpt for use in high energy physics res program; supv engrs, designers, draftspersons & technicians; asst w/ preliminary design & cost estimation; BSME or equiv; extensive mech engrg & design exp desired; exp in proj planning, budgeting, scheduling & supvn nec; knowl of mech design; stress analysis & shop practice reqd; familiarity w/ computer aided design tech, high vacuum design, electromagnet design, heat transfer analysis & cryogenics desired; $3000-3800; apply at SLAC (854-3300, ext. 2353)

Carpools

Ride needed SF-Stanford-SF Glen Park/Diamond Heights. Call Brandt, 7-1171.

Join existing carpool. Leaves Homestead and Foothill Expressway to Stanford. M-F, 8-5. Call Jeannette, 7-9627.

I'm looking for a carpool between S.F. and Stanford (preferably from the Haight-Ashbury) 4-5 days/week, approx. 9-5. Please call Nora at 431-9649 eves.

Looking for two persons to join a Mission Noe Valley-Stanford Univ. carpool. M-F, 8-5. Call John, 821-1665, or Yinon, 431-0951.

Ride or form a carpool from Fremont to Stanford. M-F, 8-5. Call Evelyn, 7-1555.

Bargaining unit

44327-TC (JCC:5736) TISSUE TECH II: TMS Unit; 7:30-4; alternate Tues-Sat; cutting 3-5 micron sections of paraffin embedded tissue incl lymph node, spleen, liver, & kidney biopsies w/ a high degree of skill & speed; perform routine H&E & special stains; embedding, coverslipping, & labeling surgical specimens; lab bookkeeping, other misc histology lab duties such as knife sharpening, solution preparation, etc; QUALIFICATIONS: ASCP in Histology preferred (not required); exp as active HistoTech; skills in high quality sectioning w/ speed; ability to commu approp w/ staff & pathologists; work some holidays & wkends.; A30; $ 9.97.

36289-JB (JCC:6604) SR S&E TECH - ELECTRO MEC: TMS Unit; some shift work; asst experimenters in installing experimental apparatus into x-ray areas & ultrahigh vacuum beam lines; respon for radiation safety & radiation safety interlocks; operate ultraviolet & x-ray beam line & computer driven monochromators, trouble-shoot PDP-11 computer sys, radiation protection sys, & vacuum control sys; QUALIFICATIONS: 5-8 yrs exp in an experimental lab or edu'l bkground in physic equivalency; specialized skill in vacuum, electrical, mechanical or computer technology.; A34; $10.97.

36288-JB (JCC:6612) PR S&E TECH - ELECTRO MEC: TMS Unit; undertake projs relating to synchrotron radiation beam lines & ultra high vacuum chambers & components, w/ direct respon for satisfactory & timely completion; set up, test, bakeout, vent, & interconnecting of vacuum subsystems to a larger sys such as beam line; good, accurate record keeping essential; guide users & staff in setting up & performing experiments, w/ emphasis on proper UHV tech, sound tech judgments, & safety; arrange procurements, coord shop fabrications & plan work of technicians; work odd hrs when proj needs; QUALIFICATIONS: 5-7 yrs' exp w/ UHV sys & components w/ thorough knowl of vacuum sci & technology; able to work closely w/ others of very diverse bkgrounds; able to read, understand & make engrg drawings; knowl of machine shop practices; able to design & fabricate small tools or components; thorough working & understanding knowl of helium mass spectrometer leak detectors & quadropole residual gas analyzer w/ subsequent data interpretation.; A39; $12.39.

33386-TC (JCC:8890) MISC TECHNICIAN: TMS Unit; 8:30-5:30; work w/ a metal cutting contour saw, contour sawing thick lead shielding blocks; recycle lead by melting & froming blanks; cut styrofoam moulds accurately w/ hot wire cutter, & pour low melting alloy into these moulds; direct contact w/ personnel preparing X-ray films; making shielding blocks fr marked X-ray film; record-keeping involved for patients scheduled treatment time; QUALIFICATIONS: make program run smoothly; work safely w/ saw & molten lead; keeping eqpt neat & in order; metal shop exp required.; A18; $ 7.50.

15123-JB (JCC:8816) PATROL OFFICER: TMS Unit; shift work (4-10 plan); enforce state & county ordinances; effectuate arrests; able to physically control violent persons; exercise good judgment; self-control in discharge of their duties; perform crime prevention & public relations programs; involves considerable overtime & shift work; able to write involved investigations reports & conduct follow-up; QUALIFICATIONS: 4 yr degree fr accredited college or equiv combination of edu & exp; completion of an accredited P.O.S.T. Basic Peace Officers Academy helpful; min age 21 yrs; weight proportional to height; vision 20/100 correctable to 20/30 each eye w/ normal color vision; good physical condition (must pass agility test); valid Calif drivers license.; P03; $11.24.

15121-JB (JCC:8816) PATROL OFFICER: TMS Unit; shift work (4-10 plan); enforce state & county ordinances; effectuate arrests; able to physically control violent persons; exercise good judgment; self-control in discharge of their duties; perform crime prevention & public relations programs; involves considerable overtime & shift work; able to write involved investigations reports & conduct follow-up; QUALIFICATIONS: 4 yr degree fr accredited college or equiv combination of edu & exp; completion of an accredited P.O.S.T. Basic Peace Officers Academy helpful; min age 21 yrs; weight proportional to height; vision 20/100 correctable to 20/30 each eye w/ normal color vision; good physical condition (must pass agility test); valid Calif drivers license.; P03; $11.24.

15120-JB (JCC:8816) PATROL OFFICER: TMS Unit; shift work (4-10 plan); enforce state & county ordinances; effectuate arrests; able to physically control violent persons; exercise good judgment; self-control in discharge of their duties; perform crime prevention & public relations programs; involves considerable overtime & shift work; able to write involved investigations reports & conduct follow-up; QUALIFICATIONS: 4 yr degree fr accredited college or equiv combination of edu & exp; completion of an accredited P.O.S.T. Basic Peace Officers Academy helpful; min age 21 yrs; weight proportional to height; vision 20/100 correctable to 20/30 each eye w/ normal color vision; good physical condition (must pass agility test); valid Calif drivers license.; P03; $11.24.

15122-JB (JCC:8816) PATROL OFFICER: TMS Unit; shift work (4-10 plan); enforce state & county ordinances; effectuate arrests; able to physically control violent persons; exercise good judgment; self-control in discharge of their duties; perform crime prevention & public relations programs; involves considerable overtime & shift work; able to write involved investigations reports & conduct follow-up; QUALIFICATIONS: 4 yr degree fr accredited college or equiv combination of edu & exp; completion of an accredited P.O.S.T. Basic Peace Officers Academy helpful; min age 21 yrs; weight proportional to height; vision 20/100 correctable to 20/30 each eye w/ normal color vision; good physical condition (must pass agility test); valid Calif drivers license.; P03; $11.24.

Nonexempt

31426-PM (JCC:2078) ADMIN ASST I (N): Respon for operations & supvn of a complex & intricate data entry operation for Faculty Practice Plan; prov data entry functions for posting of charges, adjmts, cash, & master record informa; add'l respon relate to control function of batch balancing in MRI's; work closely w/ registration, admitting, dept mgrs, cash ID, as well as other FPP operations; work w/ Univ Controllers on stop pay checks; prep periodic reports for Asst. Dir, etc; QUALIFICATIONS: posses broad working knowl of physician billing; must have basic understanding of principles of mgmt & supvn related to a professional practice offc setting; good knowl of cash acctg controls & procedures; min 3 yrs exp in a health care position; have analytical & problem solving skills as well as the ability to work & commu w/ people both w/in & outside areas of respon; contact: Mike Bass, A-156 Med Ctr, 497-5888.; B16; $1593-1671.

23596-BP (JCC:2562) SECRETARY III: Prov full range of sec'l serv to Dept Chairman; interface w/ dept faculty, staff, students & w/ other univ staff in various offcs; arrange conferences & mtgs; receive & screen all calls & visitors; open Chairman's mail; typ course mat'ls; prep drafts & final versions of manuscripts, res proposals & annual reports, using variety of text manipulation sys; make travel arrangements & prep expense reports; reconcile monthly expenditure statements; prep fund availability projections, etc; QUALIFICATIONS: typ 65; s/h 100 desirable but not required; approx 2 yrs or more sec'l exp; good commu skills; good English usage; text-editing exp or willingness to learn; knowl of Univ procedures helpful; send appl/resume to Marlie Yearwood, Bldg 460, Room 256.; B14; $1440-1514.

6824-PM (JCC:2462) OFFICE ASST III: 50%; 9-1; typ corresp, manuscripts & lecture notes for courses in Physiology & Immunology; maintain files, arrange appts & schedule for professor; answer phone; sort mail; maintain supplies, bulletin board, copy eqpt; xeroxing; simple record keeping; QUALIFICATIONS: typ 55; tech typing & good typing skills (accurate more important than speed); s/h desirable; send appl/resume to Gweneth Wood, Physiology Bldg Rm 2.; B11; $623-655.

26092-PM (JCC:2618) LEGAL SECY SPEC: Asst in providing legal sec'l support to 3 attorneys & 2 legal assistants; duties incl detailed & accurate prep of legal documents in draft & final form; monitor attorney work flow, track progress of projs & legal matters, maintain litigation calendar, tickler files, etc; asst attorneys in locating & researching mat'ls in law lib and/or complex legal filing sys; answer calls; sort mail; schedule mtgs & appts; make travel arrangements, etc; QUALIFICATIONS: typ 70; 2-3 yrs legal secty exp preferred; equiv exp in highly responsible secty position will be considered; ability to manage work flow associated w/ large volume of legal projs; excel organizational, interpersonal & commu skills; know/learn Wang word processing eqpt; contact: Pat Chor, Bldg 170, Room 205 or P.O.Box N, Stanford, CA 94305.; B16; $1593-1671.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Jan. 18, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

28546-BP (JCC:2562) SECRETARY III: Full sec'l serv to 2 Electrical Engrg professors, res associates & visiting scholars; prep of res contract proposals & budgets; monitoring & projection of spending on current contracts & assignment of expenditures between various contracts; computer prep of tech reports & manuscripts involving high degree of skill in editing & formatting of graphics & text; independence in composing responses to inquiries; QUALIFICATIONS: knowl of text formatting sys available on SAIL & SCORE computers highly desirable; editorial skill ability essential; typ 65; knowl of Univ policies & regulations; requires good English usage & spelling; send appl/resume to J. Hennessy/M. Lieberman, ERL 443B.; B14; $1440-1514.

30741-TC (JCC:2952) GOLF SPORTS ASST I: Work at Stanford Golf Driving Range handling daily functions related to golf play; open & close Driving Range daily; handle sales of balls, sports eqpt, cash register sales; customer relations, phones, answer questions; maintain inventory of merchandise; order supply of balls, clothing, shoes & golf eqpt; keep track of inventory; asst in training 16 driving range hrly personnel ; QUALIFICATIONS: prev golf course exp indicating familiarity w/ golf course regulations & rules of US Golf Assoc; thorough knowl of game of golf & its related eqpt; prev working exp at a golf course, a pro shop—municipal or private; excel commu skills; must have flexibility to accommodate early morning & early evening work.; B09; $1130-1189.

27030-BP (JCC:2554) SECRETARY II: Genl sec'l duties for Dir of Class Agents, Reunion Giving & Student Development programs; frequent interactions w/ other staff members & w/ student & alumni volunteers; asst w/ telephone & personal solicitations & will take increasing respon for prep copy & coord an annual series of mailings to some 60,000 alumni; QUALIFICATIONS: Typ 55-60; excel commu skills; demonstrated organizational skills, reliability & accuracy essential; rapid, accurate typing nec & prior word processing exp desirable (particularly exp w/ Lexitron sys); editorial skills & ability to compose corresp for review will be of value; send appl/resum to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B11; $1246-1310.

Senate discusses future of computing; 130 H & S faculty training on IMB-PCs

continued from page 1

6) Much of the central University administrative data will be on-line and accessible from workstations, terminals or office information systems;

7) The catalogs of the Stanford libraries and of the Library of Congress will be on the institution's central computing node, accessible by individuals from their workstations, and there will be effective access to the library catalogs of the country's major research universities in similar fashion;

8) Use and analysis of large databanks, such as census data, will be an integral part of social science research and teaching;

9) In student computing, most if not all of what is now supported by large mainframe computers will be done on individually owned microcomputers as mainframes evolve toward providing more special purpose services.

Humanities project

Michael Carter, CIT's director of instruction and research information systems, said 130 professors in the School of Humanities and Sciences soon will begin training on IBM personal computers in the Tiro project, funded in part by a grant from the Pew Foundation.

"Personal computers are good devices for learning information technology—people learn faster than on a big machine," he commented. After learning how to use IBM-PCs as word processors, faculty will be encourgaed to do library searches, transmission, and printing.

William Yundt, CIT's director of network development, said a prototype network will be developed for the IBM-PCs "as this explosion continues."

Over the next two years, the Stanford University Network—called SUNet—will become operational. This will provide a less expensive means of connecting computers than telephone lines and will permit the transmission of video signals as well. Current capital cost estimates range from $3.5 to $5.5 million.

"Almost any technical solution is better than what we now have," Yundt told the Senate. Brown, Cornell, Carnegie Mellon, and Arizona are among the universities which have either installed or are planning broad band, coaxial systems, he said. SUNet started five years ago in the Stanford Computer Science Department.

Prof. James R. Miller of the Graduate School of Business, head of the Academic Council Committee on Computers and Information Technology, said instructional computing has been "somewhat underplayed" in importance at Stanford in comparison with such institutions as Harvard. Yale, and Dartmouth.

Planning expansion

While Stanford should not try to "out Carnegie" Carnegie Mellon University, it should seek a "clearly respectable" position and "plan future capacity expansion" in computers rather than reacting to crises.

Contrary to public impression, Shaw said Carnegie is "not giving computers to students." He said CMU is engaged in "a useful experiment" with "very exciting" possibilities which will "benefit Stanford."

Compared to Stanford, CMU is "a relatively homogeneous university" capable of achieving a "single image solution" of its computer needs.

Miller said his committee is currently studying the appropriate level of "computer literacy" for Stanford and tentatively concluded that "Stanford is not the place for one solution."

The needs of scientists and non-scientists differ, he explained. "It would be silly to impose the requirements of one—or lack of them—on the other."

Shaw said he didn't know of any university providing all its students with "free" computers. But he emphasized that "we're working closely" with Carnegie Mellon.

Proliferating processors

During the past three years, more than 150 word processing and office information systems have been acquired by University departments. "The technology has evolved to the point where the purchase of devices that provide only word processing support is no longer an effective alternative," the CIT report said.

David Ernst, CIT's director of administrative information systems, said between 50 and 75 departments now seek help in buying such systems annually.

Prof. Kenneth Melmon, medicine, expressed concern that "people are going off by themselves (and acquiring computer systems) without understanding the consequences." President Donald Kennedy said it would be "outlandish" for the University to permit purchase of equipment that could not at least become compatible with others through a network.

CIT Deputy Director Michael Roberts indicated more than 2,000 faculty, staff and students now use CIT's central services. The IBM 3081 central node in Forsythe hall in a typical month will execute nearly a quarter million individual jobs and interactive terminal sessions and print more than three million pages of paper. The central node includes more than 50 billion characters of immediately accessible stored data and more than 14,000 miles of magnetic tape storage.

Shaw said the "dominant trend" clearly is to provide more computer services close to the individual user and then link users to networks. But the computer explosion is so rapid that there still will be growth in central services.

Budget trimmed

CIT trimmed its budget base about two percent this year and is currently studying additional cuts of up to six percent, he indicated. Its current staff totals 220. Its total budget is approximately $19 million, of which 94 percent goes for services, while six percent is invested in SUNet, the microcomputer program, and the departmental information systems program.

Prof. Carl Degler, history, expressed concern that "we're being sold a bill of goods," particularly on computer access to library resources. He also noted that his department's IBMs were incompatible with fairly recently purchased Xerox equipment.

Shaw replied that the forecast was put up to "test its reality" with the faculty and others. He acknowledged that whole libraries won't be on computer, "but we'll have a piece of it in September."

It's important to know if the 80 percent forecast for faculty computer workstations appears exceptionally wide of the mark, since the networking effort assumes this technology will become very widespread.

Humanities and Sciences Dean Norman Wessells credited Shaw and Carter with the "magnificent idea" of the Tiro project and helping obtain $500,000 in gift support for it. "All the humanities faculty owe (them) a debt of gratitude," he said.

—**Bob Beyers**

Rental housing

HOUSING AVAILABLE

□ **Beg. Feb. 1, '83:** SHARE 2BR Oak Creek apt w/prof. woman. Tennis, pools, etc. Call Cindy, 326-6660 or lv. message, will return call.

□ **NOW:** SHARE hse w/prof. female. 2BR/2BA, W/D. Interest in solar proj, design, landscaping. Female pref.; mature male considered. Privacy for $400. Write: J. Powell, Box 11425, Stanf. 94305 or call & lv. msge for Stanf. sublet, 494-2611.

□ **Beg. Feb. 1, '83:** Unfurn. spacious hse, 4BR/2BA, frig, stove, DW, w/w carpet, FR, frpl., fenced yd, stor. shed, carport. No pets. So. Palo Alto. 10 min. to Stanf. $1050/mo. + util. Call 329-0797.

□ **Beg. Mar. 1, '83:** Furn. 2BR/2BA apt. w/spectac. canyon view. W/D, pool, tennis, 12 min. to Stanf. Avail. 7 to 9 mo. $900/mo. Call Gay Morris, 326-1200 (day), (415) 591-7085 (eve).

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly Available:** 1 & 2BR furn. & unfurn. apts & twnhses in Palo Alto & Menlo Pk, in good nghbrhds & close to campus. Also 3BR/2BA hses. $525 to $800/mo. Call Shirley at 493-2321 or Jane, (415) 968-4957.

□ **Mid-Feb. to Aug. '83:** Furn. hse, Palo Alto 2BR/2BA, very nr. Stanf. Nonsmokers, no pets. $850/mo. + elec. & gas. Call 328-0179.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse., 4BR/3½BA, study, library, DR, frpl, pool, view, acre. $1700/mo. incl. grdnr, pool serv. Call (415) 327-5204 or 497-4732 (day).

□ **April 1 to June 15, '83 (flex):** Fully furn. hse. 4BR/2BA, AEK, den, W/D, hot tub on deck. Children ok. Incl. grdnr, swim/tennis club mbshp (across st.). 3 mi. to Stanf. On bus rte. Photos avail. $1000/mo. Call 494-6492.

□ **June to Oct. 1, '83:** Furn. campus hse, 4BR/2BA, + cottage BR. 4 carport, auto sprinklers, full solar hot water. $1200/mo. incl. gardener, water. Gas & elec. xtra. Deposit + 1st mo. rent req. Call 858-3941 (day), 327-5790 (eve).

□ **Jan. 15 thru Dec. 31, '83:** Furn. contemp. hse close to campus ctr, 2000 sq. ft. 2BR/2BA, 2 studies (can convert to BR), FR, frpl, piano, lush atrium, wooded lot. $1350/mo. incl. gardener, water. Call 857-0479 or 497-9477 (day).

□ **Feb. thru Aug. or 1 yr. lease:** Unique contemp. hillside hse. fully furn., 3BR/3BA. Bay view, redwood & glass. Rec. rm w/bar, hot tub, decks. $2000/mo. Call Sylvia Nobleman, (415) 854-7140.

□ **Now:** Furn. rm, w/ktchn priv, DW, W/D, share LR w/frpl, garden, gar. So. Palo Alto hse. $275/mo. + 1/3 util. Call Rose, 856-3792.

□ **NOW:** Prof. male seeks M/F rmmate to share lge 3BR/2BA hse in Foster City. LR/DR, atrium, frpl, skylights & more. See to appreciate, good location. $325/mo. + ½ util. Call John, (415) 572-9850 after 7 pm.

□ **Beg. Feb. 1, '83:** Studio in rear of Menlo Pk hse, fully furn. & equipped. $325/mo. incl. all util (xcept phone) wkly clean., linen change. Nonsmoker, no pets. Call Dr. Lenkey, 322-3717.

HOUSING NEEDED

□ **NOW:** Reliable Stanf. staff seeks hsesit. Pref. long term, 3 to 6 mo. but will consider shorter per. Will give excellent care to hse, pets, plants, yd. Loc. refs. Call Donna, 497-3967 (day).

□ **Sept. '83 thru summer '84:** Visit Prof, Operations Rsrch seeks 3-4BR hse on campus for self, wife & 2 girls. Stanf. refs. Write A. Tucker, Applied Math, SUNY, Stony Brook, NY 11794 or call eves (516) 751-3283.

□ **NOW:** Esc. Vil. family (3) seeks long term 2 or 3BR hse or apt. rental in Jordan Sch. Dist. Refs. avail. Call Davidson, 857-0390.

□ **Beg. Feb. 1, '83:** Postdoc at Med. Ctr., wife, 2 children require 2BR apt. or hse. within bike dist. of Stanf. for 10 mos. Local refs. Call Dr. Maze, (415) 848-3938 (day), 851-2531 (eve).

□ **Feb. to Sept. '83:** Visit. prof. seeks 3BR apt. or hse. on or nr campus. Poss. exchng for lovely flat nr. Tel-Aviv Univ. Call Margret, 497-3910 (day).

□ **Jan. 17 to 28, '83:** Resp. woman w/17-yr-old son seeks temp. hsng before joining husband in Colo. Will gladly care for pets. Call (415) 327-8615.

□ **Spring Qtr '83:** Visit. Eng. prof, wife, 2 children seek fully furn. & equipped 2/3BR hse or apt. Reasonable cost, will hsesit or help. Nonsmokers. Call 493-1059 or 497-2547 (day), lv. messages for Locke.

□ **End Mar. to end June '83:** Visit. prof, wife, nonsmokers, no pets, no children, seek campus hsesit. Call 497-1745 (day).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Luis Gomez to give Evans-Wentz lecture series on three Buddhist creeds

Luis O. Gomez, professor of Buddhist studies at the University of Michigan, will present the 1982-83 Evans-Wentz Lecture series at Stanford on the topic "Three Buddhist Creeds: Approaches to the Interpretation of Buddhist Dogmatic Formulae."

Cosponsored by the Department of Religious Studies and the Center for East Asian Studies, the three lectures will be held at 8 p.m. Jan. 17, 18, and 20, in the Tresidder Memorial Union Lounge.

The lectures will examine the interpretation of early Buddhist creeds and will clarify problems in understanding these texts in their literary and historical contexts.

Gomez will explore the complexities in the "simple" and "basic" creeds of Buddhism and challenge the assumption that any schematic formulation holds the key to understanding the "essence" of religion.

The first lecture, on Monday, Jan. 17, is entitled: "Variant Forms and Interpretations of the Formula of Causality"; the second, on Tuesday, Jan. 18, "The Logic of the Three Marks"; and the final, on Thursday, Jan. 20, "The Relation of the Four Noble Truths to Other Dogmatic Formulae of Buddhism."

Each will illustrate one methodological approach: respectively, the dating of variant forms of one creed; the internal logic of a dogmatic formula; and the comparison of different formulae.

Gomez is chairman of the Department of Far Eastern Languages and Literatures at Michigan. Born in Guayamilla, Puerto Rico, in 1943, he received the B.A. from the University of Puerto Rico in 1963 and the Ph.D. from Yale University in 1967.

His major teaching and research interests are in the development of Mahayana Buddhism in India and the transmission of Buddhism to Tibet and China. He is the author of numerous articles and books, including a recently published Spanish translation of the *Bodhicaryayatara*.

He is coeditor, with Hiram W. Woodward, Jr., of *Barabudur: History and Significance of a Buddhist Monument* (Berkeley Buddhist Studies, 1981). A major study of the *Bhavanakrama* by Kamalasila, dealing with famous debates between Indian and Chinese Buddhist factions in Tibet in the late eighth century, is forthcoming.

Gomez has served as president of the North American Society of Buddhist Studies (1980-82) and has been on the editorial board of the Berkeley Buddhist Studies Series since 1976. He is a member of the American Oriental Society, the American Academy of Religion, the Association for Asian Studies, Asociacion Espanola de Orientalistas, and Asociacion Latino-Americana de Estudios Afroasiaticos.

The 1982-83 Evans-Wentz Lectures are the 15th in an annual series established in 1969 from a bequest by Walter Y. Evans-Wentz (Stanford, AB '06, AM '07; the University of Rennes, DLitt '08; and Oxford, BSc '09, DSc '31), who traveled extensively throughout the world, spent several years in Tibet where he became a Buddhist monk, and wrote or edited several books on Tibetan religion.



Thursday lunchtime tours at the Museum will feature print techniques during the month of January. This is a Goya aquatint from the famous *Capricbos* published in 1799.

Lunch hour tours of Stanford Museum

A different kind of lunch hour can be had three days a week, by joining a docent tour at the Stanford Museum.

Committee for Art docents will conduct tours at 12:15 p.m. of the permanent collection on Tuesdays, the Rodin collection on Wednesdays, and the print collection on Thursdays.

Other lunch hour tours on selected topics will also be scheduled for Tuesdays and Wednesdays. Weekend tours at 2 p.m. feature the permanent collection on Sundays and the Rodin collection on Saturdays.

Docent tours for private groups may be arranged by calling 497-3469.

Currently on exhibit at the Art Gallery, next to Hoover Tower, are some recent acquisitions of the Gallery and Museum. Both buildings are open 10 a.m.-5 p.m. Tuesday through Friday and 1-5 p.m. weekends (closed Mondays).

All exhibits and tours are free of charge.

Gandolfi plans piano recital Jan. 21

Jodi Gandolfi, newly appointed lecturer in piano at Stanford, will give a recital at 8 p.m. Friday, Jan. 21, in Dinkelspiel Auditorium.

Her program will begin with Haydn's *Sonata in C minor*. Composed in 1771, the sonata is a daring work in the expressive *Sturm und Drang* style. A group of romantic character pieces by Chopin will follow: two etudes, *Berceuse*, opus 57—a florid lullaby, and the *Ballade in G minor*, opus 23.

Gandolfi will conclude her recital with Schubert's "Wanderer" Fantasy, which is based on his well-known song *The Wanderer*, opus 4. This large-scale work served as an important model for later romantic composers.

Gandolfi received her Doctor of Music Arts degree from Stanford last year. Her primary teacher was Adolph Baller. Her doctoral dissertation was a study of early 19th-century accompanied song based on holdings in Memorial Library's rare book collection.

Gandolfi received her B.A. summa cum laude from Cornell and her M.M. from the University of Wisconsin, Madison. She then studied piano, song accompaniment, and chamber music in Germany for two years under a Fulbright-Hayes grant.

Last year Gandolfi performed in New York, the Midwest, and California, and made radio recordings in Berlin and Bremen.

Tickets are $4 general admission, $2 students and senior citizens,

Hsu to lecture on Baroque music

John Hsu, virtuoso viola da gambist and professor of music at Cornell, will lecture at 4 p.m. Monday, Jan. 17, in Tresidder Small Lounge on "French Baroque Musical Rhetoric as seen through French Baroque Viol Technique." He will be a guest of Stanford's Music Department.

Hsu is the Old Dominion Foundation Professor of Humanities and Music at Cornell, where he has taught since 1955, and an artist-faculty member of the Aston Magna Foundation for Music. This quarter he is visiting artist-in-residence at UC-Davis.

Hsu is a graduate of the New England Conservatory of Music, which awarded him an honorary Doctor of Music degree in 1971. A specialist in French viol music, he is editor of the first modern edition of the complete instrumental works by Marin Marais and author of *A Handbook of French Baroque Viol Technique*.

Hsu's recordings by The Musical Heritage Society include the first complete recording of the five suites for viola da gamba by Antoine Forqueray, a series of five discs of *Pieces de viole* by Marais, Bach's three sonatas for viola da gamba and harpsichord, and two discs of Baryton trios by Haydn. Hsu has also recorded over 30 viola da gamba programs for European radio broadcasts.

Hsu's Jan. 17 free public lecture will deal with a few of the basic questions relating to the performance of French Baroque music in general; it will *not* be a lecture on viol playing for viol players.

Auditions set for *Maskarade* musical

Auditions for the spring quarter production of an original musical, *Maskarade*, will be held from 7 to 9 p.m. Tuesday and Wednesday, January 18-19 in Room 205 of Memorial Auditorium on the second floor in the back hall.

Callbacks are scheduled for 7 p.m. Thursday, Jan. 20.

Actors, singers, dancers, acrobats, and musicians are needed, especially those who can tumble, juggle, walk on stilts, or play a conga drum, banjo, or flute.

The production is jointly sponosred by the Department and Drama and the Committee on Black Performing Arts.

Maskarade is written by Prof. Sylvia Wynter of the African and Afro-American studies program and directed by Prof. Sandra L. Richards of the Drama Department, director of the committee on Black Performing Arts. Michael Britt is musical director with choreography by Halifu Osumare.

Set in Jamaica in the 1840s, the play concerns a young couple from the countryside who come to Kingston seeking jobs and recognition through the Jonkonnu festival, an event similar to the Mardi Gras in New Orleans or Carnival in Trinidad. Celebrated during the Christmas season, when slaves had finished harvesting sugar cane, it reversed normal social positions. People on the bottom of society could express their creativity and ambition through elaborate costuming, energetic dancing, parading in the streets and riotous merrymaking. A typical Jonkonnu parade included celebrants masked in cowheads, horseheads, and jack-of-the-greens reminiscent of the Yam Festivals of West Africa.

As customs evolved, servants would borrow from the white planters, incorporating into their presentations parts of Shakespearean plays with French set-girls, harlequin and clown characters. The festivities resulted in a combination of secular elements with sacred implications and incorporated the people's love of the traditional and sophisticated with the novel and the bawdy.

Because the tradition out of which Jonkonnu comes lends itself to a circular, open-air space, performances will be in the courtyard of the Old Union during afternoons of April 6-10 and 13-17. For further information, call 497-2576.

Black community programs celebrate King, poetry, films

King's birthday: rally, celebration planned Friday

The Black Community Services Center of Stanford has organized a week-long series of events celebrating Martin Luther King's birthday Jan. 15.

On Friday, Jan. 14, the Black Student Union will hold a noon rally in White Plaza. The African and Afro-American Studies program will sponsor a Martin Luther King commemorative program at 4 p.m. in Kresge Auditorium. *(Story is below).*

King's birthday itself will be observed at 7 p.m. Saturday, Jan. 15 in Terman Auditorium with a film, "Doubts and Certainties," a Stanford Gospel Choir presentation, and a talk by the Rev. Bill Calhoun of Wo'se Church, Oakland. This event is sponsored by the Black Liberation Month Committee

Further information may be obtained by calling (415) 497-1587 between 10 a.m. and 5 p.m. daily.

Born Jan. 15, 1929 King was the second black American to win the Nobel Peace Prize. Known as the "gentle warrior" for his nonviolent strategies in the struggle for civil rights, King received a popular, enthusiastic response when he spoke at Stanford in the early 1960s.



Ben Guillery, Herman Harper, and Larry Adams (l to r) in *Paul Robeson*

Guillory to portray Paul Robeson

The Stanford Committee on Black Performing Arts will present "Paul Robeson," a dramatic chronicle of the legendary singer's life for one performance only at 8 p.m. Sunday, Jan. 16, in Dinkelspiel Auditorium.

Tickets are $5 regular admission, $3 students and seniors, sold at the door.

Directed by UC-San Diego professor Luther James and featuring Bennet Guillory, the play was produced last season by the Berkeley Stage Company as part of its festival of extraordinary people.

Author Phillip Hayes Dean uses the device of an elderly Robeson reminiscing about his life to trace key events ranging from his admission to Rutgers University and selection as football's first black All-American in 1917, through his outspoken criticism of British colonialism and praise for a Russian society free of racism. It was this outspokeness which cost Robeson his passport and opportunity to present concerts abroad during the McCarthy era of the 1950s.

Bay Area critics have called actor Guillory virtually flawless. His earlier portrayal of Robeson in the documentary on House Un-American Activities, *Are You Now or Have You Ever Been?* won a Bay Area Critics Circle award for best supporting actor. Joining him in what is essentially a one-man show are accompanist Larry Adams and Herman Harper II, who plays a singing Robeson statue.



The Alma Trio: Adolph Baller, Andor Toth, and Gabor Rejto

Alma Trio concert slated Friday

The Alma Trio, ensemble-in-residence at Stanford, will present the third concert of its 1982-83 series at 8 p.m. Friday, Jan. 14, in Dinkelspiel Auditorium.

Violinist Andor Toth, cellist Gabor Rejto, and pianist Adolph Baller will open the program with Beethoven's Trio No. 6 in B-flat, Op. 97, the "Archduke."

The Alma Trio is well known, through concerts and recordings, for its interpretation of this work, which is perhaps the best known in all the trio literature.

The program will continue with its featured work, Ernest Bloch's Suite for Viola and Piano, as transcribed for cello and piano by Baller and edited by Rejto.

Baller's transcription was prompted by his conviction, after many performances of the original (1919) version, that the particularly rich, dark texture of the piano part would be better paired with the complementary tone of the cello.

In a conversation with Bloch's sister, Baller learned that the composer had considered making such a transcription for the same reason, but died before carrying out his plan.

Rejto and Baller have recorded their 1970 cello and piano version planned for this concert.

To conclude the program, the Trio will play the brilliant Trio in B Major, Op. 8, by Brahms.

Tickets are $4 general admission and $2 students or seniors. They may be purchased at the door or at Tresidder Ticket Office (497-4317).

Commemorative for King Friday

The Stanford Program on African and Afro-American Studies will sponsor the third annual service commemorating civil rights leader Rev. Martin Luther King, Jr. at 4 p.m. Friday, Jan. 14, in Kresge Auditorium.

January 15 marks what would have been Dr. King's 54th birthday. He was slain by an assassin April 4, 1968.

In honor of his life's work towards the goals of peace and dignity for all people, students and faculty will read selections from his writings and provide musical memories of his purpose in life.

Film festival slated weekly through February

A Saturday night series of films about black people all over the world, sponsored by Stanford University's Black Liberation Month Film Committee, will be shown weekly during the months of January and February.

Showings will be at 7 and 9 p.m. in Terman Auditorium, School of Engineering; admission is $1.50.

The Black Film Festival arose from a need for a closer and more critical examination of the portrayal of black people in film, and to overcome the lack of films by, about, and for black people.

The schedule is as follows:

Jan. 15: "Doubts and Certainties," a film exploring the life of the late Martin Luther King Jr.

Jan. 22: "Blue Collar," starring Richard Pryor and Yaphet Kotto.

Jan. 29: "Black Girl," by the renowned Senegalese filmmaker Sembene Ousmane.

Feb. 5: "The River Niger," starring Glynn Turman, who will be present at the showing.

Feb. 12: "The Harder They Come," a Jamaican film starring the popular reggae artist Jimmy Cliff.

Feb. 19: "Six Days in Soweto," about the 1976 struggle of South African black youth against apartheid.



Kamau

Kamau to read original poetry

Kamau, (Terry Shelton) will give a reading of his original poetry at 7:30 p.m. Wednesday, Jan. 12, in Ujamaa Lounge, Lagunita Court.

The reading is being sponsored by Ujamaa House and Onelove Productions, Kamau's self-created publishing company.

A 1980 Stanford graduate, Kamau was a resident of Ujamaa his freshman year. In 1981, he finished his first book of poetry, "Dancsinging" a collection of more than 40 poems dealing with subjects ranging from philosophy and culture to relationships and political consciousness.

Kamau has done several readings throughout the Bay Area, including spots on KZSU and KRE radio stations. He also has performed with the Kuumba Ensemble at Stanford. *Dancsinging* will be on sale at the reception which follows the reading.

Calendar

Calendar items should be delivered to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Jan. 12, to cover the week of Mon., Jan. 24 through Sun., Jan. 30.

Events must now be submitted on forms. Those wanting copies should call Events and Services, 497-2551.

LATE ANNOUNCEMENTS

Wed., Jan. 12. Latin American Studies Bag Lunch: "The Current Debt Crisis in Latin America" with Prof. Barbara Stallings, Univ. of Wisconsin. Noon. Bolivar House, 582 Alvarado Row.

Dept of Chemical Engineering Lecture: "The Phase-Change Behavior of Metal-Hydrogen Systems" by Prof. Carol K. Hall, Princeton Univ. 4:15 p.m. Chemical Engineering Conference Room, Stauffer III.

Black Alumni Speaker Series: "Black Health Professionals: Female and Male Perspectives." 6:30 p.m. Ujamaa Lounge.

Fri., Jan. 14. Applied Physics Lecture: Title TBA. Speaker is Dr. Michael Reeken, visiting the Mathematics Dept. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Sun., Jan. 16. The Lively Arts at Stanford Open Rehearsal: By the Musical Offering Chamber Ensemble. 12:30-1:30 p.m. Dinkelspiel Aud. Free.

MONDAY, JANUARY 17

Biological Sciences Dept. Seminar: "Evolution of Drosophila on the Newer Hawaiian Volcanoes" with Dr. Hampton L. Carson, Univ. of Hawaii at Manoa. 4:15 p.m. Room T-175, Herrin Hall. Open to the public.

Numerical Analysis Seminar: "A New Algorithm for Computing Matrix Pseudo Inverses" with Robert Schreiber, S.U. 4:15 p.m. Math 380C.

Stanford Film Society: "Top Hat" and "Christopher Strong." 7:30 p.m. Kresge Aud. $2.

Annual Evans-Wentz Lectures in Oriental Religions: "Various Forms and the Interpretations of the Formula of Causality" by Prof. Luis O. Gomez, Univ. of Michigan. First of three on the theme, "Three Buddhist Creeds: Approaches to the Interpretation of Buddhist Dogmatic Formulae." 8 p.m. Tresidder Union Lounge. Public cordially invited.

TUESDAY, JANUARY 18

The Lively Arts at Stanford/CROW Women in the Performing Arts Lecture Series: "Clara Schumann: Artist and Woman" by Nancy Reich, Dept. of Music, Manhattanville College. Noon. Terman Aud. Open to all.

I-Center Tuesday Lecture/Lunch Series: "Peculiarities of India's Development Experience" by Vis. Prof. Raj Krishna, Food Research Institute. Noon. I-Center. $2.50 includes hot lunch. Brown baggers welcome.

Office of Student Activities Workshop: "Publicity: Getting the Word Out with Efficiency and Impact." Focuses on practical tips for the design and implementation of a publicity campaign at Stanford." 4 p.m. International Center Assembly Room. Information at 497-3542.

CEAS Lecture: "Problems in the Contemporary Chinese Cinema" by Steve Horowitz, coordinator, San Francisco Film Festival. 4:15 p.m. room 238, Lou Henry Hoover Bldg. Open to all.

Solid Mechanics Special Seminar: "Statistical Fracture of Unidirectional Composites" S. L. Phoenix, prof. of mechanical and aero. engineering, Cornell Univ. 4:15 p.m. Durand Bldg., Room 450.

Applied Physics Dept. Lecture: "Applications of Nonlinear Optics, Planetary Atoms and Short Wave Length Coherent Light" with Dr. Richard Freeman, Bell Labs. 4:15 p.m. Applied Physics 200.

January Chinese Film Festival: "The Second Handshake" (1980). The dreams of two young scientists in love are frustrated when parental interference and Sino-American hostilities change the course of their lives. 7:30 p.m. Memorial Aud. $1.50 donation. (English subtitles.)

Annual Evans-Wentz Lectures in Oriental Religions: "The Logic of Three Marks." Second in a series of three on the theme, "Three Buddhist Creeds: Approaches to the Interpretation of Buddhist Dogmatic Formulae" by Prof. Luis O. Gomez, Univ. of Michigan. 8 p.m. Tresidder Union Lounge. Public cordially invited.

WEDNESDAY, JANUARY 19

Men's Rugby: Vs. St. Mary's. 3 p.m. Maloney Field.

Dept. of Chemical Engineering Lecture: "The Phase-Change Behavior of Metal-Hydrogen Systems" by Prof. Carol K. Hall, Princeton Univ. 4:15 p.m. Chemical Engineering Conference Room, Stauffer III.

Computer Systems Laboratory Seminar: "The Design of Low-Cost Peripherals for Personal Computers" with Dr. David Thornburg, Innovision, Los Altos, Calif. 4:15 p.m. Skilling Aud.

Basic Science Research Colloquium: "The Organization and Expression of the Mouse B_2—Microglobulin Gene" by Dr. Jane R. Parnes, Dept. of Medicine/Immunology. 5 p.m. Fairchild Aud.

Wrestling: Vs. San Francisco State. 7 p.m. Maples Pavilion.

Casa Italiana Lecture: "New Trends in Italian Design" by Italian architect Andrea Ponsi. 8 p.m. Casa Italiana , 562 Mayfield. Open to all.

THURSDAY, JANUARY 20

Condensed Matter Physics Seminar: "Organic Metals, Semiconductors and Superconductors" with C. B. Duke, Xerox Webster, N.Y. 4:15 p.m. Applied Physics 200.

Solid Mechanics Seminar: "A Model of the Curing Process of Epoxy Matrix Composites" with Prof. George S. Springer, Univ. of Michigan. 4:15 p.m. Skilling Aud.

History Dept. Lecture: "A Lily Ungilded: Martin Luther, the B.V.M. and the Saints" by Peter Newman Brooks, Downing College, Cambridge Univ. 4:15 p.m. History Corner, Bldg. 200, Room 205. Public cordially invited.

CREES Lecture: "The Struggle Against Stalinism in European Culture: The Contribution of Miroslav Krleza" by Prof. Predrag Matvejevic, Dept. of Literature, Univ. of Zagrab. 4:15 p.m. Polich Room, Lou Henry Hoover Bldg. Public invited.

Women's Basketball: Vs. Arizona State. 5:45 p.m. Maples Pavilion. $2 adult, $1 child.

Stanford Student Jewish Appeal "An Evening of Jewish Humor (Oy!)" with Prof. John Felstiner, English Dept. Campaign, reception and refreshments follow. 7:30 p.m. History Corner, Room 2. Open to all.

Grads in Common Presents: "Coping with the Information Explosion" with panel members John McCarthy, Barbara Gelpi, Paul Kaufman, Juliana Lavendal. First in a series of winter quarter forums to bring together faculty from the humanities and sciences to discuss topics of interest and cross discipline. 3:30 p.m. Tresidder 281. Graduate students urged to attend. Open to the public.

Bechtel International Center Other Cultures Film Series: Second part of Australian mini-film festival. "Passionate Industry" continues the covering of film making, 1920-30; and "'Where Dead Men Lie" portrays a tale by an Australian literary figure, Henry Lawson. 7:30 p.m. I-Center. 75 cent donation requested. Australian beer and wine tasting in the intermission.

Annual Evans-Wentz Lectures in Oriental Religions: "The Relation of the Four Noble Truths to other Dogmatic Formulae of Buddhism." 8 p.m. Tresidder Union Lounge. Public cordially invited. (Final in a series of three lectures.)

Men's Basketball: Vs. USC. 8 p.m. Maples Pavilion. Ticket information at 497-1021.

FRIDAY, JANUARY 21

Applied Mathematics Lecture: "The variety of solutions of elastic-plastic problems" by prof. David Kinderlehrer, Univ. of Minnesota. 3:15 p.m. Room 380C (Mathematics Corner Basement).

Materials Science and Engineering Dept. Colloquium: "Stress and Texture Measurements" with Prof. Gordon S. Kino, S.U. 3:30 p.m. Peterson Laboratory, Room 550A.

Fencing: Vs. CSU-Northridge. 4 p.m. Roble Gym.

Music Dept. Concert: Jodi Gandolfi, piano. Haydn—Sonata in C minor; Chopin—Two Etudes, Berceuse, Ballade in G minor; Schubert—Fantasy in C, "Wanderer." 8 p.m. Dinkelspiel Aud. $4/$2.

STARTS Great Directors Film Series: "Hapax Legomena" by the American avant-garde film maker, Hollis Frampton. In three parts, obliquely autobiographical. 8 p.m. Geology Corner, Room 320. $2.50.

SATURDAY, JANUARY 22

Women's Rugby: SFWRC/Santa Clara. 11 a.m. Maloney Field.

Men's Rugby: B.A.T.S. 1 p.m. Maloney Field.

Fencing: Vs. Air Force. 2 p.m. Roble Gym.

STARTS/Black Liberation Month Film Festival: "Blue Collar" starring Richard Pryor. About labor relations set in the motor-city, Detroit. 7 & 9 p.m. Terman Aud. $1.50 general.

Men's Basketball: Vs. UCLA. 8 p.m. Maples Pavilion. Ticket information, 497-1021.

STARTS Concert: Charles Ferguson and Timothy Lawler, duo guitar. Works by Pachelbel, Bach, Mozart, Falla. 8 p.m. Dinkelspiel Aud. $4/$2.

SUNDAY, JANUARY 23

University Public Worship: Student Worship Service, 8:30 a.m.; Robert G. Hamerton-Kelly, dean of the chapel, 11 a.m.; Catholic Mass, 4:30 p.m.

Music Dept. Concert: Herbert Nanney, organ. Recital to commemorate the 80th anniversary of the dedication of Stanford Memorial Church. 2:30 p.m. Memorial Church. Free.

ASSU Sunday Flicks: "Diner." 7 & 9:30 p.m. Memorial Aud. $1.50.

Music Dept. Concert: The Old Way and The New Way: Vocal Music of the High Middle Ages. Harlan Hokin, Michael Collver, Vismaya Lhi, Paul Vorwerk, singers. 8 p.m. Dinkelspiel Aud. $4/$2.

Stanford Hillel Library Committee: "Books and Bagels—What Did They Call You When You Got Off the Boat?" David Langenberg of the Green Library Reference will comment on Jewish genealogy and genealogical books. 10 a.m.-noon. Refreshments served. Free.

EXHIBITS

Ski Experience. Early and rare photographs of Ansel Adams. Some sixty prints made at the request of Donald and Mary Curry Tresidder of the Yosemite Camp and Curry Company. Stanford Museum, Miedel Room. January 18-March 20.

Recent Acquisitions. Paintings, drawings, sculptures and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. January 11-February 20.

Inventions. An exhibition of books and manuscripts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. January 15-April 8.

Christmas Books from the Mary Schofield Collection. Children's books. The Exhibits Gallery, second floor, West Wing, Green Library. Through January 28. 8-6 Mon.-Thur., 8-5 Fri., 9-5 Sat.

The Big Squeeze and Other Works by Dolly Du Prau. Acrylic on canvas. Reception, Fri., Jan. 7, 5-7 p.m. Bechtel International Center. January 5-30.

Latin American Panel to include State Department

Melvin Levitsky, senior deputy assistant secretary in the U.S. State Department, will defend the Reagan Administration's policy toward Central America in a free public panel discussion at 7:30 p.m. Thursday, Jan. 13, in Kresge Auditorium at Stanford University.

Moderated by Prof. John Wirth, history, director of Stanford's Latin American studies program, the symposium will include four other speakers:

Father Robert Drinan, Georgetown University professor of law, president of Americans for Democratic Action, and former Congressman from Massachusetts (1971-81);

Patricia Weiss Fagen, of the Refugee Policy Group in Washington, D.C., head of the Amnesty International's Refugee Committee, who will have just returned from a fact-finding mission in El Salvador;

Armando Olivas, director of public affairs for Christian Legal Aid (Socorro Juridico Cristiano), a human rights organization connected with the Catholic Church in El Salvador; and

Robert Wesson, senior fellow at Stanford's Hoover Institution.

The symposium is scheduled two weeks before the Jan. 27 deadline for President Reagan to decide whether to certify that human rights abuses in El Salvador have subsided. U.S. military aid to El Salvador cannot continue without such certification.

Symposium participants will discuss the current status of human rights in the Central American region and foreign policy alternatives open to the U.S.

The program is sponsored jointly by the Stanford Central American Action Network, a voluntary organization; The Koret Fund; and the Latin American studies program at Stanford.

CAMPUS REPORT

Volume XV, Number 16 | A publication for Stanford University faculty & staff | January 19, 1983

Bill Durham, Brad Efron named MacArthur fellows

Two Stanford professors Tuesday, Jan. 18, were named MacArthur Fellows by the John D. and Catherine T. MacArthur Foundation of Chicago.

The prestigious awards, which honor exceptionally talented individuals personally, rather than projects, were given to William Durham, assistant professor of anthropology, and Bradley Efron, professor of statistics.

They are the third and fourth MacArthur Fellows on the Stanford faculty. Earlier winners were Persi Diaconis, statistics, and Charles Bigelow, computer science and art. The awards were first made in 1979.

The fellowships provide a sizeable cash grant, tax free, over five years, plus additional financial support for the university. Their purpose is to enable the recipients to devote themselves fully to their own research and creative pursuits.



William Durham
(Profile by Joel Shurkin)

William Durham, 33, assistant professor of anthropology, a leading researcher in biological anthropology, has won a five-year $176,000 MacArthur Foundation award, the Foundation announced Tuesday, Jan. 18, 1983.

Durham believes there is a dynamic relationship between human culture and human genetics. One alters the other and is, in turn, altered itself. He calls this process "coevolution." He has spent several years teaching this principle to undergraduates with such enthusiasm he has been known to get ovations on the last day of his class from the normally cool Stanford students.

He is now writing a book explaining, through case analyses, why he thinks he is right about coevolution.

Durham uses 'coevolution' in a different sense from Paul Ehrlich, although the term originated with that Stanford biologist. Ehrlich studies the coevolution between several species; Durham studies it in relation to only one species: *homo sapiens*. It also is not socio-biology, which argues that culture is largely determined by genetics.

"My message is that culture and genetics are two forms of inheritance interacting with one another, operating even with, to some extent, analogous mechanisms," he says. The world, he insists, is not predictable from the genes.

"The traditional values and beliefs people have are very influential in the process of cultural change in a way that liberates that change from genetic constraints. I think what's missing in sociobiology is the idea of cultural self-selection—that people have criteria, they have values in their minds, and these values influence the course of cultural change."

For instance, the majority of people in the world get ill—sometimes violently ill—if they try to drink milk. They cannot absorb the nutrients.

One carbohydrate in milk is called lactose, which is a molecule so large it must be broken down by an enzyme called lactase. Lactase is produced in the small intestine, and because babies need the nutrients in milk, almost all humans produce lactase when they are young.

But for most humans, the nutritional

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Academic calendar report would keep quarter system

Stanford should retain the academic quarter system, on which it has operated since 1917-18, a key committee believes.

But continuing courses and sequences lasting longer than a single quarter should be considered by deans, departments and individual faculty concerned by the limits of the present calendar, the committee suggests.

"For the University's health, diversity of learning must be supported and enhanced," its report states. But "the length of academic terms is not the most important element in that undertaking."

Prof. Edwin Good, religious studies, headed the Ad Hoc Committee to Study the Question of the Length of Terms of Academic Instruction. Its recommendations will be considered by the Faculty Senate in the near future.

In a minority report, Prof. Elizabeth Cohen, education, noted that a recent study of Chicanos on five California campuses showed those on the quarter system at Stanford and the University of California were much more likely to report difficulty in getting their work done on time than those at two state universities on the semester system.

The proportion saying they "often" or "always" went to class without doing the assigned reading was 26.6 percent at Stanford, 22.3 percent at UC, and 18.2 and 14.4 percent at the state universities. Only 9.0 percent of those at a community college felt the same way.

Similarly, the proportion saying they "always," "often," or "sometimes" turn in a paper late was 24.4 percent at Stanford, 18.3 percent at UC, and 13.4 and 17.6 percent at the state universities. Among those at the community college, 19.5 percent sometimes had late papers.

"Methods of teaching should be adopted to the length of the term," Cohen said.

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Tuition increases similar to rise in family incomes

College costs nationally rose during the last decade at approximately the same rate as personal income of parents with children in college, according to Stanford Vice-Provost Raymond F. Bacchetti.

Stanford's costs rose somewhat faster, but Bacchetti said he would "make a small wager" that the average rate of increase in personal income of Stanford students' parents "probably exceeds that of the general population.

"So it's a close call as to whether Stanford costs more in relation to income now than it did in 1970."

Citing figures from the National Commission on Student Financial Assistance, Bacchetti said the average increase in both personal income and college costs nationally since 1970 was 7.5 % annually. During the same period, the cost of attending Stanford rose between 10 and 11 %, depending on what factors are included, he said.

The University meets the calculated financial need of all undergraduates.

Bacchetti was one of four University officers who discussed the University's financial status and its current budgetary problems at a widely publicized forum Jan. 12 attended by about 75 students. Other speakers were President Donald Kennedy, Provost Albert Hastorf, and Vice-President for Business and Finance William F. Massy.

Hastorf told the students that administrators were working to bring down an earlier projected 12 percent tuition

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Bradley Efron
(Profile by Harry Press)

Bradley Efron had barely learned to read when he began dealing with numbers. By the time he was five, he could add big numbers in his head.

Now he's 44, and the numbers have gotten bigger and bigger, more and more esoteric, and on Jan. 18, they added up into one big payoff when Brad Efron, Stanford professor of statistics, was named a winner of a MacArthur Fellowship by the John D. and Catherine T. MacArthur Foundation.

He was chosen because he is one of the world's leading experts in building and testing theories about the accruing of information.

"It is shocking," says Efron, "how hard it is to understand data if you don't have the proper tools. Our tools—the ones used by statisticians—are powerful, help strip away noise and misleading aspects, and tell you what's there and what's not there."

Efron spends the major portion of his life in what charitably can be called a grungy office in one of Stanford's most famous grungy buildings—Sequoia Hall. In the University's earliest days it was a three-story men's dormitory, the home of the Stanford Rough. It eventually lost its two top stories, and now it's the home of the Department of Statistics and, says Efron, "I love every bit of it."

On his desk is one of those tools he was describing. It's a 24 x 36-inch pad of paper, a sort of drawing pad such as an artist might use. It is almost totally covered with number and mathematical symbols, as the Rosetta Stone was covered with hieroglyphics.

Efron is writing a scientific paper for publication, and these are his thoughts, his words, and he is trying to make sure the theory he has about it all is accurate.

"The world of information is a very large world," he says. "There are lots of things that I, sitting at my desk, might not think of. You know, the genius theory is vastly overrated. Thinking clearly and thinking hard—and for a very long time—is vastly underrated."

Efron spends a considerable amount of time at his work, and says "it is very satisfying when a theory works." But, he adds, "without statistics, how does one go from data to what's true?"

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People

Martin Perl to share Wolf Prize

Martin Perl, professor at the Stanford Linear Accelerator Center, is cowinner of the prestigious Wolf prize for physics, for his discovery of the Tau particle, the unexpected third member of the family of subatomic particles called the leptons.

The other winner is Leon Lederman, director of the Fermilab in Illinois, for his discovery of the fifth quark, a discovery that fits comfortably with the physics implied by Perl's work.

Each will receive $50,000.

The Wolf prize was set up by Israeli chemist and businessman Richard Wolf "for outstanding contributions on behalf of mankind. . . . To promote science in all fields and art in all its forms."

Recipients are "scientists and artists outstanding for their achievements for the benefit of humanity and brotherly relationships amongst the peoples, regardless of nationality, race, color, religion, sex or political views."

The first award was made in 1978. One of the winners was Stanford Prof. Carl Djerassi, for his work in chemistry. The official presentation of the prize takes place in the Israeli Knesset (Parliament), and the award is given by the President of Israel.

Perl's discovery concerned a particle 3,600 times heavier than the electron. Previous to his work, physicists acknowledged the existence of four particles which they called leptons (Greek for "light ones,") including the electron, the muon and two kinds of neutrinos. Leptons were so named because they do not appear influenced by the strong force that binds atomic particles together.



Martin Perl

The Tau particle opened an entire new branch of the lepton family tree, and made it logical to assume that scientists looking into another family of particles, the quarks, would find more than the four already discovered. Lederman's group at Fermilab did just that.

SLAC will be holding a party for Perl at the SLAC auditorium at 3 p.m. Tuesday, Jan. 11.

Hoover names Allen fellow

Former National Security Adviser Richard V. Allen has been appointed a senior fellow (by courtesy), Hoover Institution Director W. Glenn Campbell has announced. As a senior fellow, he will continue his study of major issues of international security affairs.

From Jan. 20, 1981, until January 1982, Allen served as National Security Adviser in the White House. Prior to that, he was President Reagan's chief foreign policy adviser.

In November, 1982, the president announced that Allen would be chairman of the Presidential Commission for the German-American Tricentennial, celebrating the 300th anniversary of the arrival of the first German settler in America.

From 1966-1969 Allen served as a senior staff member at the Hoover Institution and was editor of the Institution's *Yearbook of International Communist Affairs: 1968*.

He was a founding member of the Center for Strategic and International Studies at Georgetown University, and is a member of its Advisory Board. He is currently a distinguished fellow at the Heritage Foundation in Washington, D.C., and serves as senior counsellor for foreign policy and national security affairs to the Republican National Committee.

He is also president of the Richard V. Allen Company, a Washington-based international consulting firm.

A native of Collingswood, N.J., Allen received his B.A. and M.A. degrees from the University of Notre Dame and did further graduate work at the universities of Freiburg and Munich.

He has authored or edited several books on international affairs, including *National Security: Political, Military, and Economic Strategies in the Decade Ahead* (New York: Praeger); *East-West Trade: Its Strategic Implications* (Washington: The Center for Strategic and International Studies); *Peace or Peaceful Coexistence?* (Chicago: The American Bar Association); and *Democracy and Communism: Theory and Action* (Princeton: D. Van Nostrand).

Search for VP

Vice-Provost Gerald Lieberman, dean of graduate studies and research, will head a small consultative group to President Donald Kennedy on selection of a new vice-president for public affairs.

Other members are **Profs. Thomas Merigan**, medicine; **Marion Lewenstein**, communication; **Franklin Riddle**, associate controller; and **John Schwartz**, University counsel. The group held its first meeting Jan. 11.

Robert Rosenzweig, current vice-president for public affairs, has been named president of the Association of American Universities and will move to Washington, D.C. later this year.

Sheila Scobba

Stanford senior Sheila Scobba has been named the winner of the Bob Alexander Memorial Scholarship for 1982.

The award, given by the Association of College Unions International—Region 15, recognizes an outstanding student of a member school in California, Hawaii or Nevada, who has shown exemplary performance in student union/student activities work.

The $250 scholarship is presented in honor of Bob Alexander, past director of the Millberry Union at UC-San Francisco, who died in 1976 at the age of 46.



Sheila Scobba

Scobba, a human biology major from Algina, Iowa, has been a member of Tresidder's Space Use and Food Services Committees, several search committees for professional staff members, and chair of the Union Board for the second consecutive year. In addition, she is a Stanford advising associate.



Clarkson Oglesby

Clarkson Oglesby

Emeritus Prof. Clarkson Oglesby, civil engineering, has received the highest form of recognition the American Society of Civil Engineers can bestow—honorary membership in the Society.

Oglesby earned his bachelor's degree in engineering in 1932 and a degree in civil engineering in 1936 at Stanford. After getting some experience in construction, Oglesby returned to Stanford after World War II to start a program for civil engineers with an interest in construction management.

More than 1,000 students have earned M.S. degrees or higher in construction engineering. Oglesby received the Golden Beaver Award for Outstanding Service to Heavy Engineering Construction in 1964.

Since his retirement in 1974 he has continued activities at Stanford and has helped establish programs in Chile, Australia, and South Africa. His book, *Highway Engineering*, is in its fourth edition.



Gerald Gillespie

Gerald Gillespie

The University of Paris and the French Society for Comparative Literature invited **Gerald Gillespie** to participate in an international conference held in the Sorbonne at the end of autumn quarter.

After next speaking at the Modern Language Association convention in Los Angeles on the breakthrough of modern symbolic drama in Goethe's *Faust* II, Gillespie was guest of honor at the Cal Tech production and West Coast premiere of his translation of Tieck's fantastic comedy *Puss-in-Boots*, and addressed Cal Tech's Division of Humanities and Social Sciences on the roots of the modern theater in romantic drama. East Coast productions of the play have been staged at Stony Brook and Cornell.

Gillespie's earlier translation of the modernist manifesto play *Bohemian Lights*, by Pirandello's Spanish contemporary Valle-Inclan, saw its world premiere in the Oxford Theatre Group production at the Edinburgh Festival. Gillespie joined the Stanford faculty in 1974.

Patrick Suppes

Prof. Patrick Suppes, philosophy, is the recipient of the honorary degree of Docteur Honoris Causa. It was awarded Dec. 17, 1982, by the Academie de Paris, Universite Rene Descartes, (the University of Paris V).

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Parmer Fuller III chats with another trustee, Frank D. Tatum, Jr.

Stanford is on reasonably solid financial ground. I think that is partly because it has long been our policy to look ahead very, very carefully, so that we lessen the chances of being blown off course by winds that had not been allowed for.

—Parmer Fuller III

Parmer Fuller III, 'Mr. Stanford' steps down after 25 years

BY DONALD STOKES

For 50 years the Parmer Fuller family has been around the summit of affairs in helping to run Stanford University.

This month Parmer Fuller III stepped down on completion of 25 years service with the Board of Trustees. He was president of the board in the late 1960s while the campus tumult raged, perhaps the most troubled time in the history of Stanford.

His father before him also served a quarter of a century on the board, and was its president from 1944 to 1948.

So many Fullers have been connected with Stanford in some way that an accurate tally is difficult. "The last time I tried I counted over 40 members of my family," said Parmer Fuller in a campus interview.

"It started with my mother and father in the Class of 1910 and has been going on ever since, both laterally and vertically on the family tree. Now that admissions are more difficult the Fuller growth rate is diminishing!"

His very first memory of Stanford was in 1921 when he was eight years old and was taken to his first Big Game in the then new Stanford Stadium. "I can remember it well. Stanford scored the first touchdown and then was defeated 42 to 7.

"I have seen every Big Game since, except for the three years I was away at Law School. I have seen 57 Big Games. I thought that was a record but at the last Big Game they announced over the loud-speakers that someone was attending his 75th in a row. I believe he was over 90. I'll catch up with him yet!"

Fuller was asked whether it was a great burden to be a trustee, in view of the fact that on the fiscal side alone, with the University's half-billion-dollar consolidated budget, a trustee has responsibilities similar to a supervisor of a major city.

"It is certainly a major responsibility, but the day-to-day management is in the hands of highly competent management people. Although confronted with fiscal problems similar to those of other major universities, Stanford is on reasonably solid financial ground.

"I think that is partly because it has long been our policy to look ahead very carefully, so that we lessen the chances of being blown off course by winds that had not been allowed for.

"Today, for example (he spoke just before going into the December meeting of the trustees) we shall be looking ahead very carefully for the next five years, trying to allow for any contingencies that may arise.

"Long range planning has been emphasized during the last 10 years. Before that it was not done in such detail.

"In 1957 when I joined the board the operating budget was $18.5 million. Today it is $208 million, 11 times as large.

"When I first heard that I had been nominated to be president of the board I was in Beirut, of all places. I received a cable from Morris Doyle, chairman of the nominating committee, asking me if I would accept.

"In my cabled reply of acceptance, I said, 'I consider your invitation a combination of high honor and dirty trick.' I said this as I had been nominated while absent and so had nothing to do about it.

"After I was elected, a columnist on the *Stanford Daily* wrote, 'So far as the students are concerned, it's just a dirty trick.' The columnist didn't even know me at the time, but we met later and had a laugh about it.

What distressed me most about that period of confrontation between students and those running the University was the complete lack of any civility in the efforts to secure mutual communication.

"This was the start of the sit-ins, trashings and burnings. At that time I was in the glass business, so a sign appeared on Palm Drive: 'Break a window for Parmer!'

"What I tried to do, not with any tremendous success, was to try to keep the lines of communication open. There was only a small core of about 50 or 60 students with whom one could not communicate.

"I enjoyed friendly relations with many of the student leaders, and I still value the faculty friendships which developed during those uneasy years.

"There was a large number of alumni who could not understand how malcontent students could be allowed to remain as students. We did our best to explain our position to them, but many remained outraged. One alumnus went so far as to write, 'Let's shoot the dissidents; as they did in Mexico—then there were no more disturbances!'

Most of the burden during those years of tumult fell on those trustees who lived in the Bay Area. Probably during my tenure as president of the board I spent 50 percent of my time on Stanford business—and that doesn't count the hours I spent lying awake at night, worrying.

"Those were difficult years. There was sometimes the danger that the University would go up in flames. We managed to come through it all, and I think we came through the better for having handled events with relative calm and restraint."

Fuller spread his arms wide when asked what volume of letters he received during the campus unrest: "I had a file this long. I wrote a great many of the replies myself. The staff also answered a great volume of letters addressed generally to the board, and they did it very well. Don Carlson was most adept in handling vituperative mail."

Fuller is noted for his quick wit and good humor, but when the occasion calls for it he can speak in terms of sentiment and poignancy.

Such a moment came when he was asked to tell the most moving experience of his long connection with Stanford. Without hesitation he said, "I still remember the awful morning when Fred Glover (then Secretary to the University) woke me early in the morning to report that the office of Wally Sterling (president of Stanford 1949-68) had been

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gutted by fire. I was down there within the hour.

"All of Wally's papers and books, the memorabilia of his brilliant career, the manuscripts he had labored on, the things he had prized over the years—all these were in ashes.

"There was nothing I could do, that any of us could do. Those responsible who did it were never caught. It was one of the most shattering things I can imagine happening to anyone.

"The staff stood around, aghast. Some of them were in tears. And Wally, the victim, went around and cheered up everybody.

"My father had a lot to do with bringing Wally to Stanford, and also with bringing Don Tresidder before him. I was president of the board when Wally retired. I said at the farewell gathering that my father had presided when Wally came, and I presided when he left, and that one of us had to be right!

"The campus unrest meant a very wearing time for all of us on the board, made all the worse by the fact that in the middle of the tumult we were trying to find a new president. Of course, the bitterness and violence on the campuses made the search more difficult. It is not in the nature of many people to want to engage in that sort of situation."

Fuller laughed as a memory struck him: "Among the load of advice I got at that time was from an irate alumnus who wrote, 'Forget about hiring an academic as president—get yourself a military man!'

"To be a trustee in those days not only took thick skin but also a little nerve, because several times during those periods, when the fever was at high pitch, rooms were barricaded and meetings broken up. The anger of a mob is always scary.

"In order to survive, you don't have to *be* thick-skinned, you have to give the *appearance* of being thick-skinned. You can suffer inwardly, and I'm sure most of us did."

Fuller recalled that in 1955 he received a call one day from the president of the board, Lloyd Dinkelspiel, asking whether he and President Sterling could come up and see him in his office in San Francisco. "Of course, I was flattered that two such eminent men should want to see me. Secretly, I had the hope that they were going to ask me to become a trustee.

"When they came in my office I sat back, feeling quite pleased with myself. Very soon I learned that they wanted me to become chairman of the Northern California Committee to raise money for the transfer of the Stanford Medical School from San Francisco to Stanford.

"I didn't tell them at the time of my hopes of what they had come for, and my consequent disappointment—one of the biggest of my life, it then seemed. But I did what they asked, and we raised quite a bit of money for the move.

"I knew a great many of the people who were involved in the transfer. It was a ticklish operation, as some distinguished physicians were strongly opposed to the move.

"Well, the move took place, and gradually the negative feelings died down. The move proved to be a very great success. To my secret satisfaction the following year I was asked to become a trustee of Stanford."

During Fuller's presidency of the board he served with three different presidents of the University—Wallace Sterling, Kenneth Pitzer and Richard Lyman, and with one acting president, Robert Glaser. "I think that record of serving with four chief executive officers in the space of four years will stand for a long time in Stanford's history.

"When I attended my last meeting as president of the board, in 1971, my successor, Robert Minge Brown, had prepared the traditional encomium to the outgoing paragon. In the course of reading it he came to a sentence that read 'Parmer Fuller's tenure encompassed times of great difficulty for Stanford.' Before he could go further a trustee, Carolyn Charles, stopped him and said: 'Wait, you didn't say whether he caused them!'

"A number of trustees have retired recently after giving simply superb service to the university. It is a very warm feeling for me to have worked so long with close friends such as Bill Hewlett, Ernie Arbuckle, Ed Littlefield, Ben Duniway, Dick Guggenhime, Dave Packard, the irrepressible Carolyn Charles, John Gardner, Morris Doyle, and Robert Minge Brown, to mention a few.

"Most of us were at Stanford together, give a year or two.

"Five of us were in the same two classes, 1933 and 1934. We were friends then and we are friends now. That is a remarkable span of friendship and history."

To be a trustee in those days not only took thick skin but also a little nerve, because several times during those periods, when the fever was at high pitch, rooms were barricaded and meetings broken up.

—Parmer Fuller III

The trustees are always heavily involved in fundraising for the University. This means a great deal of contact work, traveling, and visits with potential donors. This is often difficult work, but it is rewarding when efforts are successful.

"I am proud of my 25 years of service on the board. Some of the other trustees besides myself are now wearing that mark. This will probably never happen again, for the term of service has now been limited.

"When I first joined the board the term was 10 years, repeatable *ad nauseam*. During my presidency we changed the term to five years, renewable once, which means that the overall limit is 10 years, although one can be reelected after a year's wait.

"I think that way has merit. It provides continuity and also turnover."

Has any attempt been made to get younger people as trustees?

"Yes, that was one of the reasons we arranged to have eight of the trustees elected by the alumni. When we did that we also arranged that of those eight, four should be under the age of 35.

"At the moment the board numbers 31, which may be a little inhibiting to some. We do not have students on the board, but we do include students on our committees."

Fuller talked of the influences which had shaped him. "I was brought up in a home where all the old values were cherished. My father was very demanding, a disciplinarian, but understanding. In fact, the more serious the crisis the more understanding he was. In addition he had a great sense of humor, which sometimes took some understanding on my part.

"As an example of his style, when I became 21 he sent me a telegram here at Stanford which read: 'I congratulate you on graduating from the legal status of infancy into the more desirable category where you are responsible for your own civil and contractual idiosyncrasies.'

"He signed it 'W.P.F. Jr.' "

Great-grandson of W. P. Fuller, founder of the well-known paint company, Parmer Fuller III graduated from Stanford in 1934 and from Harvard Law School in 1937. He worked for the Fuller Paint Company for 25 years and resigned when Fuller merged into Hunt Foods in 1962. After that he headed the West Coast activities of PPG Industries, formerly known as Pittsburgh Plate Glass Company.

He saw war service in the U.S. Navy, rising from ensign to lieutenant commander. His other activities have included directorships of Wells Fargo, Western Pacific Railroad, Yosemite Park and Curry, Pacific Mutual Life Insurance and Hershey Oil.

He is a past president of the San Francisco Chamber of Commerce, a director of the Exploratorium science museum, past president of the Bohemian Club, and a member of the Board of Governors of the San Francisco Symphony Association.

He lives in San Francisco with his second wife, Esther, former wife of Bishop Pike of California. Fuller was previously married to Marylee Harlan and they had three children.

Fuller was asked who was coming along in his family to be eligible to continue the 51 years of Fuller service to the board.

"I have a 44-year-old son, W. P. Fuller, who graduated from Stanford in 1960 and got his Ph.D. here. He has lived and worked overseas most of his life with such organizations as the United Nations Children's Fund and the Ford Foundation. He now works for the State Department as AID chief of mission in Indonesia.

"He keeps kidding me with questions about when he is going to be appointed to the board, and I tell him 'Before Stanford does something for you, you'll have to do something for Stanford!' "

Fuller was asked why anybody would agree to be a trustee, in view of the long hours, the frequent hostility from various groups, and the lack of material rewards.

The man who has given a major part of his life to Stanford replied, "Yes, there were a lot of headaches, frustrations and tears, but also much satisfaction, a lot of laughs, and many wonderful friends.

"Being involved for a quarter of a century with the progress of Stanford University in its never ending pursuit of excellence has enriched my life immeasurably.

"The last 25 years has seen tremendous changes on campus, both physically and academically. There are more Rhodes, Marshall and National Merit scholars, more Nobel Prizewinners and higher ratings for many departments of the university.

"Major positive events in the last 25 years include the highly successful land development program, the building of SLAC, a vastly improved physical plant, including major new academic facilities as well as athletic developments, two dramatically successful fundraising campaigns, two Rose Bowl victories, and a host of other achievements.

"These have been exciting and dramatic years, and it has been a privilege for me to have at least been on the stage."

Give blood at Gazebo noon to 4 p.m. Jan. 27

The Stanford University Blood Bank will take donations from noon to 4 p.m. Thursday, Jan. 27, in the Chemistry Gazebo.

Faculty and staff are urged to give blood and, whenever possible, to announce the drive to students and colleagues.

Call Karen Patterson, 497-2501, to schedule an appointment, or simply drop in between noon and 4 p.m. at the Chemistry Gazebo on Jan. 27.

British also face decline in Slavic studies, Fennell says

BY MILLICENT DILLON

The decline in Slavic studies in the U.S. in the last decades is paralleled by an equal decline in England, says Oxford Prof. John Fennell, currently a visiting professor in history at Stanford.

The University Grants Committee, an advisory council on all higher education in Britain, has recently recommended that Slavic programs in seven universities should be eliminated.

"The British Universities Association of Slavists is up in arms," says Fennell, "but the program at Lancaster has already been cut down."

Fennell, a professor of Russian language and literature and fellow of New College at Oxford, is at Stanford for the year. He notes that the decrease in Slavic studies in England has taken place across-the-board, in secondary schools as well as universities and colleges.

"There has been a loss of interest all the way down the line. It's hard to know the exact reasons."

As in the U.S. British Soviet studies expanded rapidly in the '40s and '50's and then began a precipitous decline in the '60s.

As a leading authority in the field of Slavic language and literature, Fennell has been in on the change from the beginning. He "read" Russian at Cambridge in 1937-38. Bored with German and French, he was inspired to go into the Russian program by "a very remarkable woman teacher, Elizabeth Hill, now Dame Elizabeth Hill.

"Not many people were doing Russian in those days, perhaps only 10 or 20 students a year. It was a new and exotic field."

Fennell spent the war years first as an interrogator of German prisoners and then served as a liaison officer with the Soviet Army. He was called back to England at the end of the war to start an intensive Interservice course in Russian for the Army, Air Force, and Navy.

"Those were heady days," he says. "Lots of people also came to us from the Foreign Office."

This interservice program gave a big boost to Russian studies at the universities. Coming out of the service from this program, men who would ordinarily have gone on perhaps to study Greek and Latin at the universities, chose Russian instead.

Interest in Russian Studies continued high until the end of national service in the 1950s. "Then the numbers of students in our program began to decrease. Interest just seemed to fizzle out."

Changes in the economic situation in Britain were also apparently a factor in the decrease, as in the U.S. The number of jobs in the field began to decline.

"Of those students now in Slavic studies at Oxford, only one-half go on to jobs connected in any way with Russian," he notes. Students who do get employment in the field go on to teaching or to working with the BBC or to becoming interpreters or working in the Foreign Office. Occasionally a student also will go into publishing.

Of the program at Oxford, Fennell notes that it primarily concentrates on undergraduates. At any one given time 100 undergraduates are enrolled in courses.

Students entering this program are required to have a sound background in Russian, usually gained from training in secondary schools. Oxford does not give basic instruction in Russian. In this respect it differs from most American universities, which do incorporate basic language instruction in their programs.

Fennell is the author of a number of scholarly books on Russian medieval history and literature, as well as some basic texts on the Russian language.

He is also the editor of two journals: *Oxford Slavonic Papers*, and *Russia Medievalis*, which is coedited by two other Soviet experts, one in Germany, and one in Warsaw. "Sometimes," Fennell admits, "things get held up in Warsaw."

We English have more trouble getting our students in (to Russia) because in most cases they are allowed in only on an exchange basis. What most Soviet students want to do is to come here and see how your computers work. It is less attractive to them to go to England.

—John Fennell

Generally speaking, however, Fennell encounters no difficulty in eventually obtaining archival material. "Most of my work, after all, is concerned with medieval material, chronicles, treaties, etc. and these are not politically sensitive.

"If I want a manuscript from the Soviet Union, however, rather than go there and hang around and be frustrated by usual delays, I merely write to a colleague there and ask for help in getting it."

Fennell is in continuous contact with Soviet writers and scholars in his field. Even though his work is not in a politically sensitive field, he remains aware on his visits to Russia of the general vulnerability of his scholar-friends.

"One can never quite know how immune they are to the dangers resulting from mixing with foreigners. The possibility does always exist that whatever you say to them and they say to you may be recorded.

"So what people do who want to talk openly is to go for a walk in the streets."

Many Oxford students in the Russian program want to go to Russia to study, but not many English students are allowed in.

"We English have more trouble getting our students in because in most cases they are allowed in only on an exchange basis. What most Soviet students want to do is to come here and see how your computers work. It is less attractive to them to go to England.

"Some of our undergraduates do go for a year, usually to an out-of-the-way place, a provincial university, where life is very tough indeed.

"Nevertheless, our students are very anxious to go."

Asked if he believes the increasingly harsh political climate since the 1960s has been a factor in decreasing student enrollment in Slavic studies, Fennell says, "It's a terribly difficult thing to say whether students are discouraged from learning Russian by the fact that freedom has visibly lessened as the years go by. I don't think so. After all, in the years after the war there was great enthusiasm, even at the time of the Gulag."

Fennell has encountered considerable difficulty in getting Soviet writers and scholars to come to Oxford. "We've invited many, but they usually don't come. Over the years we have had several who were allowed to come when we invited them to award them an honorary degree.

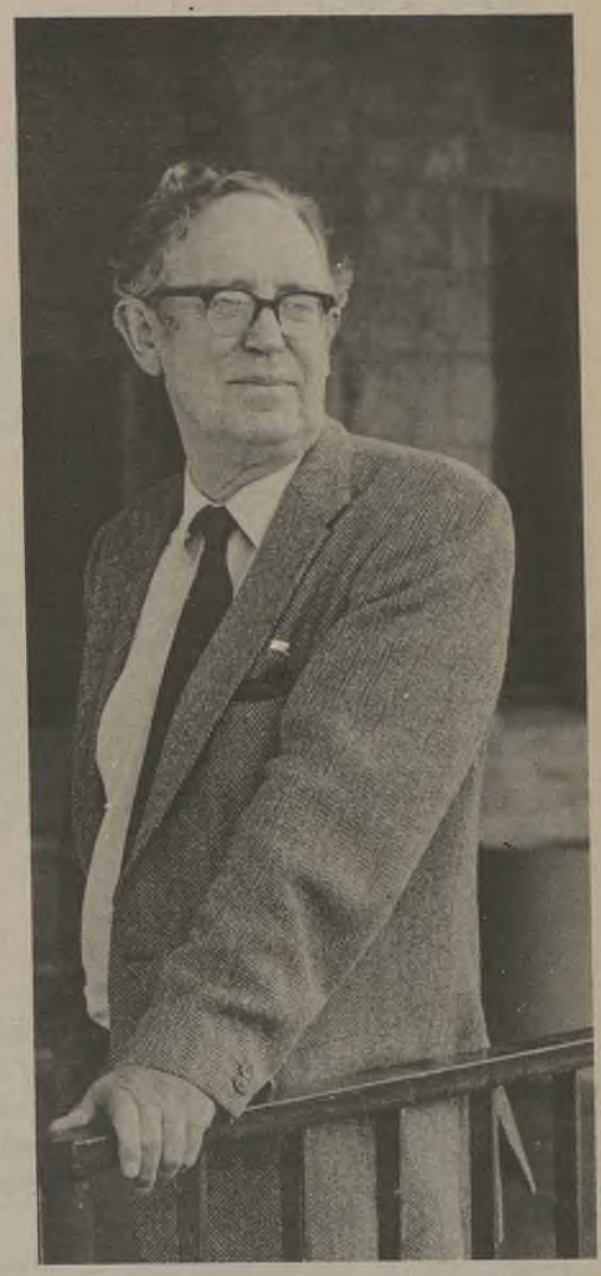
"But often when I invite scholars, my letters are not even answered.

"Now of course we are getting a number of emigres, including Sinyavsky, Solzhenitsyn, and Voinovich."

At Stanford, Fennell is teaching Medieval Russian history to undergraduates and three literature courses: the history of early Russian literature, a course on Lermontov and Turgenev, and one on Gogol.

Fennell is an ardent admirer of Gogol, whom he considers to be among the greatest writers of the 19th century.

"Gogol's works do not translate accurately," he says. "There is something so surrealistic about the way he writes, the way he uses language, that it just does not translate no matter how hard one tries."



Editor to describe 'Poland Today'

"Poland Today" is the topic of the Jan. 25, Tuesday Luncheon/Lecture at the Bechtel International Center. The featured speaker is Mariusz Ziomecki, Hearst Professional in residence in the Department of Communication, and a Fulbright Scholar at Stanford in 1980-81 as a Professional Journalism Fellow.

Ziomecki holds an advanced degree in economics from Warsaw University and was senior editor of *Kultura*, one of Poland's two national weeklies.

The popular International Center on-going Tuesday series, now in its seventh year of presenting weekly speakers on international topics, is focusing during winter quarter on specific countries or regions which present situations of global concern. Tickets for the luncheon are now on sale at $2.50. Brown-baggers are also welcome at no charge. For more information, phone 497-1831.

Efron, the last *Chappie* editor bounced off campus, wins MacArthur Prize

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Statistics, he says, is "very much like any other science, in that you have a constituency you have to satisfy. Chemists make their theories fit what happens with molecules; physicists do the same with atoms; and statisticians work with information.

"The problem is that information is not as well defined as are molecules and atoms.

"The goal of statisticians is to help in the accrual of information, which usually involves large amounts of numbers, and then to figure out mathematical systems that make sense out of these abstract figures.

"All that data coming in has to be interpreted—and interpreted correctly. If a person is lazy or incompetent—or, perhaps, crooked—infinite trouble can result. Today, with computers 10 million times faster than the calculator I used when I first came here 20 years ago, the use of that particular tool is much greater, but the correct use thus becomes even more imporant.

"It is important to come up with the right answers, and not fool yourself or lie to yourself. That's where statistics help. It's a very enjoyable detective game."

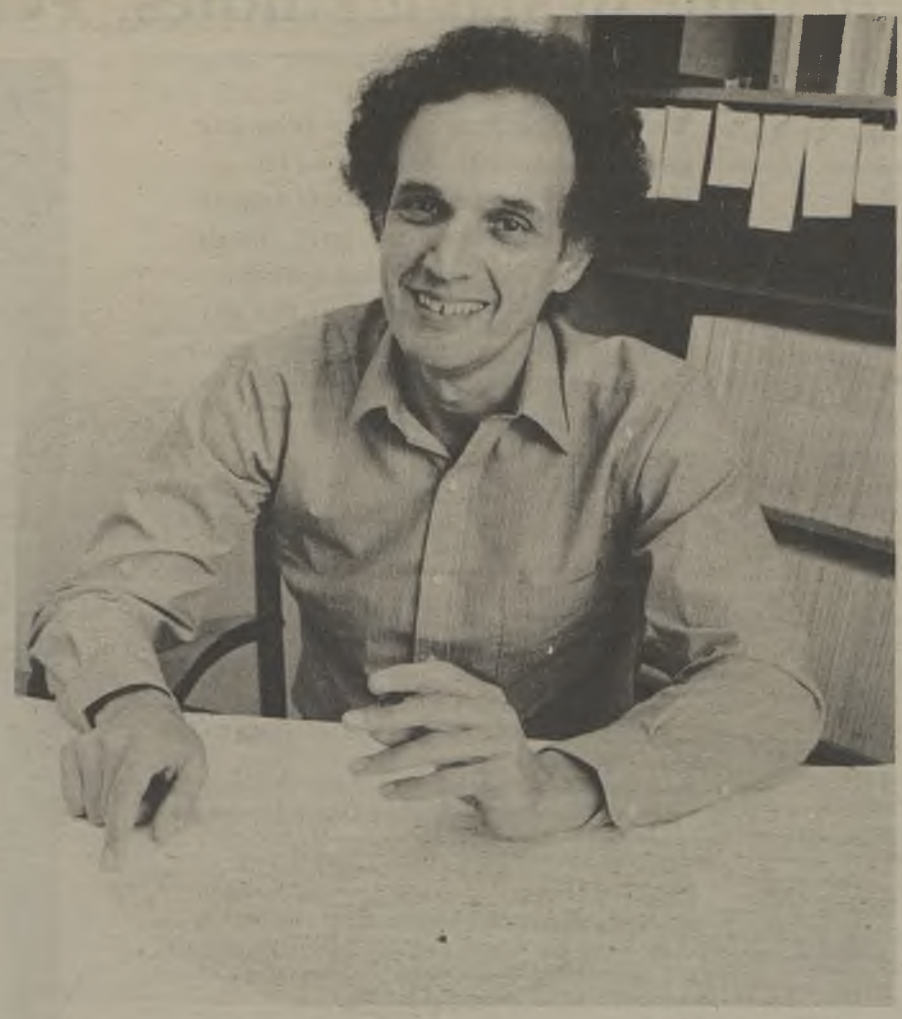
Total enjoyment

Efron's profession and total enjoyment of his life was made possible, to a great extent, because his father was a baseball and bowling fan, loved statistics, and delighted in sharing the data with his son.

At Central High School in St. Paul, Minn., Efron enjoyed mathematics, and had the good fortune to become a senior the first year National Merit Scholarships were offered. He won, and went to California Institute of Technology. There, he honed his interests, earned excellent grades, and a B.S. degree, then came to Stanford, where he earned an M.S. and Ph.D.

While here, he learned about the applied side of statistics from Prof. Lincoln Moses and Rupert Miller.

Nearly 20 years later, Efron, Moses, and one other statistics professor, Byron Brown, co-authored a book, *Biostatistics Casebook*, published in 1980, which has become a best-seller in its field.



The goal of statisticians is to help in the accrual of information, which ususally involves large amounts of numbers, and then to figure out mathematical systems that make sense out of those abstract figures.
—Brad Efron

"All four of us have joint appointments in biostatistics and work closely with Medical School researchers," says Efron. "The main question they ask is, 'How shall we run an experiment to get the most information?' Typically, they are comparing a new treatment to a standard treatment."

For example, says Efron, Dr. Henry Kaplan, working on treatments for Hodgkin's Disease, had to find a way to make sure that patients who were receiving a new treatment, and those who were controls, would be selected randomly, with all possible "biases" eliminated.

Even the flip of a coin wouldn't be accurate enough, so Efron, in writing his paper containing a solution, called it "biased coins," and his method of random selection now is in wide use.

"We want to extract something from every case we deal with, so future researchers don't have to start from scratch," he says.

In addition to his teaching and research, Efron does outside consulting. "You have to pay attention to the real world," he says, "because it really is there."

Deep appreciation

Efron is deeply appreciative that the MacArthur Foundation has recognized the world of statistics by giving its fellowships to three people in the field, two of whom are in the same department at Stanford.

Among the nation's major research universities, he says, only three—Stanford, California and Chicago—provide strong support to their departments of statistics. In the most recent national survey, Stanford and California were tied for first place in their peers' ratings.

The department now turns out seven or eight Ph.D.s a year—"our students are teaching at many universities," says Efron.

He is chairman of the new Mathematical Sciences program, which offers an undergraduate major.

"Its prospects are terrific," he says, "because in the next three to five years, there is going to be a desperate shortage of mathematicians."

Efron will receive $220,000 tax free from the MacArthur Foundation over the next five years, and his department will receive $75,000.

Without doubt, Efron is the only MacArthur Fellow ever to have been kicked out of a university.

Stanford took that action during Efron's first year as a graduate student. He was editor of *Chaparral*, the humor magazine, and turned out an irreverent parody issue.

"I guess I didn't understand the mores of Stanford," he says. "But Stanford never has held it against me, and I certainly don't hold any grudge against Stanford."

Letters to the editor

Mellor replies to Wessells, says Freedman penalized for feminist studies

Editor, *Campus Report*:

This letter is in response to Dean Norman Wessells' recent comments in your columns concerning the negative tenure decision in the case of Assistant Professor of History Estelle Freedman and the tenure procedures currently followed at Stanford.

I have been personally much dismayed by this negative decision, both because I think Estelle Freedman deserves promotion to tenure at Stanford and because I think subtle biases were at work in the decision-making process.

Currently, the *Stanford Faculty Handbook* states that in order for a person to be promoted to tenure at Stanford, he or she must be an outstanding scholar or teacher and at least very good at the other. There can be no doubt that Estelle Freedman is an outstanding teacher: she was awarded the deans' award for distinguished teaching and received the Dinkelspiel award for her outstanding contribution to undergraduate education.

In helping to construct the curriculum for the new Feminist Studies Program, Estelle was performing not only a community service but also a pedagogical function: the theoretical conception of a feminist methodology and its curricular implementation.

The deans have argued that Estelle Freedman's scholarship is less than "very good." I have read Estelle Freedman's *Our Sisters' Keepers* and agree with those scholars in the field who have reviewed this book in the leading review-journals in American history that it is a very good book: lucidly written, thoroughly documented, and a genuinely original contribution to the field of American social history.

Why then was Estelle Freedman denied tenure? I and many of my colleagues in the feminist community at Stanford share the perception that, despite Dean Wessells' disclaimer, an "administrative" factor did indeed play a role in this particular tenure decision.

In other words, Estelle Freedman was penalized in the tenure discussions surrounding her case for having done exactly what she was hired to do and what the History Department consistently encouraged her to do, namely to teach the bulk of her courses and do the bulk of her research in the field of women's history.

I believe that some scholars, both inside and outside of Stanford, who evaluated her work found this new field of women's history so controversial that they discredited her work within this discipline. But, as professor of history Carl Degler has already asserted, this new field is here to stay.

And unless the Stanford administration actively encourages young scholars to work in this new but rapidly advancing discipline of gender studies, this University shall soon find itself unable to offer a legitimate academic program in an intellectual area of vital and immediate concern to some of our most gifted students.

It is for these reasons that I hope Estelle Freedman's appeal to reverse this decanal decision will be successful. Not only does she deserve to be promoted, but Stanford University needs scholars with her active, productive commitment to research in the new and exciting area of feminist studies.

Anne K. Mellor
Professor of English
Chair, Feminist Studies Program

Word processing staffers can help automate offices

Managers who want to create an automated "office of the future" should tap the personal skills of their word processing staff, a new national study concludes.

Funded by the National Science Foundation, the study examined word processing and office automation in 200 organizations in Washington, D.C., San Francisco, Wichita, and Oklahoma City.

It was headed by Prof. Bonnie Johnson of the University of Oklahoma, now a visiting scholar at Stanford University's Institute of Communication Research.

Most organizations have introduced word processing from the top down, discouraging communication between office workers and those planning automation.

In more than six out of 10 organizations studied, the idea for word processing came from top management. "Typically, little thought was given to managing the machines," Johnson says. "After all, they were regarded as typewriters.

"When the machines were simply set out like pencil sharpeners to be used by people who needed them, the mysterious machines were often ignored because people didn't know how to use them.

"When people were assigned to work them full-time with little training or support, word processing jobs developed a reputation they have in many places today as high pressure, no reward jobs."



Word processing supervisors have been entrepreneurs as well as internal managers. Their skills and first-hand knowledge of operational problems have been responsible for numerous applications that can serve as the basis for operating office automation systems.

—Prof. Bonnie Johnson

Management failure disguised

Management failure was often disguised as technical failure, she notes:

* People were assigned as supervisors who did not want this responsibility;
* Authors were not consulted, even when the new system meant they lost the status of having a personal secretary and felt they had less say over their own work; and
* Word processing operators often regarded themselves as "victims of progress," assigned to a mechanized typing pool.

While many organizations have overcome this initial hurdle after several years, many managers overlook the potential of moving beyond efficient typing to a broad set of administrative applications.

Among the 200 organizations studied, however, many have "grown" office automation systems from word processing: 49 percent maintain inventories, 45 percent keep some kind of data base, 33 percent telecommunicate, 36 percent process records, and 14 percent typeset regularly via word processing systems.

"The capacity to develop even more applications exists in word processing units because 52 percent do some kind of programming, in most cases 'glossary type'; 20 percent have equipment capable of having a basic compiler; and 33 percent already use a text editor or computer for some or all of their word processing," she adds.

"In these places, office systems technology is growing from word processing, though the process is seldom recognized by office automation planners.

"This takes special people and special management. Their attitude must be one of wanting to take the initiative. They must have the support of upper level administrators. They must have support from the personnel department in classifying jobs. They must have a systems perspective that allows them to see their work in terms of a larger whole.

"They must involve all levels of personnel—operators, professionals who keyboard, and those who do not. They must have help from outsiders, usually headquarters, who can not only support technical decisions with regard to procurement of equipment but who spread the word of what others are doing, diffusing innovation among users.

"Today lower equipment prices and user-friendly microcomputers with text editing programs and communication capabilities are making the office of the future with a terminal on every desk a possibility for many organizations. The challenge is to integrate the work done by word processing into the total office system.

"Many word-processing supervisors resist the decentralization of equipment. One told us professionals would have no interest in doing their own keyboarding—but as she spoke we could see a nearby engineer explaining Wordstar to a group of eager co-workers.

"All the large organizations we surveyed are conducting training programs to teach professionals as well as secretaries how to use word processors.

"Word processing supervisors and personnel are often the last people invited to meetings of the office automation planners. The path to developing automated office systems is unclear. Word processing personnel have charted some of the way. Their contribution may be larger than expected.

"Our study points out that word processing supervisors in most cases provided all the management of word processing technology. Executives, after making the initial decision to acquire it, took little interest in the management. In the best cases, supervisors enjoyed a supportive relationship with top management that allowed them to implement the system.

"Word processing supervisors have been entrepreneurs as well as internal managers. Their skills and first-hand knowledge of operational problems have been responsible for numerous applications that can serve as the basis for operating office automation system.

"However, the equation of word processing with 'low clerical' activities leads planners to discount the potential contributions of these people.

"In order to be most helpful in charting the progress of office automation, word processing organizations must have successfully navigated three critical points:

"1) Establishing an efficient management system for turning out requested typing work;

"2) Resisting the temptation to be content with typing requests, and then taking the initiative in reorganizing work flow; and

"3) Recognizing the possibilities for distributed keyboarding and processing, learning to work with professionals and secretaries as part of a total office system."

Word processing report

In a report on "Innovation in Word Processing," coauthored with James C. Taylor, Dennis R. Smith, and Timothy R. Cline, Johnson notes that resistance to new technology is short-lived among users and "applications have not kept pace with equipment capabilities."

While word processing vendors train one or two people per machine initially, this was "not seen as very useful nor adequate." Among both introductory and advanced users, training by coworkers was seen as most useful, followed by training by supervisors.

Pay was the greatest single motivator for word processing, mentioned by supervisors at 29 percent of the organizations studied. The work itself was mentioned as the highest motivator by 23 percent of the respondents.

Working on projects from start to finish and getting an overview of the entire organization contributed to this feeling.

Relationships with coworkers was identified as the highest motivator 19 percent of the time. "As the field matures, turnover rates seem to be levelling off or declining," the report notes.

"Most planning has been done in terms of equipment procurement," even as accessibility to the machines has broadened.

"People responsible for operating the equipment are often the most creative in adapting the technology to the work to be done. These people often lack the perspective of overall organizational structures and mission. Systems planners can provide this perspective, but often have no real sense of daily operating problems and potentials.

"Use and applications can profoundly affect organizational structures, nature of the work, and overall productivity.

Future challenge

"The challenge for the future will be to provide a dialog between all levels of personnel associated with word processing technology to maximize its benefits not only in terms of productivity but also in terms of jobs and personal satisfaction."

Half the organizations studies were private, profit making institutions, more than a quarter were governmental, with the rest nonprofit or regulated organizations.

The largest group of respondents were word processing supervisors.

Findings were discussed last month at a colloquium sponsored by the NSF Productivity Improvement Section in Washington and will be presented Feb. 20 at the Office Systems Research Association conference in Philadelphia.

Copies of the preliminary findings are available on request from Johnson at the Institute for Communications Research, Stanford University, Stanford, Ca. 94305. Phone (415) 497-2507.

Durham says genetics, culture are mutally interdependent

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need for milk ends early in life and lactase production drops to zero. Milk makes them ill.

For the others, the enzyme is produced through life and they can drink milk, obtain the nutrients from it, and even enjoy it.

Lactose tolerance

Scientists have found that adults who are lactose tolerant are usually from Scandinavia, France, or are Americans of European descent. Those who are lactose intolerant, some 80 percent of the world's population, include most Asians, Africans, South American Indians, and American blacks.

Societies in which milk is tolerated tend to be those with a cultural tradition of dairying. The few exceptions are cultures in which milk is processed into cheese or yogurt before consumption.

This raises many questions: why didn't other people intolerant of milk learn to process milk products? Why are northern people able to tolerate milk for biological reasons instead of going the cultural route the way others have? What is the relationship between lactose tolerance and the cultural history of people?

Scientists have found that lactose aids in the absorption of calcium, a main nutrient in milk. Lack of calcium (rickets) was an old scourge in northern Europe.

Another absorbing agent is vitamin D, produced by ultra-violet radiation from the sun. In earlier eras, as humanity moved northward into areas with less sun, natural selection favored lighter skin pigmentation. This enabled northern inhabitants to absorb more sunshine to produce more vitamin D, and to absorb more calcium. But evidently none too much.

People with the lightest skin also tend to be those who are lactose tolerant. Natural selection has provided them with the ability to obtain calcium from milk just the way it enabled their skin to get vitamin D from the sun.

Dairying as cultural response

Dairying was then a cultural response to the biological need for milk.

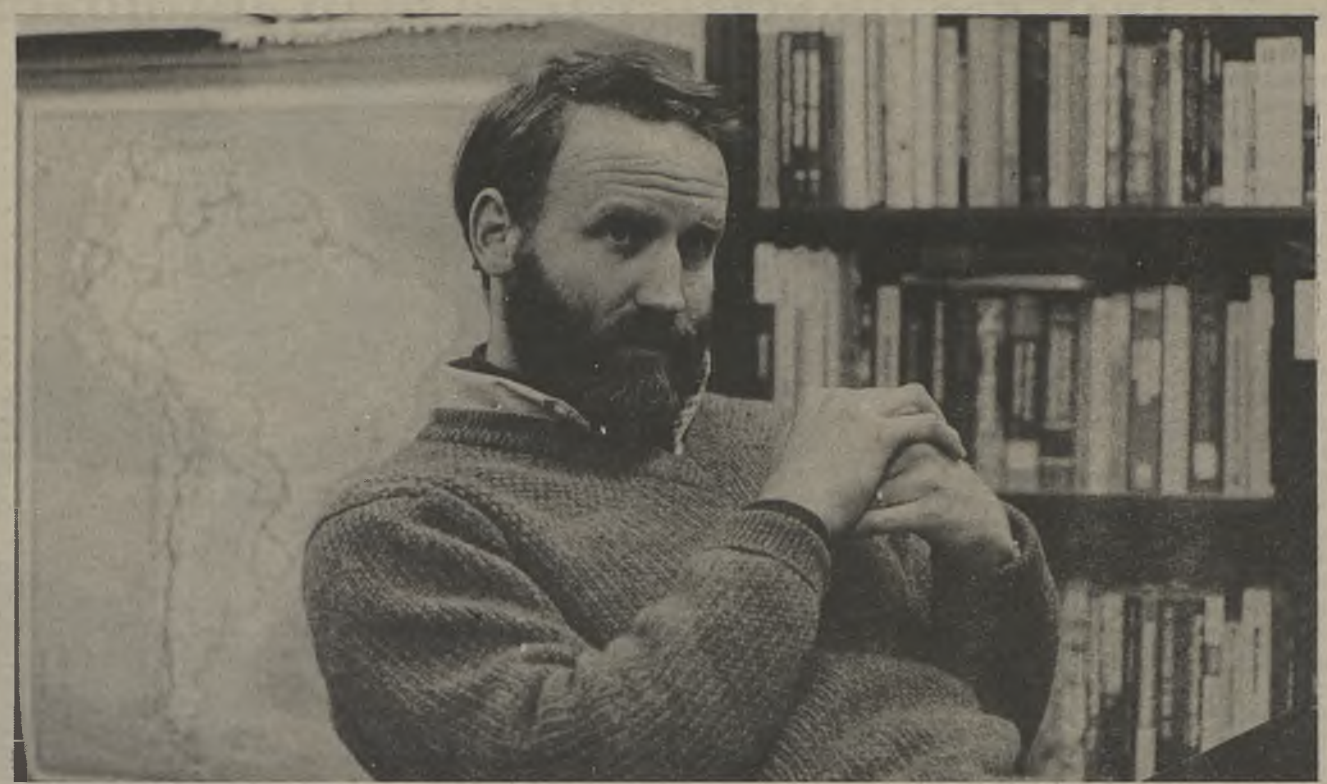
Durham has traced the changing role of milk and milking animals as a function of latitude in Indo-European mythology.

"Some of the mythological themes of societies and populations ranging from southern India to Iceland, including the Mediterranean countries. . .radiated from some common mythological origin in the southern steppes of Russia," he says. As they migrated, they took with them ancestral mythological themes.

"One of the mythological themes involves a sacrifice of cattle. What I have done is to show that in the south, cattle in the myth are male. . .bulls are sacrificed and dismembered in the creation of the world.

"As you work progressively northward there's a change. First it becomes a female bovine, and eventually far enough north, into Scandinavia, instead of being sacrificed in the creation of the world, the bovine provides milk for adult milk drinkers and gives birth to whole families of giants and superheroes of a sort.

"The interpretation that I give to this is that, on the one hand, the cultural data. . .reflect a process of appropriate nonaccidental adjustment to environmental circumstance, and the genetic system, at the same time, evolving



Bill Durham

in this cultural environment, also moved in the direction of the appropriate lactose absorption capabilities."

Cultural preferences

In the end you get people with a cultural preference, a value and belief system for milk drinking, and the genetics to absorb milk's nutrients.

"Ultimately, what I'm saying is that genetics and culture have coevolved in a very interdependent fashion. Culture has steered the direction of genetic evolution, and culture itself reflects the adaptability of enhanced calcium absorption, and all the advantages that entails in the northern latitudes."

Durham thinks he can prove his point with those cases in which the coevolution system has gone off the track, where there have been maladaptions.

Take the case of the cannibal Fore people of Papua-New Guinea. The Fore suffered from a disease known as kuru, a nerve degeneration disease that eventually leads to complete motor incapacity and death. The disease is practically unheard of anyplace else.

Epidemiologists were at a complete loss to explain the disease as it followed no normal pattern. Kuru first appeared among the Fore in 1922 and became a major health problem in the 1950s.

The Fore had a simple explanation: sorcery.

Impact of sorcery

The disease became so serious the Fore "came to see the end of the world was at hand, they thought their society was doomed and talked about it openly," Durham says. "They even gathered together in mass meetings and harangued one another with accusations of sorcery. . . . This is not a case of people sitting back while their cultural system is overwhelming them, creating a disease and leaving them helpless to deal with it. They sat down, discussed the problem, and actively debated its etiology."

Anthropologists learned that sometime after 1900 the ecology of the area in which the Fore lived changed and they became short of protein. They resorted to cannibalism to make up for the deficiency. Kuru erupted about 20 years later.

Kuru, it turned out, was caused by a virus-like organism that causes scrapie in sheep (or a virus much like it). When other people ate the deceased Kuru victims, they too developed kuru.

Females who prepared the victims almost always got kuru. Men who spent most of their time hunting and got little of their protein from humans rarely got kuru, and noncannibals never got the disease.

When they stopped eating each other, the disease died out.

"What does this tell us? To me it says that there are times when culture, through an internal process of selection, creates customs, rituals, and institutions that can cause. . .unanticipated consequences, like kuru." It also says that people inflicted with these consequences attempt to do something about them, just as the Fore got together to try to solve the problem their way."

San Blas Kuna

Durham has done a great deal of research on the islands off the coast of Panama inhabited by the San Blas Kuna. The Kuna have the world's highest rate of albinism; one out of every 200 Kuna are albinos.

Since albinism is a recessive gene and is a dangerous thing to have in the hot tropical sun, Durham wanted to know why it persists among the Kuna. The Kuna, of course, blame evil spirits.

The Kuna, it turns out, inbreed a great deal. They live in little communities on the islands and rarely marry outside their own island. This passes on the genes for albinism.

The folklore of the Kuna recognizes the problem of inbreeding. It is so ingrained in their mythology that no Kuna can go for long without hearing a legend of a god striking humanity in wrath for a mythical act of incest. This myth gives special force and explanation to the Kuna incest taboo.

Without the taboo, argues Durham, the situation would be much worse and the Kuna's existence would be threatened. "They are producing albinos not because they're marrying close relatives, but as a consequence of endogamy within small villages."

"This is a case where cultural rules and traditions, the beliefs of the people, reduce the deleterious consequences of inbreeding in a way that the genetic system never could."

Durham is a firm believer in student participation in his research.

"In the past several years I've had quite a number of students with very, very good experiences in research. I really think that's one way to bridge what's seen by many people as the traditional gap between research and teaching. Also, from the student's point of view, it's one of the exceptional things about Stanford. . . ."

A Christmas present

Durham got involved with Stanford as a Christmas present. He grew up in the Cleveland area, and while he was looking for a college to go to in the east, his father announced the family was moving to Oklahoma. To make up for this cultural shock, his father offered to let him visit any college of his choice in the west, suggesting Rice, Reed, and Stanford.

He chose to visit Stanford.

"They flew me to San Francisco—here I was, I was 18—they had a rental car for me, reservations at the Holiday Inn. I lived like a king. . . .

"I was crazy about the place. It had the right combination of intellectual excitement for me, with all the other attributes that people recognize here."

He went to Michigan for his Ph.D., doing a dissertation on the then little-known country of El Salvador. This work became a book, *Scarcity and Survival in Central America*, published by Stanford Press in 1979. Although not specifically a study of politics, the book ended with a prediction:

"Knowledgeable observers and former government officials feel strongly that the country, having forfeited the chance for a peaceful agrarian transformation, is now on the verge of a major popular uprising. . . ."

It was published a few months before the uprising began.

When his current book is finished, he hopes to use his MacArthur award to go back to Panama and resume the study of the Kuna.

Latin America becoming less dependent on U.S. TV shows

Latin America is importing less American television programming and producing more of its own, a new Stanford survey of Mexico, Peru, Argentina, Brazil and Venezuela shows.

Results were reported by graduate student Livia Antola and Prof. Everett M. Rogers of the Institute for Communication Research at a conference on the flow of media in the Americas here Dec. 9-10.

While the U.S. remains the dominant exporter of TV programs to Latin America, accounting for about 80 percent of the total traffic, reliance on outside material has diminished, they found.

Where Brazil imported 60 percent of its TV programs in 1973, for example, this year the imported share is only 28 percent.

Venezuela dropped from 50 percent to 35 percent; Chile from 56 percent to 44 percent. Mexico remained unchanged at 50 percent. In Peru, imported programming rose from 60 percent to 70 percent of the total broadcast, while Argentina increased from 20 percent to 33 percent.

In both Argentina and Peru, they noted, TV came under government control in the past decade. Run by officials who often lacked experience and changed frequently, they lost local talent after putting ceilings on actors' salaries.

"Smaller nations in Latin America are still very heavy importers of TV programs," Antola and Rogers said.

"However, some TV slots that were once occupied by U.S. series are now being filled by Latin American telenovelas and comedies. Some U.S. cartoons, once a major import in Latin America, are now being replaced by Japanese cartoons, which currently make up seven per cent of Chile's and three per cent of Peru's imports.

Mexican programs

"Mexico accounts for up to 17 percent of the total imported programs in Chile and Peru. Even in such major TV producing nations as Argentina and Brazil, Mexican imports are three and eight percent of the total TV program hours, respectively."

Mexico, Brazil, Venezuela, and Argentina are the major Latin American TV producers. Telenovelas account for 70 percent of their exports, with another 18 percent comedy shows and 12 percent musicals, films, and variety programs.

Initially patterned after U.S. programs, Latin American shows have now become "a genre in their own right," the researchers said. One example is shows de auditorio, variety programs produced by a local celebrity.

While U.S. programs account for half of all the hours broadcast by Mexico's four TV channels, when audience share is taken into account U.S. programs account for only 33 percent of total viewing, they noted.

Interviews with Latin American TV broadcasters indicated a general trend in viewer preferences toward locally produced programs, followed by those made elsewhere in Latin America, with U.S. programs third.

These preferences are reflected in top 10 audience ratings in a sample week for six different Latin American countries.

All of Mexico's top 10 programs were locally produced. In Venezuela, the "Pink Panther," rated tenth, was the only exception. In Peru, the only exception was "Vegas," ranked seventh. In Brazil, "Hart to Hart" was eighth.

In Argentina, two Mexican produced programs were among the top 10: "El Derecho de Nacer," ranked third, and "Chespirito," eighth. "Disneyland" was ninth.

"The moving force behind the shifts in television flows is the search for profits by commercial TV channels," they noted. "Thus Brazil has promoted exports to Portugal, Spain and Italy, while Mexican TV sells to Italy and the U.S.

"A large number of poor domestic consumers can also add up to a profitable market. In the past decade, the number of TV sets in Latin America has increased about 40 percent. The Hispanic population in the U.S. has grown to an estimated 20 million people, making the U.S. the fifth largest Spanish-speaking nation in the world."

Foreign sales profitable

Production costs usually are met by the domestic market alone. Hence foreign sales are highly profitable.

Censorship and government regulations particular to each country tend to inhibit imports from other Latin American countries and encourage imports from the U.S. Chile limits TV from Mexico, Brazil or Venezuela to only one hour per day per channel, but has no such limit on U.S. shows.

In Argentina, two Mexican telenovelas shown in the afternoon were censored and moved to a night slot. Venezuelan and Puerto Rican telenovelas were censored and are no longer broadcast in Argentina.

In Brazil, "Dallas," "Magnum," and "Starsky and Hutch" began broadcast after the government censored a local series.

But the flow of TV programs within the region is increasing. Mexico, Argentina, Venezuela, Puerto Rico and Brazil are important exporters, and Peru and Chile will start exporting next year.

A Peruvian and a Brazilian TV executive have suggested a bartering arrangement, where five or six TV systems would each invest $20,000 in making a one-hour program, supplying each of the others with a copy. No funds would change hands, and reliance on U.S. imports would be reduced.

Mexico is still the main gatekeeper for TV program flows between the U.S. and Latin America, due to its geographic location and the concentration of dubbing studios in Mexico City. But this is "beginning to change," they note.

Program dubbing

"Mexico will not buy a TV series unless it is dubbed in Mexico...claiming that Spanish language accent is strongly regional and national and that Mexican audiences will not watch TV programs broadcast in a non-Mexican accent."

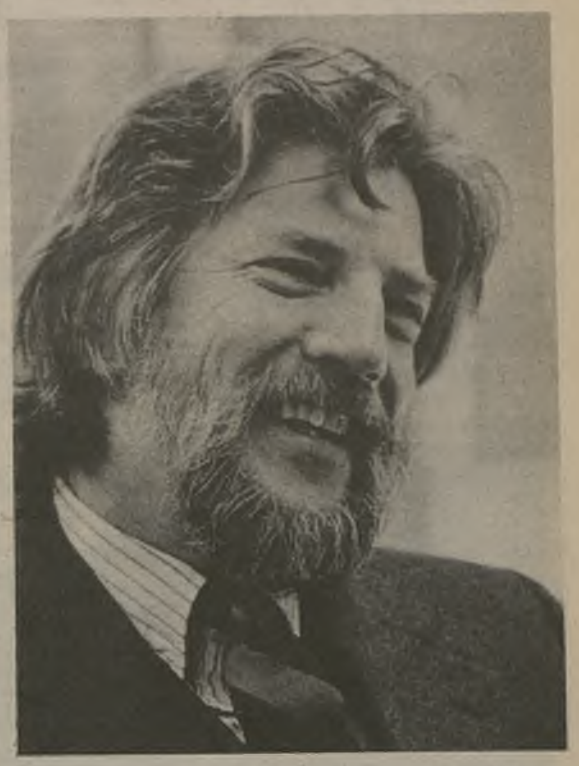
Dubbing studios in Mexico try to use a "neutral" Spanish accent that has few identifiable regional characteristics or idiomatic expressions.

In the past two years, however, dubbing studios have opened in Los Angeles, Brazil and Peru, offering speedier delivery, lower rates, and good quality dubbing. Thus future TV flows may shift.

While the heavy flow of U.S. TV programs to Latin America is not balanced by a return flow, the Spanish International Network (SIN) and other Spanish-language stations in the U.S. can now reach most of the 20 million Spanish-speaking people in the U.S.

The moving force behind shifts in TV flows is the search for profits by commercial channels.

—Livia Antola and Everett Rogers



Everett Rogers

SIN commands 77 percent of the Spanish speaking audience in the U.S. It buys 65 percent of its programming from Mexico's Televisa, mainly variety shows and telenovelas.

As cable TV expands from its present penetration of about 30 percent of U.S. households, this pattern also could change. TV producers in Venezuela and Peru are now creating programs with local directors and both local and American actors. The production is in English, with later dubbing in American English for the voices of local actors. These Latin American produced series will be marketed to U.S. cable systems.

"The Latinization of Latin American TV is still rather faint," Antola and Rogers observe. Latin American-made telenovelas are replacing certain U.S. primetime TV series, U.S. feature films, and action adventure programs, although U.S. children's cartoons are still a major import."

Their study was based on interviews with 65 TV officials in Latin America earlier this year, funded by the Stanford Latin American Studies Center.

Stanford geophysicists trace cause of quakes in New Guinea

Two Stanford geophysicists have reported that the collision of two tectonic plates near New Guinea is responsible for many of the faults seen on that island.

The two, in a paper read Friday, Dec. 10, at the meeting of the American Geophysical Union in San Francisco, used the reports of two major earthquakes in New Guinea and several smaller ones, to produce the data for their findings.

David Kaplan, a graduate student, and Tetsuzo Seno, a post-doctoral student, have studied the western half of the island where the large Indian-Australian plate meets the smaller Caroline Plate. They report that the collision of the plates is responsible for both the strike-slip and thrust faulting on New Guinea.

The two made what are called focal mechanisms, diagrams based on seismic readings. With knowledge of the characteristics of different faults, the motions of plates and regions of high-earthquake potential can be determined more accurately.

In their study, Kaplan and Seno have analyzed new focal mechanisms for 13 earthquakes occurring from 1968 through 1979, including the 1971 earthquake (6.5 on the open-ended Richter scale) in central Indonesian New Guinea, and the 1979 event on Yapen Island (6.3 on the Richter).

Many of these earthquakes represent aftershocks of the large 1971 event. Combining the focal mechanism solutions with depth profiles of earthquakes across New Guinea has led to the development of new ideas regarding the nature of the plate boundary at the New Guinea Trench located off the northern New Guinea coast.

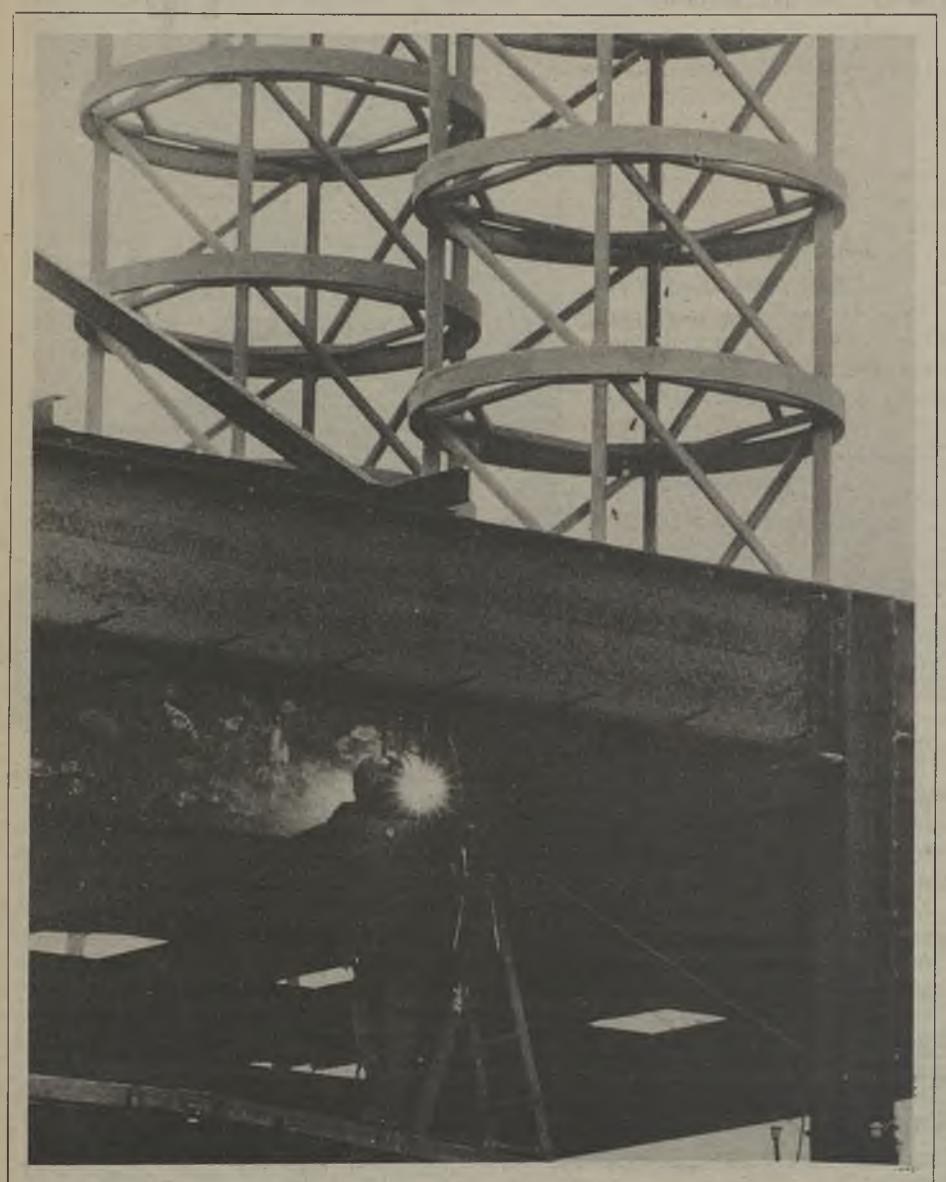
"We believe that the Indian-Australian and Caroline Plates are colliding at an oblique angle to the northern New Guinea coast," they said. "Consequently, two forces exist in the region; one force compresses the two plates while the other force shears them.

"The compressional force does not appear to induce subduction of one plate beneath another at the New Guinea Trench. Instead, the trench is a relic of ancient subduction and the compressional force is producing very steep thrust faults in central New Guinea.

"The shearing force, by comparison, is responsible for several left-lateral strike-slip faults across New Guinea including the western part of the New Guinea Trench.

"We are hopeful that more detailed analysis of the characteristics of specific earthquakes in western New Guinea will allow us to determine relative plate motions more accurately as well as regions of large-magnitude earthquake potential."

Medical Center MEMO



Construction work proceeds on the Ralph and Marian Falk Cardiovascular Research Center, a $14 million project scheduled for completion in October, which will house the academic and research programs of Cardiovascular Surgery and Cardiology. The building is located on the northeast side of the Hospital, between the Medical Center and Stanford Shopping Center.

Coordination in the Clinics

A committee to provide for communication, coordination, and quality control has been formed at the Stanford University Clinics, announced Dr. Lawrence G. Crowley, vice president for medical affairs.

The Professional Practice Committee, including physician representatives from each clinic, will function as "somewhat of a board of directors for the Clinics," said chairman Dr. Ron Merrell, assistant professor of surgery. It has the authority to govern the Clinics under the general guidelines approved by the Executive Board, according to Don Tower, director of the Clinics.

The Committee's responsibilities include ensuring the quality of patient care, recommending policies and procedures for patient care, recommending appointment of physicians to the Clinics staff, and responding and acting appropriately on patient complaints.

"The Clinics represent a large group of multidisciplinary physicians," Merrell noted. "We've never had a great deal of coordination among the physicians. Now with the renovation project underway, it's a good time to coordinate the physicians in their efforts to ensure superior care and patient satisfaction."

"The Committee illustrates our commitment to assuring Clinics patients the most effective, high quality health care," said Tower.

Committee members will be appointed annually, Crowley explained. They will serve on various subcommittees—each responsible for part of the Committee's charge as a whole—including the ancillary, medical records, policy review, and Boswell (Clinics renovation project) subcommittees.

"We wanted the Committee to include active physicians who are deeply involved with the Clinics and familiar with their operation. This is a unique opportunity for them to determine the structure for the future," Tower said.

The Clinics receive about 135,000 patient visits annually, and provide outpatient care by faculty physicians.

They are undergoing a $6.5 million construction, equipment, and remodeling program, scheduled to be completed in 1985. The renovation includes increasing the size and number of clinics to be accommodated in the Boswell Building, and providing for a larger outpatient pharmacy and decongested corridor traffic.

—Shirley Kraus

Ten assistant professors get biomedical research support

The molecular biology of sleeping sickness, effects of psychological stress on the immune system, and the physiology of epilepsy are among the newly funded research topics of ten young scientists at the Stanford University School of Medicine.

Each researcher was awarded a $5,000 allocation Jan. 1 from the Biomedical Research Support Grant, provided twice each year by the National Institutes of Health, and administered by a Stanford faculty committee.

The grant is designed to help young scientists establish research programs in areas of basic and clinical research.

The ten assistant professors awarded one-year grants are: Drs. John Boothroyd (medical microbiology), Christopher Coe (psychiatry), Barry Connors (neurology), Kevin Fish (anesthesia), Andrew Hoffman (medicinendocrinology), Fredric Kraemer (nephrology), Fred Mihm (anesthesia), Edward Mocarski (medical microbiology), Jane Parnes (medicine/immunology), and Paul Ponganis (anesthesia).

What they're doing

Boothroyd will use his grant to study African trypanosomes, parasites that cause "sleeping sickness" in man. A large part of the organism's ability to cause disease is linked to its talent for altering the proteins that stud its membrane coat. Boothroyd is studying the genes that control the changing protein pattern.

Parnes, too, is studying genes, this time as they relate to the human immune system. The several classes of "T-lymphocytes," white blood cells that control the immune system, have unique functions that may be associated with their protein coats. Parnes will investigate the role the proteins play in enabling the T-cells to do their work in battling infection.

Coe will study immunity from a different angle: the effects of psychological stress on immune responses. "Although it is generally acknowledged that stress can compromise resistance to disease," Coe said, "further investigation is still needed to determine how different types of stress affect specific aspects of immune responses."

Epilepsy is the target of Connors' research. Large bursts of electrical activity in the brain signal an epileptic seizure, but between seizures, small abnormal discharges of electricity are often detected in the nerve cells of persons with epilepsy. Connors will study these small events to capture a more detailed picture of the electrical and chemical disturbances that underly epilepsy.

Kraemer is investigating the way hormones regulate atherosclerosis, a clogging of the arteries with fatty plaques. Mocarski is studying the replication of DNA in cytomegalovirus, a variety of herpes virus that can be life-threatening in persons with a suppressed immune system.

Finetuning respiratory therapy is the goal of Mihm's research, as he studies a new method of monitoring the levels of oxygen in a patient's blood.

Anesthesia studies and more

Fish will focus on the effects of the common anesthetic "halothane" on the metabolism of other drugs often given during anesthesia.

The effects of several anesthetic agents on the ability of muscle to contract will be the subject of Ponganis' research. Studies of postoperative patients indicate that volatile anesthetics can, in a few cases, trigger a disease known as malignant hyperthermia, in which the contraction of certain muscles is uncontrollable, and the subsequent rise in body temperature can kill the patient. Ponganis aims to elucidate the mechanism of the interaction between the anesthetic and the muscle.

Hoffman will study three chemical messengers in the brain (epinephrine, corticotropin releasing factor and vasopressin) as they interact to influence the output of the pituitary gland. Hoffman said he is especially interested in the pituitary because of the hormones it activates during periods of stress.

—Deborah Franklin



Boswell project phases announced

The planned phases of construction for the Boswell Building Renovation Project have been confirmed with the contractor, announced Vera Waechter, R.N., assistant director of the Clinics.

The first phase, scheduled for the spring of 1983, will involve only the construction of enclosed balcony additions to the building.

The second phase of construction, to take place from the summer through fall of 1983, will include the first floor south (medical clinics) and the second floor south.

The clinics to be affected during this phase are: Allergy, Endocrine, Gastroenterology, Hematology, Immunology, Internal Medicine, Nephrology, Preventive Medicine, Stanford Medical Group, Cardiovascular Surgery, General Surgery, Thoracic Surgery, and Urology.

The third phase, scheduled for the winter of 1984, will involve construction in the Dermatology and Orthopedics clinics; and the fourth phase, in the summer of 1984, the Ophthalmology offices and clinic.

Finally, from the winter to spring of 1985, the fifth phase of construction will include the Special Procedures Suite, and the Cardiology, Chest, Genetics, and Neurology clinics.

Nurses make exemplary cost-cutting strides

The surgery unit gives out the "golden towel award." Other units post lists of supply costs on the wall. And still others post graphs showing supply usage. Stanford nurses are going all out in their efforts to cut expenses as part of a Hospital-wide cost-containment program.

"Cost-containment has permeated every unit. It's the byword now," said Joyce Miller, associate director of nursing. "We're not decreasing the quality of patient care at all, but we want to make sure we're doing all we can to cut costs."

The nurses' greatest effort has been in using linen more efficiently, Miller said. Their goal is to decrease the amount used for each patient by two pounds from the 1982 average of 21 pounds per patient each day. This alone will save the Hospital $150,400 each year in laundry services, she explained.

"We used to put just one linen cart on each unit, so nurses would take more than they needed to avoid an extra trip," Miller continued. "Now we put a cart on each end of the unit, so nurses can get more linen easily, but only if they need it."

They are also developing new ways to make beds that use less linen, and are discouraging nurses from using heavy blankets—which cost more to clean because they weigh more—to wipe up spills, for example. Staff members of departments such as X-ray and Physical Therapy, who used to automatically grab for linen to use indiscriminately, are being encouraged to use appropriate products, said Miller.

Unfortunately, it isn't all so easy, Miller said. The Hospital has to replace $500,000 worth of linen each year, 80 percent of which loss is unaccountable. Replacement of Operating Room scrub clothes alone costs the Hospital nearly $94,000 each year.

"We want to get everyone sensitized to the problem. We want all staff members to realize that when they take Hospital property it costs money," she stressed.

"There is not much more we can do but to try and control the problem by making the Nursing Service aware of the situation," added James Staight, director of Patient Transport Services.

Aside from cutting linen usage, nurses are looking at other supplies that are being wasted. Switching to a larger size of absorbant pads, used to soak up discharge, for example, is enabling nurses to use fewer pads, Miller said. And rather than prepare products in advance that are not reusable, such as IV set-ups, she added, nurses are being encouraged to wait until the products are actually needed.

Physicians can help out in this area, Miller said, by reconsidering various procedures to determine if they're really necessary.

—Shirley Kraus

Bulimic volunteers needed in study

Volunteers are needed to participate in a study being conducted at Stanford's behavioral medicine clinic, to determine the relative effectiveness of two approaches in the treatment of bulimia—the binge/purge eating disorder.

"We've already seen positive results with the use of group therapy sessions," said Dr. Betty Kirkley, postdoctoral fellow. "Based on those results we're conducting this study, to test two variations of group therapy."

The first treatment groups are already under way, and the next ones should start in about a month and a half, said Kirkley, who needs to hear from potential participants as early as now.

Free treatment for bulimia will be provided to women between the ages of 18 and 49 who binge eat and vomit afterwards. The treatment program will consist of 16 weekly group therapy sessions, with seven people in each group.

Before entering the program, participants will be required to have a thorough medical examination. They will complete questionnaires at the beginning and end of the program.

For further information call Kirkley, at 497-7871.



The community: applying, reaping fruits of research

Just how much a focused outreach effort can accomplish is becoming clear from innovative research projects based at Stanford University School of Medicine.

For over 10 years, a unique approach to reducing death and disability from heart disease has been studied by Dr. John Farquhar and his colleagues in the Stanford Heart Disease Prevention Program (SHDPP).

A major portion of this research aims at determining methods for educating people to alter their lifestyle in order to lower their heart disease risk "profile."

This portion of SHDPP is called the "community studies" because researchers literally are going out into local communities to do their work. (Collaborating with director Farquhar and his medical colleagues are members of other Stanford departments.)

Above, Farquhar participates in an exercise class. The community component of SHDPP is helping develop new methods of reducing the risk of heart disease on a large scale.



Cable t.v. in the health care field

"Medical and Health Care Uses of Cable Television," a community conference designed for physicians, nurses, and other health professionals, will be held 8:30 a.m. to 1 p.m., Saturday, Jan. 29, in the Palo Alto Medical Foundation Auditorium, 920 Bryant Street.

The conference, which is open to the public, is sponsored by the Palo Alto Medical Foundation and Stanford University Hospital. It is coordinated by the Peninsula Community Access Television Association.

Applications of video and cable television in the health care field include education, clinical research, computer data banks, and internal communications, according to Robert Hecht, Stanford division coordinator of Instructional Media in the Medical Center.

Hecht and Michael Yonchenko, Stanford audiovisual director and producer, will present the introductory remarks for the program. Potential uses include video teleconferencing among hospitals, nationally and locally produced health programming, staff training, and a variety of informational uses.

According to Tony Browne, assistant director of public information with the California Hospital Association, more than 300 cable systems are serving nearly 2.5 million subscribers in California. The cable companies feed signals from traditional broadcasters and the special cable network companies.

With the technological improvements and more public awareness, cable franchise agreements with cities and counties are including more community services, such as public access and dedicated channels for special community interests. At Stanford, the University's Cable TV Steering Group, headed by Associate Provost Michael Oman, is working with Palo Alto officials on plans for cable services.

At the conference, Browne will discuss community involvement in the cable franchise and refranchise process.

Speakers also include Dr. David Watts, associate professor of medicine, University of California, San Francisco, who produces the KQED television and radio "Health Notes" program.

Tom Rasmussen, director of satellite operations for the Hospital Satellite Network in Los Angeles, will discuss programming via satellite to health care professionals.

Tom Clayton of Peninsula CATV will moderate a panel discussion with questions from the audience. A complimentary lunch will follow the program.

There is no charge for the conference, but reservations are required because of limited space. Reservations may be made with Carroll Harrington of Peninsula CATV, 348 Waverley St., Palo Alto, CA 94302; or call 326-0882.

—Barbara Battino



Bill Tinsley, self-professed "mountain person," at work—even his route assignment fits in with his outdoor interests.

Getting the mail out, rain or shine

Bill Tinsley wiped a few drops of rain from his sleeve as he walked from his small pickup truck to enter a Welch Road office building.

In the classic tradition of the mail carrier, Tinsley doesn't let the weather stop him. In fact he likes it.

"I don't mind the rain one bit. When it's raining here, I know it's snowing up there in the mountains."

Tinsley is a skier.

"During the past four years I haven't missed many weekends during the (ski) season except by choice. There's only one thing that will get me to miss a weekend on the ski slopes and that is a really, really good party."

Tinsley started skiing about a year after he started work in the Hospital mailroom, where his grandfather, Harry Ball, was the supervisor.

"I wanted a set of skis because all of my friends had them. To tell you the truth, I actually had no intention of using them right away.

"But one of my cousins dragged me up on a hill. And that's all it took."

Tinsley said he never took a lesson. "Basically I'd rate my skill as an intermediate, but I'm not afraid to try an expert slope." He is a member of the West Coast Wheelers Ski Club and gravitates to the slopes in the Lake Tahoe area almost exclusively.

"I like the area, and I have a lot of friends I can stay with on the weekends in the area," he explained. "My co-workers Tim Powell and Pat Brown are also members of the W.C.W.S.C. and we ski together frequently."

And on the off-season, "I still go up to the mountains backpacking. I am a mountain person. I feel better up there. . .It's the air."

Throughout the year, Tinsley also roller skates three nights a week—"I have to keep in shape for skiing."

Even his work assignment relates to his outdoor interests. As one of the most senior of operations supervisor Ron Creamier's 14 couriers, Tinsley could probably get a route that would allow him to stay indoors at the main Hospital complex.

"But I've been on all the routes, and I really like the one I've got now best."

Tinsley, 26, is the only courier-driver among the 14 carriers in the Mail Department and has use of a small pickup truck. But he estimates that he still walks about two miles a day. Most of that foot thumping takes him back and forth from various parking lots to a variety of Medical Center offices leased along Welch Road, where he gets high marks from his mail "customers."

"He's surprisingly mellow, he just doesn't get ruffled," said Carol Jensen, a secretary in Care Review/Risk Management on Welch Road, a skier, and a close friend of Tinsley.

Friends, said Tinsley, are one of the real satisfactions of the job.

"I really enjoy when there's time to talk with people, find out who may have the same interests as I do. I have made a lot of friends" on mail rounds.

Tinsley admits the job can be busy with several thousand pieces of mail, including packages, every day.

"But we always get everything done. Of course on really heavy days I may not get a break."

But break or no break, there are always those weekends.

Tinsley does have other interests, including music. He owns 1,500 45 r.p.m. records, representing rock and roll music from the 1950s and 1960s to the '80s.

He explained, "I enjoy some of the newer groups, like Journey, but my collection is mainly from the 50s."

As for the 80s and beyond, Tinsley said he is looking forward to a career at the Center, "and for now, what I'm doing is just fine."

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard call 497-6389.

WEDNESDAY, JANUARY 19

Dept. of Clinical Social Work Inservice Education Program Part II: "Couples Therapy"—Cleo Eulau, L.C.S.W. 8:30 a.m., TF 122-C (Psychiatry Bldg.). For further information call 497-5091.

Dept. of Neurology Grand Rounds: "Cerebral Evoked Potentials and Somatosensory Perception"—Dr. Ron Angel. 5 p.m., Palo Alto Veterans Administration Medical Center, Bldg. 7, Rm. B108.

Div. of Orthopedic Surgery Grand Rounds: "Porous Coated Total Hip Replacement"—Dr. Emmett Lunceford. 8:30 a.m., M114.

Div. of Hematology Noon Conference: "Mild Hemophilia"—Dr. Robert O'Reilly. Noon, S102d.

Basic Science Research Colloquium: "The Organization and Expression of the Mouse Beta-2 Microglobulin Gene"—Dr. Jane R. Parnes. 5 p.m., Fairchild Auditorium.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Human Left Ventricular Function Immediately Following Cardiac Surgery"—Dr. George Daughters (Palo Alto Medical Research Foundation). 4:15 p.m., McCullough Building (main campus), Rm. 134.

Div. of Radiobiology Research Seminar: "Hypoxic Cell Radiosensitizers: Rationale and Clinical Potential"—J. Martin Brown, D. Phil. Noon, S092.

Div. of Clinical Pharmacology Seminar: "Nitrosodilators and Endothelium-Dependent Vasodilators May Induce Relaxation through Cyclic GMP"—Robert Rapoport, Ph.D. 4 p.m., M110.

THURSDAY, JANUARY 20

Dept. of Pharmacology Windsor C. Cutting Memorial Lecture: "Epidermal Growth Factor"—Dr. Stanley Cohen (of Vanderbilt University). 4:15 p.m., Fairchild Auditorium.

Nursing Educational Services: "Burnout: Treatment and Prevention." 8:30 a.m. to 4 p.m., 701 Welch Road, Suite 327. For further information call Carole Kidder at 497-6366.

Registration deadline: Nursing Educational Services Basic EKG Interpretation Workshop to be held February 3, 10, 17, and 24. Course will focus on cardiac anatomy, physiology and electrophysiology and offer opportunity for practice of dysrhythmia interpretation under guidance of instructors. Continuing education credit is available. For further information, call Carole Kidder at 497-6366.

Dept. of Neurology Seminar: "Calcium Gaba and Sedative Hypnotic Drug Actions Measured Intracellularly in Hippocampal Slices"—Dr. Peter Carlen (of Univ. of Toronto). 11:30 a.m., C364.

Dept. of Biochemistry Seminar: "Genes Effecting Embryonic Development in *Drosophila*—Dr. Eric Wieschaus (of Princeton). Noon, M114.

Dept. of Medicine Grand Rounds: "The National Research Council Report on Diet, Nutrition and Cancer"—Clifford Grobstein, Ph.D. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JANUARY 21

Dept. of Pediatrics Grand Rounds: "PKU Variant"—Dr. Carol Greene. 8 a.m., M106.

Dept. of Structural Biology Seminar: "Primary Events in Vision"—Dr. Peter Rentzepis (of Bell Labs, Murray Hill, NJ). Noon, Fairchild Bldg., D102.

Dept. of Gynecology and Obstetrics Grand Rounds: "Meconium Aspiration"—Dr. Ronald Ariagno. 8 a.m., A336.

SATURDAY, JANUARY 22

School of Medicine Symposium: "Education of a Physician." 8:30 a.m., Fairchild Auditorium. All members of the Stanford Medical community encouraged to attend.

MONDAY, JANUARY 24

Dept. of Gynecology and Obstetrics REI Conference: "Ectopic Pregnancy"—Dr. W. Leroy Heinrichs. 8 a.m., A336.

TUESDAY, JANUARY 25

Tenth Annual Linus Pauling Lecture: "Genes of the Major Histocompatibility Complex"—Dr. Leroy Hood, professor in the Div. of Biology at the California Institute of Technology. Sponsored by the depts. of biochemistry, biology, chemistry, genetics, medical microbiology, structural biology and the Stanford Magnetic Resonance Laboratory. 4 p.m., Fairchild Auditorium. The public is welcome.

WEDNESDAY, JANUARY 26

American Heart Association—Fifth Biannual Symposium on Cerebrovascular Disease: Speakers will include Stanford faculty members. CMA credit toward certificate is available. Reservations are required before Jan. 21, and there is a fee. 8:30 a.m. to 5 p.m., LeBaron Hotel, 1350 N. First Street, San Jose. For further information, call the AHA at (408) 247-8555.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Medical faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The department of pediatrics at Stanford University School of Medicine seeks candidates for appointment to the full-time faculty at the assistant or associate professor level in the division of pediatric nephrology.

Candidates should be certified or eligible for certification in pediatrics and in pediatric nephrology. Candidates for appointment at the assistant professor level must give evidence of training, experience and productivity in laboratory research.

Those who wish to be considered for appointment at the associate professor level must have an established research program.

Responsibilities of this appointment also include medical student and housestaff teaching, training of fellows, and responsibility for patient care.

Interested candidates should send curriculum vitae and names of references to Bruce Tune, M.D., Department of Pediatrics, Stanford University Medical Center, Stanford, California 94305.

...News Notes...

Stanford ICN relief nurse Kathy Kiser is volunteer coordinator for the California Winter Special Olympics, to be held at Mammoth Mountain this year from April 10-15.

The program, a winter experience for the mentally handicapped which includes ski instruction and competition, needs nurse volunteers, said Kiser. The nurses provide a medical back-up, though doctors and paraprofessionals also participate.

Kiser said that 100-150 adolescents and adults from all over the state will join the activities. Lodging expenses for nurses are covered by the program. Nurses who wish further information should contact Kiser at 493-1713. The deadline for volunteers to sign up is March 1.

* * * *

The Medical Center Auxiliary has given over $25,000 this month to the Hospital for the purchase of a new fluorescent microscope in the department of pathology.

The Auxiliary also gave $5,000 to Social Services to cover the patient care emergency funds through April. These funds, contributed by the Auxiliary each year, pay for expenses such as temporary housing and food. An increased need this year caused this month's extra donation, bringing the total for the year up to $14,000.

* * * *

Patricia Toomey has been promoted to the position of assistant director of Medical Record Services, announced director Marion O'Brien-Adineh.

Toomey has served for the past three years as manager of the transcription services, and was instrumental in the successful move of that section. She was also responsible for installation of the current dictation system.

Toomey's new responsibilities will primarily include the management of routine operations for the department. She has many years of medical record and hospital experience, having served at Massachusetts General prior to joining the staff at Stanford.

* * * *

David Tobin has been appointed controller for the Hospital Modernization Project, announced HMP director Elvia Garwood.

A financial and accounting manager, Tobin has a wide range of experience in developing and administering information systems for cost accounting, financial analysis, budget preparation, and construction management reporting. He is familiar with time sharing systems and has programming ability.

Since 1973 Tobin worked for Kaiser Cement Company in Permanente. He received his B.S. from San Jose State University in 1972, and also attended the M.B.A. program at SJSU.

Construction Corner

Lane Medical Library: There will be construction work in the Lane Medical Library beginning this week. Administrative offices are being built on the lower level to relieve some of the office space overcrowding on the main floor.

Study carrells will be rearranged and there will be a slight increase in the present number of seatings. Noisemaking operations will be moved to enclosed spaces to help reduce the amount of noise in the public areas.

The Library apologizes for any inconveniences during construction.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Patiently awaiting their studious owners, parked bikes dot the Medical School scene again these days, as after a holiday break students are back in full swing with winter classes.

Calendar...

continued from page 1

The Stanford students gave the lowest ratings of any of the five groups studied to the perceived soundness of evaluation of their work. This included the student's belief that good work and effort would result in good grades, and that feedback from instructors on written work was sufficient to help the student do better.

Students who perceived that the evaluation was unsound were likely to report putting out less academic effort, undermining their own academic progress.

The committee said that "argument about the calendar is an argument about educational values," which are practically "insoluble."

Proponents of the quarter system believe it exposes students to a broader variety of subjects and faculty members. Students are able to focus on fewer courses at a single time. The shorter term permits better scheduling of continuing courses and sequences. It also fosters learning done in sequential steps.

Semester advocates believe longer terms encourage more reflection on complex material, especially in the humanities and the social sciences. Semesters provide more time for meaningful response to student work, including diagnosis and correction of deficiencies. Where there are sizable writing assignments, longer exposure to material permits more sensible selection of topics for papers. Semesters also permit a reading period prior to final exams.

Harvard, Yale and MIT all use some form of the semester system.

But the committee noted that "Students are able to learn on any system whatever, if they are good students—and ours are."

Besides semesters, the committee examined the possibility of dividing the calendar into six terms of five weeks each, including two or three days for exams. These were called "Golub units" after Prof. Gene Golub, computer science.

Under this system, courses could extend anywhere from one to six "Golubs" per year, with normal quarter-length courses extending over two "Golubs" and semester-length classes the equivalent of three "Golubs."

This would require more year-long planning by students, with good academic advising at the outset. Neither of these is "Utopian," but "neither reflects present reality to (a) desirable degree," the committee said. Graduating seniors have been quite critical of academic advising, particularly prior to choice of an academic major in the junior year.

The use of "Golubs" also might encourage course proliferation rather than tightening up course offerings, the committee said. Courses fulfilling the new distribution requirements might be kept at the two "Golub" level, leading in time to reinstatement of the quarter system.

"If that result can be avoided, the arrangement is well worth more consideration," the report said.

At present, "many courses in the University have too few units (of credit awarded) for the amount of work assigned." In principle, one unit of credit should reflect an average of three hours of intellectual work per week, including class and related work.

Besides Good and Cohen, the committee included Profs. Gordon Brown, earth sciences; Alain Enthoven, business; Lawrence Friedman, law; Charles Kruger, mechanical engineering; John Steward, medicine; Lyman Van Slyke, history; and Stanley Wojcicki, physics; Registrar Sally Mahoney; Alex Markevich, graduate student in physics; and undergraduates Ann Wagenhals, history, and Doris Wilson, political science.



Stay with quarter system, ad hoc committee recommends

Following is a report from the Ad Hoc Committee to study the question of the length of terms of Academic Instruction which will be considered in the near future by the Faculty Senate:

The charge to the committee was adopted by the 13th Senate on May 28, 1981, and the faculty members of the committee had been appointed by October 28, 1981. In early December, 1981, the names of two of the three student members were given, and we decided not to wait for the third. Meetings began in January, 1982. In April, 1982, the graduate student member was appointed by the ASSU.

The charge to the committee is appended to this report. We have not felt it necessary to consult with the other committees of the Academic Council, as we were not proposing any changes in such matters. Most of the committee's effort went into the question of the length of academic terms, and to that subject most of the report is addressed.

The Academic Calendar: Options Considered

The committee was appointed in the first instance because a strong case was made in the Senate for reviewing the quarter calendar, on which Stanford has operated since the academic year 1917-18. As the principal alternative to the quarter system, the semester calendar was the major alternative considered by the committee.

1. **Quarter System**: The three terms of the academic year (the committee has not considered summer session) are all of approximately 10 weeks of instruction, followed by one week of exams. The terms are not all of the same length; spring quarter is regularly about 9½ weeks of instruction, whereas autumn quarter is usually nearly 11 weeks. Autumn quarter instruction begins on Wednesday, between September 25 and October 1, and commencement is on the Sunday between June 12 and 18. Normal undergraduate course load is 15 units, distributed among courses ranging from three to five units. A few courses exceed five quarter units. Graduate course loads vary greatly from department to department. About 25 percent of American institutions now use the quarter system.

2. **Semester Systems**: There are several varieties of semester systems.

a. **Traditional Semester**: Instruction ordinarily begins in about mid-September, and first-semester classes either conclude before Christmas vacation or resume just after New Year's for one or two weeks in January. A reading period and exams occur in January. After a vacation, the second semester begins in early February, and, with a vacation in late March or early April, it ends about the middle of June. The traditional semester was for many years the standard academic calendar in this country. In 1970, 35 percent of the institutions used it, but it has declined greatly in popularity, and in 1981-82, only about four percent of institutions were on that system. The principal objection to it is that the vacation in December causes students to lose momentum gained during the autumn, and the activities for January have a "lame duck" quality. The Stanford School of Law follows a traditional semester, beginning instruction about two weeks before the rest of the University, finishing classes before the Christmas vacation, and spending most of January on examinations.

b. **4-1-4 System**: This is a variant on the semester system in that the autumn semester begins at or about Labor Day and is completed before Christmas vacation. January is an interim term in which students may do individual research or field work, ordinarily away from the campus, for credit equivalent to one course, and the second semester begins at early February and continues until June. The name of the system comes from the fact that the typical semester course load for students is four courses, and one course is done during the January intersession. This system has come to be used more than it was formerly, but not by very much (about 7 percent of institutions in 1970, about 10 percent in 1981). In cold climates, buildings can be closed for six consecutive weeks at the height of the winter.

c. **Early Semester**: The early semester system has recently had the most increase in use. In 1970, about 26 percent of institutions used it, and in 1980 it was up to about 55 percent. On this plan, instruction both begins and ends earlier than in other systems. Autumn semester typically begins in the last week of August or just after Labor Day and is over before Christmas vacation.

In some cases, the second semester begins soon afer New Year's and is completed in late April or early May; in others, winter vacation lasts until the end of January, and the second semester ends in middle or late May. The early semester system avoids the "lame duck" January of the traditional semester, and it also gives students an advantage in the summer job market over those with later ending times (in that respect, the quarter system puts students at a disadvantage). The UC-Berkeley campus will go to the early semester calendar in autumn of 1983-84.

3. **The "Golub" System**: Among other possibilities, the committee looked carefully at only one, a system that is used, we are told, in one school of an eastern university. It was suggested by more than one faculty colleague at Stanford and proved interesting to the deans of Humanities and Sciences. It is a system of six five-week terms, with 2- or 3-day exam periods at the end of each. In effect, it cuts each quarter into two separable terms, with the assumption that most courses will cover more than one term. (The committee puzzled over what to call these terms. Half a quarter is, of course, an "eighth," which seemed not a good word for a term of academic instruction. Since the proposal was made in more than one place by Prof. Gene Golub, chairman of the Department of Computer Science, we came to call these 5-week terms "golubs." (Surely creativity should be rewarded for people with names other than Watt, Ohm, and Hertz.) In this system, courses might occupy anything from one to six golubs. Normal quarter-length courses would take two golubs, normal semester-length courses, three golubs. Some courses would last for only one golub; Computer Science tells us that some of their introductory language courses now occupy five weeks. The system is intriguing because it proposes a way by which both quarter-length and semester-length courses can be accommodated in a single system, a problem to which we will return below.

Educational Values and the Academic Calendar

The question of the academic calendar is not merely that of a convenient way to arrange the year. The committee has become convinced that particular calendar systems embody and sustain particularly educational values. This fact leads, we think, to the insoluble arguments between proponents of quarter systems and adherents of semesters. The arguments range far beyond the calendar.

Advantages argued by its proponents for the quarter calendar are several:

1. Since the normal course load in a quarter is three or more, whereas it is usually four in a semester, students can achieve better breadth by exposure to more subjects and faculty members over a year.

2. With typically fewer courses being taken at one time, students have less distraction of shifting energy and attention from one course to another.

3. Faculty leaves can be scheduled more flexibly, disrupting course offerings less seriously, and visiting faculty can be more advantageously used, even if they come from institutions on the semester system.

4. The shorter term and the flexibility of three terms in a year makes for better scheduling of continuing courses and course sequences and for maintaining students' momentum.

5. The shorter term is a better way of teaching material, including that in which the learning is done in sequential steps, with each step essential for the following ones.

Advantages argued by its proponents for the semester system are as folllows:

1. The longer term is more advantageous for subjects in which the premium is less on mastery of a body of knowledge than on reflection on complex material in terms of methodologies. For this reason many faculty members in the Humanities and some of the Social Sciences prefer semesters.

2. There is more time for meaningful response to student work, for diagnosis of difficulties, and for work to repair deficiencies. (In the debates at Berkeley, it was argued especially on behalf of minority and disadvantaged students that quarters do not permit time to recognize these students' special problems and to meet them before it is too late to help them.) A minority report emphasizing this problem is attached to this report.

3. In courses with sizable writing assignments, a longer time of exposure to the material allows sensible choices of paper topics and permits the sometimes protracted reading and research necessary to comprehend the subject and writing decent prose.

4. A reading period could be scheduled between the end of classes and the beginning of exams. Reading periods in the quarter system make the year inordinately long. (For many subjects a reading period is of no particular value.)

Basically, then, the argument about the calendar is an argument about educational values. Those who think it better that students explore material in depth than that they sample many different subjects are not convinced by the argument that quarters are preferable because they allow students to take more courses. Those who teach material that entails regular assignments carrying students through specific blocks of material that must be mastered in preparation for the next block fail to see the necessity of time to think reflectively over the material, where those who teach materials that necessitates more than one trip through it, no matter how careful (a complex novel, for example, simply requires more than one reading—even more than two readings—for even the beginnings of a critical comprehension), fail to see why a careful stepwise presentation of the material is the best way to teach.

A considerable amount of discussion has led the committee to agree that the University is a diversity in this respect: different disciplines are best taught and learned in different ways. The recognition of that educational and intellectual diversity is in no sense a judgment on the relative value of one academic discipline or one way of learning over another. Though engineering and philosophy may use some of the same mental operations, they also and more importantly use different kinds of mental operations, call for different kinds of learning and teaching—and it is not surprising that their practitioners tend to prefer different academic calendars.

Universities of high quality in this country operate satisfactorily on different calendars. Harvard has traditional semesters, Yale early semesters, Stanford quarters. Nationally admired disciplines at Stanford whose members prefer quarters are taught elsewhere on semesters (e.g., MIT). Disciplines whose members at Stanford tend to prefer semesters are represented here by departments widely acknowledged as leaders in their fields. It is important to say, moreover, that Stanford students generally study effectively and learn well, and they would do so no matter what the academic calendar were. The argument about the calendar has been pursued at nearly regular intervals at Stanford since the 1930s. It seems never to be definitively resolved, we think, for three reasons: 1) the argument is carried on between representatives of different kinds of learning that will and must remain different; 2) students are able to learn on any system whatever, if they are good students—and ours are; 3) since 1917-18, those who prefer the quarter system have always carried the day with a preponderance of votes.

The last point has also characterized the committee. Most of its members prefer quarters, and no more than a minority has wished to recommend a change to any alternative. All members agree that important educational and intellectual issues are at stake in the debate, and that it would be most desirable to find ways of making everybody happy.

The Search for Combination

The committee tried to find workable ways to combine calendars. We thought of a system in which winter and spring quarters, continuing as at present, were accompanied by a semester-length term, beginning about mid-February and ending at the same time as spring quarter, before which, during January and the beginning of February, would be a 5-6 week term in which short courses or intensive courses might be carried on. We thought of simply plastering semesters over the quarters in something of the same way, with the first semester running through most or all of January, and an exam period in early February. In every case, the student members thought that scheduling would be very complicated, and other members of the committee felt that access of students mainly on one calendar to courses on another would be at best difficult. Given the amount of time that students must spend on distribution requirements, such difficulty of scheduling seemed to the committee insuperable.

Some of the same concerns informed the committee's response to the 6-term "golub" system. On first glance it looks very attractive as a way to eat our calendrical cake and have it too, to offer within a single calendar courses on 10-week, quarter-length terms and also on 15-week, semester-length terms. It provides for the possibility of intensive courses lasting five weeks, which might be conceived as introductory to following courses. For example, a 5-week introduction to prosody, with an intensive examination of metric systems and scansion, rhythm, poetic forms, and the like in poetry, might be followed by a 2-golub introduction to poetry, emphasizing the analysis of poems, and, alternatively, by a different course, perhaps focused on the works of a single poet. Thus a single 1-golub course might be prerequisite to more than one succeeding course.

The committee predicts that patterns of courses in the 6-term system would vary considerably. Some departments would arrange their courses almost exclusively in 2-golub units, others in 3-golub units, while some departments would use both ways of arranging courses. Continuing courses would probably be affected hardly at all, though the 6-term system allows for flexibility in scheduling examinations. Language, mathematics, beginning science, and beginning engineering sequences, especially those that last for the entire year, could be arranged in any way that seemed most advantageous for teachers and students. Western culture tracks would not be affected.

The problems would come when students took some courses lasting two golubs, others lasting three, and especially in balancing out schedules over the year. If, for example, in the first half of the year a student had two 2-golub courses and one 3-golub course, at the beginning of the third golub (corresponding to the beginning of winter quarter) that student would presumably enroll in two more courses. Five weeks later, as the fourth golub began, one would search for either another 3-golub course, a 1-golub course, or a 2-golub course lasting across the fifth golub.

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(We would predict that few of the latter would be available; 2-golub courses would tend to be scheduled in times corresponding to current quarters, beginning at the first, third, and fifth golubs, whereas 3-golub courses would tend to be scheduled to begin at the first and fourth golubs.) At the fifth golub, the student would fill out the schedule for the rest of the year. At four times during the year many students would have to make course selections, and the availability at all of those times of just the right courses to enhance any student's education might well be even more chancy than it now is.

As a result, we think, students would necessarily plan their courses for the whole year at the beginning of the year. That is by no means a bad thing, but it requires two further assurances: 1) that **Courses and Degrees** accurately present course offerings for the year; 2) that good advising be available to all students at the beginning of the year. Neither of those necessities seems to us completely Utopian and impossible, but neither of them reflects present reality to the desirable degree. The perennial complaint that faculty members do not volunteer in sufficient numbers for general undergraduate advising would need solution.

Another aspect of this and other combinatorial systems that troubles the committee is the possibility that, at a time when a number of members of the University perceive that the curriculum has a luxuriance of courses with considerable overlap of subject-matter, these systems might be a temptation to proliferate courses rather than to tighten up the offerings.

The committee is intrigued with the six-term system, but it is unwilling to recommend its adoption, predicting difficulties in combining two- and three-golub courses in students' schedules. Moreover, the committee fears that all courses for distribution requirements might turn into two-golub courses, losing the leverage that might get students to accept three-golub courses, structured in that way on the best of educational grounds. Before long, three-golub courses would disappear from the curriculum for lack of enrollments, and we would be back on the quarter system. If that result can be avoided, the arrangement is well worth more consideration.

Specific Questions in the Charge

The report thus far has spoken to the first point in the committee's charge from the Senate: "The comparative desirability and efficiency of the quarter system, the semester system, or any alternative system, in the various types of instruction in the University." The committee spent most of its time and energy on that question. We now continue to other questions.

The second part of the charge was: "Measures such as course sequence scheduling, including continuing courses, in the quarter system, the semester system, or other calendar system both to facilitate the teaching of subjects that exist in precise or definable blocks and also to facilitate the assignment of research topics and term papers in those subjects in which writing as such is an important educational component." **Course sequences** need to be distinguished from **continuing courses**. Sequences are groups of courses that cover a body of material in order, but students need not complete the entire sequence to receive credit for any part of it. A continuing course lasts for more than one term, and all of it must be completed for the student to receive credit for any of it. Many sequences are to be found in departments of the humanities and social sciences, but not many continuing courses are offered there. A good many of the series in the sciences and engineering are continuing courses rather than sequences, even though students may receive grades for each term rather than the "N" grade often used in continuing courses. In some continuing courses, such as the Western Culture tracks, it is possible for students to take one quarter in one year and to complete the course in another year, though the practice is not encouraged.

Another kind of sequence is implied by attaching prerequisites to courses. Especially in the humanities, even some advanced courses do not have specific prerequisites. This is often understandably confusing to people outside of those disciplines. But the kinds of learning necessary in such subjects are different from the sequential kinds of learning that much of natural science and engineering finds natural. The study of literature is a matter of expanding sophistication in the application of critical tools to literary texts, and it does not matter whether one applies those tools first to Shakespeare and later to Wordsworth or in reverse order. The study of history likewise does not require that one cover the Renaissance before 19th-century Europe. Thus the order in which subjects are studied is nearly irrelevant in the humanities and many of the social sciences, and a teacher may be able to handle students at different levels of sophistication in the methods of study in the same course without serious disruption.

The committee suggests that the humanities and social sciences might make effective use of continuing courses in order to gain the time necessary to allow better depth of study. For many departments courses lasting longer than one quarter might help to overcome the perceived faults of the quarter system. Such courses might be offered for two quarters as continuing courses, in which the first quarter is prerequisite to the second. But many instructors who favor semesters have argued that, while one quarter is too short for the best learning, two quarters is too long. An alternative is that continuing courses need not extend throughout the next quarter; a course might last, say, five weeks into the second quarter, after which it would be over. Nothing in present regulations forbids doing this. One might, then, offer a course for four units in autumn quarter, continuing for three units in winter quarter. The students would receive "N" grades at the end of autumn quarter. The instructor might continue to hold classes for five weeks or so in winter quarter and at the end of the time arrange for a final examination. Alternatively, an instructor might give an examination at the end of the autumn quarter and use the first five weeks of winter quarter for students to do the research for and write term papers. Perhaps with a good deal of individual consultation.

Such a use of part of a second term would meet another of the typical laments about the quarter system: that it is a really bad calendar for courses in which a sizable amount of writing is called for, especially if during the term the student must search out a manageable but good-sized topic, research it, and write a paper in clear if not elegant prose.

The committee recommends that deans and departments consider experimenting with the calendar in such ways as arranging continuing courses and sequences, together with calculating equitable means of faculty teaching assignments. Such experiments must take great care to avoid impeding access to courses by students from outside the school or department.

The third charge to the committee was to consider: "The desirability and practicality of instituting a required reading period, or of strengthening the dead week concept." It is clear that a reading period before exams, in which no classes are scheduled, is completely incompatible with the quarter system. The shortness of time, about which many faculty members complain in the quarter system, would be exacerbated by substituting a reading period for some days of classes. Moreover, many faculty members have no need for reading periods for their courses. The concept of dead week depends for its efficacy either on an administrative power that can forbid all extracurricular activities during that week or on the cooperation of all departments in not scheduling new assignments, tests or public activities of any kind during dead week. The committee has not been able to think of any alternative way of making sure that dead week is observed.

The committee was asked to consider "The effects that any change in the terms of academic instruction might have on requirements such as the Western Culture, language, distribution, and writing requirements, in addition to the effects on the requirements for the major." Should a change to semesters be made, the committee sees no change in the Western Culture or language requirements. Western Culture tracks last the entire year, and they could be of-

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Committee on Length of Terms: Minority Report

The committee report concludes that there is no practicable alternative to the quarter system. This minority report concurs that there is no way to achieve a consensus on this campus to any alternative that involves serious reworking of courses, teaching loads and schedules. It does, however, take issue with the assumption the report makes that Stanford students do well regardless of whether we have a quarter or a semester system.

This assumption stems from the fact that we take in highly selected students and graduate a large proportion of them. However, whether or not the quarter system with its heavy emphasis on exams and papers that have to be prepared on relatively short notice has anything to do with the learning and academic success of students while they are studying at Stanford, is an empirical question. The answer to this question should not be assumed because it leads the faculty to think that they do not have to worry about any problems with the methods they employ in teaching.

The only evidence we have that is relevant comes from a study of Chicanas in higher education sponsored by the Center for Research on Women. This study included a Stanford sample of 237 Chicano undergraduates (148 females and 89 males). The female sample was a total sample and the male sample was a random sub-sample. Response rate was over 60 percent. There were comparable samples from a University of California campus (the only other campus to be on a quarter system) two State University campuses and a community college.

Stanford students varied as to the amount of academic difficulty they were experiencing. Some were reporting low grades, had a record of stopping out and were making slower progress toward their degree than others. This variation occurred within the Stanford sample, despite the finding that Stanford students were making more rapid progress toward their degree than students on any other campus.

Stanford students who saw themselves as less academically able were more likely to say that they did not get their reading done in time for class and that they did not turn in their written assignments on time. (See Table.) Furthermore, Stanford students were more likely to state that this was so than students on any other campus we studied. This finding is consistent with a problem of time pressure we find in many undergraduates and most acutely in non-native English speakers among the undergraduates and graduate students.

Gonzales' analysis of these data showed that the Stanford sample was also lowest of all the campuses on a measure called "Perceived Soundness of Evaluation." Perceived soundness of evaluation was an index of three items: student's belief that good work would lead to good grades, belief that effort would result in good grades, and an item concerning whether or not feedback from the instructors on written work was sufficiently specific to provide guidance to the student in doing better work. Furthermore students at Stanford who perceived that the evaluation system was unsound were likely to report putting out less academic effort thereby undermining their own academic progress (1982).*

What does this mean with respect to the quarter system? It suggests that we do have a teaching and learning problem with some students; and that this problem may well be related to teaching techniques that are ill-suited to the quarter system. We are all well acquainted with colleagues who adapt to the quarter system by simply "talking faster" in an effort to cover materials. It is very common practice to give a final exam and a term paper due at the end of the quarter when it is too late for the student to learn what he or she is doing wrong and how he or she might do better work.

If we are to remain with the quarter system it is essential for Stanford to ask some pertinent questions. How many other students besides the ones in this study are unable to keep up with the peculiar pressures of the quarter system? Considering the academic demands made on students at Stanford, are they receiving timely and specific feedback in order to prevent discouragement and falling behind in their coursework? Methods of teaching should be adapted to the length of the term. The critical issue is not so much whether we have quarters or semesters. A more important question is effectiveness of the teaching, given the constraints of the system we have chosen.

Respectfully submitted,
Elizabeth G. Cohen
School of Education

* **Judith Gonzales.** *Instructor Evaluation and Academic Effort: The Chicano in College.* **Unpublished doctoral dissertation, Stanford University, 1982.**

Percentage of Students on Five Campuses Reporting Difficulty in Getting Work Done on Time: CROW Study of Chicanas in Higher Education*

Question: Using the categories below, indicate how frequently you

1. Go to class without doing assigned reading

Campus	Percent Answering "Often" or "Always"	N
Stanford**	26.6	143
U.C.**	22.3	103
State Univ. (urban)	14.4	97
State Univ. (rural)	18.2	198
Community College	9.0	135

2. Turn in a paper late

Campus	Percent Answering "Always," "Often" or "Sometimes"
Stanford	24.4
U.C.	18.3
State Univ. (urban)	13.4
State Univ. (rural)	17.6
Community College	19.5

*** This study was supported by the Ford Foundation. A final report** *Chicanas in Postsecondary Education* **is available from the Center for Research on Women.**

**** These are the only two campuses on the quarter system.**

Stanford tuition trails Ivy League by about $150 annually, Bacchetti says

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increase for 1983-84 used in the University's long range forecast.

"We don't want to move tuition at a rate that makes it impossible for students to come here," Kennedy said. Trustees are expected to set next year's tuition rate at their Feb. 8 meeting.

Compared to the seven institutions with which Stanford shares the most candidates for the freshman class, Stanford's current tuition of $8,220 is $150 below their average, Bacchetti said. The seven schools are Brown, Cornell, Dartmouth, Harvard/Radcliffe, MIT, Princeton, and Yale.

Stanford's tuition last year was approximately $100 less than the seven-school average, and during the four previous years it was $50 to $100 above average.

Tuition went up 15.1 percent at Stanford last September, while increases averaged 15.7 percent at the other schools. Princeton plans an increase of more than 12 percent for 1983-84.

Bacchetti said "It's not surprising that institutions that have very similar characteristics have costs that are comparable and therefore have charges that are comparable."

Stanford continues "firmly wedded," Kennedy said, to a policy of admitting undergraduates without regard to ability to pay, and then meeting the full demonstrated need of each student. Between one-tenth and one-fourth of all tuition increases is redistributed to financial aid. Overall, 13 percent of tuition income is used for financial aid, he said.

The proportion redistributed to aid is higher on new tuition dollars because the University has been "making up for the diminution in federal aid programs and a lack of cost rise in the state program," according to Bacchetti. "In addition, we have been making up for the general economic conditions that apply greater allocation on our part to help those families caught in the present recession."

Bacchetti said he thought it was reasonable for tuition to grow at about the rate of personal income "so people's standard of living would not increase relative to the cost of education and the opposite didn't happen either."

Current costs

He estimated the University's four-year cost for a current senior at $60,000 to $70,000. Tuition, room, board, books, and personal expenses total about $43,000. The remainder was covered by endowment, gifts, and other sources of income. The out-of-pocket cost was lower for students on financial aid, he said.

Asserting that education should not be viewed as a product, Bacchetti said "it used to be that tuition was a word that stood all by itself. It wasn't a synonym for something like 'price' and you never talked about markets and marketing in higher education.

"I hope we don't make it into a consumer good like all other consumer goods. There's something very precious, long-term, fragile, and critical about institutions like this that gather so many students and faculty together for one purpose and one purpose only and that is to grow—to grow in knowledge, to grow personally."

Financing education should be a "partnership" of government, public-spirited donors, parents, and the students themselves through summer earnings. Even students not receiving financial aid are being subsidized because tuition does not cover the full cost of the program, he said.

The administration plans to cut about five percent from the operating budget during the next two years, Hastorf told the students. One percent was trimmed last year. Without the budget cutting program, tuition would be driven up "impossibly," he said.

"If we only paid attention to the wonderful ideas deans have, we'd go broke in no time," he joked. "By the same token, if we only pay attention to a totally miserly attitude toward the budget, we'd lose our zest and our vim."

Despite the impending five percent cut, the University has set aside one-half of one percent for new programs, down dramatically from recent years. "It's crucial that we have some atmosphere of a push forward," Hastorf said.

Kennedy told the students they could "influence public policy in a way that helps access to quality higher education, not only for yourselves, but for others around the country."

He jokingly assured the audience that administrators would "not conclude from the relatively low attendance that you are deeply satisfied with the current trajectory of tuition and that we are therefore free to move it as our ambitions suggest."

The forum was sponsored by the Associated Students Task Force on Tuition and the ASSU Speakers Bureau.

—Karen Bartholomew

Grad student social group forms

Coping with the information explosion and specialization will be the theme of the first two programs organized by a new Stanford student group, Grads in Common.

Created by students from eight different departments, ranging from English to engineering, Grads in Common will meet Thursday afternoons weekly through winter quarter.

The opening program, "Coping with the Information Explosion," is scheduled for 3:30 p.m. Thursday, Jan. 20 in the Tresidder Lounge.

Speakers will include Prof. John McCarthy, computer science, who created the term artificial intelligence and the LISP programming language; Barbara Gelpi, editor of *Signs: Journal of Women in Culture and Society;* Paul Kaufman, special assistant to the director of the Center for Information Technology; and Guiliana Lavendal, manager of the Technical Information Center at Xerox Palo Alto Research Center.

The second program on "Specialization: Where Did It Come From and What's It Doing to Our Professional Lives" will be held at 4:15 p.m. Thursday, Jan. 27, in the Tresidder Lounge.

Speakers will include Prof. Sidney Drell, arms control faculty member and deputy director of the Stanford Linear Accelerator Center; Prof. Anne Mellor, English, head of feminist studies; Prof. Ian Watt, English, director of the Stanford Humanities Center; and Prof. Malcolm McWhorter, electrical engineering, director of the Ethics of Development in a Global Environment.

Further information may be obtained by calling 497-1326.



Pianist Jodi Gandolfi will play works by Haydn, Chopin, and Schubert in a recital at 8 p.m. Friday, Jan. 21, in Dinkelspiel Auditorium. Gandolfi, who received her Stanford D.M.A. last year, is a new member of the piano faculty. Tickets are $4 ($2 for students and seniors).

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fered in two semesters as well as in three quarters. Language courses are likewise continuing courses and it matters little whether the breaks are made once or twice. Distribution and writing requirements might occupy more time for students in a change to semesters. The same predictions would hold true for the six-term system, though freshman writing might be arranged in two-golub rather than three-golub units. The possible effects of changes on majors are so many that they are nearly impossible to predict. The six-term system would probably not alter the unit requirements of majors, but it might require some departments that organize their majors by the number of courses to modify those organizations. A switch to the semester system would entail completely reorganizing major programs throughout the University, rearranging courses within departments, and rethinking structures of curricular programs.

The fifth element of the charge was: "The costs, direct and indirect, that would be involved in any change from the current quarter system." The committee did not compute or estimate costs, since it did not seriously contemplate recommending any change. The main costs would be the indirect ones of the time and energy spent by administration and faculty in the change to a semester system. We think a switch to a six-term calendar would entail much less cost, corresponding only to what schools and departments wished to do.

Sixth, the committee was asked to look into "the desirability of specifying the number of courses rather than the number of units that candidates for the bachelor's degree must complete." Courses are typically offered for three, four, and five units, with a few exceeding five. Except for students who take more than 16 units in any quarter, it is hard to take more than five courses simultaneously, though the phenomenon is not unknown. It must be said that the advantages of the quarter system, involving the intensive exposure to material over a relatively short time, are diluted when a student takes too many courses. How many are too many? The answer varies with nearly every faculty member and every student. If a student's courses are related to one another, five courses may be exhilarating. If they are not, four may be confusing. Some institutions on the quarter system permit students to take no more than three courses per quarter, and some such arrangement may be a way by which the quarter system could work best for the most students in the most disciplines. The committee is unwilling to force such a strait-jacket on its colleagues. The relative flexibility of courses with variable units becomes a bad thing only when a given course requires an amount of work incommensurable with the number of units.

Defining the amount of work to be represented by a unit of credit is difficult. Stanford's principle is that one unit represents on the weekly average three hours of intellectual work, in class and out of it. It is as plausible a definition as any, but it founders on the fact that, for example, for two equally capable students, what is two hours of hard critical reading for one may be five hours of the same for the other.

The committee is not inclined to propose a new definition of the unit of credit. We do suggest that many courses in the University have too few units for the amount of work assigned.

Conclusions

In summary, the committee recognizes with a clarity it did not have at the beginning of its deliberations that there is no such thing as a perfect academic calendar, and that significant educational values that are important to the University at large are rendered difficult of realization on the quarter system.

No alternative systems have commended themselves to more than a minority of the committee, nor do any of its members argue that the current system is completely unworkable. Several complain bitterly that it works badly for their own disciplines (the chairman is one). But the committee has been unable to muster enough unanimity about any systems combining calendrical arrangements to recommend their adoption. We do recommend that deans, departments, and individual faculty members consider experiments to overcome some of the limitations of the quarter system for their disciplines or specific courses within them, by offering sequences and continuing courses. Without question, some faculty members need relief in this matter.

The committee urges that members of the University consider that the different kinds of learning that must be fostered by a complex university, all of them proven by high intellectual attainment, are essential to the cultural tradition that the University represents. For the University's health, diversity of learning must be supported and enhanced. The length of academic terms is not the most important element in that undertaking.

Respectfully submitted:

Gordon Brown, earth sciences
Elizabeth Cohen, education
Alain Enthoven, business
Lawrence Friedman, law
Charles Kruger, mechanical engineering
Sally Mahoney, registrar
Alex Markevich, physics (graduate student)
John Steward, medicine
Lyman Van Slyke, history
Ann Wagenhals, history (undergraduate)
Doris Wilson, political science (undergraduate)
Stanley Wojcicki, physics
Edwin Good, religious studies, chairman

Massy discusses impact of computer-based modeling on university work

William Massy, Stanford's vice-president for business and finance, gave a talk recently on Stanford's experiences during the transition to increasingly sophisticated computer-based administrative support systems.

Speaking before the Annual Conference of EDUCOM, which is a non-profit consortium that involves more than 400 colleges and universities engaged in sharing applications of technology to education, Massy discussed the impact of computer-based modeling capabilities. He specifically described the use of data base management systems, word processing networks, and electronic mail at Stanford, in terms of how the University gets its work done.

Over the period of the last 10 years, and especially during the past two years, Stanford has become increasingly computerized in its administrative functions, and Massy summarized the major innovations for the EDUCOM audience, adding that what has happened at Stanford is not unique among universities.

He attributed the impact of these support systems to "a combination of forces: 1) increased budget pressures, on campus and with respect to research sponsors, that make increased efficiency imperative; 2) a recognition that change in management styles, and in general more professional management, is needed; 3) the availability of new and powerful tools, and the deployment of trained personnel who are capable of adapting the tools as needed and using them in the university environment."

Modeling widely used

Speaking first on modeling, Massy commented that models such as those used at Stanford are now accepted and widely used at many higher education institutions. At Stanford, EFPM (Educom Financial Planning Model) is used to update and run the long-range financial forecast of the University's operating budget every year. This model, the predecessor of which was developed at Stanford, permits sensitivity analysis of key operating and financial parameters. For instance, the needed operating budget support for undergraduate financial aid is modified every time a change in the tuition rate is postulated. EFPM also runs separate long-range financial forecasts for the Housing and Food Service Department, as well as for the School of Medicine.

"The combination of the experience gained using models, the improvements in the sources of data, and model refinements over time, gives the University the ability to rely on what the models are telling us," Massy stated. "We have found this particularly true in times of shrinking resources, as in the present period of financial constraints." The use of such models permits Stanford to anticipate and plan for periods of financial change. The models won't solve problems, but give the University the context in which to evaluate and develop alternative solutions.

Massy also described the facilities renewal model, on which the University's capital budget is partly based. For major capital projects, special models are built to deal with both the operating and the financial aspects of the project. Examples of these projects are the hospital modernization program and the cogeneration plant (for the generation of steam and electricity). Both of these projects have been extensively modeled to analyze risks and benefits to the University.

Other models are used to project forward any changes in the University's balance sheet, and to deal with faculty appointment and promotion rates, and the effects of changes in retirement programs upon the age distribution of the faculty.

Balance sheet model

The balance sheet model was developed this past summer by Management and Financial Planning and the Controller's Office. It permits Stanford to observe changes in the University capital structure over time, which allows the University to track the effects of debt financing for such projects as student housing, the telephone system, and the cogeneration plant. The model helps the University determine how much debt capacity is available not only for planned projects, but for major emergencies, such as an earthquake.

"Obviously, the use of models depends on the availablity of good data. The introduction of data base management systems has made it much easier to retrieve and manipulate the data needed for effective model building," Massy observed.

His remarks on data base management systems centered on Stanford's recent choice of SPIRES as the best fourth generation data base management system for the University standard. He noted that this decision was "made at the vice-presidental level—which is testimony to the importance we attach to information technology."

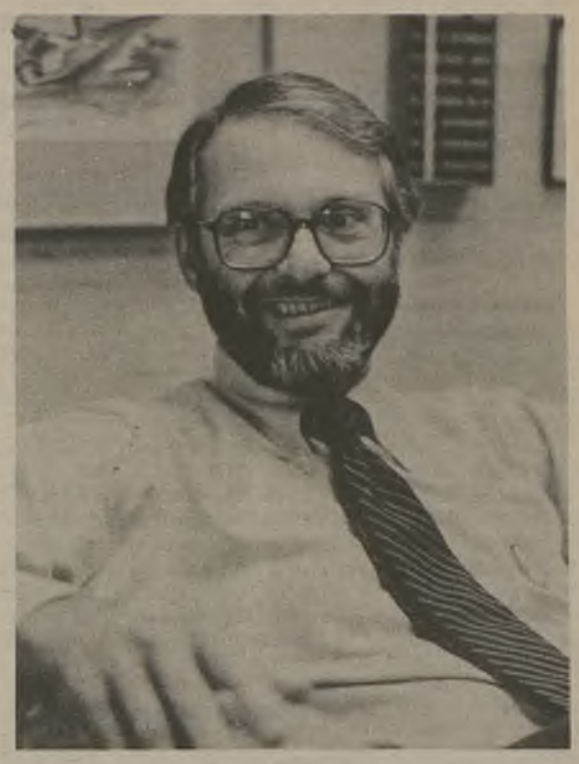
Data base management systems (DBMS) are sometimes referred to by their generation, which means a certain level of technical sophistication and ease of use. The most advanced systems available today are called fourth-generation. SPIRES has been used to develop a large system for inquiry, maintenance, and production of the University's operating budget and for a central data base and support programs for staff salary planning, review, and input to the budget and payroll system. It is being used to develop other key administrative systems: the Network for Student Information, a system for the Office of Development, and a new core accounting system.

Fourth generation equipment

Massy said "I believe that the fourth-generation DBMS approach to administrative systems development will do for that field what the high-level modeling language did for modeling. It is much easier and less expensive to construct the system in the first place. Users can play a direct role, thus tightening feedback loops with respect to the gaining of experience and acceptance of change.

"The systems are user-friendly. It is practical, indeed natural, to change the system as conditions change and/or experience is gained. After a time, change becomes an ongoing and accepted process. The result will be a closer linkage between computer system technology and the everyday working lives of users. Another result. . .will be a facilitation of modeling, as more and better data become more easily available. This will have further implications for the substance and style of management."

Moving to the topic of networking and electronic mail, Massy observed that this technology is "having major effects on communications. . .(which) will rival those of the telephone a 100 years or so ago."



The effects of electronic networking will rival those of the telephone 100 years ago.

—Bill Massy

He outlined the history of Stanford's decision to adopt standards for word processors that would enable them to communicate with each other and with the main computer. Stanford has an extensive network of terminals which is enabling decentralized data input to financial systems as well as text preparation and communication.

Electronic mail

Electronic mail at Stanford was introduced two years ago, and resulted in a new form of communication for managers and officers who have computer terminals in their offices. Massy reported that electronic mail accounts for more communication among these people than any other mode of interoffice communication, aside from scheduling meetings.

"For example," he said, "I send and receive up to 30 messages on an average day. The volume of regular mail received by my office is down by a third or more, and my own dictation is down by more than 50 percent."

Electronic mail is a good way for Stanford managers to keep in touch with the University while traveling, and it is also used as a way to share ideas and confer with many people at once. Stanford's electronic mail system, called CONTACT/EMS, is being used interinstitutionally through the Association of American Universities as well as EDUNET. (EDUNET is a national educational network established by EDUCOM to facilitate and expand a computer-based resource exchange among colleges, universities, and research organizations.)

Massy concluded his talk with a brief description of the wideband computer and video network now under development at Stanford, called SUNet, and the plans for installing the new telephone system.

He observed that plans had been made carefully to assure the University that these new systems will be compatible with long-range goals for communications technology. "The information revolution is upon us," he said. "It is strongly affecting colleges and universities. . .we're really just getting started—the next 10 years will be twice as exciting."

Fuller summaries of Massy's EDUCOM speech are available from Jane Kingston, CIT, Pine Hall 127, ext. 7-4807 or 7-3081 account gd.jlk.



With songs in their hearts and the Mendicants in the van next to them, Counterpoint, Stanford's women's vocal ensemble, will trek down to Southern California this weekend for the annual three-day tour. Leisure World, Stanford's L.A. Juniors Club, and the Manhattan Beach Club are a few of the concerts the two groups have scheduled. For concert booking or more information call (415) 322-0974.

Information technologies and computing forecast

By 1987, 80 percent of faculty will have microcomputers

Following is a report on Institutional Programs and Services in Information Technologies and Computing at Stanford, distributed to the Faculty Senate Jan. 6.

I. Introduction

This document presents a brief overview of the programs and services provided by the University at the institutional level. For those readers who have an interest, more detailed information is available both on the areas addressed below and on other efforts which could not be included if the document were to remain brief.

Part II presents the dominant trend in information technologies, how the University differs from a decade ago and a prediction of Stanford's information technologies and computing environment 48 months from today. Part III summarizes the Investment Programs that are underway in this area and Part IV reviews the central services currently being provided. Part V presents the mission and objectives of the Center for Information Technology. A set of appendices is available on request for those who want additional information.

II. The University in 48 Months

A decade ago Stanford had a small and manageable number of computers on the campus. When we planned for the central computer, we planned for all of computing.

Stanford has more than 400 computers on the campus today and we can expect this number to increase rapidly with the continuing acquisition by individuals of microcomputers and by departments of office information systems.

Avoiding a "computerized Tower of Babel" and thus providing a coherent environment within which the University's programs and services can take maximum advantage of these new technologies has become the principal task and goal of the University's Investment Programs and Central Services in information technology and computing.

An admonition from a University task force report is pertinent: "We caution readers not to underestimate the impact this technology will have on University operations or the efforts and resources required to adopt and manage the new technologies. The effectiveness with which we manage computer-based information technology will, in large measure, determine the future strength of our instructional, research, and administrative programs."

Current trends suggest the following is a realistic prediction of Stanford's information technologies and computing environment in January of 1987, 48 months from today:

* A majority of our faculty, perhaps as great as 80 percent, will have microcomputer-based professional workstations in their offices and/or their homes;
* All, or almost all, of our students will have a microcomputer or will have easy access to one;
* A majority of our professional staff will have microcomputer-based workstations;
* All of our support staff will use, as needed, computer-based technologies in their work;
* More than 50 percent of the scholarly output of the University will be in machine-readable formats and this figure could easily be higher;
* All of our 250-plus departments, academic and administrative, will have office information systems supporting departmental activities;
* Much of the central University administrative data will be online and accessible from workstations, terminals, or office information systems;
* The catalogs of the Stanford libraries and of the Library of Congress will be on the institution's central computing node and accessible by individuals from their workstations and there will be effective access to the library catalogs of the country's major research universities by these same individuals;
* Use and analyses of large databanks (e.g., census data) will be an integral part of social science research and teaching;
* In student computing most, if not all, of what is now supported by large mainframe computers will be done on individually owned microcomputers; the mainframes will evolve toward providing special purpose services.

Much of the above is already occuring as individuals and departments seek more effective and efficient methods of handling and processing information. These projections shape the institution's investment programs and central services in computing and information technologies.

III. Investment Programs

The Investment Programs are those efforts deemed by University officers of highest priority in the information technology and computing area. They are investments in the institution's future. Investment programs are distinguished from service programs (see next section) in that they often do not generate revenue to offset expense.

The current Investment Program involves three high priority activities: SUNet, the campus network; the Microcomputer Program; and the Departmental Information Systems program. Brief descriptions of these efforts follow.

SUNet the Campus Network

SUNet, the Stanford University Network, is charged to provide faculty, staff and students with access to a wide variety of computer-based and videobased resources and services and to provide the University with a wider range of economic alternatives for the provision and sharing of computer and video resources.

Physically, SUNet will include the conduits and cables that connect University buildings, offices and computers, the equipment that allows signals to pass through those cables, and the staff needed to maintain and operate the network.

Currently, most connections with University computers are made with telephone wires. SUNet will provide a separate and less expensive means of connection and will also allow the transmission of video (i.e., television) signals on the same network. But perhaps its most important capability will be to allow relatively easy interconnection of computers and the connection of individuals to a variety of computers rather than just one.



If most departments will have an office information system in four years, it is crucial to establish the most effective means for benefitting from these technologies.

SUNet's physical facilities include broadband (Cable TV-type) technology to provide the ubiquitous campus-wide network for terminals, microcomputers and other low-to-medium transmission speed devices; this backbone network will interconnect more than 100 campus buildings. In addition, SUNet will use a smaller baseband cable system (one version is called Ethernet) to supply high transmission speed intercomputer communications; this component will include perhaps 12-14 buildings and 20-24 computers.

From the user's viewpoint the objective is to provide a single "logical" network. That is, although there will be a variety of physical networks on the campus, the user must be able to move across them seeking the information or services needed as if it were a single network.

The benefits of SUNet will include:

* A significant increase in the ease of communicating written and machine reproducible information and of disseminating ideas and knowledge through evolution of a new method and style of communication.
* Increased utilization of existing computers and a reduction in the expansion of incompatible facilities.
* Introduction of new campus-wide services (e.g., electronic mail, information retrieval) using systems that can most economically and efficiently support them, with reduction of some duplicative services.
* Sharing of scarce and expensive computer-based resources, including stored data, high-speed printers, mass-storage facilities, photocomposers, software and terminals.
* Unification of the piecemeal, uncoordinated activities supporting development and expansion of the many independent and incompatible local networks on campus.
* Containment or reduction of costs of telephone lines for data transmission.
* Increased probability of close cooperation with and assistance from major industrial and commercial enterprises in network development for Stanford's needs, as well as higher probability of funding support from the Government and from private foundations.
* Favorable positioning of Stanford for making use of emerging wide-area and satellite data communications technology for the dissemination of knowledge, for electronic publishing, and for the evolution of related information systems.

SUNet will become operational in phases over the next two years, with the initial production date now for September 1984. Its creation is being led by William H. Yundt, director of network development. Current estimates place the capital costs of SUNet development within a range or $3.5 to $5.5 million. (This compares with a capital cost of $12-15 million for the new telephone system.)

The Microcomputer Program

Over the last year, and with ever increasing speed, the University is witnessing the acquisition and use of microcomputers by our faculty, staff, and students. Microcomputers are being used to support a wide range of activities in the instructional and research programs of the University and to an increasing degree to support the administrative functions of departments, both academic and administrative.

Recognizing the need for the University to provide as much help and guidance as possible, the vice-presidents approved creation of a Microcomputer Program in the fall of 1982 with the following goal:

To encourage and support the introduction and use of microcomputers by the faculty, staff, and students in the University's academic and administrative programs and activities in the most effective and efficient means possible.

The Microcomputer Program is led by Michael P. Carter, director of instruction and research information systems. As part of the Microcomputer Program, IRIS has opened the Stanford Microcomputer Instructional Laboratory Experiment to support special projects in the training and use of microcomputers in instruction and research. Initially, S.M.I.L.E. will be used as a training facility for the Tiro Project, a program of the dean of humanities and sciences to introduce microcomputers into the Humanities. This laboratory, located in Jordan Quadrangle, will serve as a facility for a variety of experiments, including the teaching of writing using microcomputers.

Additionally, and as part of the microcomputer program, IRIS will open a Microlab in Forsythe Hall for the evaluation, demonstration and development of microcomputer systems and software. This laboratory will be available to the campus community and will be staffed by laboratory assistants to help faculty, staff and students in the use of microcomputers systems that are placed there.

Finally, the Microcomputer Program is the focal point for developing the most appropriate ways of supporting microcomputers on SUNet, the Stanford University Network. As noted above, SUNet will become operational over the next 24 months. The needs of microcomputer users for SUNet connections and services will be represented by the Microcomputer Program.

The Departmental Information Systems Program

During the past 36 months more than 150 word processors and office information systems have been acquired by University departments, both academic and administrative. The decisions to acquire these devices were made at the departmental level based on local needs. In June of 1980, guidelines were issued regarding word processors and most of the subsequent purchases involved a small set of commercial vendors whose products could be supported by the institution.

The technology has evolved to the point where the purchase of devices that provide only word processing support is no longer an effective alternative. Rather, devices or systems are now being purchased that offer the capability for a department to increase the capacity of the systems as the need for automated support increases. Office information systems are now being purchased where the emphasis is on the term "systems," meaning modularity and flexibility.

If it is accurate that most of our departments will have an office information system of some magnitude in 48 months, then it is crucial to establish the most effective means for the institution, as well as the department, to benefit from these technologies.

The purpose of the Departmental Information Systems (DIS) program, therefore, is to develop and assist in the

continued on next page

Computing...

continued from page 18

implementation of a technical strategy for Office Automation and its relationship to the institution's major administrative information systems (e.g., financial, personnel, and student data).

The DIS Program is led by David J. Ernst, director of administrative information systems (AIS). Current objectives for the Program are:

* Consultation and advice to departments in determining their requirements for office systems and assistance in the evaluation of alternatives to meet those requirements.
* Study and self-education on how to determine office requirements and the current state of available technology.
* Influencing the design of central administrative systems to reflect the existence of local systems and local needs.

IV. Central Services

The University provides central computing services where there exist economies of scale in shared or combined operations or where there is an institutional need to insure continuity and coherency.

The central services involve the provision of highly capable professional staff to assist users in meeting their information systems requirements, the provision of computer-based services that cannot be met by local capacities, the management of a stable and effective operating environment for computers and related technologies and the provision of ancillary support services.

The array of services is broad and diverse, serving more than 2,000 individual users among the faculty, staff, and student body.

For discussion purposes these services can be grouped into four broad categories: 1) central shared services, 2) dedicated nodes (services), 3) applications and professional services, and 4) computer support services.

In 1982-83 these activities are supported by a staff of 220 with an expenditure budget of $18.2 million, which is approximately 3 percent of the total budgets of those University and Hospital programs receiving support.

Central Shared Services

The 3081 Node is the focus for the provision of central shared services. As the name suggests, the Node is centered on an IBM 3081 computer located in George Forsythe Hall. The 3081 Node is, however, more than simply a large computer.

The Node includes a number of minicomputers that provide telecommunications support, a vast array of computer programs for use by faculty, staff, and students, a large number of devices for the storage of machine-readable data and a set of printing machines including two laser printers.

The 3081 Node provides three broad kinds of services: 1) computer power and programs, 2) storage of machine-readable data, and 3) high speed, high quality printing services.

The 3081 Node in an average month will execute nearly a quarter of a million individual jobs and interactive terminal sessions, has more than 50 billion characters of immediately accessible stored data and over 14,000 miles of magnetic tape storage and will print more than three million pages of paper.

The 3081 Node, and its technical successors, will be an important node on the emerging campus network. It will continue to provide those services that cannot be provided on smaller machines (e.g., access to large data sets and databases) or cannot be economically provided elsewhere (e.g., high speed, high quality and quality printers).

The evolution of this central nodal service has been and will be guided by a principal of "staying in the mainstream." This has and continues to mean remaining with IBM as the institution's mainframe computer vendor.

Dedicated Nodes

Over the past several years it has become clear that neither a single computer nor a single computer vendor could meet all the requirements of the University's diverse academic and administrative programs. Smaller computers that could operate specific programs had to be acquired. Yet, in many instances, the using department did not want to operate a "computer center" and in other instances the smaller machines had to have a direct and effective linkage to the large mainframe.

The University, therefore, began two years ago to offer a service whereby it would operate a computer and its programs where that machine was devoted solely to one purpose or to one user department. Operating economies were achieved and often development economies as well.

At present three dedicated nodes exist that support the Hospital's Patient Accounting System, the Word Graphics department and the Facilities and Services department. In this context, the University also provides support to the Research Libraries Group in the operation of its own computer.

Applications and Professional Services

The provision of highly qualified professional staff to assist individuals and departments is one of the most important Central Services missions. In some instances this assistance is without charge (for example, the consulting office in Forsythe Hall).

Mostly, however, these professional services are provided on a fee-for-service basis. Professional assistance is available in information systems analysis and design, applications programming, systems programming, database systems, computer operations and other technical support areas.

Computer Support Services

A variety of technical services are provided to clients to meet specific requirements, many of them related to major administrative applications. Included in this category are data entry, production control, terminal maintenance, and engineering services.

V. The Center for Information Technology

The Center for Information Technology is Stanford's principal organization focused on institutional efforts in information technologies and computing. The center was created in January, 1980, with a principal charge "to become a highly competent and objective source of analyses about options in information technologies-regardless of which University department or unit plans, develops or operates the particular technology." The Center was created by, and is responsible to, the three University vice-presidents most concerned with these technologies (i.e., vice-president and provost, vice-president for business and finance, and vice-president for medical affairs).

In their enabling memorandum the vice-presidents wrote: "Information and information systems, e.g., computing, networking and so on, are becoming more complex and—at least as they relate to development costs-more expensive. In those instances where the University assumes institutional responsibility for providing these programs and services (as distinct from faculty initiatives, for example) we believe there must be a point at which planning efforts are regularly initiated." This charger has guided the evolution of the Center's programs and services over the past 36 months.

The Center is structured along two axes. The first is a program and services axis that represents the means by which the Center achieves its goals and objectives. These programs and services are pesented in parts III and IV above. The second axis is the traditional organizational model of six line divisions and two support divisions. The Center's total budget for 1982-83 is $19.3 million. Of this, approximately 6 percent, or $1.2 million is allocated to Investment Programs and 94 percent, or $18.1 million represents income and expense in the provision of Central Services.

Energy efficient, high pressure sodium lamps planned for Campus Drive

The golden glow of high-pressure sodium lamps will soon be replacing the blue-white light shed by less efficient mercury vapor lamps on Campus Drive, major entrance roads, and in Stanford's parking lots. The Energy Program Office expects electricity savings worth just under $2 million for the 15-year life of the program, at a cost of about $160,000.

"The major reason for making the change is to provide increased lighting levels while dramatically reducing the lighting costs to Stanford," said Karl Johnson, who heads the lighting program at the Energy Program Office.

Conversion of the 760 mercury vapor lamps to high-pressure sodium will result not only in a 50 percent decrease in operating costs, for savings of over $40,000 a year at today's energy prices, but also in a 15-20 percent increase in nighttime illumination from the fixtures. In addition, as part of their conservation program PG&E will refund almost $14,000 to the University to help defray the costs of construction.

Virtually every segment of the Stanford community contributed to the decision to change to the new lighting. Besides the Planning Office and the Energy Program Office, which coordinated the various groups involved, the plan received the approval of Stanford's Department of Public Safety, the Provost's Office, a student study group, the University Committee on Land and Building Development (comprised of faculty, staff, and students), and the Administrative Council.

The aesthetics of the lights were an important consideration in the process of approving the conversions. The old mercury-vapor lamps highlighted the blue-green portion of the visible spectrum, while high-pressure sodium will emphasize yellow and orange.

"Because of the color differences, we installed high-pressure sodium demonstration sites at Campus Drive West, Roth Way, the blood bank, Roth House and Synergy House," Johnson explained. "We publicized all the issues involved to get people at Stanford to see the lights and participate in this decision. Over 90 percent of the community response was favorable."

High-pressure sodium lights are rapidly replacing mercury vapor lights as the standard outdoor lighting source. Though people tend to resist changes in their environment even when the changes are positive, a study conducted in San Jose showed that six months after high-pressure sodium lamps had been installed, 70 percent of the residents did not freely recall that there had been a lighting change, and 85 percent approved of the new lights when informed of the savings.

In the wake of last year's eight attacks on women at Stanford, safety is a crucial consideration in lighting. Even though the high-pressure lights will increase the lighting levels, studies conducted in urban environments have not been able to show a consistent correlation between lighting and safety. Although Stanford is not an urban environment and the studies may not be applicable, people should be aware that improved lighting does not guarantee improved safety.

All the necessary parts for the conversions have been purchased. The parking lot fixtures will be converted starting the second week of January. The pathway and street light conversions will start in February.

The conversion of all 760 fixtures should be completed by the end of March.

Ph.D. oral exams

MONDAY, JANUARY 24

Mark Albert Johnson, chemistry, "High Resolution Spectroscopic Probes in Chemical Dynamics: Applications to the Study of Intramolecular Interactions in CO_2^+ and Energy Distributions of BaI Produced Under Single Collision Conditions,"
2:15 p.m., Chemistry Gazebo.

TUESDAY, JANUARY 25

Sergio J. Chion, engineering-economic systems, "Some Explanations for the Recurrent Problems in the Balance of Payments of Developing Countries," 2:15 p.m., Terman 329. **Kevin V. Lemley,** physiology, "Effects of Prostaglandin Synthesis Inhibitors on Vasa Recta Erythrocyte Velocities of the Mammalian Renal Medulla," 2:30 p.m., Physiology Library.

WEDNESDAY, JANUARY 26

Carole R. Beal, psychology, "The Development of Knowledge About Cognitive Cueing," 3:15 p.m., 358 Jordan. James D. Milojkovic, psychology, "Children Learning Computer Programming: Cognitive and Motivational Effects," 9:30 a.m., Bldg. 420, room 358.

THURSDAY, JANUARY 27

James Sheng-Chung Chang, materials science and engineering, "Measurement and Control of Oxygen in Liquid Phase Epitaxial Growth of GaAs," 2 p.m., McCullough Bldg., Room 240.

FRIDAY, JANUARY 28

Ajay Chhibber, food research, "The Sources of Inflation and Efficient Anti-Inflationary Policy in India," 2:15 p.m., Food Research 214. **David C. Noice,** electrical engineering, 3:15 p.m., AEL 109 (S.E.L. Conference Room).

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

29679-JB (JCC:7650) CUSTODIAN WKG SUPVR: 7:30-4pm; supv the cleaning, training & other duties of custodians assigned to you; create & maintain a clean, safe, 'home-like' atmosphere for residents; check daily arrival & departure time of each custodian; maintain daily check of bldgs/grounds & promptly report security, damages, maintenance & housekeeping problems to approp offc; submit monthly report; order supplies; attend approp classes; handle all emergencies at local level until proper maintenance personnel arrive; QUALIFICATIONS: good supvry skills; demonstrated admin skills; report writing; ability to acquire exp & knowl regarding employee relations & USE contract; supvry exp required; excel commu skills a must.; S09; $1632-2046.

25924-AW (JCC:2036) ADMIN SERVICES MGR II: Asst Dir respon for all operational, admin, personnel, & budgetary aspects of self-operated & leased services in the union incl: facilities & utilities; a sundries store; a ticket offc; mtg rooms & conference spaces; travel service; a fuil service bank; & hairstyling shop; shall be the renovation & expansion mgr; respon for administerlng some TMU central services incl personnel mgmt; capital budgeting process; clerical & informa support services, etc; in the absence of Union Dir, the Asst Dir shall represent the Dir at mtgs & will act on her behalf; QUALIFICATIONS: require BA/BS or equiv exp; 3+ yrs of mgmt exp; 3+ yrs of mgmt exp; strong organizational skills; strong personal skills; strong interpersonal skills; successful financial mgmtexp; ability to function effectively in a univ setting.; C07; $2113-2724.

44396-DS (JCC:2070) ADMIN ASST II: Act as Personnel Offcr, Offc Mgr & Staff Assistant to the Registrar; coord all hires, w/ assistance fr OAIV for nonexempt staff; trains mgrs & supvrs in personnel policies, incl Affirmative Action; prov informa to staff about Univ policies, benefits, promotional opportunities; asst in cost control & productivity efforts; prov bkup to Admin Asst & Asst Registrars & to manage offc workflow during NSI planning & new sys implementation; reviews monthly budget, projs trends & expenditure patterns; coord budget & salary setting process; res & drafts mat'l in connection w/ Registrar's internal offc & genl Univ respon as Associate Provost; QUALIFICATIONS: requires knowl & work exp in all areas of personnel, budgeting, & supvn; ability to plan, organize, proj & implement; familiarity w/ Stanford policies & procedures preferable.; send appl/resume to Laurie Mathers, Old Union Rm 137; C05; $1670-2086.

23966-TC (JCC:5588) LIFE SCI RES ASST I: 50%; perform radioimmunoassays & related procedures for quantitations of hormones & autoantibodies in a specialized clinical lab & to asst in ongoing res projs; involves occasional prep of biological mat'ls & isolation & radioiodination of proteins used in various tests; processing of blood specimens received for testing; record keeping; maintenance of lab eqpt & ordering of lab supplies; requires ongoing use of theoretical judgment to continously improve accuracy & reliability of the tests performed; QUALIFICATIONS: BS degree or equiv, w/ strong bkground in biochemistry & immunology; familiarity or some work exp in genl lab tech essential; prior exp in radioimmunoassay field & Calif Med Technologist or Clinical Chemistry License essential.; C05; $835-1043.

30040-AW (JCC:7534) FACIL ENGINEER/COORD II: Primary respon is to prov technical support (engrg) to proj mgrs & more senior facilities engrs relating to a wide range of projs incl both bldg & utility sys; capable of performing mechanical engrg design incl prep of design drawings; familiar w/ Univ design standards & other applicable codes & standards; consult engrs & contractors to assure that projs meet all Univ requirements; QUALIFICATIONS: BS in engrg or equiv exp; ability to work independently; good commu skills; proven exp in engrg design & design disciplines, codes & standards.; C07; $2113-2724. 1

Bargaining unit

44328-TC (JCC:5736) TISSUE TECH II: TMS Unit; Mon-Fri, 7:30-4pm; alternate Tues-Sat; cutting 3-5 micron sections of paraffin embedded tissue incl lymph node, spleen, liver, & kidney biopsies w/ a high degree of skill & speed; perform routine H & E & special stains; embedding, coverslipping, & labeling surgical specimens; lab bookkeeping & other misc histology lab duties such as knife sharpening, solution prep, etc; QUALIFICATIONS: ASCP in Histology preferred; exp as active HistoTech; skills in high quality sectioning w/ speed; willing to work some holidays & wkends.; A30; $ 9.97.

44303-JB (JCC:6596) S&E TECH - ELECTRO MECH: TMS Unit; fabrication & assembly of a variety of Electro-Mech components & devices; maintenance, repair & modification of these devices; asst other staff members & visiting researchers w/ mech projs as needed; work fr hand sketches & verbal instructions as well as engrg drawings; QUALIFICATIONS: basic reading & math skills; able to read engrg drawings & use mech measurement instruments; familiar w/ standard bolts size; pipes sizes, & metric conversion; some welding & soldering skills nec; machine tool, electrical, & hydraulic exp helpful.; A28; $ 9.50.

12696-PB (JCC:7300) FOOD SERVICE WORKER I: TMS Unit; sets up counter lines according to procedure as assigned on daily schedule; clean milk machines, water fountains, silver carts; wipe off dining room tables; wash chairs; dust window sills; wipe spills fr walls in dining rooms; clean counter area; clean juice & soft drink machines; water plants; work in dishroom; QUALIFICATIONS: must meet health & safety requirements for food Service workers; follow instructions & work well w/ other employees.; A08; $ 5.95.

Nonexempt

43506-PM (JCC:2462) OFFICE ASST III: Work in Chairman's Offc, Dept of Medicine; asst faculty administrator/perform genl dept'l duties; typ minutes; set up mtgs; maintain files; heavy phones; mailings; asst w/ spec projs/events; QUALIFICATIONS: typ 60; knowl or willingness to learn Xerox 860 word processor; good typing; exp/training in proper use of phones in an offc environment; send appl/resume to Arnee De L'Eau, SUMC S-102D.; B11; $1246-1310.

44329-PM (JCC:2504) OFFICE ASST II-SPEC: Receptionist; answer phones/requests; handle visitors & their guests; maintain patient files; prep reports; asst w/ bookkeeping & financial matters; bank deposits; prep pinks for bindery; log cytology reports in & out; fill requests for slides & reports, accession; searching patient records; QUALIFICATIONS: typ 50; med terminology; good telephone & commu skills; accurate filing skills; typing skills; ability to interact cooperatively w/ staff, pathologists & other med students & clinicians; contact: Leslie Culligan, P-2020 Med Ctr, 497-7211.; B10; $1189-1246.

36181-PM (JCC:2596) SECY II-SPEC: 8-4:30pm; prov sec'l support for res/clinical unit in Div of Gerontology; performs accurate finished form typing on corresp, manuscripts, reports & forms, fr handwritten or typed copy; receives & screens a variety of calls & visitors, some patient contact; knowl of genl offc routine; interested in learning APPLE computer; enter & evaluate clinical data; QUALIFICATIONS: typ 65; med terminology helpful; 2-3 yrs of approp clerical sec'l exp required; work comfortably w/ a diverse group of doctors, technicians, nurses & clerical staff; send appl/resume to B. Barnett, VA Hospital Bldg 2, room 181.; B12; $1310-1373.

27463-BP (JCC:2596) SECY II-SPEC: Approx 60% scientific/engrg manuscript typing of invention disclosures & other mat'l on word processing eqpt (on-the-job training for DATAPOINT eqpt); work directly w/ Patent Engrs/Advisors; sec'l support for group & bkup for Offc Asst; 40% sec'l support for hrs worked, yrly leave record, payroll & statistics, mtg arrangements, telephones, travel, acctg/expenditure forms & followup, filing, mail, misc, etc; QUALIFICATIONS: typ 65 accurately; excel interpersonal skills to interact w/ group & SPO personnel as well as Univ admin staff & faculty; thorough knowl of grammar, punctuation, spelling, & format; 2-3 yrs demonstrated exp intensive manuscript prep, med/scientific terminology, prev word processing & SPIRES exp; 2 yrs college or equiv; send appl/resume to Phyllis Hughes, Encina Hall 40.; B12; $1310-1373.

29522-PM (JCC:1747) LIBRARY SPEC I-Trainee: Subj to temp layoff during summer quarters; Charges out reserve books & other circulating mat'ls; prov genl informa to lib users; issues lib cards, registers patrons, monitors eligibility of the public for access to lib & for borrowing; assts w/ circulation controls based on an electronic security sys; interprets & carries out lib policies & procedures; sends out notices, files & maintains records; answers genl phone inquiries; searches for & retrieves mat'ls for Public Services use; collects fees & fines & maintains cash records; opens & closes lib; may asst w/ simple computer files & machine memory sys; works nights, wkends & holidays, as necessitated by Public Services Dept schedule; QUALIFICATIONS: exp in interpreting & carry out detailed, written policies; phone answering skills needed; able to remain on feet for better part of the day; lib exp is a major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib, GSB, Room 119, 497-2162.; B10; $1189-1246.

Rental housing

HOUSING AVAILABLE

□ **Beg. Feb. 1, '83:** SHARE 2BR Oak Creek apt w/prof. woman. Tennis, pools, etc. Call Cindy, 326-6660 or lv. message, will return call.

□ **NOW:** SHARE hse w/prof. female. 2BR/2BA, W/D. Interest in solar proj, design, landscaping. Female

HOUSING NEEDED

□ **NOW:** Esc. Vil. family (3) seeks long term 2 or 3BR hse or apt. rental in Jordan Sch. Dist. Refs. avail. Call Davidson, 857-0390.

□ **Beg. Feb. 1, '83:** Postdoc at Med. Ctr., wife, 2 children require 2BR apt. or hse. within bike dist. of Stanf. for 10 mos. Local refs. Call Dr. Maze, (415) 848-3938 (day), 851-2531 (eve).

□ **Feb. to Sept. '83:** Visit. prof. seeks 3BR apt. or hse. on or nr campus. Poss. exchng for lovely flat nr. Tel-Aviv Univ. Call Margret, 497-3910 (day).

□ **Jan. 17 to 28, '83:** Resp. woman w/17-yr-old son seeks temp. hsng before joining husband in Colo. Will gladly care for pets. Call (415) 327-8615.

□ **Spring Qtr '83:** Visit. Eng. prof, wife, 2 children seek fully furn. & equipped 2/3BR hse or apt. Reasonable cost, will hsesit or help. Nonsmokers. Call 493-1059 or 497-2547 (day), lv. messages for Locke.

□ **End Mar. to end June '83:** Visit. prof, wife, nonsmokers, no pets, no children, seek campus hsesit. Call 497-1745 (day).

March & April: Visit. surgeon & wife need furn. apt. Immaculate, nonsmokers, non-drinking, no pets or children. Call 854-0781.

□ **Sept. '83 to Sept. '84:** Visit. prof, spouse seek to rent or exchange furn. 2BR in College Terr. or Old Palo Alto. Write or call Rogowski, Pol. Sci. Dept., UCLA, Los Angeles, (213) 397-2379.

□ **NOW:** New staff member looking to rent 3BR, 2BA, hse with yard near campus. Property owner; refs available upon request. Call Edward Escobedo, days 497-2009; nights, 857-0168.

pref.; mature male considered. Privacy for $400. Write: J. Powell, Box 11425, Stanf. 94305 or call & lv. msge for Stanf. sublet, 494-2611.

□ **July 1 to Dec. 31, '83:** Furn. 4BR/3BA hse in Sharon Hgts. Study, FR, sep. DR, 2 frpls, 1/3 acre. $1500/mo. Call 497-3785 (day), 854-7471 (eve).

□ **April thru Sept. '83:** Furn. 3BR/2BA hse in Palo Alto. Frpl, FR, all appl., pool w/solar heat, solar hot water. Dir. bus rte. to Stanf. 10 min by car. Children ok, nonsmokers. Call Sladen, 858-0494.

□ **Mid Mar. to Mid. Nov.'83:** Fully furn. Palo Alto hse. 3-4BR/2BA, LR, FR, lrg. cov. patio. Lush garden, easy keep-up, auto. sprinklers. Adults, no pets. $1200/mo. incl. water. Call 858-0880 (eve), 497-1580 (day).

□ **Beg. Feb.:** Central Woodside. Hse to share w/one other. Quiet, woodsy, clean. Mature, resp. person. $400/mo. Call (415) 859-3451 (day), 851-8336 (eve, wknd).

□ **NOW:** 6 mo. min. Palo Alto Hills, new, furn. 1BR apt. No pets, nonsmoker. Priv. ent., deck w/view. Quiet, 3½ mi. to Stanf. $600/mo. incl. util. Call 948-8575.

□ **Feb. 1 to Aug. 31, '83:** Flat in Paris. Furn, 40 sq. meters, 4th flr (no elev.), 3000 FF/mo. Write Dr. George Agoston, 4 Rue Rambuteau, 75003 Paris, France.

□ **Mar. 25 to June 1, '83 (nego):** Fully furn. 4BR/2BA hse in Palo Alto, FR. $850/mo. incl. gardener. Call 494-1148 or 497-9309 (day).

□ **July & Aug.'83:** Attrac. summer rent. Dwntwn Palo Alto, 1BR/2BA condo, library, balc., pool, secure. Call Pat Mueller-Vollmer, (415) 324-1624 (eve).

□ **NOW:** Tahoe Donner Ski Bowl condo. 3BR + loft, sleeps 10. Color TV, spa. Call Bienenstock (415) 493-8649.

□ **End Mar. to end July '83 (flex):** Fully furn. Los Altos hse on cul-de-sac. 4BR/3BA, 6 mi. to Stanf. Walk to schl, shops, dwntwn. $1200/mo. incl. gardener, water. Call (415) 948-0936.

□ **Beg. Feb. 1, '83:** Unfurn. spacious hse, 4BR/2BA, frig, stove, DW, w/w carpet, FR, frpl., fenced yd, stor. shed, carport. No pets. So. Palo Alto. 10 min. to Stanf. $1050/mo. + util. Call 329-0797.

□ **Beg. Mar. 1, '83:** Furn. 2BR/2BA apt. w/spectac. canyon view. W/D, pool, tennis, 12 min. to Stanf. Avail. 7 to 9 mo. $900/mo. Call Gay Morris, 326-1200 (day), (415) 591-7085 (eve).

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly Available:** 1 & 2BR furn. & unfurn. apts & twnhses in Palo Alto & Menlo Pk, in good nghbrhds & close to campus. Also 3BR/2BA hses. $525 to $800/mo. Call Shirley at 493-2321 or Jane, (415) 968-4957.

□ **Mid-Feb. to Aug.'83:** Furn. hse, Palo Alto 2BR/2BA, very nr. Stanf. Nonsmokers, no pets. $850/mo. + elec. & gas. Call 328-0179.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse., 4BR/3½BA, study, library, DR, frpl, pool, view, acre. $1700/mo. incl. grdnr, pool serv. Call (415) 327-5204 or 497-4732 (day).

□ **April 1 to June 15, '83 (flex):** Fully furn. hse. 4BR/2BA, AEK, den, W/D, hot tub on deck. Children ok. Incl. grdnr, swim/tennis club mbshp (across st.). 3 mi. to Stanf. On bus rte. Photos avail. $1000/mo. Call 494-6492.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Jan. 25, in Room 132, Tresidder Union.

The sessions are open to all new employees without preregistration.

36143-BP (JCC:2454) OFFICE ASST II: 62.5%; 5 hrs between 11am & 5pm; 9.5-10 mons appt mid-Sept thru mid-June; work in Manzanita Park Offc which is the ctr of admin activity for staff & students in Manzanita & also serves as an information ctr for Manzanita students; respon for & directs offc operations; liaison w/ custodial staff; liaison w/ food service staff; maintenance of Manzanita program budgets; supvry duties; QUALIFICATIONS: thorough knowl of, & ability to perform offc procedures, practices, & methods; ability to win cooperation fr students & faculty of all ethnic bkgrounds; clear & succinct in oral & written commu; typ 45; accuracy w/ numbers & other details; ability to evaluate admin procedures; send appl/resume to Elizabeth Hiyama, 311 Old Union, 497-3044.; B09; $706-743.

continued on next page

Controller's Office workshops set on accounting, travel, payroll

The Controller's Office has scheduled four workshops in February and March. The courses are:

Introduction to the Stanford Accounting System (two two-and-a-half-hour sessions). For employees new to Stanford who monitor either departmental or auxiliary activity expenditure statements. The course includes the organization of the Controller's Office, discussion on account numbers, responsibility for the use of funds and record retention. Practical work includes practice in reading an expenditure statement in forecasting for future results.

Wed., Feb. 2 and 9, 9:30 a.m.-12 noon, Room 112, CERAS Building.

Travel (one two-and-a-half-hour session). For employees who need to understand the University's travel policy (Guide Memo 36.7) to complete travel and expense reports. The Travel Workshop summarizes travel policy, defines allowable travel costs, and provides practice in completing the necessary forms for Advances (SU-34A) and Expense Reports (SU-35).

Wed., Mar. 9, 9:30 a.m.-12 noon, Room 112, CERAS Building.

Payroll Personnel (three two-hour sessions). For employees completing forms related to Payroll-Personnel actions and record keeping. This workshop includes a review of policies and procedures, and practice in completing all necessary forms.

Fri., Mar. 11, 18, and 25, 10 a.m.-12 noon, Room 112, CERAS Building.

Procurement (two two-hour sessions). This new workshop reviews the procurement process along with criteria for choosing the correct form amongst the SU-10, SU-11, SU-12, SU-13, SU-14, SU-15, SU-34A, SU-34B, SU-35, SU-40, SU-41 and SU-43.

Wed., Feb. 16 and 23, 10 a.m.-12 noon, Room 112, CERAS Building.

To enroll in one of the courses, send name, department, campus address and phone number to Alice Forbes, 200 Encina Hall.

Carpools

One person to join existing carpool to Stanford. M-F, 8-5. We meet at Stevens Creek & Wolfe Road, Cupertino. Please contact Ana Errico at 7-0612.

Long-established Berkele, -Stanford carpool seeks new members. Leaves Berkeley, Claremont area 8:15 a.m., leaves Stanford 6 p.m. Elizabeth Traugott 7-4284 or Jon Bendor 7-4480.

Ride needed SF-Stanford-SF Glen Park/Diamond Heights. Call Brandt, 7-1171.

Join existing carpool. Leaves Homestead and Foothill Expressway to Stanford. M-F, 8-5. Call Jeannette, 7-9627.

I'm looking for a carpool between S.F. and Stanford (preferably from the Haight-Ashbury) 4-5 days/week, approx. 9-5. Please call Nora at 431-9649 eves.

Looking for two persons to join a Mission Noe Valley-Stanford Univ. carpool. M-F, 8-5. Call John, 821-1665, or Yinon, 431-0951.

Jobs...

14300-BP (JCC:2454) OFFICE ASST II: 50%; 8-12; typ varied form letters; duplicates, collates, assembles & distributes mat'ls; transfer informa onto & off of forms, codes, posts, makes simple entries; modify, maintain & updates existing computer program; knowl of Wylbur helpful but can be trained; asst other offc staff in answering phones, making reservations & answering genl questions regarding Faculty Club; QUALIFICATIONS: typ 45; good spelling skills; thorough knowl of English grammar; atten to details & accuracy essential; contact: Pat Heeger, 497-4325.; B09; $565-595.

17846-PM (JCC:2512) Offc Asst III-Spec: 50%, 1-5pm; answer pones; route calls; type messages; type routine letters, memos, forms, manuscripts, grants; operate Xerox 860 word processor (will train); order & maint supplies; transcribe from dictaphone; maint files; photocopy documents; handle appts, etc for Chief of Immunology; generally asst admin asst; learn medical terminology; QUALIFICATIONS: Type 65 wpm; must be an excellent typist & speller; good interpersonal skills; willingness to learn medical terminology; send appl/resume to Claire Wolf, Med Ctr M215, 497-7900; B12; $655-687

Apples, IBM-PC costs reduced

Procurement has entered into agreement with a firm in San Francisco whereby Stanford University and its faculty, staff and students receive 25 percent discount (or more in some cases) off factory list prices for IBM-PC and Apple II personal computers and related software and peripherals.

In addition, free delivery and installation is provided. Several local companies have offered varying discounts ranging from 20 percent to 30 percent off list prices but not for all items and in some cases without free delivery and installation.

Copy machines

Departments desiring new or replacement copiers now have the opportunity to view some of the more cost-effective and better copiers currently on the market. We have made on-going arrangements with various copier companies to provide demonstration models of low and medium volume copiers. Dependent upon current need, we will have available as many as six or seven kinds of copiers at any given time, so the departments looking for new copiers might have an opportunity to look at and try them out.

These copiers will be available at Procurement, 851 Welch Road. Anybody interested in looking at them should call Pete Quey, 497-1757, for a list of what copiers are currently available and an appointment to see them.

Mexican film

Les Blank, well-known filmmaker and "folk biographer," will accompany a special showing of his film, *Chulas Fronteras*, at 7 p.m. Thursday, Jan. 20, in the Casa Zapata lounge at Stanford. A reception will follow with food, antojitos, music and "ambiente."

For more information stop at Casa Zapata in Stern Hall or call 497-3297.



Windham Hill (above are Ira Stein and Russel Walder) will help Tresidder celebrate its 20th birthday with a concert at 8 p.m. Saturday, Jan. 22, in the upstairs lounge. The two will perform pieces from their debut album, 'Elements.' Admission is $5.

Tresidder's birthday party offers cake coke, Toons, films, trips

Tresidder Union will celebrate its 20th birthday this weekend.

"American Graffiti," starring Richard Dreyfuss and Ron Howard, and directed by George Lucas, will be shown at 4, 6:30 and 9 p.m., Thursday, with a general admission charge of 75 cents. Children are welcome at the early showings.

Friday will feature price rollbacks. From 10 a.m. to noon, Marcel's will offer a doughnut for a nickel. At noon, Union Crossroads will feature goodies from a converted malt shop, tunes on a special '60s jukebox, and rolled-back prices on specific items. The good old days of 30-cent cherry cokes and vanilla rootbeers can be recalled from 2 to 4 p.m. in the Coffee House.

The Recreation Center will offer reduced prices all day, with bowling at 35 cents a game and billiards for 60 cents an hour.

A zany birthday celebration follows Friday at noon. Marcel will bake a Tresidder Union cake, which will be cut and distributed as long as it lasts. The Toons, a well-known San Francisco rock 'n' roll band, will sing on the front patio.

The Great Directors Film Series will show films of the American Avant-Garde by Hollis Frampton in the Geology Corner, located in the outer quad across from Skilling Auditorium at 8 p.m. Friday. Featured will be "Nostalgia," "Poetic Justice" and "Critical Mass." Admission is $2.50.

The Coffee House will feature Eve Bluestein, with bluegrass, from 9 p.m. to midnight. Admission is free.

A suitcase party from 8 p.m. to midnight will offer a lucky winner a weekend trip for two to New York, a room in the Waldorf Astoria Hotel, tickets to a Broadway play, and after-theatre dinner at Sardi's.

The winner must be present at the dance to win, and will be whisked away to the San Francisco Airport immediately upon winning. The trip is provided by Sequoia Travel. Rock 'n' roll dancing music will be provided by "Rescue." Admission is $2.

Saturday features "An Evening with Windham Hill" with Ira Stein and Russel Walder in Tresidder Union Lounge at 8 p.m. Admission is $5.

The weekend birthday events are part of a quarter series of programs, Winter Fete, sponsored by Tresidder Union in conjunction with its twentieth anniversary.

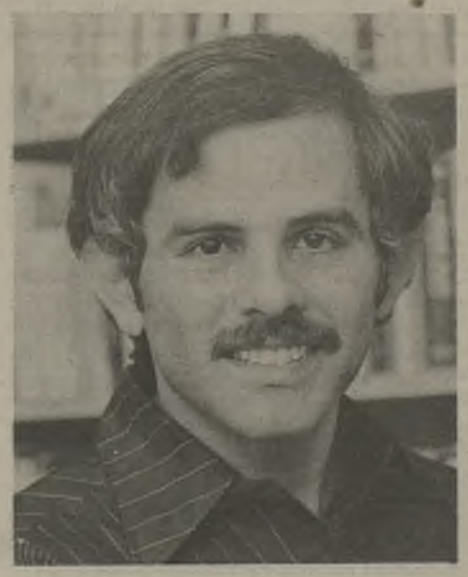
Islas to teach short evening course

Ernest Hemingway and F. Scott Fitzgerald are two of the most popular American writers of this century. Much like ours, the world they portrayed was one of violence and decadence, romance and courage.

The writings of these two powerful authors will be examined in a four-part evening seminar sponsored by the Stanford Alumni Association beginning at 7:30 p.m. Tuesday, Jan. 25.

Stanford English Prof. Arturo Islas, recipient of the 1976 Lloyd W. Dinkelspiel Award for outstanding contribution to undergraduate education, will teach the course which will be held on campus Jan. 25, Feb. 8 and 22, and March 8.

For more information, please contact Risa Forister at the Stanford Alumni Association, 497-2021. The seminar is open to the public.



Arturo Islas



The Paul Taylor Dance Company will perform in two different programs at 8 p.m. this Thursday and Friday, Jan. 20-21, in Memorial Auditorium. Above is 'Mercuric Tidings,' which will be part of Friday's program. In addition to the two performances (tickets are $11.50-8.50 with $3 off for students and seniors), the company will give a free lecture/demonstration at 8 p.m. Wednesday, Jan. 19, in Memorial Auditorium.

Robotics expert will give three lectures next week

Computer science Prof. Raj Reddy, director of the Robotics Institute at Carnegie-Mellon University, will deliver the George and Sandra Forsythe Memorial Lectures on Jan. 24, 26, and 27 at Stanford.

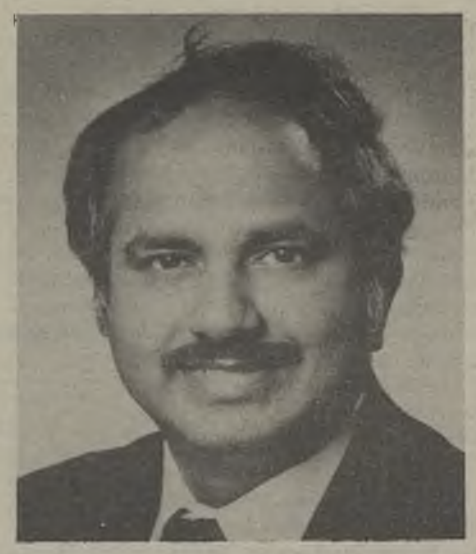
A recipient of one of the first Ph.D.s awarded by Stanford's Computer Science Department, Reddy is known for his work on speech understanding and other signal interpretation systems which have led to a number of important techniques in artificial intelligence.

The first lecture, at 7:30 p.m. Monday, Jan. 24, in Skilling Auditorium, will be "Technologies for Learning," exploring trends in computer technology and their implications for learning and education. Reddy will also present a research agenda of several problems in learning which may be solved with the availability of low-cost supercomputers.

The second, "Unsolved Problems in Artificial Intelligence," will be given at 7:30 p.m. Wednesday, Jan. 26, in Skilling Auditorium. A number of knowledge-intensive artificial intelligence tasks will be examined which, while conceptually possible, may not be done for decades because of the lack of adequate tools, professionals, facilities, and techniques. Some of the necessary conditions for making these problems solvable will be explored.

A third, more technical talk titled, "Task Oriented Computer Architectures," will be given at 4:15 p.m. Thursday, Jan. 27, in Jordan 040.

The talks honor the memory of computer science pioneers George and Sandra Forsythe. George was the founder of Stanford's Computer Science Department and as its first head nurtured it through its formative years. Sandra was an influential



Raj Reddy

textbook writer and educator in computer science. The Forsythes encouraged young people to pursue academic careers and were always interested in the educational process.

Prof. Gene H. Golub, head of the Computer Science Department, observed, "We are honored to have a distinguished alumnus return to Stanford to share with us his thoughts on problems of such importance to the field of computer science."

Seminars planned on geothermal techniques

The Stanford Geothermal Program seminars will be held at 1:15 p.m. Thursdays in Room B67 of the Mitchell Bldg. The schedule for this quarter is as follows:

Jan. 20: "Planning Commercial Development at the Geysers," by SAI Engineers.

Jan. 27: "High Temperature Well Testing Instruments," by Sally M. Benson of the Lawrence Berkeley Laboratory.

Feb. 3: "Geothermal Energy Development at the Geysers," by Robert Lindquist, former chief engineer at Magma Thermal Power.

Feb. 10: "Hydraulics of the Klamath Falls Geothermal System," by Edward Sammel, U.S. Geological Survey.

Feb. 17: "Use of Gravity in Evaluating Reservoir Characteristics of East Mesa," by Tsvi Meidav of Trans-Pacific Geothermal.

Feb. 24: "Application of Geochemistry to Understanding Geothermal Systems," by Robert W. Potter II of Occidental Research Corporation.

Mar. 3: "High Temperature Geothermal Developments in the Basin and Range Province," by W. Richard Benoit of Phillips Petroleum Company.

For more information, call Jon Steinar Gudmundsson, 497-1218 or 497-4744.

Program on financial management

A three-session financial managing program for faculty and staff will be held from 7 to 9:30 p.m. Thursdays, Feb. 3, 10, and 17, in the SLAC Auditorium.

The free program, which is open to spouses, is conducted by a financial specialist from Waddell and Reed, Inc. of San Jose and sponsored by Benefits and Records, according to Manager Jeannie K. A. Thomas.

It is free of product identification and provides an opportunity for individual counseling and free computerized financial analysis for each faculty and staff member who so desires.

Topics to be discussed include financial planning as an economic tool, detecting and coping with the effect of inflation, tax planning and tax reduction strategies, preparation of your financial plan, effective credit management, current market conditions, developing your investment program, retirement planning, identifying realistic insurance needs and reducing costs, and estate planning.

Preregistration is not necessary. Questions may be directed to benefits specialist Mary Simonton, 497-9393.

CalTech expert to give Linus Pauling lecture

Prof. Leroy E. Hood, chairman of the Division of Biology at California Institute of Technology, will give the tenth annual Linus Pauling lecture at Stanford.

His free public talk on "Genes of the Major Histocompatibility Complex" is scheduled at 4 p.m. Tuesday, Jan. 25 in Fairchild Auditorium of the Stanford Medical Center.

Hood received the Howard Taylor Ricketts medal from the University of Chicago in 1980 for "outstanding accomplishments in the medical sciences" and was elected to both the National Academy of Sciences and the American Academy of Arts and Sciences last year.

He has played a leading role in deciphering the structure, organization, rearrangements and evolution of antibody genes. These studies have provided fundamental insights into how relatively modest amounts of genes can generate enormous amounts of information through the combinatorial scrambling of gene segments and somatic mutation.

He also has pioneered the development of a unique microchemical facility at Caltech which contains instruments for the analysis and synthesis of genes and proteins. This may be used with two other biotechnologies—the recombinant DNA and monoclonal antibody techniques—to isolate and characterize interesting genes with speed and precision.

More recently, Hood's laboratory has started to analyze genes of the major histocompatibility complex. These genes play a fundamental role in regulating several aspects of the vertebrate immune response.. This system provides a unique opportunity to employ recombinant DNA and microchemical instrumentation techniques to determine how communication occurs between cells.

Ramsey to speak on atomic clocks

Norman Ramsey, the Higgins professor of physics at Harvard, will give a free public lecture on "Atomic Clocks" at 8 p.m. Tuesday, Jan. 25, in the Physics Lecture Hall at Stanford.

He is the 12th person chosen to give distinguished lectures in memory of Prof. Leonard I. Schiff of the Stanford Physics Department.

Ramsey will give a specialized talk on "Experiments on Time Reversal Symmetry and Parity" at 4:15 p.m. Wednesday, Jan. 26, in Physics Lecture Hall.

Ramsey is the author of books on *Experimental Nuclear Physics*. *Nuclear Moments*, *Molecular Beams*, and *Quick Calculus*.

His experimental work has ranged from molecular beams to particle physics. It has concentrated on precision measurements of the electric and magnetic properties of nucleons, nuclei, atoms and molecules.

President of the American Physical Society in 1978-79, he has been chairman of the Board of Governors of the American Institute of Physics since 1980.

From 1966 to 1981 he was president of the Universities Research Association which operated the Fermi National Accelerator Laboratory. Many years earlier, he was executive secretary of the scientists who established Brookhaven National Laboratory.



Skiing on Lembert Dome, Yosemite High Sierra **by Ansel Adams 1930**

Ansel Adams' 'Ski Experience' photos at Stanford Museum

"Ski-Experience," early and rare examples of Ansel Adams' work, are on display at the Stanford Museum through March 30.

The photographs were made in 1929 and 1930, at a time when Adams was finding his way toward the photographic technique that would enable him to communicate what he felt about what he saw. The comparatively small size of the photographs, the delicacy of their treatment, the sureness of their design and their fine quality proclaim them as the works of the young man who would become recognized by the world as a master of the photographic art.

The prints in the exhibition were made at the request of Donald and Mary Curry Tresidder of the Yosemite Camp and Curry Company (Dr. Tresidder later became the fourth president of Stanford University). The Tresidders commissioned Adams to illustrate the winter sports that were being developed in Yosemite in the late 1920s.

It was then that the all-year highway from Merced was paved, the Ahwahnee Hotel was opened, and the Yosemite Ski School was founded. The sports in the Valley—ski-joring, sleighing, ice-skating, dog-sledding and skiing—were the subjects of Adams' 1929 photographs.

In 1930, he made a long ski trip to the High Sierra with the Tresidders and the recently hired Austrian ski-instructor, Jules Fritsch. It was this "ski-experience" that he described in the *Sierra Club Bulletin* of 1931 and illustrated with several of the photographs in the exhibition. Ansel Adams' words are apposite to his photographs of the immensity and purity of the snow-covered mountains above Yosemite at a time when few people made tracks there:

"To us, four motes on an Earth-gesture of high stone, it appeared that great mountain spirits had assumed white robes of devotion and were standing in silence before the intense sun. . . . "

All of the photographs in the exhibition are original prints; the negatives were destroyed in a darkroom fire in 1937. Most of them are on loan to the Stanford Museum from Mr. Thomas W. Weisel of San Francisco. Others come from the collection of Mrs. Oliene Tresidder Mintzer of Menlo Park.

The Stanford Museum is open to the public Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday from 1 to 5 p.m. It is closed on Mondays. Admission is free. Docent tours can be arranged by calling 497-3469.

Concert marks Church's 80th

Herbert Nanney, University organist and professor of music, will perform at 2:30 p.m. Sunday, Jan. 23, in Memorial Church in a free recital to commemorate the 80th anniversary of the dedication of the church.

Nanney will perform works by Buxtehude (*Prelude and Fugue in G minor*); J. S. Bach (*Deck Thyself, My Soul, with Gladness* and *Toccata and Fugue in D minor*); Mozart (*Andante for Small Mechanical Organ*); Mendelssohn (*Sonata No. 1 in F minor*); Brahms (two Chorale Preludes); Darke (*Brother James' Air*); and Franck (*Chorale in A minor*).

Seventeen organ students have received Doctor of Musical Arts degrees from Stanford under Nanney's tutelage.

I-Center films on Australia

The International Center's winter quarter Other Cultures film series continues its Australian Mini-Film Festival at 7:30 p.m. Thursday, Jan. 20, with the second in a series of three documentaries on the Australian film industry.

Passionate Industry: 1920-30 moves us along through the filmmaking of that decade. Also to be shown is *Where Dead Men Lie*, a tale by Australian literary figure Henry Lawson. It portrays Australia's pioneers and the heartbreak of life in the Outback.

Members of the Stanford Community are invited to learn more about what has become one of the world's most outstanding motion picture industries, and enjoy some of the delights of Australia via special door prizes and Australian wine tasting.

There is no charge, but a 75 cent donation is requested at the door.

Whitehouse gives concert Jan. 30

Stanford's Music Department presents flautist Shelley Whitehouse in a free concert at 8 p.m. Sunday, Jan. 30, in Dinkelspiel Auditorium. Joining her will be David Achenbach, harpsichord, and Kris Speer, bassoon.

The program will include Blavet's *Sonata No. 4* and Bach's *Sonata in C Major*, both for flute and harpsichord; Beethoven's *Trio for flute, bassoon, and piano; Cantabile and Presto* by Enesco, *Soliloquy* by Rogers, and *Sonata* by Poulenc.

Whitehouse is a sophomore at Stanford majoring in music and political science. She studies flute with Frances Blaisdell. Achenbach is a graduate student in music; Speer is a junior majoring in music and earth sciences.

Japanese film showings slated

Three free public showings of Japanese films are planned at Stanford at 7:30 p.m. Thursdays, Jan. 27, Feb. 10, and Feb. 24, in Room 41, Building 420 Jordan Hall, at Stanford.

The series is jointly sponsored by the Center for East Asian Studies, the History Department, East House, and Okada House.

Jan. 27: "Red Bear (Akahige) (1965)," directed by Akira Kurosawa; with Toshiro Mifune, Yuzo Kayama. A tale of the internship of a vain young doctor in a slum clinic who gradually learns humility and gains strength under the tutelage of a gruff, heroic older doctor.

Feb. 10: "I Was Born, But. . .(Umarete wa Mita Keredo) (1932)," directed by Yasujiro Ozu; with Hideo Sugawara, Tokkankozo. Silent comedy of middle-class manners and mores in 1930s Japan. Two small boys must adjust to recognition of the fact that their father is a company employee whose boss's son they are told to play with.

Feb. 24: "Fires on the Plain (Nobi) (1959)," directed by Kon Ichikawa; with Eiji Funakoshi, Mickey Curtis. Bleak story of the close of the Pacific War in the Philippines, marked by Ichikawa's ironic humor. Retreating Japanese soldiers fight starvation and embittered Philippinos.



Harlan Hokin

Hokin to direct vocalist concert

Vocal music of the "High Middle Ages: The Old Way and The New Way" will be presented by Stanford's Music Department at 8 p.m. Sunday, Jan. 23, in Dinkelspiel Auditorium.

Directing the concert will be Harlan Hokin, tenor and newly appointed lecturer in early voice at Stanford. Performing with him will be singers Michael Collver, Paul Vorwerk, and Vismaya Lhi. Maria Walsh will accompany on the vielle, an early instrument similar to the viola.

Hokin describes vocal music of this era as "some of the most interesting music of all time. . .with spectacular displays of vocal technique." The first half of the program will be *Ars Nova*, or The New Way: music by 14th-century poet/composers Jacopo de Bologna and Guillaume de Machaut.

The second half of the program will be *Ars Antiqua*, or The Old Way: 12th-century church music from Notre Dame, including Gregorian chants, liturgical pieces, and a very rarely heard four-part organum.

Hokin received his B.A. in music from UC-Berkeley, then spent three years studying early music at the Schola Cantorum in Basel, Switzerland with Thomas Binkley and Andrea von Ramm. He has performed with Sequentia in Europe and La Corte Musical in Berkeley.

Collver is a well-known counter-tenor who performs widely in Europe. Vorwerk is presently director of choral activities at UC-Santa Cruz, on leave from Cal Arts in Valencia.

Tickets are $4 general admission, $2 students and senior citizens.

Ferguson, Lawler duo-guitar fete

Stanford's Music Department presents duo-guitar ensemble Charles Ferguson and Timothy Lawler in concert at 8 p.m. Saturday, Jan. 22, in Dinkelspiel Auditorium.

Ferguson is Stanford's lecturer in guitar and a graduate of Columbia and California Institute of the Arts. Lawler teaches guitar in San Mateo and graduated from the San Francisco Music Conservatory.

The duo will perform works by Pachelbel, Lawes, Bach, Mozart, Myers, Duarte (a former teacher of Lawler's), Riera, Barrios, and Carulli.

Tickets are $4 general admission, $2 for students and senior citizens,

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Jan. 19 to cover the week of Mon., Jan. 31 through Sun., Feb. 6.

MONDAY, JANUARY 24

Biological Science Seminar: Talk by Dr. Stewart Thompson. 4:15 p.m. Room T-175,Herrin Hall-Biological Sci.

Computer Science Lecture: "Iterative Algorithms and Software for Large Sparse Linear Systems" by David Young, Univ. of Texas at Austin. 4:15 p.m. Margaret Jacks Hall,Third Floor Lounge.

Biological Sciences Seminar: "The Molecular Basis of a Stereotyped Behavior" by Dr. Richard Scheller. 4:15 p.m. Room T-175 Herrin Hall,Dept. of Biological Sciences.

Stanford Student Jewish Appeal Workshop: "Israel's Social Needs". 7 p.m. History Corner Rm.34.

Forsythe Memorial Lecture: "Technologies for Learning" by Prof. Rai Reddy of Carnegie Mellon University. 7:30 p.m. Skilling Aud.

Film Society: "Magnificent Ambersons" (1942) and "Holidays" (1938). 7:30 p.m. Kresge Aud. $2.00.

TUESDAY, JANUARY 25

Bechtel International's Tuesday Luncheon/Lecture Series: Mariusz Ziomecki, former senior editor of Kultura, one of Poland's national weeklies. Noon. I-Center. $2.50 includes hot lunch;brown baggers welcome.

STARTS: Crochet Class with instructor Karen Springen. Noon-1 p.m. Tresidder Union rm. 132. $8 for 8 weeks.

Stanford Museum of Art Lunch Tours: "The Glory of Greece". 12:15 p.m. Stanford Museum.

Feminist Studies Dept. Lecture: "In and Out of Harm's Way: Arrogance and Love" by Marilyn Frye, University of Michigan. 4 p.m. 305 History Corner.

Stanford Alumni Assoc. Seminar: "Hemingway and Fitzgerald" by Prof. Arturo Islas. 7:30 p.m. Call Rita å 497-2021 for location.

Center for East Asian Studies Chinese Film Fesival: "Fifteen String of Cash" (1956). 7:30 p.m. Memorial Aud. $1.50 donation.

Physics Dept. 1983 Schiff Memorial Lecture: "Atomic Clocks" by Prof. Norman Ramsey, Harvard Univ. 8 p.m. Physics Lecture Hall,rm. 100.

CROW and Lively Arts: Piano Recital Featuring Women Composers: Sylvia Glickman, Director of Chamber Music, Haverford College. 8 p.m. Dinkelspiel Aud. Tickets Available through Tresidder ticket office.

WEDNESDAY, JANUARY 26

Latin American Studies Lecture: "Recent Spanish American Theater" with Prof. Rene de Costa, Dept. of Romance Languages and Literature, Univ. of Chicago. Noon. 582 Alvarado Row-Bolivar House.

Chemical Engineering Lecture: "Selectivity in Xylene Isomerization: Configurational Diffusion in Zeolite" by Prof. James Wei, Dept. of Chemical Engineering, MIT. 4:15 p.m. Chem. Engineering Conference Rm.

Forsythe Memorial Lecture: "Unsolved Problems in Artificial Intelligence" by Prof. Rai Reddy of Carnegie-Mellon University. 7:30 p.m. Skilling Aud.

Lively Arts at Stanford: "Practical Musical Consideration—A Discussion from a Journalistic Point of View" by Harold C. Schonberg, Cultural Correspondent, New York Times. 8 p.m. Dinkelspiel Aud. $5.50,students $4.

Lively Arts at Stanford: Harold Schonberg Lecture. 8 p.m. Dinkelspiel Aud. $5.50;$4.00 students.

THURSDAY, JANUARY 27

Stanford Geothermal Program Lecture: "High Temperature Well Testing Instruments" by Sally M. Benson, Lawrence Berkeley Lab. 1:15 p.m. Mitchell Bldg. Rm. B67.

Condensed Matter Physics Seminar: "Correlation length and fluctuation in inhomogeneous superconductors", Bernard Giovannini, University of Geneva, Switzerland. 4:15 p.m. Applied Physics 200.

Risk Analysis Seminar Series: "Safety Trade-offs on the Three Mile Island Clean up" with Prof. Howard Raiffa, Harvard Univ. 4:15 p.m. Terman Aud.

Forsythe Memorial Lecture: "Task Oriented Computer Architectures" by Prof. Rai Reddy, Carnegie-Mellon Univ. 4:15 p.m. Jordan 40.

Solid Mechanics Seminar: "Nonlinear Soil Structure Interaction" with Dr. Jeremy Isenberg, Weidlinger Associates, Menlo Park. 4:15 p.m. Skilling Aud.

Center for Teaching and Learning: "Specialization: Where did it come from and what it's doing to our professional lives" — a panel discussion. 4:15 p.m. Tresidder 271. Free.

Latin American Film Series: "From the Ashes . . . Nicaragua Today.". 7 p.m. Casa Zapata.

Australian Mini Film Festival: "Now You're Talking" and "Australia in the 80's." Door prizes, Australian beer and wine tasting. 7:30 p.m. I-Center. .75 donation.

Center for East Asian Studies Chinese Film Festival: "Li Shuangshuang" (1962). (English subtitles). 7:30 p.m. Memorial Aud. $1.50 donation.

CERAS, EAST House Film: "Red Beard," starring Toshiro Mifune. 7:30 p.m. Blg. 420,Rm. 41.

Stanford Hillel Presents: Bill Graham . 7:30 p.m. TBA.

FRIDAY, JANUARY 28

Applied Mathematics Lecture: "Four Tricky Problems from Mechanics," by Prof. Stuart Antman, Univ. of Maryland. 3:15 p.m. Room 380-c(Mathematics Corner).

Materials Science and Engineering Colloquium: "Hot Wall Epitaxy of Semiconductor Films" by Prof. Adolpho Lorez-Otero, Univ. of Linz, Austria. 3:30 p.m. Peterson Laboratory-Rm. 550A.

Lively Arts Concert: Lucy Shelton, soprano. Twice Naumberg Winner. 8 p.m. Dinkelspiel Aud. $8.50,$7.50,student $3 less.

Stanford Law School Film Society: "Little Women". 8 p.m. Kresge Aud. $1.50.

STARTS/GSA Great Directors Film Series: "Anticipation of the Night" by film maker, Stan Brakhage. 8 p.m. Geology Corner,Rm. 320. $2.50.

SATURDAY, JANUARY 29

Women's Swimming and Diving: vs. USC. 1 p.m. DeGuerre Pool.

Women's Lacrosse: vs Palo Alto/San Jose. 10 a.m., 11 a.m. Maloney Field.

Women's Rugby: vs. California. 11 a.m. Maloney Field.

Dept. of Athletics: Harlem Globetrotters. 2 p.m. Maples Pavillion. $8.50,$7.50,$6.50.

Black Liberation Film Festival: "Black Girl" by Senegalese director Ousmane Sembene. 7 and 9:15 p.m. Terman Aud. $1.50.

SUNDAY, JANUARY 30

Memorial Church: Public Worship by Bernard Brown of the University of Chicago. 11 a.m. Memorial Church.

University Public Worship: R.G. Hamilton-Kelly, Dean of the Chapel. 11 a.m. Memorial Church.

EXHIBITS

Photographs by Maria Pease. Tressider Union Upstairs Lobby. Jan. 1 - Jan. 31.

"The Big Sqeeze" and other works by artist Dolly DuPrau. I-Center. Jan. 5 - Jan. 30.

Recent Acquisitions. Paintings, drawings, sculpturess and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. Jan. 11 - Feb. 20.

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Meidel Rm. Jan. 18 - March 20.

Now you can look up calendar on computer file

Starting this week, you'll notice that the Public Events Calendar on our back page has a new format. It's now being computer-generated, and the change involves more than what you see on the printed page..

Are you wondering what films will be shown on campus next weekend?

Do you want to know where and when a particular speaker will be giving a lecture?

Or perhaps you would like to know what musical events are on the calendar for the next couple of months.

If you have access to CIT's IBM timesharing system, you can find the answers to questions like these at any time.

PUBLIC EVENTS is a SPIRES subfile that was developed by CIT's Departmental Information Systems Group. It is used to print the calendar in *Campus Report*, and its contents may also be viewed by anyone with a WYLBUR account and elementary SPIRES knowledge.

The PUBLIC EVENTS file contains all the types of events that appear in *Campus Report*, such as lectures, sports events, and art exhibits. In addition, information about a contact person and handicapped access is provided.

As with the printed version of the calendar, there is a separate entry for each event. When multiple performances are given, such as with a play, there will be a separate record for each performance.

Events are entered into the computer whenever the Public Events staff receives a notification form; thus, you are not limited to looking at events of the current week, but may search up to two months in advance.

To access the online events calendar, logon to a terminal, call SPIRES, and enter the command SELECT PUBLIC EVENTS. You may type SHOW SEARCH TERMS to see a list of words that can be used in searching the file. You may also BROWSE the terms to see a sample of possible values. When you have found the information you want, it can either be displayed at the terminal or printed on paper.



Above is *Landscape with a Cottage by a Large Tree,* an etching by Rembrandt van Rijn which may be seen at the Stanford Art Gallery in Collecting for Stanford: Recent Acquisitions for the Stanford Museum. The exhibition is designed to spotlight the Museum's areas of particular strength and to illustrate the significance of the new acquisitions in the context of long-term collecting interests. The exhibition will be at the Gallery through Feb. 20.

CAMPUS REPORT

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Entrepreneurs' spirit thrives amid students

From computer programming to cookie shops, from earthquake engineering to popular recordings, Stanford students are putting their ideas to work by starting their own companies in Silicon Valley.

Perhaps most symbolic of the new generation of student entrepreneurs is John Halamka, who recently founded Colossus Computers, a computer hardware and software company that last year grossed $100,000.

He works out of the basement in the home of the late Stanford Emeritus Provost Frederick Terman, world famed as the father of Silicon Valley. Running a company is "a lot more fun than classes," he said. Halamka is a student member of Stanford's Committee on Research. Named after D.F. Jones's novel on the first computer to run the Earth, his systems greet users with an audible "This is the voice of Colossus."

A senior majoring in political science, public policy, and medical microbiology, Halamka has done computer programming for economists Arthur Laffer and Milton Friedman, and physicist Edward Teller. One of his latest clients is McGraw Hill. Former staff editor of *The Chaparral*, a campus humor magazine, he has 20 customers and carries a full load of 20 academic units.

Because of his apparent closeness to the great Stanford engineering professor, Terman's descendants have asked Halamka to write a biography of Terman's life. He may do so this summer.

Halamka is just one of the many Stanford students who are finding that, with enough energy and insight, they can become their own bosses.

Last April, more than 500 Stanford students—more than four percent of all those at the University—attended the first Stanford Conference on Entrepreneurship and listened to the advice of Silicon Valley's most famous young entrepreneur—Steven Jobs, 27, chairman of Apple Computers, Inc.

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...and then, says photographer Ed Souza, they pulled the plug and it all ran out.

Panel hears plea for more graduate aid

America risks its world intellectual leadership unless the "steady erosion" in support for its most talented graduate students is reversed, a spokesman for the nation's top universities warned Tuesday, Jan. 25.

Robert M. Rosenzweig, president-elect of the Association of American Universities (AAU) delivered a joint statement from the AAU, the Association of Graduate Schools, the Council of Graduate Schools, and the National Association of State Universities and Land Grant Colleges to the National Commission on Student Financial Assistance, meeting at Stanford University.

He offered "a simple and clear prescription" for national policy on graduate education: "Attend to the education and training of the nation's best young minds or fall behind those nations that do."

Since 1968, he reported, the number of federally funded graduate fellowships has "declined precipitously," from 51,000 to less than 10,000.

Fellowship support in the arts, humanities, and certain social sciences is "almost totally lacking," he added.

Growing dependence on loans has increased the debt burden upon graduate students "to a degree that may begin turning students away from low or moderate paying fields or discourage them from pursuing graduate education altogether," he warned.

"The nation cannot assume the availability of a sufficient cadre of highly trained scientists and scholars unless national policy provides incentives adequate to bring about that result.

"The guiding philosophy for government policy. . .should be to maintain continuity of training to assure over time a 'critical mass' of talented individuals broadly distributed across the range of academic disciplines."

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Home computers cut TV time by half hour per day here

Home computers reduce television viewing by more than a half hour daily, a study of 77 computer families at Stanford shows.

"This change represents a rather major shift in the use of time. It suggests that home computers may be more addictive than television," Prof. Everett M. Rogers, Hugh M. Daley and Thomas D. Wu declare in a new report, "The Diffusion of Home Computers—An Exploratory Study," published by the Stanford Institute for Communication Research.

More than half the families studied (56 percent) reported no change, but four out of 10 (40 percent) said they decreased their viewing by an average of 1.5 hours daily.

The average U.S. household has TV turned on about six hours per day. A separate study of Stanford faculty and staff this fall indicated their sets were on only 2.7 hours per day.

When asked what changes their home computer had caused, the most common response was "facilitates my work" (29 percent), followed by "increased my awareness of the computer world" (17 percent), "changes my recreational activities" (14 percent), "saves time" and "allows me to spend time at home" (12 percent each).

The Stanford study is one of the first comprehensive analyses of the diffusion of home computers to be publicly reported. It was conducted by 59 students as a class project in Communication 167-267 and Values, Technology and Society 172.

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People

RLG's new chief, Richard McCoy, reports for work

Richard McCoy, the new president of the Research Libraries Group, arrived at RLG's corporate headquarters in Jordan Quad at Stanford to assume his new post Jan. 17.

McCoy comes to RLG with substantial experience in the field of information systems and data processing management at the University of Wisconsin, in the Wisconsin state government, and in the federal government.

Most recently he served as director of the State Office of Information Systems Management in the Wisconsin Department of Administration, on assignment to the state from the University of Wisconsin, and in a staff assignment for the secretary of that department.

McCoy holds degrees in engineering, management, and applied computing from Wisconsin. He held positions there as director of administrative data processing and director of academic computing.

Other appointments include a period as coordinator of computing activities (Office of Administration, Executive Office of the President of the U.S.), and as assistant to the secretary (Wisconsin Department of Health and Social Services).

He has a decade of instructing and consulting in computing management for Stanford, the State University of New York at Albany, and other participants in the EDUCOM consortium of universities.

McCoy succeeds Patricia Battin, who has served as RLG's president since last summer. She was on loan from her post as vice-president and university librarian at Columbia.

McCoy and his wife, Elizabeth, will make their home at Peter Coutts Hill initially.

Mrs. McCoy was a student at Stanford in the 1950s and later lived in San Francisco. She will pursue her weaving interests and may renew her previous interest in children's library work.



Richard McCoy

The Research Libraries Group, Inc., a nationwide network of research institutions, is a corporation owned and operated by its members. The partnership was founded in 1974 to provide a framework within which these institutions could seek long-term solutions to the chronic fiscal, staffing, and support problems common to all research libaries.

Through its four chief programs—Shared Resources, Collection Management and Development, Preservation, and Technical Systems and Bibliographic Control—the consortium is working to create an open-ended system of software, hardware, cooperative agreements, and coordinated procedures that will enable libraries to fulfill their age-old mission of collecting, organizing, preserving, and providing information.

Diane McAfoos

Diane McAfoos of the Hoover Institution has been elected to "Outstanding Young Women of America."

She graduated magna cum laude, Phi Beta Kappa, from Mount Holyoke College in May. A psychology major, her thesis on "Coping with Divorce: Attributions of Responsibility" involved extensive interviews with young women in the community. McAfoos was a Sarah Williston scholar, a Mary Lyon scholar, and a member of Psi Chi, national psychology honor society, and Sigma XI, the Scientific Research Society of America.

At the Hoover Institution she is secretary and assistant to senior research fellow, Admiral James B. Stockdale.

Faculty openings

Aero-Astro research professor sought

The Department of Aeronautics and Astronautics seeks a highly-qualified candidate for the position of professor, research. The position requires a Ph.D. degree along with further original research contributions in a field closely associated with aeronautics and astronautics. The candidate's capability for generating and pursuing creative research programs should be widely recognized.

It is important that the candidate have five to ten years R&D management experience involving the formulation and successful implementation of research programs in aeronautics, including theoretical, experimental as well as computational aspects. Also highly desirable is previous affiliation with a major university.

Interested persons should respond promptly by sending curriculum vitae and names of at least four references to Prof. Daniel Bershader, Department of Aeronautics and Astronautics, Durand Building, Stanford University, Stanford, Calif. 94305.

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

Ready help available from students in the Department of Statistics

Gotta little problem involving statistics?

If you are a researcher who is not a statistician, the answer is usually, yes. The Stanford Department of Statistics has relief on the way.

The department has formed the Statistical Consulting Service, made up of nine graduate students and Prof. Jerome Friedman. The service is entirely free. All that's necessary is to show up at room 109 at Sequoia Hall, Wednesday, and Friday, between 2 and 4 p.m. and Tuesday, 1-3. There is usually no wait for service.

The consultation is limited to the "broad university community" Friedman says, "and we don't do homework."

The service has been running since the fall. The consultants, each of whom can get three hours of course credit for the work, have been meeting with five to eight clients a week. The clients are frequently graduate students with research problems, but not always.

One client was a member of the administration who wanted to do a survey to determine which stores would be most profitable per square foot at the Stanford Shopping Center. The consultants advised her on how to go about the research.

Another researcher wanted to find out how much money flowed out of the East Palo Alto community. This researcher believed that the area had a negative economy and wanted to find out how to prove it. He also wanted to know what stores might stem that flow. The consultants in this case could not think of a scientifically sound way of doing this study.

A researcher in the Music Department obtained assistance in work determining the "attack" time of musical instruments—the time it takes for a listener to perceive the sound from the instrument.

Each week the consultants meet as a group to discuss the week's problems. Each problem is analyzed by the group, and if there are further thoughts, the client is contacted.

Friedman says that many other universities have similar programs, some of them quite large, profit-making establishments. The Stanford effort is just for the community; if commercial concerns begin using the service, the department would have to establish fee rates, etc., which it is reluctant to do.

Graduate student Trevor Hastie said the students enjoy the service; some even work without the credit, if their course requirements are already filled.

The service can be reached at 497-2623 during the consulting hours.

GeoRef sets open house in Earth Sciences Library

The data base GeoRef will be available to faculty, staff, and students for free searching from 9 a.m. to 3 p.m. Thursday, Jan. 27, in the Branner Earth Sciences Library.

A representative of the American Geological Institute, the producers of GeoRef, will give a demonstration and discuss the various searching capabilities of GeoRef at 3 p.m. the same day in Room 111 of the Mitchell Building.

GeoRef is the online version of the following indices: Bibliography and Index of North American Geology; Bibliography of Theses in Geology; Geophysical Abstracts; Bibliography and Index of Geology Exclusive of North America; and the Bibliography and Index of Geology.

The data base is of particular interest to those involved in the research areas of geology, geochemistry, geophysics, mineralogy, paleontology, petrology, and seismology.

It is searchable online by author, original titles, translated titles, country of publication, subject keywords, sources of publication, conference location, longitude, latitude, publisher, language, and date.

GeoRef is international in coverage, with approximately 40 percent of the indexed items originating in the U.S. It organizes and indexes papers from more than 4,500 serials and other publications representative of the interests of the 18 professional geological earth science societies that are members of the American Geological Institute.

For more information, call Earth Sciences Librarian Charlotte Derkson, ext. 7-2746.

Wolfgang Panofsky

Wolfgang Panofsky was inadvertently omitted from last week's list of those serving as an advisory group on selection of **Bob Rosenzweig's** successor as vice-president for public affairs.

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Student film-makers guided by famed Hollywood producer

BY DONALD STOKES

A Stanford professor and his students are making movies with the professional stamp.

For 10 years Julian Blaustein has been helping tyro film-makers at the University to see how it is done. He directs Stanford's Film and Television Production Center, part of the Department of Communication.

Blaustein, a graduate of the Boston Latin School and of Harvard, came to Stanford after 35 years in the motion picture industry.

He produced dozens of major movies, employed many of the superstars from Laurence Olivier to Marilyn Monroe, from Bette Davis to James Stewart.

But he is impatient with backward looks at past successes. He is far more intent on the movies which he and his graduate students are producing today.

In a campus interview he described some of the movies now being made at the Stanford Center. He is proud of the fact that all of them will have great usefulness to wide sections of the public.

Reluctantly, he agreed to look backward long enough to compare today's movies with those of yesterday.

The well-known producer at one time had 11 other producers working under him, and brought in an important movie every two weeks. He still has strong views on present motion pictures. He thinks:

* The romantic movie is due for a comeback.
* There is a shortage of great romantic female stars today, but plenty of male stars.
* Movies suffer today from the fact that nonprofessionals head most of the motion picture corporations.

Blaustein turned to his principal interest, the Film and Television Production Center. Here, graduates who are studying production work for their advanced degree.

"We make movies that cover a wide range of human interest," he said. "We draw on many of the rich resources of Stanford and its faculty.

"The film 'One in Eleven' deals with breast cancer. It was produced by Kate Spohr, who worked with Prof. Henry Kaplan, the world-famous research authority on Hodgkins disease and director of Stanford's Cancer Biology Research Laboratory.

"Judy Karp produced what we hope will be the first in a series of movies dealing with the emotional problems faced by many students. It was made in collaboration with Dr. David Dorosin, director of Stanford's Counseling and Psychological Services.

"Two Nobel Prize winners, Profs. Arthur Kornberg and Paul Berg, and Prof. Roger Kornberg, worked with Joe Sachs on 'Just What is DNA?' which is the first of a planned series on the vocabulary of biochemistry. Berg appears in the movie.

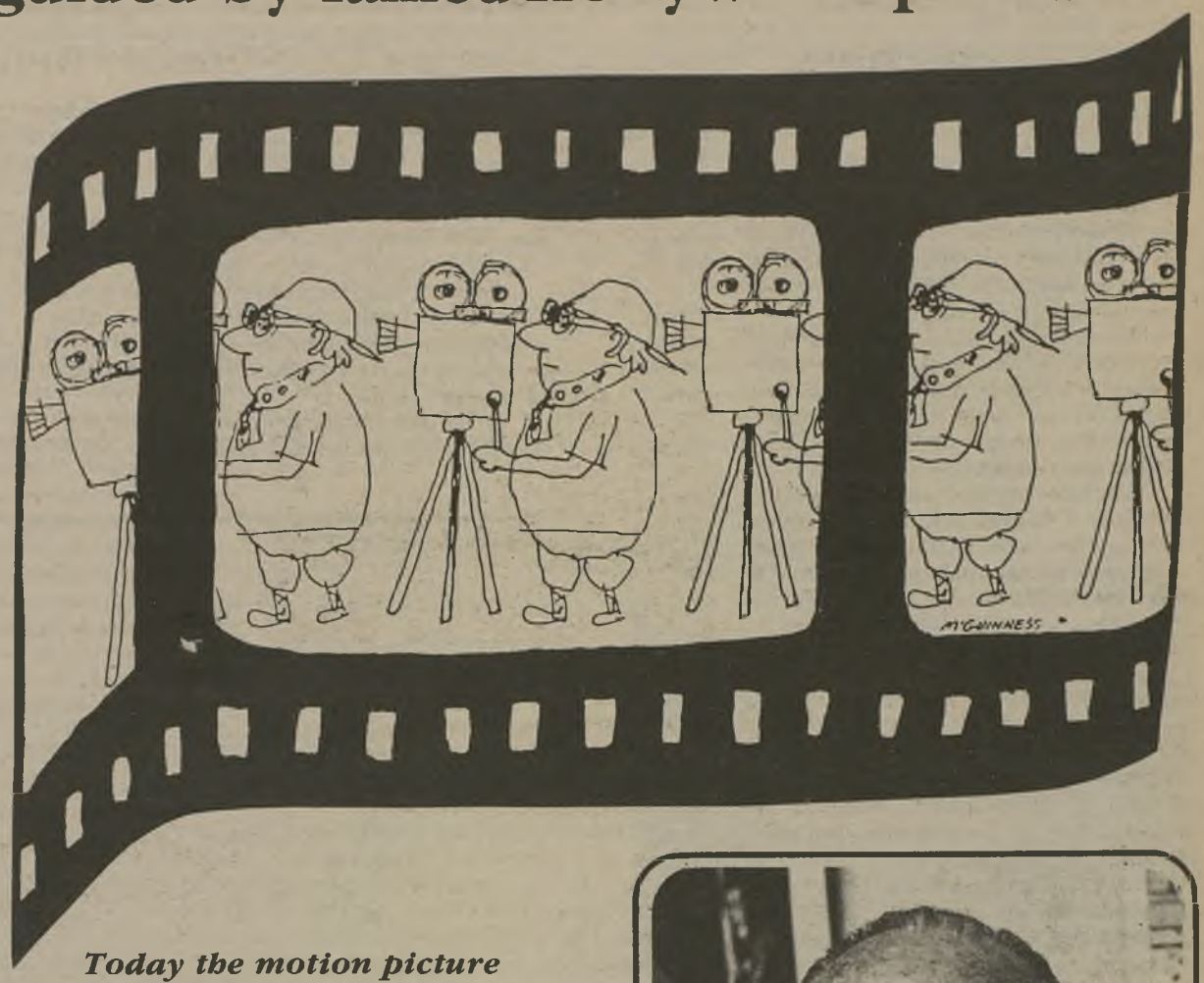
"The biggest medical problem in the U.S. today is that of the heart. Richard Heus worked with Dr. Robert DeBusk, director of our cardiac rehabilitation program, on 'Take Heart' and 'The Next Step.'

Our graduates tackle all sorts of subjects of wide interest. Anne Makepeace produced, as her thesis project, a film about the Moonies, called 'Moonchild.'

"Currently, Marilyn Waterman is completing post-production work on 'Rodin's Balzac,' a film that examines the sculptor's trials in the creation of the famous masterwork. Waterman is collaborating with Prof. Albert Elsen, one of the world's leading authorities on Rodin. It is possible that this will be the first of several movies on Rodin and his work."

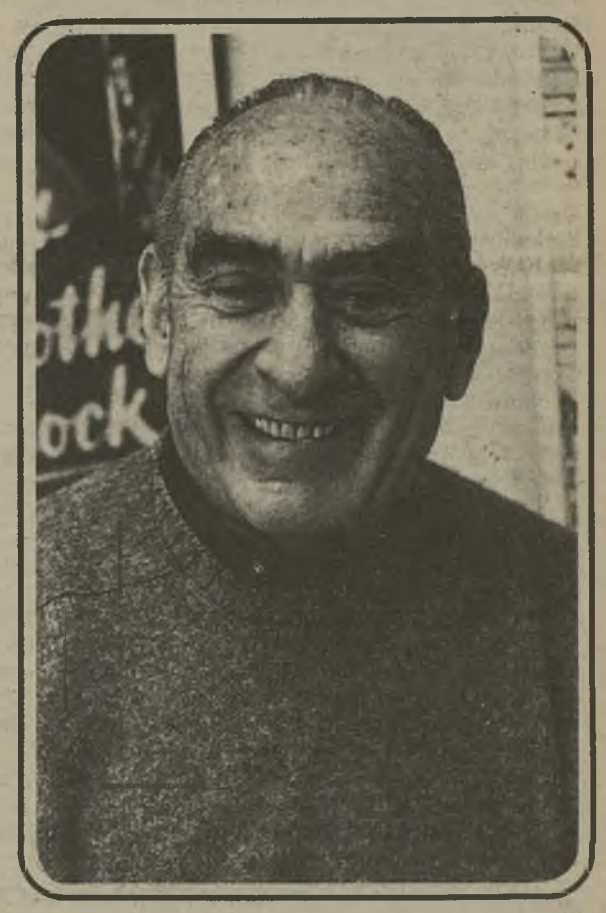
Not all of the movies made by graduates are documentaries. Keith Jones has selected for his thesis a fictional subject, "American Dream," on which shooting will start shortly.

Within the Communication Department, the students work with Profs. Henry Breitrose, Ron Alexander and Kris Samuelson, as well as with Blaustein.



Today the motion picture companies are run by men—and some women—who have never had the experience of actually making a picture from start to finish.

—Julian Blaustein



Many graduates of the Center are now working in the film industry, mostly in the documentary field. For those interested in feature and fiction films there is an M.A. program in screenwriting.

Blaustein, who is responsible for the program, believes that writing offers the best chance for new people to break into the Hollywood film industry.

"It is hopeless to expect to become, say, a producer or director as an entry level job, even for outstanding production students.

"Writing is the best opportunity, but also the most difficult challenge. Our program does not pretend to teach people how to write, but it does offer a chance for a student with talent to develop it."

Noted figures in the film world who will meet with students this quarter include Guy McElwine, president of Columbia Pictures; Jack Lemmon; Sydney Pollack, director of "Tootsie"; Jeff Berg, president of International Creative Management, largest talent agency in the world; and Carl Freeman of "River Kwai" fame.

The department also offers screenwriting fellowships to graduate students. They were made possible by a gift from Mrs. Don Nicholl and her late husband. "The fellowships are something of a halfway house between school and professional life," says Blaustein, who supervises the program.

"We are working very hard to arrange for some of the films produced at Stanford to be shown on commercial or public TV.

"I admire the young people who are attracted to our film courses. They know they are entering a very difficult industry."

"When our graduates go out into the marketplace they will find a scene that is radically different from the peak years of the industry. The people who put up the money for the production of pictures these days do not permit anything like the power that used to be given to producers and directors.

"The money men took it very much to heart when 'Heaven's Gate' proved to be such an utter disaster that the corporation owning United Artists simply sold the complete firm and got out of the movie business.

When the studio system broke down in 1950, it did so to the point where the studios were no longer the activators of projects. A corporation which owned the studio and also a chain of theaters as ready channels for distribution could no longer simply allocate money to a producer and say, 'Go make this picture.'

"Money is what the movies are all about, just as money is the lifeblood of all business. When the

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Blaustein/ continued from page 3

movie business began to suffer under the new laws the studios grew very nervous about making long-term commitments. Many of the directors, writers and artists who worked on contract were let go.

"Today the motion picture companies are run by men—and some women—who have never had the experience of actually making a picture from start to finish.

"Today's head of MGM was a former lawyer in its legal department; the chief executive officer of the company is also an attorney. An oilman purchased 20th Century Fox, and it is no longer a public company. And so on throughout the industry.

"The procedure these days is that the producer generates a project, then offers it either to venture capitalists or to a newstyle motion picture corporation, which examines the project purely as a dollars and cents proposition.

"The effect of this system has generally been deleterious, because it limits the number of movies that can be made. There are some very good producers who are no longer creative administrators. Instead, they have to be entrepreneurs.

The important thing today is to get the money for your picture. After that you hold your breath. In former days the studios wanted pictures and we made them. There was continuity, and a much greater volume of movies.

"I grew up in the industry when producers such as David Selznick put their stamp on everything, including wardrobe, sets and music. They were busy in all the critical areas such as story selection, working with the writers and director (including the hiring of the director), the editing, and of course the casting and working with the players.

"That was not all by a long way. The producer usually worked with the sales force and the distribution campaign. A good producer was a creative administrator. He knew not only how to save money, but also how to spend it."

In view of all the changes in the industry, an interviewer asked, is it still possible for great motion pictures to be made?

"Sure. Movies are still made by people, and the best movies are made by the best people. Of course, here we get into defining terms. What is 'great?' It is largely in the eye of the beholder.

"It cannot be gauged by the box office receipts. Often that is very far from being the yardstick. One of the most offensive movies I have ever seen is 'Porky's,' which is a very big success.

In view of the fact that most films today are made by comparatively small teams which sell their productions to the major corporations, is this a deterrent to the making of first-class movies?

"That depends on the people making them. I was in independent production from 1955 to 1973, and during those 18 years I released through Columbia, MGM, United Artists and Universal.

"You can imagine the difficulties of making such a movie as 'Khartoum,' a costume piece which was set in the Sudan and called for large crowd scenes. I had three top stars—Heston, Olivier and Richardson. I set up an office in London and put together the staff as needed. We solved the problems as they came along."

Mass audiences are waiting for great romantic films, Blaustein believes. "I am convinced that a huge audience here and abroad is waiting to see a really good romantic movie. Even 'Love Story,' made a few years ago, was a major hit, although it was too saccharine for my taste.

"People like to laugh, to cry, to be scared, even to hate. Touch their emotions and they will come back again and again.

"But whom do we have today to play the heroine in a romantic love story? Jane Fonda, who is a little bit past it? Barbra Streisand? Meryl Streep perhaps. Why am I having all this trouble trying to think of romantic leading ladies? Because there are so few.

"Just think of the days when millions of people all over the world would stand in line to get into their local moviehouse simply because there was a Bette Davis picture, or a Garbo, a Norma Shearer, Crawford, Colbert, Irene Dunn, Carole Lombard, Loretta Young. . . you name her. They were all whopping stars.

"Where are their successors? Sure, there was Marilyn Monroe, the biggest movie attraction since World War II. I made the first picture in which she played a leading role ('Don't Bother to Knock,' with Richard Widmark and Anne Bancroft). But who else has there been, what other women whose presence in a film guarantees its success?

"Marilyn had that indefinable quality of stardom. The secret of her appeal was her vulnerability, which came through on the screen. And her sex appeal, of course—a combination of innocence and sensuality.

"What was the secret of Marlene Dietrich? Certainly she was never a great actress. What was Garbo's? Perhaps it was that she seemed to be a well of enormous promise."



When our graduates go out into the marketplace they will find a scene that is radically different from the peak years of industry. The people who put up the money for the production of pictures these days do not permit anything like the power that used to be given to producers and directors.

—Julian Blaustein

The man who for 35 years had accurately sensed the pulse of the entertainment world asked himself another question: "Why are there male stars today, but very few female? Perhaps because we have lived with wars, or threats of wars, for so long that the public responds to heroes.

"A fundamental problem is that not enough movies are being made to generate opportunities to develop new stars. Too much control is in the hands of a very small group of major names, such as Clint Eastwood, Paul Newman, Robert Redford and Burt Reynolds. They can write their own tickets.

"I think that when another Tyrone Power or Errol Flynn comes along the public will roll over and play dead for him.

"Just imagine the effect on today's public if, for example, 'Wuthering Heights' were to come out again today with the equivalent of Olivier and Merle Oberon.

Is there any formula for success in the film industry?

"If there is a formula it has eluded everybody. The same executive at Columbia who approved the making of 'Kramer versus Kramer' and 'The Blue Lagoon,' which were hits, also turned down 'E.T.' "

Does a producer try to hit some nerve in the public which brings a galvanic response?

"If you do hit such a nerve you try to keep on hitting it. That is why we have 'Rocky' 1, 2 and 3; 'Jaws' 1 and 2; 'Amityville' 1 and 2. We get a new James Bond picture every two years because the public likes Bond.

"James Bond is an industry, not a series of movies. Cubby Broccoli, who produces them, produces nothing else. I would guess that the Bond pictures will outlive him.

"Sometimes the public nerve is hit because a movie deals with an emerging social problem, as in 'Kramer versus Kramer.' That dealt with the problems of a single father.

"Pictures like that, and 'Ordinary People,' are popular if they are well-made. 'Kramer' would never have been financed if it had not been for Dustin Hoffman's interest. Similarly, 'Ordinary People' probably wouldn't have been done if Robert Redford had not supported it."

Blaustein's career began as soon as he was separated from the U.S. Army in 1946. He was invited out to California to meet David O. Selznick, who was looking for somebody to function as his editorial supervisor.

"Before the war I had headed the story departments of Universal and Paramount Pictures. During the war I was in charge of units that made over 200 documentary films for the Army, and I dealt with every facet of production."

Blaustein's association with Selznick was most fruitful. Among the pictures made during that time were two Alfred Hitchcock classics, "Spellbound," and "The Parradine Case."

"I had the privilege of working with Hitchcock, who was already the master of suspenseful story-telling."

In 1949 Blaustein became a producer at 20th Century Fox, where Daryl F. Zanuck was the great power. For two of the six years Blaustein was there he was executive producer, supervising from 22 to 24 productions a year.

Stars whose names are still household words were part of the teams built up by Blaustein. His first major picture starred James Stewart in "Broken Arrow." This later became a TV series that ran for eight years. Burt Lancaster starred in the second, "880."

So it went on, with Loretta Young, Paul Douglas, Patricia Neal and many of the other great names of Hollywood. All told, Blaustein produced at least 24 pictures of note, with stars whose names are familiar to the world.

They include Marlon Brando, Jean Simmons and Merle Oberon (in "Desiree"); Kirk Douglas ("The Racers"); Bette Davis ("Storm Center"); Jack Lemmon, Kim Novak and Hermione Gingold ("Bell, Book and Candle"); Gary Cooper and Charlton Heston ("Wreck of the Mary Deare"); and Charles Boyer ("Four Horsemen of the Apocalypse").

In 1955 he went into independent production, releasing through four of the major studios.

Many of his films are rerun today on TV. Asked whether he benefited from this he replied, "Sometimes, but not always. For example, I was on salary when I made 'Broken Arrow' so I earned nothing from the subsequent TV series."

In spite of his preoccupation with his work at Stanford, Blaustein keeps up his contacts in the film world and maintains his interest in what is being produced and by whom.

He is optimistic about the room for romantic films in an industry which is thriving on science fiction and violence. A recent film, "An Officer and a Gentleman," is in Blaustein's view the first old-fashioned boy-meets-girl story in a very long time.

"Take out the explicit sex scenes, and it might have been made 30 years ago," he says.

Maybe love is just around the corner, as the lyric promises.

Dancer Bella Lewitzky's fine art: a lifelong California collaboration

BY MILLICENT DILLON

Modern dance is the one American art form in which, from its inception, women have been the dominant force.

So said dancer Bella Lewitzky in a lecture at Stanford recently, part of the series on "Women in the Performing Arts," sponsored by the Center for Research on Women and the Lively Arts at Stanford.

A major contemporary choreographer, founder of her own company, and one of the leading concert performers in the U.S. for many years until her retirement, Lewitzky is the best illustration of her own thesis.

She is distinguished from all of her colleagues in the field, however, by one crucial fact. Accepted lore in the American dance field has it that to make one's way in the American dance world, one must first go to New York.

Lewitzky was born in California, studied in California, formed her group in California, and has done all of her major work here.

Asked why she never went to New York, Lewitzky responded in a campus interview, "I just never went. I never had any desire to. I love California, which is an excellent reason to have stayed here.

"If I could not practice my art here, I would certainly get up and move. But as long as I can work here, I'm very content to stay."

Out of that staying she has evolved an art unique to her and to the landscape she grew up in—direct, without pretense, incorporating strong opposing forces, unified, intelligent and witty.

Lewitzky was born on a Utopian Socialist Commune in the Mojave Desert, the daughter of idealistic Russian immigrants. "My father was a true humanitarian," she recalls. "He made the word come alive in the way he lived his life."

The colony had its own educational system, "something similar to what Montessori is now," she said. It had its own bakery, grew its own food, and had its own newspaper—for which Lewitzky's father was the political cartoonist. "It was completely self-sufficient except for one small detail.

"It was in the Mojave desert and they had neglected to secure the water rights. And one day the peach grower who lived in the mountains above turned off the tap. So they had to leave."

Members of the colony moved to Louisiana, where it lasted for over 60 years.

When it left California, however, Lewitzky's father chose to stay. "We moved to San Bernardino. My father, being the sweetly loving but unrealistic individual he was, did what all vaudevillians wanted to do in the old days. He started a chicken ranch.

"He knew nothing about chickens and he knew nothing about ranching. He dearly loved people but ranching is not a place where you meet people."

There was another way in which Lewitzky's father was not a traditional rancher. He could not bear the thought of attacking weasels, the traditional enemies of chicken ranchers.

"Weasels are very clever little animals who, like the finest physician, attack a hen at the jugular. It's very tidy, very instant. They take the top of the skull off, they only eat the brain and that's all.

"My father thought that this was a remarkable feat. When all of the other ranchers would say, 'We've got to get together to hunt for weasels. Will you join us, Mr. Lewitzky?' he declined.

"And where do you think the weasels lived? On the Lewitzky ranch. They would romp over our dog. They didn't destroy much, they just killed to live. It wasn't wanton bloodshed.

"It was a wonderful childhood, chickens aside," said Lewitzky. "I have never cared much for fowl of any kind."

She recalled her childhood on the ranch as a "Paradise" playing outside most of the year, without physical restraints, making up her own games with other children, making up her own dances. By age seven she decided to be a dancer, though she had never seen anyone perform.

"But later I did see some extraordinary performances right in San Bernardino. A very enterprising woman established in this basically arid railroad town an opera house.

"And then, in the nearest city, Redlands, a woman by the name of Grace Mullen, aided by the generosity of a rich Socialist family, presented a series of performances by artists in a fine new amphitheater."

During her high school years, Lewitzky saw a performance by dancer Maude Allen, a contemporary of Isadora Duncan. "I can still remember the shape and color of her dances. I thought she was wonderful."

She also saw Lester Horton, who was later to become her mentor, perform with the Japanese dancer Michio Ito.

"Michio Ito was a charismatic man, a wonderful performer, who was deported as an alien spy during World War II. I doubt very much that he was a spy though I'm in no position to say exactly. But certainly his interests were not at all political.

"He taught in Japan and died in Japan. His work is currently being revived and restaged in New York."

After high school Lewitzky went to study with the Lester Horton Dance Group in L.A. She progressed rapidly and soon became a major member of the company.

From the late 1930s on Horton was forced to do commercial work in order to support the company and himself. He choreographed for films and for vaudeville and, as Lewitzky remembers, he once had the company do a New York performance.

"We were hired to do a supper club performance called 'The Folies Bergere.' I hated every moment of it. I didn't like club work. I didn't like commercial dance. Also I was no good at it. I was never that kind of 'female beef trust—flashy dancer.' I was basically a dramatic concert performer.

"I also hated New York. And we were all so innocent. We moved into an inexpensive hotel and the first night we were awakened by a banging and crashing on the door, someone yelling, 'Gladys or Mary or whatever, let me in.'

"It turned out we were staying in a hotel for whores. The next day we moved to a quieter place."

Soon after the war began, the Horton company disbanded. Lewitzky was married to Newell Taylor Reynolds, whom she had met when he was a member of the company.

"Newell entered the dance company, thinking it was a form of glorified athletics. He found out dance had very little to do with athletics so he left. He liked competitive sports. Dance is not—should not be—though it sometimes is—a competitive sport."

At the end of the war Horton and Lewitzky founded Dance Theater in Los Angeles, with the cooperation of art director Bill Bowne and Newell Reynolds, now an architect.

In later years Lewitzky founded her own company. Still based in Los Angeles, it is actively engaged in the National Endowment for the Arts touring program and has toured extensively in the U.S. and Europe to great critical acclaim. Her company has performed repeatedly at Stanford.

Lewitzky's work has been defined by some critics as abstract. She accepts the label for want of a better one, though in fact she is resistant to labels of all kinds.

Even as a child, first making up dances, Lewitzky worked with form, shape, and motion, not with story or realistic detail.



Bella Lewitzky

"Maybe I began working this way so early because in the living room of our house was set up an easel with my father's paintings on it.

"He was a tremendous admirer of Cezanne. His own painting was abstract though it recognizably imitated the external form he was working with. I was able to see very early that what the world meant to him, his perception of it, could be put on canvas through this kind of abstraction."

In any case, she adds, objectivity in art is almost impossible to achieve. "The moment you take a piece instead of the whole, you've already altered its state. In that sense, all artists abstract, no matter how objective they try to be."

To Lewitzky both the earlier "Dance Theater" and her own company have been the outcome of a true collaboration with Horton, with her husband, with her dancers, with designers such as Rudi Gernreich, and many others.

She herself has continued to be the guiding force of her work, however. One critic recently described her dances as "true to her deeply entrenched principles of movement theater and ever faithful to the call of her own conscience."

Lewitzky thinks of her work as a "continuation of my childhood, where I was doing what I wanted to do. My life just went on unfolding that way.

"I am basically a noncompetitive person. I am not without ambition, but I am totally without interest in competition."



Letters to the editor

On not meeting the Queen: Chace suggests reading great works as substitute

Editor, *Campus Report*:

James Boswell's *Life of Johnson* relates the happy story of Johnson's dignity upon meeting his King. The king in question was George III, soon to become notorious in the American Colonies. The year was 1767 and Johnson, by then famous as a dictionary-maker, essayist, and poet, had never sought to meet the King, but clever and generous friends of his thought the encounter would be worth a memorable story or two. It was.

Boswell, the manipulative biographer, was one such friend. He had for long engineered implausible meetings with unlikely people, including himself with Voltaire and himself again with Johnson and a variety of natives of the Hebrides. But a meeting with the King, with Royalty? The appeal was irresistible.

So, when it was known that both the King and the eminent man of letters would be in the vicinity of the library of the Queen's house, Johnson found himself surprised to see, at his elbow, the King. Conversation of an odd sort briefly ensued, one subject being, then as now, Oxford. The King, responsive to the obvious opportunity, praised Johnson's achievements, but the man of letters, observing decorum, responded with silence. On being asked later by Sir Joshua Reynolds why he had said nothing, Johnson answered: "When the King had said it, it was to be so. It was not for me to bandy civilities with my sovereign." Boswell remarks that Johnson's silence showed a "nice and dignified sense of true politeness."

Johnson's appraisal of the situation—of how one encounters royalty and retains one's dignity—is worth our modern—and local—attention. Just some two hundred years ago one of the greatest talkers and conversationalists of all time declined the opportunity to talk to royalty. Why? Because Johnson, a wise man, knew there was no easy chatting with a George or, we may speculate, with any of George's successors.

That is because Johnson was not, like Boswell, a "leveller." Boswell owed the distinction of his career to the fact that he *was* a leveller. He believed he could meet everyone from Voltaire to the lowliest prostitute and make them all one with him. He was, in this sense, an American. The glory of the American sensibility is that it presumes to be on a perfectly equal footing with anyone or anything, and that it is best, when encountering the strikingly different, to believe that it is very much like oneself.

Johnson thought otherwise, and so he "bandied no civilities." Royalty, he knew, is not just a human being capped with crown or tiara. Indeed, it isn't human at all. It is symbolic.

So, if meeting the Queen, it is good to keep in mind that one does not meet a person; one meets a Presence. This Presence has nothing to do with conversation or opinions, or casual reflections. It has to do with the declaration of Fact; as Johnson said, "When the King had said it, it was to be so." For one hears, from the voice of royalty, not the speculations of a perceptive English traveller; one hears the voice, purposefully made toneless, of an Entity, purposefully made bland. To be a Queen is to know that one will never have to carry the awkward burden of personality.

But burdens of many other sorts are carried by the Queen: cliches, banalities, innocuous opinions and anesthetized reflections. To be a very good Queen is to recognize the clear and present danger of being interesting. Therefore it is crucial, if meeting a Queen, to accept the unAmerican idea that it is best to look through Her, for She is most certainly looking directly through you. What She sees is anybody's guess, but what you see, unobstructed by human interest, is a long vista of English hopes, dreams, fantasies, history and possibility.

This makes conversation intensely difficult. Hence Johnson's polite silence. But if one finds American impulses, Boswellian impulses, overwhelming, and if one must bandy a civility or two, the wise leveller will obey a few guidelines.

The first is knowing that many, *many* topics of conversation are thoroughly unsuitable. They include Argentina, Exocet missiles, Prince Andrew's vacations, the weakening of the pound, spies, Margaret Thatcher, unannounced nocturnal visitors, and absolutely anything whatsoever to do with Ireland. These are political and personal matters, and the characteristic attribute of a Symbol is that it transcends both.

Suitable topics are exquisitely few in numbers; they may be grouped under one heading: the Queen's pleasure. Thus conversation may appropriately proceed: "We are pleased to welcome you to Stanford." The Response: "We are pleased to be here." The Opening: "Would you care to have something to eat?" The Response: "That would be very, very nice." The Opening: "Stanford is a large private university, one with some 12,000 students." The Response: "How pleasant."

In progressing thus through what could be an exceedingly long afternoon, the Visit, by virtue of its total oddity, will serve some important purposes for us all. It will, first, remind us of the essentially egalitarian atmosphere of this University. For to be invited or to be uninvited to the function will amount to the same thing. Neither group will have an advantage, for neither will "meet" the queen. Symbols are not met; they are regarded from distances, long and short.

The second advantage of the Visit will be to emphasize the importance of symbols. Once the Queen has been among us, even if fleetingly, we are on our way toward developing a taste for the symbolic. And where, then, might we go to satisfy such a taste? We should probably not ask to see the King of Spain, or to have lunch on a regular basis with Saudi princes.

A vastly cheaper and easier thing to do than to bandy civilities is to turn to the single greatest repository of symbols in the world: poetry, literature in general. There we will find memorable and powerful things. No more than the Queen will they be interested in us, even if we are deeply attracted to them. But that makes no difference. Hamlet, Cleopatra and Oedipus, Ulysses, Antigone, and Lear: all royal and all charged with rich meaning. We can see in them the reality of age, youth, courage, foolishness, weakness and fate. Getting to know them will not cost us the tedious formalities of a long lunch. And knowing them will help to do what we and our attentive presidential host have wanted to do for some time at Stanford: strengthen our understanding of the humanities.

So: Welcome, from afar, to this very peculiar, foreign and rewarding presence.

William M. Chace
Professor of English

How a student made Bill Kimball's day —a simple 'thank you' was all it took

The following correspondence may be one of a kind—a student writing to say something positive to the Board of Trustees. It so touched Trustee William Kimball that he suggested the exchange for Campus Report.

Dear Sirs:

My four years at Stanford are coming to a close. I went into the Financial Aids office last quarter to find out where the scholarship I had been receiving for the past four years was coming from. I found out that the Board of Trustees for the University was making the award.

I would like to take this opportunity to thank you for providing me with a chance to attend such a fine institution. I know that without financial assistance I never would have been able to attend Stanford. I would like to commend your endeavors in providing a quality education to all deserving students.

I know that this may sound tacky, but I wonder how many times we stop to think about those "vague nebulous entities" who are committed to assisting us with our careers, educations, and lives. I know the Board of Trustees is not a "vague nebulous entity" but rather an integral part of the functioning of Stanford. Your work and numerous meetings have meaning and purpose for the students here at Stanford.

Once again, thank you for your assistance. My life has been improved by my experience here at Stanford. I laud your efforts in continuing your work to maintain Stanford as one of the top educational institutions in the country.

Albert E. Cota
Senior, English

Dear Mr. Cota:

It was a genuine pleasure to receive your very kind letter of January 11th. It made my day!

I should hasten to let you know that the Board of Trustees is the body which awarded the aid you received because it came from the unrestricted funds donated to the University rather than funds designated specifically for financial aid. These unrestricted funds are used in part for financial aid despite the pressing need for them elsewhere because of the University's unswerving commitment to admissions without regard to financial need. The board fully supports this use of unrestricted funds.

That does not change the intent of your letter, I hope; it certainly does not alter the warmth or appreciation in my response. You've very much brightened our year! Thank you for taking the time to write.

William R. Kimball
President, Board of Trustees

Blood bank seeks donors at Law School Friday, Feb. 4

The Stanford University Blood Bank will accept donations from 10 a.m. to 4 p.m. Friday, Feb. 4, in the Law School's student lounge and Room 172.

Faculty and staff are urged to give blood and, whenever possible, to announce the drive to students and colleagues.

Call 497-7831 to schedule an appointment or simply drop in during the above hours at the Law School.

Supton: Feminist studies as teaching

Editor, *Campus Report*:

Dean Norm Wessells' letter about the tenure process discusses the way university service is counted in tenure decisions. Although it is understandable that the dean could not discuss details of his office's recent denial of tenure to Prof. Estelle Freedman, it would be important to know whether Prof. Freedman's work on the Feminist Studies Program is seen as "service" or "teaching" in evaluating her for tenure. It can be argued that development of curriculum and design of courses is part of a faculty member's teaching responsibilities.

Prof. Freedman is a primary architect of the Feminist Studies Program. She influenced significantly the curriculum for the major and the content of courses within the major. She has worked zealously to develop a core curriculum that is academically rigorous and consistent with the ideals of feminist scholarship and research. Prof. Freedman's shaping influence is reflected not just in the courses that are part of the Feminist Studies curriculum, nor in the shape of the major, but in the standards of scholarship she sets for her students and colleagues.

Prof. Estelle Freedman's qualities of mind and dedication to feminist scholarship influenced the intellectual interests and scholarly pursuits of her colleagues on the faculty. Prof. Nan Keohane (now president of Wellesley College) and Diane Middlebrook (currently a fellow at the Bunting Institute at Radcliffe) were just beginning to do work in the field of feminist studies when they served with Prof. Freedman on the committee to design the new Feminist Studies Program. Both credit Prof. Freedman with influencing their own intellectual development and interest in feminist scholarship. With Prof. Shelly Rosaldo, Prof. Freedman served as a leader to and a teacher of other faculty members at Stanford as well as to students in this new area of interdisciplinary study.

I have been heartened in recent years to hear President Kennedy and Dean Wessells speak publicly in support of CROW, *Signs*, and the Feminist Studies Program. It has also been encouraging to hear renewed commitment to affirmative action goals, which Dean Wessells' letter on tenure states can come into play at crucial points in some tenure decisions. As a member of the Feminist Studies Committee, I hope that those responsible for reviewing the decision in Prof. Freedman's case view her work in developing the Feminist Studies Program as part of her excellent record of teaching, not merely as service to the University, and reverse a decision that makes some of us wonder whether the commitments to feminist scholarship and affirmative action can be affirmed when they count most.

Alice Supton
Assistant Dean of Student Affairs
for Residential Education

Music librarians: people of many skills, diverse talent

BY JULIA SOMMER

Stanford University Libraries employ some 97 librarians and 275 support staff who work to support the teaching and research that goes on at Stanford. Following is a report on one branch's staff.



Music Library staff, (l to r): Aurora Perez, Beth Rebman, Lynne Toribara, Erna Wilson, Diane Greeley, Mimi Tashiro, Anne Witherell, Gina Balestracci, Leroy Kromm.

'I'm interested in computers and libraries, as well as music, and a Master of Library Science looked like it might allow me to use all my skills.
—Lynne Toribara

Music librarians have to be two people—musicians and librarians.

One of 10 branch libraries on campus, the Music Library requires all its staff, both librarians and support staff, have a working knowledge of music performance and the scholarly aspects of music.

Music Librarian Jerry Persons, recently promoted to senior librarian, is a good case in point. Besides his Master of Library Sciences (MLS) degree from the University of Michigan, he has a B.S. in music education, an M.M. in performance, and substantial graduate work toward a Ph.D. in musicology.

"While a graduate assistant in Wichita State's Music Library, I discovered I enjoyed library work more than any other part of the music program," he explains. "You have to understand the academic music program in order to provide good library support."

The Music Library, located on the second floor of the Knoll, is one mile from Green Library, where Persons' supervisors work. "Some branch librarians feel isolated," he says, "but I enjoy the walk to Green and back. It gets me off my duff!"

Beth Rebman is head of the music cataloging unit located within the Music Library but reporting directly to the Cataloging Department in Green. She has worked in music cataloging since 1971, and before that was a reference librarian in Meyer Library. "I was chosen for that job primarily because of my music background," she recalls.

"The Music Library's catalog includes all music books and journals, regardless of their location on campus, and the only catalog for scores and sound recordings," explains Rebman. "Music catalogers are the only catalogers not located in Green because we have to refer constantly to material here in the Music Library. And the scores and recordings catalogs are the only catalogs on campus not also located in Green. We're unique in many ways."

Rebman has an MLS from Michigan. She also has a B.A. in music history, an M.A. in music from Stanford, and studied organ and harpsichord for one year in Germany.

Baroque dance and music have become Rebman's specialty, and she has taught the weekly dance lab for Music 269 (Baroque Performance Practices) since 1978.

Mimi Tashiro recently left the music cataloging unit to become assistant music librarian. She supervises all Music Library support staff. Tashiro, too, has an MLS from Michigan. She also has a B.A. in music and an M.A. in musicology.

"Michigan is one of the very few library schools in the country that offers courses specifically in music librarianship," she explains. "I was doubtful about pursuing a Ph.D. in musicology, and music librarianship provided a nice mixture of what I'm interested in, plus it gives me the academic environment I enjoy."

Lynne Toribara is both half-time music copy cataloger and Stanford graduate music student. She is writing her Ph.D. dissertation on late Baroque violin ornamentations, but last year took a leave to get her MLS at UC-Berkeley.

"I'm interested in computers and libraries, as well as music, and an MLS looked like it might allow me to use all my skills," she says. "Berkeley is one of the few library schools where you can specialize in computer applications."

Toribara has applied to Stanford Libraries for a grant to catalog Center for Computer Research in Music and Acoustics (CCRMA) material and add it to the Research Libraries Group data base. She is already cataloging for CCRMA on a volunteer basis.

"Everyone at the Music Library is very independent," she notes. "Most of us have been associated with the Music Department for many years. Extensive knowledge of the field, familiarity with its research tools, and experience with library procedures make for a much more efficient flow of library materials." Some graduate students can't tear themselves away from the Music Library even after they receive their degrees.

Anne Witherell, part-time cataloger, received her Ph.D. in 1980; her dissertation was on 18th-century dance.

"Actually, I'm a freelance trombonist," she explains, "but I love working in the Music Library and it pays the rent. All musicians need 'day work' to pay the bills."

Witherell has been working in the Music Library for 10 years. Before that she worked in the library at the Eastman School of Music, where she received her B.M. in trombone.

"My teachers at Eastman told me I would never be able to make a living as a trombonist because I was a woman, so I didn't try. (How times have changed!) But after receiving my Ph.D., I got so many good trombone jobs that I gave up looking for a university teaching position! I sub for the Oakland and San Jose symphonies, and play regularly with West Bay Opera, Scholar Opera, Schola Cantorum, and many other groups.

Witherell also teaches trombone at UC-Santa Cruz, Bethany Bible College, and privately.

"I enjoy working with the computer in the library," she says. "Stanford was a pioneer in using RLIN, so we suffered more than others. UC-Berkeley's Music Library will soon begin using RLIN, and their staff are coming to us now for training and 'empathy' sessions."

Erna Wilson has worked in music cataloging for 16 years. Her studies at the Academy of Music in Vienna were interrupted by Hitler, and she was forced to flee to the U.S. alone at age 18.

"I didn't continue my musical studies in this country, but I've always been a keen appreciator," she says. "I go to many concerts, the opera and especially voice recitals. Romantic music is my specialty.

"One has to know music in order to catalog it," Wilson says. "It is a very specialized field. This is a very demanding but rewarding job. You have to love music, otherwise you wouldn't be in the field. My languages help too, of course."

Kent Underwood handles acquisition of records and microforms. He is also completing his Ph.D. dissertation on 15th- and 16th-century lute music and performing. "It's good to have a part-time job so closely related to your field of study," he points out.

Underwood works with the RLIN system and reports: "It's working pretty well now. There were big problems at first because the libraries wanted the system to run before it could walk."

Elaine Moise also combines Ph.D. research and part-time work in the Music Library. She handles scores search, acquisition, and reference. Her dissertation is on 17th-century Italian vocal music.

Anne Hesterman is an undergraduate music major stopping out for the year. She started working weekends at the Music Library while a junior at Gunn High School in Palo Alto.

"I enjoy library work. . . it's a useful skill to have, and working here is helping me make decisions," she says. "I'm exposed to people who are using their music in many different and exciting ways." Hesterman orders, receives, and searches serials. She is also on Tresidder's graphic art staff,

continued on next page

Does Facilities and Services listen to customers? Surveys will tell them

More students believe various aspects of the food provided by the University Food Service to be good rather than poor, but most believe them to be fair according to a recent survey.

The survey is the first in a project designed to measure the responsiveness to their customers of the various diversions of the University's Facilities and Services organization.

"The program is an outgrowth of the recently completed Organization and Management Study of the University," according to Associate Vice-President Jason Mavis.

In addition to Housing and Food Service, the responsiveness of the Facilities Project Management, Procurement, Operations and Maintenance and Word Graphics Divisions of Facilities and Services will also be measured.

Jack Albrecht, assistant director of facilities and services, is project manager, and George P. Barbour, Jr., of Public Management Consulting Associates of Palo Alto, is providing consulting services.

"We may conduct as many as 11 different surveys because of the diversity of services provided and customers served," said Albrecht.

Surveys to measure the responsiveness of the Housing Department of Housing and Food Services, Purchasing and Contracts, Stores, Commissary and Facilities Project Management will be released soon, with surveys of Operations and Maintenance and the various parts of Word Graphics following this spring.

The surveys will be taken at least annually, and in some cases, more frequently. They will provide information to the management of these operations, and serve as a resource for evaluating changes and making improvements in the ways in which Facilities and Services responds to the needs of the University.

The Food Service survey was conducted on December 2. About three-fourths of the students attending the evening meal in all locations served by the University Food Service responded to the questionnaire. In addition to 39 questions requesting evaluation of Food Service policy and response issues, demographic questions in class, meal plan and sex were also asked. The questionnaires were kept separate by location. Comments were solicited, and about one-third of the 2,092 questionnaires contained comments.

According to Ed Scoles, director of housing and food service, and Maxine Anderson, manager of University Food Service, both broad and specific insights into the provision of food services have been gained as a result of the survey. Many changes that could be made immediately have already occurred, and other, more far reaching recommendations are being studied for possible implementation at a later date.

"Although all recommendations cannot be implemented in their entirety because of constrained resources," Mavis said, "the data received will give guidance to our managers on the allocation of those resources that are available. We anticipate that this will be an outcome of all the surveys yet to be taken."

Health and safety report

Accidents and Injuries Occurring Jan. 10-22

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	2	(0, 0)
Non-impact: sharp object	5	(0, 0, 0, 0, 0)
Non-impact: pinched, squeezed, crushed	3	(0, 0, 4)
Foreign body (i.e., in eye)	2	(0, 0)
Lifting improperly	4	(0, 0, 3, 0)

The way it was....

David Starr Jordan vs the roadhouses: those were the good old days

75 YEARS AGO (1908)

The Board of Trustees secured a decree from the Superior Court of Santa Clara County authorizing the Board to withdraw $15 million of the University endowment from the eastern railroad securities in which it was invested and to reinvest the same in San Francisco and Bay region realty.

* * * *

In an attempt to abate what he termed "the greatest single influence for evil about Stanford University," President Jordan appealed to the Board of Supervisors of San Mateo County to refuse to renew the liquor licenses of Charles Veyer of Menlo Park and of Walter Jellich, who conducted the "Wunder" roadhouse on the Los Trancos road. The Supervisors decided that the charges were too general and declined to revoke the licenses.

* * * *

President K. L. Fenton of the Senior Class honored F. R. Lanagan, captain of the varsity track team, and Miss E. N. Hill, captain of the senior women's basketball team, by appointing them to the flower committee, to decorate the Stanford tomb each Sunday. The custom was started by the Class of 1905 in March of that year, shortly after Mrs. Stanford's death.

50 YEARS AGO (1933)

The Student Emergency Employment Fund Committee, appointed by Acting-President Swain, began a strenuous program of money- and job-hunting to alleviate the emergency wants of needy students. A flood of students were seeking loans of $14 with which to pay the fees not covered by their tuition notes and many were out of work and hungry.

* * * *

The Board of Athletic Control cut salaries by 10 percent for all members of the coaching staffs, grounds workers, and office employees to avoid a deficit caused by declining football receipts.

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The Bawlout for winter quarter, the directory of students and faculty, revealed that there were 3.6 students for every faculty member. Of the 3,043 students registered, 2,331 were from California, 634 from other states, and 79 from foreign countries. Mary, Dorothy, and Elizabeth were the most popular names of the girls. Robert, John, and William led for men.

25 YEARS AGO (1958)

A faculty committee selected 63 students from a total of 197 applicants to attend the first semester of a Stanford campus abroad, Stanford in Germany, in Beutelsbach (near Stuttgart), on the basis of grades, class distribution and linguistic skills.

* * * *

Planning for a married student apartment program began. Married students who flocked to Stanford and other universities following World War II were recognized as a permanent part of the student population. A survey showed that 1,532, nearly one-fifth, of Stanford's students were married. Their children number 1,579. Stanford had had since its inception the goal of housing as large a proportion of its student body as possible.

* * * *

The Sixth Annual Military Ball, presented by all three Stanford ROTC units, at the Palace-Sheraton Hotel was attended by 1,100 persons. The cadets and midshipmen were in uniform for the occasion. The coed Queen and her escort dined at the Fort Scott Officers' Club at the San Francisco Presidio before the dance.

Compiled by Catherine Peck
The Stanford Historical Society

Music Librarians...

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and is redecorating Tresidder's cafeteria.

Hesterman and Moise share Kathy Bain's full-time job while Bain is on maternity leave. Bain received a B.M. in violin and an M.M. in music education, then taught music in South Africa for one year. She came to work in the Music Library five years ago when she couldn't find a job teaching strings in the local schools.

Gina Balestracci, in charge of circulation, is a frequent performer in Music Department concerts, along with her graduate student husband, gambist Roland Hutchinson.

"My father started me in music when I was quite young. I began playing the organ in grade school and picked up tuba and percussion in high school," she recalls.

Balestracci received a B.M. in music history and literature adding recorders and bass viol to her repertoire. She worked in libraries during high school, college, and at MIT for three years after graduation before moving to Stanford.

"Getting this job at the Music Library was a grand stroke of luck," she says. "It's the perfect job for me." Eventually Balestracci wants to get a Ph.D. in musicology. In the meantime, besides her full-time job and concertizing, she has become proficient on the shawm and harpsichord.

Diane Greeley is Gina's assistant. A flutist, she recently graduated from the University of Santa Clara with an emphasis on music.

Leroy Kromm is a half-time cataloger of sound recordings, but perhaps better known as a fine baritone soloist and music director at the First United Methodist Church in Palo Alto. He also teaches voice at the University of Santa Clara.

Kromm received a B.A. and M.A. in voice and a B.S. in music education from the University of Illinois at Urbana. He worked in the Music Library at Urbana for four years, doing exactly what he's doing now.

"I enjoy the steadiness and security of this job," says Kromm, "And I don't have to use my voice too much!"

The Music Library is open to all Stanford identification card-holders. Records may not be checked out, but listening facilities are provided. To find out more about the Music Library, call 497-2463.

The Music Library's sister institution, the Archive of Recorded Sound, is located on the ground floor of the Knoll.

Barbara Sawka has been archivist there since 1977. Before that she worked at Yale's Collection of Historical Sound Recordings, one of the best in the country.

"Since the Archive contains spoken word and historical recordings as well as music, my degree in French, combined with music and other humanities courses in college, provide a good background for my work with users from many disciplines," Sawka notes. "And I've played the flute since age 10."

Her assistant, Aurora Perez, came to the Bay Area from Texas expressly to take advantage of the active music scene here.

In Texas, Perez performed Latin music for 10 years, singing and playing the guitar. Now she plays with "Blue Moon," a Palo Alto-based rhythm and blues band, and writes blues and jazz songs of her own.

"I've wanted to work in the Archive ever since I came to Stanford," says Perez. "It's an enlightening place for a musician, and I enjoy learning about the history of recording."

We must tax consumption, not income, urges Michael Boskin

During this decade, Congress should continue moving toward taxes on consumption, rather than income, Stanford economist Michael Boskin said Thursday, Jan. 20, in Washington, D.C.

Faced with a "frightening" slowdown in long-term growth, he said, "we need to change our society from one that borrows in order to consume to one which saves in order to promote its future well-being."

Congress should integrate the corporate and personal tax, remove all saving or reinvestment from the tax base, and greatly simplify the tax code and business decisions, he declared.

"All saving and investment—whether in plant and equipment, in human beings, or in quasi-public goods provided through charitable contributions—(should) be deductible from a comprehensive measure of income," he said. "The remaining direct consumption would be the proper tax base."

Personal exemptions would reflect a basic level of consumption under such a plan.

"We have been gradually moving toward a hybrid of an income and expenditure tax in our personal tax system for many years," Boskin noted. Liberalized provisions for Individual Retirement Accounts (IRA's) permit tax savings until they are used for consumption, for example.

How to increase savings

Integrating the personal and corporate income tax would eliminate double taxation of income for corporate sources and double taxation of other kinds of personal savings, he noted. It would be much simpler to administer than a value-added or national sales tax.

While "by no means a panacea," a consumption tax system would probably increase overall savings and investment. It should be supplemented with sensible spending policies, moves to control the deficit, and increased government investment in research, Boskin said.

Emphasizing the need to get the U.S. back toward its traditional long-term growth rate of two percent annually, he noted that even small differences in growth rates can "drastically alter" a society in relatively short periods.

"The United Kingdom, growing at about one percentage point less than did the U.S., France and Germany managed to transform itself from the wealthiest society on earth toward the end of the 19th Century to a relatively poor member of the Common Market today."

Steering committee chairman of Stanford's Center for Economic Policy Research, Boskin testified before the Senate Finance Subcommittee on Savings, Pensions, and Investment Policy and also addressed the American Council for Capital Formation. His comments came one day after public disclosure of the sharpest drop in national production since 1946.

Abysmal economic growth

America's recent economic growth has been "simply abysmal," Boskin said. The average annual increase in labor productivity in the private business sector, between cyclical peaks, has fallen from 3.6 percent in 1948-53 to 0.6 percent in 1973-79.

Once the nation comes out of the recession, the net national saving rate needs to be increased by at least 50 percent, he said.

"Our problem is a general lack of capital formation and technological innovation—not low rates of capital formation in specific industries," he said. The share of gross national product devoted to net productive investment has fallen from 4.1 percent in 1965-69 to 2.2 percent in 1975-79.

Research and development expenditures as a share of GNP have fallen from 2.9 percent in 1965 to 2.2 percent in 1978.

"We have not been adding enough capital to our capital stock," Boskin said. "We have not been generating enough new technology and embedding it into our capital stock and our labor force."

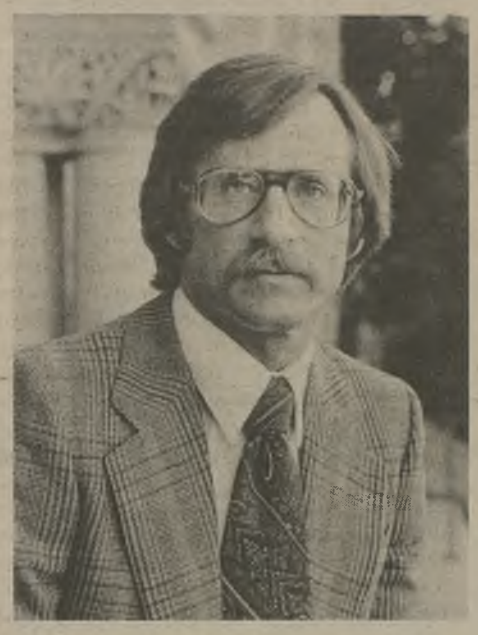
Impending fiscal deficits

Boskin's own studies suggest that the net savings rate in the U.S. is about seven percent. But the best long-term rate for society may be twice that level.

Heavy taxation of capital income, government deficits, and social insurance programs all contribute to the current low savings rate.

"There is probably no greater contributor to our sluggish investment and innovation, our overvalued dollar, and our lack of competitiveness in many overseas markets, than our enormous impending fiscal deficits," he said.

Achieving long-term balance between government revenues and expenditures is needed to substantially reduce real interest rates, decrease the amount of foreign capital pouring into the U.S., and help restore a "sensible value" to the dollar, he added.



Michael Boskin

Increased saving is essential to fuel long-term technological change and economic growth. As research and development expenditures increase, the rate of new product innovation is likely to rise.

A substantial amount of "learning-by-doing" follows, Boskin said. "As new investment occurs, new techniques of production become apparent which would not otherwise have been discovered."

The rate of investment and technological change may increase even further if it is difficult or impossible to "embed new technology in old capital," he added.

"General knowledge produced in basic research may be commercially exploitable in many areas," but government investment in research and development is needed to realize its full potential value to society, he said. It is "disheartening" that government investment has been "falling sharply" except in areas associated with the national defense buildup.

Tax laws not neutral

Present tax laws are not neutral in their impact on different kinds of investment, he noted. When taxes are taken into account, for example, it may be more profitable for an individual to buy a personal computer than to invest in knowledge and skills, since the direct cost of doing so is not generally depreciable. College tuition is not deductible or recoverable.

"If this trend continues for a span of time, we run the risk of misallocating our investment and underinvesting in the ...human capital...necessary to take advantage of the growth of new technologies."

Barton Bernstein's warning

Artificial heart may sidetrack more useful programs

So far, the artificial heart research program has been "riddled with unrealistic promises" about gains in scientific knowledge and the quality of life, says Stanford history Prof. Barton Bernstein.

"Conceived in the early 1960s amid widespread euphoria, and promoted by leading heart surgeons and biotechnicians, the federal program was supposed to cost $40 million and develop a fully implantable heart within five years," he notes.

"Now the program is more than a decade behind schedule and the total cost has soared 500 percent.

"Even the most optimistic proponents do not think there will be a fully implantable device until the end of the 1980s, at the earliest. Some experts close to the program think that goal will not be achieved for at least a generation."

Bernstein questions whether the U.S. can afford the artificial heart program, particularly if it results in the continuing neglect of heart disease prevention and other more effective programs, such as prenatal care and nutrition.

"It has been estimated that the device, the operation and the hospital care (for an artificial heart) would cost $100,000 per recipient in the first year after implantation," he declares.

"With projections of the number of recipients ranging from 16,000 to 66,000 each year, the total annual cost would run between $1.6 and $6.6 billion.

"If the artificial heart is perfected and the government is unwilling to pay for the operations of all who need it, the device



Barton Bernstein

will be available only to the wealthy, who already receive better care than the poor do. . . .

"It was a desire to avoid this unfairness that impelled the federal government to fund all kidney dialysis treatments in the U.S. . . .

"There are serious doubts that the artificial heart will make the lives of heart patients significantly better if it should become widely available. Being tethered to air hoses may not be much better than being bedridden.

"The experience of dialysis patients is relevant here. They have a suicide rate that is eight times that of the general population. Many of them are depressed and unable to work. And the promise of a power system (for the artificial heart) remains just that—a promise."

So far $200 million has been spent developing the artificial heart. Budget requests have been routinely approved after hearings lasting two hours, on the average.

"With the artificial heart still in the experimental stage and a totally implantable device at least a decade away, now is the time for a probing public dialog about the costs—economic and social—of developing this device," says Bernstein.

"Admittedly, there is little glamour in preventive medicine. Sometimes its findings require us to reconsider the structure of our society and the injuries we quietly suffer in the name of economic necessity.

"That is why heroic medicine has often seemed more attractive. It does not prompt demands for social reform or for the elimination of hazards in the workplace, and it represents a triumph of skilled physicians and technology over illness and nature.

"But such triumphs can be costly and shortsighted."

Bernstein participates in a program on biomedical innovations, including the artificial heart, at the Stanford Medical School. His views are developed in the Jan. 22 issue of *The Nation* magazine.

Latest measure of status: how many semiconductor chips in your home?

continued from page 1

Support came from the Stanford Center for Information Technology, the Hewlett-Packard Company Foundation, and TRW Corporation.

In becoming aware of computers, deciding to buy, and actually getting their computers going, respondents relied more on friends, working colleagues, computer stores and other interpersonal channels than on mass media, the survey found.

Among media sources, hobby magazines were most often mentioned as affecting brand choice, with newspapers and popular magazines less influential. TV was mentioned only rarely.

So far, home computer buys have relied increasingly on interpersonal sources of information. But this decentralized pattern of diffusion may change.

"Brands, such as IBM and Atari, which have been prominently advertised in the mass media have a much higher salience than (computer) ownership alone would predict," the report notes. "Indeed, the growing consumer market for home computers and the entrance of large firms, including Japanese corporations, into the competition, bodes toward increased centralization."

Home computer owners knew an average of about five home computer owners before making their purchase. They reported talking to an average of about 13 other people in the previous month about their computers, showing it to an average of five others in the same period.

Home computer owners reported encouraging an average of eight other people to buy a home computer.

Nearly two-thirds of the owners reported encountering problems with their computer, yet more than two thirds indicated they were very satisfied with their machines. They took an average of about a month before feeling comfortable with their computer.

Home computers may be rapidly diffused in the future because of the rising number of information sources and channels of influence, the increased number of brands known, interpersonal influence, and a decline in the time needed to adopt this innovation, the report said.

But home computer diffusion may be taking place within relatively wealthy, upper income families.

The most common uses of home computers were entertainment and word processing, each mentioned by more than half the owners. More than 30 percent reported some usage for business management, database access, and home budgeting.

In most households, the computer was used between five and 20 hours per week, with average use topping 17 hours a week. One fourth of the families reported using computers more than 25 hours per week.

Computer use increases

More than half the respondents reported an increase in home computer use over time, while 14 percent reported a decrease in use. Entertainment dominated children's computer use almost to the exclusion of other uses.

More than two-thirds of the computer owners said they saved time, while one third found computers saved money.

The home computer is generally seen to have a relative advantage over traditional alternatives both in home recreation and personal or work-related financial activity.

"Though the computer is used in the home, more than a third of the advantages mentioned. . .were related to work or business," the report observed. "Many of the more expert adopters, however, saw the limitations of the home computer, in comparison to larger computers, as important negative considerations."

Prior to purchase, price was the biggest barrier to home computer purchase, despite an average annual income of $35,000 among respondents. Next to cost, anticipated difficulties in learning to use computers was the biggest barrier to purchase.

In general, the mass media appear to have a greater role earlier in the innovation decision process, while friends become the most important source of knowledge at the decision stage and in the choice of brand.

Competition from TV

When it comes to home entertainment, "the largest obstacle to the home computer is the present saturation of the U.S. market with tried and proven home entertainment fare," the report said.

"Passive enjoyment of dramatic, humor and music programming on TV or radio, records or videodiscs, videotape or home movies, may have more appeal than the interactive requirements of computer games. Their interactive element seems to provide the greatest attraction for youth. The explosion of the arcade video game market provides striking evidence of this."

While computer prices now have become competitive with other home electronics, there may be some doubt over the availability of software to provide sustained satisfaction from computer games.

"Perhaps the best single measure of status in today's information society is the number of semiconductor chips per household, perhaps in a watch or radio," the report commented.

"The average American home probably has from eight to ten chips and a very modern one probably has 15 to 18. This index of information-power is much lower in the developing countries of Latin America, where there may only be one or two chips per household."

Copies of the report may be ordered from the Institute for Communication Research, Stanford University, Stanford, Ca. 94305.

U.S. should subsidize grad education—Rosenzweig

continued from page 1

The government should provide "fully subsidized, merit based" support to the most exceptional students in all academic disciplines, he said. These should fully support living expenses and "reflect a realistic recognition of competing market forces." He cited proposed fellowships of $12,000 each in the Defense Department budget for fiscal 1983 as "exemplary."

Full funding of 450 portable merit fellowships, already authorized in Title IX of the Higher Education Act of 1980, is "an essential first step" which would symbolize "the inherent worth of pursuit of knowledge in all disciplines," he added.

Modest programs of institutional fellowships, awarded on the basis of merit by the National Science Foundation and other agencies, would help maintain strong academic departments, he added. To assure merit, some variant of the national research service awards program might be used; these incorporate peer review by a national panel.

Graduate student research assistantships, included in peer-reviewed faculty research projects, are "one of the most effective means for supporting research training in the sciences and engineering," he added.

The NSF and National Institutes of Health have strongly supported the use of graduate students in this fashion.

But "as costs have risen rapidly some federal program officials and some faculty are emphasizing short-term research productivity by employing postdoctoral research staff at the expense of younger doctoral candidates," he observed. While understandable, this trend "will have a serious negative impact on the number of doctorate trained personnel" if it continues.

Funds to support graduate students under the college work-study program should be "substantially increased," he added. Teaching assistantships partially funded through work-study can help both studies and "hard-pressed teaching budgets of the university."

As graduate scholarship and fellowship programs have declined, guaranteed student loans have begun to provide essential support. But the size of loans accrued by many students produce "enormous financial burdens that hamper them for years" after graduation.

The higher interest rates proposed in the new Auxiliary Loans to Assist Students (ALAS) program would aggravate this problem.

Federal and university policy makers should consider ways of reducing the debt burden or at least adjusting payment schedules according to ability to pay. Substantial expansion of work-study programs might enable graduate students to reduce their dependence on loans.

Federal rules concerning financial independence of graduate students from their parents now make it "exceedingly difficult" to establish independence during the senior year in college. This means many prospective graduate students must look for a year of "stopgap employment" before continuing their academic work. The rules should be revised to permit graduate students to be considered independent when they enroll, providing they meet current criteria from that time forward.

To maintain a "critical margin of excellence" in graduate education, he concluded, "a substantially expanded, balanced set of merit fellowships awarded to the most talented students and the strongest academic department represents the most significant commitment to quality that the federal government can provide" in all academic disciplines.

Project grant support for graduate student research assistants would foster close student-faculty interaction "responsible for the uniquely vigorous and innovative nature of American science and engineering," he added.

"The guaranteed student loan program is essential because of the current breadth of its impact."

Current federally funded graduate fellowships total 9,168. The agencies, purpose, and total for each program are: Health and Human Services, national research service awards, 4,800; National Science Foundation, science and engineering, 1,477; Department of Education, graduate and professional opportunity program and public service, 1,200; U.S. information Agency, Fulbright-Hays grants for Americans studying abroad, 990; Department of Education, foreign language and area fellowships, 635; and Department of Defense, engineering, 66, a new program for 1983.

Soon to leave his current position as vice-president for public affairs at Stanford, Rosenzweig coauthored a recent AAU study on *Research Universities and Their Patrons*, a study of university-government-business relations. This emphasized the need for stable, long-term support of the nation's best students at the graduate level.

Emission standards won't impact auto industry

Proposed cuts in auto emission standards would have "minimal impact" on car prices, sales, and employment, according to Timothy F. Bresnahan, assistant professor of economics at Stanford.

"Assuming regulatory relief were coming on stream right now, the effect on employment would be 2,500 jobs—one third of one percent of those employed—out of a quarter million unemployed in the auto industry," he declares in a working paper circulated by the Center for Economic Policy Research at Stanford.

"Similarly, a one-third decline in real interest rates—to levels that would still be spectacularly high by historical standards—would have more than 10 times the impact of the proposed (emission standards) regulatory relief on the true cost of automobiles to the end user."

The effects of any change of emission standards for carbon monoxide and for oxides of nitrogen would come "too late to to help the current auto industry crisis," he adds.

In Congressional testimony, Ford projected a savings of $80 per car from loosened standards, Chrysler $125, Volkswagen of America $135, American Motors $200, and GM $165 to $360.

Overall, Bresnahan believes, a cost savings of $100 to $150 per car is probably the most reasonable estimate.

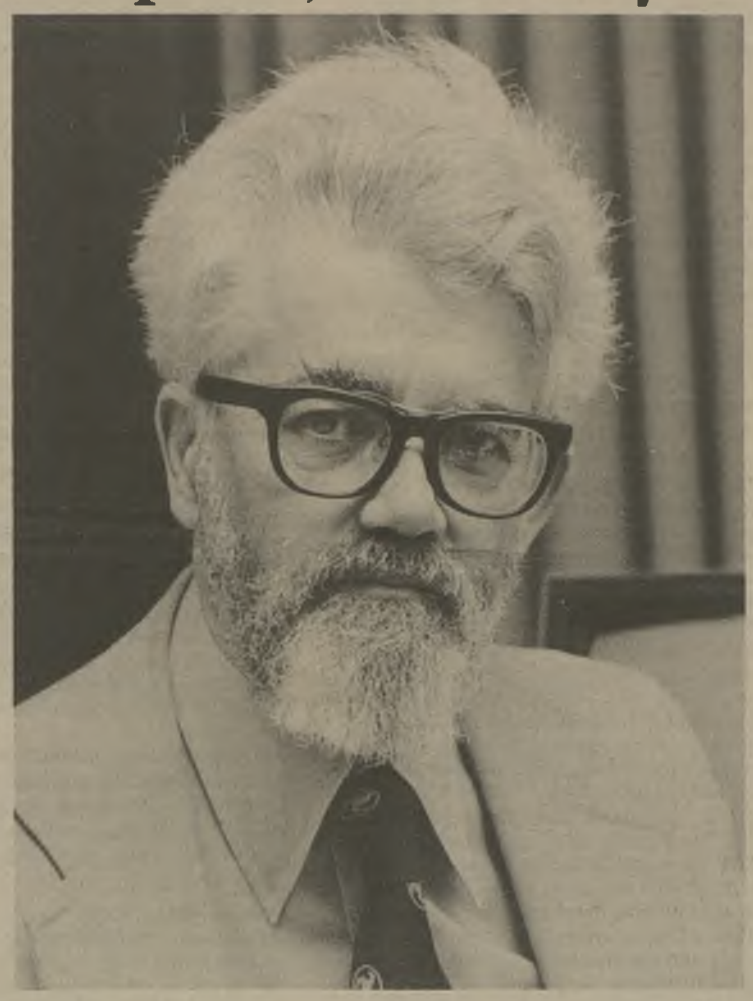
About 80 percent of this saving might be passed through to consumers—or roughly one to one and a half percent of the average retail price of $10,000 per car.

The lower price would have only a very small impact on sales, ranging from as little as one third of one percent to as much as two thirds of one percent.

Even under the most extreme set of assumptions—a two percent cost saving, all of which was passed through to consumers—rolling back emissions standards would yield less than 15,000 auto industry jobs.

Future shock a 'popular misconception,' McCarthy says

Technological change impact small now compared to period of 1890 to 1920



Leo McCarthy

Future shock is simply a popular misconception, says Prof. John McCarthy, Stanford computer scientist and pioneer in artificial intelligence.

"There's been a slowdown in technological change that affects everyday life," McCarthy told about 150 persons attending a Grads in Common panel discussion on "Coping with the Information Explosion."

Between 1890 and 1920, McCarthy suggested, people experienced much more technological change in their daily lives. Electricity, telephones, automobiles, airplanes and radio all hit the popular market.

In recent decades, only television has had a "really basic" impact, he said. New methods of birth control were important, but earlier means existed for the same purpose.

Computers will enable people to "get rid of a lot of paper," could greatly expand the free press, and have interesting applications in holding popular representatives more accountable for keeping their promises, he suggested.

There's been a "large drop" in the caliber of public debate between the Lincoln-Douglas and the Ford-Carter exchanges, McCarthy said. Where long questions once received thoughtful answers, now questions simply trigger a "key word" search of material canned from previous speeches.

"There's a lot of hit-and-run journalism," he added. "Things are said knowing there will be no answer."

Computers might change that. "Imagine every person had the right to vote on every issue, but could delegate that right to others" to the point where those with half a million proxies or more might serve in Congress, he suggested. Individuals could still retain the right to withdraw their proxy, of course.

No computer revolution

"There's been a lot of talk about the Computer Revolution since 1950 but it hasn't happened—yet," McCarthy said. By the turn of the century, however, there could be another "wave of inventions" comparable to those of the late 1900s.

Computers can make it much easier and cheaper to publish information, especially if means can be devised for users to pay authors, he observed.

The physical characteristics of microcomputers are far less important than the public information systems to which they are connected, he added.

Instead of making government documents available in Washington, D.C., reading rooms—where wealthy firms can hunt for competitors secrets—the information should be stored and made available on computer systems.

Stanford itself might well spend the millions now planned for an improved computer network, called SUNet, to get more library information in computer-readable form, he added.

McCarthy once suggested to Ed David, President Nixon's science adviser, that the U.S. use $2.5 billion in rupees blocked in India to have unemployed people there type the world's great literature into computers.

Paul Kaufman, special assistant to the director of Stanford's Center for Information Technology, noted that the culture of the information age has been "manufactured."

"We live amid unparalleled self-consciousness of this information revolution." he added. "You'll have to ask historians whether workers in England several hundred years ago went around saying to each other: 'By God, we're in the Industrial Revolution!

" 'How does it feel to you, George?

" 'Well, I don't know, Alph. . . .

Information age dawns

"At the official media dawn of the information age, a commercial suggested that 'If your boss or your family asked what you did all day, tell them that you "managed information." '

"Many executives and bureaucrats must have been relieved. For years they felt secretly guilty—being completely unable to explain to others, not to speak of themselves, what they did at the office.

" 'By God, that's right,' they must have said. 'That's what I really do! I manage information.'

"TV commercials, which had for so long featured macho portraits of sweaty loggers and thirsty fishermen, now portrayed a new breed of Americans—the data wranglers. . . .

"More than half the work force is engaged in the manipulation of signs and symbols. But leaving the brutal toils of the fields, mills, and factories has not made life easier for us. And it is only now that the casualties are staggering in—those left shell shocked by the information explosion, debilitated, simply unable to log on any more. . . .

"There is a specter haunting the information economy: the prospect of class divisions between the information rich and the information poor; the prospect that the business of mining our intellectual gold, creating as it is now called 'intellectual property' will have unforeseen consequences for the creating and diffusion of our cultural values."

Divergent ways of thinking

In the universities there are widely divergent ways of thinking about information. Engineers and scientists put a high value on measuring things, bit by bit. "Something is there or it is not," as Kaufman put it. Data is correctly viewed as an entity apart from its users.

A contrasting vision comes from therapists, who are apt to view information as a process fusing the observer and the observed.

While it has become easier to generate, transmit and transform bits of information, this does not necessarily make individuals or society more effective.

"What is needed is a clearer view of the values, of intentions—the subjective side of the information process. . . .

"Many organizations are beginning to see that productivity in the information age is akin to creativity. So they are looking more at what can be done to understand the dynamics of interpretation and intuitive judgment," Kaufman said.

"Perhaps it is our fate in Western technological society, with our traditional faith in objectivity, to have begun first by mastering the ability to produce data, in its broadest sense.

"Having done that, we are faced with understanding how data is turned into information, through interaction with someone to whom the data means something.

"Finally, looking to the source of that meaning, we will begin to look at values and knowledge."

Information technology can help, "not only by pointing us to the new and timely, but also pointing us to what is old and timeless: the unrevealed source of our individual creativity."

Giuliana Lavendel, manager of the Technical Information Center for Xerox Palo Alto Research Center, agreed that many managers are "shell shocked" by the sheer mass of information. Some rely on "serendipity, friends, television and what their wives say at night," she observed. But many also can obtain personally useful information through prompt access to more than 200 data banks nationally.

Trained as a classicist, she "lives among a lot of Renaissance people" who enjoy literature and music as well as computers and high technology.

Disagreeing with McCarthy, she said "I can't imagine anything having a deeper influence on daily life" than local area computer networks.

These help "people make friends with others whom they may never see, provide access to important people who may otherwise be unreachable," she said. Social life, views of knowledge, and ways of thinking can be deeply affected.

Associate Prof. Barbara Gelpi of the Stanford English Department, editor of *Signs: Journal of Women in Culture and Society*, urged the graduate students in her audience to pool resources across disciplines.

While it is important to have a scholarly base, "unless there is interdisciplinary work, a specialized field can become sterile and even wrong," she said.

"Poets don't just read other poets." In fact, poet Sylvia Plath found that reading others' poetry was bad for her own writing. Poetry should be read and understood in the context of a particular time, society and culture.

While most people in universities do not believe in the possibility of broadly talented Renaissance men and women, they still judge achievement in individualistic terms.

Many minds may go into the writing of a book, but "the name on the front is still the P.I. (principal investigator,)" she observed. Universities still need to find better ways of judging and crediting work done by groups of people.

Grads in Common

Sponsored by the Center for Teaching and Learning and the Graduate Student Association, Grads in Common is a new organization which seeks to bring students together from a wide variety of disciplines.

It will sponsor a panel discussion on "Specialization: Where Did It Come From and What's It Doing to Our Lives?" at 4:15 p.m. Thursday, Jan. 27, in the Tresidder Lounge.

Participants will include Prof. Sidney Drell, deputy director of the Stanford Linear Accelerator Center; Prof. Anne Mellor, English, chair of feminist studies; Prof. Ian Watt, English, director of the Stanford Humanities Center; and Prof. Malcolm McWhorter, electrical engineering, director of ethics of development in a global environment (EDGE).

Grads in Common plans informal coffee hours from 3:30 to 5 p.m. Thursdays, Feb. 3, 10, and 17, in the Alumni Room of the Old Union Clubhouse, across the courtyard from the Nitery.

Further information about the organization may be obtained from 497-1326. —**Bob Beyers**

Kennedy: Schools have become magnet for public discontent

Following is the major portion of a talk on "The Schools and Their Future: Who Will Lead?" by President Donald Kennedy, given to the California School Superintendents Association, Jan. 20:

Public confidence in the venture for which you are responsible is a necessary (though not a sufficient) condition for successful leadership of the schools themselves.

And all agree, I think, that public confidence in education is at disastrously low ebb. Our fellow citizens are unhappy about two decades of decline in standardized test scores; they're frightened by antisocial behavior in the schools and the resulting disciplinary problems; they are puzzled by the stubborn persistence of inequities in access to public education of quality; and they're chagrined or outraged by functional illiteracy and the practices that appear to encourage it—curricula that neglect critical basic skills and academic management that permits students to leave the system with less-than-minimal competence.

One hears these complaints everywhere. But I think we will be mistaken if we focus on the specifics, and fail to recognize that underlying them is a kind of lesion in faith. I want to spend a few minutes trying to examine the etiology of that lesion, in order to explain why there is such a mismatch between our collective expestations of the educational process and what it is prepared to deliver.

We are, to begin with, a society that sets great store by institutional solutions to problems, especially if they are rather technical, and most especially if they are public. After all, we have grown our public sector at an extraordinary rate in this century. We have a record of having successfully attacked problems ranging from agricultural innovation to major episodes of unemployment and poverty with public sociotechnical experiments.

The zenith of our faith in such intervention may have been reached in the educational and social reforms of the late 1950s and 1960s. Our expectations in those days were pretty grand; we thought that we could solve the problems of access and improve quality at the same time; we thought we could revise all the science curricula in the high schools at once; we believed that massive interventions with the very young, if critically timed, could entirely abolish a cohort of the supposedly uneducable.

And we were developing a set of expectations about the schools that went far, far beyond their role in educating. We wanted them to do things that heretofore had been thought the tasks of parents, of churches, of neighborhoods, of aunts and uncles, quite probably even of the Boy Scouts and the Army.

In short, we made the schools a magnet for the overdrawn expectations of a society that looks to public institutions for too many solutions to too many different problems.

When the technological fixes didn't work, or didn't work as expected, there was substantial disillusionment. Nowhere was it more prominent than among the technicians themselves.

Social scientists, often the same ones who over-promised two decades ago, are now casting doubt upon the efficacy of *anything* that was done in the name of the Great Society. Having spawned a great array of reforms, the applied social scientists have now made a cottage industry out of making the case that they don't work. It would be an amusing illustration of academic make-work were it not providing so much ammunition for a neo-conservative political movement.

As a matter, of fact, the current assertions that Headstart, busing, and all those other programs don't accomplish anything at all are just as phony as the earlier claims that they would solve everything.

Bold experiments

We have made a number of bold experiments in public education in this country, and the record of their accomplishment and failure is going to be very difficult to sort out. I expect we will wind up rather less encouraged than we were in the beginning, and a whole lot happier than we are now. The fact remains, though, that today critics of these experiments are in the driver's seat, and most of our fellow citizens believe that we are now victims of some national foolishness.

That is one cause of the lesion. The second, I think, is a damaging and national withdrawal of public respect from public service. I've tried hard to explain this, and I can't.

It seems only yesterday that the very best young people I taught at Stanford were committing themselves to spend time in the Peace Corps, thinking about working in public health, and asking about the Foreign Service examinations. I'm happy to report that, on our campus at least, that spirit isn't dead; but I do have to confess that it's a lot less visible. And nationally the situation strikes me as very bad.

For nearly a decade of American life, scarcely a single good word about "government work" can be heard from the most highly-placed sources. Instead, the bureaucracy has become a scapegoat for everything that doesn't work in this society, and in two straight presidential campaigns the candidates have vied with one another in heaping scorn upon the apparatus they hoped soon to inherit. It is small wonder that people who work in the public sector are dispirited.

And teachers are in many ways the most visible "public servants"; what applies to the others in the way of public attitude applies to them.

What are the consequences of this lesion in faith? One of them, I suspect, is the appalling lack of favor teaching careers are now finding. I find it plausible, even likely, that the mistrust of public service and its extension to teaching are responsible for the low proportion of able college students who intend to make teaching a career. Two years ago, for example, students entering college who intended to enter the teaching profession had average SAT scores 65 points below the average for all high school seniors bound for college. This in itself, of course, tends to reinforce public mistrust of the schools, and the spiral deepens.

Punishing the school

Another consequence has been taking place at the polls. The defeat of school bond measures; the failure of special taxes; and the passage of statewide measures (like Proposition 13 here) that are generally damaging to public institutions, including the schools, are important outcomes of the loss of public faith. And then, the predictable deterioration of performance leads in turn to further criticism: by punishing the schools for not doing what we want, we make them worse. It is a strange system of discipline.

What can we do to begin to reverse this trend, and to restore the public's regard for public education? That is, clearly a collective responsibility—no group can do it alone. The Seven Springs Study entitled, "Restoring Confidence in Public Education," prepared by Fred and Grace Hechinger, puts it this way:

> "The decline of confidence in public education. . .unfortunately. . .is treated largely as if it were a side issue, subordinated to such central questions as the economy or national security—one to be dealt with by school boards, school superintendents, teachers and perhaps those citizens who, as parents, have a personal interest in the matter. We have long been convinced that this is a dangerously shortsighted view of the problem. The history of both public education and of the fortunes of a democratic society persuades us that the schools are not peripheral institutions. They are at the center of society."

I am convinced that the leaders of institutions of higher education can play a useful role in the task of restoration. At earlier times, university presidents (perhaps most memorably Conant of Harvard) were important national spokesmen for the values and importance of schools and schooling. More recently, they have been strangely silent on these matters, and I think that is unfortunate. Only if the best institutions care about schools—and, incidentally, about their own schools of education—will the public think that they are worth caring about. And surely nothing could be more clearly the business of America's academic leaders.

This view is certainly not mine alone. A number of universities and university presidents have recently undertaken strong initiatives with regard to secondary schools. The President of Yale, Mr. Giamatti, has extended an effort to involve Yale faculty with the New Haven schools, through the Yale/New Haven Teacher Institute, and has convened a conference next month to explore how schools and colleges can work together better in the future. The education commissioners of virtually all the states will attend. At Berkeley, Chancellor Heyman has made strong efforts to move that university's School of Education into active service with the public schools, including a major mathematics curriculum project revision. Harvard's president, Derek Bok, has actively joined the Carnegie study of the American high school, and he and I are planning a meeting of several university presidents in which we will explore alternative ways of supporting education.

At Stanford, our efforts have been heavily conditioned by the fact that we have a successful and prestigious School of Education, with a new and creative Dean. I've found myself surprised that despite these advantages, there was less collaboration than I thought desirable between members of that School's faculty and other faculty members at Stanford.

Indeed, it struck me as surprising that you could collect a large number of faculty members outside the School of Medicine who would claim a serious academic interest in health policy, and yet that only a few faculty members outside the School of Education would identify an equally serious interest in educational policy. A strange result, I thought, in view of the real parity between these two matters on our national agenda.

Accordingly, we conceived a major effort whereby we might accomplish several desirable things at once. First, we wanted to develop some strong interactions with neighboring school districts in order to ask some fundamental questions about how things are really working in the schools, and how they might be improved. We hoped we could learn some things that would be useful to these and other districts in the future.

Second, we wanted to chart in a more thoughtful way, the future of our own School of Education, by discovering how it can be more productively involved in the really central problems of the educational system. As byproducts, we hoped for two additional things: a deeper and more extensive involvement of the Stanford faculty outside the School of Education with the school, and with educational problems generally; and a strong public message that Stanford wa *sinstitutionally* interested in the schools and prepared to extend itself to help out.

Here is how we have organized Stanford and the Schools project, which is under the general direction of Dean Mike Atkin and me. There are six project groups.

One is on testing and teaching; it seeks to understand how tests and their content are linked to curricular objectives, how tests can be evaluated, and how they can be applied effectively in improvement.

The second is on curriculum—not what the descriptions and lesson plans say the curriculum is, but what is *really* is as teachers lay it out in the classroom. Indeed, one of the central objectives of this group is to find out how much disparity there is between what we say we're doing and what is really happening.

A third is on teacher education; it seeks to understand what the role of schools of education in universities like ours might be with regard to the preparation of teachers, how better collaboration might be fostered between institutions and practitioners, and how we get the results of research about teaching into practice.

A fourth looks at the design of secondary schools, and tries to understand how the major external forces acting to shape the high school may suggest new policies.

There is a project on personal responsibility. It seeks to examine which of the several extra-academic obligations of the public schools are pursued and which not, and how we might reassess the school's responsibility for these areas.

There is, finally, a project on education and technology, whose goals are adequately indicated by the title.

School district cooperation

For all project groups, we've recruited participation from the Stanford faculty outside the School of Education, although the effort is lead primarily from within it. We have the full cooperation of several school districts—Milpitas, Mountain View-Los Altos, San Francisco, San Jose, San Mateo.

We have attracted people like John Gardner, Fred Hechinger, Shirley Hufstedler, Robert Maynard, Albert Shanker, Paul Simon, and David Saxon to serve on a national advisory board. We have attracted strong foundation support for the work of the projects. I am, in short, very gratified by the success we've had—at least in the early going—in persuading people that the problem is a terribly important one, and that we have something to contribute to its solution.

I would be happy to describe this project in further detail, but I think enough is enough; I'll be glad if you ask me questions about it at the end. My point in this brief description is merely to indicate to you that we are serious about what we are doing, that we do not believe the problems can be solved by airy pronouncements from on high, and that we are prepared for a long course involving considerable cooperation. I think that is also the attitude of the other university presidents who have indicated their determination to work on the problem. What are some reasonable outcomes to hope for?

First, I think it will be helpful if we can succeed in reawakening the interest in our own faculties in what the schools are doing. One can argue that the post-Sputnik science curriculum reforms of the late 1950s and 1960s accomplished less than they might have, and indeed that they sometimes rode off in the wrong direction. They also managed some significant improvements, and they brought to secondary school science teaching a new enthusiasm and new pride. Much of that, I think, came from the new sense of connection many of them had to the colleges and to the research community.

Second, I hope we can encourage stronger commitments on the part of the private commercial sector in the future of the schools. Without that, it will be impossible to achieve the restoration of confidence in schools by the middle class in this country—the basic essential if they are to achieve what this society expects of them.

The alternative probably will not be the death of public education. But it almost certainly *will* be a retreat from the bold moves toward education for all that we made in the post war period, and a tacit admission that we are prepared to educate only the more fortunate of our young people, and to tolerate the perpetuation of a permanent underclass in

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Student entrepreneurs—lots of 'em—making big money at Stanford

continued from page 1

The Center for Entrepreneurship now is planning a second conference this April to foster ties between academia and industry.

Harvard and Dartmouth students recently have organized similar entrepreneurial groups.

"For the next 20 years, we're going to see a renaissance in smaller business ventures," Steven C. Brandt, senior lecturer in Stanford's Graduate School of Business said in a recent campus interview.

"I think there is a more serious interest today for students to take positions in less traditional businesses." Brandt is the author of a new book on *Entrepreneuring: The Ten Commandments for Building a Growth Company* ($12.95, 190 pp.).

Entrepreneurs who have started their own technical firms are featured in Electrical Engineering Seminar 205. Seminar leader Robert Melen, consulting professor of electrical engineering, says enrollment has doubled in the last four years to more than 150. "Students from outside the engineering realm have even been joining my class," Melen noted.

A Stanford entrepreneur himself, Melen founded Cromemco Computers, named after his campus dormitory, Crothers Memorial.

Stanford students and faculty have been heavily involved in entrepreneuring ventures, especially in engineering and computer science. Some examples:

Gekee Fiber Optics, a Palo Alto-based fiber optics company, was recently cofounded by Brett Kingstone, a recent graduate in economics, and George Hara, an MBA student who became a master's student in electrical engineering. Kingstone reports $1 million in sales for 1982 and predicts that this year's total will rocket to $5 million. Clients include Walt Disney's Epcot in Florida.

While Hara and his brother are the technical know-how behind the company's success, it is Kingstone who has aggressively marketed Hara's contribution to fiber optics technology.

Former undergraduate owner of a bedding firm on the Peninsula, he personally surveyed student entrepreneurs at several campuses across the country, but found Silicon Valley a more active than the rest.

In addition to cofounding Gekee Fiber Optics, Kingstone has written a book, *The Student Entrepreneur's Guide: How to Start and Run Your Own Part-Time Small Business* (Ten Speed Press, Berkeley, Calif., $5.95).

Kingstone has also started his own publishing company, Dupie Press, so that he could publish and market the work of former *Stanford Daily* cartoonist Gil Morales.

Earthquake Safety, a "hotline" designed to help homeowners actually get ready in advance for the Big One, was established last May by David Hedman, a Stanford undergraduate in engineering and economics. Since then, it has distributed 20,000 packets of basic earthquake and disaster preparedness information to homeowners, mainly in the Bay Area. Hedman also has organized student engineers and others to do individual home inspections (at $75 each) for 5,000 customers. Now he's working with officials from 20 different cities, organizing meetings with attendance as high as 1,000 homeowners, to show step-by-step how to reduce risks from a major quake. Recently covered for three days by a *National Geographic* TV crew, Hedman acquired a 1,000 square-foot warehouse, plans to open an office in Los Angeles later this spring, and projects company revenue at $750,000 this year.

Western Data Systems was founded by Dan Leonard, a Stanford graduate student in mechanical engineering. According to Leonard, Stanford is "really fertile for the widely contagious entrepreneurial spirit. You discuss optical memory one day, computer interfaces the next," he emphasized.

Juan Bardina, a graduate student in mechanical engineering, is president of Technomex, Inc., a company which manufactures a washing machine that cleans microprocessor chips for Silicon Valley firms. Its decontamination process cleans chips by injecting a chemical "soap" along with deionized water, then dries the chip with nitrogen. Because of the specific nature of his new company, Bardina claims that there is no competition yet. "Last year, my company made $1 million, and in 1983 we hope to make about $3 million.

Robert Whalen, also a Stanford graduate in mechanical engineering, has founded Ability Designs, Inc. Whalen had the idea to develop and market an inflatable bathing device for handicapped people. Working with Stanford's Technology Licensing Office, he has teamed up with the family of a Colorado quadraplegic to design the device. "The reward isn't money, but just doing something well," he said.

Joel Walls, a Ph.D. student in geophysics, is director and one of the principal founders of Core Analysis and Petrophysical Services, Inc. in Mountain View. "Our company started out as the result of a perceived demand on the part of oil companies for proprietary research on a confidential basis," he said.

Robert Horstmeyer, a recent Stanford graduate, has formed a Palo Alto company called Advanced Drilling, Inc. Horstmeyer has developed and marketed a land drill that can dig oil wells sideways or even uphill.

Called the Robot Drill (TM), it uses hydraulics to grip the sides of the hole it is digging. This enables the drill bit to go off in almost any direction. "The idea was that there's got to be a better way to drill holes in the ground rather than using an 80-year-old technology which is essentially brute force," said Harold C. Nissley, chairman of Advanced Drilling, Inc. Prototypes were made and tested on campus, and the University given shares in the firm.

Liberal arts students also are taking some clever ideas of their own to the marketplace. Some examples:

Amazing Events Unlimited

Stanford students Mark Breier, Jeff Heyman and Eddie Poplawski are helping companies and individuals throw the "perfect party." They've started a creative events company called Amazing Events Unlimited and will do "almost anything" to create the personality and pizzaz that people will remember. "The nature of the events are attention getting and to make people smile," says Breier.

At a posh Woodside party, Amazing Events supplied a "butler" who hotly pursued imaginary pests with a flyswatter and a "maid" who mixed drinks with her thumb. When they "argued" over the aesthetics of a "valuable" oil painting, she took it off the wall and smashed it over his head. The guests were horrified, but their hosts were happy.

"How to College"

Two freshman dorm buddies, Bill Jeakle and Eugene Reardon, decided to "do something big" one summer. Convincing their families and three of their friends to invest $15,000 in their new ideas they established their own publishing company and went on to print and distribute *How to College: A Humorous Guide to the Four Years* (208 pp., $4.95, P.O. Box 3710, Stanford, Calif. 94305).

They're quickly selling the initial 6,000 copies that were printed. "If we're successful on the grass roots level, then maybe we can attract a major distributor, said Reardon, an economics major at Stanford. Contributing mightily to the guide were writer Ed Wyatt and *Stanford Daily* cartoonist Phillip Chalk.

Gummy Bears

After capturing the hearts of hundreds of Stanford Sierra Campers and the minds of three entrepreneurial Stanford students, German-made Gummy Bears moved into Silicon Valley, threatening to upset the balance of trade and maybe the stomachs of overindulgent Americans.

The highly popular candies were cleverly sandwiched between the covers of a book, *Gummy Bear Goes to Camp* ($3.95, 44 pp.) published a year ago by Bob Moog, Anne Boreta, and Sue Cashel.

The manufacturer provided 5,000 free sample bags for the first edition, which was marketed through candy stores and other nontraditional outlets. The sales have now financed Moog through the first year of the Stanford Graduate School of Business.

Following their entrepreneurial instincts and keeping their wits about them, four young liberal arts graduates have produced a fast-selling record, "The MBAs Born to Run Things."

The quartet, whose only live performances were making the recording and meeting the media, go by the names Franklin Mint, Manny Hanover, T. Bill Raitt, and Holden Gaines.

They describe themselves as "the world's first happily pro-business rock and roll band" with a "neo-conservative" outlook.

The opening lyric in their first song, "The MBAs Theme" puts it this way:

We like to eat out, and drive fast cars,
We take our dates to expensive bars,
Proud of our country's business roots,
Just a four-piece band in three-piece suits

(Lyrics copyright 1982, Thrice Music Inc. used with permission).

Other songs, ranging from new wave rock to gospel and disco, include "Inside Information," "Jesus H. Chrysler," and "Take This Pink Slip and Beat It (You Don't Work Here Any More)," management's response to the popular "Take This Job and Shove It."

According to Holden Gaines, better known to his 1982 Stanford classmates as Steve Kessler, the idea started with a spoof review, "The Rise and Fall of a Rock Band, the MBAs" published in the *Stanford Chaparral*, the student humor magazine. This drew a seven-line mention on the front page of the *Wall Street Journal* (Aug. 27, 1981), with a response so strong that the writers decided to whip out some lyrics, pick up a band, and start selling pressings on their own. Hitting the market just before Christmas, they sold more than 1,000 copies from push carts in front of the Pacific Stock Exchange and on Wall Street. Copies may be ordered at $8.98 each from Box 1903 Grand Central Station, New York, N.Y. 10163.

"We just don't crack jokes unless we can ring every chuckle into our cash register, **Cornell Lantern** editor Joey Green notes in a new college humor review, *Hell Bent on Insanity*, coauthored with Bruce Handy, former editor of the *Stanford Chaparral*, published by Holt, Rinehart and Winston. Today's economy calls for "survival of the wittiest," Handy comments.

The Stanford Game

In a bull session at a Mountain View pizzeria, former Stanford undergraduates Heidi Roizen and Timothy Draper dreamed of transforming their alma mater into a board game.

Roizen and Draper, who now work for Tandem computers and Hewlett-Packard respectively, realized this dream in September 1981 when 2,500 board games were produced for $13,000. "Tim and I had originally expected to spend about $5,000," said Roizen, "but as we wandered through the process of

continued on page 21

Kennedy text...

continued from page 12

this society.

Last Sunday's *New York Times* contained an account of attendance in the New York City public schools; it asserted, on the basis of what appeared to be reliable figures, that one-third of the pupils in that system are chronic absentees. One can look at that circumstance in at least three ways. One can say, "Fine, the schools work better without them." Or one can say, "Well, given the correspondence of that number with the increased proportion of school-aged children enrolled in the past couple of decades, these are quite probably the children who, a generation ago, we simply weren't trying to educate." Or one can say, "That is unacceptable; I want to be part of a society which insists on solving that problem." I hope you agree that this last view is the one we must take.

Medical Center MEMO

To recapture humanism in medical education today. . .

Faculty and students explore challenges, deficiencies

Getting humanism back into medical education was the key concept that emerged at a Stanford University School of Medicine symposium Jan. 22.

The symposium, which discussed aspects of the general professional education of the physician, was spurred by the Association of American Medical Colleges' ongoing national study of medical education in the United States.

Three panels, made up of faculty and students, considered separate aspects of medical education including essential knowledge, fundamental skills, and personal qualities, values and attitudes of physicians.

What panelists concluded is that humanism begins to be eliminated starting with the "pre-med syndrome" before students even start medical school.

Almost 90 percent of pre-medical students major in science, said Dr. Robert Cutler, professor of neurology and associate dean of medical education. "Is that emphasis necessary?" he asked.

"Students know what they need to get into medical school and that dictates the way they become," said Dr. Lawrence Mathers, pediatrics intern at Stanford University Hospital. "Until the admissions standards are changed to consider other qualifications besides facts and numerical scores, nothing will change."

"Medical school requirements should not interfere with students' undergraduate education," added Dr. Saul Rosenberg, professor of medicine. "Their education needs to be broad and diverse, including all areas and not just science. They do need basic scientific facts to be able to proceed with their medical education, but they don't necessarily need A's in those courses, nor do they need to get involved in other activities such as research or hospital work.

"Students coming into medical school know lots of facts," continued Rosenberg, who took a year-long sabbatical to research the problems of pre-medical students competing to get into medical school. "But they are deficient in other skills such as communication, observation, problem-solving, and judgement-making. These are the skills involved in everyday practice as a physician, not the facts.

"Pre-medical students are too concerned with their grade point averages, and come out too narrow-minded," Rosenberg concluded. "Pre-meds who are nerds become medical students who are nerds become doctors who are nerds and parents and spouses who are nerds."

Mechanized admissions

The lack of humanism is apparent in the admission procedures as well as requirements, Mathers added. "It's impossible to find out if a student will be a good doctor on the basis of an hour-long interview. And Stanford, having incorporated a computer to do preliminary screening of applicants, is moving towards a more mechanized, less personal admissions approach."

The lack of humanism continues once the students get to medical school,



panelists noted, in the manner that fundamental clinical skills are taught. The physician-patient relationship needs to be nurtured in courses, said Aria Dibiase, third-year medical student.

"Students don't get enough preparation in these skills. On their clerkships they have the most responsibility to talk with the patients. There is a lack of good role models. Students need to be taught how to be educators and communicators as part of being a physician," she added.

"The clinical experience always starts with an introduction, taking the history, having the patient disrobe and doing the physical exam. At the end of this initial encounter the physician can tell the patient what to do," said Dr. Mark Perlroth, associate professor of medicine. "A special bond needs to be created between patient and physician in order to be effective. Without it, everything else—knowledge, facts—is useless."

Dr. Edward Shortliffe, assistant professor of medicine, stressed the need for medical students to become familiar with computer technology because of its increasing use in medicine. "Students and physicians need to be familiarized with computers or they will be disenfranchised from the practice of medicine," he predicted.

In response to criticism that computers would make medicine even less personal, Shortliffe argued that the time saved by using computers would, in fact, give physicians more time to spend helping their patients adapt emotionally to their conditions.

Dr. Harold Sox, Jr., associate professor of medicine, stressed the need to educate students in clinical decision-making as another fundamental skill. "Students are not being adequately prepared for today's situation of limited resources. They need to be encouraged to make decisions that will allow them to give the highest quality of care for less cost," he said.

Teaching methods

Rather than concentrate only on what students need to be taught, said Dr. Kelley Skeff, assistant professor of medicine, the method of teaching should also be considered. "We need to consider the skills and approaches of individual teachers, and the effect on learners," he said.

"With increasing emphasis on attracting a diverse group of learners, we need to diversify teaching methods because everyone does not respond the same way. We need to assist the faculty by creating an environment in which their individual traits, such as humanism, can be brought out to the utmost."

Perhaps the ultimate area in which humanism is ignored, panelists contended, is with the medical students themselves.

"About 26 percent of the fourth-year Medical School class is in counseling at Cowell Student Health Center," said Dr. Harvey Weinstein, assistant clinical professor of psychiatry. He identified medical students' greatest problems as depression, lack of self-concept and anxiety, and education's impact on personal relationships.

Minority students have even more stress, said Brisbain Daniel, second-year medical student, because they are forced to deal with overt and covert racism. Teaching assistants avoid their laboratory tables, there are few minority faculty members to serve as role models, and it is difficult to find housing and acceptance in the local community, he said.

Personal needs neglected

"Physicians take on a great deal of responsibility for society's characteristics, and for having mass amounts of knowledge. They are constantly performing—in school, on hospital rounds—and are always under scrutiny. They are taught to put their own needs last, and are encouraged, and rewarded, for ignoring time," Weinstein explained. "There's a discrepancy between physicians' caring for others and caring for themselves.

"My concerns about medical education," Weinstein continued, "are that it doesn't teach students to learn about feelings, and it doesn't give them time to assimilate feelings and experiences and to deal with personal problems. This attitude—humanism—needs to be built into the curriculum, and the faculty has to be taught how to teach it."

"We act as though our patients have no needs of us other than an accurate diagnosis and a treatment," summarized Dr. Allen Barbour, Medical School ombudsman. "We act as though our feelings will simply get in the way of our more important cognitive judgements and that it is okay to ignore the human condition and problems of our patients and each other.

"The main impediment to the growth of these desirable traits in our students is our total emphasis on facts, figures, techniques, and academic excellence combined with a corresponding exclusion of caring, understanding, empathy, collaboration, feelings, or an honest awareness of all that is human in our interactions.

"We could make a big step forward by affirming these qualities clearly as ideals; by looking for them in admission interviews; by practice in our interactions with patients, students, and all others; and by active discussion at rounds and other opportunities."

—Shirley Kraus

Several therapies of use in treating anxiety disorders

Psychiatrists have come to agree that anxiety disorders, such as claustrophobia, fear of heights, or agoraphobia, are not merely symptoms of other diseases as was once thought, but rather are separate diseases.

They also agree that separate treatments are necessary to treat anxiety disorders, and in the last decade or so several have been developed.

What the psychiatric community does not agree on is which of these treatments is the most effective. Some of psychiatry's leading authorities shared their experiences with their preferred treatments—behavior therapy, drug therapy, or psychotherapy—at a recent symposium at Stanford University.

Anxiety disorders, or phobias, are triggered by events coming from within the patient, such as fear of eating solid food; or from outside the patient, such as fear of snakes.

What starts out as a simple fear may develop into a severe disease, said Dr. David Sheehan, Harvard assistant professor of psychiatry and director of the hypnosis and psychosomatic medicine unit at Massachusetts General Hospital.

A patient may start out experiencing dizzy spells, for example, he explained. These dizzy spells become more concentrated, eventually causing the patient to become hypochondriacal.

Patients often attach that hypochondria to a concrete situation, such as a simple phobia. "I'm feeling dizzy," the logic goes, "because of my fear of spiders." This simple phobia, fear of spiders, may expand to social phobias, fear of groups, to agoraphobia and multiphobias. The end stage is often depression, Sheehan continued, which can result in suicide.

Because of this progression, anxiety disorders need to be treated.

"Many patients think they're the only ones with these fears," said Dr. Walton Roth, associate professor of psychiatry and chief of the psychiatric consultation service at the Palo Alto Veterans Administration Center. "They think they are just disasters. They're relieved when they find out this isn't so."

Treatments have developed in three major areas. Dr. W. Stewart Agras, professor of psychiatry and director of the behavioral medicine program at Stanford, said research shows behavioral therapy is effective in treating anxiety disorders.

Systematic desensitization—having patients imagine the phobia until they learn to relax—is more effective than the more traditional psychotherapy, he said. Implosion therapy—having patients start off in the worst possible situation—is also effective.

Exposure important

The best behavioral therapy treatment, however, is exposure to the feared situation, Agras' research showed. Exposure increased the time patients were able to spend in the situation. Their heart rates decreased also, proving that the longer patients were exposed to the situation, the more comfortable they grew.

Behaviorial therapy combined with drug therapy—anti-depressant drugs specifically—had even better results, Agras continued.

"By themselves, the drugs have little effect. But the combination with behavior therapy has a great effect," he said.

"The active ingredient in behavior therapy is that it is real life," Sheehan concurred.

Dr. Alan Skolnikoff, associate clinical professor of psychiatry at the University of California, San Francisco and training and supervisory analyst at San Francisco Psychoanalytic Institute, however, said psychotherapy is the desired treatment for most phobias.

"The phobia is just a cover-up for a much larger anxiety," he explained. "Uncovering that anxiety through psychotherapy cures the phobia in the process."

Skolnikoff advocated transcendental meditation and other relaxation techniques also as anxiety-reducers.

Dr. Robert Fowles, assistant professor of medicine and director of the noninvasive cardiovascular laboratory at the VA, brought up another controversial issue. Whether mitral valve prolapse is a symptom or cause of anxiety disorders has been questioned since the condition was first diagnosed among soldiers in 1871.

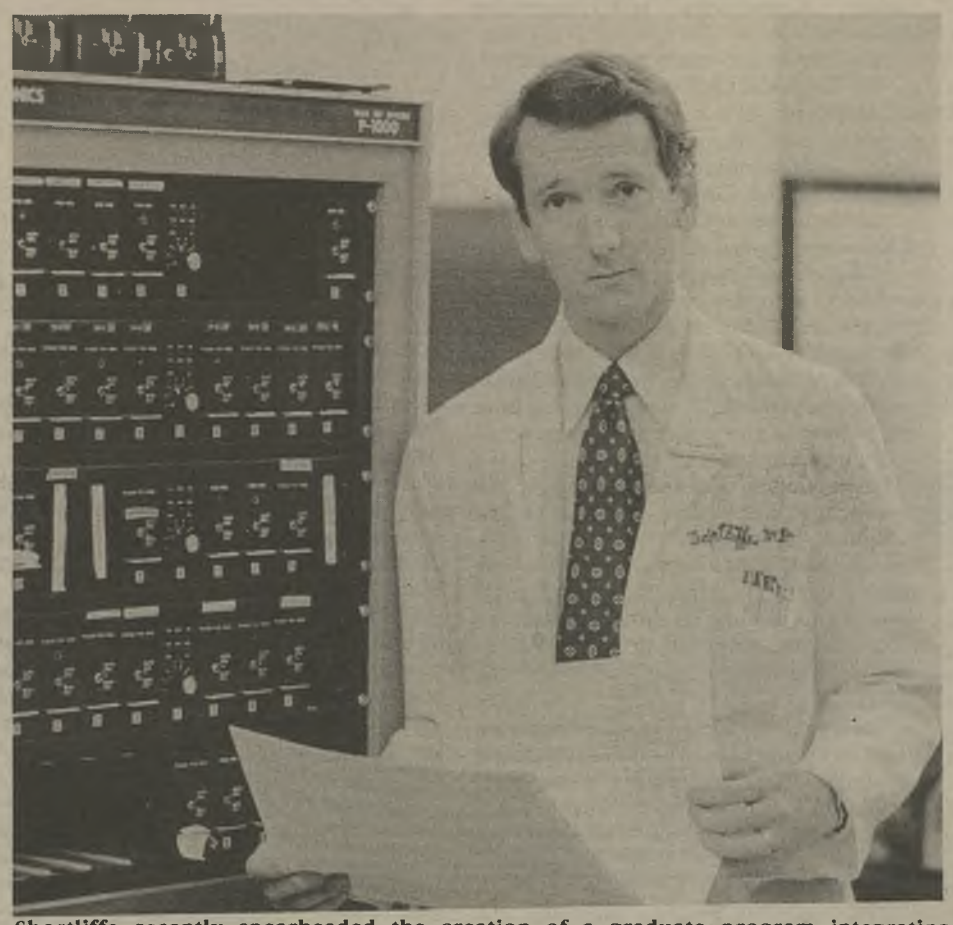
Mitral valve prolapse is a condition in which the valve regulating blood flow between the left ventricle and left atrium fails to do so efficiently. This causes a backflow of blood in the heart, which in turn may cause circulatory problems.

It may cause "funny sensations" that may cause anxiety among patients, Fowles said, but research at Stanford has shown that the presence of mitral valve prolapse is not necessarily connected to anxiety disorders.

"It doesn't matter what anxiety disorder treatment is used, just so the patients get better," Sheehan concluded.

The physician's treatment should aim to get rid of the immediate symptoms with medication; eliminate the phobic behavior with behavior therapy; eliminate any underlying causes with psychotherapy; and finally encourage long-term control of the phobia with patient education, he said.

—Shirley Kraus



Shortliffe recently spearheaded the creation of a graduate program integrating medicine and computer science.

Kaiser Foundation names Shortliffe one of this year's Faculty Scholars

Dr. Edward Shortliffe, assistant professor of medicine and computer science at Stanford, has been named a Henry J. Kaiser Family Foundation Faculty Scholar in General Internal Medicine.

The foundation said the award provides a $50,000 annual grant for three years, with an option by the giver to renew for two more years. The annual grant includes $35,000 for salary support and $15,000 in unrestricted funds to support research.

The primary research effort of Shortliffe—one of four academic physicians nationwide to receive one of this year's Kaiser grants—is the SUMEX-AIM Computing Resource, which is developing computer systems to aid physicians make difficult and sophisticated diagnoses of patients. Shortliffe is the chief physician scientist on the project.

The holder of both a Ph.D. in medical information sciences (computers) and an M.D. from Stanford, Shortliffe recently spearheaded the creation of a graduate program integrating medicine and computer science.

Other recipients this year—the third Kaiser has awarded the five-year honor—are Drs. Randall Cebul, the University of Pennsylvania, Philiadelphia; Mark Cullen, Yale University, New Haven, Conn.; and Daniel Singer, Harvard University, Boston.

The Stanford recipient joined the faculty in 1979 as an assistant professor.

The foundation, based in Menlo Park, Calif., was founded in 1948 as a charitable trust by the late industrialist Henry J. Kaiser.

In 1982, the foundation authorized grants of more than $15 million to support efforts in the field of medicine and health.

Cohen's royalties to fund fellowships

Royalties awarded to Dr. Stanley Cohen, professor of genetics, for his role as co-inventor of specific gene splicing and cloning methods, will be pumped back into education to fund fellowships for young scientists, Dr. Dominick Purpura, dean of the Stanford School of Medicine, announced last week.

The initial contribution of more than $150,000 is the beginning of an endowment, named the "Bernard Cohen Fellowhip Fund" in memory of Cohen's father, intended to "provide long-term support for postdoctoral trainees at Stanford," Cohen said.

"One of the greatest needs in any area of science today is to support the training of young scientists," he said. "With the cutback in federal funds for training purposes, that need has become especially acute in recent years."

Postdoctoral students throughout the School of Medicine and Department of Biology will be eligible to apply to the Fund, which will be administered by the Dean's Fellowship Fund committee.

To date, $1.4 million in gross revenue has accrued from the 73 genetic engineering firms licensed to use techniques described in the first Cohen/Boyer patent, which was issued in December, 1980.

Cohen's personal share of this revenue constitutes seed money for the endowment.

The patent covers fundamental techniques that Cohen and Dr. Herbert Boyer of the University of California, San Francisco developed to rearrange the genes of common bacteria.

By inventing ways to replicate genes that code for desired traits within microorganisms, Cohen and Boyer developed a powerful tool for investigating the organization and function of genes.

The techniques also made possible the construction of "bacterial factories," new sources of medically useful, but difficult to obtain products such as insulin, human growth hormone, and the anti-viral drug interferon.

The United States Patent Office has not yet approved a second Cohen/Boyer patent, which would license the intermediate products of the techniques.

But the revenues used to set up the Bernard Cohen Fellowship Fund will not be affected by the Patent Office's ultimate decision on the second patent, according to Niels Reimers, director of Stanford's office of technology licensing.

Born in Perth Amboy, New Jersey, in 1905, Bernard Cohen was a merchant with "a great deal of interest in science," according to his son.

"He was a remarkable man and an inventor of sorts," Cohen said. "I wanted to honor his memory."—**Deborah Franklin**

Consortium moves into Health Research Policy Bldg

Members of the Consortium for Health Research and Policy at Stanford will move to new headquarters in the campus building which formerly housed the Medical Microbiology Department, now located in the Fairchild Building. The move is scheduled for completion Feb. 1.

In all, about 75 persons will be stationed in the renovated building. Designed by architect John Northway (of Stoecker and Northway, Inc.), the renovation is intended to give a physical boost to the concept of group health planning as conceived by the Consortium for Health Research and Policy.

Located at the north end of the Basic Sciences Building across Campus Drive from the Medical Center, the site had originally been a part of the Stanford Museum, until after the 1906 earthquake when it was approved by the Trustees for use by the basic medical sciences.

President Donald Kennedy now has approved a new name for the building, to be known henceforth as the Health Research Policy Building.

Among other renovations, the Schultz Auditorium has been remodeled for the academic functions to be housed in the building. Project manager for construction was David Jerome of University Facilities.

Included in the move will be the entire Department of Family, Community and Preventive Medicine, except for the Division of International Health.

Count D. Gibson, Jr., chairman of the department, explained that the two components until now housed at 703 Welch Road—the Division of Health Services Research and the Primary Care Associate Program—will be joining the rest of the department as a result of the move.

Director John Farquhar, Dr. Stephen Fortmann, and administrator Lillian O'Toole from the Stanford Heart Disease Prevention Program will also be moving with their office staffs to the building.

Co-director of the SHDPP, Nathan Maccoby of Communications, along with the program's community education group, will move from their present location in Cypress Hall. And all SHDPP postdoctoral fellows, presently scattered at Cypress and throughout the Medical Center, will join the group as well.

(Drs. Peter Wood and William Haskell, and the rest of the SHDPP staff, will remain at 730 Welch Road.)

Drs. James Fries and Halsted Holman of the Division of Immunology will also be included in the move. Fries and Holman are responsible for the Stanford Arthritis Center, including the American Rheumatism Association Medical Information System. The Clinical Scholars Program, directed by Holman, will move as well.

About two years old, the Consortium is a group of Medical School faculty members joined with colleagues from other Stanford University departments to focus their separate research programs on issues of national health policy and service. The group is open to all faculty members concerned with health planning research who wish to actively support the Consortium.

Dr. John Bunker, professor of family, community and preventive medicine and director of the Division of Health Services Research, is convener of the seven-member governing council of the Consortium.

The existing programs of the Consortium include SHDPP, the Stanford Arthritis Center (including the American Rheumatism Association Medical Information System), the Midpeninsula Health Service, and the Department of Family, Community and Preventive Medicine.

Also the health management program at the Graduate School of Business, the multidisciplinary research training program on organizations and mental health, the ambulatory care research program of the Division of General Internal Medicine, and the National Bureau of Economic Research.

"The Consortium includes faculty members who are at the forefront of research and analysis in disease prevention, health economics, legislative reform, technology assessment, the organization and delivery of health care, and physician and patient—or provider and consumer—behavior," Bunker said.

He explained that the research of the Consortium emphasizes the role of the consumer, or patient. "We are taking a close look at how we may improve the quality of life, rather than simply attempting to prolong its duration. And we are also by necessity taking a hard look at cost analysis and system design," he added.

"Research in these areas require, in addition to medicine, a variety of social science skills, including economics, sociology, psychology and communications. Hence there is the need for an interdisciplinary research center," Bunker concluded.

The Board of Trustees approved the $1.5 to $2 million remodeling project in October, 1981, aiming to move many of the Consortium's key members into a single office complex. An open house will be held in about a month. —Lisa Ames



Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Richard Goode

SMASH lecture

"Seashells, Vulcans, and the treatment of hearing loss" is the topic of this Friday's S*M*A*S*H lecture, to be given 4:30 p.m. Jan. 28 in Fairchild Auditorium, by Dr. Richard Goode, professor of surgery.

All interested members of the Medical Center community are invited. The presentation will be followed by a TGIF gathering in the Fairchild lobby.

Volunteers Needed. . .

Diabetes study seeks answers

Are high carbohydrate diets really effective in controlling diabetes?

Volunteers are needed to help answer this question by participating in research conducted by Dr. Gerald Reaven and associates at the clinical research center at Stanford University Hospital.

To be eligible for this study, volunteers must have non-insulin treated diabetes; be currently treated by diet or oral agent; be between 20 and 69 years old; and be otherwise in good health.

Participants will be offered the following free of charge: evaluation of blood sugar, insulin, lipids (cholesterol and triglycerides), routine health evaluation including liver and kidney function test, cardiogram, physical exam, dietary evaluation and meals during the entire study.

Anyone interested or wishing further information should call Dr. Clarie Hollenbeck or Dr. George Liu at 497-6973 between 9 a.m. and 5 p.m., or Ann Coulston, R.D., at 497-5430 between 9 a.m. and 12 noon.

SUH reduces staffing costs

Guidelines to reduce staffing costs, such as temporary reductions in workdays or reduced workweeks, were outlined to Stanford University Hospital department heads Tuesday, Jan. 18.

No employees are being laid off their jobs at this time. "We want to do everything possible to avoid layoffs," said Sheldon King, executive vice president and director.

Cost reductions are necessary because of low patient census during the past few months, said King. He cited the distressed economy as a cause of the low census. With high unemployment rates, more people are delaying elective procedures and keeping hospital stays to a minimum.

Hospital use throughout California has been dropping steadily since 1980, according to a recent quarterly report by the California Health Facilities Commission. The number of patients discharged from hospitals in Santa Clara County was down 3.3 percent in October 1982, compared to the same quarter in 1981, and the number of patient days of care was down 9.0 percent.

Because of reduced needs, some patient care units at Stanford have been closed and staff asked to take an extra day off periodically.

The new staffing guidelines are not related to whether the Hospital receives a contract from the state to treat Medi-Cal patients. The Hospital is still waiting to hear whether or not a contract will be awarded to Stanford. In the meantime, the Hospital is continuing to admit authorized Medi-Cal patients.

More severe cost reduction measures may be considered in the event the Hospital does not receive a Medi-Cal contract or if low census figures continue, King said. In that case, administrators would try to set a specific monetary goal for reductions.

The Hospital employs 4,497 people, including more than 1,400 nurses.

Some Hospital departments, such as Nursing, Housekeeping, Respiratory Therapy and others, have staffing cost reduction plans already working. Some nurses, for example, have been asked to take one day off each month. The new guidelines are meant to assist department heads throughout the Hospital in examining and dealing with alternative ways they can reduce staffing as they consider appropriate to their area.

In some departments, employees may be asked to take reduced workdays on a temporary basis. In other departments reduced workweeks might be recommended.

Before reduced workweeks are put in effect in a department, said King, affected employees will be given at least two weeks written notice. They would be able to use Paid Time Off (PTO) or Absent Time (time off without pay) to cover the days reduced from their previous schedule.

At this time, employees whose hours are reduced will still remain eligible for benefits, even though their hours may fall to less than the 50 percent benefit requirement.

Department heads will work with their line administrators and the Director of Personnel before any plans are presented to employees.

Other alternatives, which will be evaluated by individual departments and implemented on an as-needed basis, include:

- extending the period that jobs are held open before authorization to hire is given. Job vacancies are now held open for 30 working days. The new guidelines call for an additional 30 calendar days vacancy period;
- increased scheduling of PTO or Absent Time before a shift is completed, releasing employees from their jobs early;
- contacting employees at home if it appears at the start of a shift that the full amount of scheduled staff will not be needed.

In all of the alternatives, employees would be asked to voluntarily participate, depending on the department's needs. If there are not enough volunteers, then there may be mandatory reductions, based on seniority, which may ultimately affect all employees. —Barbara Battino

Social Services celebrates 70 years of much change



Social workers have been helping patients and their families in Stanford University Hospital programs for 70 years. Now, as seen above, social worker Beth Garifalos (right) chats with eight-year hemodialysis patient Evelyn Tahl.

Two-pound premature infants weren't struggling to stay alive in incubators when Marie Jorgensen became the Hospital's first social worker in May, 1913.

Jorgensen's duties, from the scanty records which remain, probably centered on ameliorating financial hardship and providing general hygiene information for about 1,000 patients that first year at Lane Hospital. That was Stanford's San Francisco teaching hospital before the medical campus moved in 1959.

Jorgensen's formal career as a social worker began at Stanford only eight years after what is regarded as the nation's first Social Services Department was established at Massachusetts General Hospital in Boston.

Now it is 70 years later, and social workers Charlene Canger and Rose Grobstein bristle at the stereotype of a social worker—the smiling bearer of a wicker basket of goodies or money for the humble poor.

Although they often help families find financial resources, they said most of their work involves family issues which are changing as rapidly as science constantly pushes the state of medical technology.

In fact many of the most important changes have occurred not since Jorgensen rode in a carriage to work. Instead, the most dramatic years may have come between 1962, when Grobstein helped start the first intensive care nursery (ICN) at Stanford, and the present when Canger is the full-time social worker in the ICN under Grobstein's supervision.

Some of the changes will be discussed by Canger and child psychiatrist Charley Zenah at a seminar for ICN professionals scheduled at Stanford on Jan. 28. The seminar is part of a year-long celebration as Social Services at Stanford celebrates its 70th anniversary.

"The preemie babies of 1962 are not the preemie babies of 1983," said Canger.

"It used to be that babies were critically ill and then either died or got well quickly."

But now the babies are smaller, less developed, "and we are finding that they sometimes go from being acutely ill to a long period of chronic illness."

Although they are saved at a premature age and low birth weight that would have been inconceivable five years ago, they go home with serious physical problems which the family must deal with.

Being realistic

"We have to help the families go home with a greater degree of uncertainty. . . .The support which is needed is more extensive, and by necessity, our jobs become more complex," Canger continued.

"Nobody says life is fair," reads the sign in Grobstein's office. It's a summary of her battle for realism.

"Fairness is a real issue," interjected Canger. "You'd be surprised at the number of parents who say after the death of an infant: 'But I took such good care of myself.' Or sometimes they'll grieve that their baby is dead or deformed 'while that mother who didn't even want a child had a healthy baby.' "

Grobstein's battle to help patients deal realistically with issues began, she said, when she was a young social worker more than 40 years ago in the coastal hills of Oregon.

"I visited one particular family whose unclean house I thought might jeopardize the health of a newborn child. So another social worker and I brought cleaning materials up to their cabin one month and helped them clean up.

"When I returned a month later the place was just as dirty as before. It was then I realized that people had to do for themselves."

Helping patients and their families, Canger and Grobstein explained, is a major duty of the Hospital's 21 social workers.

"But we also have a role at helping the other members of our teams—including doctors and nurses—cope with the stresses of the environment," said Canger.

"In the ICN one recent week we had six (premature infant) deaths. The amount of stress this produced could have been intolerable for all of us. But we were able to talk."

Helpful meetings

Discussion among staff was begun in what ICN physicians and nurses have lauded as an innovative pilot program under Grobstein's direction in the mid 1960s.

A study was under way at that time to learn whether contact between preemies and their mothers would foster bonding without being a safety risk.

Dr. Philip Sunshine, professor of pediatrics and director of the ICN, said the experiment produced some tensions and feelings of competition between the mothers and nurses, who previously had had a "monopoly" on the infants' attentions.

Grobstein initiated frequent staff meetings for the nurses and doctors, a tradition which was expanded to deal with other tensions in the unit. These meetings continue today under the informal leadership of Canger.

Grobstein has left the ICN for a role as chief pediatric social worker but she still sees clients, among them participants in a genetic counseling program.

"That's an attempt to deal with problems before they appear in the nursery," Grobstein said.

Although terminating a birth is sometimes an option, Grobstein said her role can often be helping families to prepare for a birth where prenatal testing has revealed damage or a genetic defect.

Grobstein said she came to Stanford from a job with an adoption agency in San Jose "because I was looking for some answers. I wanted to do some research and the opportunity was here at Stanford."

Results of her subsequent research include more than 14 authored or co-authored articles and book chapters, as well as an appointment as a lecturer both in Stanford's department of family, community and preventive medicine, and at the School of Health and Medical Sciences at the University of California, Berkeley.

—Mike Goodkind

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservation required. Call 497-6389.

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard call 497-6389.

WEDNESDAY, JANUARY 26

American Heart Association—Fifth Biannual Symposium on Cerebrovascular Disease: Speakers will include Stanford faculty members. 8:30 a.m. to 5 p.m., LeBaron Hotel, 1350 N. First Street, San Jose. Registration deadline has passed. For further information, call the AHA at (408) 247-8555.

Divisions of Clinical Pharmacology and Cardiology Seminar: "Predicting Lidocaine Levels in Patients with Acute Ischemic Heart Disease"—Dr. Samuel Vozeh (Syva Corp., Basel, Switzerland). 4 p.m., M112.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "The Fringe Scanner: A New Flow Cytometer for High Resolution Measurements of Chromosomes"—Dr. Richard Norgren (Lawrence Livermore Laboratory). 4:15 p.m., McCullough 134.

Div. of Hematology Noon Conference: "A Working Formulation for Non-Hodgkin's Lymphoma"—Dr. Ronald Dorfman. Noon, S102d.

Dept. of Structural Biology Seminar: "The Structure of A Voltage-Gated Pore, Matrix Porin"—Dr. R. Michael Garavito (Biozentrum, Switzerland). Noon, Fairchild Bldg., D102.

THURSDAY, JANUARY 27

Dept. of Clinical Social Work: "Couples Therapy"—Cleo Eulau, L.C.S.W. 8:30 a.m., TF122-C (Psychiatry building).

Nursing Educational Services Critical Care Course Level II: "Acute Myocardial Infarction." 8 a.m. to 4:45 p.m., Faber Auditorium, Children's Hospital.

Dept. of Pharmacology Seminar: "DNA Methylation, Differentiation and Transformation"—Dr. Peter Jones (USC). 4:15 p.m., Pharmacology Library R358.

Dept. of Medicine Grand Rounds: "New Approaches to Treating TIA and Preventing Stroke"—Dr. Henry Barnett. 8:30 a.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "Recent Advances in the Molecular Biology of Polio Virus"—Dr. David Baltimore (MIT Center for Cancer Research). Noon, M104.

Dept. of Biochemistry Industrial Affiliates Program Seminar: "Mung Bean Nuclease—An Alternative to S-1"—Dr. Harry Osterman (P. L. Biochemicals, Inc., Milwaukee, Wisconsin). Noon, M316.

FRIDAY, JANUARY 28

Dept. of Structural Biology Seminar: "Monoclonal Antibodies to Tumor Antigens"—Dr. Gerard Evan (Depts. of Microbiology and Immunology, UCSF). Noon, Fairchild Bldg., D102.

Dept. of Pediatrics Grand Rounds: "Pathogenesis of *E. coli* Urinary Tract Infection"—Dr. Stanley Falkow, 8 a.m., M106.

SATURDAY, JANUARY 29

"Medical and Health Care Uses of Cable Television"—A community conference sponsored by the Palo Alto Medical Foundation and Stanford University Hospital. 8:30 a.m. to 1 p.m., Palo Alto Medical Foundation Auditorium. Reservations are required. For further information, call Carroll Harrington at 326-0882.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.

Academic Council

TO MEMBERS OF THE ACADEMIC COUNCIL
NOTICE OF MEETING
Thursday, February 3, 1983

A meeting of the Academic Council will be held on Thursday, February 3, 1983 beginning at 4:15 p.m. in Room 290, School of Law.

Agenda for the meeting will be as follows:

1. Minutes of the Council meeting held on October 8, 1982. (Draft minutes below.)
2. Memorial Resolutions:
   Loren R. Chandler
   Anthony E. Sokol
   James T. Watkins IV
3. Report from the Senate Chairman.
4. Report from the President: Indirect Costs.
5. Report from Dean F. Hargadon: Undergraduate Admissions.
6. Unfinished Business.
7. New Business.
8. Adjournment.

Clara N. Bush
Academic Secretary

DRAFT MINUTES OF THE MEETING
OF THE ACADEMIC COUNCIL
OCTOBER 8, 1982
SUBJECT TO APPROVAL

A special convocation of the Academic Council was held on Friday, October 8, 1982 beginning at approximately 4:20 p.m. in Dinkelspiel Auditorium, with President Donald Kennedy presiding.

After calling the meeting to order, President Kennedy announced that early that morning the University and the United Stanford Workers (USW) negotiating teams had reached tentative agreement on a new contract, and that union membership would meet the next day to consider ratification of that contract.

He then thanked those present for attending the Academic Council convocation, and turned the meeting over to Provost Albert Hastorf for the announcements of special awards to members of the faculty.

ANNOUNCEMENTS OF FACULTY AWARDS

In his opening remarks, Provost Hastorf welcomed new members of the Academic Council, as well as the new Academic Secretary, and expressed special thanks to Assistant Provost Noel Kolak for organizing the special convocation and to the nearly 200 Academic Council members present for their attendance.

This is the 91st year since classes began at Stanford on October 1, 1891. The Founding Grant was in 1885; the cornerstone was laid in 1887, and instruction began in 1891. The faculty that first year numbered 17; there were 559 students (a 33:1 student/faculty ratio). It is no surprise that, the second year, there were 29 on the faculty, a 33:1 ratio being clearly intolerable to both faculty and students. Presently, the Academic Council membership at Stanford is 1,272. The student/faculty ratio is now approximately 10:1, with 6,600 undergraduates, and 5,500 graduate students (780 of these terminal graduate students.)

He then turned to the recognition of a number of Stanford faculty who had been given national awards in the past year:

Arthur Schawlow, Physics, was awarded a Nobel Prize.

Calvin Quate, Applied Physics, was awarded the Rank Prize of England.

Stanford now has on its faculty two MacArthur Fellows:

Persi Diaconis, Statistics
Charles Bigelow, Art and Computer Science

Stanley Cohen, Genetics, was awarded the Wolf Prize.

The Stanford faculty now includes 75 members of the National Academy of Sciences, our most prestigious scientific organization, which was founded in 1863.

Two Stanford faculty members were appointed to that Academy this past year:

Leonard Herzenberg, Genetics

Harold Mooney, Biological Sciences

This past year, seven members of our faculty were elected to the American Academy of Arts and Sciences, an organization founded in 1780 by John Adams. These included:

Paul Brest, Law
Herbert Clark, Psychology
Paul Ehrlich, Biological Sciences
Victor Fuchs, Economics
Harold Mooney, Biological Sciences
Calvin Quate, Applied Physics
Osward Villard, Electrical Engineering

Now almost 10 percent of our Academic Council members are members of the American Academy of Arts and Sciences.

Three members of the Stanford Medical School faculty were appointed this year to the National Institute of Medicine:

William Dement, Psychiatry and Behavioral Sciences
Avram Goldstein, Pharmacology
Dominick Purpura, Neurobiology, Neurology, and Dean

Nine Stanford faculty members were awarded Guggenheim Fellowships for 1982-83:

John Bender, English
Gordon Craig, History (Emeritus)
Michael Fayer, Chemistry
Paul Green, Biological Sciences
Joseph Greenberg, Anthropology
Richard Snow, Education and Psychology
Ann Swidler, Sociology
Michael Wald, Law
Robert Wilson,Graduate School of Business

Four members of the Academic Council were appointed to the highest honor the institution can award to its own, endowed chairs:

Eugene Farber, appointed the Jane and Hugh S. Center Professor of Dermatology

Dominick, Purpura, Neurobiology and Neurology, appointed to the Carl and Elizabeth Naumann Professorship, and Dean of the School of Medicine

John Hart Ely, appointed Richard E. Lang Professor of Law, and Dean of the School of Law

Seymour Martin Lipset, Professor of Political Science and Sociology and Senior Fellow of the Hoover Institution, appointed the Caroline S.G. Munro Professor of Political Science

Two other major awards this institution presents to its own are the Dinkelspiel and Gores Awards, announced at Commencement each year. This past year, the Dinkelspiel Awards for contributions to undergraduate education went to:

Donald Abbott, Biological Sciences and Hopkins Marine Station
Kathleen Namphy, English

Gores Awards for teaching last year went to:
Roy Maffly, Medicine
Edward Spofford, Classics

Provost Hastorf then turned to the School Deans, who were to announce awards made to faculty members last year within their Schools.

Dean Dominick Purpura, School of Medicine, announced the following School awards:

The Arthur L. Bloomfield Award in Recognition of Excellence in Teaching of Clinical Medicine:
William Watson, Clinical Dermatology

Henry J. Kaiser Family Foundation Awards for Excellence in Teaching:
Patricia Gross, Structural Biology
Stanley Falkow, Medical Microbiology
Ronald Merrell, General Surgery
Jon Kosek, Clinical Pathology

Special Henry J. Kaiser Family Foundation Award for Oustanding and Innovative Contributions to Medical Education:
Henry Jones, Diagnostic Radiology.

Dean John Hart Ely, School of Law, announced that the Law School has only one award for excellence in teaching, the John Bingham Hurlbutt Award. It was presented this year to **Eric W. Wright,** Visiting Professor from Santa Clara Law School. Professor Wright is a graduate of Stanford Law School, the son of a distinguished Stanford Law Professor, and the recipient of an excellence in teaching award from his home university last year as well as this one from Stanford.

Dean Norman Wessells, School of Humanities and Sciences, announced this year's recipients of the Dean's Awards for Distinguished Teaching, originated in 1975 by Dean Halsey Royden. They included:

Ivan Sag, Linguistics
David Wellbery, German Studies
Steven Boxer, Chemistry
Richard Schupbach, Slavic Languages and Literature
Anne Mellor, English

He also announced research grants awarded to humanists as the first recipients of funding from the Pew Memorial Trust. The following scholars received awards:

Arnold Davidson, Philosophy
John Felstiner, English
Stephen Ferruolo, History
Gregory Freidin, Slavic Languages and Literatures
William Leben, Linguistics
Suzanne Lewis, Art
Arnold Rampersad, English
Lewis Spitz, History
Peter Stansky, History

Associate Dean Eugene Webb, Graduate School of Business, announced that the School of Business does not present formal teaching awards, but noted a number of awards recently presented to his colleagues in the School in other domains.

William Beaver recently won the Alpha Kappa Psi National Accounting Award for outstanding contribution to the accounting literature, the fourth of those awards in a row he has won.

John Cox, Finance, has been awarded the Batterymarch Fellowship, one of three given each year nationally in this field. Another Stanford Business School colleague, **Douglas Breeden,** held it the year before.

Serge Taylor, Public Policy and Management, has been awarded the American Political Science Association's Leonard D. White Award for best doctoral dissertation in the field of public administration.

He closed by reminding the Council that their colleague, **George Schultz,** termed "a part-time Business School faculty member" by the *Stanford Daily*, had been recently appointed U.S. Secretary of State.

William Kays, School of Engineering, announced a number of awards for excellence in teaching and advising.

The premiere award for excellence in undergraduate teaching is a student-nominated award. Tau Beta Pi, the student honorary society makes the choice. This year the award went to **Robert Carlson,** Industrial Engineering and Engineering Management.

In 1980-81, a School award for distinguished advising was instituted. This past year, the award went to:

Henry Parker, Civil Engineering
Robert Helliwell, Electrical Engineering

At the departmental level, the Department of Industrial Engineering and Engineering Management made an Outstanding Teacher award. **James Hodder** was the recipient.

The Department of Aeronautics and Astronautics made an Excellence in Teaching Award to **Donald Baganoff.**

Finally, the Department of Industrial Engineering and Engineering Management made a very special award, the W. Grant Ireson Faculty Service Award, to **James Jucker.**

Dean J. Myron Atkin, School of Education, announced the 1981-82 recipients of the School's Excellence in Teaching awards, presented each year at the Commencement ceremony. Student votes, which determine the recipients of these awards, are based on a number of factors, including intellectual challenge, breadth and depth of the substantive issues presented, theory building, practical applications, respect for student input, and quality of instructional materials. Last June, awards went to two professors:

Nel Noddings, Curriculum, Philosophy of Education and Mathematics Education

Robert Politzer, Foreign Language Education and Romance Linguistics

Dean Allan Cox, School of Earth Sciences, announced that the newly-established award for Excellence in Teaching in the School of Earth Sciences had been won the first year by **James C. Ingle, Jr.,** Geology. Professor Ingle was especially commended for his large undergraduate course for non-majors, The Oceans, one of the best-recieved such courses at Stanford.

After thanking the Provost and Deans for their

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Council...

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recognition of these significant faculty awards of the past year, President Kennedy proceeded to the regular agenda of the quarterly Academic Council meeting.

The minutes of the last meeting of the Academic Council held on April 9, 1982 were approved as published in draft form in *Campus Report* of September 29, 1982.

The following memorial resolution was presented to the Council.

MEMORIAL RESOLUTION
FRIEDRICH W. STROTHMANN
(1904-1982)

Professor Kurt Mueller-Vollmer presented a resolution in memory of the late Friedrich W. Strothmann, Emeritus Professor of German, who died in June 10, 1982. The resolution, which was prepared by Professors Walter F.W. Lohnes, (chairman), Lawrence V. Ryan, and Kurt Mueller-Vollmer, was adopted by the Council in the customary manner.

REPORT FROM THE CHAIRMAN OF THE SENATE

Professor Alexander L. Fetter, Chairman of the Fifteenth Senate, presented a report on the activities of the Fourtheenth Senate during spring quarter 1981-82. The full text of Chairman Fetter's report is given below.

REPORT FROM THE PRESIDENT

President Kennedy focused his remarks on the overall state of the faculty, with particular attention to what must be done to maintain and improve its quality.

He pointed out that within the past decade there has been an imposing improvement in faculty quality, by any recognized standard, and especially commended the care with which Stanford chooses, fosters, and retains the very best of its young faculty. Over the past two decades, the proportion of young faculty promoted to tenure at Stanford has remained relatively stable and relatively high (between a third and half of them).

This strategy had clear advantages. First, the average quality of the faculty at any given moment is higher, because of the care taken in selecting the most promising junior professors. Second, younger faculty members feel encouraged to build for the future here. Third, more of the senior faculty have had their productive years at Stanford, with the advantages of continuity and stable affiliation.

Current trends make this practice more difficult to sustain, however. After two decades of rapid growth, the tenure line faculty at Stanford in the recent past has grown at a rate of only about one percent a year. Mandatory retirement age has risen to 70. The result has been an alarming shift in the tenure ratio and the average age of Stanford faculty. For every year that passes, we gain about one year in average faculty age. In 1971, 65 percent of the Stanford faculty was tenured; a decade later, the proportion had risen to 72 percent.

If current legislation to uncap mandatory retirement should succeed, universities will be forced to a complete reappraisal of their tenure policies.

Affirmative action, the effort to improve the composition of the faculty while improving its quality, is obviously affected by these demographic facts. Closing off opportunities at the junior level would significantly impede progress. Last year was the most successful year in Stanford's history in increasing the number of tenured women and in appointing new women to the faculty. Even so, only 117 of Stanford's over 1,200 Academic Council members are women, and only 48 of the 836 tenured faculty are women.

Success in appointing members of ethnic minority groups was less encouraging, but still 15 percent of last year's total Academic Council appointments went to members of minority groups. Implementing the report of the faculty Committee on Affirmative Action this year will make such considerations a central concern in every new departmental search.

To attract and retain the very best young faculty, Stanford's offers must be both professionally attractive and financially feasible. Faculty salaries have improved somehwat relative to our competition over recent years. Housing problems, however, will continue to require attention. Much has been done recently, but more imaginative solutions must still be sought.

The faculty recruits, retains, and promotes its new members, and sets the intellectual and social conditions that determine the attractiveness of the environment. Stanford now has vastly improved scholarly resources, a superb student body, and an increasingly powerful tradition of accomplishment.

In closing, President Kennedy commented that he came to Stanford 22 years ago as an assistant professor. The development of faculty quality over that nearly quarter-century has been truly extraordinary. As a faculty, he said "we have come far enough to know that there is still more to do and that we can do it."

(The full text of President Kennedy's report may be found in *Campus Report* for October 13, 1982.)

Following the President's remarks, he was asked if the advancing average age of tenured professors might not be related to some degree to Stanford's increased prestige academically over this period. Why should this development be called 'alarming'?

President Kennedy responded that age and productivity may have some discoverable statistical relationships, but the concern here is that this trend of increased average faculty age (at a rate of one year for each three years that passes) will inevitably lead us into difficulties if it goes unchecked.

There being no further business to come before the Council, the meeting adjourned at 5:35. The President and the Provost hosted an informal wine and cheese reception following the meeting.

Clara N. Bush
Academic Secretary

MEMORIAL RESOLUTION
LOREN R. ("YANK") CHANDLER
1895 - 1982

Born on a farm near Fresno, April 22, 1895, Loren R. ("Yank") Chandler soon learned to appreciate nature as well as hard work. Even at an early age he wanted to be a doctor, and enrolled at Stanford where he received his B.S. degree in 1920 and his M.D. degree in 1925. After an internship and residency in surgery at Stanford's Lane Hospital, he practiced surgery and taught as a voluntary assistant professor until he was appointed as Dean of the School of Medicine by President Ray Lyman Wilbur in 1933; he became a full professor of surgery in 1938. He guided the School through the years of depression and of World War II, then stepped down in 1953.

Dean Chandler believed that faculties should be comprised of experts who could teach, that committees were too unwieldy to manage a medical school, and that it might be hazardous to rely too heavily upon funds from government. His years were those in which the school had a wide reputation for excellence in clinical medicine; science at the bedside was not neglected, and he himself published a score of papers on surgical topics.

During his tenure, morale of faculty and students remained high despite the Depression and World War II. The former had led to the collapse of plans for a new school in San Francisco, and after the war Chandler had to rebuild the faculty and review the teaching procedures which had been disturbed by the war-time accelerated program. It was then, too, that the Board of Trustees revised its earlier plans as to the site of the school.

During such turbulence, Dean Chandler was showing his leadership away from Stanford too. He became president of the Association of American Medical Colleges (1941-42) and of the California Academy of Medicine (1942). He was president of the San Francisco Surgical Society (1948) and of the Pacific Coast Surgical Association (1954-55). He was a member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association (AMA).

Chandler served on countless local, state, and national organizations, as well as many federal commissions. In 1950, he was one of three physicians sent by the AMA to study the effects of the British National Health Service Act; "it would be folly," they concluded, "to contend that a similar plan of nationalized medicine is needed in the United States." In 1955, Dr. Chandler served as consultant during the construction of the Albert Schweitzer Hospital in Haiti; he organized its staff and stayed on for a few months as chief surgeon. Later, he was chief of surgery at the Palo Alto Veterans Administration Hospital.

Dean Chandler advocated prepaid medical care and championed the development of the California Physician Service and Blue Cross. He also favored the spread of medical and other scientific knowledge to the lay public through newspapers and other media.

Always popular, he was to be found annually at reunions, happily reminiscing in the center of admiring groups of returning alumni of the 21 classes graduated from the medical school during his tenure. He believed that the post-war shift of population to the Peninsula made the move of the medical school from San Francisco inevitable.

In 1959, Dr. Chandler was made honorary fellow of Stanford University, and in that year he wrote a seven page review of events of the medical school during his tenure; Chandler concluded "There has been much talk of moving the medical school but unfortunately this school cannot be moved. . . . The old school as it has been known will close this summer. A new school. . .will be born in September, 1959, on the Stanford campus. The King is dead. Long live the King."

Dr. Chandler died October 16, 1982. He leaves his wife, Elva Beal Chandler; a son, Craig; a daughter, Loran McIvor; seven grandchildren and one great grandchild. He leaves in addition a long list of Stanford alumni who will be forever grateful for his leadership.

David A. Rytand, *Chairman*
Robert A. Chase
Roy B. Cohn

MEMORIAL RESOLUTION
ANTHONY E. SOKOL
(1897-1982)

Anthony E. Sokol was born in Vienna, Austria, in 1897. His career was immensely varied, both before and after he came to Stanford in 1929. World War I sent him into the Austrian-Hungarian Navy as a young officer. The collapse of that navy led him first to study naval architecture and then to join the Royal Dutch Steamship Company as an officer stationed in Batavia, Java. This nautical background had long-lasting consequences for Tony's teaching, writing, and administrative career at Stanford.

Tony's fluency in at least five languages brought him to the United States in 1924 to teach languages, especially German, at Mississippi State Teachers College. After a brief return to Vienna, where he studied philosophy and history, he came to Stanford in 1929 as a teaching assistant in the Department of Germanic Languages. He obtained his Ph.D. in 1932, and was appointed Assistant and then Associate Professor in that department.

World War II brought a sharp shift of emphasis in Tony Sokol's career. His knowledge of the Dutch and Malay languages, as well as of Indonesia, led to his becoming codirector, with Professor John Dodds, of Stanford's Far Eastern Area and Language Program, one of the Army's Specialized Programs in anticipation of post-war occupation of the Pacific and Southeast Asian islands. This in turn led to his helping organize and administer the post-war Pacific-Asiatic and Russian Program, an interdisciplinary area studies program for undergraduates. When Stanford organized a new Department of Asiatic and Russian Studies in 1945, Tony became Executive Head and Professor of Asiatic Studies. That department was reorganized in 1957 for Asian Languages only, at which time he transferred to the Hoover Institution and, in 1958, to the Department of Political Sciences as Professor of International Security Affairs.

As Tony's title suggested, he never lost interest in naval and military power in world affairs. He was a prolific writer on a variety of cultural and historical subjects, but the works for which he is best known were *Sea Power in the Nuclear Age* (1962) and an official history of the Austrian Navy entitled *The Imperial and Royal Austro-Hungarian Navy* (1968). The latter, translated and reprinted in an elaborate illustrated edition in Austria, was a huge sales success and led to his being awarded by the Austrian Government in 1976 the highly prestigious decoration, The Cross of Honor, First Class, in Science and Art. He was, indeed, a major contributor to the study of naval power and history.

In addition to Tony's special interest in international affairs, he actively pursued a wide range of teaching and writing in the history of civilization. He worked, while a Fulbright Professor at the University of Vienna, to further a better understanding of American culture among Europeans. He had an early interest in the historic status of women, teaching in 1968 a freshman seminar on "The Position of Women in Historical Societies." His collection of slide pictures of distinguished and attractive women was impressive, and indeed his final writing was on a text to accompany possible publication of the collection. As another phase of his broad range of interests, he contributed a collection of hundreds of volumes to the Austrian National Library and the Austrian War Archives.

What does not emerge from a review of Tony's professional achievements is the fact that he was a warm and charming associate whose good humor was ever-present. His students found him always interested in them as persons, and the added close acquaintance that came with teaching twice at Stanford in Austria, after his

continued on next page

MEMORIAL RESOLUTION
JAMES T. WATKINS IV
(1907-1982)

James T. Watkins IV was born in 1907 in San Francisco. His paternal great grandfather, a famous sea captain, had established the family in California. His mother and father were both physicians. In 1938 he married Elise Gettier, a Smith College alumna, who survives him, as do his brother, Dr. Sherman Watkins, and several nieces and nephews. He died suddenly on September 27, 1982 while in France on vacation.

Before enrolling at Stanford in 1925 Watkins graduated from the San Diego Army and Navy Academy. Having received his A.B. degree from Stanford in 1929, Watkins taught English at a high school in Japan for two years, and subsequently political science at the Central China college for another two years. He then returned to Stanford for graduate study, receiving his A.M. degree in 1934, and his Ph.D. degree in 1941. His principal mentor was Professor Graham Stuart, who remained a life-long friend. While retaining an interest in the Far East, Watkins focused on international relations and, more particularly, on international organization, which he considered to be a promising step in establishing a stable and peaceful community of nations. In pursuit of this interest he spent two years at the Graduate Institute of International Studies at Geneva, working on his dissertation on "China and the League of Nations." Prior to receiving his Ph.D. he taught at the University of Chicago (1938-41). From 1941 to 1943 he was on the faculty of Ohio State University.

Watkins' academic career was interrupted between 1943 and 1946 by his service in the U.S. Navy, in which he attained the rank of Lieutenant Commander. After attending the Naval School of Military Government and Administration at Columbia University, he arrived in Okinawa in March 1945 shortly after the invasion of the island had begun. In December 1945 he became Government Officer for the Military Government of the Ryukyus. He devoted himself to his work, which involved preparations for the establishment of an indigenous administrative organization, in the spirit of a patriot who expected from his country adherence to high standards. Jim was always proud of his endeavors during this period and of the friends he had made in Okinawa. Intending to write a monograph on this American experience in military government he amassed a great deal of material, but his intention fell short of fruition because of his untimely death.

In July 1946, Jim was discharged. On leaving the Navy, he was appointed Assistant Professor at his Alma Mater. He became a full professor in 1953, served as Executive Head of his department from 1950 to 1958, and chaired the International Relations Program from 1947 to 1971. He was a visiting professor at the University of Washington (1948), at the University of Tokyo (1950) and at the University of California at Santa Barbara (1951). He became professor emeritus in 1973.

Professor Watkins began publishing during World War II. He contributed two chapters to an Army symposium volume on Japan (1942) and while in the Navy wrote a monograph on Taiwan (1944). He also published articles in the *American Political Science Review* (1942) and *Social Forces* (1943). After the war he wrote on the settlement with Japan in *Commonwealth* (1950), and coauthored three prophetic articles on control of the Panama Canal in *Foreign Affairs* (1959) and the *Nation* (1960 and 1964). He coauthored a textbook, *General International Organization* (1956), and contributed a chapter to a book on *Control of Foreign Relations in Modern Nations* (1957). For many years he was on the executive committee of the Institute of World Affairs, occasionally serving as director of its annual meetings and contributing to the *Proceedings* which the Institute published. Left unfinished are the above-mentioned monograph on the occupation of Okinawa, and a manuscript on "Mysticism in Walter Pater's *Marius, the Epicurean*," which Professor Watkins considered his "main work."

Jim's life as student, teacher, and alumnus spanned more than half of Stanford's existence and in part explains his unique place in her history. He had known every President of Stanford, from David Starr Jordan on. The rest lies in his character, his values, and his style. Of no one is it truer that "style is the man himself." Patrician in bearing, language, and tastes, he was saved from pompousness by an enduring and endearing self-deprecatory wit. For whom else has a memorial service concluded with a serenade by the Leland Stanford Junior University Marching Band?

His values were distilled from the history of Western civilization, of which he was a life-long student. Deeply religious, and fascinated by Christian mysticism, he was not pious, and indeed to the pious might have seemed occasionally irreverent. He was a patriot, but a discriminating one, whose judgment of his country's conduct was tempered by idealism and by the historian's sense of the limitations of the current ruling dogma of national sovereignty in international relations. Innately conservative, he nonetheless realized that change is not only prudent but often necessary in the affairs of men and of states.

His character was formed by adherence to the stern classical virtues, softened by the compassion of the later humanistic tradition, in whose literature through wide reading and remarkable memory he was at home. Demanding of himself, he was charitable toward the waywardness of others.

He thought of himself foremost and always as a teacher, and gloried not in the title of professor but in the opportunities if afforded him. Inspirational in the classroom, he was capable of lapidary and memorable language which countless numbers of his former students recall and quote. Proud of his most accomplished students, he was even more delighted when he succeeded in showing "under-achievers" how to reach their true potential. But he never equated good teaching simply with brilliant classroom performance. Without children of his own he, like the University's founders, thought of all Stanford students (not just those who had studied with him) as his children. No student in distress of mind, body or estate was beyond his concern or turned to him, as many did, without receiving his help; indeed, he quietly sought out those who needed it. One fruit of these efforts is the James T. Watkins Discretionary Fund, established and supported by some of his former students, and now to be perpetuated.

As an alumnus his devotion to Stanford transcended mere rational respect for it as an institution and surmounted every difficulty and disappointment in its daily life. Two beneficiaries of his efforts show his attention both to Stanford's past and to its future. After his retirement he was the moving spirit and founding president of the Stanford Historical Society, now flourishing. It is doubtful that any faculty member in his time was more constantly and deeply involved with the Stanford Alumni Association's activities in behalf of the future welfare of the University. For many years he was the director of the sparklingly successful Alumni Conference program, an early experiment in the concept of "continuing education" in which the Stanford Alumni Association has been a notable pioneer in American higher education. Near the end of his life he said half ruefully and half jestingly that he had finally concluded that he couldn't run Stanford. In truth, he had never tried to. But he never ceased in his efforts to sustain and advance it as a university of high degree.

Kurt Steiner, *Chairman*
Robert A. Horn
Robert C. North

Sokol/continued from page 19

Tony will be long remembered as a warm and stimulating colleague by all who came to know him at Stanford. He is survived by his devoted wife, Else, and by a son, Otto, of a previous marriage. Otto is a Stanford graduate in biology. He is also survived by a brother and sister living in Vienna.

Robert A. Walker, *Chairman*
Robert North
Kurt Steiner

CHAIRMAN FETTER'S REPORT TO THE ACADEMIC COUNCIL OCTOBER 8, 1982

During spring quarter, under the chairmanship of Professor David Abernethy, the Fourteenth Senate heard a report from Professor Charles Lyons on the first full year's operation of the Western Culture program as a University requirement. The program seems to be running well, even though the various tracks still differ on the importance of the core list of books that should provide a common intellectual element. With few exceptions, the different tracks attract a good number of regular faculty members as teachers, but there is some concern about providing suitable released time. Another problem is the heavy teaching load of lecturers in the program: preparation, classroom time, and correcting examinations and essays leave them little time for their own scholarly work.

Several times during the quarter, President Kennedy commented on the potential effects on universities of developments in Washington. Two matters were of particular importance. First, financial support for students, at both the undergraduate and graduate level, depends on final congressional decisions about student support. If some of the proposed federal economies actually occur, they will affect all students—particularly those in private institutions. Second, federal support for research carried out by small businesses promises to reduce the universities share of federal funds for basic research.

As is usual in spring quarter, the Senate heard reports from Dean Lieberman and Provost Hastorf on affirmative action for graduate students, research associates, and faculty appointments. Stanford's overall achievement in recruiting minority graduate students is good, but close inspection shows that the overall percentage is skewed by outstanding recruitment of our professional schools. Our achievement in recruiting minority students for Ph.D. programs is less impressive, but that may reflect economic self-interest in these days of shrinking opportunities for faculty positions.

Affirmative action for women faculty is improving (although slowly). For minority faculty, 1981-82 was our best recent year. Continued effort will be needed, however, as there is some evidence that the minority pool is decreasing.

The discussion of faculty affirmative action raised the issue of evaluating scholarly progress. Women and minority faculty members are likely, in increasing numbers, to carry out nontraditional scholarship. As yet, we have no clear basis for evaluating the quality of such research.

The Senate heard a report by Dr. David Weber on the University Libraries. In terms of what can be bought by the budgeted funds, the libraries remain healthy because the recent marked increase in costs has now moderated. In contrast, the problem of a large backlog of materials waiting to be processed stimulated critical discussion. Dr. Weber explained that the new system had led to unanticipated delays, exacerbated by the loss of stored information owing to the failure of magnetic disks. At the time of the report, the acquisition of an IBM 3081 computer dedicated solely to the Research Libraries Group was expected to improve the situation; some weeks later, President Kennedy announced that library processing had speeded up. We may expect that the subsequent performance will be reported to the Senate during coming months.

Provost Hastorf announced a restructuring of the administrative support for undergraduate education. For the past decade, the Dean of Undergraduate Studies has had the responsibility for undergraduate programs. Acting on the recommendations of an *ad hoc* committee, Provost Hastorf decided that the direct responsibilities for undergraduate academic programs (including faculty appointments and budgetary decisions) will henceforth reside in the H & S deanery, with Professor Carolyn Lougee as the new associate dean for undergraduate programs. The general oversight of undergraduate education and its coordination across schools (along with other Vice-Provostial duties) will remain with Professor Herant Katchadourian, the vice-provost for undergraduate education. In response to questions, Provost Hastorf assured the Senate that the restructuring reaffirms support for undergraduate education. Separating these functions clarifies the position of undergraduate studies, whose dean earlier served both as administrator and advocate.

The report of the *ad hoc* committee on the adjunct professoriate occupied several Senate meetings. This subject arose from a request by the School of Medicine to change the titles of its adjunct professors. Preliminary discussion in the Senate revealed that the adjunct professoriate raised other problems, and the Senate appointed a review committee, chaired by Professor John Merryman. The conclusions and recommendations of that committee were accepted by the Senate. In brief, the Senate agreed to change the titles of "Adjunct Professor" and "Professor of Clinical Subject" to reflect more clearly the functions of these faculty members. The new titles will read, for example, "Professor of Classics (Teaching)" or Professor of Anesthesia (Clinical)." In addition, the Senate adopted the committee's recommendation that this non-tenure line (as it will be known) should include an additional rank of Associate Professor. The committee also considered whether the Principal Investigator (PI) status should extend beyond the ranks of the Academic Council. It concluded that such an extension was inconsistent with the Academic Council's responsibility for the scholarly program of the University. In contrast, some members of the Senate urged the creation of an additional rank in the research staff with the PI privilege, since certain large research projects could

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Entrepreneurs...

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starting this company, it got to be more expensive."

Their company motto is actually pitched to the parents of Stanford students: "Put your kid through Stanford for only $20."

The "Cookie Habit"

In 1977, a journalism undergraduate at Stanford had the idea to start her own cookie store in the Stanford Shopping Center. "It took many proposals to the Shopping Center's leasing committee, but they eventually went for the idea and allowed us to move in," said Marcia Hadeler. She and her sister, Marlowe Savelle, now run a thriving business.

"Klutzes"

Four years ago. three Stanford graduates pooled their resources to author and publish *Juggling for the Complete Klutz* ($8.95). At last count, the book had sold 400,000 copies and has spawned the creation of a new publishing business, called Klutz Press.

Running their business from a two-story house that they now rent in Palo Alto, founders John Cassidy, B.C. Rimbeaux, and Darrel Hack decided to publish and distribute the book themselves. After having their original manuscript turned down by several large publishing firms. Klutz Press has recently published its second book, *The Hackey-Sack Book*, which already has sold 30,000 copies. "At this point," said Cassidy, "we'll be ready to rest on our laurels in a few more years."

Silver Label Recording

John DiLoreto, an electrical engineer now enrolled in the Graduate School of Business, runs a recording studio, Silver Label Recording, out of his home. A former marketing manager for Itel's microprocessor development systems, he's also a member of the rock band Crossfire.

"I feel comfortable on stage," he told the *Palo Alto Weekly*, "but I'm even more qualified behind a mixing console." Such groups as the Grateful dead and the Kingston Trio trace their origins to the Peninsula.

Wasp venom

Bill Hoskins, a masters student in exploratory geophysics, collects and freezes thousands of yellow jacket wasps so that their venom can be processed and then be used as a vaccination drug for people who are allergic to wasp stings. His wasps are worth $700 a pound, Hoskins thinks that the 10 pounds he collected last summer will pay off half of his living expenses for the year.

Graduate student indebtedness seems to be part of the degree

Roughly half the nation's college graduates eventuallv pursue some form of graduate education, according to a new study of recent trends in graduate and professional education.

The study was prepared for the National Commission on Student Financial Assistance by Assistant Prof. Michael Garet of the Stanford School of Education, Project Director Paul Butler-Nalin of the Stanford Graduate Division and the Consortium on Financing Higher Education, and Scott Bassage, graduate student in education at Stanford.

During the past decade, both federal and foundation fellowships for graduate students have declined and, in some cases, disappeared. Universities have partially compensated for this loss by committing a larger share of their funds to graduate support. Federal work-study funds also have been increasingly applied to graduate students.

Graduate participation in federally guaranteed student loan programs has risen, as have the cumulative debts incurred by graduate students.

A recent survey of graduate students at Princeton showed educational loans for those who have borrowed range from $4,600 to $7,000.

A recent Stanford survey shows more than half the graduate students responding expect to carry total educational debt—graduate and undergraduate-averaging $9,500. About 60 percent of doctoral students and 70 percent of those at the master's level expect to have educational debts by the time they get their degree.

Cumulative graduate loans incurred by doctoral students averaged $5,500 after 3.3 years of study. Those enrolled in Master of Arts programs averaged $7,250 and those in Master of Science programs $5,600.

These figures are consistent with results obtained by the Fund for Improvement of Post-Secondary Education and institutional data, the researchers note.

The magnitude of debt suggests that "generally graduate students are frugal borrowers," the authors note. "Doctoral students are accumulating debt at a more modest rate per year than master's students, but have several more years of study to finance.

"Master's students, on the other hand, appear to borrow more, probably due to the fact that less support is available to them.

"The strong impression. . .is that educational debt financing has become an integral part of graduate studies across the whole range of graduate degree programs in the arts and sciences, humanities and engineering."

No systematic attempt has been made to determine the full extent of graduate student borrowing nationally, but the researchers estimate that in fiscal 1981 more than a half million graduate students borrowed $1.02 billion through guaranteed student loans; 66,300 graduate students borrowed $15.8 million through national direct student loans; and 49,000 were partially supported by work-study funds totalling $27.5 million.

The report includes the following description of aggregate trends in graduate study nationally:

a. The number of doctorates awarded each year reached a peak of about 34,000 in 1972-73, and it has declined by roughly 2,000 since then.

b. The number of Master's degrees awarded each year reached a peak of about 318,000 in 1976-77, and it has declined by more than 15,000 since then.

c. The number of first-professional degrees awarded each year (primarily degrees in medicine and law) has increased throughout the decade, and it is expected to increase somewhat beyond the number currently granted (about 70,000).

d. More than half of the students in Master's and doctoral programs are enrolled part-time. First-professional enrollment, however, remains predominantly full-time.

e. According to two indicators of demand for graduate education (number of applications and admissions test volume), the demand for graduate education has declined somewhat since the mid-'70s.

f. The proportion of women among graduate students has risen steadily over the past decade, from about 40 percent to nearly 50 percent.

g. Foreign students constitute an increasing proportion of graduate enrollment and degrees conferred, and, if trends in undergraduate education are any indication, this proportion is likely to continue to grow. Foreign participation appears particularly large in certain disciplines—for example, engineering, the sciences, and economics.

Trends in enrollment and degrees granted differ across graduate disciplines. In the biological sciences, enrollments and graduate degrees have increased over the past decade, while, in the physical sciences, they have declined.

In engineering, enrollments have increased, but the number of doctorates granted has declined. The humanities have remained stable, while the pattern in the social sciences is mixed.

Device produces laser-like light

Chemists working at Stanford have constructed a laser-like light source capable of producing extremely short wave-length ultraviolet radiation using off-the-shelf hardware.

The device makes it possible for scientists in almost any laboratory to study a regime important for research.

The device represents the first broadly tunable coherent (laser-like) light source producing extreme vacuum ultraviolet light (XUV), light of so short a wavelength that no window materials are known to transmit this light. If the light is aimed at any solid material—glass, quartz, sapphire, it will be absorbed and none will shine through.

It is also the first time such a coherent tunable light source has been produced in a laboratory. Generally scientists have had to go to large synchrotron radiation sources at places like the Stanford Synchrotron Radiation Laboratory (SSRL) to get XUV.

The work will be published in an upcoming issue of *Chemical Physics Letters*. It has been supported by the National Science Foundation and the Office of Naval Research.

"It's good for so much, I almost don't know where to start," said Richard N. Zare, Shell distinguished professor of chemistry at Stanford, the team leader.

"Its advantages are that it has been done in the laboratory with all commercially-existing materials. Anyone can do it; and moreover, they will.

"It represents a practical breakthrough for the generation of this very difficult wavelength in the laboratory."

The work was performed by Zare, two Stanford postdoctoral students, Ernesto E. Marinero and Charles T. Rettner, and by Dr. Andrew H. Kung, managing scientist of the San Francisco Laser Center, a joint operation between Stanford and UC-Berkeley.

XUV is ultraviolet radiation shorter than 104 nanometers (a nanometer is one billionth of a meter). This is the region where the hydrogen molecule, the commonest molecule in the universe, first absorbs energy.

"At this wavelength many materials ionize," Zare said. "Some are excited, and others fall apart. It's a region which chemists have wanted to get into because there's so much action."

The Stanford method takes light at 300 nanometers produced from a dye laser, and triples it by focusing the light into argon gas.

"The laser is a pulsed high intensity source," Zare said. "The gas is injected into a vaccum chamber in tiny puffs, much like gasoline vapor is injected into a car engine by the carburator nozzle.

"Using such a pulsed nozzle valve whose opening and closing is synchronized with the firing of the laser, wavelengths have been generated and tuned continously between 97 and 102 nanometers."

"One can envision that some, not all, synchrotron experiments can now be done with advantage in the lab," he said; and he added, "some entirely new experiments are now possible because of the exceptional brightness and wavelength purity of this new light source."

Carpools

Carpool wanted to Santa Cruz from Palo Alto M, W, F. Call Mark, 856-2428.

Ride needed SF-Stanford-SF Glen Park/Diamond Heights. Call Brandt, 7-1171.

Join existing carpool. Leaves Homestead and Foothill Expressway to Stanford. M-F, 8-5. Call Jeannette, 7-9627.

I'm looking for a carpool between S.F. and Stanford (preferably from the Haight-Ashbury) 4-5 days/week, approx. 9-5. Please call Nora at 431-9649 eves.

Looking for two persons to join a Mission Noe Valley-Stanford Univ. carpool. M-F, 8-5. Call John, 821-1665, or Yinon, 431-0951.

Radiological hazards panel

The Administrative Panel on Radiological Hazards Control will meet from 2:30 to 4:30 p.m. Thursday, Feb. 3, in Room 132 of Tresidder Union, according to chairman Prof. Wray Huestis, chemistry.

The meeting is open to all who are interested.

Proof of new evolution theory buried in Ethiopia?

Donald Johanson, the anthropologist who is now embroiled in one of the nastiest personal and professional feuds in all of science, said Monday, Jan. 17, he hoped to return to his "dig" in Ethiopia despite the fact he and all other scientists were thrown out of that country late last year.

Johanson, founder of the Institute of Human Origins in Berkeley, is the discoverer of Lucy, the three-million-year-old fossil remains of a female, who Johanson and others believe to be the earliest known discernible ancestor of homo sapiens. He has found other fossils as well which have convinced him that the widely-accepted family tree of human evolution needed correction.

Johanson told a class in Stanford's Human Biology Program that the proof of his theory is probably still buried in the Ethiopian rift valley.

"If I had a choice to work anywhere in the world, that's where I want to go," he said. "Ethiopia is really the hot spot."

Lucy, who is between 3 and 3.3 million years old (the dating is part of the dispute), is believed by Johanson and Tim White at UC-Berkeley to represent a hitherto unidentified species of hominid which they call Australopithecus afarensis. They believe afarensis is the ancestor of humanity, not Australopithecus africanus, as most anthropologists believed.

This put them into scientific conflict with many in their field, particularly the family of Louis Leakey in Kenya, which has its own version of the human family tree.

Other factions in the anthropological community have joined in the dispute. Public charges of grave-robbing, fossil stealing and CIA spying have flown across the anthropological community.

Last year Johanson and others were told that they could not dig in Ethiopia until the government rewrote its antiquities regulations, and 18 of them were told to leave the country. This exacerbated the animosity between the warring camps.

An article in the recent issue of *Science* magazine suggests that the disputes between the scientists played a role in the Ethiopian action. Johanson, for one, admitted in a book he coauthored, that he took a femur bone from an Ethiopian grave site for comparison with his fossils. The article quotes an Ethiopian student as saying this played a role in the government's action.

"I really did want a femur," Johanson told the class. "There was this graveyard. I talked to some of the people around there because I didn't want to get into trouble. They said it was an old grave, nobody knows whose it is. There were bones all over the place. We went out there and we looked at the bone, we compared the bone and we returned that bone.

"I addressed that question when I was there in December to the Ethiopian government. There is a faction of students which is associated with this guy (John) Kalb (a geologist at the University of Texas at Austin) who had dragged this up. . .and it's really a campaign by three or four people who would like to sort of smear our reputation, to do whatever they can."

Kalb was thrown out of Ethiopia on charges he was an agent of the Central Intelligence Agency. Kalb denied the charges.

"We brought up these points," Johanson told the students. "Essentially they said, definitely this had nothing to do with it."

Johanson said the government is trying to rewrite its regulations on antiquities which had been written under the old Imperial regime.

"They want to make stipulations about involving more and more Ethiopian students and Ethiopian scholars. Up to this point we have not been able to train Ethiopians, because the previous government really didn't allow many of these people to travel." Several students are being trained now.

Johanson told the class that fossils like Lucy are "borrowed" from the Ethiopians. After five years they have been returned to the National Museum in Addis Ababa.

"I was in Addis in the end of November, at which time I worked on part of the collection. It is well curated. . .it's a very primitive museum, it's nothing elaborate. But they're Ethiopian antiquities and they belong to Ethiopia."

Johanson said the period between two and three million years could hold the clue to whether this theory is correct. Very few fossils from that period have been found. The dispute over the age of Lucy, he said, doesn't change his theory.

One area that might hold important fossils is called the Awash, but until the government lifts its ban, no one will be able to get into that area. The feuding scientists also will have to decide which of several expeditions has priority in the Awash.

"If you try to do a job right and try to do it throughly it provokes not so much praise, as it does criticism and jealousy," he said.

—Joel Shurkin

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benefit from having senior members of the research staff able to serve as Principal Investigators. The Senate declined to adopt this proposal and, instead, approved the committee's recommendation.

In 1982-83, the Senate looks forward to a comprehensive report from a provostial committee on our overseas studies program, as well as reports from the various committees of the Academic Council.

This is a good opportunity to thank faculty and staff who serve on these committees, which have been firmly guided for the past eight years by the Academic Secretary, Professor Eric Hutchinson. I know that the Senate of the Academic Council joins me in expressing gratitude for his devotion and diligence, and in welcoming Professor Clara Bush as his successor.

Susan Rosse, daughter of economist, dies Jan. 22 in automobile accident

Susan Rosse, 28, research assistant at Lawrence Berkeley Laboratory, was killed early Saturday, Jan. 22, in a one-car accident on the Bay Bridge.

She was returning home to Berkeley from a family reunion in Palo Alto with her parents, Stanford Prof. and Mrs. James Rosse. She suffered massive head injuries and never regained consciousness before dying at Providence Hospital in Oakland.

Memorial services were held at 2 p.m. Tuesday, Jan. 25, at Stanford Memorial Church. Burial followed at Alta Mesa cemetery in Palo Alto. The family welcomed friends at home afterward.

Rosse graduated from Crescent Park elementary school, Jordan junior high, and Palo Alto High School. She received her bachelor's degree in economics from Stanford in 1976 and her master's from UC-Berkeley, where she worked with the environmental resources group. She was particularly interested in economic and environmental concerns in developing countries, and planned to become a staff scientist at LBL.

Besides her father, an economist, and her mother, Janice, an accountant for Hewlett-Packard, she is survived by her sister, Anne, a Stanford freshman, and two brothers, Stewart, a financial aids officer for Stanford Medical School, and Jay, a student at Grinnell College.

The family prefers memorial contributions to charities of individual choice or to the Stanford Class of 1976.

A. Clark Griffin dies in Texas

Dr. A. Clark Griffin died suddenly after a brief illness on Dec. 13 in Smithville, Tex., at the age of 64.

Known to many in the Stanford community, Griffin came to Stanford as a research associate in biochemistry in 1947, shortly after receiving his Ph.D. in biochemistry at the University of Wisconsin. In 1954 he accepted an appointment as director of biochemical research in the M.D. Anderson Hospital and Tumor Institute of the University of Texas System. From 1955 to 1961 he held a concurrent appointment as professor of biochemistry in Baylor University. In 1981, on retirement form the M.D. Anderson Hospital, he became director of the University of Texas Cancer Research Center at Smithville, Tex.

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the months of September and October:

FEDERAL

New Contracts

Robert H. Cannon and Thomas O. Binford, aeronautics and astronautics, "End-Point Control of Flexible Robots, Path Calculation and Tracking Hand Control," $902,009 from the Department of the Air Force for 3.5 years.

Arthur I. Bienenstock and Herman Winick, Stanford Synchrotron Radiation Laboratories, "SSRL Operations and Capital Equipment," $14,500,000 from the Department of Energy for 2 years.

John Ross, chemistry, "Experimental and Theoretical Research on Efficiency of Chemical, Thermal and Coupled Processes," $336,000 from the Department of Energy for 3.5 years.

William E. Spicer and Ingolf E. Lindau, Stanford Synchrotron Radiation Laboratories, "Beam Line and Associated Work," $1,375,619 from the Department of the Navy for 2 years.

Contracts—Amendments

Calvin F. Quate, W. W. Hansen Laboratories, "Acoustic Microscopy at Cryogenic Temperatures," $215,814 from the Department of the Navy for 2 years.

Charles H. Kruger, Robert H. Eustis, Morton Mitchner, and Sidney A. Self, mechanical engineering, "A High Magnetic Field MHD Generator Program," $330,000 from the Department of Energy for 1 year.

James D. Plummer, Stanford Synchrotron Radiation Laboratories, "Computer Aided Design of Integrated Circuit Fabrication Processes for VLSI Devices," $2,832,011 from the Defense Advance Research Agency for 3 years.

New Grants

James O. Leckie, civil engineering, "Spectroscopic, Kinetic and Thermochemcial Study of Transition Metal Adsorption at the Oxide/Aqueous Interface," $254,000 from the Environmental Protection Agency for 2 years.

Grants—Amendments

Peter M. Banks, Stanford Electronics Laboratories, "Study of the Dynamics of Atmosphere, Ionosphere and Magnetosphere Interactions," $200,000 from NASA for 1 year.

Denis A. Baylor, neurobiology, "Neural Signalling in the Retina," $280,344 from NIH for 1 year.

James P. Collman, chemistry, "Reversible Oxygen Electrode: Collaborative Search for New Catalysts and Physical Textures," $200,000 from NSF for 1 year.

Robert F. Kallman, radiology, "Training Program in Cancer Biology," $443,802 from NIH for 1 year.

John Farquhar, Nathan Maccoby, and Peter D. Wood, "Stanford Five City Multi-Factor Risk Reduction Study," $1,178,471 from NIH for 1 year.

John Farquhar, Nathan Maccoby, and Peter D. Wood, "Stanford Five City Multi-Factor Risk Reduction Study," $1,010,293 from NIH for 1 year.

Gerald J. Lieberman, Provost's Office, "Graduate Fellowship Program," $1,188,896 from NSF for 5 years.

James D. Meindl, electrical engineering, "Fast Turn-Around Facility for Very Large Scale Integration of Capital Equipment," $756,000 from the Defense Advance Research Agency for ½ year.

Kenneth Melmon, medicine, "Conjugated Vasoactive Agents as a New Class of Drugs," $328,176 from NIH for 1 year.

Walter E. Meyerhof, physics, "Atomic, Molecular and Plasma Physics Program," $256,200 from NSF for 2 years.

Allen M. Peterson, Stanford Electronics Laboratories, "SETI Instrument Systems Research," $270,000 from NASA for 1 year.

Norman E. Shumway and Stuart E. Jamieson, cardiovascular surgery, "Orthotopic Heart Transplantation," $349,525 from NIH for 1 year.

NON-FEDERAL

New Grants

Bernard Roth, mechanical engineering, "The Kinematics of Robotic Systems," $791,371 from Systems Development Foundation for 5 years.

American role in El Salvador vigorously debated

Withdrawal of U.S. aid from El Salvador would give "complete control" to Roberto D'Aubuisson, leader of the Constituent Assembly, and "the worst elements in the government would soon take over," a State Department official said Thursday, Jan. 13, at Stanford.

This spontaneous remark by Melvin Levitsky, senior deputy assistant secretary of state, came toward the end of a two-hour panel session attended by more than 400 in Kresge Auditorium.

Armando Olivas, director of public affairs for Christian Legal Aid, a human rights group working with the Catholic Church in El Salvador, said: "They would become desperate. . .D'Aubuisson would make many mistakes, and these would be his last."

Patricia Weiss Fagen, human rights activist just returned from El Salvador, said simply "as long as the Salvadorean government is run by the military, human rights will not be respected. Stable democratic institutions won't survive."

America's primary objective has to be peace through negotiated settlement, she added.

'Dirty war'—ADA chief

Father Robert Drinan, Georgetown University professor of law, president of Americans for Democratic Action, and former Massachusetts Congressman, said the U.S. should end its support for "the hidden, dirty war" in El Salvador.

"Our country has intervened on the wrong side of history," just as it did in Vietnam, he added, drawing the most sustained applause of any speaker.

President Reagan is involved in "gunboat diplomacy," he declared. "This is a war against the campesinos (poor rural farmers) and in favor of the 14 families" who ruled El Salvador.

A liberation theologist, Drinan said most of those opposed to the regime are not communists, Cubans or Marxists. The Catholic Church has been persecuted and all those who want reform have been repressed.

Olivas said more than 8,000 political assassinations were reported in 1980, nearly 12,000 in 1981, and almost 6,000 last year. While these admittedly imprecise statistics have been cited as signs of progress, he added, in fact the level of violence rises and falls in ways that show "the apparatus of the state. . .is responsible for repression. . . . Nothing has changed."

Collective assassinations continue, and most victims are tortured before they are killed.

Fagen agreed that "the structures are still very much intact for murders." She works with the Refugee Policy Group in Washington and heads Amnesty International's Refugee Committee.

Schools closed, teachers killed

Individual security "remains in jeopardy" throughout El Salvador, and democratic institutions are being destroyed by war. One third of the nation's primary and secondary schools have been closed, 1,400 teachers brought into the cities from the countryside, and hundreds of teachers have been slain or have disappeared.

While "both sides are responsible for the deaths" most of the violence is perpetrated by pro-government forces, she indicated. When her group interviewed a member of El Salvador's new human rights commission, he freely acknowledged he was a member of the national police and described all other human rights groups as "subversive."

While U.S. diplomats are trying to exercise a moderating influence on the regime, she said, the dominant American concern for "winning" the civil war is simply "incompatible with human rights."

In his prepared remarks Levitsky said "We do not ignore the considerable problems which continue to exist in El Salvador.

"There continue to be abuses by government forces of the civilian population. The judicial system is in disarray. There have been attempts by forces on the extreme right to reversed established reforms by the Duarte government and by the Magana government which succeeded it. That has been particularly true with regard to the program of land reform which we support.

"But we have seen over the last two or three years a decrease in the level of violence against civilians on the part of the Salvador armed forces. There has been a free and fair election for a constituent assembly. . . .

"We will continue our economic and security assistance programs as long as the following goals remain in place:

"* Continuation of economic and land reforms;

"* Further efforts to curb abuses of authority by the government security forces;

"* Maintenance of a reasonable timetable for the electoral process and further development of a democratic political process;

"* Providing the opportunity to those elements of the left which wish to participate peacefully in the democratic process. We support a dialogue between the government and those forces."

Despite thousands of political assassinations, Fagen noted, there have been only two cases in which alleged abuses by the military were investigated, both involving American victims.

Robert Wesson, senior research fellow at the Hoover Institution, said it was "a mistake" for the U.S. to get involved in El Salvador, but now "there is no easy answer, no easy way out."

He described the thousands of assassinations as "little more than pimples" on the face of the country's basic problems. Disagreeing with Drinan, he said the war was not started by President Reagan, but goes back historically at least 50 years. No matter who runs for President in 1984 "it is very likely U.S. intervention will not end" after the election.

The program is sponsored jointly by the Stanford Central American Action Network, a voluntary organization; The Koret Fund; and the Latin American studies program at Stanford.

New machine may be able to detect life in outer space

Scientists at Stanford University are perfecting a prototype of a machine which may become the most powerful radio signal receptor of its kind, capable of receiving radio signals from the galaxy and detecting possible life outside our solar system.

Known as a "multichannel spectrum analyzer," scientists hope that this powerful "ear" will allow them to receive signals from intelligent life in our galaxy.

Development of the machine is part of the Search for Extra-Terrestrial Intelligence program (SETI), run by the National Aeronautics and Space Administration (NASA).

"The idea of SETI is to try and detect radio signals that might be transmitted by other civilizations out in the galaxy," explains program head Dr. John Billingham. "We believe on many different grounds that life is widespread in the universe and that intelligent life is widespread."

The machine is being built under the supervision of Stanford Electrical Engineering Prof. Alan Peterson and researcher Ivan Linscott in collaboration with NASA's Ames Research Center in Mountain View and the Jet Propulsion Lab in Pasadena.

Once the prototype is completed, it will be taken down to NASA's Goldstone Observatory in the Mojave Desert. There, it will be hooked up with NASA's Deep Space Network radio telescope.

The device will work by separating the radio spectrum into 74,000 channels and analyzing the signals. Using a "sophisticated data processing system," the machine will aide the project's researchers in distinguishing signals which occur naturally in the galaxy from any that might be artificial.

After extensive testing, the machine will be sent to the Arecibo Observatory in Puerto Rico, where the largest radio telescope in the world is located, for testing. It will return to Stanford for modifications, and then go through another round of testing. After about five years, said Billingham, about six machines will be built with a capacity of anywhere from 10 to 100 million channels.

Editor of *Economist* says that both U.S. and Britain face huge structural shifts in their 'sick' industries

Both British Prime Minister Margaret Thatcher and President Reagan face "very great danger of giving good (economic) policies a bad name—if they fail," a British editor said Friday, Jan. 14.

Andrew Knight, editor of *The Economist*, spoke at an advisory board meeting of the Stanford Center for Economic Policy Research.

Both leaders have "changed the terms of debate in ways which even some of their opponents welcome," he said.

Both the British and American economies face "huge structural shifts" with "terminally ill" industries, like steel, he added. These have been compressed in a two- to five-year period where two or three decades might have been more appropriate for the change.

They problems may well prove "extremely intractable" for both Thatcher and Reagan—as well as their successors, he declared.

The greatest difference between Thatcher and Reagan is the Falklands, which gave her "a new lease on political life," Knight said. "That's a very important economic fact."

The current harsh economic realities could lead to a political and social polarization similar to the Depression era in America, he noted.

In Britain, "large numbers of the business community complain because life is so hard," Knight said. "In New York, I heard reputable bankers say 'What's wrong with inflation?" Large foreign debts provide the basis for "a vested interest in the re-ignition of inflation," he noted. This would permit payment of the loans in depreciated currency.

Both countries "certainly have a vested interest in return to (economic) growth," Knight said.

If both Thatcher and Reagan were to suffer political defeat "in sour circumstances," he added, "they will have failed largely because of what's going on around them" rather than because of "what they tried to do."

Although it has recently agreed to modest cuts, the Reagan Administration may be the first to seek "massive increases in defense spending financed by tax cuts," he quipped.

Whether Thatcher has held the government deficit steady, reducing it as a share of gross national product, Reagan has not, he noted. Thatcher has increased taxes by three percent as a share of national income.

The U.S. saving rate remains "remarkably low" by international standards.

In Britain, the recession has cut the inflation rate in half—to about six percent—"a remarkable achievement," Knight said. But declining inflation now is threatened by "the fall of the pound" in international money markets.

While it has dropped from $2.40 to $1.60 against the dollar it "probably is too high now," he added.

Unlike Reagan, Thatcher does not have to worry about any idea of financial collapse in the banking community. British banks, once chastised "by papers like ours" of a "heads in the sand" attitude on foreign lending "now smell like roses," Knight said.

The new French Socialist government "went straight for government reflation," nationalizing industry and incurring "enormous deficits," Knight said. As a result the French franc "would have collapsed" without strong protective measures by the government and "massive help" from West Germany.

Knight serves as a member of the CEPR advisory board. William Hewlett has been elected its chairman, effective next September, succeeding Edmund Littlefield. CEPR is directed by Prof. James Rosse, economics.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

15003-LL (JCC:5588) LIFE SCI RES ASST I: Irregular schedule; asst in production & assay of monoconal antibodies, incl establishment of primary cell cultures fr both malignant & normal human tissue; maintenance & subpassage of continuous lines; fusion of cells in presence of polyethylene glycol; selection of hybrid cells in media containing metabolic inhibitor cloning in semisolid media & by limiting dilution in microwell liquid cultures; solid-phase radioimmunoassays; enzyme-linked immunosorbent assays; will make theoretical contributions to project based upon academic bkground; QUALIFICATIONS: BS in Biology in order to understand of & exp w/ immunology & immunologic tests & procedures; exp w/ cell culture, esp w/ liquid suspension cultures of lymphoid or other nonadherent cells.; C05; $1670-2086.

15002-LL (JCC:5588) LIFE SCI RES ASST I: Irregular schedule; asst in production & assay of monoconal antibodies, incl establishment of primary cell cultures fr both malignant & normal human tissue; maintenance & subpassage of continuous lines; fusion of cells in presence of polyethylene glycol; selection of hybrid cells in media containing metabolic inhibitor cloning in semisolid media & by limiting dilution in microwell liquid cultures; solid-phase radioimmunoassays; enzyme-linked immunosorbent assays; will make theoretical contributions to project based upon academic bkground; QUALIFICATIONS: BS in Biology in order to understand of & exp w/ immunology & immunologic tests & procedures; exp w/ cell culture, esp w/ liquid suspension cultures of lymphoid or other nonadherent cells.; C05; $1670-2086.

17031-TC (JCC:5596) LIFE SCI RES ASST II: Primary respon for independent design & implementation of various sleep res projs, incl cardiac function, respiration, & gastro-intestinal sys studies during wake & sleep on infants, children, adults, & the elderly; respon for the development & implementation of new res & data analysis strategies & tech; compile & interpret data; write up results for scientific publication; train new personnel & schedule work assignments of staff; QUALIFICATIONS: exp working w/ subjs, data analysis, & collection methods, sleep technology; BS degree or equiv edu & exp; must have CPR certificate; working knowl of computers required; working knowl of varied testing & recording instruments.; C06; $1854-2312.

28216-LL (JCC:6860) OTHER RES ASST II: 50%, Tue-Wed, 8-5; Thur, 8-12; act as Nurse Assessor/-Proj Coord for Stanford Arthritis Ctr Proj #12, Arthritis Health Professionals; identifying Proj patients; developing & maintaining Proj files; reviewing & abstracting VA clinical records; obtaining informed consent; admininstering baseline data & outcome questionnaires to Proj patients at 6 month intervals; acting as liaison between Proj patients & VA; QUALIFICATIONS: willing to travel to patient homes in order to administer questionnaires & perform health testing; possess effective commu skills, verbal & written; able to interact w/ peers, other professionals, & patients; nursing degree & at least 1 yr prev related exp or at least 3 yrs related work exp; some bkground in survey res, programming, data analysis, and/or health assessment preferable.; C06; $927-1156.

19646-DS (JCC:8880) MISC PROFESSIONAL: 50% or 75%; act as Music Guild Program Coordinator; liaison between volunteers & univ agencies; oversee volunteer mgmt of membership drives, benefit fund raisers, community outreach programs; serv as consultant & admininstrator to Guild officers, board & committees; QUALIFICATIONS: at least 1 yr dir exp in volunteer mgmt, fundraising, arts admin or equiv exp; knowl of music helpful; knowl of Stanford community and/or other academic environ desirable; must work effectively w/ faculty, staff, students & a diverse group of volunteers; requires independent decision-making, judgment & originality in identifying needs, determining alternatives & organizing Guild membership; typ own corresp & oversee record keeping for Guild operations.; C04; $756-940.

31840-VW (JCC:1954) Dir of Principal Gifts: Reports to VP of Development; respon incl identifying & qualifying prospects for gifts to Stanford of $5 million & above, & for insuring their solicitation; development & production of detailed strategy documents for each prospect; maintaining a detailed record of progress of each solicitation; advisor to VP of Development regarding the status of all principal solicitations incl the effect univ policy may have relative to attitudes & interest of Principal Prospect group; QUALIFICATIONS: 10 yrs or equiv exp at highest levels of Univ Fundraising; excel verbal & written commu skills; extensive regular interaction w/ Trustees, Univ President & chief academic officers; demonstrated effectiveness in constructing strategic solicitation plans for gifts of extra-ordinary size; Stanford exp desirable.; N11; EN.

25924-AW (JCC:2036) Admin Svcs Mgr II: Asst Dir respon for all operational, admin, personnel, & budgetary aspects of self-operated & leased svcs in union incl: facilities & utilities; a sundries store; a ticket offc; mtg rms & conference spaces; travel svc; a full service bank; & hairstyling shop; shall be the renovation & expansion mgr; respon for administering some TMU central svcs incl personnel mgmt; capital budgeting process; clerical & informa support svcs, etc; in absence of Union Dir, the Asst Dir shall represent the Dir at mtgs & will act on her behalf; QUALIFICATIONS: require BA/BS in Bus Admin, Facilities Mgmt, or equiv exp; significant facility/property/proj mgmt exp; significant exp in supvn of exempt/bargaining unit employees; strong organizational skills; good written/verbal commu skills; willingness to work long or odd hrs; strong interpersonal skills; successful financial mgmt exp; ability to function effectively in univ setting; C07; $2113-2724

Bargaining unit

33242-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 60%, 8-1pm; asst w/ research on natally acquired herpes simplex infections & transfusion acquired cytomegalovirus infections in newborns; respon for maintaining cell culture tubes & observing them for cytopathic effect due to herpes simplex; separates sera, records patient name & sera number & stores sera; coord receipt of specimens w/ res R.N.; prep & infects human amnion cells for typing of HSV strains; performs indir hemagglutination assays for antibody to cytomegalovirus twice a week; shares in respon for genl lab maintenance; QUALIFICATIONS: aseptic tech, genl lab eqpt standard operatihng procedure & tissue culture tech helpful; dependable, accurate; ability to learn sufficient theory to trouble shoot procedures at bench level; l yr lab exp or equiv in college level sciences; min high sch'l level biology & chemistry; ability to interact w/ doctors, patients & lab personnel.; A18; $ 7.50.

36182-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; 9-5; routine but skillful prep of lipoproteins fr rat & human plasma; membrane fractionation w/ sucrose gradients; binding assays incl 125I-HDL binding to ovarian membrane & to liver membrane; treatment of rats w/ hormones or other agents; killing rats for plasma or experimental tissues; immunizing rabbits w/ antigens; QUALIFICATIONS: basic lab exp such as accurate pipetting, preparing solutions & buffers; some exp in dealing w/ instruments (such as low speed, medium speed & ultracentrifuges, spectrophotometers & scintillation & gamma counters) is preferred; willing to kill rats or bleed rabbits; ability to take respon to organize & finish assays, keep raw data & calculate them.; A24; $ 8.65.

39085-AW (JCC:8150) CARPENTER MAINT/MUS: TMS Unit; 7:30-4pm; builds, repairs & installs counters, cabinets, benches, partitions, floors, doors, stairs, ladders, bldg framework, etc; sel specified typ of lumber or other mat'l; sel & install various sound insulations mat'l; operates sanders, planners lathes, power saws, & joiners; repairs & maintains roofs; repairs or replaces chalk & bulletin boards; working fr blueprints, sketches, or verbal instruction constructs & repairs structural wood work; keep tools & machinery of trade in good condition; answers emergency calls, etc; QUALIFICATIONS: requires full journeyman level skills; completed documented Carpenter Apprentice program.; A33; $10.71.

19645-DS (JCC:8890) MISC TECHNICIAN: TMS Unit; 50%; oversee & prov tech serv for public events & rehearsals in Dinkelspiel & other locations; perform routine maintenance of stage & auditorium eqpt; operate lighting, audio & video eqpt; coord activities w/ faculty, staff, students & other performers to prov best use of eqpt & services; supv part-time students & other tech personnel during performances; determine own operating prior; QUALIFICATIONS: knowl of basic lighting design, & operation & maintenance of theater lighting sys; thorough knowl of audio & video recording & playback sys; ability to perform basic carpentry, electrical & mechanical maintenance & construction; ability to commu effectively w/ diverse users under time & performance pressure.; A30; $ 9.97.

Nonexempt

28217-PM (JCC:2496) OFFICE ASST I-SPEC: Offc Asst for Data Bank Network Post-Marketing Drug Surveillance Proj, the Outcome of Rheumatoid Arthritis Proj, & the Auranofin Surveillance Proj; prep & mail proj mat'ls to participating Data Bank Ctrs; collate & mail Outcome assessment questionnaires to approx 300 patients; follow-up on non-responders via mail & phone contact; request med & financial informa fr hospitals & proj patients; maintain patient & proj files; typ reports & corresp; xerox, collate, & distribute proj corresp, etc; QUALIFICATIONS: typ 50+ 1 yr offc training exp preferred; able to work w/ public & detail; some familiarity w/ med terminology or ability to learn; send appl/resume to Connie Hartnett, 701 Welch Road, Suite 3301.; B08; $1078-1130.

16280-PM (JCC:2562) SECRETARY III: Full range of sec'l respon for Genetics professor w/ a large, active & diverse program; receive, screen & use of judgment in referring calls & visitors to the prof., his staff or independently making appts; sort mail; set up, maintain & revise as nec, all offc files; prep check advances, expense reports, work orders & purchase orders following prescribed financial guidelines; compile non-tech data for mtgs, reports & reviews, etc; QUALIFICATIONS: typ 75-80; prior sec'l exp; genl knowl of biological vocabulary - some science courses desirable; prior exp w/ word processor desirable; prior univ or med sch'l exp desirable; send appl/resume to K. J. Carpenter, S-337, Med School.; B14; $1440-1514.

22014-BP (JCC:2596) SECY II-SPEC: Independently execute assigned bklog of work for the office; typing of tech papers, proposals, corresp, prep purchase reqs, expense reports, check requests & interdept'l requests; willing to learn word processing eqpt; perform genl offc duties for 2-4 faculty members; run errands, distribute mail; answer phone, etc; QUALIFICIATIONS: typ 70-75; 2-3 yrs of genl offc exp; knowl of tech typing helpful; send appl/resume to Judith Haccou, Terman Eng. Ctr 551.; B12; $1310-1373.

33715-PM (JCC:2714) MED SERV ASST III-SPEC: 7:45-4:30; respon for the day-to-day handling of patient inquiries either by phone, in person or thru written corresp; primary respon is to promptly & satisfactorily respond to patient's concerns in a comprehensive manner; requires intensive knowl of physician billing, medicare, med insurance billing as well as training in data retrieval for patient acctg & FPP policies & procedures; intensive patient contact; requiring high level of tact & diplomacy involving patient complaints or misunderstanding; maintain accurate acctg & billing; QUALIFICATIONS: typ 35; 1-2 yrs college edu w/ business & commu emphasis plus a min of 3 yrs exp in business offc dealing w/ public or equiv combination of both; knowl of commercial & gov't insurance billing procedures, & understanding of FPP policies; knowl of med terminology & procedures, basic business eqpt; contact: Barbie Padilla, 328-5461.; B12; $1310-1373.

44330-TC (JCC:2966) MEDICAL TRANSCRIBER: Willing to consider job share; daily transcription of rough & final Surgical Pathology reports; maintain Organ/Lesion file (index of organs & diseases) on a daily basis; retrieve informa; coord of tasks w/ other transcribers; use of IBM Offc/Sys 6 Word Processor & Mag Card A typewriter; some flexibility of hrs worked; shift differential applied to base salary if approp hrs are worked; QUALIFICATIONS: typ 70; med terminology, preferably pathology exp; 2-3 yrs transcribing exp w/ Word Processor; capability of maintaining Organ/Lesion file using SNOP & SNOMed nomenclature; contact: Leslie Culligan, Med Ctr, P-2020, 497-7211.; B14; $1440-1514.

31846-BP (JCC:5484) DATA AIDE II: Checks output quality; sorting & distribution of the output; works as a team w/ 2 other staff members & various campus units; bills users; answers routine questions; monitors output messenger service; acts as a resource for Computer Service users; typing, filing & writing short memos; order supplies & check routine data on budget statements; code & stage computer jobs; 1-3 hrs of terminal work/day w/ frequent interruptions; QUALIFICATIONS: typ 45; know or willing to learn WYLBUR, SPIRES langs; good interpersonal skills incl assertiveness; enjoy detail work w/ accuracy; good proof-reading skills; good writing skills; lift several 30-40 lb boxes of output daily; legible handwriting; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B10; $1189-1246.

31848-BP (JCC:2210) ACCOUNTING ASST III: Work w/ med develop't professional staff, Med Sch'l & Hospital depts, Univ gift-processing offc, & controller's offc in recording, transmitting, & acknowlg gifts to med ctr; duties incl transmittal of gifts into Univ & Hospital acctg sys; drafting & typing thank-you letters; answer inquiries; documenting & filing gift corresp; supv & is assisted by 1 non-exempt, full-time employee; overtime may be required when gift workload is heavy; QUALIFICATIONS: typ 60; excel grammar, spelling, punctuation, & typing; effective telephone comm; extraordinary atten to detail; good memory for names & figures; knowl of med terminology & of Stanford admin procedures useful; aptitude & exp in acctg; send appl/resume to Liz Trujillo, Office of Development, 301 Encina Hall.; B14; $1440-1514.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Feb. 1, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Hospital

MANAGER REG. ACCTS/CREDIT & COLLECTION—Patient Acctng — #5054 (B-5): Responsibilities: Under genl supvn of Asst Director of Finance for Patient Acctng. Manages operations of regular accts and Financial Counselling functions of a large dept. Develops, implements, evaluates and revised policies, procedures and reporting systems. Ensures the applicable policies and procedures of the Hospital and Dept are followed. Performs special projects as assigned. **Qualifications:** A Bachelor's Degree in Business Administration or a closely-related field, and a minimum of 3 yrs directly-related experience or an equivalent combination of education and experience, reqd. Must be able to communicate effectively, both verbally and in writing, w/ individuals of diverse bkgrds, on matters of considerable importance to the Hospital's overall financial condition. Strong abilities in the areas of planning, work organization, problem solving and the mgmt, reqd. Knowledge of computerized billing system desirable. Permanent, M-F, 8-5 pm. $14.85-22.57 hrly. Please contact Bradlee Yochem at 497-6361 or send resume to Employment and Recruitment (SUH), 770 Welch Rd, Suite 100, Palo Alto, Ca. 94304.

39452-PM ADMIN ASST I: 75%; fixed term, 2/7/83-6/30/83; 8-3; asst Business Mgr of FCPM in the admin of all common svcs of Dept; respon for grant/contract admin incl prep of budgets & coord of submission of proposals to grnting agencies; monitor mthly budget statemts; totally respon for processing of all dept personnel/payroll records; supv clerical staff activs; answer questions requiring judgmt, knowl & interpretation of Univ policies & procedures; QUALIFICATIONS: typ 45; demonstrated supvry ability; must be tactful & discreet; familiarity w/Univ procedures & policies helpful; grant/contract admin exp preferable; contact: Droni Moo, Med Ctr A106, 497-5639. $1386

Ph.D. oral exams

MONDAY, JANUARY 31

Ehud Israel Ronn, business, 12 noon, Room 243 GSB.

TUESDAY, FEBRUARY 1

Robert Lawrence Thornton, applied physics, "Monolithic Schottky Diode Storage Correlators for Signal Processing," 3 p.m., Applied Physics 202.

WEDNESDAY, FEBRUARY 2

James E. Corter, psychology, "Similarity and the Density Hypothesis," 1:15 p.m., Room 358, Bldg. 420 (Jordan Hall).

FRIDAY, FEBRUARY 4

Neal David Benezra, art, "The Murals and Sculpture of Josef Albers," 2:15 p.m., Room 101, Cummings Art Bldg. **George Edward Newell,** education and linguistics, "A Case Study/Protocol Analysis of Writing to Learn in Two Content Areas," 2:15 p.m, Room e114, Education Bldg. **Lyle R. Smith,** electrical engineering, "An Analysis of Area Routing," 3:15 p.m., Chemistry Gazebo.

Political terrorism may consume perpetrators—Johnson

Political terrorism is as likely to cause a revolution against its users as it is to serve them, according to Prof. Chalmers Johnson of the University of California at Berkeley.

His views are developed in a new chapter in the second edition of his book, *Revolutionary Change*, recently published by the Stanford University Press (217 pp, $17.50 cloth, $6.95 paper).

"Terrorism runs a high risk of turning potential revolutionary victory into defeat," he declares.

"Nothing has done more to embarrass or discredit revolutionary movements than their use of terrorism in gaining power, as happened with the Nazis in Germany, the Japanese Nationalists of the 1930s or the Khmer Rouge in Cambodia.

"Extensive reliance on terrorism by such movements in their efforts to seize power often condemns them to a continued reliance on terror in order to rule at all.

"During the 1970s several revolutionary movements with high potential for legitimacy appealed to an international audience for understanding and support, and often received it. But one wonders whether the PLO or the IRA, for example, would ever be able to overcome the heritage of their own past and exercise genuine political authority."

Between the mid-1960s and the late 1970s, there was a major shift from guerilla warfare to international terrorism. According to the Central Intelligence Agency, the number of such incidents rose from around 10 per year to an average of more than 300 in 1978 and 1979. Deaths rose from 34 in 1968 to 642 in 1980.

Contributing causes included

1) A series of frustrations for revolutionary movements in the main arenas of revolutionary violence—such as the Israeli victory in 1967 and Che Guevara's death;

2) An array of new terrorist weapons, including the letter bomb, remote-controlled high explosives, bazookas and other portable missiles;

3) Extensive international traffic in arms, particularly machine guns; and

4) A global expansion of mass media available for terrorist exploitation.

"The mass media clearly help to publicize terrorist causes, which may in turn trigger other terrorists' decisions to act," Johnson says. "The media also facilitate the training of new terrorists—by showing them the procedures of an actual operation, for example—and promote international links among terrorist organizations."

During the 1970s, he adds, "the Soviet Union, Czechoslovakia, East Germany, Cuba, Libya and the Popular Democratic Republic of Yemen operated centers for the training and support of terrorists.

"Other nations tolerated this activity because of various overriding national policies, including superpower detente, the West German government's policy of *Ostpolitik*, and the presence of large, legal communist parties in most Western European democracies.

"However, the climate of toleration began to change following the killing of German industrial leader Hanns-Martin Schleyer by the Baader-Meinhof gang in September, 1977, the killing of Italian Premier Aldo Moro in May, 1978, the IRA bombing of Lord Mountbatten in August, 1979, and the holding of American hostages in Teheran from 1979 to 1981.

"It became clear that much of the terrorism of the 1970s was not transnational but international, a form of surrogate warfare in an international system in which open warfare had become too dangerous."

As Brian Jenkins has noted, "a secret backer of the terrorists can also deny sponsoring them."

Moreover, in Western countries there was a "persistent belief that the resort to political violence had to signify the existence of intolerable social grievances and that left-wing political movements, regardless of the temporary excesses they might commit, were basically on the side of human 'progress,' " Johnson observes. "This was particularly true in nations that had recent memories of disastrous right-wing or totalitarian regimes, such as Italy, Germany, Spain, Greece and Japan.

"While this political climate of toleration lasted, terrorists were able to obtain the training, safe havens, funds, equipment, and new recruits that made their attacks possible."

One study of 63 major kidnapping and barricade operations between 1968 and 1974 showed that terrorists had an 87 percent chance of seizing hostages, a 79 percent chance no terrorist would die or be punished, a 40 percent chance that some of all of their demands beyond just safe passage or exist would be met, and virtually a 100 percent chance they would gain major publicity.

"Small wonder terrorist acts proliferated," he comments.

Rental housing

HOUSING AVAILABLE

□ **Beg. Feb. 1, '83:** Spacious unfurn. hse, 4BR/2BA, frig, stove, dw, w/w carpet, FR, frpl, fenced yd, stor. shed, carport. No pets. So. Palo Alto, 10 min. to Stanf. $975/mo. + util. Call 329-0797.

□ **Beg. Mar. 19:** Furn. 3BR/3BA hse, spacious, new kitchen, W/D, piano, frpl, fenced yd., Palo Alto nr Stanf. No pets. $1550/mo. incl. gardener, water. Call COLLECT (602) 299-4499.

□ **Mar. 15 to June 30, '83:** Hse in Palo Alto, 4BR/3BA, library, pool. $1300/mo. incl. gardener & pool serv. Call 327-4197 or 497-4856 (day).

□ **NOW:** 6 mo. lease. Lux. twnhse, 3BR/2½BA, furn. & fully equip., pool, etc., no pets. $2500/mo. Call (415) 854-1443.

□ **NOW:** North Berkeley/Albany area; one/half hse to share, 10 min. to UCB, 20 min. to city, sunny, quiet, $300/mo. Prof. woman will SWAP for similar situation in this area. Call 328-4432.

□ **July 1 to Dec. 31, '83:** Furn. hse, 4BR/3BA, study, FR, Sharon Hgts., 1 mi. to campus. Sep. DR, 2 frpl., 1/3 acre. $1500/mo. Call 497-3785 (day), 854-7471 (eve).

□ **Beg. Mar. 1, '83:** Fully furn. hse, 2BR/1BA, nr. Stanf. Piano, lrge yd, gardener. $900/mo. Call Jenny, 497-4744 (day), or 321-9760.

□ **NOW:** Ski Cabin. So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly Avail.:** 1 & 2BR furn. and unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds. Close to Stanf. $525 to $1200/mo. Call Shirley (415) 493-2321 or Jane (415) 968-4957.

□ **Beg. Mid/End Feb. '83:** SHARE 3BR/2BA condo in Redwood City. Pool, beaut. view, nr 280, bus. Occas. child care. 7 yr. old boy deduct. from rent. $225/mo. Call 497-6283 (day), 364-6298 (eve).

□ **NOW:** 6 mo. min. Palo Alto Hills, new, furn. 1BR apt. No pets, nonsmoker. Priv. ent., deck w/view. Quiet, 3½ mi. to Stanf. $600/mo. incl. util. Call 948-8575.

□ **Feb. 1 to Aug. 31, '83:** Flat in Paris. Furn, 40 sq. meters, 4th flr (no elev.), 3000 FF/mo. Write Dr. George Agoston, 4 Rue Rambuteau, 75003 Paris, France.

□ **Mar. 25 to June 1, '83 (nego):** Fully furn. 4BR/2BA hse in Palo Alto, FR. $850/mo. incl. gardener. Call 494-1148 or 497-9309 (day).

□ **July & Aug. '83:** Attrac. summer rent. Dwntwn Palo Alto, 1BR/2BA condo, library, balc., pool, secure. Call Pat Mueller-Vollmer, (415) 324-1624 (eve).

□ **NOW:** Tahoe Donner Ski Bowl condo. 3BR + loft, sleeps 10. Color TV, spa. Call Bienenstock (415) 493-8649.

□ **End Mar. to end July '83 (flex):** Fully furn. Los Altos hse on cul-de-sac. 4BR/3BA, 6 mi. to Stanf. Walk to schl, shops, dwntwn. $1200/mo. incl. gardener, water. Call (415) 948-0936.

□ **July 1 to Dec. 31, '83:** Furn. 4BR/3BA hse in Sharon Hgts. Study, FR, sep. DR, 2 frpls, 1/3 acre. $1500/mo. Call 497-3785 (day), 854-7471 (eve).

□ **April thru Sept. '83:** Furn. 3BR/2BA hse in Palo Alto. Frpl, FR, all appl., pool w/solar heat, solar hot water. Dir. bus rte. to Stanf. 10 min by car. Children ok, nonsmokers. Call Sladen, 858-0494.

□ **Mid Mar. to Mid. Nov. '83:** Fully furn. Palo Alto hse. 3-4BR/2BA, LR, FR, lrg. cov. patio. Lush garden, easy keep-up, auto. sprinklers. Adults, no pets. $1200/mo. incl. water. Call 858-0880 (eve), 497-1580 (day).

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse., 4BR/3½BA, study, library, DR, frpl, pool, view, acre. $1700/mo. incl. grdnr, pool serv. Call (415) 327-5204 or 497-4732 (day).

HOUSING NEEDED

March & April: Visit. surgeon & wife need furn. apt. Immaculate, nonsmokers, non-drinking, no pets or children. Call 854-0781.

□ **Sept. '83 to Sept. '84:** Visit. prof, spouse seek to rent or exchange furn. 2BR in College Terr. or Old Palo Alto. Write or call Rogowski, Pol. Sci. Dept., UCLA, Los Angeles, (213) 397-2379.

□ **NOW:** New staff member looking to rent 3BR, 2BA, hse with yard near campus. Property owner; refs available upon request. Call Edward Escobedo, days 497-2009; nights, 857-0168.

□ **NOW:** Reliable Stanf. staff seeks hsesit. Prefer long term 3 to 6 mo. or longer. Will give excl. care to hse, pets, plants, yd. Loc. refs. Call Donna, 497-3967 (day).

□ **Beg. Spring Qtr:** April 1 or May 1, two Stanf. med. students seek to rent hse. or apt. (2 to 5BR) nr. Stanf. Nonsmokers. Long term hsng wanted. Call Steve (415) 857-1792 or Bill (415) 327-3868 (eve).

□ **Mar. thru June '83:** Visit. Australian prof. seeks 3-4BR hse for self, wife & 3 children. Nonsmokers. Will care for hse & garden. Call Pamm, CERAS, 497-4717 before 2:30 p.m.

□ **July '83:** Med. prof. with well-behaved family seeks hsesit for 1 mo. or will EXCHANGE 4BR/3BA hse w/fenced yd, 45 min. from Manhattan nr. Rutgers Univ. Loc. refs. Call Bardin 851-0435 (eve).

□ **NOW:** Esc. Vil. family (3) seeks long term 2 to 3BR hse/apt rental in Jordan sch. dist. Loc. refs avail. Call Davidson, 857-0390.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Reasons for child abuse are still a mystery after 100 years of study

Americans concerned with "the battered child syndrome" may profit from the experiences of their predecessors a century ago, a Stanford-educated historian suggests.

"The idea that children possess a 'right' to reasonable treatment from their parents came of age in the late 19th century," Assistant Prof. George K. Behlmer of the University of Washington declared in a new Stanford University Press book on *Child Abuse and Moral Reform in England*, 1870-1908 (320 pp., cloth, $30).

"The English and American philanthropists who founded the first societies for the prevention of cruelty to children during the 1870s and 1880s were, admittedly far less sophisticated than latter-day experts in attempting to explain why parents brutalized their offspring.

"Yet the early reformers did understand that this behavior was often habitual, apt to be repeated if intervention was not forthcoming.

"Moreover, with greater experience, these reformers grew as concerned about the impact of long-term neglect as about direct physical assaults upon children.

"Convinced that strict law, conscientiously applied, would promote better care of the young in their own homes, the child-savers sought to create a public demand for such law. Why the agitation did not start sooner is an intriguing problem.

"The earliest experiments in family policing were conducted in the northeastern U.S. but it was in England that the prevention of cruelty to children became a truly national phenomenon."

In America, especially New York City, early anticruelty workers tried to remove children from physical harm without much thought to reforming their parents. But their British colleagues "not only acted on the belief that most threatened children could be helped within their homes, but also gave much thought to the pressures that shaped 'unnatural' parents," he comments.

While mass media coverage which followed description of the "battered child syndrome" in 1962 has helped create far more effective screening of potential victims "we know only marginally more about what motivates parents to harm their young than did reformers in late Victorian times," he adds.

"To patronize their concern for the safety of the child would be presumptuous. . . .

"What Victorian moral reformers liked to call 'the cry of the children' may never be hushed. But perhaps, given close cooperation between state and private bodies, more parents can be helped to wield their power with discretion."

The author credits Stanford Prof. Peter Stansky for guiding his study through the Ph.D. dissertation stage.



Dale Herman and John Toenjes

STARTS Sunday Festival opens next week with Dale Herman, John Toenjes

Dale Herman and John Toenjes will perform music for recorder, harpsichord, and celeste at 8 p.m. Sunday, Feb. 6, in the Tresidder Lounge. Admission is $3 general and $2 students and senior citizens.

The concert is the first of The Sunday Festival Series sponsored by STARTS to celebrate the 20th anniversary of Tresidder Union.

Works on the program include contemporary compositions by Miller, Alemann, Staeps, and Pinkham as well as those of 16th and 17th century composers Bach and Barsanti.

Herman received his Mus. Bac. from the University of Toronto in 1975, and his M.A. in the performance practice of early music at Stanford in 1979. He currently teaches privately in Palo Alto.

Toenjes studied harpsichord with Margaret Fabrizio at Stanford, graduating in 1978 with a B.A. in music. Since then, he has concertized in the Bay Area, and now teaches music in Palo Alto. Several of his compositions for theater have been produced in Palo Alto and San Francisco. He also has a harpsichord restoral and repair service, and plays the program on an instrument of his own construction.

Human biology lectures open up

Human Nature: The Human Animal

Are human beings naturally aggressive? Can the brain grow and change? Are men more aggressive than women? Are there basic emotions?

These and other topics will be addressed in a new course offered by the Human Biology Program. Entitled Human Nature: The Human Animal, HB 90 will explore questions about human nature that have been of concern to thinking people for millenia.

Lecture topics will include: the nature of early man; what specifically does make us human; what does natural selection select; how does evolution operate; why males act the way they do in matters of sex, and how this is biologically different from females; what is basic to the human brain that is different from other brains; and how the brain grows and changes with experience.

Each lecture will feature a different guest speaker, including Stephen Jay Gould, author of *The Panda's Thumb*, Donald Symons, author of *The Evolution of Human Sexuality*, and Paul Ekman, author of *Emotions in the Human Face*.

The course is part of a two-quarter sequence with Human Biology 91—Human Nature: the Social Animal. It is an outgrowth of a design developed by Donald Kennedy, Albert Hastorf, and Robert Ornstein.

Lectures will be held on Mondays and Thursdays from 3:15 to 5:05 in Bldg. 260, Room 268. They are open to all students and members of the Stanford community. For further information, contact Deana Fabbro-Selaya in the Human Biology office at 497-3693.

Humans and Viruses

The Program in Human Biology is sponsoring a winter quarter lecture series in conjunction with course HB 115, entitled Humans and Viruses.

Open to all members of the Stanford community, the scheduling of rooms will be announced. There is a possibility of a "brown bag" with the individual lecturers; if interested, contact instructor Robert Siegel at 497-3693 or 843-4337.

Thursday, Jan. 27: Jeff Silvers, "Influenza," 11 a.m.

Tuesday, Feb. 1: David Regnery, "The Ecology of Viruses," 2:15 p.m.

Tuesday, Feb. 15: John Ziegler, "Epstein-Barr Virus and Burkitt's Lymphong," 11 a.m.

Thursday, Feb. 24: Richard Hamilton, "Herpes Simplex Virus," 11 a.m.; and Bea Mandel, "Discussion of HSV," 2:15 p.m.

Tuesday, Mar. 1: Linus Pauling, "Vitamin C and Viral Disease," 11 a.m.

Thursday, Mar. 10: Paul Berg, "The Use of Animal Viruses in Genetic Engineering," 2:15 p.m.

Latin American film series shown Thursdays in Casa Zapata lounge

Casa Zapata (Stern Hall) has begun a free Thursday evening series of Latin American films, open to all interested people.

Shown at 7 p.m. in the Casa Zapata lounge, the remaining films in the series are:

Jan. 27: "From the Ashes. . . . Nicaragua Today," Latin Americanist, Richard Fagen, Stanford prof. of political science will be present to commentate on the current political situation and U.S. foreign policy in Nicaragua.

Feb. 3: "La Ultima Cena," set in the epoch of slavery in 18th century Cuba.

Feb. 10: "Chuquiago," explores the conflicts of contemporary Bolivian society that is marked by racial and class divisions.

Feb. 17: "Chile with Poems and Guns," documents the years and the defeat of Salvador Allende and the Popular Unity party in Chile. Destroys myths often given to the U.S. public on the role of the U.S. and the CIA in the military coup.

Feb. 24: "On Company Business," reveals the role of the CIA in U.S. foreign policy and in the Third World. This film is an event in the week of "U.S. global strategy and Third World Liberation" (Feb. 20-26).

March 3: "The Cost of Cotton," filmmaker Jim Watson will be present to speak on his film that deals with the effects of the international demand for cotton on the developing nation of Guatemala.

More Australian films at I-Center

The International Center January Australian mini film festival ends with two films on the growth and development of the Australian film industry at 7:30 p.m. Thursday, Jan. 27, at the International Center.

Now You're Talking covers 1930 through 1940, from the pioneering days of the early "talkies" to the decline of the industry with the coming of World War II.

Australia in the '80s is a sophisticated high-tech look at the country today, ranging from big city life to industry, ranching, recreation, and including scenes of cave drawings contrasting with advanced medical research.

The evening will include champagne tasting from the Seaview cellars and cabernet from the Huntington Estates, Australian products courtesy of Lathrop and Mines Wines of San Francisco.

Door prizes will again be offered. A 75 cent donation is requested.

Fagen to discuss Central America

"Can There be Peace in Central America?" is the topic of the International Center weekly Tuesday luncheon talk for Feb. 1.

Featured speaker is Richard R. Fagen, professor of political science and Gildred professor of Latin American studies at Stanford.

Fagen, who has served as visiting faculty member at universities in Mexico and Chile, was recipient of a 1979-80 Ford Foundation grant for research in Nicaragua. He has published widely on contemporary political developments in Chile, Central America, Mexico and Cuba, and frequently presents testimony before Congress relating to U.S. foreign policy.

Tickets for luncheon at $2.50 are on sale at the International Center. Brown baggers are welcome at no charge. For more information, phone 497-1831.

Stress management to begin Monday

The starting date of the Health Improvement Program (HIP) class "How to Manage Stress" has been postponed one week. It will begin 5:15-7:15 p.m. Monday, Jan. 31, and continue through Mar. 14.

The class, which meets at the Medical Center in the M121 conference room, will be taught by Chris Rosche, M.P.H., a health educator, who has taught previous stress management classes at Stanford, Midpeninsula Health Service, and San Jose State University.

All of us at Stanford confront daily situations at work and at home which evoke stress responses, but few know how to cope with stress. Fortunately, managing stress effectively is a skill that can be learned.

There are still a few openings in the "How to Manage Stress" course for SU faculty and staff and their families. For registration and fee information, call the HIP office at 497-7940.

Security topic of two-day seminar

"Security in an Insecure World" will be the topic of a two-day seminar at Stanford Feb. 26-27.

One of an annual Great Powers series presented by the Stanford Alumni Association, this program is cosponsored by the Stanford Arms Control and Disarmament Program. John W. Lewis, William Haas professor of Chinese politics and director of the arms control program, is chairman of the seminar.

Stanford faculty participants include Prof. Wolfgang Panofsky, director of the Stanford Linear Accelerator Center; Sidney D. Drell, deputy director, SLAC; Barton J. Bernstein, history; John H. Barton, law; and Coit D. Blacker, lecturer in political science.

Coming from Washington, D.C., will be William G. Hyland, senior associate at the Carnegie Endowment for International Peace and former deputy assistant to the president for national security affairs.

Also participating will be Philip J. Farley, a research associate in Stanford's arms control and disarmament program and former deputy U.S. special representative for nonproliferation negotiations, and Gloria Duffy, executive director of the Plowshares Fund. In addition, the film *The Day After Trinity* will be viewed. Its producer, John Else, will be a seminar participant.

The public is invited to participate. Tuition is $75. For further information contact Jenee Zenger-Sonneman at the Stanford Alumni Association, 497-2021.



Harold Schonberg

Music criticism subject for Schonberg lecture

The Lively Arts at Stanford will present Pulitzer Prize-winning critic Harold Schonberg, cultural correspondent and former senior music critic for *The New York Times*, in a lecture at 8 p.m., Wednesday, Jan. 26, in Dinkelspiel Auditorium.

His topic will be "Practical Music Criticism—a discussion from a journalistic point of view."

In addition to the lecture, Schonberg will be present at a book signing from 12:30 to 2:30 p.m. Thursday, Jan. 27, at Printers Inc. Bookstore (310 California Ave., Palo Alto, 327-6500).

Schonberg is a native of New York City, and a graduate of Brooklyn College (BA) and the New York University (MA). He studied piano with Alice Frisca, and at the graduate school of New York University with Marion Bauer. He also studied at the Art Students League with Kuniyoshi.

Schonberg was music critic for the *New York Sun* from 1946-1950; columnist for *London Gramophone* from 1948-58; contributor and columnist for *Music Courier* from 1946-51.

In 1950 he joined the staff of the *New York Times* as music critic, and served as senior music critic from 1960-1980.

Schonberg won the Pulitzer Prize for criticism in 1971. He has contributed to many magazines, and is the author of eight books, including *Facing the Music* (1981), *The Lives of the Great Composers* (1970), *The Great Conductors* (1967), and *The Great Pianists* (1963).

Schonberg holds honorary degrees from Temple University and Grinnell College.

Tickets for the lecture are $5.50 general, and $4 student.

For ticket information, call Tresidder Ticket Office, (415) 497-4317, BASS, and other Bay Area ticket agencies.

Indian group coming

The Berkeley Indian Dance Group will appear at 7 p.m. Saturday, Jan. 29, in Stanford's Dinkelspiel Auditorium.

The free public performance is sponsored by Hammarskjold House, the international theme house at Stanford.

The program will consist of a dance drama entitled "The Game of Fate" and selections of modern choral music from India.

Symposium, film, discussion part of Black Liberation Month

A Black Liberation Convocation on Friday and Saturday, Feb. 4-5, will be the major event of Stanford's Black Liberation Month '83.

The Convocation will begin with a free, public symposium on "Sowing the Seeds of Our Legacy: The Task of This Generation," at 7 p.m. Friday, Feb. 4, in Annenberg Auditorium.

Speakers will include Amiri Baraka (Leroi Jones), father of the Black Arts Movement, activist, author, and member of the League of Revolutionary Struggle; Maxine Waters, state assemblywoman from Los Angeles; and Omowale Satterwhite, local community leader, educator, and member of the Nairobi Secretariat.

Author-educator-poet Haki Madhubuti (Don L. Lee) will discuss "Developing Black Institutions" in a program moderated by History Prof. Kennell Jackson, chair of Afro-American Studies at Stanford, at 1 p.m. Saturday, Feb. 5, in Tresidder Union.

The discussion will be followed by workshops dealing with East Palo Alto Incorporation and Black Student Organizing: The State of the Art.

The Convocation will conclude with a program on "Our Creative Legacy: Building Positive Black Images through the Performing Arts" at 7:30 p.m. Saturday in Memorial Auditorium. The special guest will be Glynn Turman, star of *The River Niger* and currently the lead in the Broadway production of *Proud*.

A showing of *The River Niger* will follow, with a special appearance by the Kuumba Ensemble.

Tickets for the Saturday evening program are on sale for $3 ($2 for youths under 18 and senior citizens) at Tresidder Ticket Office and the Black Community Services Center, 321 Bell St., East Palo Alto.

For more information, call 497-1587.



The Lively Arts will present the Emerson Quartet at 8 p.m., Wednesday, Feb. 2 in Dinkelspiel Auditorium in a program that includes Schubert's *Quartet in A minor*, Op. 29; Beethoven's *Quartet in F Major*, Op. 135; and Brahms's *Quartet in C Minor*, Op. 51, No. 1 Tickets are $9.50 and $10.50 (student $6.50 and $7.50).

Clark to discuss Ethiopian finds

Prof. Desmond Clark, UC-Berkeley anthropologist and archeologist will discuss "The New Archeological Finds in Ethiopia: Discoveries in the History of Early Man" at 4 p.m. Friday, Jan. 28, in Building 200 (History Corner) Room 203 at Stanford.

Clark will discuss the significance of archeology for research in Africa and its implications for interpretations of human evolution and culture. He will also discuss the importance of the iron age and historical development of ethnic populations.

Dr. Clark received his formal training at the University of Cambridge in Britain and has spent the last 44 years doing archeological research in southern and western Africa. He was the founder of the National Museum of Antiquities in Zambia.

In 1961 he joined the UC-Berkeley Department of Anthropology. He has lead several field studies with archeology students throughout the African continent. His lecture will include slides from his most recent trip to Ethiopia where remains of the oldest humans were found dating back four million years.

The lecture is being sponsored by the Program on African and Afro-American Studies with support from the Hewlett Fund, which has given a special grant for programming on Africa for undergraduates.



The Lively Arts will present soprano Lucy Shelton, two-time winner of the Naumberg Award, at 8 p.m., Friday, January 28, in Dinkelspiel Auditorium.

Shelton will sing sets by Schubert, Messiaen *(Poemes pour Mi)*, and Ives, as well as a Gypsy Finale, including works by Dvorak, Wolf, and Brahms *(Zigeunerlieder.)* Tickets are $8.50 and $7.50 (student tickets $3 off).

Cotton to speak on world economics

Sir Robert Cotton, Australian Ambassador to the U.S., will speak in Room 75 of the Graduate School of Business at noon Monday, Jan. 31.

His talk on "World Economic Recovery: Restraining Protectionist Government Policies" will be followed by questions from the audience.

Cotton was appointed in August, 1982. A former senior cabinet minister, he served as minister for industry and commerce, minister for overseas trade, and minister for foreign affairs in successive Liberal Party governments in Australia.

His talk is sponsored by the International Business Association and the Student Association for Public Management. Further information is available from George Foster (497-2881).

Help Center helps with sabbaticals

"Sabbatical Leave—A Bittersweet Experience" will be discussed by a panel from 7:30 to 9 p.m. Monday, Jan. 31, at the Stanford Help Center in Galvez House (entrance in rear).

The panel is composed of Linn (of the Help Center staff), Tim Hayes, and Bernard (chairman of the Anthropology Department) and Charlotte Siegel (psychiatric social worker at Cowell Student Health Center).

Issues to be discussed include: the importance of preparing for a sabbatical leave; culture shock; the impact on the individual, the couple, and the family; implications for professional development; and integrating the sabbatical experience at home.

There will be ample time for questions and discussion following the presentation.

Reserve space by calling the Help Center, 497-4577, before Thursday, Jan. 27. The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Medical Center, and SLAC employees and their immediate families without charge.



SHELLY WHITEHOUSE will play works of Blavet, Bach, Beethoven, Enesco, Rogers and Poulenc in a Music Department concert at 8 p.m. Sunday, Jan. 30, in Dinkelspiel Auditorium. Joining her will be David Achenbach, harpsichord, and Kris Speer, bassoon.

Toth, four guest musicians, schedule chamber music concert Sunday, Feb. 6

Violinist Andor Toth has invited four outstanding musicians to perform chamber music with him at 2:30 p.m. Sunday, Feb. 6, in Dinkelspiel Auditorium.

His four guests will be Mayumi Ohira, a nationally known concert violinist; Don Ehrlich, violist with the San Francisco Symphony and the Aurora String Quartet; faculty cellist Thomas Stauffer; and Richard Dasher, clarinet.

The program will open with Haydn's "Lark" string quartet, followed by Martinu's brilliant Duo for violin and cello.

Toth will then perform Bach's Ciaconna from the Partita in D minor for solo violin. Commenting on Toth's recent New York performance of this work *New York Times* reviewer John Rockwell wrote: "the Bach sounded exalted."

The Brahms Clarinet Quintet, op. 115, will conclude the program.

Tickets ($4 general admission, $2 for students and senior citizens) are available at Tresidder Ticket Office (497-4317) and at the door.

Barnard, Ito plan flute concert Feb. 6

The Department of Music at Stanford presents flutists Kathryn Barnard and Yuri Ito in a free concert at 8 p.m. Sunday, Feb. 6, in Dinkelspiel Auditorium.

Both students of Frances Blaisdell, Barnard and Ito will perform Vivaldi's *Concerto for Two Flutes in C. Major*; Bach's *Sonata in E minor*; a sonata by Reinecke; *Deux Interludes* by Ibert; C.P.E. Bach's *Sonata in A minor*; *Poem* by Griffes; and *Sonata in E minor for Two Flutes* by Loeillet.

Barnard is a junior at Stanford majoring in human biology. She has played with both the Stanford Symphony and Chamber orchestras, and will solo with the symphony next fall.

Ito is a Stanford senior majoring in Japanese studies but planning a career as a flutist. She will solo with the Stanford Chamber Orchestra Feb. 18, performing the Stamitz *Flute Concerto in G Major*.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Jan. 26 to cover the week of Mon., Feb. 7 through Sun., Feb. 13.

MONDAY, JANUARY 31

Computer Science Lecture: "Numerical Considerations for Singularly Perturbed Convections Diffusion Equations" by Ray Chin, Lawrence Livermore Lab. 4:15 p.m. Margaret Jacks Hall, Third Floor Lounge.

EE350 Radioscience Seminar: "Remote Sensing of Polar Ice Using Satellite Altimetry," by John Vesecky, Stanford. 4:15 pm. McCullough Bldg., Room 134.

Stanford Student Jewish Appeal Workshop: "Surviving and Thriving in the Jewish Bay Area (Where do all my dollars go locally?)". 7 p.m. History Corner-Rm. 34.

Film Society: "Bicycle Thief" (De Sica, 1949). 7:30 p.m. Kresge Aud. $2.00.

TUESDAY, FEBRUARY 1

STARTS: Crochet Class with instructor Karen Springen. Noon-1 p.m. Tresidder Union rm. 132. $8 for 8 weeks.

Bechtel International Lunch/Lecture Series: Richard R. Fagen: Can There Be Peace in Central America? 12:00 pm. I-Center. $2.50 includes lunch, brown-baggers welcome.

Applied Physics Colloquium: "Semiconducting & Metallic Polymers: From Solitons to Storage Batteries," by Prof. Alan J. Heeger, Physics Dept. at UCSB. 4:15 pm. Applied Physics 200.

Communications Design Seminar: "Performance of an Advanced Character Recognition-Compression Technique" by K. Mohiuddin of IBM & Stanford. 4:15 pm. McCullough Bldg., Rm. 128.

Lively Arts at Stanford: The Robin Flower Band. An all-women group featuring Blue Grass music. 8 p.m. Dinkelspiel Aud. $5, $3 students.

Music Guild "Learning to Listen" Lecture: "Spanish Music of the Golden Age," by Prof. Albert Cohen. 8:00 pm. Annenberg Aud. $4/$3/$2.

Women in the Performing Arts Series: The Robin Flower Band. 8:00 p.m. Dinkelspiel Aud. Tickets available at Tresidder ticket office.

WEDNESDAY, FEBRUARY 2

Chemical Engineering Lecture: "Polymer Additives in Jet Fuel: The Anti-Misting Phenomenon and Aircraft Safety," by Prof. Michael C. Williams, University of California, Berkeley. 4:15 pm. Chemical Eng. Conference Room.

Lively Arts at Stanford: Emerson String Quartet, featuring Schubert: Quartet in A minor, Op. 29; Beethoven: Quartet in F major, Op.135; Brahms: Quartet in C minor, Op. 60. 8:00 pm. Dinkelspiel Aud. $10.50, $9.50; students $3 off.

THURSDAY, FEBRUARY 3

Stanford Geothermal Lecture Series: "Geothermal Energy Development at the Geysers" by Robert Linquist, Former Chief Engineer of Magma Thermal Power. 1:15 pm. Mitchell Bldg., Room B67.

Condensed Matter Physics Seminar: "Noble Metal-Silicon (111) Interface," by Prof. J. Derrien of the Universite d'Aix-Marseille II, France. 4:15 pm. Applied Physics 200.

Solid Mechanics Seminar: "Further Development and Application of Elastic- Viscoplastic Constitutive Equations," with Prof. S. R. Bodner, Technion Univ., Haifa, Israel. 4:15 pm. Skilling Aud.

Latin American Film Series: "La Ultima Cena": a film on Cuba. 7:00 pm. Casa Zapata.

Bechtel International Center Film Series: "Kamouraska" (Quebec, 1973). 7:30 p.m. I-Center. 75 cent donation.

FRIDAY, FEBRUARY 4

Condensed Matter Physics Seminar: "Chemisorption of Oxygen and Hydrogen on GaAs (110): Some Puzzles and some answers," by Wilfred Monch, University of Duisberg, Germany. 1:30 pm. Applied Physics 200.

Mathematics Dept. Lecture: "Oscillations and travelling waves in delayed differential equations," by Dr. Luis Bonilla, Stanford. 3:15 pm. Bldg. 380, Room 380-C.

Black Liberation Symposium: "Building Unity, Self Reliance and Self-Determination. 7:30 pm. Annenberg Aud.

Lively Arts at Stanford: Emanuil Sheynkman, mandolin and balalaika. 8:00 p.m. Dinkelspiel Aud. $8.50, $7.50; students $3 off.

STARTS/GSA Great Directors Film Series: "Il Grido" (The Cry). 8:00 pm. Geology Corner, Rm. 320. $2.50.

Stanford Law School Film Society: "Sunset Boulevard." 8:00 pm. Kresge Aud. $1.50.

Stanford Society of the Archaeological Institute of America: "Kourion," with David Soren, University of Arizona. 8:15 p.m. Bldg. 300, Room 370.

SATURDAY, FEBRUARY 5

Music Guild: Violin Master Class Auditions: Donald Weilerstein. 1-5 p.m. Dinkelspiel Aud.

Black Liberation Month Convocation: Symposium on "Building Institutions on Campus and in the Community." 1 pm. Tresidder Union, Rm. 281.

Black Liberation Month Convocation: Reception for Glynn Turman, star of "The River Niger." 5:00 pm. Tresidder Union, Rm. 282.

STARTS/Black Liberation Film Festival: "The River Niger." 7:30 pm. Memorial Aud. $3 general, $2 under 18 and senior citizens.

Music Guild Concert: Baroque Orchestra & Wind Ensemble George Houle, director. 8:00 pm. Dinkelsspiel Aud. free.

SUNDAY, FEBRUARY 6

University Public Worship: Communion Service. 11:00 am. Memorial Church.

Music Guild Concert: Andor Toth & Guests, An Afternoon of Chamber Music. 2:30 pm. Dinkelspiel Aud. $4/$2.

ASSU Sunday Flicks: "The World According To Garp." 6:30 pm. & 9:30 pm. Memorial Aud. $1.50.

Music Guild Concert: Kathryn Barnard & Yuri Ito, duo flute. 8:00 pm. Dinkelspiel Aud. free.

Young Stanford Artists Classical Series: Dale Herman, recorder & John Toenges, harpsichord. 8:00 pm. Tresidder Union, upper lounge, rm. 280. $3 general, $2 students.

EXHIBITS

Recent Acquisitions. Paintings, drawings, sculptures and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. Jan. 11 - Feb. 20.

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

Photographs by Olivia Peterson. Coffee House/Tresidder Union. Feb. 1 - Feb. 28.

Recent Expressionist Drawing Experiences by Barbara Scoledes. Tresidder Union, upper lobby. Feb. 1 - Feb. 28.

CAMPUS REPORT

Volume XV, Number 18 | A publication for Stanford University faculty & staff | February 2, 1983

President's budget includes $40 million for new collider

President Reagan's budget for fiscal 1984 includes $40 million to start construction of the Stanford Linear Collider, Prof. Wolfgang Panofsky, director of the Stanford Linear Accelerator said Tuesday, Feb. 1.

"Anyone reading the newspapers knows that on budgetary matters there is much commotion between the Congress and the President, and it is even more difficult than usual to make a firm forecast about SLAC's future based specifically on the President's message," he cautioned SLAC workers attending two separate "all hands" talks.

If approved, "this will be a bold venture for all of us. . . .

"We expect to pursue the SLC vigorously," with completion in late 1986. This would be two years ahead of the planned completion of a 17-mile, circular storage ring by CERN in Europe.

Total projected costs of SLC are $112 million. It will require a "thorough reworking" of the present two-mile linear acclerator and building major new rings and tunnels in the area bordered by Sand Hill Rd., Alpine Rd., and the present end station.

"The SLC is technically an extremely difficult but also important and exciting undertaking. It pioneers a new direction to obtain very high energy electron-positron collisons and at the same time gives physicists from many institutions a new tool to reach what is currently believed to be the most critical energy region in which new phenomena are expected," Panofsky said.

In the linear collider, electrons and positrons from the linear accelerator will be focused down to an area only one micron wide, in single pass collisions with an energy as high as 100 billion electron volts (GeV).

"When the electron collides with its anti-particle, the positron, the two particles disappear in a bundle of energy from which new particles emerge," Panofsky explained.

"The energy density of these collisions has been compared to that of the Big Bang at the beginning of the universe, although it is of course of vastly smaller scale. . . .

"A new particle, called Z^0 should be produced. We can learn about this new world (where the so-called weak interaction becomes dominant) by studying the reactions in which Z^0 participates. This is as exciting as anything we have learned about the world so far."

Panofsky said SLAC should be able to move "quite rapidly" on the new collider if Congress acts favorably on the budget. Detailed design of the facilities will be complete before October.

"If things go as planned, we will issue competitive bids to the construction industry even before the end of this fiscal year to be able to get a running start on the work by this fall," Panofsky said.

Thanks to "good communication with our neighbors. . .the current design

continued on page 18



Life was difficult around Tresidder Union during last Wednesday's storm, what with trees falling on cars and transformers shorting out. This car became a convertible of sorts, luckily during a Bookstore visit by the man who had rented it a few hours earlier. Tresidder was without power from 5:30 p.m. Wednesday, when a flood knocked out its transformer, until 8 p.m. Thursday. Operations and Maintenance put in a standby unit, one of four recently purchased for just such an emergency. A new, custom-made transformer will arrive in about four months.

Students criticize linkage of draft, financial aid

Student opposition to new federal law linking financial assistance to draft registration is growing, according to Matt Nicodemus, a Stanford student "stop-out" who has publicly announced his refusal to register.

"Students should begin considering how much their conscience and stopping the draft is worth to them," he said in a campus interview Tuesday, Jan. 25.

Yale, Earlham, and Haverford Colleges already have declared their intent to make up federal aid nonregistrants would lose through their own private grants or loans, according to a statement Nicodemus circulated at a hearing of the National Commission on Student Financial Assistance, held on campus Tuesday.

He was joined by Sushma Govindarajulu, an undergraduate active in Stanford Against Conscription, a voluntary organization with about 10 active members.

Their material urged educators to comment on proposed new federal regulations issued by Selective Service and the U.S. Department of Education by Feb. 22, the deadline for public responses.

Student governments at Humboldt State University, the University of California at Santa Barbara, and Syracuse University have strongly condemned the new law.

Students on dozens of campuses are organizing around the issue, they added. Work against the Solomon Amendment has started at Berkeley, Chico, Santa Cruz, Santa Barbara, Los Angeles, Mt. Carmel, Riverside, Sacramento, Arcata, San Diego, San Francisco and Stanford.

Last June, prior to passage of the new law, Stanford Vice President Robert Rosenzweig called it "absolutely awful legislation.

"We have in the past strenuously opposed mixing educational policy and the draft. We shouldn't use educational opportunity for punitive purposes."

ACADEMIC COUNCIL MEETING FEB. 3

President Donald Kennedy will discuss indirect costs, and Admissions Dean Fred Hargadon will speak on undergraduate admissions at the winter quarter meeting of the Academic Council.

It is scheduled for 4:15 p.m. Thursday, Feb. 3, in Room 290 of the Stanford Law School, immediately following the Faculty Senate meeting, which is scheduled to start at 3:15 p.m.

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People

External pressures seem effective against war, say two Stanford authors

Moral perfectionists in foreign policy "provide a useful safeguard against the tendency of practical men to engage in moral self-deception," two noted Stanford scholars declare in a new book on *Force and Statecraft: Diplomatic Problems of Our Time* (Oxford University Press).

Profs. Gordon A. Craig, history, and Alexander L. George, political science, developed their basic ideas in a Stanford course, drawing on extensive case histories from 19th and 20th century diplomatic history.

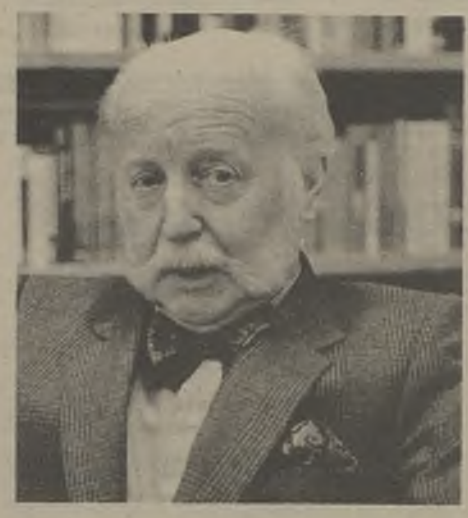
While moral perfectionists are "often irritating and naively impractical, we should still appreciate the contribution they make to public debates about foreign policy. . . .

"It is often forgotten that Machiavelli, even while advising the prince that circumstances would force him to use morally questionable means on behalf of worthwhile goals, also remarked that it was important that the prince should know he was doing so, and that he should suffer a bad conscience so that moral values would at least survive their violation."

The scholars note that "in the history of the West from the Middle Ages to the present, the most effective restraint upon the warlike tendencies of the individual, group or state has been the pressure exerted by external forces.



Alexander George



Gordon Craig

"The periods least affected by interstate violence have been those in which there existed a viable international community and an accepted body of law and custom to guide and control it."

Only "modest success" has been achieved by other means, they observe:

"Religion has not only failed to discourage war, but has often motivated it;

"Attempts at arms control and disarmament have had minor successes that all too often, once achieved, encouraged evasion; "The rules of war that alleviated the brutalities of 18th century conflict are clearly ineffective in an age of nuclear weaponry; and "Recent experience hardly encourages. . .belief in the capacity of modern governments to employ war strictly as an instrument of policy, restraining its inherent expansionist tendencies."

Adaptation to accelerated change has become the major problem of modern statecraft, testing both the ingenuity and fortitude of those responsible for controlling international violence and for maintaining the security of their own countries.

Social and economic change, intense nationalism and ideological conflict on a global scale "have had an impact on international politics that amounts to a diplomatic revolution," they declare.

Most policy-makers and advisers in the U.S. "probably regard themselves as practitioners of the nonperfectionist approach" to foreign policy, Craig and George declare. Any moral guidelines are applied in "a very subjective, loose, and highly inconsistent way. . .not only because these guidelines are so vague but because other pressures on policy-making are often so much stronger. . . ."

Policy makers are under pressure to advance their country's position, "even when vital interests are not at stake," to achieve results and to win elections.

These factors tend to be more important for most policy makers than "what may seem to them to be an overly squeamish concern with the morality of the means employed.

"It is all too easy for decision makers to justify their resort to morally questionable means, to engage in self-deception, and to offer convenient rationalizations (regarding) the necessity to do so."

Carlyle, Daniller, Coreysis

Lynne Carlyle, formerly editorial coordinator for the Registrar's Office, has been appointed information and registration officer, with responsibility for the registration and information sections as well as the editorial.

Mae Daniller is the new editorial coordinator and Cecilia Coreyis registration and information coordinator. Both now report to Carlyle.

Faculty openings

EE, Computer Science posts open

The Departments of Electrical Engineering and Computer Science have a number of openings for regular and adjunct faculty and research positions. Applications are invited. Applicants should have a demonstrated research ability in one or more areas of computer-aided design and computer systems design, including IC routing and placement, semiconductor devices and processing, IC fabrication and testing, operating systems, program verification, computer architecture and programming languages. The departments are particularly interested in research applications for VLSI fabrication, design, architecture and application.

All applicants will be considered for positions beginning with the fall quarter 1983.

Please submit as soon as possible a detailed resume including names of references to Prof. Robert Dutton, chairman, Search Committee, Department of Electrical Engineering, Stanford University, Stanford, Calif. 94305.

Stanford University is an Affirmative Action, Equal Opportunity Employer and welcomes applications from women and minority groups.

Appointment announcements clarified

Clarification: When the listing of Trustee actions on new faculty appointments appears in *Campus Report*, it should be understood that some of the offers of appointment might not yet have been accepted by the candidates. Such is the case with the candidate Joan Bresnan whose appointment as professor of linguistics, effective Sept. 1, 1983, was reported in the Jan. 5 issue.

Ralph Keller

Ralph W. Keller was recently presented an outstanding service award at the Western College Placement Association in recognition of the many contributions he made to the profession during his tenure as director of the Career Planning and Placement Center at Stanford. Keller retired as director of the CPPC in June and is currently the assistant dean for alumni relations in the School of Education.

Selma Meyerowitz

A new book by Selma S. Meyerowitz, Ph.D., lecturer in undergraduate studies, has recently been published by Twayne publishers, a subsidiary of G. K. Hall & Co. The book, entitled *Leonard Woolf*, is a study of Woolf's literary and political work. Since very little critical material on Leonard Woolf has been published so far, this study should fill a gap for twentieth-century British scholars.

Meyerowitz received her Ph.D. in English in 1975 from Wayne State University and has been teaching at Stanford since 1978 in both the freshman English and freshman seminar programs.

Robert Textor

Prof. Robert B. Textor, of education and anthropology, keynoted the annual American studies seminar in Bangkok, Thailand, Jan. 19. Delivered in Thai, his talk covered "Reflections on Futures Research in America and Thailand: An Anthropologist Looks One Generation Forward and Backward." Cosponsoring the conference were the American Embassy, Chulalongkorn University, and the Thai American University Association.

John, not Leo

In last week's *Campus Report*, a photograph of Prof. John McCarthy was mistakenly identified as Leo McCarthy. *Campus Report* regrets the error.

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Anthropologist Befu bridges American, Japanese cultures

BY DONALD STOKES

Harumi Befu has lived three separate lives, first as an American, then as a Japanese, and now as an American again. Each time, as a citizen of the country he was in, he thought and spoke in the lifestyle of the particular country.

Today Befu is professor of anthropology at Stanford, and is resident fellow at its East House, where 61 students interested in the Orient soak up the respective atmospheres of East and West.

As a result of his three lives, Befu can explain the Orient, and particularly Japan, as few others can. In a campus interview he told his strange story, and exploded many myths about Japan. These included:

* Large Japanese corporations are not "extended families," but scenes of intensive competition that is carefully concealed;
* Social pressures compel Japanese women to leave work as early as 25, for marriage; they return to work in their 40s to take the lowest-paid jobs;
* It is not true that the Japanese meekly follow "group-think"; strikes and riots are frequent;
* Most Japanese mothers are benignly overbearing in their control of their children's education.

Befu's remarkable story began when he was six years old, living in Los Angeles as one of the five sons of a Japanese gardener and his wife.

"My mother decided that American education was not suitable for her sons," said Befu. "In particular, she did not like the idea of coeducation. She decided to send her three youngest sons to Japan to be educated. I was the youngest of those three sons, the other two being respectively three and five years older than I. We were all dual nationals.

"When I started school in Japan I was very unpopular at first, as anti-foreign feeling was being fanned by the military, and I was regarded as an outsider. The other kids were often very brutal and nasty to me.

"I adapted quickly, learned to speak fluent Japanese, and to become completely Japanese. I went through grade and high schools. The war broke out when I was 11.

"The oldest of my brothers in Japan was drafted into the Japanese Army, and the second went into the equivalent of the U.S. Naval Academy.

"Meanwhile, back in the U.S. notices appeared on all the telephone poles in Los Angeles and elsewhere on the West Coast, ordering all persons of Japanese ancestry to report to various centers. They were given only a few days notice to dispose of all property except what they could carry with them into the camps that were set up for them in isolated areas.

My mother and father, with their two oldest sons, had to go into one of those 'relocation centers.' My oldest brother, Yoshiro, was a super-patriot for the U.S. and he wanted to volunteer to fight for freedom. My father said to him, 'What freedom do you have?'

"My father and Yoshiro had many bitter arguments about this. Yoshiro kept saying that he intended to enlist in the U.S. armed forces. My father would retort, 'If you leave our family and do that you need not come back to us.'

"Yoshiro did volunteer, but he flunked the physical examination. His dilemma then was that having left, he would not be allowed back into the camp by the authorities or into the family by his father. My mother made urgent pleas on her son's behalf, and finally Yoshiro was allowed back. But his relations with our father were very strained.

"My other brother in the relocation camp, Masuo, was drafted into the U.S. Army. He was sent to Fort Snelling in Minn., where he was trained to become an interpreter in the Pacific War area, but fortunately the war ended before any of my brothers went on active service.

"All through the war years, there were no communications between those of us in Japan and the rest of my family in America, except that we were able to send form letters through the Red Cross in Switzerland that simply reported we were alive."

In 1947 Befu came back to the U.S. and the family reunited in a house in Los Angeles. "That was a very emotional and strained time," recalled Befu. "It took us a long time to get to know each other again."

The father assumed his job as a gardener, and young Harumi went back to high school. He was then 17. "By that time I had forgotten nearly all my English, although we had been given some instruction in it at school in Japan. I had to go to special classes for adult immigrants.

"I grew so bored in high school that I obtained permission to transfer to City College, where I studied French and Latin. I got my first degree there, majoring in foreign languages.

"Starting life again in America was a cultural shock. I became fascinated by the differences between Japan and America, and I suppose this launched me into anthropology. In Japan I had been indoctrinated with the belief that the Emperor was a god, and that we Japanese were descendants of the Sun God, and that the American system was immoral.

When I came back to the U.S. I was thrust into an entirely different atmosphere. It was a wonder that I did not become a schizophrenic. Instead, I became apolitical, but fascinated by the cultural and spiritual differences between east and west."

He studied at UCLA for three years, and after that at the University of Michigan, Syracuse University, and UC-Berkeley, before getting his doctorate at Wisconsin in 1962.

Befu has been back to Japan many times, often on fieldwork. Usually, he stays in one locality so that he can study conditions intensively. He also has carried out archaeological research into the prehistory of Japan.

My mother and father, with their two oldest sons, had to go into one of those 'relocation centers.' My oldest brother, Yoshiro, was a super-patriot for the U.S. and he wanted to volunteer to fight for freedom. My father said to him: 'What freedom do you have?'

—Harumi Befu



Students at a seminar, (left to right): Joan Hotelling, Prof. Harumi Befu, Todd Ohanian, Nancy Chen and Laurel Skurko

Befu/ continued from page 4

"As a result of my experiences I have dedicated myself to correcting the stereotypes of East Asia, particularly of Japan," said Befu.

"The Japanese are not typically engaged in 'group-think.' Workers are not blindly loyal to the group, such as the company they work for. There have been a great many industrial strikes. The leaders of these strikes are punished, but the strikes continue.

"Government workers are forbidden by law to strike, but they do, and when this happens the leaders are punished severely.

"The stereotype of the Japanese that is widely believed by most Americans, and often promoted by many Japanese, is that of a people who find a consensus by a sort of osmosis or that in Japanese business concerns the executive decisions are reached by some subtle process of finding out what everybody thinks. That is far from true. A good many Japanese corporations are headed by individuals who make the decisions and make them stick."

The large Japanese corporations are also widely regarded by Americans as being corporately-sponsored "extended families," with beneficient managements extending help into all form of human relations, including the encouragement of employees' marriages within the 'family' and so on.

"That is true only to a limited extent," said Befu. "It is a stereotype cultivated by many Japanese themselves. It is true that some Japanese companies like to present a view of themselves as one big happy family. Probably they do so more than American firms, but the real picture is that working for a Japanese corporation is not always easy or comfortable.

"For example, a Japanese corporation that gives the impression of being one family will typically hire, say 200 college graduates in the spring. From that first day each of those 200 is strongly contesting with each other for higher positions. Each is fully aware of the fact, and lives in that competitive atmosphere all the time.

"There is a facade of harmony and cooperation, which smothers and hides the competition. That is not understood by American observers, who look only at what is happening on the surface."

It is one of Befu's aims to destroy the stereotype that all Japanese fall into a pattern. "It is a multi-faceted society, with many permutations and sometimes contradictory forces.

American women, particularly feminists, are very curious about the role of women in Japanese life. It might be true to say that Japanese women enjoy less freedom than American women. They tend to have more circumscribed roles, and American feminists point their fingers at this.

"A great many Japanese women do not accept this criticism. They say that the proper role of a woman is to be the ideal wife and mother. The Japanese believe that whatever one does should be done to the limits of one's capabilities, and that being a good wife and mother demands full-time attention.

"This attitude has both good and bad consequences in Japan. One bad one is that Japanese women concentrate so hard on their duties as mothers that they tend to have far too much influence on the child's academic progress."

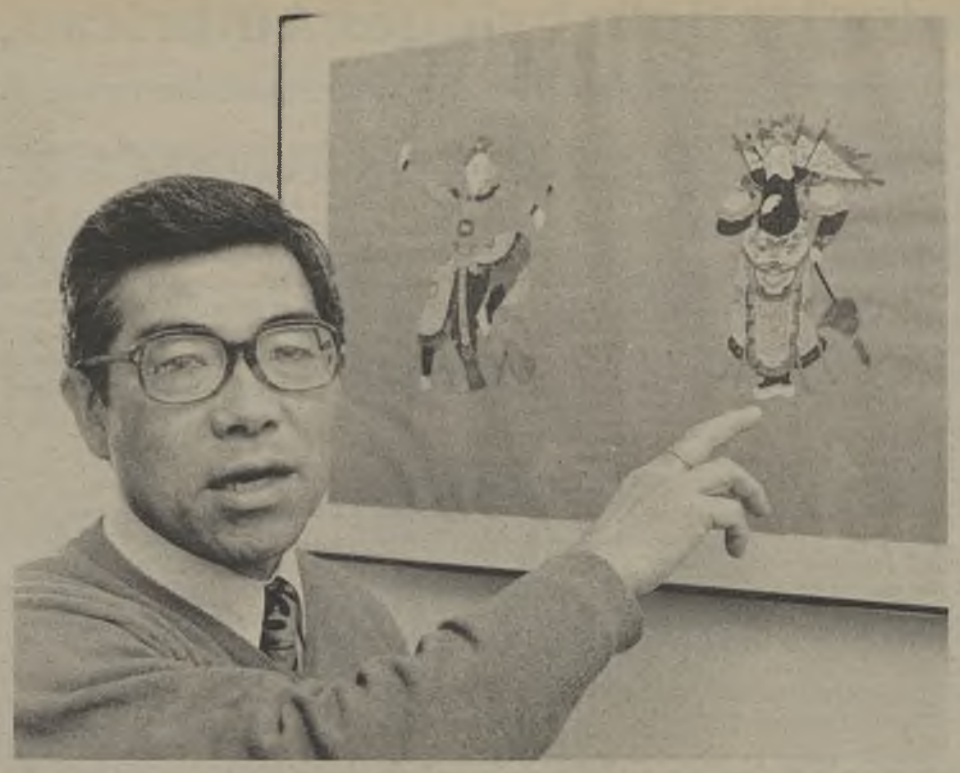
More so than the famous Jewish Mother?

"Jewish mothers allow a great deal of independence for their children in academic matters, whereas Japanese mothers tend to be overbearing in those respects."

Was Befu perhaps thinking of his own mother, who had sent him away at the age of six to spend his green years 8,000 miles away?

"Perhaps so for the initial decision to send me away. But if the decision did indeed pay off, it was largely due to what happened after I arrived in Japan, while my mother stayed in the U.S."

Befu spoke of the wives of Japanese businessmen who come to this country to live with their husbands.



Prof. Befu shows a papercut of a traditional Chinese figure

"The minute their children get home each afternoon from their U.S. schools they superintend while the children work on the lessons sent by correspondence schools in Japan. Then they do their American school's homework, after which they will take their piano lessons or perhaps some Japanese artcraft or martial arts. Often it is 10 at night before the children finish. Then on Saturdays, children are sent to an all-day Japanese school.

I do not say that we should not make value judgments about each other. Even in Japan there is a considerable body of opinion which maintains that women should not be required to leave work at 25.

"Nearly half of the entire Japanese labor force is female, in spite of the fact that women are expected to leave work at 25 for motherhood. This is because they come back to work in their early 40s after their kids have gone through junior high school, in other words after the mothers have been at home for 16 years.

"When they come back into the labor market they have to accept the lowest-paying jobs. There are some female managers and executives, but they are very few.

"When workers are hired at a Japanese firm, the men are hired at one window and the women at another. The conditions and opportunities for each are strikingly different, even though the two may be equally qualified."

Suppose a Japanese woman does not quit her job at 25, as she is supposed to?

"All sorts of gossip starts. She is faced with the comments of the other women: 'You can't find a man?' It becomes increasingly uncomfortable for her to stay on. It has sometimes been said that the greatest danger to feminism is women."

What happens to the woman who reaches 25 and does not have any marriage prospects?

"The vast majority of Japanese women see marriage as a social necessity and they do find husbands. Only a small percentage of Japanese women do not marry.

What can the U.S. and Japan learn from each other?

"Japan has one of the lowest crime rates in the world. They have an extremely efficient police system, and crime is largely under control. No citizen is allowed to have a handgun under any circumstances."

Asked why the Japanese were more law-abiding and less prone to drugs and violence, Befu said the Japanese had better motivation. They internalize values that are useful to society.

"In the U.S. people often have a distorted idea of the meaning of freedom, and this in turn affects their value motivation. Another reason is that the U.S. has so many diverse racial groups, often with differing values. Americans are encouraged, under the Constitution, not only to tolerate but to encourage this diversity.

"The Japanese have a relatively strong consensus on how people should act, on what is right or wrong.

"General MacArthur decreed an American form of government for Japan. Ever since he left the Japanese people have in effect gone back in many ways to the status that existed before the American occupation.

One of the special problems facing both countries today is the stream of pornography. "In Japan porn periodicals are sold in machines, and anyone, including children, can get them simply by putting a coin in a slot."

In his present position as resident fellow at Stanford's East House Befu is dedicated to bringing into focus the real nature of Japan and the other East Asian countries.

Sixty-one students live and study in the house, which is part of the brand-new complex of buildings at Governors Corner.

"The house is dedicated to undergraduate education on East Asia in a residential setting. Students are already able to draw on one of the finest set of course offerings in America, ranging from Chinese philosophy through Sino-Soviet relations to Japanese medieval literature and U.S.-Japanese economic relations.

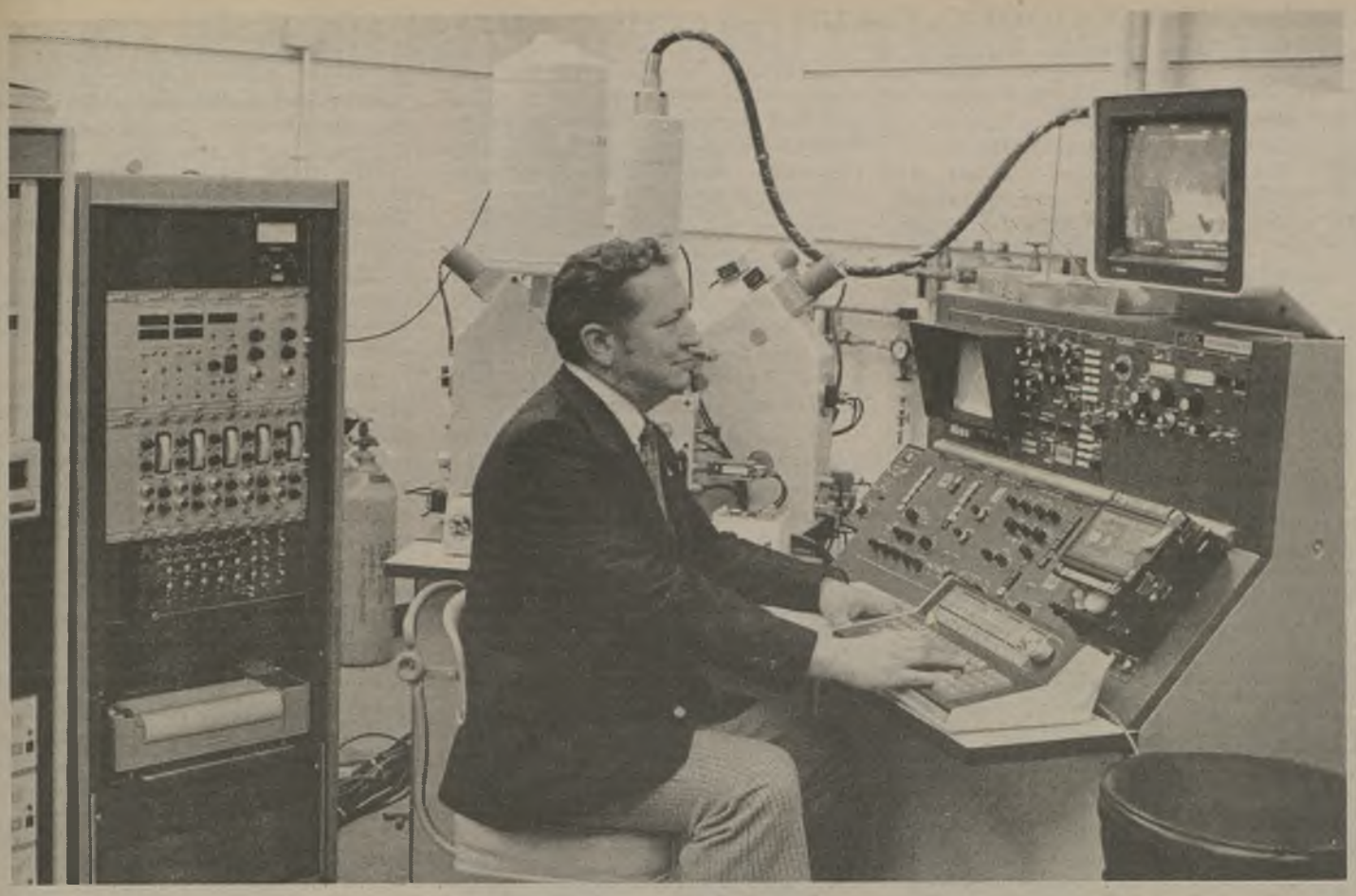
"While China and Japan are the foci of our programs at East House, we offer programs on other East Asian countries. In addition to all the academic work, we sponsor or plan to sponsor programs in practical arts such as flower arrangement, tea ceremony, martial arts, music, dance and so on.

"Already Stanford attracts hundreds of scholars and students from East Asia. We shall help to bring it all together."

Befu is busy not only on researching and explaining East and West to each other. In addition to scores of published works in the U.S. he also writes for Japanese learned journals. He has been commissioned to explain, in the Encyclopedia of Japan, a variety of American and Japanese characteristics.

Befu lives with his wife, Kei, and his son, Justin, who goes to Gunn High School. His daughter, Marina, is at Chapman College.

Asked whether his children were being brought up as Americans or Japanese, Befu replied with Oriental subtlety: "Hopefully as civilized people," he smiled.



CMR electron microscopist Chris Zercher operates the new JEOL superprobe, which was supplied with Tracor Northern EDS detector and 5 WDS spectrometers.

Atlantic Richfield, NSF help fund microprobe

Geologists at Stanford will now have at their fingertips the world's most advanced "microprobe"—a device that acts like a microscope but can perform quantitative analysis of very small rock samples.

Called the electron microprobe analyzer, it combines the latest solid state electronics with computer automation so that scientists can determine the ingredients of samples the size of a micron (1/1000th of a millimeter) in diameter.

The microprobe has "revolutionized our understanding of the chemistry of minerals and thin films," said Gordon Brown, associate professor of geology and director of the microprobe project.

At a recent luncheon meeting, the microprobe was officially dedicated to those departments at Stanford that will be using it for materials research in the coming years.

The microprobe project was funded by a combination of grants from the Atlantic Richfield Foundation, the National Science Foundation, and various departments at Stanford. The price of this sophisticated measuring instrument is $500,000.

In the order of the amount contributed to the project, those departments are: the School of Earth Sciences, the Center for Materials Research, the Provost's Office, the School of Humanities and Sciences, the School of Engineering, the Medical School, the Materials Sciences Department, and the Institute for Energy Studies.

The microprobe was designed and manufactured by a Japanese company called JEOL (Japan Electron Optics Laboratory) which is one of only three companies in the world that make this instrument. The other two are Cameca, a French company, and Applied Research Laboratories, an American company based in Los Angeles.

"The real benefit of this machine is that we can now look at very small rock samples 'in situ' (while in their original form) and not have to destroy the sample in order to get it under the microscope," said Brown.

The new electron microprobe analyzer will be used interdepartmentally to analyze not only such things as rock solids, minerals, synthetic crystals and metallurgical samples, but also tissues from human organs, and semiconductor materials.

Brown explained that the microprobe operates by bombarding solid samples with a beam of electrons which dislodge other electrons in the sample being studied. The results are x-rays that tell scientists the relative amounts of whatever substances are present in the sample.

According to Brown, Stanford's new microprobe is "the best facility of its kind to be found in the Western half of the United States."—**Craig LaGrow**

Students form entrepreneurs' center here

With startup funds totaling $1,500 from three graduate deans' offices, Stanford students have organized a Center for Entrepreneurship.

The outgrowth of a surprisingly strong response to a student-organized conference on entrepreneurship last spring, the new center's board of advisors includes Howard Head, inventor of Head skis and the Prince tennis racket, and University of Washington Prof. Karl Vesper, one of the nation's leading educators in entrepreneurship. Both spoke at the 1982 conference.

At a recent organizational meeting, student directors of the center started planning a second conference, tentatively set for April 30. They're also considering an internship program to link Stanford students with local entrepreneurs and a newsletter to highlight campus and community entrepreneurial activities.

Organized by students in engineering and business, last year's conference drew more than 500 Stanford students.

"This year we're hoping for about 700," said Thayer Wendell, second-year MBA student who is chairman of the Student Management Committee.

Initial funding for the center includes $500 each from the deans of graduate studies and research, engineering, and business. Wendall expects the conference and other activities will net an additional $4,000.

Other members of the Student Management Committee are Debbie Chen, David Gleba, Jim Hake, John Hendrickson, Bruce Johnson, Trish Kubal, John McCarthy, Luanne Picard, and Steve Wisch.

Serving ex-officio are last year's conference organizers Scott Buehrer, Constance Carroll, and Jonathan MacQuitty.

Besides Head, Vesper, and Wendell, the Board of Advisors includes Vice-Provost Gerald J. Lieberman, dean of graduate studies and research, Engineering Dean William Kays, Business School Dean Robert Jaedicke, Jim Levy, and Rene McPherson, outgoing dean of the Business School.

The Center can be contacted through P.O. Box 3678, Stanford, Calif. 94305.

The Center currently is establishing its quarters in Owen House.

Communist prospects in southern Africa appear bright, Henrikson says

"Prospects for communist governments in Africa south of the Sahara look bright," Thomas H. Henrikson, research fellow at Stanford's Hoover Institution concludes in a new book, *Communist Powers and Sub-Saharan Africa* (Hoover Institution Press, Stanford, Ca. 94305).

Armed intervention in Angola and Ethiopia "revealed that Soviet hardware and Cuban regulars could not only advise and assist, but also they could make up for the sloth, indifference, ethnic rivalries, and sheer incompetence of local forces," he declares.

Besides continuing to back opponents of the South African government, the Soviets have other pretexts for intervention, Henrikson says.

"Border disputes between African states and power struggles within countries are more prominent than at any time since the independence era. The Organization of African Unity has generally proved powerless to regulate border conflicts, and the absence of African institutions to implement peaceful transfers of power make for political violence.

"Regimes dubbed neocolonialist are fair game for toppling by self-styled national liberation movements. The most likely candidate for such a scenario today is Zaire, where the corrupt and inefficient regime Mobutu wavers. Several groups are organizing a bush war against Mobutu and "the old Katanga gendarmerie, trained and armed by Moscow, Havana, and East Berlin, wait in neighboring Angola. . . .

"Guerilla movements and their host states cannot overlook the obvious advantage of an alliance with the sole external military power ready and able to extend armed backing on a decisive scale."

But Soviet-Cuban intervention has raised fears among moderate African states, as did the invasion of Afghanistan.

"In the long run, the Russians could be eclipsed by the Chinese whose racial characteristics, semicolonialized past, and much lower-key activities find less opposition in Africa," he declares. "The Chinese have shown themselves to be personally diplomatic and willing to accept humble accomodations."

Where some Western analysts view Soviet intentions as "a riddle wrapped in a mystery inside an engima," as Winston Churchill once phrased it, Henrikson suggests policy-makers should heed the British statesman's conclusion that "Perhaps there is a key. That key is Russian national interest."



Thomas Henrikson

Financial aid helps achieve economic, racial diversity, survey suggests

Stanford's financial aid policies are working well, results of a new freshman survey indicate.

The proportion of incoming students expressing "major concern" about financing college this year was 11.4 percent, compared to 11.9 percent five years ago.

The proportion citing financial aid as a "very important" factor in selecting Stanford rose from 23.1 to 31.3 percent in the same period.

Both the family income and racial background of Stanford students are significantly more diverse than those of freshmen at highly selective private universities nationally, the survey indicates.

Stanford is one of the few universities nationally which continues to admit students without regard to financial need and to then meet their calculated financial need.

Conducted every fall for the American Council on Education by Prof. Alexander Astin of UCLA, the survey covered 188,692 freshmen entering 350 colleges and universities, including 1,200 at Stanford.

The University's "good academic reputation" was cited by 92.6 percent as "very important" in choosing Stanford, up slightly from 90.1 percent in 1978.

Interest in obtaining graduate and professional degrees remains very strong, with only 6.3 percent planning to complete their formal education at the baccalaureate level.

The proportion planning to earn a master's degree is 34.1 percent, Ph.D. or Ed. D. 24.8 percent, M.D. and related degrees 22.2 percent, and LL.D. or J.D. 11.5 percent, all about the same as five years ago.

In keeping with national trends, students entering Stanford this year are somewhat more likely to describe themselves as "liberal" than last year. They also are more liberal than their colleagues at other selective private universities and the average for all respondents nationally. *(See Table 1.)*

When asked what objectives they considered essential or very important, 78.8 percent of the Stanford freshman cited "to be an authority in my field," 69.1 percent "to develop a philosophy of life," 67.7 percent "to raise a family," 66.8 percent "to keep up with political affairs" and 66.3 percent "to help others in difficulty." Compared to five years ago, the proportion citing raising a family rose more than 10 percent.

Reasons cited as "very important" in deciding to go to college were virtually unchanged, with 88.6 percent citing "to learn more about things," 84.7 percent "to gain general education," 74.4 percent "to meet new and interesting people," 71.7 percent "to prepare for graduate school," and 65.8 percent "to get a better job."

Compared to five years ago, the proportion intending to major in engineering rose sharply, the portion heading to arts and humanities declined, and those interested in education as a field nearly disappeared. *(See Table 2.)*

Engineering also grew as a preference among probable careers. *(See Table 3.)*

When asked to estimate their parental income, eight percent placed it below $15,000 while 12.9 percent said $100,000 or more. Compared to other selective private universities, more freshmen come from low income families and fewer from the highest bracket. *(See Table 4.)*

The racial background of Stanford freshmen was more diverse than both private universities and the average for the entire U.S.. *(See Table 5.)*

The proportion of entering freshmen reporting they attended religious services dropped from 77.4 percent in 1978 to 39.8 percent in 1982.

Those reporting they frequently smoked cigarettes dropped from 1.6 to 0.8 percent, while tnose participating in political demonstrations rose from 11.6 percent to 15.9 percent.

One in five freshmen (20.6 percent) said they had taken computer-assisted courses and nearly half (46.9 percent) said they had written computer programs, findings very similar to those enrolling at private universities nationally.

In the 1981 survey, other private selective universities included Brandeis, CalTech, Cornell, Duke, John Hopkins, Lehigh, Northwestern, Princeton, Rice, Vanderbilt, Tulane, and Notre Dame.

Table 1

Political orientation	Stanford		Private Univ.	U.S. Total
	1981	1982		
Far left	1.1	1.4	1.5	1.8
Liberal	29.5	32.0	25.3	18.9
Middle of road	41.9	42.0	48.8	59.8
Conservative	26.6	24.1	23.2	18.4
Far right	0.8	0.5	1.1	1.0

Table 2

Intended major field of study	1978	1982
Arts, humanities	9.7	7.9
Biology	10.7	10.6
Business	6.9	6.1
Education	0.6	0.1
Engineering	14.7	22.9
Physical sciences	8.3	8.9
Professional fields	17.0	16.2
Premed	15.1	14.1
Social Sciences	14.5	13.0
Technical trades	0.0	0.2

Table 3

Probable career (leading preferences)	1978	1982
Business executive	9.3	8.6
Engineer	12.0	18.9
Lawyer, judge	9.4	9.7
Physician	20.4	19.2
Scientific research	7.1	7.2

Table 4

Estimated parental income	Stanford	Private Univ.	U.S. college
Below $15,000	8.0	6.7	20.6
$15,000 to 19,999	4.0	3.7	9.1
$20,000 to 24,999	7.3	6.7	13.2
$25,000 to 29,999	5.7	6.0	11.5
$30,000 to 34,999	8.0	8.7	12.0
$35,000 to 39,999	14.1	8.6	8.5
$40,000 to 49,999	10.3	14.0	10.6
$50,000 to 99,000	29.7	29.3	11.3
$100,000 or more	12.9	16.3	3.3

Table 5

Racial background	Stanford	Private Univ.	U.S. colleges
Caucasian	76.3	87.4	88.2
Black	7.3	4.5	8.5
American Indian	1.8	0.6	1.0
Asian American	9.2	5.0	1.4
Chicano	7.5	1.7	0.9
Puerto Rican	0.3	0.9	0.9
Other	3.9	2.3	1.4

The way it was....

75 YEARS AGO (1908)

The Board of Trustees passed a resolution making drunkenness sufficient ground for the suspension of a student and authorizing the president and the faculty to take all necessary steps to enforce the resolution.

* * * *

As the first step in the installation of an automobile bus line from Palo Alto to the campus, a five-passenger touring car began carrying persons at a 10 cent fare. Thirty-passenger automobiles were to begin a regular schedule soon.

* * * *

The remains of the statue of the "Angel of Grief" were moved into the Museum for safekeeping. It had been erected by Mrs. Stanford in memory of her brother, Henry C. Lathrop. After it was damaged in the 1906 earthquake souvenir seekers began taking away parts of the rare Italian marble statue.

50 YEARS AGO (1933)

The Board of Trustees extended the leave of absence of President Ray Lyman Wilbur until March, the end of the Hoover administration. Herbert Hoover and W. Mayo Newhall were reelected to the board. Each had joined the board in 1912.

* * * *

The last was seen of the booted and spurred military man leading an extra horse up the Row or to Roble Hall to take his girl for an afternoon ride at the Army's expense. That privilege of long standing was withdrawn by Colonel Cubbison, commander of the Stanford unit of the R.O.T.C., after several accidents.

25 YEARS AGO (1958)

University scientists started setting up a satellite research station to chart the paths of new Sputniks. The station, located in a meadow near the athletic fields just off Campus Drive, was being equipped with 20- and 40-megacycle receivers and recorders. The equipment would be used for university studies of the ionosphere and upper atmosphere. The project, sponsored by the International Geophysical Year Program, was to be manned by graduate students of the Radio Propagation Laboratory under the direction of Professors O. G. Villard, Jr., Ronald N. Bracewell and Allen M. Peterson.

Compiled by Catherine Peck
The Stanford Historical Society

How Admissions copes with 14,000 applicants, Murphy's Law

In the Stanford Office of Admissions, in any given year:

Twenty to 30 pairs of applicants will have the same first and last names;

About six pairs will have the same first, middle and last names;

One or two pairs will have the same first, middle, and last names, and the same birthdate;

And that's only the beginning.



This mass of files represents the 14,000 applicants for next September's freshman class. Each file contains at least 10 documents—no wonder Admissions is so organized.

"People don't appreciate, or even think about, the massive, dedicated clerical effort behind the admissions process," says Admissions Dean Fred A. Hargadon. "The ones who do that work here are unsung heroes."

Last year, there were almost 14,000 applicants for the approximately 1,500 spots in the freshman class. By mid-January of this year, there were nearly 700 more than that figure.

"There are about 10 documents for each applicant," says Hargadon, "which means almost 7,000 additional pieces of mail to receive, open, sort, and file."

Each complete file includes, at a minimum:

The student's application;
Two teachers' recommendations;
Counselor's or principal's report;
Transcript;
Test scores;
Preliminary application data.

Kmetovic controls traffic

Helen Kmetovic, assistant to the dean, is in charge of the staff and handles all of this, and has been in the admissions office for 19 years.

"She is like a senior traffic controller," says Hargadon.

Starting in late December, about six bags of mail arrive daily. The Federal Express man "seems to be working solely for us," says Hargadon. But the intricate and vital part is keeping all the paperwork straight.

"Just today," he added, "I read applications from two girls, with the same first and last names, from the same high school. Our credentials staff thoughtfully had put a precautionary note on each folder to alert the readers.

"And there are many other things to watch out for. There's a sort of Murphy's Law here. If a high school has two people with the same name, and one applies to Stanford, inevitably we'll get the other person's transcript, and inevitably it will show terrible grades.

The Federal Express people "seem to be working solely for us" —Fred Hargadon

"Many students take tests more than once, taking the SAT on several different dates, the achievement tests on yet another. We always use the highest score, so we have to check all those test reports against one another. And the last test is given in January, which means we don't get those reports until mid-February.

"Often students forget something—or a required letter doesn't arrive. We write and tell what's missing and give them 10 days to supply it.

"Every transcript is different. Some look like ancient maps, and others are so computerized and esoteric we can't decipher the acronyms. Furthermore, schools have different grading systems. Some use A-B-C, some use 5-4-3-2-1, some 100 to zero.

"We always 'work' the transcripts, crossing off courses Stanford doesn't count, and then recalculate the GPA."

Financial aid checks

The Financial Aids Office checks regularly to find out who is admitted, then does a cross-check to see if the person has applied for financial aid. If so, and if the student is eligible, the amount is determined and a letter can go out in the same envelope as the "admit" letter.

"We send a letter to every applicant saying 'yes' or 'no,' and we always use the first name or nickname," says Hargadon. "But we have to make sure the nickname is useable—some of them are pretty wild—especially if our response is 'no.'

"And of course, we double-check every one of those 14,000 letters and envelopes before sending them out. One of the reasons for that double-check is that about 1,000 applicants will have an address change every year, between the time at which they filed their applications and April 1, when we mail our letters."

With all the paperwork, however, there is a lighter side.

Many applicants send supporting material, such as photos of scientific projects, audio or video tapes, or art work.

"One girl this year wanted to make sure we believed she'd had a successful catering service," says Hargadon. "She sent a cake and several kinds of cookies. There was no way to file them except in our stomachs. And no, I can't tell you whether or not she'll be admitted."

—Harry Press



Helen Kmetovic

Proposed PG&E rate increases could cost Stanford $2.6 million more in '84

Pacific Gas and Electric has recently proposed changes in utility rates that could mean an increase of as much as $2.6 million in Stanford's annual energy bill beginning in January, 1984.

The company's proposals are set forth in its latest general rate request, which deals primarily with the utility's non-fuel costs of doing business. This is in contrast with electricity and gas fuel-cost-passthrough requests that occur several times a year.

If the state Public Utilities Commission approves the full amount of the increase, residential PG&E customers would also pay more—up to 12 percent more per year for gas and 25 percent more for electricity. That is unlikely, however, for the PUC has approved 60-80 percent of the company's general rate requests in the past.

In addition to regulating California's gas and electric utilities, the five-member Commission oversees telephone and water companies as well as trucking and transportation. The Commission and its staff must analyze and decide on hundreds of proposed rate changes each year. The most complex of these are the general rate requests of the utilities, which involve billions of dollars and a lengthy regulatory review process.

For example, in the request for 1984, PG&E has asked for an increase in revenues of nearly a billion dollars for their $7.5 billion dollar a year business. The utility says that the increase is necessary to allow it to improve its financial condition and to attract the investors who provide the company with much of its capital. It is the job of the PUC to decide just how financially healthy the company should be.

"What you have with most utilities is a situation where it is in *everyone's* best interest to have a monopoly because the cost of laying more than one set of power, water or phone lines is so huge," says William Swanson, who prepares forecasts of Stanford's energy bills and so must stay abreast of all the rate changes.

"What the PUC does is become 'pretend competitors' for PG&E. They try to set their rates so that they would resemble those of several companies in healthy competition."

The process of creating imaginary competition for a multi-billion-dollar business is not simple. At the beginning everyone is involved but the five PUC Commissioners themselves.

PG&E submitted their proposals—a stack of documents a foot high—in December. An administrative law judge, who cannot make decisions but who guides the proceedings, will oversee public hearings beginning in March. The hearings involve six months of testimony and cross-examination by PG&E, the PUC staff and many "interested parties."

The interested parties are usually the representatives of large groups like the California Manufacturer's Association or the ad hoc consumers group TURN (Toward Utility Rate Normalization), but if an individual customer wants to berate a vice-president of PG&E about his or her utility bill, he too can sign up as an interested party and cross-examine or testify. Stanford sometimes becomes an interested party in these cases because the interests of universities and hospitals might be overlooked.

Stanford is interested in changes in rate design as well as the amount of rate increases, because the way in which rates are designed can have a significant impact on our costs.

For example, PG&E is proposing to eliminate the rate schedule on which the University presently purchases its natural gas. Under present PUC policy this rate is lower than that which most residential customers pay because it is tied to the equivalent price of heavy, low-sulfur fuel oil and is available to customers who can use that oil as a backup fuel.

PG&E claims that its large customers have developed the capability to burn oil without ever intending to do so under most circumstances, in order to take advantage of the advantageous rate. PG&E wishes to establish a new rate that would actually be slightly cheaper, but might be unacceptable to Stanford because the gas supply could be less reliable. Consequently the University might be forced to purchase gas at a more expensive rate to assure reliability. This one change in rate design would amount to a 14.3 percent increase in gas costs, or about $750,000 annually.

When the hearings on the PG&E case end in September, the administrative law judge prepares a summary and recommendation for the PUC. The PUC staff, PG&E and the interested parties also prepare their final briefs. The Commissioners then review all of the briefs, summaries, and recommendations, as well as the original PG&E proposals and six months of transcribed testimony, and take them into consideration in rendering a final decision.

The decision on the case will be issued in December and is likely to contain surprises, for none of the recommendations or briefs are binding. For example, in 1978 the Commission decided that PG&E was not doing enough to encourage cogeneration. They shaved a few percentage points from the rate of return that PG&E was allowed to earn, resulting in millions of dollars in lost revenue for the company.

Lyle Zimmerman

Malinda Larry memorial set for Friday

Malinda Larry, who retired as administrative assistant for the Center for Materials Research in 1981 after 25 years at Stanford, died Saturday, Jan. 29, at the age of 66. She had been in declining health since her retirement.

A memorial service will be held at 4:30 p.m. Friday, Feb. 4, in the Round Room at Memorial Church.

Besides her husband, Andrew, Larry is survived by her two children and their families: daughter and son-in-law Malinda and Gene Koch and their daughter Gretchen Malinda; and son Michael and his wife Lilo.

At the beginning of her working career, Larry spent two years as secretary to W. C. Fields in Hollywood. His private name for her was "Miss Bossy."

Her 25 years at Stanford were spent in the same department, where she was noted for her sense of humor and talent for organization.

Telephone trouble on Personnel lines

The continuing wet weather has created phone problems for some sections of the Personnel Department—because of wet switching equipment in the Old Pavilion, many incoming calls are not ringing through. Unfortunately, repairs to the equipment cannot be made until the weather subsides. People experiencing difficulty in reaching a section of Personnel by phone should send a message through Campus Mail or call another Personnel section indicating the person with whom they wish to speak. That person will call back as soon as possible.

Offices move

The offices for the Center for Teaching and Learning and the Program for Faculty Renewal will be closed Feb. 3 and 4 in order to move to a new location.

Beginning Monday, Feb. 7, they can be found at Encina Commons 126. Their telephone numbers will remain the same—ext. 7-1326 for the Center and ext. 7-0761 for the Program.

Health and safety report

Accidents and Injuries Occurring Jan. 24-28

Type of Accident or Injury	Number of Incidents	Days Lost
Chemical-absorption	1	0
Impact with object	2	(0, 0)
Non-impact: sharp object	1	0
Fall from same level	4	(0, 0, 0, 2)
Lifting	2	(0, 0)

New first aid kits, called J-Kits, are available at half the cost of old kits and include band-aids, first aid tape, flexible gauze, sterile pads, alcohol swabs, a triangular bandage, ammonia inhalants, a first aid guide, and Stanford emergency information.

These kits can be ordered from Stores, using the same stock no. 690004 as the old kits. A memo will be distributed by Stores regarding the numbers for replacement items.

Letters to the editor

To see—or not to see— the Queen

Editor, *Campus Report*:

I enjoyed Prof. Chace's whimsical letter in which he suggested that we should read *King Lear*, etc., instead of going to see the Queen.

He reminds me of the occasion when George Bernard Shaw stood on the stage on the first night of his *Major Barbara* and waited patiently while the storm of applause continued. At length he was able to make himself heard, and was about to speak when a single but loud "Boo!" came from the gallery.

Shaw beamed in delight and shouted "I agree with you sir, but who are you and I among so many?"

Donald Stokes
News and Publications

Do computers add glibness to writing?

Editor, *Campus Report*:

A delightful student who is solidly grounded in both math and lit said today: "I thought computers would save time which I could then apply to personal and humanistic pursuits, but it hasn't worked out that way."

He went on to explain that his life and work were meantime being increasingly corrupted by the *means* while the ends became more remote. Yes, indeed. This is why Camus attacked people like Sartre: for putting the end—"essence"—after existence in a way that allowed a radical increase in pragmatic ruthlessness unchecked by simultaneous *values* (morality, the aesthetic, the deeply personal generally).

May I repeat? Creative or humanistic work prospers precisely by being constantly checked or balanced with *inefficient* realities, concerns about the past, and all sorts of scruples and issues *surrounding* the project, i.e., a wholeness and complexity unknown to manipulatory, one-dimensional, "tunnel-visioned" and future-directed technology.

Examples: the two finest critics I have known both stammered, hampered as they were, apparently, by their desire to say it all. Thus Richard Wilbur: "We respect *some* scholars' stammers" (*Grace*).

When a leading humanist sent me some recent articles printed from a word-processor, I immediately saw a new sloppiness and flaccidity, a new glibness. I sometimes see this in the work of even my best students these days.

I don't expect many scientists will understand what I am saying here. But what distresses me is that the way things are rapidly going, soon almost no humanists will understand either. It is later than we think. Where are the protesting voices of the few who know?

Robert Greer Cohn
Professor of French

P.S. Need it be said that I am not against computers and processors for routine purposes? I am talking about a subtle and all-important "certain point" and a dangerous bent in our time and place.

Managing technology key to small company success

Learning how to "manage the business of technology" is the key to success in a small company today, says Dan Verser, president of a newly formed chemical processing company in Menlo Park called Engenics.

"The trick is to have a combination of a solid technical background and the good business sense to go out and put your ideas to work," he said to a crowded classroom of Stanford MBA students on Tuesday, Jan. 25. Verser has a bachelor's degree in chemistry from Louisville, a Ph.D. from Princeton, and an MBA from Harvard.

Verser described the feeling he had when he woke up one morning and decided that he just didn't want to go to work for the large corporation he was working for at the time.

"In a big technical company, you feel lost and unimportant. Instead of allowing technical people the freedom to develop new and important ideas, most corporations force their thinkers into little administrative boxes. I'm much more attuned toward making things happen than knowing the finest details of why they happen," he said.

Verser sees a need today for people to develop their own technical ideas in the small business world. He recommends that, as a society, we move away from the traditional assumption that technological progress can only happen if it is developed by a large corporation.

Original investment

Although Verser's company began on the original investment of $10 million from six major corporations, he said that Engenics intends to remain a small private company.

"I hope that we never get to the point where the company is so big that I can't keep tabs on the research going on at every level," he said.

Engenics is in the business of making synthetic products like pharmaceuticals and agricultural chemicals through what Verser calls "biotechnological processes." Verser said that he hopes to market state-of-the-art chemical processes that will be more reliable than what he calls the "hit or miss" approach of genetic engineers.

While genetic engineers manipulate the coded information of a cell's DNA to produce a certain chemical, Verser's company is developing different methods of obtaining the same chemical results by using the techniques of fermentation and chemical separation.

"What I enjoy most about working on this approach," he said, "Is that I can develop a personal relationship with the technology and then go out and make money on the ideas that surface from our research."

Verser also said that he foresees a time in the near future when his research in chemical processing will blend with some of the research techniques that genetic engineers are working on today.

"We're using the same tools as they use. But their success is wholly dependent on whether or not they find the exact DNA code they're looking for or not," he said.

Verser's speech was sponsored by two student business groups at Stanford—the New Enterprise and Small Business Association and the Technology and Business Association.

Engenics background

In 1981, six companies provided $7.5 million for four years of applied research and development by Engenics. They are: Bendix, General Foods, Koppers, Mead, MacLaren Power and Paper (a subsidiary of Noranda Mines) and Elf Technologies of Societe Nationale Elf Aquitaine.

They also provided $2.4 million for a non-profit Center for Biotechnology Research, which will fund basic research at Stanford, Berkeley, and other academic institutions.

Governed by three independent trustees, the Center holds a 30 percent share of Engenics. If Engenics proves a commercially important biotechnical enterprise, this share will increase in value, providing universities more private support for fundamental research.

The Center's initial grants included approximately $1 million each to Stanford and Berkeley for four years. Chemical Engineering Prof. Channing Robertson and Dr. Abdul Matin of the Stanford Department of Medical Microbiology will be coprincipal investigators at the University, while Prof. Harvey Blanch of the UC-Berkeley Department of Chemical Engineering serves in a similar capacity there.

In 1981, Stanford President Donald Kennedy said that "while there is no commitment by the Center to support research at Stanford beyond the present contract, I believe this novel approach to the funding of research and technology can set a new pattern of long-term support for university research which can contribute significantly to meeting future needs.

"I am particularly grateful for the far-sightedness of the six companies for developing this new and imaginative approach."

—Craig LaGrow



Here's how WYLBUR can help manage office information

A secretary sits down at a desk, types at a keyboard, and produces twenty copies of the minutes of yesterday's staff meeting on Stanford memo paper.

Later an accounting assistant sits at the desk, enters some figures, and is shown a ten-year depreciation schedule for the laboratory equipment the department has just purchased.

At the end of the day the department head types into the same keyboard and finds out what lectures are being given on campus during the next week.

This may sound like the office of the future, but if you have a WYLBUR account, you can use CIT's IBM timesharing system to perform all of the tasks just described, and more. What makes it possible is a new WYLBUR word called ADMIN.

When you type the word ADMIN at your computer terminal in response to the COMMAND prompt, you are given the option of choosing from a whole list of administrative functions. ADMIN is the name of a system that was developed by CIT's Departmental Information Systems (DIS) in order to make the resources of administrative information technology readily accessible to University departments. The options currently available are summarized below.

ADMIN ADDRESS BOOK builds and maintains for you a personal SPIRES file of names and addresses which can be used to create telephone or address lists and mailing labels. It will eventually be possible to use it in conjunction with BULK MAILER, a feature still in the planning stage, which will merge a name and address file with a specified text to produce personalized letters.

ADMIN CALCULATOR is an interactive financial calculator. Currently, it can perform computations in four areas:

* Interest—Simple and Compound
* Depreciation—Straight, Sum-of-Years' Digits, and Real Declining
* Cost/Benefit Analysis—Net Present Value, Internal Rate of Return
* Amortization—Periodic Payment Amount, Mortgage Amount, Length of Time to Amortization.

The CALCULATOR operates in a way similar to hand-held calculators, but with several added conveniences. It can detect and ask for correction of some entry errors, and it displays both input and results. It can also produce tables, such as amortization schedules, which may be printed on paper or sent to others using electronic mail. A Buy-versus-Lease computation is planned for Cost/Benefit Analysis.

ADMIN INFO provides a director and access to a collection of public databases of interest to the Stanford community. These databases are generally owned and maintained by members of the University community rather than by DIS. INFO currently includes:

* AAPLAN—Stanford University's Affirmative Action Plan
* BUILDING—Stanford Building Managers
* COMMUNITY—Community Information
* COMPUTERS—Mini and Maxi Computers at Stanford
* DISABLED—Resources for the Disabled
* PACNET—Public Affairs/AAU/COFHE schools
* PUBLIC EVENTS—Calendar of Public Events at Stanford.

ADMIN LEAVE is an online system which can record, store and report leave taken by any regular Stanford staff member. It automatically posts monthly accruals according to established rates, and computes leave balances. Using ADMIN any University department may be added to the system. ADMIN LEAVE also includes an accrual calculator which computes partial month employee leave accruals. You need not be a participant in the leave system in order to use the accrual calculator.

ADMIN MEMO prepares a Stanford University memorandum for printing, either on CIT's 3800 or 9700 laser printers or on a local printer, using a standard or customized format. A choice of paper, type faces and number of copies is offered.

Two other ADMIN functions are available to accounts authorized to use them. These are EMAS, a departmental expenditure management analysis system, and EASYMARK, a batch reporting system used by financial analysts and others. Anyone interested in using these two systems, or who would like more information about ADMIN, should contact the DIS staff at 497-1415.

Stanford ranks high in latest graduate education survey

Stanford has made a strong showing in the latest comparative evaluation of graduate faculty by their peers in the nation's major research universities.

Stanford ranked among the top 10 in 25 different fields, a record exceeded only by Berkeley, which finished among the top 10 in 30 of 32 fields surveyed.

Stanford ranked first in four fields:

* **Biochemistry**
* **Computer Science**
* **Psychology**
* **Statistics-biostatistics**

The faculty was among the top five in seven other fields

* **Economics**
* **Chemistry**
* **Geoscience**
* **Chemical engineering**
* **Civil engineering**
* **Electrical engineering**
* **Mechanical engineering**

Fourteen additional departments ranked among the top 10 nationally:

* **Anthropology**
* **Art history**
* **English**
* **German**
* **History**
* **Linguistics**
* **Mathematics**
* **Microbiology**
* **Philosophy**
* **Physics**
* **Political science**
* **Spanish**
* **Sociology**
* **Zoology**

Harvard ranked among the top 10 in 22 fields surveyed, followed by Yale, 20; Princeton and Chicago, 18 each; UCLA, 17; and MIT, 16.

Berkeley and UCLA were the only institutions represented in all 32 fields. Stanford and Yale each has 30 programs; Princeton and Chicago, 26 each; Harvard 23; and MIT 17.

Harvard had seven programs rated first nationally, followed by Yale and MIT, six each; Berkeley, five; and Stanford, four.

Berkeley led in programs ranked among the top five, with 24, followed by Harvard and Yale, 15 each; MIT and Chicago, 13 each; Stanford, 11; and Princeton 10.

The accompanying table, prepared by Stanford News and Publications Service, compares the perceived quality of faculty at Stanford in four national surveys of graduate education since 1957, when the University ranked 13th nationally.

Rankings of the most recent survey are compared with seven other institutions—Berkeley, Harvard, Yale, Princeton, MIT, Chicago, and UCLA—all of whom had at least 16 departments ranked among the top 10 in their respective fields nationally.

Standardized scores for each field in the 1982 survey also are shown. In the standardized scores, 50 represents the average, with about two-thirds of the responses clustered between 40 and 60. These show a much greater perceived difference between first and second place rankings in art history (where Yale was first with a standardized score of 75 and Harvard second with 69) than economics (where MIT led with 73, followed by Stanford, Chicago, and Harvard, all clustered at 72).

The most recent survey was sponsored by the Conference Board of the Associated Research Council, which includes the American Council of Learned Societies, the American Council on Education (ACE), the National Research Council and the Social Science Research Council. The $500,000 two-year study was funded by the Mellon, Ford, and Sloan Foundations, the National Institutes of Health, the National Science Foundation, and the National Academy of Sciences. A random sample of scholars in each field was asked to rank other institutions on a variety of dimensions, of which perceived faculty quality was one. Prof. Lincoln Moses of the Stanford Department of Statistics, was one of 17 scholars who served on the Committee on an Assessment of Quality-Related Characteristics of Research Doctorate Programs in the U.S., overseeing the study. The committee was co-directed by Lyle V. Jones of the University of North Carolina at Chapel Hill, and Gardner Lindzey, director of the Center for Advanced Study in the Behavioral Sciences at Stanford.

Copies of the final reports, *An Assessment of Research-Doctorate Programs in the U.S.* (five in all, one for each broad field surveyed) are available at $10.50 each from the National Academy Press, 2101 Constitution Ave. NW, Washington, D.C. 20036.

The 1969 and 1964 surveys were sponsored by the ACE, while the 1957 survey was done by the University of Pennsylvania.

Compared to 1957, Stanford improved in every field except botany in 1982. Compared to 1964, the University remained the same or improved in every field except botany, English, French, history, microbiology, physiology, physics, and zoology. Compared with 1969, the findings were quite mixed, with advances in some fields and setbacks in others. In some instances very small differences in standardized scores translated into large differences in rankings among those near the top of their respective fields.

PERCEIVED QUALITY OF FACULTY IN GRADUATE PROGRAMS

	STANFORD RANKINGS				1982 RANKING (Standardized Score)						
HUMANITIES	**1957**	**1964**	**1969**	**1982**	**Berkeley**	**Harvard**	**Yale**	**Princeton**	**MIT**	**Chicago**	**UCLA**
Art History	NR	NS	11*	7 (59)	6 (64)	2 (69)	1 (75)	5 (66)	NL	13 (53)	12 (54)
Classics	15	NI	4	14 (55)	2 (67)	1 (70)	3 (65)	4 (62)	NL	10* (57)	16 (52)
English	15	6*	6*	10 (66)	2 (71)	4 (69)	1 (73)	7* (67)	NL	5* (68)	11* (64)
French	NR	11*	8	12 (59)	6 (61)	13 (56)	1 (74)	2 (73)	NL	13* (56)	31 (48)
German	NR	13*	5*	6* (63)	4 (65)	9 (59)	1* (67)	1* (67)	NL	21 (47)	11 (57)
Linguistics	NR	NI	Good	9 (58)	6* (61)	10 (55)	11* (52)	NL	1 (69)	4* (62)	2 (66)
Music	NR	NS	10*	14* (59)	1* (67)	NL	4 (66)	1* (67)	NL	1* (67)	11* (60)
Philosophy	NR	10	11*	7 (66)	4 (69)	1 (72)	14 (57)	2* (71)	9 (64)	6 (67)	5* (68)
Spanish	NR	NR	17*	7* (63)	5 (67)	1 (74)	3* (69)	13 (59)	NL	NL	7* (63)
SOCIAL SCIENCES											
Anthropology	14	10*	9*	7* (63)	1 (74)	7* (63)	6 (65)	37* (47)	NL	2* (73)	7* (63)
Economics	5*	6	7*	2* (72)	9* (65)	2* (72)	5* (71)	5* (71)	1 (73)	2* (72)	9* (65)
History	15	7*	5*	8 (67)	1* (71)	3* (70)	1* (71)	3* (70)	NL	5* (68)	10 (64)
Political Science	13	7*	6*	7* (66)	2* (71)	2* (71)	1 (72)	9* (63)	6 (67)	4* (70)	16 (59)
Psychology	5	1*	1	1 (72)	4* (69)	2* (70)	2* (70)	16* (63)	21* (62)	9* (67)	7* (68)
Sociology	NR	11*	15*	7* (66)	3* (69)	5* (67)	14* (62)	16* (60)	NL	1 (71)	8* (65)
Geography	(no program)				4* (66)	NL	NL	NL	NL	3 (67)	6 (64)
BIOLOGICAL SCIENCES											
Biochemistry	NS	2*	2*	1* (74)	4* (71)	1* (74)	7 (70)	25 (59)	1* (74)	15* (64)	12* (66)
Botany	14	9*	11	NL	3* (65)	NL	5 (63)	NL	NL	42 (45)	10* (60)
Cellular, Molecular	(new category)		4	11* (61)	8* (64)	6* (65)	4 (69)	28* (53)	1* (70)	11* (61) (C)	14 (60)
Microbiology	NS	7	8*	10 (64)	31* (56)	NL	13 (63)	NL	1 (77)	20* (61) (D)	8 (66)
Physiology	NS	24	Good	35* (54)	31 (55)	7 (65)	2* (68)	NL	NL	18* (58)	5* (67)
Zoology	14	4	3*	7* (66)	2 (70)	1 (74)	3* (69)	NL	NL	10 (62)	5* (67)
PHYSICAL SCIENCES											
Chemistry	15	5	3*	5* (70)	1* (74)	1* (74)	13*(64)	13* (64)	4 (73)	7* (69)	7* (69)
Computer Science	(new category)			1 (75)	4 (70)	NL	8 (60)	14 (55)	2 (74)	NL	6* (63)
Geoscience (A)	6	7	4*	5* (66)	9* (64)	7* (65)	9* (64)	7* (65)	2 (72)	5* (66)	3 (69)
Mathematics	9	6	6	6* (69)	2 (72)	3* (71)	6* (69)	1 (73)	2 (72)	4* (71)	14 (63)
Physics (B)	6	5	5*	6* (70)	3* (72)	1* (73)	11* (65)	3* (72)	3* (72)	6* (70)	17* (62)
Statistics, biostatistics	(new category)			1* (72)	1* (72)	6* (62)	13* (60)	6* (62)	NL	3 (70)	17 (59)
ENGINEERING											
Chemical	NS	10*	4*	5 (70)	3* (71)	NL	30* (50)	9* (64)	7 (67)	NL	35* (49)
Civil	NS	5	4*	5* (67)	1 (75)	NL	NL	10* (61)	2 (74)	NL	16* (58)
Electrical	NS	2	2	2* (75)	2* (75)	NL	30*(54)	10* (63)	1 (76)	NL	5* (67)
Mechanical	NS	3	2	2 (74)	3 (73)	NL	23* (54)	6 (66)	1 (76)	NL	9* (64)
	ranked first			4	5	7	6	3	6	2	0
	top 5			11	24	15	15	10	13	13	6
	top 10			25	30	22	20	18	16	18	17
	total fields			30	32	23	30	26	17	26	32
	fields in survey			32	32	32	32	32	32	32	32

* = *ties*
NL = not listed
NR = not ranked
NS = not surveyed
NI = not included

(A) = ranking shown is for geophysics, geology had a standardized score of 60, applied earth science 56
(B) = applied physics had a standardized score of 65, equivalent to an 11th-place tie
(C) = ranking shown is for genetics, biology had standardized score of 55, biophysics and theoretical biology, 58, developmental biology 54
(D) = ranking shown is for microbiology, immunology had standardized score of 57, virology 68

RLG's solution to the interlibrary loan problem uses electronic mail

Many Stanford library users have recently noticed a significant improvement in the response to their interlibrary loan requests.

Studies made four years ago showed that materials requested from eastern universities such as Yale, Columbia, Princeton, and Cornell, were taking four to five weeks to arrive at Stanford from the date the request was sent.

Today this figure is more often 10 to 14 days. The reason for the improved response time is that each work day a library specialist sits at a terminal in Green Library and sends requests to other libraries via the RLIN electronic message system for loan or photocopy of library materials required by Stanford faculty, students, and staff, but unavailable here.



Meyer Library circulation desk

RLIN message

This new system, originally introduced by the Research Libraries Group (RLG) in November, 1980 and improved last September, goes a considerable way to removing many of the drawbacks associated with traditional interlibrary loan service.

No matter how large or comprehensive a University's library collection, it has always been necessary to borrow materials to support the research of its scholars.

Since its formation in 1974, the Research Libraries Group has had as one of its primary goals a responsive and cooperative interlibrary loan service between members. Each RLG library enters into the RLIN data base records of its newly cataloged materials. Stanford's Interlibrary Loan unit searches this data base, which now contains over 7½ million records, to locate libraries which own the materials requested by faculty and students.

With positive information that a member library owns the requested material, Interlibrary Loan can then ask for it via the special RLIN electronic message system. If more than one library has indicated ownership, the staff can, at the time of the initial request, instruct the system to relay the request, when not filled, from one library to the next without it being returned to the originating library after each negative response.

Speedy shipment

Each RLG library has instituted internal procedures to ensure that member's requests receive priority handling and that a response of "filled" or "unfilled" is returned to the requesting library within three working days.

Shipment of materials is no longer through the mail but by UPS surface delivery or, at the request of the borrowing library, by UPS Air Service. The results of these new methods of communication, speedier shipment of materials and increased dedication of staff effort, have been very dramatic in the past few months.

Another attractive feature of the RLG network is the provision of free photocopy, between members, of journal articles, etc. of reasonable length (defined as 50 pages). This not only provides material not otherwise available but also eliminates the paperwork associated with billing and other financial charges.

As many Stanford faculty and students have discovered, many U.S. and Canadian universities will not loan their dissertations when there is a microfilm copy available for purchase. This problem has been greatly reduced within the RLG network since the members have agreed to lend their dissertations to each other whenever there is a non-archival (i.e. second) copy available.

In addition to dissertations, member libraries are making other materials available which they formerly did not loan. Often they require that the material be for "library use only" and it is then placed in the Department of Special Collections for use in the reading room there.

Although this is a restrictive measure, it is nevertheless an improvement from when the lending library would not have sent the material at all. Another significant step forward in cooperation is that two RLG members, New York Public Library and American Antiquarian Society, which previously did not loan materials, have agreed to make parts of their collections available to other RLG libraries.

There is a unique relationship between Stanford's Interlibrary Loan and that of UC-Berkeley. As with other RLG libraries, Stanford's requests are sent to Berkeley via the electronic system; but the materials from Berkeley are delivered to Stanford twice a day on the Gutenberg Express bus and hence shipping time is saved. Berkeley is also very cooperative in lending Stanford bound journals not normally available through Interlibrary Loan.

The staff's best success using the RLG electronic mail system in recent weeks was the receipt of a dissertation from University of Minnesota within three days of initiating the request.

However, Bernard Denham, head of Stanford University Libraries Interlibrary Services Division, commented that this speedy response cannot be taken as the norm; there are still many requests for which the lending library may have to do special searching or recall and those requests for which there is difficulty in locating a library which owns the material.

While the new system is meeting with success, it is still not able to locate all of the materials required and Stanford must rely on libraries outside the network. Last year, 40 percent of all the materials Stanford borrowed or received as photocopy came from RLG libraries. However, it is expected that RLG activity will grow in the future as the RLIN data base is enlarged, creating a greater knowledge of the holdings of the member libraries.

All the components are in place for a successful, cooperative and responsive interlibrary loan network. This includes not only the technological and other features ensuring rapid transmission of requests and material, but the equally necessary positive approach of all library staffs at Stanford and throughout the Network who provide this important library service.

It is already working and the beneficial results are available for all Stanford faculty and students. The Interlibrary Loan staff invite Stanford faculty, staff, and students to use the service.

Berkeley sound archives have arrived at Stanford

Cooperation between the Stanford Archive of Recorded Sound and the UC-Berkeley Music Library over the past year has resulted in the transfer of more than 10,000 commercial 78 rpm sound recordings from the soon-to-be-closed old UC storage facility at Richmond to the Stanford Archive of Recorded Sound. Located on the ground floor of the Knoll, the archive is a part of the University Libraries dedicated to the collection and preservation of historically and artistically significant sound recordings, including classical and popular music, literature, drama, interviews, and public addresses.

When it became clear that the Berkeley archival recordings could not be accommodated in the new Northern California Storage Facility, plans to move them to Stanford were initiated by Berkeley both to provide proper housing and to make them accessible once again to Berkeley and Stanford library users alike.

Classical vocal and instrumental performances from the early 1900s to the 1940s make up the largest part of the newly-acquired recordings, but a significant collection of jazz as well as some spoken-word material is included, all of which complement and enhance the Stanford Archive's present holdings.

Approximately 2,500 of the more interesting and important Berkeley records were added to the Archive's collection during the summer and fall, and they will be included in the *Rigler and Deutsch Index of Pre-LP Sound Recordings* to appear later this year.

A consortium effort funded by the National Endowment for the Humanities and the Ledler Foundation, this index will document all Stanford's 78 rpm discs as well as those in the sound archives of Syracuse and Yale Universities, the New York Public Library, and the Library of Congress. The remaining Berkeley recordings will be gradually incorporated into the Archive as time and staff permit.

Containing about 100,000 items, the Stanford Archive of Recorded Sound is a non-circulating collection open to users from 1 to 5 p.m. weekdays or by special appointment.

One of the largest general sound recording collections in the United States, the Archive serves not only the Stanford and UC-Berkeley communities but researchers from all over the country and abroad as well.

Further information is available from Archivist Barbara Sawka at 497-9312.

After a heart attack. . .

Study probes question of getting patients back to work

Many mild heart attack patients are probably told by their doctors to stay home from work longer than is necessary, a Stanford University cardiologist believes.

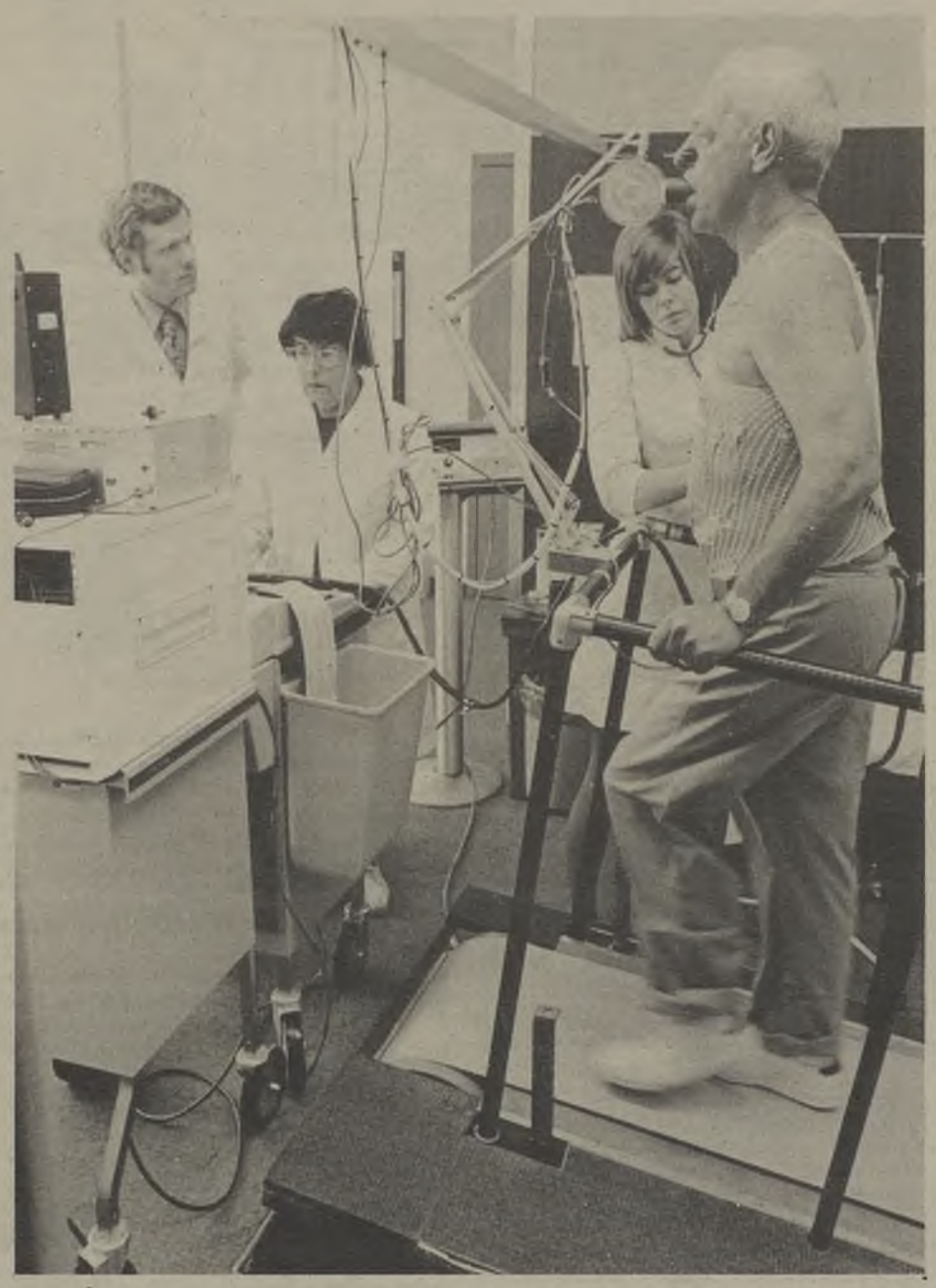
"A good number of the lower-risk patients could likely hasten their return if they were given the confidence to do so," said Dr. Robert DeBusk, associate professor of clinical medicine and director of the Cardiac Rehabilitation Program.

Heart attack patients, he said, currently are advised to wait 80 to 90 days before returning to work. But his and colleagues' previous studies on more than 700 patients within three weeks of infarction have demonstrated that early exercise testing permits the distinction between high- and low-risk patients, said DeBusk.

His present study, funded by a new grant from the Robert Wood Johnson Foundation's Medical Practice Research and Development Program, builds upon those previous studies by carrying the question one step further: can the effective communication of information thus obtained through testing facilitate an earlier return to work for low-risk postinfarction patients?

The study will test a combined intervention—including both an occupational work evaluation and a behavior change program. "The intervention is designed to enhance patients' perceived health status," said DeBusk, explaining that this is a key factor in determining the patients' confidence and thus their return to work.

"Through the use of certain specific techniques, we hope to cut down to 30-50 days the amount of time the lower-risk patients need to stay home after heart attacks," he said.



DeBusk (far left) stands by with other staff members as a patient undergoes treadmill exercise testing in the laboratory of Stanford's cardiac rehabilitation program.

Comparisons

The $150,000 grant will enable DeBusk and his colleagues to work with 600 male heart attack patients over the course of about two years. The researchers will attempt to detect changes in the time patients take to go back to work depending on such factors as age, state of employment, medical impediments, and mode of medical follow-up.

Moreover, DeBusk predicts that if doctors better identify high-risk patients from the start, they'll be able to more successfully intervene medically when necessary, while encouraging the lower-risk patients to get back on their feet sooner.

As the first step of his research protocol, a treadmill exercise test will be administered to patients three weeks after infarction. "This test serves a therapeutic as well as a diagnostic purpose," said DeBusk, "by demonstrating to patients their capacity for work."

The test allows doctors to establish a prognosis for each patient on which to base decisions. (In the event that abnormalities are found, medications or bypass surgery may be indicated.) A private counseling session will follow the test.

The behavior change program will be carried out by patients at home, DeBusk explained. "Physical activity, inability to cope with job stress, and smoking are three major areas of concern to postinfarction patients." These issues will be addressed by a program tailored to each patient's needs, making use of audiovisuals, advice-filled workbooks, and individually prescribed exercise (walking and jogging) regimens.

"Patients will monitor their heart rates, send us progress reports, and talk with nurses on the phone periodically. We'll revise our instructions based on what the patients tell us, and then we'll see them at the end of six months," DeBusk said.

A key question of the research, he added, will be whether or not the findings can be expanded to apply to a greater number of people. "For example, we will use these techniques only with patients 60 or younger during the study. But perhaps, observing older patients, we'll find that the same principles hold true for some of them.

"So we'll try to determine the relevance of our intervention, as related to different segments of the population."

Subjects

Patients will be enrolled as volunteer participants in the study from five Kaiser hospitals throughout the Bay Area, DeBusk said. The project may begin as early as April.

DeBusk's research is one of 21 projects being funded under the Foundation's Medical Practice Research and Development Program. The grants, totaling $3 million, are aimed at improving medicine's capacity to assist impaired, acutely or chronically ill individuals in regaining or maintaining their functional abilities.

The present grants were made under a second annual round of projects funded under the Program. A total of 254 applications were received and reviewed by an expert panel for selection.

DeBusk, who received both his B.A. in history and M.D. degree at Stanford Universiy, has been on the faculty here since 1973. He is a Fellow of both the American College of Cardiology and the American College of Physicians.

The Robert Wood Johnson Foundation, the nation's largest private health care philanthropy, is committed to improving the quality, affordability, and delivery of health care in the United States. In the past ten years over $400 million in grants have been made to institutions in support of health care projects.

—Lisa Ames

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Molecular Biology gets top marks in national survey

Stanford University's biological science graduate programs received high marks in a national study recently published by the National Academy of Sciences.

The study was not intended to rank the programs, but on a scale of 0 to 5, Stanford's biochemistry program scored 4.9, a tie with Harvard and just behind Massachusetts Institute of Technology (MIT). The cellular/molecular biology and the microbiology programs scored 4.0.

"The study is extremely indicative of Stanford's present reputation in newly developing areas, and that the reputation will continue to grow," said Dr. Dominick Purpura, dean of the Medical School.

However, he noted that Stanford did not score among the top schools in physiology. "Establishing a strong physiology department is a target of the School's growth," he said. "It would be surprising if ten years from now Stanford was not included among the top ten physiology programs.

"It's nice to stand on laurels, but it's better to work towards meeting challenges," he added.

The study was sponsored by the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council.

About 56 percent of the 1,848 academic biologists surveyed participated in the study. Many objected to the survey, which has been criticized in the past for "confusing prestige for quality."

Data collected by the study includes the number of faculty members in each program, the size of the university library, and the proportion of faculty receiving federal funds.

State of the art: plastic and reconstructive surgery

Imagine a young man losing his arm in a car accident. So badly mangled, it cannot be surgically reattached. Instead, surgeons attach a new arm—received from a donor. With proper medication and physical therapy, the young man gains full use of his new limb.

Sound impossible? Not at all, predict leading plastic surgeons at Stanford University Medical Center. "We've got the technical know-how now," said Dr. Lars Vistnes, surgery professor and chief of the Plastic and Reconstructive Surgery Clinic. "As soon as we can overcome the immunological barriers, we'll be able to transplant limbs. It's the next big leap."

The "immunological barrier"—rejection of the limb—is being broken down, however, Vistnes added, with the development and refinement of immunosuppressant drugs, such as Cyclosporine, which are used in heart and heart-lung transplants.

"The reason we won't risk transplanting limbs and possible rejection by the patient is because a limb, unlike a heart or a lung, is not essential to sustain life," explained Dr. Robert Chase, surgery professor and head of the hand unit of the Clinic.

Powerful immunosuppressants always compromise the body's ability to fight off infections. Transplanting limbs, the surgeons believe, is not yet sufficient trade-off if the infection risks are high.

Vistnes and Chase are cautious, but optimistic about the future of plastic and reconstructive surgery. Their optimism is based on the recent development of techniques that have enabled their specialty to advance in great strides.

The two major developments in the last decade, Vistnes said, are the discovery that it is possible to move entire units of skin, based on the underlying muscles and blood supply, and microsurgery.

Until recently, Vistnes elaborated, surgeons thought skin could only be moved if the blood supply remained intact. For example, in order to graft skin from one part of the body to another, it was necessary to bind the two parts together, let the skin begin to grow on the new area while still being kept alive by its attachment to the original area, and then separate the two parts once again.

Now surgeons can completely remove a unit of skin and muscle from one area, and transfer it to a new area, without the two areas having to be physically attached to each other during the process.

"This discovery shortens the hospital time for the patient, cuts the number of operations to only one, allows the patient more comfort, and it doesn't ruin the site the skin is taken from," Vistnes explained.

What's more, he continued, it enables surgeons to do procedures such as reconstructing breasts on women who have had mastectomies, and replanting patients' limbs that have been severed.

"For example," Vistnes said, "some time ago an Alaskan man caught his hair in a machine and his whole scalp was torn off. The man was flown down to Stanford, with his scalp in a bucket of ice. Dr. Vincent Hentz (associate professor of surgery) replanted it, and today he has a full head of hair. Ten years ago this wouldn't have been possible."

Not to be overlooked in the success of such procedures is the use of microsurgery techniques. With the aid of microscopes, surgeons can now see how to reconnect miniscule tendons, blood vessels, muscles, and other components of the body. This ability, Vistnes said, enables surgeons to "salvage severely mangled extremities that would otherwise have to be amputated."

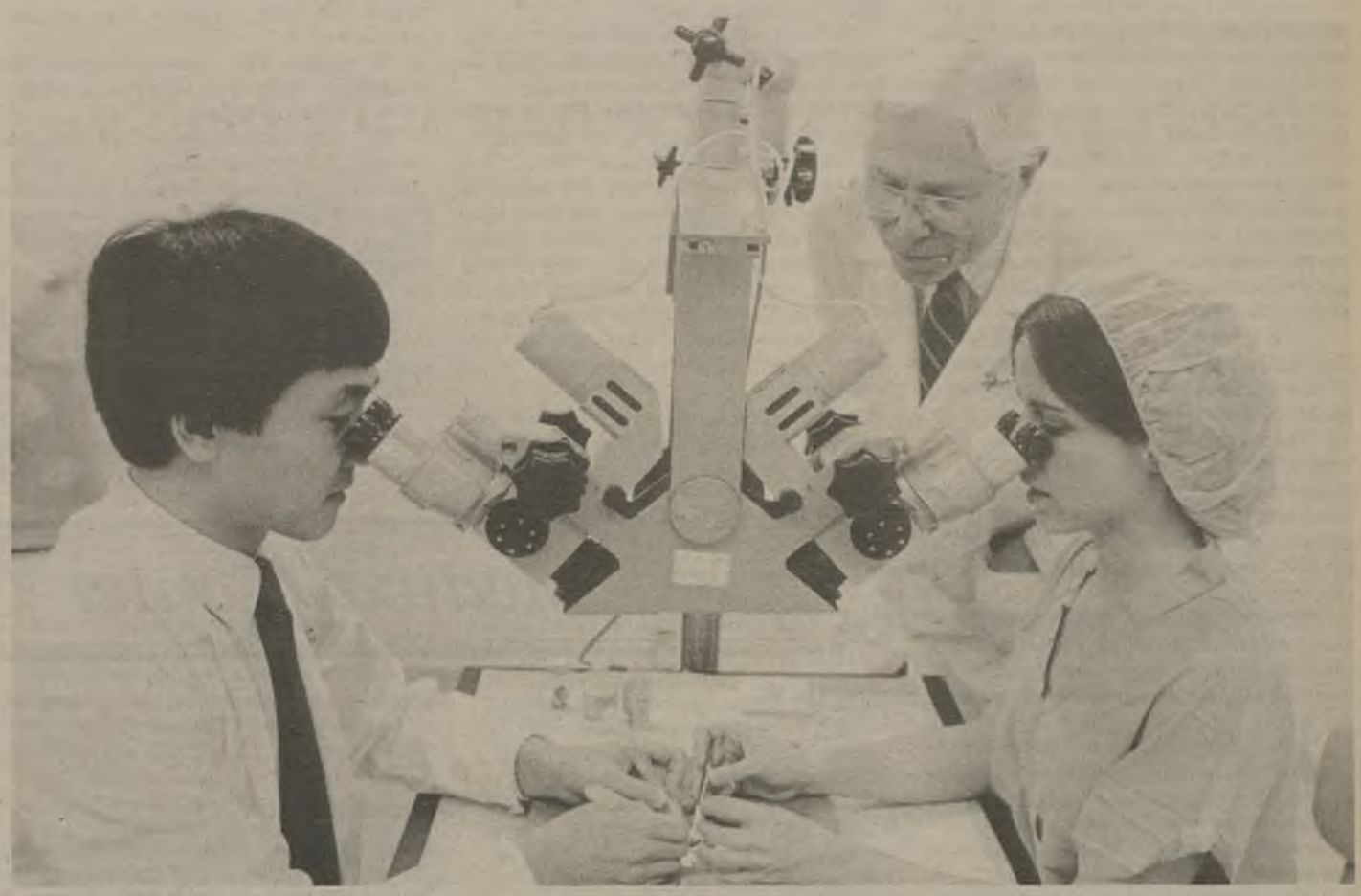
"Microsurgery is the most dramatic technical advance in years because it allows surgeons to transfer parts of the body, including skin, bones, soft tissue, and entire parts from one place to another," said Chase. "What's also very exciting is the transfer of muscles, often from lower to upper limbs, to take over the function of muscles that have been lost."

Other advances in the area of hand surgery, Chase continued, include the management of fractures. "By using mini mechanical gadgets, such as pins and screws, to hold the fractures in place, we can mobilize the hand immediately even though the bones are broken," he said.

This also cuts down on the length of time casts are used, if at all.

More implantable devices, such as artificial joints and bones, aid in the management of degenerative diseases, such as arthritis, Chase added.

Considered by many to be the "father" of hand surgery, Chase is also developing a computer image of the hand. By converting each component of the hand to a numerical formula, it will be possible to get a multidimensional image on a screen. By making all the components movable, Chase said, surgeons will be able to learn the biomechanics of the hand, to aid them in managing hand injuries and in building robotic hands. —Shirley Kraus



Dr. Lars Vistnes (standing), chief of the Plastic and Reconstructive Surgery Clinic, watches eagerly as residents Seung Kim and Jane Weston practice microsurgery techniques.

Photos by Ed Souza



The specimen under examination

Plastic Clinic consolidates thanks to new location at Hoover

Stanford University's plastic and reconstructive surgery clinic has a new home at Hoover Pavilion as of Feb. 1.

The move, part of the Stanford University Clinics renovation project, consolidates the clinic to allow patients to register, and receive treatment and therapy all in one area.

Hoover Pavilion is Stanford University Hospital's annex on Quarry Road and El Camino Real, Palo Alto.

"Our offices used to be in one place, our clinics in another, and our research laboratories in yet another place," noted Dr. Lars Vistnes, clinic chief. "Now we have everything concentrated in one area to offer care more efficiently."

The new clinic has access to two operating rooms for major operations, an outpatient minor operating room, available Hospital rooms within the proximity, and laboratories in addition to larger examining rooms.

"We're gaining hours of availability in addition to space," Vistnes explained. "Before we had to share the rooms with other specialties. This is all ours."

Vistnes is also excited about the chance to offer patients increased continuity of care. Because of the proximity, the nurses in the clinic will be able to see hospitalized patients as well, he said. Occupational and physical therapists will also be at the clinic. "It will be more of a family affair," Vistnes concluded.

"We're quite excited about the move because it places us in direct relationship to inpatient and outpatient services, just one floor below the operating rooms, and near occupational and physical therapists," added Dr. Robert Chase, chief of the hand unit of the clinic.

The clinic is open from 8 a.m.-5 p.m. Monday through Friday. General plastic and reconstructive surgery patients should call 497-7001, and hand surgery patients should call 497-5256 for information and appointments.

New billing system hoped to increase efficiency

The major changes in SUH's patient billing system may be more felt than seen by the 44,000 patients who currently have active acounts at the Hospital.

Yesterday, Feb. 1, the Hospital converted all patient billing accounts to a new Patient Accounting System (PAS).

The change includes the addition of 75 computer terminals which are expected to assist the 150 employees of the Patient Accounting Department to produce accurate bills more efficiently and less expensively, said Suzanne Cameron, the department's director.

"One thing patients will feel more than they will see is their improved accessibility to our billing personnel when they have questions," Cameron said.

"Operationally we have made a very substantial change in the handling of phone inquiries. We now have six persons who can call up a patient's billing information on a computer terminal and provide answers immediately," Cameron explained.

Previously, an individual employee was responsible for about 2,000 paper files. Queries had to be referred to the individual employee responsible for locating the file.

"Delays predictably occurred when the employee was on break or otherwise absent from the office. It was frustrating for the patient."

Some changes will be seen directly by the patient, Cameron said.

"Bills will be clearer and include more information," she said. For example, patients previously were billed for items without being told how many. "Patients would wonder why they were charged one figure for a lab test during one stay and five times more the next.

"What the bill didn't tell them was that the second time they had five tests and the first time only one," Cameron said.

"We also have the capability to write individualized messages to the patients via the computer terminals now. We can tell patients right on their bill, for example, that their insurance company has been billed. Before the only capability we had was to write a separate letter," she added.

Also, one computer terminal will be placed in the Emergency Room, giving that department the capability to gain vital information on patients more quickly.

"If someone comes in in a coma, and we need to get information quickly, the computer can tell us his or her medical record number almost instantly if the person has been a patient here before," said Cameron.

"It could also provide next-of-kin information quickly, if there was a need to contact family members."

The new system services all Hospital patient billing activities, as well as laboratory or other Hospital procedures performed for outpatients at the Clinics. Not included will be Faculty Practice Program professional fees which will continue to be billed separately.

Cameron said the new system is being driven by a new Data General minicomputer at the Center for Information Technology on the main Stanford campus.

The cost for hardware was $500,000 and all software is being leased on a monthly contract. Cameron said the former 16-year-old billing system cost $1.5 million annually to operate and that the new system is expected to cost much less.

A team of 20 people under the direction of Project Manager Bill Rolapp worked 10 months to install the new billing system, Cameron said.

The capability of identifying bad debts more quickly is expected to result in additional cost savings, she said.

The PAS is the second step in a multi-year approximately $3.5 million Hospital-wide reorganization of data communications and record keeping.

The first step was the implementation last year of a computerized master patient index, which gave Admissions personnel much faster access to a former patient's medical record.

—Mike Goodkind

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

ONGOING: CPR courses at SUH. A variety of times are available to take this course, which is designed for those 13 and older and trains for Red Cross certification. A $10 fee per person is required. For further information, call the Life Support Training Center at 497-7907.

WEDNESDAY, FEBRUARY 2

Basic Science Research Colloquium: "Possible Roles for DNA Topoisomerases in Gene Expression"—Dr. Douglas Brutlag. 5 p.m., Fairchild Auditorium.

Dept. of Neurology Grand Rounds: "Infantile Spasms"—Dr. Joseph Lacy (Palo Alto Medical Clinic). 5 p.m., C364.

Div. of Orthopedic Surgery Grand Rounds: "Evaluation and Treatment of Back Pain"—Dr. John Hanbery. 8:30 a.m., M114.

THURSDAY, FEBRUARY 3

Nursing Educational Services: Basic EKG Interpretation Workshop. Four sessions—Feb. 3, 10, 17, 24. Registration required. 7 to 10 p.m., W005. For further information, call Carole Kidder at 497-6366.

Dept. of Medicine Grand Rounds: "Medical Application of Synchrotron Radiation"—Dr. Edward Rubenstein. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology Seminar: "The Molecular Basis of a Simple Behavior"—Dr. Richard Scheller. 4:15 p.m., Pharmacology Library R358.

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Injuries of the Temporal Bone and Facial Nerve"—Drs. John Shinn, Victoria King, Steve Denenberg, Clough Shelton. 6 p.m., Wang Library R117.

Dept. of Pediatrics Grand Rounds: "Respiratory Syncytial Virus Infections in Infancy"—Dr. Ann Arvin. 8 a.m., M106.

FRIDAY, FEBRUARY 4

Dept. of Structural Biology Seminar: "Monoclonal Antibodies to Tumor Antigens"—Dr. Gerard Evan (UCSF). 3:15 p.m., D102.

Dept. of Structural Biology Special Lecture: "Leonardo da Vinci: Artist or Anatomist?"—Eric Glasgow (Prof. of Anatomy, Australia). 4:30 p.m., Fairchild Auditorium.

SATURDAY, FEBRUARY 5

Stanford Hospital Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call the Auxiliary office at 497-6636.

MONDAY, FEBRUARY 7

Film: "My Brother's Keeper"—sponsored by Committee on the Well Being of Medical Students. Following will be a discussion led by Dr. Vincent Dandrea, Dr. Stephanie D. Brown, and Sally Rubenstom. 4:30 to 6 p.m., Fairchild Auditorium.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Getting the message out on life-saving skills



The floor is littered with limp bodies; rescuers crouch over the lifeless, attempting to blow breath into their still forms. Words of encouragement come from helpers nearby.

It looks like a cluttered emergency scene, but it's actually Stanford Hospital emergency department's life support training center, a facility dedicated to training local citizens and health professionals in cardiopulmonary resuscitation (CPR) and advanced cardiac life support (ACLS) techniques.

Above, community members practice life-saving skills on a manikin during classes run by the Palo Alto Junior League, and held at the Center.

On the Peninsula, the American Red Cross and the American Heart Association traditionally have certified local citizens in life support techniques. The Center and its equipment are available to these organizations for their training activities, as well as to members of local service clubs who are trained as instructors and can train others at the Center.

For further information about the Center and its activities, call 497-7907.

...News Notes...

Six areas of the Hospital have been targeted for pilot cost containment projects in 1983.

The cost containment subcommittee of the Medical Board has earmarked Diagnostic Radiology, the Emergency Room, North Intensive Care Unit, Neonatal ICU, a nursing unit to be selected, and the Compromised Host Unit.

Chief of Staff James Silverman said meetings would begin early this year in each of the areas to develop methods of decreasing the overall cost of the units.

* * * *

Dr. Thomas Hoffman, assistant professor of dermatology and a Menlo Park physician, has been elected to Fellowship in the American College of Physicians.

* * * *

Dr. Robert Black, clinical professor of pediatrics, has been appointed to the California Health Planning Law Revision Commission.

* * * *

Employees are encouraged to make use of the escort service offered by the Facilities Protection Department at SUMC. Hilary Ryniewicz, director of Safety/Security Services, reminds personnel that from 10 p.m. till 12:30 a.m., a vehicle (No. 2) patrols the north, west, and south SUMC parking lots, offering rides to incoming staff to the main Hospital entrance.

The vehicle passes the main entrance every 10 minutes to pick up outgoing personnel for delivery to indicated lots.

Another vehicle (No. 1) patrols Hoover, Lot "Q" and east SUMC parking lots, offering assistance to all incoming and outgoing personnel.

In the event that personnel desire escort service at other than the indicated times, they should contact Communications at 7-5931, or Facilities Protection at 7-7222, 7-7223, 7-7224 or 7-7225. They will be met at a predetermined site and time.

The Facilities Protection Department also provides a vehicle jump-start service for employees and visitors whose cars have dead batteries in SUMC parking lots. Persons should contact the department at the phone numbers listed above. This service is provided on a 24-hour basis.

The department can also assist people who have locked their car keys in their vehicles.

* * * *

Frank Montalvo has been appointed manager of wage and salary administration for SUH effective Feb. 1, announced Don Thomas, director of Personnel Management.

Montalvo has over ten years of experience in different facets of personnel management, with his most recent appointment as wage and salary administrator at the University of California, Irvine Medical Center. He did his undergraduate work at Cal State University and has also done some graduate work there and at U.C., Irvine.

Montalvo will report directly to Thomas. His office is located at 770 Welch Road, and he can be reached at 497-6855.



Don Thomas

Don Thomas, director of personnel management at SUH, has been named an Accredited Executive in Personnel (AEP) by the Personnel Accreditation Institute, Inc., the accreditating body for the nation's personnel professionals.

Besides his extensive experience in personnel management, Thomas has been active in teaching and currently serves on the part-time faculty at the Menlo College School of Business Administration.

Accreditation for personnel, industrial relations, and human resource management professionals was introduced by the institute in 1976. Individuals who become accredited must update their status every three years.

The primary purpose of the accreditation program is to improve performance within the profession, indicating that the accredited individual has mastered a validated, common body of knowledge.

* * * *

The Medical Center Auxiliary has approved requests to fund two electric operating tables for the Hospital, at a cost of $36,788, and five passive leg exercisers for physical therapy, at a cost of $14,883.

* * * *

Physician impairment is the topic of the film "Our Brother's Keeper," scheduled to be shown 4:30-6 p.m., Feb. 7, in the Fairchild Auditorium. The film, which kicks off Mental Health Week, will be followed by a brief discussion led by Dr. Vincent Dandrea, clinical associate professor of psychiatry; Dr. Stephanie Brown, acting assistant professor of psychiatry; and Sally Rubenstom, fourth-year medical student.

* * * *

The Facilities/Projects Department is conducting an electrical power factor correction project. Weather permitting, work will again be performed between 8 a.m. and 6 p.m. Sunday, Feb. 6, to tie in the new power factor capacitors to the normal electrical power source to the Medical Center.

There may be some momentary interruptions of normal electrical power during the work period. Emergency power will not be affected. The project affects only the following buildings: Core, East, West, Boswell, Grant, Lane, Medical and Edwards.

All departments will be notified in the event that rescheduling is necessary. All questions should be directed to Bob Bohnet, electrical foreman, at 497-5555.

Lecture: sex after a heart attack, sorting the facts from fiction

"The Loving Heart: Sex after a Heart Attack" is the topic of a program to be held 7-10 p.m., Thursday, Feb. 10, in the Sherman Fairchild Auditorium at Stanford University Medical Center.

Sponsored by Stanford Nursing Services, the workshop will attempt to provide factual information to health care professionals, increasing their ability to contribute to patient awareness and understanding.

A lecture-slide presentation will identify numerous myths associated with the subject, describe the phases of sexual activity, discuss various positions for sexual relations, and review medications and their effects on the heart and sexual functions.

Speaker for the program will be sexologist Richard Sharon, M.A., Ph.D., who has his doctorate from the Institute for Advanced Study of Human Sexuality where he studied under Dr. Wardell Pomeroy, co-author of the Kinsey Reports.

Sharon has published in the *Journal of the American Medical Association* and is the author of two books and numerous articles dealing with sex-related issues. Currently practicing in Burlingame, California, Sharon has completed a large research study on the effects of heart attacks on the sexuality of men, women, and their respective partners.

Fee for the course will be $5, which can be paid at the door, with an extra $10 for nurses who wish to receive continuing education credit. Net proceeds will go to the Friends of Nursing Scholarship Fund.

The program is open to the public. For further information, call Katherine Barnett, R.N., at 494-8074.

State approves new scanner for SUH

Stanford University Hospital has been granted approval by the state to replace its present EMI computerized head scanner with a new GE 9800 scanner.

The new instrument, to be used for head scans, will allow faster scanning and greater diagnostic quality. It has the capability to be upgraded in the future to perform body scans as well.

Total cost of the new equipment is $1,257,840, according to Ron Hill, director of Health Services Planning.

In addition to the head scanner, the Hospital operates a GE 8800 scanner which accommodates both body and head scans.

The new machine is expected to allow physicians to scan up to 20 patients per day instead of 10 as at present, because of more rapid computer processing. More than 6,000 head scans and 1,365 body scans were performed at Stanford Hospital in 1981.

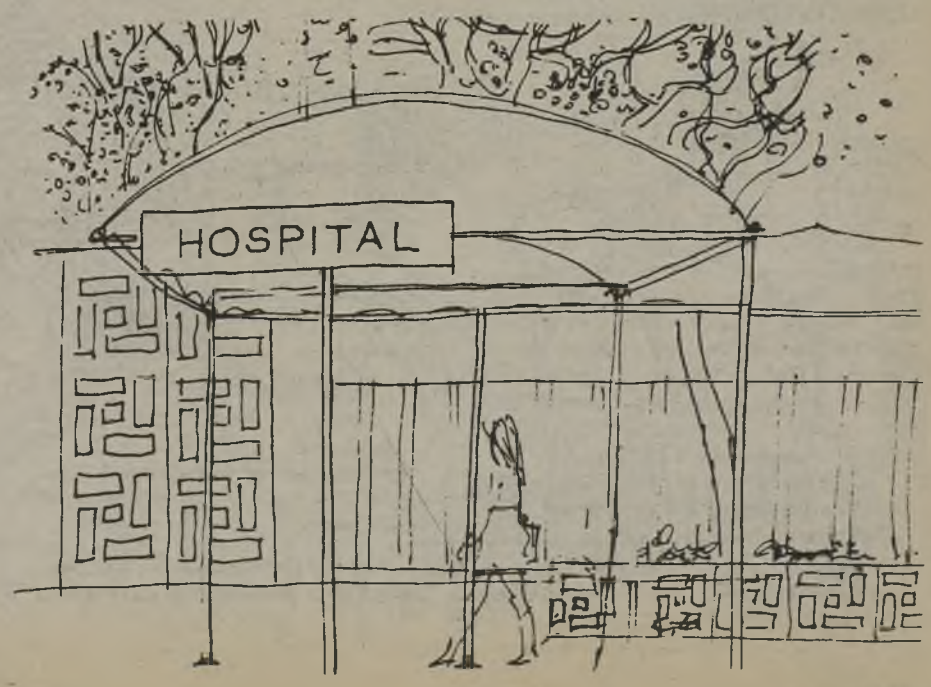
The two existing scanners will remain in use during construction and installation of the new scanner. An area in the Phase I building used for general radiographic activities and an adjacent service corridor will be converted into a new scanner area. According to Hill construction should begin by March.

Blood drive next week; come donate!

The Stanford University Blood Bank will hold a blood drive in the Medical Students' Lounge 11 a.m.-3 p.m. Thursday, Feb. 10. Medical School faculty and students especially are encouraged to participate, and all Medical Center staff are invited to donate at this time.

According to Renee Burgard of the Blood Bank, patients at SUH and Children's Hospital at Stanford often have complex and sophisticated transfusion needs, and the demand for all blood products is heavy. The two hospitals combined use more than 100 units of blood each day, and in order to support this need, the Blood Bank asks for everyone's support.

Call 497-7831 to make an appointment to donate Feb. 10, or just drop by the Lounge during the day's scheduled blood drive.



Tinkering with the MBA curriculum

BY RICHARD KUROVSKY

The 1982 MBA Review Committee Tried But Failed to Overhaul the First-Year Curriculum for MBA Students. The Issues It Raised, However, Will Affect the School for Years to Come.

The 1982 MBA Review Committee at the Stanford Business School is now history. The 14-member committee came into being in the spring of 1981 and issued its lengthy report and recommendations on the MBA Program a year later. The GSB faculty met as a whole last spring to consider the committee's dozen or so recommendations, the most sweeping and important of which would have replaced the first-year "core" curriculum with a set of distribution requirements. As might be expected, that controversial proposal dominated the faculty discussions. By the end of the debate—and without a vote—the proposal was moribund. Another way to view what happened, according to GSB Associate Dean for Academic Affairs Eugene J. Webb, was that "the faculty, in effect, endorsed the concept of the core."

But the story continues. Like the salesman who somehow managed to get his foot in the door, the 1982 MBA Review Committee still has a fair chance of making a sale to the faculty. Although its major proposal was defeated, the committee effectively articulated several problem areas in the MBA curriculum and set forth an agenda of items that will occupy the School for years to come. In addition, several of the less controversial recommendations received at least tacit approval from the faculty; some are already being addressed by the GSB administration, such as upgrading of computer facilities and instruction, encouraging experimentation, disbanding the first-year "cohort" structure during winter quarter, and increasing the breadth of the MBA Program by expanding the faculty. More about those later.

Major tinkering with the MBA curriculum at the Stanford Business School is a momentous event largely because it involves just about everyone in the School and happens so seldom. The MBA Program, with an annual enrollment of over 600 students, is the centerpiece of the School's academic programs. The GSB's 72 permanent faculty members play all the leading roles in the life of the MBA Program, shaping and guiding it over time as architects, builders, inspectors, caretakers, and critics. Nearly every faculty member teaches one or more MBA courses during the academic year; the professional reward system at the School is directly tied to the teaching effectiveness and course development abilities. Naturally, the faculty's vested interest in the integrity and vitality of the MBA curriculum ensures a careful, considered, and cautious response to calls for major changes in the program.

The need to make major changes or even to discuss them has been felt only rarely. The last major curricular review and overhaul came in 1971, after a detailed analysis of the MBA Program by a specially appointed review committee chaired by James C. Van Horne, a GSB finance professor and former associate dean for academic affairs. Between the reviews, the curriculum can be modified slightly, thus allowing for growth of the curriculum without distorting its goals. Yet in any case, the process of altering the curriculum remains evolutionary and carries the important stipulation that no missing links are permitted. Curricular movement must be incremental, smooth, and logical.

Some parts of the curriculum are easier to change than others. The last two curricular reviews have concentrated to a large extent on the first-year or "core" section of the curriculum because it is the most difficult to alter. As the foundation for the MBA Program, the core is the only part of the curriculum encased in a relatively rigid structure. Changing the core requires the consensus of the faculty, which can be difficult to achieve. "The faculty is a group of free spirits," said William Beaver, a GSB professor of accounting and a member of the MBA Review Committee. "That attribute—the diversity of the faculty—is a key factor in its excellence. But at the same time, it can make major changes difficult to achieve."

The MBA curriculum is divided into required and elective courses. The core section consists of 13 required courses, most of which are taken during the first two quarters of a student's first year in the program. The core is generally considered to be "basic training" for Stanford MBAs; it exposes them to all disciplines of the GSB and develops analytic techniques necessary to the study of management. As basic training, the core is especially rigorous and challenging. It tests the endurance and intellect of first-year students by presenting them with an almost overwhelming amount of material to be learned, much of it analytic and quantitative in nature—Stanford Business School is widely known, after all, for its emphasis on number crunching. Thinking of the core as basic training can become irksome and confusing to first-year students, who often instinctively look for some overarching pattern to the required courses—a "Stanford View on Management." They never find one because it doesn't exist, a point stressed in the committee's report. Indeed, the disparate viewpoints at the School are widely viewed as the GSB's major source of strength. As the committee noted in citing a 1977 memorandum written by GSB Professor of Accounting Charles Horngren: "Stanford has no sharply defined philosophy other than eclecticism; in my opinion, its heterogeneity is its greatest strength."

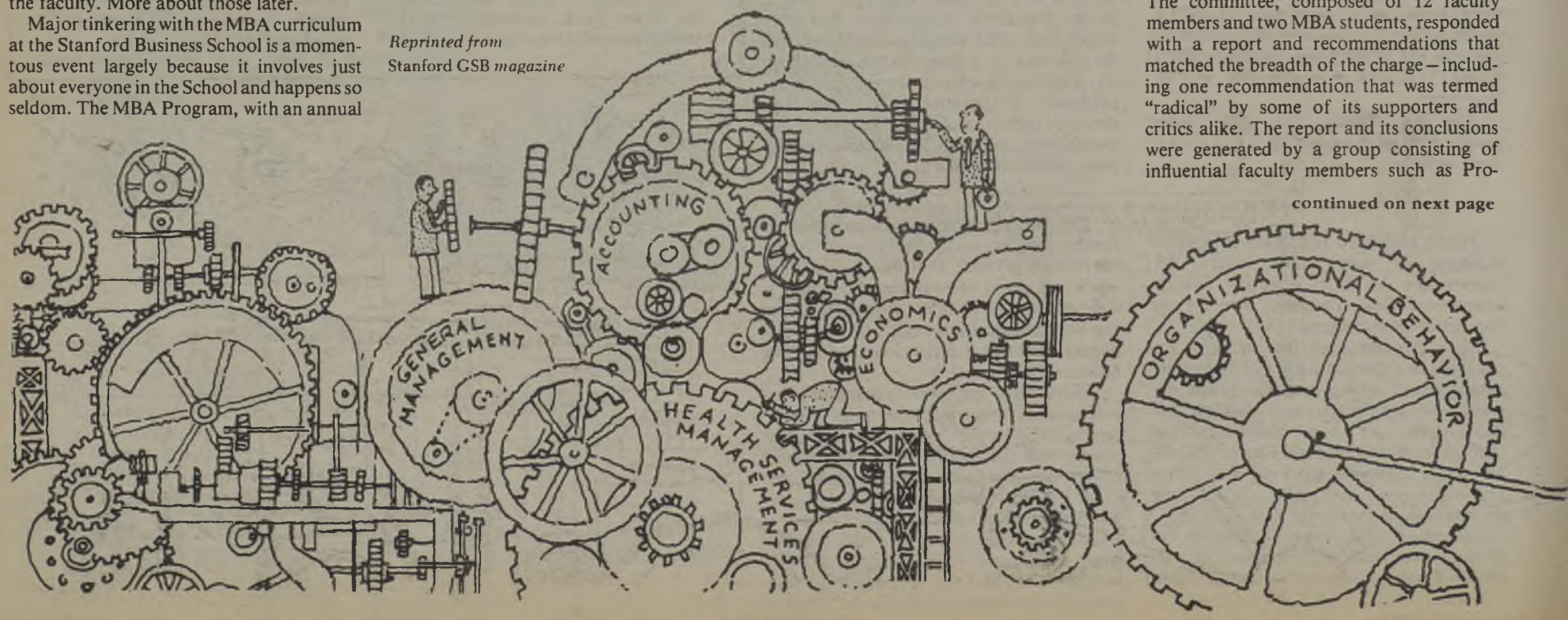
Students traverse the core in groups or "cohorts" of about 60 people each. The committee's report noted that the cohort's most redeeming feature is its function as a socialization device: It helps students get to know one another more quickly and encourages group interaction and cooperation in and out of class—another hallmark of the Stanford MBA Program. However, the report said that the cohort structure had locked students into a single group for two quarters, with little or no choice over their instructors, sequence of courses, or classmates. Although all students admitted to the Stanford MBA Program must meet extremely high academic standards, students still arrive with varying backgrounds and levels of abilities—especially in the quantitative area. The cohort core mixes students together in the first-year classes, which can have a negative impact on the course and the instructor. David Kreps, a professor of decision sciences and cochairman of the committee, said he sometimes feels constrained in his teaching because of the presence of quantitatively less adept students in his classes. "I have to teach so that most students can be moved along. In decision sciences, I aim for the 75th percentile," he said.

The elective portion of the curriculum, in which students devote a portion of their first year and almost all of their second year, is a constantly-changing relative of the core. While the core has experienced three major changes over the past decade, about half the elective courses offered in the 1982–83 GSB Catalog didn't exist five years ago. The considerable fluctuation in the elective area is caused by two major factors, one procedural and one coincidental, according to Associate Dean Webb. Under a so-called One Year Rule, any faculty member may design a new elective course and teach it on a one-year experimental basis, subject only to initial approval by the Dean's Office. If the course succeeds and the faculty member wants to continue teaching it after the first year, the course is then brought before the full faculty for what is normally perfunctory approval. Courses that don't work out usually die by the hands of their creators. Last June, GSB professors approved continuance of seven new elective courses created in this way. Electives also change as a result of faculty turnover. Since GSB elective courses reflect the interests and diversity of the individual faculty members, course content and emphasis can change substantially from professor to professor and year to year. No two courses, even with the same name, are ever taught exactly alike. Course content isn't standardized. The elective area's capacity to reflect the school's diversity and to change rapidly earns it high praise. Prof. Kreps believes that elective courses, and not core courses, make up the true heart of the MBA Program. "It's what we as faculty members do best, and I think the students recognize it," he said.

The 1982 MBA Review Committee was given the broad charge of examining the entire MBA Program for its strengths and flaws, and of recommending a course of action to correct problems or inadequacies. The committee, composed of 12 faculty members and two MBA students, responded with a report and recommendations that matched the breadth of the charge—including one recommendation that was termed "radical" by some of its supporters and critics alike. The report and its conclusions were generated by a group consisting of influential faculty members such as Pro-

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Reprinted from
Stanford GSB *magazine*



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fessor of Finance William F. Sharpe, Professor of Management James G. March, Professor of Economics and former GSB Associate Dean James E. Howell, Professor of Marketing David B. Montgomery, and Associate Dean Webb, who served as committee cochairman, among others.

The controversial nature of the main curricular recommendation may have been fueled by research on the attitudes of past and present MBA students toward the Stanford program. In attempting to define the problems within the MBA curriculum, the Review Committee spent hours listening to comments of people in and out of the School—students, faculty, alumni, and outside interest groups, including the business world. But data on the MBA classes of 1971–76, 1981, and 1983, obtained from surveys and focus group discussions, provided a great deal of provocative material for committee deliberations. Tracy S. Smith, MBA '82 and now a Ph.D. student at the School, was the committee member responsible for much of the research. "My main objective in wanting to be a participant on the Review Committee—given how infrequently reviews are done—was to encourage it to take into account the views of students and alumni. In the end, I think the committee learned a lot about how students perceive the MBA experience at Stanford."

The research showed that students have a large number of complaints about the core. A substantial number of students said the heavily analytical nature of the core crushed

"The committee's recommendations arose from a sentiment that we've created a pressure cooker for students. The committee was acutely sensitive to issues of personal stress."

— Tracy Smith

their spirit, intuition, and inventiveness. Another substantial number felt completely overloaded with work, with no time to think. Nearly all students complained that some of their assignments seemed like busywork. The elective area of the curriculum, in contrast, was received far more positively by the students, whose main concern was that the administration reacts too slowly in adding extra sections of popular courses. Tracy Smith said the committee's recommendations arose "from a sentiment that we've created a pressure cooker for students. The committee was acutely sensitive to issues of personal stress."

The committee blamed frustrations over the MBA Program almost entirely on the cohort core. The report stated: "We believe that the cohort core is no longer the best mechanism by which to teach the common knowledge that every MBA ought to possess: It imposes entirely too many constraints on both faculty and students." The committee unanimously agreed that every MBA ought to be exposed to the different ways in which managers think, but the exposure need not be uniform. The committee's solution was to replace the core with a distribution requirement scheme that would have required students to take at least one course from each of the major areas represented in the curriculum: accounting, business policy, finance, organizational behavior, etc. Underpinning the proposal was a philosophy that "there is no single program of study that is appropriate for all our MBAs—or, if there is, we have not found it, nor are we likely to," according to the report. By eliminating the core and disbanding the mandatory cohorts, the committee fashioned a proposal that mirrored the successful (and noncontroversial) structure of the elective courses. Associate Dean Webb described the solution as "adaptation without destruction."

The committee said the change would bring about three primary benefits. First, it would end the lock-step of the current system by not forcing students to take courses in any proscribed order. "The premise here is that no single progression of courses is best for every student," the report said. "Some may wish to delay heavily analytical material; others may wish to concentrate on analysis early on." Second, the new system would allow greater diversity in the core (200-level) courses. Students could enroll in sections of courses that were either more or less analytic—not unlike the current, limited option of "poets" and advanced sections of some core courses. The "poets" sections are designed for students who are less quantitatively adept. This fall, for instance, students could have taken a "poets" section of the optimization (260) course. In addition, diversity would allow professors to offer courses that differed in terms of emphasis or pedagogical style. Third, the proposal would reduce the number of required courses in the belief that students are too constrained under the current load. In effect, the proposal would have allowed students to escape from taking, for instance, both micro and macro economics core courses, and would have instead required only one of them. Although Prof. Beaver noted that Stanford MBAs spend more time in the classroom during their first year than business students at the University of Chicago spend in two years, faculty critics later assailed the reduction as an assault on the rigorousness of the Stanford MBA Program. The committee admitted that it could not predict how its proposal would affect demand for core level courses—a deficiency in the eyes of faculty members who criticized the report for its lack of information on how the proposal would ultimately affect the School. Prof. Kreps said in an interview that he believed "90 percent of students would do [under the new proposal] what they do now. Still the idea that 10 percent or more would be doing something radically different has a philosophical implication—that there is no core set of ideas that we are presenting to students."

Overall, the committee believed that the proposal would "significantly improve the quality of classroom life by removing many of the frictions that currently beleaguer us." Prof. Beaver said, "To me, it was a move in which everyone gained."

But the faculty disagreed. Committee members failed to convince their colleagues that the problems of the first-year MBA curriculum merited a major change in direction. "The present structure has served us well; we should depart from it carefully," said Professor of Accounting Robert K. Jaedicke, who opposed replacing the core. Jaedicke, a former GSB associate dean for academic affairs and acting dean in 1979–80, predicted that the School will continue to work on problems identified by the committee, though it would probably never fully adopt the committee's solution—or do so only to a limited degree. He said, however, that the faculty's rejection of the plan shouldn't be taken as "evidence that nothing will happen. There are some changes that are called for. I think you will see the School move in that general direction." He suggested, for instance, that GSB faculty members within the various disciplines may eventually decide to substitute a distribution requirement plan for their own core courses. Such a plan would rely on faculty members to disband the core concept area by area, if they thought it was necessary. In any case, he said, the report must be seriously considered simply because of who the committee members were and the fact that they represented 14 percent of the faculty.

Members of the Review Committee were surprised and disappointed by the faculty's rejection of their major ideas, though they also predicted the GSB will change as a result of the report. "If nothing else, the report raised the consciousness of the place," said Prof. Kreps. "I know at least one colleague who would call that a rationalization, and that we should admit we were defeated. But

"The present structure has served us well; we should depart from it carefully."

— Robert Jaedicke

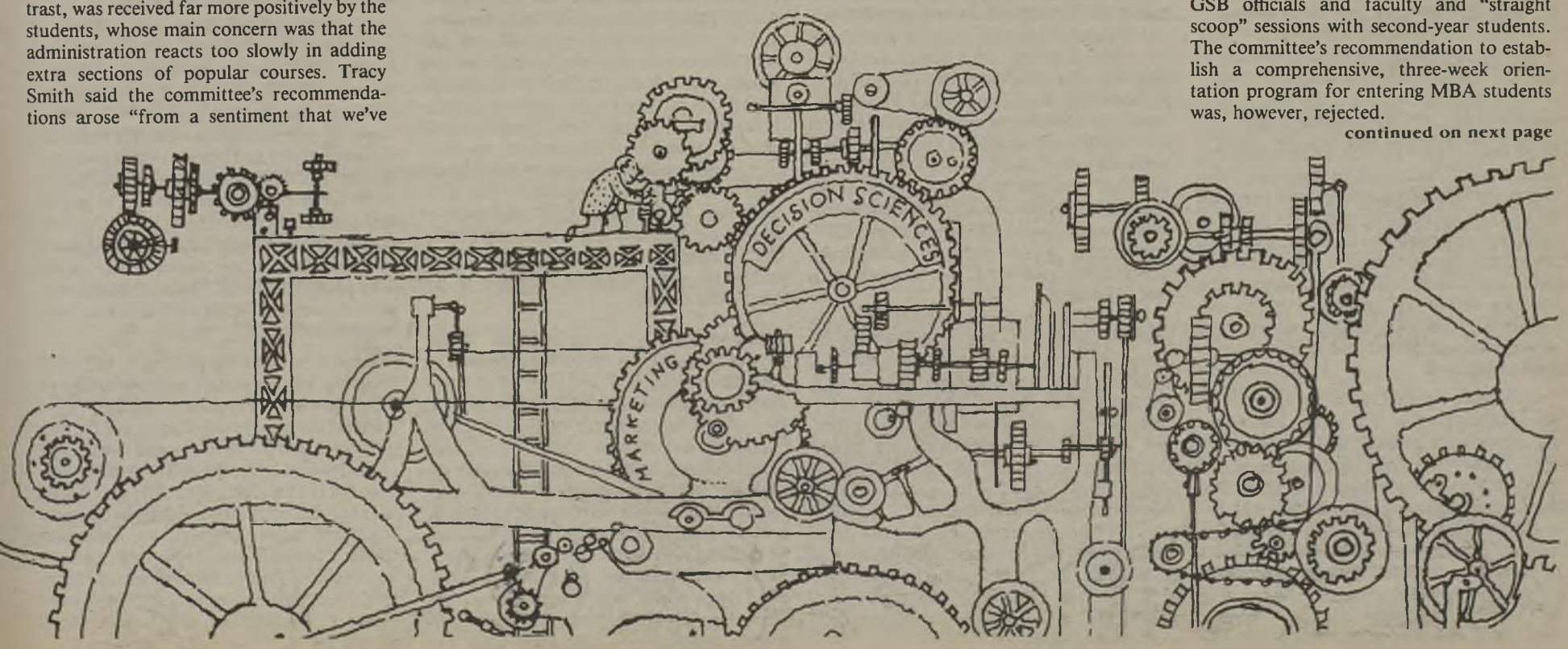
pieces will slowly surface—one or possibly two, though I don't think we'll see anything radical. But the strains on the system are not going to go away." Tracy Smith agreed: "I feel good about the consciousness-raising as an end, especially when you're dealing with an organization that runs itself by consensus. But I will be disappointed if nothing changes after a couple of years."

Unfortunately, the faculty's swift and efficient dismissal of the main proposal obscured some of the successes scored by the Review Committee—including the establishment of an agenda for action by the School. Several recommendations, which required only administrative approval or implicit faculty consent, have already been launched or are now being planned. They include:

—*Experimental disbanding of the first-year cohort system.* The GSB administration has okayed breakup of the cohorts on a trial basis during the 1982–83 winter quarter, according to Gary Williams, GSB assistant dean for the MBA Program. The move will give first-year MBA students the opportunity to select instructors for their core courses.

—*Modifications in the orientation program for entering MBA students.* The GSB revamped the format of orientation activities for incoming first-year students this past fall at the urging of the Review Committee. The committee noted that students complained that previous orientation programs were too much, too fast, followed by nothing. This year's orientation program included a tightly run and informative meeting with senior GSB officials and faculty and "straight scoop" sessions with second-year students. The committee's recommendation to establish a comprehensive, three-week orientation program for entering MBA students was, however, rejected.

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Panofsky reviews SLAC budget outlook during annual 'All hands' talk

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appears acceptable to almost everyone," he commented. Completing construction by the end of 1986 "depends critically on pushing as hard as possible our current research and development program designed to solve the technical problems."

The President's budget also includes two other important new projects: a "very substantial growth" in the Stanford Synchrotron Radiation Laboratory's facilities and an injector which will make it possible to generate low energy beams, possibly extending SLAC's use during the summer when it is highly restricted in electric power use.

SLAC has become an international center for high energy physics research, involving 25 American and 10 foreign institutions this year. Participating physicists include 231 from the U.S. and 69 from other countries. A total of 73 American and 16 foreign graduate students also use SLAC.



"There is no intention of any kind of changing our single-minded dedication to basic, open science," Panofsky said.

Both SLAC and SSRL are independent laboratories reporting to the University administration. Each determines its own program under general policies of the University. These specify that the work shall be free from any secrecy constraints and results be published with minimum delay.

SSRL, while independent, depends on SLAC for technical support in many areas on a reimbursable basis. "As SSRL expands, questions are raised whether this type of relationship will continue to serve the needs," Panofsky said. Accordingly Provost Albert Hastorf has appointed a committee headed by Prof. Sidney Drell, deputy director of SLAC and former head of the U.S. high energy physics advisory panel, to make long-range recommendations on relations between SLAC and SSRL.

If the President's budget recommendations are approved by Congress, it is "extremely unlikely" SLAC staffing levels will decrease, Panofsky said. "But we simply have not had time to analyze in what categories, if any, increases are warranted. It does appear, however, that the total amount of detailed engineering will be increasing substantially over the next year if we are to meet our schedules."

The linear collider can accommodate only one experiment at a time, he noted. "Even with today's large collaboration of physicists, the total number of people who can participate with SLC is considerably smaller than the total number now participating in SLAC's program."

High energy physics

But Panofsky emphasized that "above all, we are going to continue our normal high energy physics activities, both with stationary beams and colliding beam storage rings into the future, and will continue to probe new directions. . . .

"We have all been spoiled by the great spurt of discoveries and exploration at the Stanford Positron Electron Accelerator Ring (SPEAR) following the unsuspected phenomena that began to emerge at the end of 1974.

"In contrast, the regions of energies accessible to the Positron Electron Project (PEP) has thus far not shown up anything truly unsuspected or qualitatively new.

"All the results obtained at PEP and at our sister institution PETRA in Germany have improved our quantitative understanding of many phenomena. However, none of the new measurements have shocked the physics community into changing the basic view of things which had emerged previously.

"It is on the basis of this picture—excellent performance of PEP and its instruments, but thus far not too rich a field for new surprising results—that I cannot forecast how long the PEP program will continue once the SLC is fully operational. Naturally, we have to be fully flexible. . .pending analysis of those measurements now in progress at PEP and PETRA."

Proposed regulations on draft registration are issued

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Rosenzweig is preseident-elect of the Association of American's Universities, 52 leading U.S. and Canadian graduate-level institutions.

According to SAC, Education Secretary Bell, in a memo to David Stockman, director of the Office of Management and the Budget, said "The means proposed (for this legislation) would require a level of unnecessary federal intrusion and administrative complexity and burden we roundly oppose."

At a news conference Jan. 21, Bell said "The law is clear and the government will carry out its responsibility. We hope we can do that fairly but firmly. The message is simple: no registration, no student aid."

Major Gen. Thomas K. Turnage, director of selective service, told reporters: "If a man does not accept the basic responsibility of a society, he has no claim to the benefits of that society."

The proposed regulations would require financial aid applicants to complete a statement certifying they were registered or they were not required to be registered.

The law has been challenged by the American Civil Liberties Union in Minnesota. The ACLU says the law discriminates on the basis of sex, age and income, and will have a disproportionate effect on minorities. It also contends the legislation violates Fifth Amendment rights and violates the Privacy Act.

In the statement circulated at Stanford Tuesday, SAC notes that the legal penalties for nonregistration "are already severe. No other felonies are given such special treatment."

The law turns educational institutions into enforcement agencies, will deny education to some of the nation's most conscientious youth, and will add to administrative burdens, SAC notes. It also "harkens back to the McCarthyistic loyalty oaths" and "further increases the militarization of our entire society."

The proposed regulations would limit appeals to students who assert they have, in fact, registered but have not been able to prove that registration.

According to *The New York Times*, Secretary Bell told reporters "Regardless of what your moral code says, the law is the law."

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—*Assistance for new faculty in teaching.* New assistant professors at the GSB were given help on how to improve their teaching skills this fall, according to Associate Dean Webb. New faculty members were provided with books on teaching and given access to videotape materials and facilities. The committee urged such steps after noting that students frequently complained about the teaching abilities of untried junior faculty members—especially in the core courses, where first-year MBAs had no choice over their instructors.

—*Upgrading of the GSB's computer facilities and instruction.* The report states that the computer is an area "that has bedeviled the GSB for many years" and is the source of great student discontent. It also notes that the GSB is not succeeding in this area because of tremendous obstacles that need to be overcome, such as the astronomical costs of keeping up-to-date with technological advances and the enormous difficulty in hiring and retaining first-rate people in the computer area, who now find industry more financially and intellectually rewarding. The committee actually threw up its hands and said it couldn't decide how to proceed, but did recommend further study. A special faculty committee has been appointed and is now working with Associate Dean Charles A. Holloway to develop a plan for computers at the GSB. In the meantime, the School has substantially increased its existing computer capacity for use by students, faculty, and staff through the addition of two new mainframe computers and a number of microcomputers and remodeling of the computer center. A new course on management information systems was also instituted with this fall quarter.

—*Increase the breadth of the GSB by expanding the faculty.* The committee said the School must do better in subjects that fall under the general rubric of the "environment of business," embracing subjects such as political science and policy analysis, history, law, the nature of the workforce, etc. Its recommendation, which was accepted by the faculty, was to hire five to eight new faculty members over the next five years—including some senior appointments—who can operate in more than one discipline and develop these topics from a business school perspective. Associate Dean Webb said the costs involved may make the recommendation difficult to implement.

—*Expand the international approach of the School.* The committee noted that the GSB has struggled for many years with the question of instruction in international and global management. It recommended that the School do all it can to "lessen the provincialism" of existing faculty as the best long-term solution to the problem. The School reacted by establishing two general management programs for executives to be held next year in Geneva and Singapore. The programs will be taught by GSB professors—thus giving a number of senior and junior faculty members the opportunity to meet and work with colleagues and executives from other nations.

—*Establish a "venture capital fund" within the School to support experimentation.* The committee proposed and the faculty endorsed the idea of establishing a special fund that would, in the words of the report, be "designed for mutant ideas." The fund would be used to finance activities that are high-risk and substantially different from the School's current activities or programs, and which have a comparatively low chance of meshing with current instructional plans. Such experimentation, according to Associate Dean Webb, would help balance the strong conservative forces that exist in all mature organizations, such as the GSB. The proposal is now in the Dean's Office and awaits funding and further study.

In addition, the committee outlined a broad area, which it labeled second-track activities, that should be addressed by the School over the next several years. Such activities include further study of or improvements in communication skills for students, career planning and placement for students, courses in learning skills, and vehicles for stress handling. In issues related to gender and race, the School responded to the committee's recommendation for improvements by establishing a fall quarter course on sex roles in management. The committee's suggestion to change scheduling of classes was, however, defeated by faculty vote.

Besides pinpointing glitches in the MBA Program, the committee also identified why Stanford's MBA Program is so highly rated. Its list of the most positive aspects of the program included the diversity and intelligence of the student body, the diversity and intelligence of the faculty, the confidence instilled in the graduates, and the emphasis on teamwork and group projects. As the report stated: "Stanford should be proud of what it has attained. As one member noted, 'Stanford doesn't have to move in the direction of being a Harvard or a Chicago. It *is* Stanford.' "

New executive education programs planned in Singapore, Geneva by GSB

Stanford Business School will conduct two new executive education programs overseas this summer, one a three-week general management seminar in Singapore, and the other an international investment management seminar in Geneva, Switzerland.

The Singapore Executive Program, jointly sponsored by Stanford and the National University of Singapore, is expected to be the start of a long-term teaching and research relationship between the two institutions, said program director Harold J. Leavitt.

The International Investment Management Program is a seminar for European institutional investors, to be held under the joint sponsorship of Stanford and the International Management Institute (IMI) in Geneva. Aug. 29 to Sept. 2.

Professor of finance William F. Sharpe, program director, said the seminar will be taught by a six-member faculty team including three finance professors from Stanford and three from IMI. He said the Stanford group will concentrate on investment management theory and the generalizing of that theory in an international context. The IMI faculty will deal mainly with international accounting issues and the workings of the international monetary system.

He said the plan is for Stanford to host a similar seminar for American institutional investors in 1984 if both schools decide to continue with joint sponsorship.



Photographs of Old Russia **by Jack Kollman of the Hoover Institution will be shown at the Faculty Club until early March. Kollman is a specialist in the history of the Russian Orthodox Church and old Russian art and architecture.**

SOAR organizes new adventures

Do cross-country and downhill skiing, whale watching, wine touring, nature walks and San Francisco eating adventures sound appealing?

They're a few of the new and exciting adventures offered this quarter through SOAR (Stanford Outdoor Adventures and Recreation).

Gather the latest on what they're up to by stopping by the SOAR switchboard, located in the Recreation Center on the ground floor of Tresidder Union. Sign-up lists and information on activities are available there.

SOAR also provides assistance to groups and departments interested in organizing their own adventures. Call 497-4316 any Monday, Tuesday, or Friday between 10 a.m. and 2 p.m. with trip ideas or groups you'd like to put together.

AHA takes stand

The American Historical Association officially opposes the production of any new nuclear weapons systems, according to Stanford Prof. Gordon A. Craig, immediate past president of the organization.

At its December meeting, the AHA voted "to support the objective of negotiated nuclear arms reductions with the Soviet Union and other states."

To produce new nuclear weapon systems "at this time" would be "prejudicial to our national security and to the pursuit of peace," the AHA added.

Subsequently approved by the AHA Council, the policy position now has been transmitted to President Reagan, Vice President Bush, House Speaker Tip O'Neill, and the director of the National Security Council, according to Craig.

USW agrees to post notices

United Stanford Workers has agreed to post notices reminding its members not to engage in illegal secondary picketing of construction sites.

The agreement to post the notices for 60 days was made pursuant to a settlement approved by the Oakland regional director of the National Labor Relations Board.

The University charged the union with unfair labor practices when USW members and supporters picketed the Stanford Linear Accelerator Center, the Cardiovascular Research Building, and the Peter Coutts and Governor's Corner housing projects during a month-long strike in September and October.

Arms control panel set at I-Center

"Nuclear Arms Control: Soviet and American Approaches" will be discussed at noon Tuesday, Feb. 8, at Bechtel International Center.

Coit D. Blacker, associate director, and Condoleezza Rice, assistant director, of the Stanford arms control and disarmament program will discuss the history and content of recent Soviet and American arms control proposals in both START (Strategic Arms Reduction Talks) and INF (Intermediate Range Nuclear Forces) contexts.

Blacker has recently returned to Stanford from Washington, where he was a special assistant to Senator Hart of Colorado on national security issues. Rice is a consultant to the Rand Corporation. An assistant professor in political science, she previously was a Stanford arms control and disarmament program fellow.

The presentation is one of the I-Center's series of Tuesday luncheon/lectures focusing on major world problems. Tickets for the lunch are $2.50, available one week in advance. Brown baggers are also welcome at no charge.

Campus crime report

COMMUNITY CRIME INFORMATION
Jan. 10-31

Burglary/residence	2	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	1	Felony arrest	2
Theft/under $200	14	Misdemeanor arrest	17
Theft/over $200	4	Adult booking	12
Bicycle theft	51	Adult cite/release	5
Vehicle accident	17	Juvenile booking	1
Bicycle accident	0	Juvenile citation	1
Indecent exposure	0	Warrants served	6
Assault	0	Driving under influence	4

Residential Burglary:

Date	Time	Location	Property Lost
1/15	Even.	Stern Hall	Wallet & Cash
1/23	Night	500 blk Campus	Trombone

Dance-video performance Sunday at 8

The Undergraduate Special Program at Stanford University will present "Conversing," a collaborative dance/video performance conceived and choreographed primarily by Duncan Macfarland and Clare Whistler, at 8 p.m. Sunday, Feb. 6, in Stanford's Terman Auditorium.

This one-time only performance explores the balance between technological advancement and the human element in art, and also includes the contributions of over a dozen San Francisco based dancers, choreographers, musicians, filmmakers and artists.

The performance will be given in conjunction with Undergraduate Special No. 31, "Experimental and Avant-garde Rock, 1965-Present." It promises to take full advantage of one of the special features of Terman Auditorium, a specially designed, fully-equipped television studio.

Donation is $5 general ($3 students). For ticket information, call 497-4317.

Staff employment opportunities

Exempt

31840-VW (JCC:1954) Dir of Principal Gifts: Repts to VP of Dvlpmt; respon incl identifying & qualifying prospects for gifts to Stanford of $5 million & above, & for insuring their solicitation; developmt & production of detailed strategy documents for each prospect; maintain detailed record of progress of each soliciation; advisor to VP of Dvlpmt regarding status of all principal solicitations incl effect univ policy may have relative to attitudes & interest of Principal Prospect group; QUALIFICATIONS: 10 yrs or equiv exp at highest levels of Univ Fundraising; excel verbal & written commu skills; extensive regular interaction w/ Trustees; Univ President & chief academic officers; demonstrated effectiveness in constructing strategic solicitation plans for gifts of extraordinary size; Stanford exp desirable; N11; EN

14257-LL (JCC:3980) A-V SPEC II: 50% Media Spec & 50% Dir of AV/TV; respon for planning & developing edu'l media programs in a variety of formats, incl video, film, slide-tape & print; writes scripts & storyboards; produces, dir & edits media mat'ls; supvn of staff members; set-up & develop't of work procedures, evaluations, disciplinary actions, hiring & firing decisions; promotion of Dept services to faculty & staff of Med Ctr & Univ; QUALIFICATIONS: an edu'l bkground in Commu of Film & TV Production, w/ several yrs' exp as a professional writer, producer-director & editor; must have working familiarity w/ video sys, incl basic ENG & editing techniques.; C06; $1854-2312.

14258-LL (JCC:8880) MISC PROFESSIONAL: Overall managerial respon for a full-serv media dept & Learning Resource Ctr w/ a staff of 25 & a budget of approx $1,000,000/annum; fiscal respon for a full cost-recovery serv dept; evaluates performance of unit mgrs; prep marketing campaigns & mat'ls; works w/ school administrators & faculty to plan Div goals, serv & policies; assts faculty in planning effective uses of media serv & facilities; QUALIFICATIONS: exp in managing a full-serv media dept w/ cost-recovery goals; working knowl of instructional design, photography, video, audiovisual & graphics; MA degree or equiv exp in commu or media mgmt.; 1 C07; $2113-2724.

29255-JB (JCC:8306) R&D ENGR II: Must work independently to create original designs for experimental robot eqpt; make decisions concerning inhouse fabrication of parts or procuremt fr outside vendors; vendor liaison; supv & participate in fabrication of parts & in bldg the product; QUALIFICATIONS: must have Mechanical Design exp; prefer an engrg degree & extensive exp in area of controls & robotics; C99; $2113-2724

Nonexempt

39452-PM ADMIN ASST I: 75%; fixed term, 2/7/83-6/30/83; 8-3; asst Business Mgr of FCPM in the admin of all common svcs of Dept; respon for grant/contract admin incl prep of budgets & coord of submission of proposals to grnting agencies; monitor mthly budget statemts; totally respon for processing of all dept personnel/payroll records, supv clerical staff activs; answer questions requiring judgmt, knowl & interpretation of Univ policies & procedures; QUALIFIATIONS: typ 45; demonstrated supvry ability; must be tactful & discreet; familiarity w/Univ proceds & policies helpful; grant/contract admin exp preferable; contact Droni Moo, Med Ctr A106, 497-5639; $1366

42627-PM (JCC:2562) SECRETARY III: Prov sec'l support for 3 faculty members & their research staff; receive & screen all calls; make appts & maintain calendars; type & edit all manuscripts, corresp, grant proposals & clinic notes in finished form; monitor & maintain all grant budgets in res lab; order supplies & set-up procedures for follow-up; do lib & bibliographic searches; able to deal w/ a variety of indiv & set work priorities; QUALIFICATIONS: typ 60; med or scientific terminology required; able to transcribe fr dictaphone in fininshed form; good command of vocabulary & punctuation; able to organize & handle a large volume of paper in methodical & precise manner; exp in Univ grant policies & procedures helpful; exp or ability to learn NBI word processor; 1 send appl/resume to Phyllis Friedman, Dept. of Neurology, Med Ctr C338, 497-5072.; B14; $1440-1514.

41733-PM (JCC:2596) SECY II-SPEC: 75%; serv as sec to one professor active in labor law; handle all manuscripts, class work, corresp, nec arrangements for expense reports, travel, etc., phone calls & any other requests to make work flow smoothly; able to accept respon to plan own time at extremely busy desk; excel skills a must to keep up w/ work load; some legal bkground nec; QUALIFICATIONS: typ 60+; excel typing skills; good office bkground; willingness to learn computer sys; send appl/resume to Dena Landsman, Rm 113, Crown Quad.; B12; $983-1030.

36144-BP (JCC:2454) OFFICE ASST II: 50% between 10-5pm; 9.5-10 months appt. mid-Sept thru mid-June; office is respon for appl of Univ housing policies & administering student residence assignment flow to & fr Toyon houses,providing program support to Resident Fellow & student staff, etc; duties fall into following categories: informa & commu, residence operations, liaison w/ custodial staff, liaison w/ food serv staff, maintenance of Toyon program budgets, & supvry duties; QUALIFICATIONS: typ 45; thorough knowl of, & ability to perform offc procedures, practices, & methods; ability to win coop fr students & faculty of all ethnic bkgrounds; clear & succinct in oral & written commu; accuracy w/ numbers; a sensitivity to residence programming & to prov program support; ability to evaluate admin procedures; send appl/resume to Elizabeth Hiyama, 311 Old Union, 497-3044.; B09; $565-595. 1

29458-PM (JCC:2554) SECRETARY II: Sec to Asst Dean for Admin/Staff Affairs Officer; prov full range of sec'l support; sort mail; answer telephone; keep calendar; arrange appts; make travel arrangements; maintain files; maintain computer-based GSB room inventory, quarterly head count for faculty & staff; relief receptionist fr 12-1pm; QUALIFICATIONS: typ 60-65; several yrs sec'l exp; demonstrated organizational skills; commu skills; good typing, spelling & grammar essential; computer/MUSE word processing exp or willingness to learn; send appl/resume to Norma Sandy, GSB Rm 131.; B11; $1246-1310.

Bargaining Unit

32117-LL (JCC:5652) LIFE SCI TECH III: TMS Unit; 50%, 3 days one wk & 2 days the next wk; certified X-Ray Tech to work in Radiology Research lab; may be an occasional night or wkend; procedures are mostly animal related; computerized Tomography (CT), digital imaging, as well as routine radiography are employed in res labs; QUALIFICATIONS: CT exp as well as some spec procedure (angio) exp strongly desired; must be a grad of an approved A.R.R.T. program; must be A.R.R.T. registered & have Calif. license.; A30; $ 9.97.

42880-PB (JCC:5835) ANIMAL CARE ASST I: TMS Unit; 50%, Tues & Thurs, 8-5; Fri,12-2; maintain clean environ for lab mice & rats; change dirty cages, feed & water; wash all cages & bottles; do basic daily chores; sweep & hose floor, take trash out; QUALIFICATIONS: no allergies to animals; able to lift 50 lbs; work requires manual dexterity; able to follow detailed oral & written instruc in English; able to learn techniques & procedures in caring for & handling the animals & able to operate related eqpt.; A12; $ 6.54.

Carpools

Ride needed to S.F. MWF. Money negotiable. Brandt, ext. 7-1171.

Carpool wanted to Santa Cruz from Palo Alto M, W, F. Call Mark, 856-2428.

Join existing carpool. Leaves Homestead and Foothill Expressway to Stanford. M-F, 8-5. Call Jeannette, 7-9627.

I'm looking for a carpool between S.F. and Stanford (preferably from the Haight-Ashbury) 4-5 days/week, approx. 9-5. Please call Nora at 431-9649 eves.

Looking for two persons to join a Mission Noe Valley-Stanford Univ. carpool. M-F, 8-5. Call John, 821-1665, or Yinon, 431-0951.



Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

SLAC

93292-JM (JCC:8880) Electronics Engr: Sys/Proj engr duties incl to develop sys & subsys specifications, schedules & cost estimates; coord & supv design engrs & support personnel; coord all phases of proj incl conceptual design, fabrication, installation, documentation & subsys & sys checkout; MSEE or equiv; demonstrated exp in proj mgmt & supvn; expert knowl in state-of-the-art data acquisition sys for high energy physics, incl front end electronics, data acquisition, modular interface standards, cable power, rack & cooling sys.; C99; $3600-4200. APPLY AT SLAC

91788-JM (JCC:8880) Electrical Engr: Support of main electrical power sys; design of facility alterations & support of experimental physics program which incl design & initial operation & modifications of existing a.c. variable voltage substations; switchgear selections; underground cableways, sys coord; lighting & conventional electrical utiilities design & instaliation; direct field operations; BSEE or equiv; comprehensive field exp in electrical engrg; registered professional desirable; familiar w/ OSHA, Nat'l & Calif. Code & Safety Regulations; broad functional knowl of electrical power eqpt & sys & heavy electronics power eqpt & circuits; exp in coordinating projs w/ drafters & work inspectors.; C99; $3000-4000. APPLY AT SLAC

95091-JM (JCC:8880) Electrical Engr: Support of main electrical power sys; design of facility alterations & support of experimental physics program which incl field operations; sys coord; installation & alteration cost estimates; establish electrical sys protection relay settings; coord routine maintenance work; BSEE or equiv; comprehensive exp & demonstrated knowl & ability to perform work of considerable scope & compiexity; registered professionai desirable; must be familiar w/ OSHA, Nat'l & Calif. Code & Safety Regulations; overall knowl of primary power transmission procedures; thorough knowl of engine-generator sets & battery sys essential; supvry exp desirable; ability to commu both orally & in writing.; C99; $3000-4000. APPLY AT SLAC

94949-JM (JCC:8880) Electronics Engr: Design high power puise modulator, pulse power supply & associated interlock & low level sys; define overall sys requirements for linear collider pulsed power sys; produce design reports, cost estimates, schedules & engrg sketches for prototype construction & supv production & testing of components; BSEE plus extensive exp in high power, high voltage pulse sys; MSEE preferred; exp in design, high voltage components & safety & protection procedures; demonstrated ability to manage & work smoothly w/ variety of people.; C99; $3200-4200. APPLY AT SLAC

93295-JM (JCC:8646) SR S&E TECH - ELECTRON: TMS Unit; all shifts; perform diagnostic, corrective, scheduled & preventative maintenance on wide variety of simple to highly complex accelerator electronic sys, sub-sys & eqpt; requires tech knowi & skiils acquired thru college courses & related exp or equiv; ability to troubieshoot eqpt down to component level using schematics & diagrams; several yrs exp maintaining high power modulators & familiarity w/ thyratrons, thyristors & klystrons desirabie; working knowl of conventional solid state circuits & associated hardware; able to climb ladders & assist in heavy lifting; familiarity w/ CAMAC desirable.; A34; $1901. APPLY AT SLAC

91782-JM (JCC:6654) PR S&E TECH - ELECTRON: TMS Unit; maintain radiation monitoring eqpt such as ionization chambers, proportional counters, GM counters, thermoluminescent dosimeter readers & solid state radiation measuring devices; interact w/ a variety of people; AA degree in Electronics or equiv several yrs related exp; thorough knowi of circuit analysis, guarding techniques & some basic radiation physics; good verbai & writing skills; demonstrated exp in independent work & exercising judgement; A39; $2148. APPLY AT SLAC

94318-JM (JCC:6680) S&E TECH MECH: TMS Unit; Klystron processing to incl installing on bake station, leak checking, operating the station, pinching off after bake, & preparing the tube for testing; high sch'l and/or equiv related training; a coupie yrs related exp; ability to do heliarc welding; ability to interpret blueprints & use hand & power tools; able to qualify for gov't driver's license.; A28; $1647. APPLY AT SLAC

95048-JM (JCC:6680) S&E TECH MECH: TMS Unit; ali shifts; assemble ultra high vacuum (UHV) chambers, pumps, valves & gauges, & test components in a clean room area; prepare UHV chambers for pumpdown, bakeout & installation into storage rings; maintain inventories; expected to complete vacuum technology course; have good mech skills; ability to read engrg. drawings; prev related exp; knowl of algebra & trig usefull; able to qualify for gov't driver's license.; A28; $1539. APPLY AT SLAC

94316-JM (JCC:6696) PR S&E TECH MECH: TMS Unit; receive & inspect, check certificaitons & insure conformance to specifications of all incoming mat'l; inspect klystron parts, components, ceramics & assemblies; construct & assemble klystron parts & components; conduct spec tests on OFHC copper; keep inventory; AA degree or equiv (physics or engrg); exp in various phases of quality control & inventory procedures; familiarity w/ welding, brazing tech & heat treating & plating; 1 extensive exp in above areas w/ emphasis on metallurgical & ceramic tech & procedures.; A39; $2148. APPLY AT SLAC

94304-JM (JCC:6714) ACCELERATOR SYS OPR TR: TMS Unit; rotating shifts; geni operation of complex sys to dir, tune & maintain electronic beam; perform corrective & preventive maintenance; fabricate, instaii, modify, etc, eiectronic & electro-mechanical components & sys; AA in electronics or equiv; several yrs related exp incl digital electronics, fast electronics, etc.; A00; $1811. APPLY AT SLAC

94428-JM (JCC:6492) LAB MECHANICAN III: TMS Unit; operate heavy eqpt & large machine toois i.e. lathes to 60 in. swing, vertical boring mills to 84 in. swing, etc; set up jobs & plan work; do complicated work to precision tolerances; apprenticeship or equiv; several yrs journey level exp on basic heavy machine toois; highly skilied at working fr blueprints and/or verbal instructions.; A41; $2250. APPLY AT SLAC

94781-JM (JCC:6588/6604) Sr. S&E Tech/Trainee (Electro-Mech): TMS Unit; rotating shifts; operate & repair liquid helium refrigerators & systems; operate & maintain cryogenic, hydrauiic & pneumatic eqpt; leak check high vacuum eqpt; use machine tools; bend tubing; do silver solder & braze; read blue prints; fill & transport liquid hydrogen trailers; keep records; related courses desirable; exp w/ hydrogen & helium refrigerators, high pressure gas, photography, optics, hydraulics & cryogenics desirable; skills in ieak detection & lab vacuum practices. Salary for trainee may be lower.; A00/A34; $ .00/1901. APPLY AT SLAC

93297-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; all shifts; perform diagnostic, corrective, scheduled & preventative maintenance on wide variety of simple to highly complex accelerator electronic sys, sub-sys & eqpt; requires tech knowl & skills acquired thru college courses & related exp or equiv; ability to troubleshoot eqpt down to component level using schematics & diagrams; several yrs exp maintaining high power moduiators & familiarity w/ thyratrons, thyristors & klystrons desirabie; working knowl of conventional solid state circuits & associated hardware; able to climb ladders & assist in heavy lifting; familiarity w/ CAMAC desirable.; 1 A34; $1901. APPLY AT SLAC

93296-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; all shifts; perform diagnostic, corrective, scheduled & preventative maintenance on wide variety of simple to highly complex accelerator electronic sys, sub-sys & eqpt; requires tech knowi & skills acquired thru college courses & related exp or equiv; ability to troubleshoot eqpt down to component level using schematics & diagrams; several yrs exp maintaining high power modulators & familiarity w/ thyratrons, thyristors & klystrons desirabie; working knowl of conventional solid state circuits & associated hardware; able to climb ladders & assist in heavy lifting; familiarity w/ CAMAC desirable.; A34; $1901. APPLY AT SLAC

91593-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; troubleshoot, repair & calibrate a variety of commercial electronic test eqpt, incl oscilloscopes & associated plug-ins, signal generators (puise, function, oscillators), digital voltmeters, digital panel meters, CCTV cameras & monitors, RF commu sys, recorders, multmeters & power meters; AA degree or equiv; military schooling or equiv acceptable; exp in repair & calibration of electronic eqpt; use of test eqpt & special calibration fixtures; ability to restore malfunctioning test eqpt to original specifications; knowl of digital & analog theory & able to read schematics, etc.; 1 A34; $1901. APPLY AT SLAC

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Feb. 8, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Committee for Art sponsors series of lectures on the Spirit of Japan

The Committee for Art will sponsor a series of lectures on The Spirit of Japan at 8:15 p.m. Thursdays, beginning Feb. 10, in Annenberg Auditorium.

The topics in the series offer a rare opportunity to hear distinguished experts on gardens, ceramics, art, history, woodblock prints, and major tourist points of interest.

Admission is $4 for Committee for Art members and students, $5 for others. The schedule follows:

Feb. 10—"Will the Real Japan Please Stand Up" by Prof. Peter Duus, history. He'll discuss the historical background of the contradictions of the Japanese character.

Feb. 24—"The Emperor's Villa and Other Gardens" by Ron Herman, lecturer in landscape architecture at UC-Berkeley and author of *A Guide to the Gardens of Japan*.

Mar. 10—"Is Japan One Big Disneyland?" by Prof. Melinda Takeuchi of Stanford's Art Department.

Mar. 24—"Japanese Ceramics" by Art Prof. John LaPlante, who will lead the Committee for Art's Spirit of Japan trip next September.

Apr. 7—"Japanese Woodblock Prints" by Roger Keyes, world authority, lecturer, author, and consultant.

Apr. 14—"Search for the Spirit of Japan" by John LaPlante, who will speak this time on the trip itinerary and major sites.

Rental housing

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

HOUSING AVAILABLE

□ **Beg. Feb. 1, '83:** Spacious unfurn. hse, 4BR/2BA, frig, stove, dw, w/w carpet, FR, frpl, fenced yd, stor. shed, carport. No pets. So. Palo Alto, 10 min. to Stanf. $975/mo. + util. Call 329-0797.

□ **April 10 to July 15, '83:** London: Hampstead nr Heath. Beautifully furn. hse, 3BR/2BA, FR, study, garden. EXCHANGE or rent. Details incl. photo avail. Call Himmelweit, 321-2052 or 328-6040.

□ **June 22 to July 28, '83:** Fully furn. hse on campus. 3BR/2BA, pool, hot tub. Gardener & clean. woman incl. Must care for dog. $1400 + util. Sec. dep req. Call 497-7196 (day), 493-1882.

□ **May thru July '83 (flex):** Fully furn. hse, 2BR/1BA, nr footbrdge from MP to PA. $475/mo incl. water & ¼ util. Call H. Whiting, 322-5669, 392-1739.

□ **Summer '83:** LONDON HOUSEBOAT. Chiswick-on-Thames. Views, comfort. Suitable for cpl w/teen-ager or 3rd adult. Fully furn. elec. heat, DW, W/D, frig., TV. City water & sewer. $800-1,000/mo. 3 to 5 mo. nego. Call Beard, 323-2755.

□ **NOW:** Tahoe Donner Ski Bowl Condo. 3BR + loft, sleeps 10, color TV, spa. Call Bienenstock, (415) 493-8649.

□ **Aug. to Dec. '83 (flex):** Fully furn. hse 4BR/3BA (1BR/BA w/sep. ent. & rentable), study, FR, 2 patios, 2 frpl, AEK, W/D. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **Late Mar. to early June '83:** Furn. 1BR apt. Menlo Pk. $500/mo. Call 497-3025 or 497-0769 (day), 322-3301 (eve).

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse., 4BR/3½BA, study, library, DR, frpl, pool, view, acre. $1700/mo. incl. grdnr, pool serv. Call (415) 327-5204 or 497-4732 (day).

□ **Beg. Mar. 19:** Furn. 3BR/3BA hse, spacious, new kitchen, W/D, piano, frpl, fenced yd., Palo Alto nr Stanf. No pets. $1550/mo. incl. gardener, water. Call COLLECT (602) 299-4499.

□ **Mar. 15 to June 30, '83:** Hse in Palo Alto, 4BR/3BA, library, pool. $1300/mo. incl. gardener & pool serv. Call 327-4197 or 497-4856 (day).

□ **NOW:** 6 mo. lease. Lux. twnhse, 3BR/2½BA, furn. & fully equip., pool, etc., no pets. $2500/mo. Call (415) 854-1443.

□ **NOW:** North Berkeley/Albany area; one/half hse to share, 10 min. to UCB, 20 min. to city, sunny, quiet, $300/mo. Prof. woman will SWAP for similar situation in this area. Call 328-4432.

□ **July 1 to Dec. 31, '83:** Furn. hse, 4BR/3BA, study, FR, Sharon Hgts., 1 mi. to campus. Sep. DR, 2 frpl., 1/3 acre. $1500/mo. Call 497-3785 (day), 854-7471 (eve).

□ **Beg. Mar. 1, '83:** Fully furn. hse, 2BR/1BA, nr. Stanf. Piano, lrge yd, gardener. $900/mo. Call Jenny, 497-4744 (day), or 321-9760.

□ **NOW:** Ski Cabin. So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $150/wk (5 days). Call Janine (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly Avail.:** 1 & 2BR furn. and unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds. Close to Stanf. $525 to $1200/mo. Call Shirley (415) 493-2321 or Jane (415) 968-4957.

□ **Beg. Mid/End Feb. '83:** SHARE 3BR/2BA condo in Redwood City. Pool, beaut. view, nr 280, bus. Occas. child care. 7 yr. old boy deduct. from rent. $225/mo. Call 497-6283 (day), 364-6298 (eve).

HOUSING NEEDED

□ **NOW:** Reliable Stanf. staff seeks hsesit. Prefer long term 3 to 6 mo. or longer. Will give excl. care to hse, pets, plants, yd. Loc. refs. Call Donna, 497-3967 (day).

□ **Beg. Spring Qtr:** April 1 or May 1, two Stanf. med. students seek to rent hse. or apt. (2 to 5BR) nr. Stanf. Nonsmokers. Long term hsng wanted. Call Steve (415) 857-1792 or Bill (415) 327-3868 (eve).

□ **Mar. thru June '83:** Visit. Australian prof. seeks 3-4BR hse for self, wife & 3 children. Nonsmokers. Will care for hse & garden. Call Pamm, CERAS, 497-4717 before 2:30 p.m.

□ **July '83:** Med. prof. with well-behaved family seeks hsesit for 1 mo. or will EXCHANGE 4BR/3BA hse w/fenced yd, 45 min. from Manhattan nr. Rutgers Univ. Loc. refs. Call Bardin 851-0435 (eve).

□ **NOW:** Esc. Vil. family (3) seeks long term 2 to 3BR hse/apt rental in Jordan sch. dist. Loc. refs avail. Call Davidson, 857-0390.

□ **Beg. April 1:** For 3-4 mo. Cambridge Univ. prof. & wife, seek quiet 2BR hse, apt. nr Stanf. campus. Call 497-2972 or 497-1978 (day), 327-3344.

□ **May 15 to Aug. 15, '83:** Visit. prof., wife, 2 children seek 3BR fully furn. & equipped hse or apt on or nr campus. Call COLLECT, Indiana, (317) 463-3912.

□ **NOW:** VA Resident seeks rm w/ba in Palo Alto during wk. nites in EXCHANGE for my S.F. r. w/ba & priv. entr. Call Margie, (415) 564-2622 (eve) or 493-5000, pager #229 (day).

□ **Mid-Mar. to June (flex):** Visit. prof, wife, 2 pre-sch. child. seek 4BR fully furn hse Palo Alto/Stanf. area. Call (415) 965-1109.

□ **Mid-June thru July '83:** TRADE HOUSES. 4-mbr prof. family seek Bay Area hse for Gattingen, W. Germany. Lovely new home in small vill. nr. Univ. twn. Accessible to fields & forest, 3BR/2BA & study. Car avail. Call (415) 859-4757, (415) 941-4319 (eve).



Iris by Sally Spence

Watercolors by Sally Spence scheduled for showing at I-Center this month

Images in Bloom, watercolor paintings by Sally Spence of Novato, will be shown at Stanford's International Center Feb. 3-28. A reception for the artist will be held there from 5 to 7 p.m. Friday, Feb. 4.

A second-generation California watercolorist, Spence studied with several Northern California artists, including the late Richard Yip.

As a young adult Spence divided her time between being a wife, mother, practicing nurse, and a "very part-time" artist, experimenting with a variety of media and subject matter.

In 1973 she, her husband, and their children joined the Peace Corps as a family group and served for two years in Venezuela.

Since her return she has focused almost exclusively on watercolor, portraying the rural environment of Western America, Chinese life and culture, and flowers.

Many of her recent large watercolors plunge the viewer into a mass of flowers; the horizon disappears and all sense of direction is obliterated.

The International Center, located at the intersection of Mayfield Ave. and Lomita Dr., is open for viewing exhibitions from 8:30 a.m. until 11 p.m. on weekdays and from noon until 11 p.m. on weekends.

Ph.D. oral exams

MONDAY, FEBRUARY 7

Delmar Doucette, history, 3 p.m., Room 230, Bldg. 200. **Frank G. Halasz,** psychology, "Mental Models in the Routine Operation of Complex Systems," 2:15 p.m., Room 358, Jordan Hall.

TUESDAY, FEBRUARY 8

Daniel H. Greene, computer science, "Techniques for the Analysis of Algorithms," 3 p.m., Room 146, Bldg. 460.

WEDNESDAY, FEBRUARY 9

Benjamin Moszkowski, computer science, "A Temporal Logic for Multi-Level Reasoning About Hardware," 3:30 p.m., Room 146, Bldg. 460. **Mordechai Shefer,** aeronautics and astronautics, "Estimation and Control with Cubic Nonlinearities," 4:15 p.m., SK-191.

THURSDAY, FEBRUARY 10

Daniel Moos, geophysics, "Velocity, Attenuation, and Natural Fractures in Shallow Boreholes," 2:15 p.m., Mitchell 350.

FRIDAY, FEBRUARY 11

Peggy Pascoe, history, 10 a.m., Room 307, Bldg. 200.



Violinist Andor Toth and guests will play works by Haydn, Martinu, Brahms, and J. S. Bach at 2:30 p.m. Sunday, Feb. 6, in Dinkelspiel Auditorium. Joining him will be Mayumi Ohira, Don Ehrlich, Thomas Stauffer, and Richard Dasher. Tickets are $4 ($2 for students and seniors).

Minority business fair expects 300

Some 300 minority graduate and undergraduate students from throughout the Bay Area are expected to attend the second annual minority business conference and job fair at the Holiday Inn in Palo Alto, Friday and Saturday, Feb. 4 and 5.

The job fair, which will be held from 1 to 6 p.m., Friday, Feb. 4, will give Black, Chicano, and Asian American students a chance to discuss career prospects with representatives of national and regional corporations. The fair is under the joint sponsorship of the Stanford Black Business Students Association, the Chicano Business Students, and the Asia Forum.

Percy E. Sutton, chairman of the New York-based Inner City Broadcasting Co., is scheduled as keynote speaker at the conference on Saturday, Feb. 5. Inner City Broadcasting, which began with two radio stations in 1972, now includes seven stations, an inner city cable TV hookup, the Apollo Entertainment Network, and Amistad Electronics.

The conference will run from 9 a.m. to 9 p.m., with registration starting at 8 a.m., and will include panel discussions on assessing corporate careers, entrepreneurship and community service, career opportunities and male/female dynamics, balancing personal and professional needs, identifying and pursuing investment opportunities, and reassessing black economic development. Panelists will include minority executives and educators.

The conference theme is "Pathway to Parity: Managing our Resources to Accelerate Black Economic Growth."

Conference sponsors are the Stanford Black Business Students Association and the Stanford Black Pre-Business Society. There is a fee for the conference, but the job fair is free.

Purrington plans bassist concert

Bassist Courtney Purrington and Friends will give a free concert at 8 p.m. Saturday, Feb. 12, in Tresidder Lounge. Joining Purrington will be Jennie Abrahamson, flute; Curtis Smith, cello; and keyboardists Arno Mundt, Jeff Sugarman, and Lee Cosart.

Purrington is a senior at Stanford majoring in political science and Russian. He has played the bass since sixth grade in Albany, N.Y., and studied with Roger Scott—principal bass with the Philadelphia Orchestra. In high school Purrington performed with the All-Eastern Orchestra; at Stanford he has been principal bass with both the Symphony and Chamber orchestras.

Purrington will offer a variety of seldom-heard works for accompanied bass by Lorenziti, Monteverdi, Koussevitzky, Eccles, Handel, and Rossini. Purrington will also perform three movements of Bach's *Suite III for unaccompanied cello*, a medley of folk songs, and two of his own compositions for solo bass: *Variations on a Theme by Mahler* and *March for Peace*.

Cosart and Abrahamson will perform Claude Bolling's *Suite for Flute and Jazz Piano*.

Purrington, who is fluent in Russian, works part-time at Hoover Institution microfilming Russian newspapers.

Library Associates to hear bookbinder

Deborah Evetts, hand bookbinder and head of the Conservation Bindery at the Pierpont Morgan Library in New York City, will be the featured speaker at the Feb. 11 meeting of the Associates of the Stanford University Libraries. Her topic will be "Collector Bindings: My Approach."

The meeting is scheduled for 4 p.m. in Annenberg Auditorium and will be followed by dinner at a local restaurant. Advance reservations for the dinner must be made through the Associates office, 497-9426. The meeting is open to the public without charge.

Evetts is an expert on restoration of books and documents. She develops original designs for these projects and also teaches bookbinding classes.

WISE lecture set on random process

"Random Processes in the World: Three Perspectives" is the title of the next in the Stanford Women in Science and Engineering (WISE) lecture series, to be given at 4:15 p.m. Thursday, Feb. 10, in Room 420-041 (entrance in the basement of the Math Department).

Speakers will be Stanford math Ph.D. candidate Ruth Williams, Civil Engineering Prof. Anne Kiremidjian, and SRI International population genetics specialist Dorit Carmelli, Ph.D.

All members of the Stanford community are welcome; refreshments follow each lecture.

The series is designed to promote interdisciplinary discussion among women by providing a regular forum where nontechnical lectures on research topics are followed by informal discussion.

It is jointly sponsored by the Office of the Dean of Graduate Studies and WISE. For more information, call ext. 7-2496.



Anthony J. Haney and Graham H. Winton as satyrs

Cyclops/Nobody's musical to premiere here with Rush Rehm directing

"Cyclops/Nobody's Musical" will receive its premiere production at Stanford's Little Theater Feb. 16-19 and 23-26.

This bold new musical features book and lyrics by Schubert Award-winning playwright Rush Rehm, who also directs, and music by Francis James Born, composer of the filmscore for Christopher Miles' recent "Priest of Love."

A very free adaptation of Euripides' satyr play, "Cyclops" breaks new ground for the musical theater. The archetypal Greek story of Odysseus' encounter with the one-eyed monster takes on the excitement and drive of a Broadway musical. The jazz-rock score draws on elements of musical comedy even as it transforms them into a mode of revenge and triumph.

Marooned on Cyclops' island, a group of satyrs are forced to serve as the monster's shepherds while they dream of long-absent women and wine. Led by Silenus (played by Anthony J. Haney), they invoke their god Dionysius in a ritual of theatrical magic—sheep turn into women, women into men. When the smoke clears, the satyrs discover Odysseus (portrayed by Marc Accornero) and his crew have stopped for food on their way home from war.

In another miraculous transformation, Odysseus produces an endless supply of wine, and the satyrs' dream of Dionysius seems realized. The return of the one-eyed cannibal Cyclops (Andre Bruagher), however, breaks up the festivities.

Caught on this island-stage, hedonist Silenus, opportunist Odysseus and natural-man Cyclops work through the conflicting views of what the god Dionysius means: freedom, seduction, wine, nature, war, death, triumph.

In the archetypal account of Cyclops' temptation and Odysseus' revenge, "Cyclops" presents a humorous but ultimately disturbing parable of our own day.

Musical direction and orchestration for the premiere production are provided by Steven Ullman. William S. Eddelman, past winner of the Bay Area drama critics award for scenic design, designed the highly evocative setting and costumes. Lighting and special effects are by John Rathman, who recently returned from a design project with the Guthrie Theatre in Minneapolis. Choreography is by Stacey Greenburg.

Performance dates are at 8 p.m. Wednesday through Saturday, Feb. 16-19 and 23-26 with a special 2 p.m. matinee Saturday, Feb. 26.

For ticket information call the Tresidder Ticket Office at (415) 497-4317.

Free slide-lecture on *Cyclops* set

Assistant Prof. John J. Winkler of the Stanford Classics Department, will give a free public slide-lecture entitled " '. . .Or Are You Just Glad to See Me?'—Phallos and Festival in Ancient Greece," at 4:30 p.m. Thursday, Feb. 10, in the Forum Room of Meyer Library.

The lecture is the second in the Drama Department's Drama forum series and is given in connection with the upcoming production of the new musical "CYCLOPS/Nobody's Musical."

"CYCLOPS/Nobody's Musical" has been very freely adapted by playwright-director Rush Rehm from Euripides satry play, *The Cyclops*.

According to Winkler, "In Greek satry plays and comedies the phallos was used as a primary symbol of men's social role, expressing and testing their authority vis-a-vis other social groups: women, children, slaves, animals, gods.

"But it was not a straightforward display of power and might: more often it expressed the joking realization that male authority is a public fiction, a norm of behavior which supports, conceals and exonerates the detumescent identity of individual men."

The slide-lecture will illustrate the Dionysian playfulness during public holidays honoring Dionysos.

A faculty fellow in the Stanford Humanities Center, Winkler is completing work on his ground-breaking study of Apuleius, the Golden Ass.

Playwright-director Rush Rehm and "CYCLOPS/Nobody's Musical" composer Francis James Brown will be present at the lecture and available for discussion following Winkler's presentation.

Voice students to perform Feb. 11

Students of Stanford's newly appointed voice teacher Lila Stuart will perform at 8 p.m. Friday, Feb. 11, in Dinkelspiel Auditorium. The recital is free.

Singers will include Alexandra Coku, Nancy Kass, Sharon Paul, Cheryl Karinen, Charles Fidlar, Barbara Fausel, Benly Pierce, Robert Campbell, Bengt Post, Jane Boothroyd, and Richard Berlin performing solos and ensembles by Schubert, Purcell, Faure, Mozart, Brahms, Ives, and others.

Pianists Camilla Passarelli and Kay Bedenbaugh and clarinetist Joseph Limacher will accompany.

Stuart comes to Stanford after 13 years teaching at University of Redlands. Before that she was artist-in-residence and leading soprano with the Opera Theater at Indiana University's School of Music.

Stuart was a finalist in the Metropolitan Opera auditions and trained with the San Francisco Opera Merola program. She has performed with opera companies and symphony orchestras around the country.

Alaska travel film screening slated

Stanford University Events and Services will present "Inside Passage to Alaska," a travel documentary produced and narrated by Don Cooper, twice on Monday, Feb. 7.

The film will be screened at 2:30 p.m. in Kresge Auditorium and at 7:45 p.m. in Memorial Auditorium as part of the Discovery Film Series.

The film tells the story of the northwest coast from Seattle to the Bering Sea, nearly 3,000 miles up the inside passage to Alaska, and the Aleutian and Pribilof Islands. It touches on the history of Alaska, past and present, and includes glimpses of Alaska's dramatic scenery and elusive wildlife.

Tickets ($3 for matinee, $4 for evening) are available at the door or at Tresidder Ticket Office, (415) 497-4317.

Dramatists ready for *The Wager*

The Drama Department's production of *The Wager* opens Wednesday, Feb. 9, in the Nitery and runs through Saturday, Feb. 12.

The Wager was written by Mark Medoff who did his graduate work at Stanford, receiving his master's degree in English in 1966. He went on to write several successful plays including the 1980 Tony Award-winning *Children of a Lesser God*.

The Wager was first produced at Stanford by the Stanford Repertory Theatre in 1968. This year's production, directed by senior Christine Roum, will update the play for the eighties.

The play takes place in the apartment of two graduate students, Leeds and Ward, played by Joe Christiano and Orlando Ward respectively. The story revolves around the interrelationship with their neighbors, young professor Stevens, played by Steve Vineberg, and his wife Honor, played by Lisa Glass.

Admission is free and curtain is at 8 p.m. Passes are available at the door at 7:30 p.m. but it is recommended to come early as seating is limited.



Emanuil Sheynkman

Russian virtuoso Emanuil Sheynkman slates mandolin, balalaika concert

The Lively Arts at Stanford will present Russian virtuoso Emanuil Sheynkman, mandolin and balalaika, at 8 p.m. Friday, Feb. 4, in Dinkelspiel Auditorium.

Accompanied by Ksenia Sudarikova, pinao, Sheynkman's program will include works by Beethoven, Kreisler, Rachmaninoff, Borodin, and other Soviet and Russian composers, as well as traditional Russian pieces and Sheynkman's own works. One half of the concert will be devoted to each instrument.

A native of Leningrad, Sheynkman came to the U.S. in 1978. In Russia, he is regarded as the leading exponent of classical mandolin, as well as a prominent teacher and performer on the balalaika, a traditional Russian fretted instrument.

Sheynkman studied at the Rimsky-Korsakov Conservatory of Music and the Mussorgsky Institute in Leningrad. He won his first international instrumental competition at age 15 in Warsaw, and subsequently was First Prize Laureate in the Soviet Instrumental Competition.

He was a frequent soloist with the Leningrad Philharmonic, and recorded 15 albums on Melodiya Records.

Since his arrival in the U.S., he has performed at Carnegie Hall and with the Los Angeles Philharmonic. He served as visiting professor of Russian music at the University of Illinois, Champaign-Urbana for 1981-82. His first American recording, "The Art of the Mandolin," will be released by Nonesuch this year.

Tickets are $8.50 and $7.50. Student tickets are $3 off the regular price.

For ticket information, call Tresidder Ticket Office (415) 497-4317, BASS, and other Bay Area ticket agencies.

Hawley, Hagopian, Blaisdell to give flute, piano concert Sunday, Feb. 13

The Stanford Music Department presents flutist Alexandra Hawley with pianist Robert Hagopian at 8 p.m. Sunday, Feb. 13, in Dinkelspiel Auditorium. Joining the well-known duo will be flutist Frances Blaisdell. Both Hawley and Blaisdell teach flute at Stanford. Lawrence Granger of the San Francisco Symphony will play cello continuo parts.

Their Feb. 13 program will include a trio sonata by Quantz, Hummel's *Grand Rondeau Brillant*, flute duos and a sonata by Muczynski, sonatas by Bach and Franck, and Doppler's *Andante & Rondo for two flutes*.

Hawley and Hagopian have been performing as a duo for seven years, giving concerts and workshops throughout California, the East Coast, and the Midwest. They recently performed at the Metropolitan Museum of Art in New York and as part of the Myra Hess Memorial Series in Chicago.

Blaisdell is one of the foremost flutists and teachers in the country. She was solo flutist with the New York City Ballet for 15 years, and has soloed with symphony orchestras and chamber music groups around the country.

A *San Francisco Chronicle* critic wrote that a Hawley/Hagopian concert: "was as perfect as I have encountered. Programming, technique, musicality, all rated a 10. Hawley has every arrow available. But beyond mere control and mastery, she and Hagopian reached exceptional levels of classy musicianship."

Tickets for the concert are $4 general, $2 students and seniors, available at Tresidder Ticket Office (497-4317) and the door.

Emerson Quartet plays tonight in Dinkelspiel

The Lively Arts at Stanford will present the Emerson Quartet, with violinists Eugene Drucker and Philip Setzer, violist Lawrence Dutton, and cellist David Finckel, at 8 p.m. Wednesday, Feb. 2, in Dinkelspiel Auditorium.

The program will include Schubert's "Quartet in A Minor, Op. 29, No. 1"; Beethoven's "Quartet in F Major, Op. 135"; and Brahms's "Quartet in C Minor, Op. 51, No. 1."

Formed at the Juilliard School in 1976, the quartet won the Naumburg award for chamber music in 1978. They have appeared in virtually every major series in the U.S. and Canada, and will make their first major European tour this season.

They were recently appointed Resident Quartet of The Chamber Music Society of Lincoln Center, the first quartet so honored. They also maintain residencies at the Smithsonian Institution, the Spoleto Festival (in both Italy and the U.S.), Middlebury College, and the University of Hartford's Hartt School of Music.

The Emerson's broad repertoire embraces the complete cycles of both Beethoven and Bartok, as well as contemporary American works.

From the beginning of their association, the two violinists, both prize winners in the Queen Elizabeth competition in Brussels, have shared first chair equally.

Drucker is a graduate of Columbia and the Juilliard School, where he studied with Oscar Shumsky. He has toured with "Music from Marlboro," and is currently a member of the New York Chamber Soloists.

Setzer studied with Joseph Gingold and Raphael Durian, and earned his B.A. and M.A. at Juilliard with Oscar Shumsky. He has appeared as guest soloist with the Cleveland Orchestra and the National Symphony. He has participated in the Marlboro Music Festival, and is a member of the Madison Trio.

Dutton began violin and viola studies with Margaret Pardee, continued at the Eastman School with Francis Tursi, and earned his B.A. and M.A. at Juilliard with Lillian Fuchs. He has appeared as a guest artist with the Juilliard String Quartet, the New York Philomusica, and the New York Chamber Soloists.

Finckel has studied cello with Elsa Hilger, Bernard Greenhouse and Mstislav Rostropovich. A prize winner in the 1978 International Bach Competition and the 1979 Friday Morning Music Club International Competition, he has toured with "Music from Marlboro," and is a member of the Madison Trio.

Tickets are $10.50 and $9.50. For ticket information, call Tresidder Ticket Office, (415) 497-4317, BASS, and other Bay Area ticket agencies.

Snyder discusses student profiles

Rixford K. Snyder, professor of history and dean of admissions at Stanford from 1950 to 1969, will discuss "Changing Profiles of the Stanford Student Body" at 3 p.m. Sunday, Feb. 6, in History Corner, Room 2, at Stanford.

His talk is sponsored by the Stanford Historical Society.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Feb. 2 to cover the week of Mon., Feb. 14 through Sun., Feb. 20.

MONDAY, FEBRUARY 7

Biological Science Lecture: "Dispersed 5S Ribosomal RNA Genes in Neurospora. What Keeps Them Honest?," by Dr. Robert L. Metzenberg, University of Wisconsin. 12:05 pm. Room T-175, Herrin Hall, Dept. of Biol. Science.

The Bridge Lecture: "Winning the Type A Game: Coping with Stress at Stanford," with Carl Thoresen, Professor of Education & Psychology. 4 pm. Education 133, Cubberley.

Energy Policy Seminar: "The Project Development for a 100-Megawatt Photovoltaic Power Plant for Sacramento," with Mitchell R. Wool, Project Manager, Acurex Corporation, Mountain View, Ca. 4:15 pm. Skilling Aud.

Biological Science Lecture: Dr. Norman H. Giles, Dept. of Molecular & Population Genetics at the University of Georgia. 4:15 pm. Herrin Hall, Rm. T-175.

Numerical Analysis Group Lecture: "Convergent Regular Splittings for Singular M Matrices," by Don Rose, Bell Laboratories and Stanford. 4:15 pm. Room 380-C, Math Corner.

EE350 Radioscience Seminar: "Radiation from Pulsed Electron Beams in Space Plasmas," by Ken Harker , SRI International. 4:15 pm. McCullough Bldg., Room 134.

Stanford Jewish Appeal Lecture: "Everything You Wanted To Know about Solicitation." 7 pm. History Corner Rm. 34.

Film Society: "Double Indemnity" (1944) & "To Have & Have Not" (1944). 7:30 pm. Kresge Aud. $2.

Jean and Bill Lane Lecture Series: Wallace Stegner will be reading from his works. 8 pm. Annenberg Aud.

TUESDAY, FEBRUARY 8

The Bridge Panel Discussion: "The Fifty Hour WeekLiving through It," with Fred Hargadon, Carolyn Lougee, Marvin Herrington, Alice Supton, Don Bruce. Noon. Meyer Forum Room.

Bechtel International Center Lecture: "Nuclear Arms Control: Soviet and American Approaches," by Assist. and Assoc. Directors, Arms Control and Disarmament Program, Stanford. Noon. Dining Room, I-Center. $2.50 for lunch, however brown baggers welcome.

Stanford Museum of Art Lunch Hour Tours: "The Stanford Legacy". 12:15 pm. Stanford Museum.

Baseball: vs. USF. 2:30 pm. Sunken Diamond. General $2, students free.

Tower Talks Presents: "Nine Lies about America," by Arnold Beichman, visiting scholar. 3:30 pm. Lou Henry Hoover Room, Hoover Tower.

Communications Design Seminar: "Interference between Satellite Systems With Different Signal Modulations," by Ruming Chen. Visiting Scholar from China. 4:15 pm. McCullough Bldg. Rm. 128.

Biological Sciences Seminar: "Feedback Regulation of the Synthesis of Ribosomes and Ribosomal Components" by Dr. Masayasu Nomura, Institute of Enzyme Research, Univ. of Wisconsin. 4:15 pm. Herrin Hall, Room T-175, Dept. of Biological Sciences.

Music Guild "Learning To Listen" Lecture: "Computers and Music—A Rich Interaction," by Prof. John Chowning. 8 pm. Annenberg Aud. $4/$3/$2.

WEDNESDAY, FEBRUARY 9

CROW-Women in Performing Arts: "Black Women in Jazz," by Daphne Muse, Mills College Ethnic Studies Program. Noon. Terman Aud.

Stanford Museum of Art Lunch Hour Tours: "The Stanford Legacy". 12:15 pm. Stanford Museum.

Chemical Engineering Lecture: "Composite Reaction Injection Molding: Heat Transfer in Flow through Porous Media," by Professor Christopher M. Macosko, Univ. of Minnesota. 4:15 pm. Chemical Eng. Conference Room.

Electronics in Medicine Lecture: "Performance of a High-Speed Multi-slice Cine-CT Scanner," by Dr. Douglas Boyd, Physics Res. Lab. UCSF School of Medicine. 4:15 pm. McCullough 134.

The Bridge Lecture: "Understanding and Preventing a Suicide," by Perrin French, M.D., Professor of Psychiatry. 4:30 pm. Meyer Forum Room.

Music Guild Concert: Chamber music by the students of Margaret Fabrizio. 8 pm. Dinkelspiel Aud. Free.

Drama Dept: "The Wagner," by Mark Medoff. Directed by Christine Roum. 8 pm. The Nitery. Free.

Art Dept. Lecture Series: "Xi-an, Cultural Capital of China: a Survey of the Importance of this City from Neolithic Times of the Tang Dynasty (618-906 A.D.). 8:15 pm. Annenberg Aud.

THURSDAY, FEBRUARY 10

Stanford Geothermal Program: "Hydraulics of the Klamath Falls Geothermal System," by Edward Sammel, U.S. Geological Survey. 1:15 pm. Mitchell Bldg., Rm. B67.

Women in Science & Engineering Lecture: "Random Processes in the World—Three Perspectives". 4:15 pm. Building 420, Room 041.

Solid Mechanics Seminar: "Boundary-Element Methods for Transient Response Analysis," with Dr. Thomas L. Geers, Lockheed Palo Alto Res. Lab. 4:15 pm. Skillings Aud.

Industrial Engineering Lecture: "Risk Analysis as a Basis for Building Code Decisions," with Prof. Rudiger Rackwitz, Technical Univ. of Munich. 4:15-5:30 pm. Terman Aud. Free.

Drama Forum Series Lecture: "___ Or Are You Just Glad to See Me?" — Phallos and Festival in Ancient Greece by John J. Winkler of the Cl. 4:30 pm. Forum Room of Meyer Library.

Financial Planning Program: Financial counseling and free financial analysis by a financial specialist from Waddell & Reed, Inc. of San Jose. 7 pm. SLAC Auditorium. Restricted to Stanford faculty and staff.

Baroque music concert Saturday

The Music Department presents a free program of Baroque chamber music and the Baroque Orchestra at 8 p.m. Saturday, Feb. 5, in Dinkelspiel Auditorium.

Under the direction of Prof. George Houle, three chamber music works will be performed; *Divertimento No. 16 in E-flat Major, K. 271g* by Mozart; Aria *Floesst, mein Heiland* from *The Christmas Oratorio* by Bach; and Cantata *Goettlichs Kind, lass mit Entzuecken* by Telemann.

The Baroque Orchestra, under the leadership of violinist and graduate student Marmee eddy, will perform Haydn's *Symphony No. 67 in F Major.* Members of the orchestra will include Prof. Houle, Glenna Houle, Herb Myers, Deborah Barney, Marion Rubenstein, and Ruth Wenzel.

Quebec film at I-Center

The I-Center varies its usual documentary format this Thursday in presenting *Kamouraska*, a full-length feature film set in nineteenth century Quebec. The two-hour film, in French with English subtitles, will be screened at 7:30 p.m. Thursday, Feb. 3, at the International Center.

Kamouraska, produced by Carle-Lamy (Montreal) and the Societe Parc Film (Paris), is based on the famous novel of the same name. Genevieve Bujold acts the role of Elizabeth, a woman who becomes trapped by the folly of her passion for an American doctor. Their mutual plot to do away with her husband, the Lord of Kamouraska, results in her arrest and imprisonment. Though released from prison, her spirit and love remain confined by eternal brooding over a lost passion. It is a classic portrayal of 19th-century Quebec.

"Other Cultures" films are shown at 7:30 p.m. every Thursday at the I-Center. A 75 cent donation is requested at the door to help defray costs of the series. For further information on "Kamouraska" or future "Other Cultures" films, call 497-1831.

Latin American Film Series: "Chuquiago," a view of contemporary Bolivian society. 7 pm. Casa Zapata/Stern Hall.

Bechtel International Center Film Series: "Always for Pleasure" (New Orleans). 7:30 p.m. I-Center. .75 donation.

Drama Dept: "The Wagner," by Mark Medoff. Directed by Christine Roum. 8 pm. The Nitery. Free.

Spirit of Japan Lecture Series: "Will the Real Japan Please Stand Up," by Peter Duus. 8:15 pm. Annenberg Aud. Nonmembers $5 , Comm. for Art members & students $4.

FRIDAY, FEBRUARY 11

Material Science and Engineering Colloquium: "Ion Implantation and Metastable Materials," by Dr. T. Picraux of Sandia National Lab., Albuquerque, New Mexico. 3:30 pm. Peterson Laboratory, Bldg. 550, Room 550A.

Materials Science and Engineering Colloquium: "Low Density Aluminium Alloy Development", by Richard Lewis, Metallurgy Dept., Lockheed Research Laboratory, Palo Alto. 3:30 pm. Peterson Lab., Rm. 550A.

Associates of the Stanford Libraries Lecture: "Collector Bindings: My Approach," by Deborah Evetts, Hand Bookbinder and head of the Conservation Bindery, Pierpont Morgan Library, New York City. 4 pm. Annenberg Aud.

Stanford Hillel: Bring a Friend to Shul: a teaching service. 7 pm. Old Union Clubhouse.

Music Guild Concert: Vocal recital by the students of Lila Stuart. 8 pm. Dinkelspiel Aud. Free.

Stanford Law School Film Society: "Oliver". 8 pm. Kresge Aud. $1.50.

STARTS Great Directors Film Series: "Story of a Love Affair," by Italian director Michelangelo Antonioni. 8 pm. Geology Corner, Room 320. $2.50.

Drama Dept: "The Wagner," by Mark Medoff. Directed by Christine Roum. 8 pm. The Nitery. Free.

Coffee House Evening Entertainment: Music featuring many of the areas favorite new & up-and- coming performers. 9-12 pm. Coffee House. Free.

SATURDAY, FEBRUARY 12

Baseball: vs. San Jose State Univ. 12 noon. Sunken Diamond. General $2, students free.

Stanford Museum Weekend Tour: Rodin Collection. 2 pm. Stanford Museum. Free.

Black Liberation Month Film Festival: "The Harder They Come". 7 pm. & 9:15 pm. Terman Aud. $1.50.

Drama Dept: "The Wagner," by Mark Medoff. Directed by Christine Roum. 8 pm. The Nitery. Free.

Coffee House Evening Entertainment: Music featuring many of the area's favorite new & up-and-coming performers. 9-12 pm. Coffee House. Free.

SUNDAY, FEBRUARY 13

Stanford Museum Weekend Tours: Permanent Collection. 2 pm. Stanford Museum. Free.

ASSU Sunday Flicks: "Midsummer Night's Sex Comedy". 7 & 9:30 pm. Memorial Aud. $1.50.

Music Guild Concert: Alexandra Hawley, flute with Frances Blaisdell, flute & Robert Hagopian, piano. Quantz- Trio Sonata in C minor,Bach- Sonata in E minor, Hummel- Grand Rondeau Brillant, Muczynski- Flute duos, Sonata, Franck- Sonata, DopplerAndante & Rondo for two flutes. 8 pm. Dinkelspiel Aud. $4/$2.

Young Stanford Artists Classical Series: Gloria Cheng, piano. 8 pm. Tresidder Union, Rm. 280. $3 general, $2 students.

EXHIBITS

Recent Acquisitions. Paintings, drawings, sculptures and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. Jan. 11 - Feb. 20.

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

Photographs by Olivia Peterson. Coffee House/ Tresidder Union. Feb. 1 - Feb. 28.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Recent Expressionist Drawing Experiences by Barbara Scoledes. Tresidder Union, upper lobby. Feb. 1 - Feb. 28.

"Images in Bloom", by Sally Spence, watercolor paintings. I-Center. Feb. 3 - Feb. 28.

CAMPUS REPORT

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SHANNON SEYMOUR GETS HER JUST REWARD—champagne in the face—for her part in earning $6,000 toward a new boat by rowing on the ergometer in White Plaza. The Crew received a challenge grant of $5,000 and took turns rowing for a 24-hour period to earn the rest. The boat was given in memory of Betty Kantor Chapman, '60, who died last year.

Quiet crisis of conscience: SSRL weapons work opposed

Fifteen faculty and about 280 staff members at the Stanford Linear Accelerator Center (SLAC) have quietly signed petitions objecting to proposed weapons-related research at the Stanford Synchrotron Radiation Laboratory (SSRL).

The proposal involves the development and testing of high speed x-ray detectors, used in the analysis of nuclear weapons tests. Similar detectors could be used in studies of how atoms rearrange themselves in biological and other materials—as muscles contract, for example.

No funding for the proposal was included in President Reagan's budget for fiscal 1984. Completely unclassified, the weapons testing proposal was developed by scientists at Lawrence Livermore, Sandia, and Los Alamos national laboratories, who seek about $5 million from the Department of Energy's Office of Military Applications.

Faculty from seven University of California campuses—San Francisco, Santa Barbara, Irvine, Los Angeles, Berkeley, Riverside and San Diego—are

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Big indirect recovery loss

Stanford may forego as much as $20 million in research cost recovery over the next three years, President Donald Kennedy told the winter quarter meeting of the Academic Council Thursday, Feb. 3. *(See text page 23.)*

Full recovery of indirect research costs, "however realistic," would cause faculty researchers "to suffer a competitive penalty in the allocation of (research) awards," Kennedy said.

In addition, "the Executive Branch agencies and the Congress are both distressed by the rate of increase in overhead. In my judgment, that concern is based upon a substantial misunderstanding; but it is nonetheless a political reality.

"We are not anxious to have recent

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Packards pledge $20 million

Gifts totalling $20 million for construction of the new Children's Hospital at Stanford have been pledged by David and Lucile Packard of Los Altos Hills, Stanford University President Donald Kennedy announced Monday, Feb. 7.

The gifts will be known as the David and Lucile Packard New Children's Hospital Fund and will be used by the board for the planning and construction of the new Children's Hospital. Under the terms of the pledge Stanford will provide an equal amount towards the project, primarily through additional fundraising.

"We want to help develop the finest Children's Hospital in the country and have it physically and intellectually connected to an outstanding university medical center such as Stanford," said Mr. and Mrs. Packard.

"The Packard commitment for this joint venture is the largest personal pledge either institution has received since their founding," Kennedy said. "It has given us a truly magnificent start for our comprehensive goal to consolidate all children's services in a new Children's Hospital."

The gifts, Kennedy added, will also complement the present efforts of the University to modernize Stanford Hospital and research facilities of the Medical School.

Packard, a Stanford alumnus and former trustee, is chairman of the board of Hewlett-Packard Corporation. Mrs. Packard, a Stanford alumna, is vice chairwoman of the current board of Children's Hospital at Stanford. Both have been known for their activities in support of education and community betterment.

The new Children's Hospital will be a $40 million building physically attached to Stanford University Hospital. It is expected to be ready for occupancy by a target date of May 1987. An agreement between Stanford and Children's Hospital has created a new corporation to operate a

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Tuition up 9.8% to $9,027

Responding to the recession, Stanford will increase tuition 9.8 percent in 1983-84, to $9,027 from $8,220.

"Special effort has been taken to temper the rate of growth of tuition in general recognition of the tightness of the economy," according to documents considered by the Board of Trustees, which approved the increase Tuesday, Feb. 8.

The increase compares with a 15.1 percent hike this year and a 12 percent gain projected in the University's long-range forecast last December. A year ago, the 1983-84 forecast was 14 percent.

Harvard recently announced an 8.7 percent increase in tuition, room and board charges, to $13,150 from $12,100 the smallest percentage increase there in four years. Princeton announced a 12.6 percent increase, to $12,910 from $11,468. Brown boosted tuition 12.8 percent.

Stanford will continue to meet the calculated financial need of all those admitted as freshmen and maintain its "aid-blind" admissions policy, making decisions without regard to financial need.

At present, 46 percent of all un-

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Research fund competition up

Major private universities face growing competition for research funding, a new Stanford report suggests.

A background paper on indirect costs, circulated to the Board of Trustees by President Donald Kennedy, notes that "the capacity to do good research is becoming more and more widespread in this country.

"This is due largely to the fact that graduate programs at the best institutions have been turning out people with doctorates faster than this same class of schools can absorb them as faculty members.

"The average quality of faculty at a

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People

Shultz to give graduation talk June 12

Secretary of State George P. Shultz, on leave as professor at the Stanford Graduate School of Business, will be featured speaker at the University's 92nd annual commencement Sunday, June 12.

Scheduled for 10 a.m. in Frost Amphitheater, the commencement program is open by ticket only. Each degree candidate obtains three tickets.

A Stanford campus resident, Shultz was appointed to a part-time professorship in the Business School in 1974, where he taught in the public policy program until he was named to the Cabinet last June.

Former dean of the University of Chicago's Graduate School of Business, Shultz was a fellow at the Center for Research in the Behavioral Sciences at Stanford in 1968-69.

He was the unanimous first choice of the commencement speakers panel, an advisory group to President Donald Kennedy which includes students, faculty and staff.

Members include Senior Class Presidents Kevin O'Beirne and Katie Dore, Profs. Alberta Siegel, psychology, and Bliss Carnochan, English; Robert Hamerton-Kelly, dean of the chapel; Larry Horton, director of government relations; and Marlene Wine, special assistant to the president.



George Shultz

Capacity crowds of 12,000 filled Frost to the brim in 1981 and 1982, when the speakers were two Stanford alumni, Deputy Secretary of State Warren Christopher and U.S. Supreme Court Justice Sandra Day O'Connor.

Reagan names Trent ambassador

President Ronald Reagan has appointed Hoover Institution Senior Research Fellow Darrell M. Trent as chairman of the U.S. delegation to U.S.-European civil aviation conference negotiations on multilateral pricing (U.S.-ECAC). The President has also announced his intention to nominate Trent for the rank of Ambassador.

Currently on leave from Hoover, Trent will continue his duties as deputy secretary of the U.S. Department of Transportation, a position he has held for the past two years.

The U.S.-ECAC agreement sets up a multilateral civil aviation pricing arrangement with the long-term aim of permitting U.S. and international air carriers to set fares without government intervention.

The six-month pricing agreement, which began on Aug. 1, 1982, was subsequently extended an additional nine months in order to permit work on a permanent understanding.

The agreement constitutes a step in further loosening government control of international air carriers. It provides for zones of flexibility within which governments have agreed to permit pricing without intervention.

Countries bound by the agreement include: Belgium, France, Germany, Greece, Ireland, Italy, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, The United Kingdom, and Yugoslavia.

Trent has held numerous public policy positions throughout his career. He has deputy assistant to the President and staff administrator from 1969-70; deputy director and acting director of the Office of Emergency Preparedness in the Executive Office of the President from 1970-1973; associate director of the Hoover Institution, from 1974-1980.

Ely receives top book prize

John Hart Ely, the Richard E. Lang professor and dean of the Stanford Law School, was one of two recipients of the triennial award of the Order of the Coif, the nation's highest accolade for scholarly work in law.

He was presented the award—shared with Dean Jesse H. Choper of the Boalt Hall Law School—in Cincinnati during the annual meeting of the Association of American Law Schools on Jan. 7.

Ely was chosen by a panel of lawyers and legal educators to receive the award, which is made every three years in recoginition of the "authorship of a written book evidencing creative legal talent of the highest order." Ely was recognized for his book, *Democracy and Distrust* (1980).

This is the third time a Stanford law professor has been its recipient. The late Prof. Herbert L. Packer shared the award in 1970 for his book, *The Limits of the Criminal Sanction* (1968), and Lawrence M. Friedman, the Marion Rice Kirkwood professor of law, received the award in 1976 for his books, *A History of American Law* (1973) and *The Legal System: A Social Science Perspective* (1975).

John Roberts

Graduate School of Business Prof. John Roberts, 37, has been elected a Fellow of the Econometric Society, the worldwide professional association of theoretical and statistical economists.

Roberts was one of 12 scholars elected to the society. Others are a member of the mathematics department at UC-Berkeley, six other Americans, two Britons, and a Hungarian.

Roberts, who joined the Business School faculty in 1980, holds the Jonathan B. Lovelace Professorship in Economics at the School.

The Fellows are a select group of 300, drawn from within the 5,000-member Econometric Society. Two other members of the Stanford Business School faculty, David Kreps and Robert Wilson, are also Fellows in the society.

Paul Mosher

Paul Mosher, Stanford University Libraries' director for the collection development, has been appointed a Senior Fellow in the second year of the Senior Fellows Programs of the Graduate School of Library and Information Sciences at UCLA.

Coordinated by UCLA Dean Robert M. Hayes and funded by the Council on Library Resources, the program brings together top level academic library administrators from across the country in an intensive six-week summer program, followed by a year's study of a specific issue or problem in library management and a follow-up session in June 1984. Mosher will explore theories of organization development as they apply to academic research libraries.

Miriam Miller

Miriam Miller has joined the staff of the Stanford Alumni Association as editor and manager of The Portable Stanford book series.

Editor of a number of books, both while living in New York and since returning to the Bay Area in June, she has done work for Macmillan, Columbia University Press, Hawthorn Press, W. H. Freeman, and Newmarket Press.

A native of Connecticut and a graduate of the University of Michigan, she began her career in marketing and merchandising with Macy's in New York and San Francisco. Before entering the publishing field, she worked on her doctorate in English at UC-Berkeley and taught there and at the University of Minnesota.

Faculty openings

EE statistical signal processing

The Department of Electrical Engineering invites applications for faculty positions in the general area of statistical signal processing and system identification, with interests in applications in telecommunications, including hardware and/or software aspects, especially as related to efficient VLSI or other practical circuit implementation.

One position is available at the (tenure track) assistant professor level. Candidates for the more senior position of research professor are also sought.

Interested persons should apply before May 1, 1983, including a resume, statement of interests, copies of publications, and names and addresses of references to: Prof. Joseph W. Goodman, chairman, Search Committee, Dept. of Electrical Engineering, Stanford, Calif. 94305, (415) 497-3304.

Stanford is an Equal Opportunity, Affirmative Action Employer, and welcomes nominations of women and minority group members and applications from them.

Feb. 15 deadline for frosh/soph seminar plans

The deadline for submitting course proposals to the Freshman/Sophomore Seminar programs is Feb. 15. All faculty are encouraged to submit a course proposal. If you need a proposal form, please contact Kathy Thoelecke in the Academic Information Center, 497-2426.

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Robots, high-tech machines, come to help of the disabled

BY DONALD STOKES



L to R: Machiel Van der Loos, program engineer; Larry Leifer; K.G. Engelhardt,Veterans Administration specialist.

Robots are coming to the aid of quadriplegics, the blind, the disabled, and nearly all those who suffer the loss of limbs or bodily functions.

It is happening in a crowded, noisy building on the grounds of the Veterans Administration in Palo Alto.

Here, 27 young engineers, scientists, physicians and therapists are pushing into new fields which have such names as orthopedic biomechanics, man-machine integration and neuromuscular rehabilitation.

Robots are only one of their score or more of projects. Others seek to:

* Help the blind to "read" books and daily printed material by hearing them electronically spoken;
* Study the feasibility of making those with spinal-cord injuries walk again;
* Probe ways to electronically augment the workings of the nervous system; and
* Use advanced computer graphics to facilitate cognitive rehabilitation.

The work is a collaborative effort between the V.A. Rehabilitation Research and Development Center, several departments at Stanford University, six in the Veterans Administration Medical Center Services, and a variety of institutions in the Bay Area.

Projects are also conducted in various parts of the country with other R&D centers.

The Rehab R&D Center, as it is often referred to, is directed by Larry Leifer, professor of mechanical engineering at Stanford.

Leifer, aged 42, has spent more than 16 years on research related to the application of engineering science to the understanding and functional correction of nerve and muscle function.

During the past six years his work has focussed on the application of engineering in rehabilitation. Though involved in several projects, his contribution to rehabilitation robotics is probably the reason for his reputation as a world leader in helping the disabled.

His manner is deceptively mild, his appearance youthful.

Leifer explained that the thrust of his team's work is to seek generic solutions, to understand a class of functional disabilities, rather than individual problems. "We try to define assistive devices that will satisfy a range of needs.

"Otherwise, we would remain in the historical rut of making expensive custom fixes for each individual problem. We try to define and answer functional questions which apply to the problems encountered by people of varied impairment.

"For example, if a person has an arm but cannot use it, what should we do for him? In most cases we choose not to look for an anatomical replacement. That has been the bias of the last 100 years, a very understandable one.

"People have been made to hope that they will get their arm 'replaced' in working order. That is just not possible, with current or foreseeable knowledge.

"Our team attacks the functional problem: how can we help you perform the functions you once did with that arm. That is where the robotic concept takes shape. We try to make a machine, not constrained to look human, which will perform comparable functions.

"As the machine is not part of one's body, the disabled user is more free to interact critically with the machine.

"One way to control such a machine is by voice command. Curiously, we have found that it is important for the machine to talk back to the user, if spoken to. We also have to realize that in ordinary human communication a great deal is left to inference.

"If I say to you 'Get me a drink of water' you infer what a cup of water is, where it is and how to fetch it.

"This means that we must create a way for the patient to control the machine, rather like a pilot flying a spacecraft. The machine must be given as many built-in features as possible. But, when the stage is reached where the limits of the machine's capabilities are reached, then a human must take over and guide the machine."

Leifer demonstrated an experimental clinical model. It consisted of a small, almost humanoid metal arm, a two-fingered hand and a collection of 12 micro-computers which control the arm.

A young quadriplegic veteran was being trained to use the robot. In sequence, the young man asked the robot to wake up; "move to glass"; "pick up glass"; and "bring it to me."

The robot repeated each request and obeyed each instruction.

Slowly, delicately the metal arm lifted a glass containing water.

"Give glass to me" came the next order. Slowly, the arm brought the glass to the lips of the quadriplegic.

"Repetitive tasks are easy for the robot," Leifer commented. "Our challenge lies in making the robot interactive, able to follow every change in the operator's objectives, as might happen if helping the user to play chess, or to cook.

"This is only a beginning. This will develop in the coming decades. We can imagine robot servants able to carry out many useful tasks in the home or the factory."

While robotics is the most visually comprehensible project at the Rehab R&D Center, there are many other important projects where space age technology is being adapted to aid the handicapped.

A flight simulator, one of the expensive and elaborate machines that helped astronauts to prepare for venturing into space, will now be helping the handicapped to venture into the everyday world. The task is formidable and requires a team effort with board expertise in electro-mechanical systems design, computer software, human information processing and clinical evaluation.

The flight simulator will first be applied to the design of vehicles for the handicapped. "With this simulator we can find the limits of what people can manage with wheelchairs, and measure what needs to be built into wheelchairs so that they can be more effective and serve more people.

"We aim to make such vehicles more usable by those who have lost vision, have severe motor disability or have cognitive losses."

The basis of all the work at the Center is a profound shift away from the manner in which machines are normally used. Most people adapt to their autos, household utensils and office apparatus, but the R&D Center tries to adapt the machine to the user.

In this effort, the computer is invaluable; it is the vital link between the capabilities of the user and the machine that works at his command.

Leifer expressed concern that because of societal influences and habits, the handicapped may fatalistically accept handicaps for which remedies can be found if enough effort is harnessed.

His own mother, for example, is extremely hard of hearing. He has talked with her and the rest of the family about assistive devices that are now available to help, but Mrs. Leifer and the rest of the family have never felt like pursuing the matter.

"Many people with major disabilities tend to accept their situation and do not seek technical solutions. With the passage of time, if one does not do something about a physical impairment or disability, the time comes when it cannot be ameliorated. This is especially true where brain or muscle function is concerned."

Leifer described the work of Sally Wood, an electrical engineer who, in one project, is building a mathematical model of the transmission of electrical signals in human nerves.

In a second project, she is working on a reading machine for the blind, in which a camera scans the characters printed in a book, then delivers the images to computers which translate them either into synthesized voice, Braille, or computer-readable files.

"This unusual blend of theoretical and applied research is characteristic of many people in our center.

"Considerable work has been done on computer synthesis of human speech, but a vast amount remains to be done. At the moment synthesized speech sounds very mechanical. There is no inflection, no pacing.

"If the computer is going to talk to you, it should have a little personality. Richard Steele is studying how to inject those features into machine-made speech.

"His second task is to tell the computer what to say. He is studying better ways of coupling verbal thought to the machine—synthesized speech.

continued on next page

Katsufrakis's Antarctic research hampered by sunspot surge

Stanford scientists in the Antarctic have found unusually violent sunspot activity this year which has hampered their research into magnetosopheric phenomenon.

Since sunspot activity is supposed to be on a downward cycle, the frequency and severity of the storms was unexpected, according to John Katsufrakis, adjunct professor of electrical engineering and project director for Stanford's project at Siple Station in the Antarctic interior. One storm was the worst he ever saw, he said.

"1982 was a disaster from our point of view," Katsufrakis said. "There was just so much solar activity, they were averaging one event a week at Siple.

"July 13th, they had a blood red aurora which covered the entire sky. You could see shadows," he said.

"They had between three and five flares from last Friday to Saturday, so it's continuing. We hope it kind of quiets down so we can go about our business."

These storms block out radio transmissions sent from Siple to Stanford's station in Roberval, Quebec. The transmissions follow the magnetic field of the



John Katsufrakis

earth. Stanford scientists can study the relationship between the magnetosphere and the atmosphere by listening to the transmissions. They also monitor the natural radio activity of the magnetosphere, usually called "whistlers."

Katsufrakis said that the peak of the sun's 11-year cycle should have been 1979, and that solar activity should last two or three years, decrease, and reach its low point around 1990. The pattern is not being followed during this cycle.

He said 1980 was unusually quiet, 1982 unusually active.

The storms also break up high frequency radio transmissions between the bases "on the ice."

"We were just fortunate that a lot of the bad weather and the 'comm' problems were essentially in parallel," he said. This meant that no one was travelling (usually by air) when communications were disrupted. Such a disruption could constitute a safety hazard to travellers.

Katsufrakis said that during the storms it was easier to communicate to Siple from the engineering building here using a satellite than it was for the men at Siple to talk to McMurdo or the other American bases on the continent.

Several changes have been made at Siple this year, Katsufrakis said. The length of the antenna which transmits the radio signals to Roberval has been doubled so that researchers can now send high-powered, low frequency signals, as low as one kilohertz (one thousand cycles per second).

He said that was a useful regime for the research.

Siple reopened two years ago after a one year shutdown caused by budget cutbacks. Thirty-five men were there during the recent austral summer period, mostly construction workers. Katsufrakis, who has been to the Antartic more times than anyone in history, was there again this year.

When the station ends its summer research this month eight men will "winter-over," including two from Stanford, John Green, a recent masters candidate, and Dave Shafer, a graduate student.

There will also be a researcher from Utah State University, and five support personnel, including a Navy paramedic, two life-support engineers, a cook and a radio man.—**Joel Shurkin**

French studies fellowships available

The Georges Lurcy Educational and Charitable Trust is making available two fellowships for full-time graduate study or research. One fellowship is for research or study in France, the other for research or study as a resident fellow.

To be eligible, the graduate student must be a citizen of the U.S. or a permanent resident. The fellowship may not be held simultaneously with any other fellowship. The stipend is $7,500 (minus TGR fees) for an academic-year period. Applications will be judged on academic performance and promise of the candidate and the quality of the proposed program.

The Lurcy Trust has indicated a preference for applicants whose projects involve contemporary French culture. Applicants should arrange for separately submitted letters in support of their applications from their academic advisors and department chairman. A curriculum vitae, proof applicant can speak French, and a local and permanent address must also be included with the application.

Applications are due in Building 10 by **March 1, 1983.** They will be reviewed by a faculty committee and the two selected will be nominated to the Foundation for appointment.

The recipients *will be notified by the Foundation soon thereafter.*

If you have questions, please contact Shirleyann Shyne at 7-3904.

Robotics...

continued from page 3

"One of his studies centers round the use of a stenographic keyboard. Under ideal circumstances, by using a stenographic machine a person can proceed at 220 words a minute, which is faster than the average human range of 100 to 200 words a minute.

"We are aiming for the time when a speechless person can 'talk' at a normal rate."

Another researcher, Fred Lakin, is working on the development of a graphic language for those who have lost ability to manipulate words and their meaning.

"The human consequences of not being able to understand normal language are profound," said Leifer. "The cost in human terms is extraordinary. Fred is trying to create an environment for communicating graphically. It includes extensive use of computers and computer-generated images.

"A person may be so injured that he cannot relate letters and words to objects or messages. But he may be able to make some sort of squiggle that stands for something he is trying to convey.

"By recording this, and working closely with the patient, it may be possible to build an individual language for that individual. The computer becomes his/her personal translator. The language is idiosyncratic to the user."

Thousands of potential wheelchair users need a means to control the vehicle without coming into physical contact with the control interface. The answer, say researchers, is ultrasonic rangefinding.

Using this, the user would not have to wear any part of the device nor make any special accommodations for it to operate adequately. In combination with voice command, the wheelchair would be easy to use, and safe.

The work of the Rehab Center is aimed not only at relieving the handicaps of many thousands of people. It is also hoped that research will lead to a reduction of costs in the care of the handicapped.

For example, some 4,000 quadriplegics are being cared for by the Veterans Administration, and it costs $50,000 a year to maintain each one, making an annual bill of $200 million. As they may be expected to live another 40 years (many are young veterans of Vietnam) that makes a potential cost of $8 billion for that group of injured alone.

There are many thousands of people with lesser disabilities. In all cases, there are direct and indirect cost incentives to reduce the handicap associated with any disability. There is also a clear opportunity to be helpful.

Good design, new technology, attention to the user and a philosophical commitment to building machines that adapt to people are key factors in Leifer's belief that the disabled can have a better life cost-effectively.

It all began for Leifer when, as an undergraduate at Stanford, he grew restless with the study of engineering, as he found it.

"I felt I wanted direct involvement with human problems," he said, "so I took courses in physiology and psychology. I enjoyed work with machines but primarily as they are used directly by humans. I am also drawn to the dynamic properties of both people and machines.

"I admire a bridge and its builders, but I would rather see people dance and build machines that are an extension of the human will to dance.

"At the graduate level this became focused for me. I became interested in the human body itself as a machine. This led me further into the physiology of human movement. Curiously, I am now more involved with the development of machines that can augment lost human movement."

Leifer gained all his degrees at Stanford and did his doctoral work in the Neurology Department between 1965 and 1969. His work centered on the application of engineering techniques to physiology, particularly the study of nerve conduction and muscle contraction during voluntary movement.

From Stanford he went to the Ames Research Center, where he became a staff scientist in the Human Performance branch. He worked in a psycho-physiological laboratory where the objective was to measure human information processing physiologically.

Next came a year at MIT, where he did similar work. Then came a significant transition. In 1973 he went to Switzerland where he joined a former Stanford professor, Max Anlicker, in the Biomedical Engineering Institute of Zurich. Leifer did research in and taught biomedical systems analysis.

In 1976 he came back to Stanford as an associate professor of mechanical engineering, with a courtesy appointment in biomedical engineering in the Department of Neurology.

In his second year he and several faculty from the School of Engineering, the School of Medicine, and the V.A. Medical Center joined in the proposed establishment of a rehabilitation research and development center.

"Most of the people were senior, and already committed to their own particular projects and teaching. I was still uncommitted and the Center was exactly the direction in which I wanted to go. Franklin G. Ebaugh, associate dean of the School of Medicine asked me in 1979 to direct the fledgling center."

Leifer works very closely with three other engineering faculty members—Felix Zajac, Dennis Carter and Robert Piziali.

There is currently a staff of 27 researchers and support people, and some 12 Ph.D. students. All projects are carried out in collaboration with physicians at Stanford and the V.A. Medical Center.

The team is the only funded center in the U.S. which is developing robotics to help the disadvantaged.

In 1980 the team moved into its present facility. "We are still in the growth stage," says Leifer, "and will need a couple more years before we are a mature R&D group of approximately 40 persons."

In an important evolutionary step, the Center will be adding three medical program directors to augment the current technical leadership. More specific information may be had from the following individuals:

R R&D Center: Larry Leifer, Ph.D.; Franklin Ebaugh, M.D.;

Orthopedic biomechanics: Dennis Carter, M.D.; John Csongradi, M.D.;

Nerve and Muscle Systems: Felix Zajac, Ph.D.; Leslie Dorfman, M.D.;

Man-Machine Integration: Larry Leifer, Ph.D.; Robert Chase, M.D.; and

General Information: Pat McCarty (415) 493-5000, ext. 5465.

Stuck head first on rocks, barnacles eat with their feet

Today we are going to talk about barnacles.

The barnacle is confronted early in life with an existential decision about where it is going to live. Once it decides, it can never move again; it spends the rest of its life hanging with its head cemented to a rock, trying to eat with its feet.

"Being a barnacle is not an easy life," points out Mark Denny, assistant professor at Stanford's Hopkins Marine Station in Pacific Grove. Denny is an expert on barnacles, which he says is a more interesting creature than one might assume.

Consider barnacle cement. It is one of nature's strongest glues, a mixture of still-unknown substances that is so strong it is easier to chip the rock the barnacle is attached to than it is to pull off the barnacle. Dentists would love to have it synthesized so they can use it to fasten false teeth; orthopedic surgeons would adore it for gluing together broken bones.

Consider sex. Barnacles have, for the size of their bodies, one of the largest male sexual organs in all nature. Since barnacles are also hermaphroditic, well. . . .

While Denny speaks of the little critters with some informality, they are complex and fascinating creatures, with several mysteries still unsolved. Denny studies the mechanical design of organisms, how they are built to withstand the sometimes violent environment in which they live.

"Once you know something about how the animals are designed in a mechanical sense, you can start looking at their ecology in a different light," he says.

Barnacles, for instance, must go about their business in the strong ocean surf. The forces they must endure are the equivalent of a man trying to stand up in 300-400 mile an hour winds. They apparently are capable of doing this because the glue is so strong.

Barnacles are crustaceans, subclass Cirripedia. Two of the most common barnacles on the California coast are the so-called gooseneck barnacles (Lepas anatifera), and the acorn barnacle (Chthamalus dalli). The gooseneck has a stalk that holds the working parts of the animal away from the rock.

There are about 1,445 barnacle species, many of them first described by Charles Darwin, who found so many he referred to an "Age of Barnacles." Most of the sediment of the Florida shelf is made up of barnacle shells.

Not all barnacles attach themselves to rocks. Some pick fish or whales to hang on. They are very particular. A barnacle species that selects the grey whale would not be caught dead on a humpback, and the humpback's barnacles would lament the neighborhood if they accidentally found themselves attached to a grey.

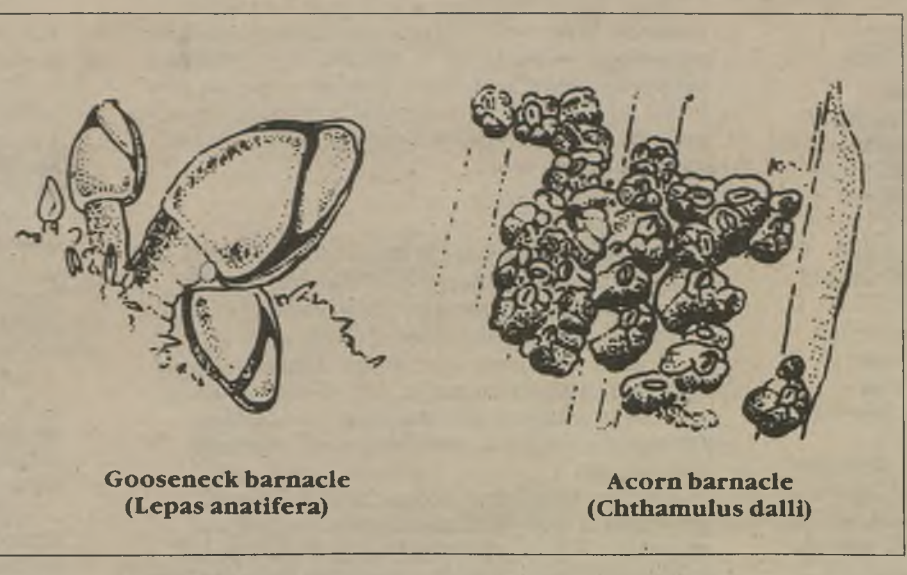
Some barnacles like the bottoms of boats, to the chagrin of boat owners who find the drag doubled when enough barnacles call their boats home. The barnacles must be scraped off to get the ship running properly. Poisonous copper-based paint serves as some protection from barnacle blight.

Two metamorphoses

Barnacles go through two metamorphoses, and employ two different kinds of cement.

Their life cycle is complex and replete with unknowns to marine biologists, Denny says.

Barnacle babies are born in large batches, Denny says. "They kick out thousands per adult. They're just released in the water." The babies are about a millimeter long.



Gooseneck barnacle (Lepas anatifera)

Acorn barnacle (Chthamulus dalli)

Being a barnacle is not an easy life. Once it decides where to live, it can never move again.

—Mark Denny, Hopkins Marine Station

Where they go and how far they swim is totally unknown. It is possible they stay in the neighborhood and attach themselves to the same rock as their parent; it is also possible they are carried thousands of miles.

"If you take those 10,000 younguns and try to follow them in this kind of water, there just isn't any hope. People have tried putting dye traces out. The larvae are active things; they can decide where in the water column they want to be.

"You can tell when barnacles are releasing their larvae into the water, and you can tell when larvae settle on the rocks, but the two may come from two entirely different populations. The ones that settle on the rocks may start out in Japan for all anybody knows," Denny says.

Somehow or other the barnacle larvae find their way to the vicinity of a rock and metamorphose to something that looks a little like a clam.

The barnacle must decide if the rock (or ship or whale) is likely to be a good place to feed and live. It must have strong currents to bring in plankton for food.

The barnacle then attaches itself to the rock using a relatively mild form of glue, one that enables it to move around a bit by shuffling on its antennae. The animal usually selects a rock with other barnacles on it.

When the barnacle decides that it likes the homesite, it settles down permanently and begins to change yet again to the form commonly seen as a barnacle.

Two weeks later it starts producing the adult cement. This cement becomes almost solid. The barnacle will never be able to move from its position again. If it has chosen well, there is plenty of food passing by, life is long. If it has chosen poorly, it starves to death.

"Once they're glued down with the adult stuff, that's it."

The barnacle grows a shell to protect itself from other creatures. The shell opens at the bottom and two feet-like organs, called cirri, can be stuck through the bottom to wave in the water. The fan-shaped cirri catch the plankton and shovel it into the barnacle's mouth appendages.

Barnacles that attach themselves to boats just ride along with their heads cemented to the hull, their feet waving in the passing water, trolling as it were.

"It takes more energy to sit there and beat your feet all the time than it does to just stick them out and wait for something to come to you," Denny says. "There's a trade-off between finding an area where you aren't at any risk of being knocked off, and finding an area where the cost of feeding yourself isn't particularly high."

The cement has never been synthesized, Denny says. Scientists know a good bit about the ultimate composition but suspect that barnacle cement, like epoxy glue, comes in two compounds which form the glue only when they are mixed. Scientists have been unable to find out what those substances are, so they cannot reproduce the cement.

Dentists and surgeons are intrigued by it because the glue is made of protein and is not likely to be carcinogenic. It also works well on wet surfaces.

Televised attachment

One mystery Denny is working to solve is the brief period when the barnacle settles on a rock. This usually takes place in a violent surf. No one has actually seen this process in the ocean.

"They're in the water; it's torquing around. . . and they manage to get next to the rock, at some point when the water's still, and glue themselves down. How they manage to do that is mind-boggling. I just don't understand it."

Denny would like to rig a television camera to concentrate on a small area of a likely rock and photograph this process.

Duplicating the process in a laboratory would not work because no one can easily simulate the crashing waves.

"The problem is the water velocities. The accelerations out there are just whopping. The water, even on calm days. . . is coming in at 15 or 20 miles an hour. . . it's got turbulence in it, and it's really hard to come near to duplicating it in the lab."

Barnacle shells are strong if a bit brittle. They are composed of calcium carbonate like most crustacean shells.

Some barnacles, particularly the gooseneck, are good to eat, something Denny is not sure he wants to get around. The gooseneck has a muscle that runs up the shaft that tastes like lobster.

The Japanese have discovered this potential food source, and the going price for some barnacle muscles is $20-30 a pound delivered in Japan.

Fortunately, Denny says, you get so little meat from each barnacle it takes a lot of work to produce a barnacle cocktail.

His work is funded by the Office of Naval Research.—Joel Shurkin

Viennese Ball Saturday to climax Austria Week at Stanford

Austria will invade Stanford this week in full, festive Viennese style. The events began Monday, Feb. 7 and conclude with the gala event—the sixth annual Viennese Ball, Saturday, Feb. 12.

According to AnneMarie DeGeorge, head of the committee organizing Austria Week here, the entire week's events are planned "so people can learn about the culture of Austria." But probably nothing is more traditional or popular than the splendid Viennese Ball.

Tickets for the event sold out Jan. 31 after being on sale for only one and one half hours. This year 434 tickets were sold at $13 per ticket for the Roble Gym dance.

The Viennese Ball is no ordinary dance, however. Promptly at 8 p.m., the dance will open in true Austrian style, with guests of honor and members of the ball committee participating in a ceremony of pageantry. Special guests include the Austrian Consul and Hedwig Thimig, assistant director of the Stanford-in-Vienna program.

The ball will open with the entrance of the special guests, followed by the 22 waltzing couples. The women will be dressed in long white dresses and elbow-length gloves and the men will be wearing tuxedos. They will be dancing to the "Blue Danube Waltz."

Other events for the week include:

* Guest of honor Hedwig Thimig, who is a drama professor, speaking on theater in Vienna, 7:30 p.m., Monday, Feb. 7, History Corner, Room 2.

* "Heurigenabend," an evening of tasting wine, cheese and cold cuts in the Austrian "heurige" fashion. The German theme house on campus, Haus Mitteleuropa, 620 Mayfield, will host the event 8:30 to 11 p.m., Tuesday, Feb. 8.

* An orientation meeting for those students interested in Stanford-in-Vienna. The talk will be hosted by Thimig, 8:30 p.m., Wednesday, Feb. 9, at Haus Mitt. The meeting will be followed by a slide show and film on Austria open to anyone interested.

* A Kaffee Haus at Bechtel International Center, Thursday, Feb. 10. Coffees, pastries and cakes will be served.

* GastHaus Mitt, a complete German dinner served in Austrian style Friday night, Feb. 11, at Haus Mitt. Reservations are required.

Official Soviet announcements give clear view of events. . .

BY MILLICENT DILLON

The Russians themselves in their official announcements give the clearest indication of what is happening in their internal power struggles, says visiting Prof. Boris Gasparov, a Soviet emigre now teaching in the Department of Slavic Languages and Literatures at Stanford.

"In political statements it is very often much more important how something is said than what is said.

"What does it mean, for example, when *Pravda* chooses a particular syntactical structure in an official announcement? If one can answer this question, much is revealed. Here semiotics (the study of language as code) can be of great help."

According to Gasparov, in ideological articles the method of expression is very clearly defined, and the rules of the code are used quite unconsciously by the writers. If one analyzes the text, the hidden message becomes clear.

"You can rather easily obtain the basic rules that govern that official language by seeing what language is chosen, what the syntactical patterns are. It's amazing how strict these rules are, and once found out, how they reveal the meaning behind the text.

"Often I can obtain much more information reading *Pravda* than by reading American newspapers. On first glance the American newspapers seem to reveal more; they are loaded with facts, they are part of a free press. And *Pravda* is highly ideological and has almost no factual material at all.

"But in *Pravda* things are often amazingly clear.

"After the death of Brezhnev, for example, I read American newspapers and watched TV and saw there was much guessing about what was going on.

"Then I saw a Russian newspaper with an official announcement about a Central Committee meeting—just a few lines.

"From these seemingly meaningless lines, just from seeing the syntactical pattern of the sentence in which Andropov's name was mentioned, it was possible to understand what was going on: how much power he had.

"As to the announcement of Kirilenko's resignation and the question as to whether he really was sick or was ousted, that too was immediately clear. He had been ousted and in a rather rude way."

One of the most eminent linguists and semioticists in the Soviet Union, Gasparov emigrated to the U.S. in 1981. During his career the relationship between linguistics and ideology was never an impersonal one for him, but one that always had a deep bearing on his life as a scholar.

From his earliest days as a linguist he tried to evade the effects of official Soviet ideology upon his own scholarly work. Yet so complex is the interplay between external and internal forces in the life of a Soviet scholar, Gasparov himself is not sure when personal and when political factors determined his intellectual choices.

Gasparov was born in Rostov-on-the-Don in the Armenian settlement of Nakhichevan. His family, of Armenian origin, had fled from the Turks in the early 19th century to Russia.

"I am a sixth-generation ethnic Armenian living in Russia, without language. My original language and the language of my education was Russian. Perhaps that explains something about my later proceedings."

His own family had been educated for many generations, with Russian being the language of education. His grandmother and grandfather had graduated from a Russian university. His great aunt had been the only woman to graduate from Moscow University in her year.

"In my family's view the local Armenian vernacular spoken in Nakhichevan was a language of the lower class, the language of the streets. Nevertheless the style of our household life was very much traditional Armenian.

"So I had a paradoxical double personality, Russian in culture and language but absolutely non-Russian in my everyday habits and attitudes."

Gasparov entered the Russian primary system in the late 'forties and soon became an intellectual star.

The Russian educational system, he notes, remains a very conservative and traditional one, based on the old-style German system. "The aims and substance have changed with the years, but the pure form has remained conservative."

All classes are assigned, there is no possibility of a free choice for any student. From the fourth year on each student is subjected to a series of very stringent final examinations.

"It is vital to obtain a high grade on these exams," says Gasparov, "in order to be able to go on."

All examinations are based on a ritualized form of expression, standard devices which allow for no room to express individual thought. All final examinations are checked by a higher authority in the education district office, the equivalent of our county board of education.

In the primary years the strongest emphasis is put on math and science. "Perhaps 10 percent of the children are able to understand the very difficult theoretical level at which these subjects are presented. But those 10 percent do get a superb education."

Gasparov won many mathematics competitions and so it was expected of him that he would go on to mathematics at the university.

"It somehow happened differently. I was very young, 16, when I graduated from the high school. It was 1956, a very exciting year. It was the year of the 20th Party Congress at which Stalin was denounced for the first time.

"Everybody was excited. Attention to history was very great. We had just studied Soviet history in one way and now there were these changes after the Party Congress. Maybe this atmosphere, this excitement caused me to suddenly choose humanities."

In the mid-1950s, the humanities were regarded as unimportant. "Basically the understanding that people had was that those who went into the humanities were those who could not manage science or math.

"The additional stigma the humanities had, of course, was that many of the disciplines, like literature and history, were highly ideologized. The imperatives and taboos were very strong.

"There were relatively small fields, however, in which you were somewhat freer. Linguistics, because it was so abstract, was one of these."

Gasparov entered the Russian Department at the University of Rostov-on-the-Don. There he found a very strong emphasis on theory. "In our exams on literature we almost didn't deal with texts. It was taken for granted that we knew these.

"The main emphasis was on general linguistics theory, the theory of grammar and the theory of poetics."

Gasparov finished his master's thesis on the history of Russian syntax. As Rostov had no doctoral program he went to Moscow, where he enrolled in the Moscow Pedagogical Institute, a small state university.

At MPI, according to Gasparov, there was an underground linguistic circle, underground in the sense that the scholars worked quietly on a continuation of Russian formalism and structuralism, a movement of the 'twenties, founded by Nikolai Trubetskoy, Roman Jakobson and Victor Schklovsky, which had been banned in the early Thirties by the Stalinist government.

"No," says Gasparov, "the formalists were in no way political. But the state was constantly producing ideological enemies and cracking down on them. The same thing happened with the geneticists in the 'forties."

As the result of both external and internal pressures, Gasparov found himself very dissatisfied with his scholarly studies.

"At that time I felt I could not be satisfied with

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Stanford investment return averaged 8.2% during past decade...

During the past decade, Stanford's total investment return was 8.2 percent per year, compounded, Vice-President William F. Massy declares in the University's annual financial report for 1982.

This includes interest, dividends, rents and capital appreciation. It compares with an annual growth rate of 4.8 percent in the Standard and Poors' index of common stocks.

"Stanford is in the top decile (10 percent) of endowment funds in terms of total return for the decade as a whole, and the top quartile (25 percent) of endowment and pension funds taken together," Massy says. "We are optimistic about the state of the investment climate."

The estimated market value of Stanford's endowment totalled $770 million at the end of the fiscal year Aug. 31, 1982. The recorded value rose to $692 million from $665 million a year previously.

"Currently, Stanford's target investment mix is 80 percent equities and 20 percent debt," Massy adds.

The equity includes 47.5 percent domestic stocks; 9.0 percent international; 6.5 percent venture capital; 5.0 percent small companies; and 12 percent real estate. The debt includes 15 percent bonds and 5 percent real estate.

"Our commitments to domestic companies with small capitalization and to international companies are relatively new," Massy says.

"Stanford has been active in venture capital since the early 1970s. Recently that commitment has been reaffirmed and expanded as a result of market opportunities and our success in earlier investment rounds.

"Our equity position in real estate consists mainly of the Stanford Shopping Center and mortgages on faculty homes. Plans exist for expanding Stanford's real estate holdings, with stress on geographic and line of business diversification. The Investment vehicles probably will be land ownership with participating ground leases and mortgages on improvements.

"Stanford was among the first institutions of its kind to develop detailed written investment guidelines, couched in terms of modern portfolio principles. They include general instructions with respect to admissable types of securities, diversification targets, and also, where appropriate, the portfolio's risk factor."

Professors in the Graduate School of Business helped develop and monitor these guidelines.

In the past decade, total current funds operating expenditures grew by about 11 percent annually, about 2 percent faster than inflation, as measured by the consumer price index.

Tuition grew at about the same rate, about 1.5 percent faster than the CPI. This was about the same as other private universities.

Financial aid trailed tuition growth by about 2 percent, reflecting the growth of state and federally funded programs. Recent changes in federal and state policies "have reinstated the burden on colleges and universities to assure that access remains open to all, regardless of economic background," Massy observes.

"The growth of research expenditures—some 5 points greater than the rate of inflation during the past decade—was another favorable financial force that may well be coming to an end.

"The past 10 years saw very strong growth of sponsored research, especially in the biomedical, physical science and engineering areas which are among Stanford's greatest strengths. . . . The University ranks among the top five institutions in the receipt of federal research funds.

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...provided you're skilled in linguistics, as is Boris Gasparov

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my education in this form, in any form which the Soviet Union could offer to me. I felt the need to change perspective, to obtain a view from a different angle, to enter an entirely different field."

In 1963 while still working on his dissertation in linguistics, Gasparov entered the Music Conservatory in Moscow. For two years he worked on both programs simultaneously.

Attempting to combine his linguistic studies with musicology, he produced a theory of music as a language. "I analyzed musical texts and produced a set of grammatical rules for the language of harmony."

Gasparov completed his Ph.D. in linguistics in '65 and his M.A. in music soon after.

In '66 he was appointed to a post at the University of Tartu in Estonia. "I call this my first emigration," he says. "It was the best place for me to be.

"Comparatively, the Estonians were less influenced by the Soviet government. They spoke their own language. All teaching at the university was done in Estonian, though in the Russian Department we did teach in Russian.

"It was a place very well entrenched against official ideology."

Gasparov experienced this intellectual movement as "a kind of spiritual emigration from traditional scholarly fields. We were entrenched not only against official ideology, not only against everyday Soviet realities there in Tartu, but also against the traditional institutions and values of academia.

"We all felt at ease with each other. We were people of different backgrounds, mathematicians, linguists, scientists, and philosophers, all unified by this semiotic approach."

At just about this time a shift began to take place in Soviet society, according to Gasparov. Among the changes was a major breakthrough for the humanities. "They became suddenly prestigious."

As part of this shift, the study of semiotics was greatly expanded nationwide. "To many scholars semiotics offered a model for studying any science, any cultural phenomenon, which could be broken down into a code, in the broad sense of the word.

"Every literary text, for example, could be regarded as the application of a system of rules, upon which was superimposed the author's individual variation. In this way one could also study the semiotics of dance or of iconology or of fashion.

"The applications of semiotics in all areas of life was soon a very popular and prestigious study."

Was this kind of study, with an emphasis upon form and rules rather than content, a way of evading the pressures of ideology?

"Yes," says Gasparov. "It was a very effective way of constructing an institution in the humanities which enabled people to proceed without the influence of ideology."

But the very success of semiotics began to destroy its potentiality as an anti-ideological technique.

"Beginning in the early 1970s, a few of us began to feel uneasy with what was being done by others and also with what we ourselves were doing. The movement had developed so broadly throughout the country that there were frequent huge conferences on semiotics.

"This mass production, we saw, led to some kind of stagnancy and to a new kind of institutionalization which we hated. After all, the whole movement had been very much conscious of its anti-institutional character and now it was being turned into an institution."

By the early 1970s, after the Czechoslovakian invasion, the entire political climate began to harden, says Gasparov. Once again the humanities were deposed from their position of prestige.

"What happened to us in the field of semiotics? What I am fond of thinking was that it was not just the external pressure which drained this movement of its appeal and power. It was our inner hesitancy as well.

"Some of us had come to recognize that we could not go on the same way because the positive potentials of the applications of linguistic techniques to cultural phenomena had been exhausted.

"We finally began to see that it had become a rather restrictive way of understanding the phenomena of culture, emphasizing only one aspect. We had been closing our eyes to many other sides of the problem.

"None of us knew what to do. By us I mean the three or four or five scholars who shared this feeling.

"I myself stopped publishing and did not write a paper for over two years.

"We came to the conclusion that it was necessary to return to more traditional values, to elaborate less formalized but more complicated models.

"There was a very strong desire for a reconciliation with philology and traditional linguistics and philosophy.

"But it also became clear that something further was required. The reconciliation would not only have to be with the traditional values of the field and with the traditional institutions but with the whole Russian way of life.

"Some of us were able to bring about this reconciliation. For others, emigration was the only answer."

Gasparov emigrated to the U.S. in January, 1981, and was given a scholarship at the Russian Institute at Columbia. In June of that year he came to Stanford, where his wife, Irina Paperno, is working on her doctorate in Slavic languages and literatures, and an M.A. in psychology.



Some of us were able to bring about this reconciliation. For others, emigration was the only answer.

—Boris Gasparov

Gasparov's work at Stanford is primarily concerned with literary texts and their analysis. He teaches courses on literary studies and on language and culture.

This summer he will be working at the Hoover Institution, with the support of a fellowship, on a "small" book on the language of Soviet newspapers.

. . . .University ranks in top 10% of endowment fund performance

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"Stanford also is coming to rely heavily on research grants and contracts from private firms. They not only provide needed dollars, but also add a sense of perspective and coverage of certain important scientific fields that are not a high priority with federal agencies. . . .

"Federal support for university research is under very great pressure. . .and it may well decline faster than the private sector can or will pick up the slack. The federal government also is raising questions about the continued payment of the full indirect costs of the research it supports. . . . Hence sponsored research must be regarded as an area of serious financial vulnerability."

Private gift support and endowment income remain two bright spots and were "strong performers" in the past decade, Massy notes.

"Stanford closed this recession year with a gift total of $77 million. This was second in size only to last year's record-breaking performance of $79.5 million and kept us a leader among universities nation-wide.

"Stanford's academic reputation plus the strength of our professional and volunteer fundraising organizations lead us to be optimistic about the gift possibilities for the future, despite continuing worry about the possible effects of recent and potential changes in the tax laws."

A professor in the Graduate School of Business and coauthor of a major book on *Planning Models for Colleges and Universities* (Stanford University Press, 1981), Massy notes that, paradoxically, "the better we (in universities) do our job, the more expensive we become relative to other goods and services in the economy."

Massy explains the apparent paradox as follows:

"On average, over time, real wages in a free economy tend to rise with the growth of productivity. A university like Stanford has 60 percent or more of its operating budget as direct labor.

"Universities must pay wages that are competitive with those in the external economy. If we fail to do so, we lose in the short run faculty and staff members who are in fields with high external demand. In the long run we deter those who might have chosen to train themselves for an academic career.

"Despite the need to pay wages that reflect productivity (improvements), universities are unable to apply the benefits of productivity gain to their own operations at the economy-wide average rate. THe areas available for productivity improvement are limited to administration and some support services.

"To alter the fundamental relation of students to faculty in ways that seem to increase productivity would, we believe, alter the educational experience in undesirable ways.

"The confluence of these facts means that the operating budgets of colleges and universities are under great pressure to grow at more than the rate of inflation.

"The irony of this relationship is worth mentioning. Institutions of higher education contribute to the growth of productivity through education and research—through the enhancement of human capital and the discovery of new knowledge.

"These productivity increases improve real wages, which push up the institutions' budgets. These increases, in turn, must be made up by revenue sources such as tuition and the direct and indirect costs of sponsored research."

Both university planners and public policy makers need to pay greater attention to this "strategic issue," he suggests.

Perl, Hanson start work on first experiment for new linear collider

Physicist Martin L. Perl will continue his search for new subatomic particles as part of a group whose experiment proposal has been accepted as the first for the future Stanford Linear Collider.

"We're going to be looking for two things," says Perl. One is the "Z" particle, a theoretical counterpart to the recently discovered "W" particle.

"We are, more than ever, confident of making it," he continues. "And once you make that, that will then degenerate into a whole world of new particles."

In preparation for the new experiments, Perl and colleague Dr. Gail Hanson will be rebuilding the drift chamber, the most important piece of equipment.

The chamber was previously used in a successful 1975 experiment, in which Perl first detected a subatomic particle called the tau. The discovery recently earned him a one-half share of the prestigious $100,000 Wolf Award, for "outstanding contributions on behalf of mankind."

With the discovery of the tau, Perl says, "We hope to understand the nature of matter, the nature of energy, and the nature of time."

The tau is the newest member of and

We're just at the beginning of the big adventure.

an anomaly in the "lepton" family of particles. The name, which means "light ones" in Greek, was given because leptons have the smallest mass of all atomic particles. The tau is an exception because it is 3,600 times heavier than the lightest particle, the electron.

The other known members of this family are the electron, which was discovered 100 years ago, and the muon, which was detected in the 1930s. They are called simple particles because they are the basic subatomic units, and contain no other particles within their structure. With the addition of the tau to the lepton group, scientists' conceptions about the nature of subatomic particles is changing.

"Now we find out that they can be heavy and simple; before, they thought that the simplest components of the atom were light and simple," says Perl.

Although the complexity of something which has only been seen indirectly by computer-recorded photographs of events lasting one-millionth of one-millionth of one second is not surprising, it is surprising that the 55-year old Perl says he doesn't "do very well thinking about complex things."

Perl's office on the grounds of the Stanford Linear Accelerator (SLAC) is as simple as the half mile, $78 million PEP (Positron-Electron Project) ring where he conducts his experiments is intricate. Without so much as a throw rug to clutter the room, the bare floor and spare furnishings reveal Perl's preference for practical physics.

"I'm a hands-on physicist, so I spend a lot of time with the apparatus and building that apparatus. I'm not theoretically inclined," he says.

The discovery of the tau was not "so much theory as instinct," he continues. "The thing I enjoy best is getting the equipment working and getting it to work well."

Of course theory had a role in the discovery of the tau. In 1974, Perl first began musing about the nature of muons. This led to the idea that there might be other particles.

According to Perl, the process was somewhat serendipitous. "You have to keep flexible and not get too fixed at what you're looking for," he says. "I try to find something that hasn't been measured or looked for, and then I try to find a way to do it."

In 1974 completion of the 80-meter SPEAR electron-positron storage ring gave Perl the way to test his hypothesis. Beams of electrons and positrons were sent spinning around the ring in opposite directions so that they would be forced to collide with one another. Every few seconds, two of the approximately 100 billion particles in each ring would collide, causing a high energy reaction in which the original particles disintegrated.

New particles were created in the place of the old. Sometimes electrons or muons resulted; other times, the new tau particle was detected.

Although he thinks that "a new view will come out as to what these are"—a view that may unlock some of the many perplexities about matter. Perl says he is pleased that he went out on a limb in a new direction, and was right.

"It's the uniqueness and importance in it. We're just at the beginning of the big adventure."

—Amy Bernhard

Rebholz outlines advantages of semester system prior to Feb. 17 debate

Following is a statement in support of the semester system submitted by Prof. Ronald H. Rebholz, English:

The Academic Senate began a discussion on Thursday, Feb. 4, of a report by an ad hoc committee on the academic calendar. The discussion will presumably be resumed and completed on Feb. 17, when the Senate decides to accept the **ad hoc** committee's recommendation that we retain the quarter system or reject the recommendation and switch to the semester system or some other academic calendar.

This question has come before the Senate twice in the last 10 years, and each time the vote was in favor of staying with the quarter system. I think the time has come, especially in a period when the University community is concerned with improving the study of the humanities, for the Senate to adopt the semester system.

My arguments in favor of this change, the result of my own experience as a teacher in the humanities for 22 years at Stanford and of many conversations with colleagues in the humanities and social sciences, rest on three assumptions:

1) The change, if made, would be to the kind of "Early Semester" system in which the first semester begins in late August or early September and ends shortly before Christmas, and the second semester begins in mid-January and ends in May. In the current academic year, and in any typical year, that system would yield about the same number of weeks (roughly 30) involved in the present quarter system. According to the **ad hoc** committee, this system, used by about 26 percent of colleges and universities in 1970, was used by 55 percent in 1970.

2) Students, currently required to take 15 units each quarter, average about 3.5 courses per quarter for a total of about 42 courses during their undergraduate career. The number of courses taken by graduate students would vary more significantly according to departments and disciplines. In the semester system, in which undergraduates averaged about four courses per semester, they would take about 32 courses in their career. Again, graduate students' programs would vary more.

3) Members of the faculty who prefer the semester system would not increase substantially the amount of material they treat in any course, but they would continue to meet the class for the same number of hours each week as in the quarter system. For example, in my current quarter-course on Shakespeare's plays, we study eight plays; in a semester course I would not increase the number by more than one or, at the most, two.

I see several advantages in a change to the semester system answering to these assumptions:

1) Reduction of the number of courses without substantial increase in the material covered or substantial decrease in the number of classroom hours should entail greater time and energy, both in and out of the classroom, devoted to the study of what would, over four years, amount to less material. This change would create the opportunity to treat the material in much greater depth than at present and with a much richer attention to the method or methods employed by students of the subject. Consequently, students would learn better how to continue being students of the subject, should they choose, for the rest of their lives.

2) Students could write essays or papers or more essays and papers than they currently write in those disciplines in which writing is essential to learning. Colleagues in some of the social sciences have complained to me that they cannot assign essays or papers at all because of the restraints on time imposed by the quarter system. Colleagues in the humanities have complained to me that, for the same reason, they can only assign a few short essays or one longer paper. Those who complain about our students' inability to write should realize that writing in the quarter system is an educational luxury not easily afforded.

The graduate students in the humanities with whom I have spoken on this issue loathe the quarter system precisely because it does not allow them time to write substantially on a subject, or it leads them toward nervous breakdowns because they are writing substantially on three subjects for three courses each quarter, or it yields a pile of incompletes. I predict that the number of incompletes, taken by both graduate students and undergraduates, would diminish radically in the semester system.

3) The semester system would make possible a genuine "dead week" or reading period and the consequent opportunity to reflect on the material, absorb it, and relate it to the material and methods encountered in one's academic and intellectual life on other occasions.

"Dead week" in the quarter system is a sham as a period of study. Indeed, in the spring quarter, exams begin in "dead week." Students hustle through their notes or the lines in books colored with their magic markers in their mad dash to the vomitorium called "final examinations."

4) Reduction of final examinations from three to two would make those examinations true opportunities to learn. This advantage is intimately linked with a real "dead week." Examinations in the quarter system have to be short because grades must be submitted to the Registrar's Office within 92 hours of the exam. For the same reason teachers cannot comment very fully on them. As a result, most students do not take them seriously enough to pick them up. It is also my impression that the absence of dead week and the frequency of exams in the quarter system produce in students a tendency to think of a course of study as something "finished" and "done with," to be forgotten in preparation for the next quarter's hustle, not to be part of their ongoing lives as students and human beings.

5) As Lee Zeigler, the director of Bechtel International Center, pointed out in a memo to the **ad hoc** committee, the Center "has responsibility for the administration of many external fellowship programs such as Fulbright, Marshall, Rhodes, German Academic Exchange, Churchill, etc. Deadlines for these programs are early to mid-October. It is frantically difficult to handle applications when students do not return to school until the end of September in order to meet the deadlines which are inflexible."

The committee chose to ignore this argument, but Mr. Zeigler's point helps me understand Stanford's poor showing in the one scholarship program of which I have direct experience—the Rhodes. Having read 94 applications to the California Rhodes Committee this autumn, I found the applications from Stanford students uniformly inferior to those from Yale, on the "Early Semester" system, or Harvard, on the system in which the first semester ends in January. Our applications suffered by comparison in conception, sense of purpose, prose, and the quality of letters of recommendation. Sadly ironic are those front-page boasts in Stanford publications about the one or two winners of the scholarship (sometimes there are none to boast about) when one thinks about the regularity with which Yale and Harvard have five or six winners. I am sure that the less frantic semester system accounts in part for their success.

6) A dissent to the **ad hoc** committee's report was registered by Prof. Elizabeth Cohen of the School of Education. From the findings of a CROW study of Chicanas in higher education, she concludes that the pace of the quarter system does not serve the learning of minority students: they go to class without doing the assigned reading and turn in papers late much more often than students on the semester system. Prof. Cohen wisely asks: "How many other students besides the ones in this study are unable to keep up with the peculiar pressures of the quarter system?" My guess is **many**, including some of the most talented graduate students in this country.

7) If we move to the semester system, the faculty will have to rethink their courses and, in the case of lecture courses, their lectures (not a bad exercise in itself).

When I examine the **ad hoc** committee's list of the quarter system's "advantages," only one strikes me as substantive: "students can achieve better breadth by exposure to more subjects and faculty members over a year." I realize that in some disciplines, especially engineering, breadth is more important than depth. But I cannot believe those disciplines outnumber those in which depth is more important than breadth, and I know there are universities on the semester system, like MIT, with excellent programs in engineering. If the change to semesters is made, the engineers might accommodate by the creation of several half-semester courses taught with great intensity.

The alternative which the engineers always suggest to the humanists and which the **ad hoc** committee echoes in its only positive recommendation—that we teach continuing courses which, for all practical purposes, span two quarters—overlooks the students' perceptions that two quarters are too much time to devote to a course.

My impression of the discussion in the Senate on Thursday was one of bored reenactment of a ritual: Stanford has been on the quarter system for 75 years, we yawn through a reconsideration of the educational values which it enshrines every now and then, there isn't really enough at stake to warrant the effort required for a change, so "we're all right, Jack, thank you."

We are not all right. I hope my colleagues will inform their Senators of that fact before Feb. 17.

Karinen: from bank officer to Stanford freshman music major at age 28

Starting college at age 28 isn't easy, but that's what Stanford senior Cheryl Karinen did after 10 very successful years in banking.

Karinen is a music major (voice) who left the Black Hills of South Dakota immediately after high school graduation to seek her fortune in California. She headed for Sacramento "because it was the capitol" with $300 and one suitcase. There she found a part-time job as a teller with Bank of America.

"Originally I had planned to come for the summer. I had a scholarship to go to college in South Dakota in the fall. But when fall rolled around, I knew I didn't want to go home.

"My parents didn't like it. They thought of California as full of violence and crime, not a good place for their daughter to live. Neither of them went to college, and they were very disappointed at my decision to postpone my education."

After a year and a half in Sacramento, Karinen decided San Francisco was the place to be. She landed a job with United California Bank as an installment credit clerk. Eight years later she left UCB as a corporate banking officer to enroll as a freshman at Stanford.

"When I decided to go to college, friends at the bank said 'How can you do it? You're throwing your career away!' At that point I was operations officer for the San Francisco Metropolitan Division, selling cash management services to large corporations headquartered in the state—among them Stanford University. But I realized I was at a point where my lack of a college degree would eventually prevent me from continuing up the corporate ladder.

"It's hard to take a four-year chunk out of your life and go to school, but it seemed that if I didn't, I'd be in the same spot four years later. The bank was supportive of my decision. I looked at my long-term career plans with the bank, and it wasn't what I really wanted to do. I was looking for a change. The challenge, creativity, feeling that you're helping people—it just wasn't there."

Karinen applied to Stanford and UC-Berkeley, and was accepted by both.

"When I initially contacted Stanford, a counselor advised me to go to UC or another college for a couple of years, then apply for transfer to Stanford. She didn't know how much a 10-year-old high school diploma from a tiny town in South Dakota was worth. So I went back to South Dakota and collected transcripts and recommendations from my high school teachers. Most of them were still there and they remembered me—Belle Fourche is a very small town.

"I also got recommendations from a couple of my bosses at the bank. I wanted to let Stanford know that even though I'd been out of school for 10 years, I *had* been learning something."

Returning to California, Karinen was faced with taking tests high school juniors and seniors normally tackle for college admission.

"Can you imagine?" she exclaims. "I couldn't remember a thing! When you don't touch subjects like math and science for 10 years they go right out the window. But I studied and scored well.

"I picked Stanford over Berkeley partly because I knew I'd have to move down here and I wanted a complete break from my career. If I'd gone to Berkeley I would have stayed in San Francisco and probably worked part-time for the bank. It would have meant a double existence. Also, Stanford does not offer an undergraduate business degree, so I knew I'd be forced to explore new areas."

As a freshman Karinen lived in Mirrielies, rooming with a grad student. Since then she's roomed with sophomores and juniors. "It hasn't been a problem. In fact, it's made me feel younger and more carefree," she says.

"Initially I felt I couldn't compete academically. Stanford students are so bright and directed. I had to study harder than other freshmen because they were fresh from high school. I was out of the habit of studying. They had been writing in school for years; I had written only letters for 10 years. The first few times I took tests I panicked to the point of becoming physically ill. Several years behind the times, I went to my first chemistry test without a calculator. I was the only one figuring everything longhand!

"At first I tried to keep up my social life—going up to San Francisco on weekends, skiing—but all of that collapsed, little by little. School became my overwhelming priority.

"My first contact with music at Stanford was singing in the Church choir sophomore year. I had sung a lot in high school, but not a note the 10 years I worked for the bank. Greg Wait (choir conductor and voice teacher) suggested I study privately, and I got hooked.

"I started taking the foundation courses for a music major. They were difficult because I had no formal training in music. I never thought I'd be able to complete the major, but I just took it in chunks. After a year I was so entrenched that it was the only thing I could do!

"Music was something to do for myself. Some day I'd love to sing semiprofessionally and support myself, at least partially, as a musician. Greg has been very supportive; he brought me out of the closet."

As an older student, Karinen says:

"I'm at Stanford to learn, not just to get grades. It's stupid for me to pay money to take a class I'm not going to get anything out of, so I've tried to do all the reading and everything the instructor suggests to really benefit from each course.

"Some students at Stanford just want to get good grades as a stepping stone to graduate or professional school. But for me, it's been learning for learning's sake. That's why I chose music—because I love it. I don't know if I'll ever be able to make a living at it, but the knowledge is very valuable.

"If I'd gone to college right after high school, I don't think I would have enjoyed music as much. I would have been thinking: "I've got to get a good job and music doesn't pay."

Karinen has received financial aid from Stanford and a generous grant from the state. She's worked two summers and breaks for UCB and one summer for Stanford Savings & Loan. "I'm not in nearly as much debt as I thought I would be. I tried to work part-time during school, but it detracted too much from my studies."

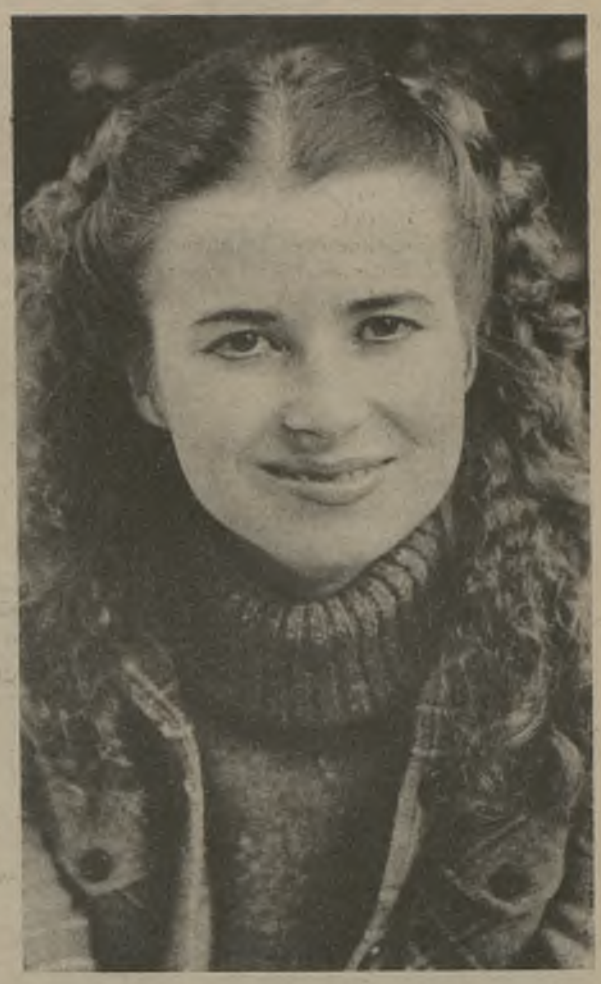
Karinen will spend her final quarter at Stanford-in-Florence studying Italian and voice. "I want to check out the Italian opera scene and travel a bit in Europe. Then I'll probably return to work in business for a year. I need to pay off debts and devise a new game plan. . .decide where to go from here. I don't know if I want to go to grad school, but I know I want to go on singing and studying music.

"Even a year ago I thought I would do music just for fun, then return to the business world. But now I've incorporated music into my life and I don't want to give it up. I've got to find a way to keep music in my life.

I've enjoyed majoring in music at Stanford because the department is so small, and I like the people. You get a lot of personal attention here. Most of my music classes have had less than a dozen students, and one had only three! You try to do well in class because you don't want to embarrass yourself and you *know* the professor will know your name!

"By contrast, my Human Bio core classes had hundreds of students and there wasn't a chance of getting to know the professor."

Karinen studied voice for five quarters with Greg Wait. "He's a wonderful teacher. . .he has so much compassion. He pushed me to get involved in music and sing; otherwise, being basically chicken, I probably wouldn't have been brave enough."



Even a year ago, I thought I would do music just for fun, then return to the business world. . . . But now I've got to find a way to keep music in my life.

—Cheryl Karinen

This year Karinen is studying with newly appointed voice teacher Lila Stuart. "Lila is a positive addition to the department—she has lots of energy, a dynamic personality, and while performing she's a rock of composure."

Under Stuart's coaching, soprano Karinen will give a recital with baritone Charles Fidlar at 8:30 p.m. Thursday, Feb. 17, in Tresidder Lounge. Fidlar is a graduate student in choral conducting. They will perform Purcell duets, arias from Mozart's *Don Giovanni*, Schumann lieder, and songs by Fuare.

Karinen will also perform with Lila Stuart's voice students Friday, Feb. 11, and with the Stanford Chorale Tuesday, Feb. 15. On March 5 she makes her opera debut in the lead role of *The Necklace*—a one-act opera by Music Department Prof. Leonard Ratner.

Reflecting on her move to Stanford, Karinen says: "If nothing else, I've learned that change is possible. It is hard. Sometimes I say to myself: 'Why are you putting yourself through this? What is it worth?' But I hope I never feel that change is too difficult because it's so rewarding. . .you grow so much.

"But the growing pains. . . .!

"I actually feel younger now than I did four years ago. I think I've even gone though a personality change. I would suggest that more people work and then go to school."

—Julia Sommer

Compound aids in killing cancer cells

A drug developed by scientists at Stanford and SRI International which boosts the potency of radiation in shrinking cancerous tumors gained approval from the Food and Drug Administration last week for testing in cancer patients.

Called a "radiosensitizer" because it enhances the ability of radiation to kill tumor cells, the compound was first made and tested in 1978 by Dr. Martin Brown, associate professor of radiology, and Dr. William Lee of SRI International in Menlo Park, California.

Subsequent extensive testing proved the drug to be "highly effective" in eliminating certain tumors in laboratory animals without the usual toxic side effects of similar drugs, Brown said.

The FDA has now commissioned five U.S. medical centers to test the compound, named SR-2508, in human patients.

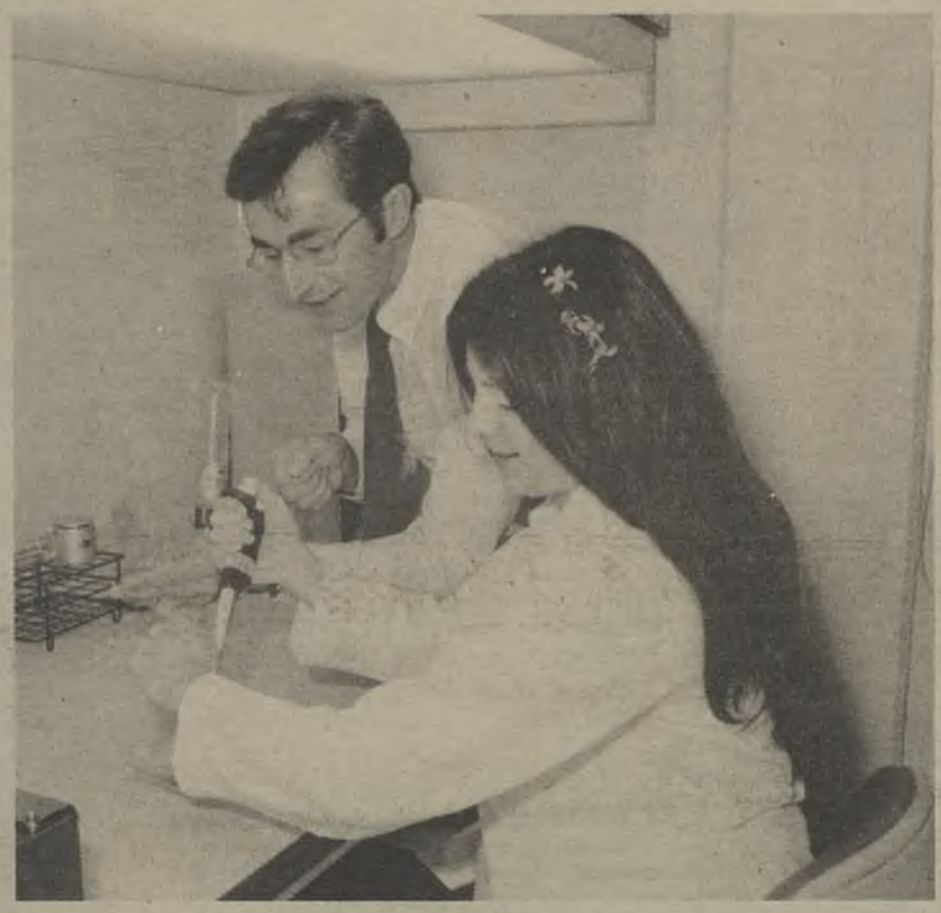
The drug works by mimicking oxygen, which plays a key role in radiation therapy, Brown said. In traditional therapy, beams of X-rays knife through cancerous tissue, tearing holes in DNA, the genetic material that enables the cell to live and reproduce. By locking onto the broken DNA, the oxygen, which is abundant in most cells, ensures that the damage will be permanent, and the tumor cells die.

But scientists realized 25 years ago that a kernel of cells that don't contain oxygen lurk within many, if not all, tumors, and these cells remain resistant to radiation.

"When you're dealing with cancer, killing 99 percent of the tumor isn't enough," Brown said. "You have to get it all."

To overcome the problem, some physicians have placed patients undergoing radiation therapy in chambers with pure oxygen at three times the normal atmospheric pressure, in hopes of coaxing more oxygen into the troublesome cells.

Another method involves using a different kind of radiation (for example, neutron or pi-meson radiation) that doesn't rely on oxygen to kill cancerous cells. Both methods improve the tumor eradication rate, Brown said, but are too expensive and, in some cases, dangerous.



Brown and Yvonne Taylor, postdoctoral fellow in the Cancer Biology Program, combine radiosensitizer with tumor cells. Shown to aid radiation therapy in shrinking animal tumors, the radiosensitizer has now been approved for testing in humans.

In 1974, British scientists developed a compound that seemed a potential solution. The drug, named Misonidazole, mimics the effects of oxygen in the tumor cells, sensitizing them to radiation without affecting normal tissue. But animal and human studies show that doses of the drug high enough to be effective poison brain and nerve cells. Painful tingling in the hands and feet, hearing loss and disorientation have been prohibitive side effects of the drug.

Brown and Lee found that they could reduce the toxic side effects by modifying Misonidazole so that it was almost completely insoluble in fat. The new compound is thus unable to cross the blood-brain barrier, the fatty tube that encases and protects the brain and nervous system.

Studies in animals and human tissue cultures showed that the new drug is just as effective as Misonidazole in enhancing the death of tumor cells, but is five to ten times less toxic to nervous tissue.

"This drug is effective as a radiosensitizer in animals, there's no question about that," said Dr. Norman Coleman, the assistant professor of radiology who will lead the clinical study at Stanford. "But it's not easy to tell how predictive that will be in human patients."

Approximately 150 volunteer patients across the country will be studied in the first phase of clinical testing, Coleman said. The centers collaborating to study the drug are five members of the Radiation Therapy Oncology Group: Stanford; Washington University, St. Louis, Mo.; University of California, San Francisco; the National Cancer Institute, Bethesda, Md.; and the Cross Cancer Institute, Edmonton, Alberta.

—Deborah Franklin

SUH offered contract for Medi-Cal

Stanford University Hospital officials were notified Friday, Feb. 4, that the Hospital will be offered a contract to continue to provide care for Medi-Cal patients.

Stanford is among six hospitals on the Peninsula notified by telephone by the office of special negotiator William Guy that a contract will be sent for hospital review and signature. When signed by Hospital officials, the contract will be effective March 1.

The specific conditions of Medi-Cal contracts are not made public.

In a joint statement issued Friday, Dr. Lawrence Crowley, president of the Hospital; Sheldon King, executive vice president and director; and Dr. Donald Kennedy, chairman of the Board of Hospital Directors, said, "We are pleased that care can continue for Medi-Cal patients. We have long served patients who require the highly specialized services and treatment available at Stanford."

Hospital administrators had submitted a formal proposal for a Medi-Cal contract to the state negotiator last November. Under a law passed last year, the negotiator determines from the cost bids submitted which hospitals will be reimbursed for care of Medi-Cal patients.

Major services utilized by Medi-Cal patients at Stanford include high-risk obstetrical services, neonatal and pediatric intensive care, cardiovascular surgery and oncology/hematology and radiotherapy. In addition, SUH operates an emergency transport center for obstetrical patients, infants, and cardiac patients at risk.

About 15 percent of the Hospital's total admissions are Medi-Cal patients. A high percentage are acutely ill referred from beyond the Peninsula area.

(Editor's note: Other Peninsula hospitals awarded contracts, according to the state negotiators office, are: Sequoia Hospital, Community Hospital of Los Gatos, O'Connor Hospital of San Jose, Santa Clara Valley Medical Center and Alexian Brothers Hospital in San Jose. Children's Hospital at Stanford is exempt from the Medi-Cal negotiations.)

Balding men needed to test drug as possible treatment

A drug that stimulates hair growth will be studied for its safety and efficacy as a treatment for baldness by the department of dermatology at Stanford University Medical Center.

One of several sites in the country for conducting the study, the department announced its involvement to attract volunteers.

"This is not necessarily a cure for baldness. There are still a lot of unknowns," warned Dr. Elaine Orenberg, one of the coordinators of the study.

Specifically, the department is looking for up to 100 men in good health from ages 18-49 with thinning hair or baldness to participate, at no cost, in testing Minoxidil, the active ingredient in Upjohn Company's antihypertensive drug, Loniten.

Stanford's study will last at least one year, beginning Feb. 14. Participants will be required to make monthly visits to the department for check-ups and evaluation. Preliminary physical testing will take place before individuals begin receiving the treatment, Orenberg said.

Investigators began considering the possibility of Minoxidil's effectiveness in treating baldness during clinical testing of Loniten, which was approved by the Food and Drug Administration (FDA) in 1979. One side-effect of the orally-administered drug is hair growth, as reported by about 80 percent of the patients taking the drug for hypertension.

Once they stopped taking the drug, hair growth stopped. Investigators could not determine, however, who would experience hair growth, where they would experience it, or what type of hair would actually grow.

Investigators began to develop a topical ointment containing Minoxidil in 1977, to find out just how effective and how safe it is for use by balding men. With the FDA's approval, it is now being tested by applying it only to the bald areas.

At Stanford, the study will be randomized and double-blind, with one group receiving the Minoxidil ointment and one group receiving a placebo ointment. The placebo will be replaced with the drug after four months.

Following completion of the studies—at Stanford and elsewhere—Upjohn Company will determine if FDA approval of the drug should be sought. Jan Auferdehide, spokeswoman for Upjohn Company, cautions men from hoping for a cure for baldness, however. "The FDA approval process takes 8-10 years on the average," she said.

Interested volunteers should call the Department of Dermatology at 497-7964 between 1 p.m. and 4 p.m., Monday, Tuesday, and Friday.

—Shirley Kraus

Preventive drugs may make cardiac arrest less likely

A scientist who has probed deeply into the molecular structure of human heart muscle believes that drugs could help prevent a sizeable proportion of the 500,000 yearly deaths caused by sudden cardiac arrest.

"In a sense," said Dr. William Clusin, "our research indicates that it is possible via medication available on the market today to make heart attacks 'safe.' At least we would be able to reduce sharply the occurrences of ventricular fibrillation (VF), which usually come without warning and often are nearly instantly fatal."

Clusin, a physician specialist in cardiology, has learned along with colleagues that drugs such as beta blockers and calcium blockers can actually protect the heart from going into VF. This condition is characterized by uncontrolled spasms of the heart muscle and the subsequent failure of the organ to pump blood effectively.

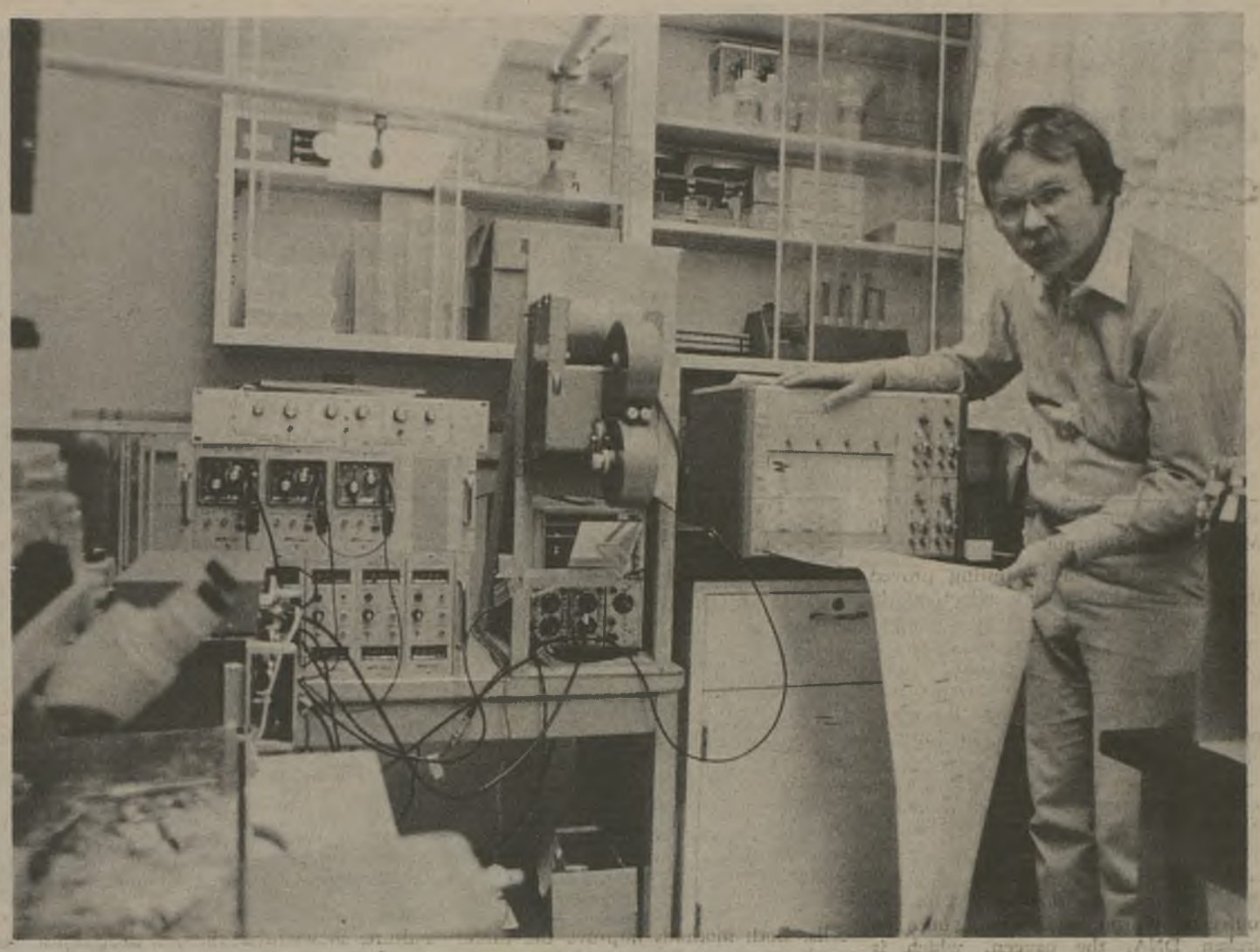
Results of the Stanford scientists' research was published Feb. 5 in *Lancet*, a British medical/scientific journal.

"Beta blockers are administered routinely to relieve chest pains for persons suffering from heart disease. But our research has led us to believe that these drugs—or perhaps similar medication—should be given routinely to persons at risk of having a heart attack whether they have symptoms or not," Clusin said.

Past clinical studies have shown beta blockers—among the most widely prescribed drugs in the United States today—are effective at relieving the chest pain associated with a heart condition.

But what Clusin and his colleagues believe might be their most important potential was not known until very recently.

He said these drugs act to alter the movement of calcium within the cells to prevent the formation of abnormal electric currents which are the cause of VF. These injury currents have been known since the 19th century and can be recorded accurately on heart monitoring equipment.



Clusin studies the electrical impulses recorded in individual cells. He believes that drugs commonly given for heart disease symptoms could prevent fatal heart attacks if administered to high-risk persons before symptoms occur.

Calcium the key

For many years it was known that persons whose blood vessels became blocked by disease were prone to injury currents. But Clusin said it was not realized until recently that the injury currents may be triggered by abnormal accumulation of calcium within the heart muscle cells.

More importantly, the scientist said, research has shown that beta blockers and probably other drugs alter the flow of the calcium, thus decreasing the likelihood that an injury current will be generated.

Clusin and his colleagues observed the movement of calcium and the patterns and effects of injury currents by monitoring beating clusters of electrically coupled chick embryo heart cells in tissue cultures. Then they confirmed their findings using live animal models in the lab and by reviewing available statistics about the effects on human patients of beta blockers.

"We must keep in mind that these drugs do relatively little to change the underlying cause of common cardiac illness—blockages in the arteries which arise because of diet, genetic factors or other causes. But by controlling the calcium movements in the heart, we are lessening substantially the possibility that an injury current will occur, triggering VF."

Prophylactic doses of medication offer a more practical solution for many patients than dealing with blockages surgically.

The risks of surgery pose their own problems, and in any case it may not be practical to identify the precise location of blockage in every patient, Clusin explained.

"In the past, researchers believed incorrectly that the only way to prevent the consequences of coronary artery blockages was either to relieve the blockages or to reduce the amount of oxygen consumed by the heart.

"We now realize that when the calcium content of the heart muscle cells is reduced by a drug, the muscle may tolerate a reduced blood supply without producing the abnormal electric currents that precipitate cardiac arrest.

"Therefore, it might appear prudent to administer such drugs to persons who appear statistically at risk of having a heart attack, even though they have no active symptoms."

Side effects

Beta blockers can have side effects, such as fatigue or shortness of breath.

"However, there is another category of drugs called calcium blockers, which might avoid the side effects for some patients," said Clusin, adding that more research is needed before calcium blockers are administered routinely.

"But I think we do have enough research now to offer the possibility that doctors might prescribe prophylactic doses of beta blockers to their patients who are at risk."

The recent studies of injury currents at Stanford were conducted, besides Clusin, by Dr. Michael Bristow, a physician specialist, and by postdoctoral fellows Maurice Buchbinder, Avery Ellis and Hardwin Mead. Collaborating was Dr. Donald Harrison, professor and chief of the division of cardiology.

—Mike Goodkind

Packard gift. . .

continued from page 1

consolidated children's medical center, and a joint board was named recently to begin planning for construction. Mrs. Packard is also the vice president of the new board.

Kenneth Sayre of Menlo Park, chairman of the original Children's Hospital board and treasurer of the new board, said:

"This most generous gift caps a 15-year commitment that Lucile Packard made as a member of the board. That commitment is to develop superlative care for severely ill and disabled children.

"The Packards' contribution assures a successful beginning for the new Children's Hospital at Stanford."

Stanford and Children's Hospital have been running their pediatric programs from separate locations for years under the direction of the department of pediatrics of Stanford University School of Medicine. About 2,500 patients yearly are shuttled one mile across a busy thoroughfare between the hospitals for specialized treatment at Stanford.

"The separateness results in inconvenience to patients, duplication of services, and higher costs," explained Dr. Lawrence G. Crowley, chairman of the new Children's Hospital joint board and a University vice president for medical affairs.

"The consolidation will alleviate these problems and allow the two institutions to mount a comprehensive approach to the care of children in the community and region."

The new hospital will consolidate the 60 beds of Children's Hospital and the 44 pediatric acute medical-surgical and pediatric intensive care beds of Stanford Hospital. It will also house the Stanford-Children's Ambulatory Care Center, which provides 27 separate clinic services, including such specialties as cardiology, birth defects, oncology and child psychiatry.

The new Children's Hospital will continue to provide inpatient services in the 15 specialties now offered by both hospitals.

The existing Children's Hospital at 520 Willow Road in Palo Alto will continue to operate until the new building is completed.

The consolidation must also undergo the review process of state and local agencies

Head of Jamison's lab has hands full with work—and outdoor fun

Nephrology research assistant Kristina Blouch recalls the curious path that led her to her present occupation in the world of medical research.

"In college I majored in German and minored in biology, and hoped to teach German when I got out. But there was an oversupply of teachers, so instead I got a lab job at Harvard Medical School, where I stayed for six years," Blouch explained.

Then the Michigan native thought it would be interesting to change her surroundings once more and migrate to California. Blouch has worked at Stanford since 1978 under the direction of Dr. Rex Jamison, chairman of the division of nephrology.

And after about a decade in the field of renal physiology, she feels that "research has become an important part of me and I wouldn't want to leave it completely.

"Although lately," the newly licensed pilot confided, "I have been considering the possibility of someday becoming a flight instructor."

Blouch said most of her lab work, and that of her associates, involves collecting samples of fluid from different segments of individual kidney structures of rats, using a surgical technique called micropuncture.

"We then analyze these samples for their concentrations of several key electrolytes and some other compounds of interest. For example, we are now developing a micro-technique for measuring urea," she added.

Blouch said the samples taken from rats are extremely small, "barely visible to the human eye"—a trait which makes some of the researchers' tasks tricky.

But the four people who work in Jamison's laboratory (of which Blouch is director) see their efforts pay off in furthering a basic understanding of kidney function. (All mammalian kidneys are similar to humans', explained Blouch.)

The Center for Materials Research is a resource department on campus to which Blouch regularly takes samples for analysis by an electron microprobe.

The way the microprobe works, Blouch explained, is to shoot beams of electrons at her crystalized samples, exciting their atoms and causing each of their elements to emit X-rays of different wavelengths. "This enables us to see what elements there are and how much of each in a sample," she said.



The freezing point osmometer is an instrument that allows Blouch to read the temperatures at which different kidney fluid samples melt.

This is the part of her work Blouch enjoys most—the actual research. "I get involved with the administrative aspects of running the lab as little as possible," she confessed, "though I do play a role in the budgeting, personnel, and paperwork."

Blouch said she's enjoyed the people she's met in Nephrology over the years, "but my exposure to the people here has been sort of limited to the lab area, not the clinical."

In their weekly group meetings with Jamison, Blouch said, "we review the results of the past week's experiments and discuss their interpretation; organize upcoming projects and distribute the workload—though we all know pretty much what we are to do; we hash out any problems we're having, and sometimes we're treated to a pep talk from Dr. Jamison—concerning our productivity," she smiled.

Blouch, who lives in downtown Palo Alto with a Siamese cat and her flute, said she likes to get away by backpacking in the High Sierras at least once a year for a week, with friends.

"My favorite kind of vacation would be some warm tropical island with a beautiful beach. But I really do love the mountains. There's something great about being up high, away from civilization."

Maybe that's also why she took up flying lessons last summer. "I've always enjoyed flying, and I thought maybe now I could afford it after all," she explained.

Blouch intends to fly for fun, and take herself places—"with any friends who have the nerve to come along." Any hesitations? Apparently not. "I never feel frightened or nervous when I'm up in a plane," she said.

—Lisa Ames

Clinical Scholars Training Program gets funding renewal

A two-year fellowship that permits physicians to expand their skills in fields ranging from law and economics to ethics and education was recently granted more than $1.1 million in a three-year funding renewal by the Robert Wood Johnson Foundation of Princeton, New Jersey.

Stanford and the University of California, San Francisco share both funding and administrative responsibilities for the Clinical Scholars Training Program.

Studies of the ethics and economics of clinical decision making, and computer modeling as an aid to cancer diagnosis are two projects newly funded by the fellowship.

Since its inception in 1974, the program has trained 41 physicians who are committed to clinical medicine, but have sought broader training related to the organization of health services, improvement of medical practice, and public policy in health, according to Dr. Halsted Holman, professor of medicine and director of the Stanford portion of the program.

Participants in the program attend seminars in such subjects as information sciences, sociology, cost-benefit analysis, anthropology, and systems analysis to lay the groundwork for subsequent research with faculty advisors from the Stanford, UCSF and UC Berkeley campuses.

Currently, seven Clinical Scholars training programs are funded by the Foundation across the nation.

Former participants are involved in academic medicine, government, and in the practice of medicine, according to the Foundation.

"The purpose of the program is to allow young physicians to develop skills in non-biological disciplines pertinent to the improvement of health care," Holman said.

"Introducing non-biological disciplines into medical thinking and practice will not by itself resolve the problems of health care. Nonetheless, these disciplines provide understanding and methods which are essential to the search for better solutions."

County reviews animal facility plans

Stanford University School of Medicine's design for a $12 million animal research facility will go before the Santa Clara County Architecture and Site Approval Committee in March for the final approval needed before construction begins next summer.

The County Planning Commission approved plans for the 32,000 gross square foot facility in a unanimous vote last week.

The new building will be connected to the main center by an underground tunnel, and will replace about half of the existing animal research facilities of the Medical School, which do not meet present codes.

Three-quarters of the School's principal investigators make use of laboratory animals in their research. The School houses more than 50,000 laboratory animals, mostly rodents, for the vast variety of biomedical research projects.

The proposed facility is expected to permit improved quality of animal care, and centralized operations, with greater efficiency.

Progress in Medicine series to explore ethical dilemmas

"Who Shall Live? Progress and Ethical Dilemmas of Intensive Care" will be the focus of the winter/spring 1983 Progress in Medicine lecture series, a community outreach program sponsored by the Stanford University Medical Center.

The season's presentations are:

- Feb. 16—"Intensive Life Support Systems: Present Practice and Moral Issues," featuring Dr. Thomas Raffin, assistant professor and assistant chief of medicine. His lecture will follow an introduction to the series by Dr. James Silverman, associate professor of radiology and chief of staff at SUH;
- Feb. 23—"Who is Saved?" with Dr. Myer Rosenthal, associate professor of anesthesia, medicine and surgery, and director of the intensive care units at SUH;
- Mar. 2—"Impact of the Intensive Care Unit on the Critically Ill Patient with Chronic Lung Disease," with Dr. Andrew Newman, clinical instructor of medicine at Stanford and director of the Bay Area Pulmonary Rehabilitation Program; and "Impact of the Intensive Care Unit on the Critically Ill Patient with Heart Disease," with Dr. Robert Sladen, assistant professor of anesthesia and associate director of the intensive care units at SUH;
- Mar. 9—"Newborn Intensive Care: Survival—What Price?" with Dr. David Stevenson, assistant professor of pediatrics and associate director of the Intensive Care Nursery;
- Mar. 16—"Who Suffers More—the Health Care Team or the Family?" with a panel including Silverman, Raffin, Jean Bronstein, R.N., assistant director of Nursing Service for the critical care region, and Aaron Smith, M.P.H., L.C.S.W., chief social worker in cardiology; and
- Mar. 23—"Ethical and Emotional Issues in the Care of the Dying Patient and Family," with Reverend Dr. Ernle Young, chaplain to the Medical Center and senior lecturer in medical ethics.



Thomas Raffin



James Silverman



Myer Rosenthal



Andrew Newman



Robert Sladen



David Stevenson



Jean Bronstein



Aaron Smith



Ernle Young

The Progress in Medicine lectures were initiated at Stanford in 1966 by Dr. Joshua Lederberg, then professor and chairman of the Department of Genetics, to provide an opportunity for leaders in academic medicine to share their insights and perspectives with the community.

Lederberg had observed: "The community has little opportunity to be informed of the exciting developments in medicine. Public understanding of these developments is of the utmost importance to social decisions."

All upcoming Wednesday evening presentations will take place in the Medical Center's Sherman Fairchild Auditorium, at 7:30 p.m. Admission is free, and seating is limited. There are no reserved seats, and no tickets will be issued. Early arrival is recommended to permit the best choice of parking and seats.

For further information, call the Medical Center's office of public events, at 497-6389.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, FEBRUARY 9

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Performance of a High Speed Multi-Slice Cine-CT Scanner"—Dr. Douglas Boyd (UCSF). 4:15 p.m., McCullough 134.

Basic Science Research Colloquium: "Heterogeneity of Mycosin Structure and the Development Origin of Fast and Slow Twitch Muscle Cells"—Dr. Frank Stockdale. 5 p.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "B-Z Transition in Poly-d (AC) d (GT)"—Larry McIntosh, Ph.D. candidate (Max Plank Institut, W. Germany). 4 p.m., M316.

Div. of Hematology Conference: "Acute Leukemia"—Dr. Charles Linker (UCSF). Noon, L201.

THURSDAY, FEBRUARY 10

Blood Drive: All Medical Center staff and faculty are invited to join the students in giving the gift of life. 11 a.m. till 3 p.m., Medical Student Lounge.

Dept. of Pharmacology Seminar: "What Do the Structures of Acetylcholine Receptor-Containing Membranes and Purple Membranes Tell Us About Function?"—Dr. Robert M. Stroud (UCSF). 4:15 p.m., Pharmacology Library, R358.

"The Loving Heart: Sex After a Heart Attack"—sponsored by Nursing Services. 7-10 p.m., Fairchild Auditorium. Speaker is Richard Sharon, M.A., Ph.D. Program is open to the public. Fees required. For further information, call Katherine Barnett, R.N., at 494-8074.

FRIDAY, FEBRUARY 11

SMASH Lecture Series: "The Heart of the Matter—The Matter of the Heart: Endomyocardial Biopsy"—Dr. Margaret Billingham. 4:30 p.m., Fairchild Auditorium.

FEBRUARY 12 AND 13

Dept. of Anesthesia Workshop: "Hemodynamic Monitoring/Pulmonary Artery Catheterization Workshop." 7 a.m. till 5 p.m., Fairchild Auditorium. For further information, call 497-7662.

MONDAY, FEBRUARY 14

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Clinical Applications of ABR/ECOG"—Holly Hosford-Dunn, Ph.D. 7:30 a.m., R117.

TUESDAY, FEBRUARY 15

Div. of Surgical Pathology Conference: "Electron Microscopy of Small Round Cell Tumors"—Dr. Richard Sibley. 8 a.m., L201.

Dept. of Dermatology Grand Rounds: "Deep Fungal Infections"—Dr. Barbara Egbert. 10 a.m., R136.

FRIDAY, FEBRUARY 18

Registration deadline: for Nursing Educational Services Pediatric Critical Care Course Level II to be held Feb. 28 and Mar. 1. The course aims to promote understanding of the impact of critical illness and its management on child and family, in order to enhance quality of care to the critically ill pediatric patient. Advance registration and fee required. For further information, call Carole Kidder at 497-6366.

Nursing Educational Services Workshop: "Selected Concepts in Surgical Nursing" 8 a.m. till 4:30 p.m., Hyatt Palo Alto. Advance registration required. For further information, call Carole Kidder at 497-6366.

FEBRUARY 21 THROUGH 25

Office of Postgraduate Medical Education: "Basic Science for Clinicians." Advance registration required. For further information, call 497-5594.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



Margaret Billingham

SMASH lecture of the week

"The heart of the matter—the matter of the heart: Endomyocardial biopsy" is the title of this Friday's S*M*A*S*H lecture, to be given 4:30 p.m. Feb. 11 in the Fairchild Auditorium, by Dr. Margaret Billingham, associate professor of pathology.

All interested members of the Medical Center community are welcome. A TGIF gathering in the lobby will follow the presentation.

Health communications enhanced by cable programming

Cable television has the potential for providing quick, cheap communication—a system that's better than the telephone, speakers told a community audience of health professionals recently.

Community groups across the country, hospitals among them, are negotiating for access to cable television channels that will link hopsitals, homes and schools and offer a range of educational, entertainment and public service programming, said Tom Browne, associate director of public information for the California Hospital Association.

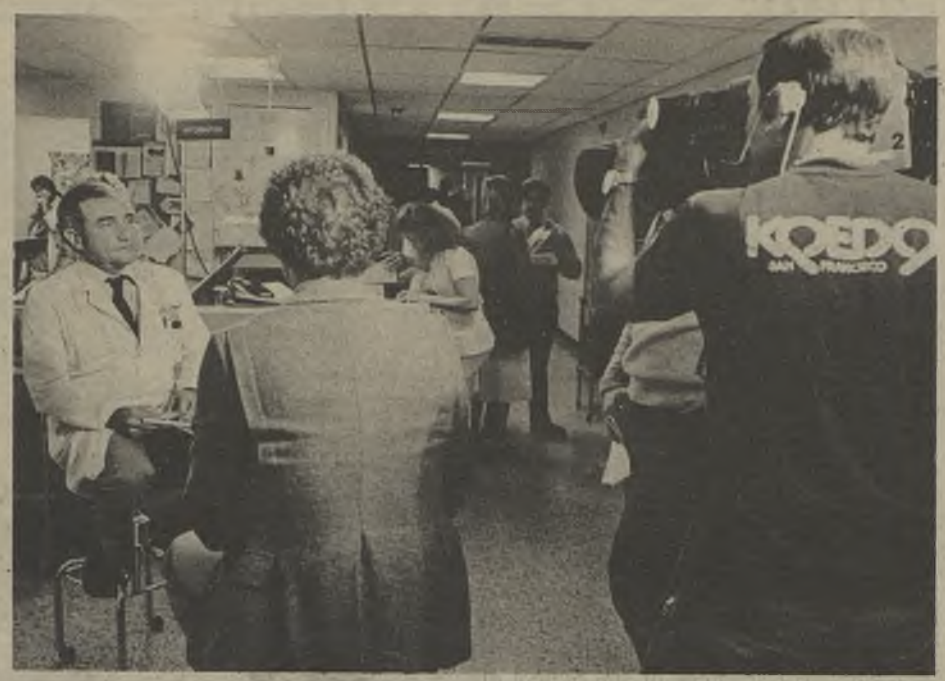
Browne spoke Jan. 29 at a program on the medical and health care uses of cable television, sponsored by the Palo Alto Medical Foundation and Stanford University Hospital.

Two-way or interactive cable systems enable people in separate locations to see and talk to one another. A conference at Stanford Medical Center, for example, could not only be seen in hospitals across the country, but could also allow the participants to talk to one another.

Robert Hecht, Stanford division coordinator of Instructional Media, and Michael Yonchenko, Stanford audiovisual director and producer, showed samples of medical television uses. A televised surgical procedure performed in a Sequoia Hospital operating room, for example, was watched by students at a conference at Canada College. Conference participants could ask questions of the surgeon during the procedure.

Another example was a mass visual screening test developed by Stanford's department of ophthalmology and used to test television viewers' eyes throughout the country.

Cable systems, said Browne, have an originating station, the "head end," which picks up programs from local commercial broadcast television, from microwave relays from distant cities, other cable connections and from national satellite companies. The cable company filters and amplifies the signals and sends them throughout the community in cables similar to telephone lines.



Dr. Kenneth Melmon (left), chairman of the Department of Medicine, was interviewed by Watts last year for *Health Notes*. With the advent of interactive cable technology, the potential uses of medical television are rapidly growing.

Most existing cable systems are one-way, to subscribers. New technology allows access by institutions, such as schools and hospitals, and two-way communication for teleconferencing and educational uses.

Browne cited the need for careful community and institutional participation as older franchise agreements come up for renewal and new ones are established. (Ninety percent of the present 300 cable franchise agreements in California will be coming up for renewal soon, he said.)

"Make sure the specific services you want are written into the agreements," he said. "If health channels and cables between hospitals are required in the franchise agreement, there will be little direct cost, but adding the service after the system has been installed will be difficult and expensive."

In health care fields, cable and satellite technology could mean shared grand rounds and inservice programs for hospital staff, preventive health programs for the community, emergency paramedic access to patient's medical histories, and international teleconferencing that could save on hospitals' travel budgets, he said.

Some cable agreements provide training courses and video equipment for people to use. Such services are funded out of the profits made by the cable company.

"It costs millions to lay the cables for a system, but there are vast amounts to be made too," Browne said.

Programming communicated by satellite, from one "dish" device to a satellite, then to a receiving "dish" antenna, was described by Tom Rasmussen, director of satellite operations at the Hospital Satellite Network in Los Angeles.

Today, such a receiver costs about $10,000, and a transmitter about $500,000. More than 30 hospitals in the U.S. have these receivers now, he said. Five national networks are planning health and medicine programming that could be used by hospitals for their patients and staff.

"None of the systems are up now, but the first will be ready this year. This will mean a way to bring news to hospitals much faster than any way we have now. Wtih video publishing, information about a new procedure, for example, could be spread across the country in a matter of hours," Rasmussen said.

These capabilities are being examined, he said, in light of what they will mean for the present system of peer review, or review by professionals in the field before publication of a scientific paper.

Dr. David Watts, who hosts and writes "Health Notes" for KQED television, cited the "tremendous need for accuracy in reporting health and medical information via television. The information has to be understandable and balanced in its interpretation."

Watts found from his own experience that health professionals expecting to become involved with video programming "may need to take some lessons, to learn to be more alive and upbeat in front of the camera, and to speak clearer."

—Barbara Battino

Construction Corner

Department of Medicine Offices: Construction will be under way this week in the Department of Medicine offices located at S102. This project will provide the department with remodeled office areas and a new conference room. The renovation will occur in three phases with the conference area as the first phase.

The project was designed by Christina Anaya of the SUMC Facilities/Projects Office. Construction will be coordinated by Richard Booth.

General Surgery Offices: An existing laboratory and a storage area are being renovated, as well as existing office space, in order to provide an office suite for the Division of General Surgery. The construction in rooms S059 and S067 is in progress and scheduled for completion by May 1, 1983.

The SUMC Facilities Office project team responsible for the work consists of Norm Berge, construction coordinator, and Phillip Eubanks, architectural planner.

Fume Hood at the Loading Dock: Construction will soon be in progress to repair and upgrade the fume hood at the loading dock. This fume hood is one utilized by the Radioisotope Inspection Station which receives and inspects such material for departments throughout the Medical Center.

Construction coordinator for this project is Dave Dominguez of the SUMC Facilities Office.

Boswell Renovation progress made during January: The contractor, E.J. Amaroso and Sons, moved into the Pasteur Drive parking strip space. Excavation and removal of debris was completed, to prepare the site for the footings of the new columns that support the external walkways. Jackhammer testing, tree removal, and other necessarily noisy tasks were accomplished without significant disruption of work schedules.

Boswell Renovation activities for February:

- Demolition of walls and ceilings on the first floor south to begin. A barrier will be constructed which will eventually close the entire corridor as well as a portion of the front Boswell lobby.
- A crane to lift the steel into the courtyard to arrive mid-February for two to three weeks. It will be positioned in the area between the fountains and the front of the Boswell Building. The crane has a 140-ton capacity and a boom length of 260 feet. The contractor will maintain a minimum of 16 feet clearance for vehicles. Four parking spaces will be temporarily lost while the crane is here. Appropriate safety measures will be taken.
- Temporary signage to be installed to help reduce the confusion for patients during the renovation process. The temporary signs have light blue background and white lettering.
- Clinic registration will be accomplished in the individual clinics, and the centralized registration area will not be functioning.
- The steel support structures will be attached to the existing building by bolts. This is expected to produce a great deal of noise as holes are drilled for the bolts.

Watch future **Construction Corners** *for updates on the progress and plans of the Boswell Renovation and other projects.*

—Editor

Medical faculty opening

Stanford University is an affirmative action employer and welcomes nominations of women and minority group members and applications from them.

Applications are invited from surgical pathologists with strong academic orientation for the position of assistant professor in the department of pathology at Stanford University School of Medicine.

Respondents must either be eligible for or possess California licensure and must be certified in anatomic pathology by the American Board of Pathology. Applicants must have a comprehensive knowledge of and a strong background in general surgical pathology, prior experience in research and teaching, and diagnostic expertise in hematopathology.

Duties will include teaching medical students and housestaff, diagnostic and supervisory responsibility in general surgical pathology, and participation in the diagnostic, teaching and research programs in hematopathology. A record of prior publications is essential.

Applications should be dated no later than April 1, 1983, for an appointment to commence Sept. 1. Applicants should send curriculum vitae and the names of at least three referees to David Korn, M.D., chairman, Department of Pathology, Stanford University Medical School, Stanford, CA 94305.

...News Notes...

Jordan Maple was appointed administrative service manager in the Department of Neurology effective Jan. 17, announced Dr. David Prince, professor and chairman of the department.

Maple has had a great deal of experience, most recently as controller of the Foundation of California State University, Sacramento, and prior to that in Ohio and West Virginia where he was executive manager of a university medical corporation.

* * * *

The volunteer arm of the Community Relations Department, the patient relations associates of SUH have been nominated for the President's 1982 Volunteer Action Award by the Junior League of Palo Alto, Inc. The award honors a select number of volunteers across the nation.

The goals of the patient relations associates are to meet the personal and comfort needs of patients; to improve interactions between patients, their families and Hospital staff; to provide problem-solving services; and to recommend changes in Hospital policies and procedures to eliminate problems.

The purpose of the Junior League, which serves the mid-Peninsula, is to promote voluntarism and to demonstrate the effectiveness of trained volunteers in their communities.

Director of Community Relations Jeanne Kennedy remarked, "We're very excited that these dedicated volunteers at the Hospital have been honored in this way by the Junior League."



"Got a minute, doctor?"

Incomplete charts, a concern reported here and at a sampling of Bay Area hospitals, have declined at SUH, reported the director of medical records.

Marion O'Brien-Adineh, the director, reported that as of early January, there were 283 delinquent charts—incomplete charts for patients who had been out of the Hospital for at least 14 days.

"We're pleased with the progress, but the situation still could be better," said O'Brien-Adineh. A year ago, SUH was faced with approximately 1,500 delinquent charts.

"The decline is largely to the credit of Administration working very closely with the Medical Staff and its leaders to alleviate what had been an extremely acute problem," she added.

Fifteen staff members had been suspended during the past year, said Bunny Blake-Gray, manager of the chart completion unit. The action came during a concerted campaign which was conducted to reduce incompletions.

Meanwhile, at nearby hospitals, medical record directors indicated parallel concerns with potential or actual delinquencies.

Dr. Thomas Gonda, chairman of the Department of Psychiatry and Behavioral Sciences, has been appointed to a two-year term as the representative of the Council on Medical Education of the American Medical Association to the Residency Review Committee for Psychiatry.

* * * *

"The Healing Force," an 80-minute documentary film about writer/editor Norman Cousins and his unique personal experience of recovery from a life-threatening heart attack, will premiere at 7:30 and 9:30 p.m., Tuesday, Feb. 15, at the New Varsity Theater, 456 University Ave., Palo Alto.

Cousins is adjunct professor in the department of psychiatry and biobehavioral sciences of the School of Medicine at UCLA. He was formerly editor for 35 years of the Saturday Review magazine, and is the author of 16 books including Anatomy of an Illness.

Cousins based his healing process on forming a partnership with the medical community to optimize his recovery. He believes that treatment for any disease has twin requirements: the availability of the best that medical science has to offer, and the patient himself becoming fully involved in the recovery effort.

Proceeds of the film will benefit Touchstone, an emotional support group for children with life-threatening or chronic illnesses and their families. Touchstone and the Midpeninsula Health Service, both nonprofit organizations, are sponsoring the presentation.

Tickets at $4 each can be purchased as tax-deductible donations at the Touchstone office, 605 Cowper Street in Palo Alto during business hours, or at the theater the night of the performance, or by calling 328-4495.

Touchstone was established in 1981 by some members of the medical staff of Children's Hospital at Stanford. For more information about the group, call the phone number listed above.

* * * *

New members have been appointed to the Medical School Staff Affirmative Action Committee. Those who have accepted two-year terms are: Ali Lampert of Pediatrics; Harold Spencer of Lab Animal Medicine; Droni Moo of Family, Community and Preventive Medicine; and James Taskett of Instructional Media. Richard Placone of Radiology has been reappointed for a one-year term.

Outgoing members include Clare Phillips, Marie Casey, Peter Stangl, and Elwood Pierce.

* * * *

The Human Resources Group now has available new resource binders expected to be of interest to many in the Medical School. Staff members should feel free to visit the Group in M118 and browse through these, which include a child care referral and information binder; a recreation, events and discounts binder; a training and development binder; and a binder with Medical School staff profiles run in the Medical Center Memo.

For further information about these helpful resources, call Catherine at 497-6295.



The Hospital's new dining room in P1060 received finishing touches on its wall design last week from Oscar Briones, associate project manager with the HMP. Located between the PATs Lounge and X-ray North, the new facility opened yesterday, Feb. 8. It is the renovated section of a shell space formerly used for storage, and will seat about 150 persons, almost doubling the current capacity of the main cafeteria. This extra room has come about largely due to the efforts of the Committee on Cafeteria Crowding, which has worked out several strategies to alleviate the daily lunchtime congestion. The operating hours of the new dining room will be 11:30 a.m.-1:30 p.m. weekdays. Flatware, napkins, and tray disposal will be provided, but food service is still restricted to the main cafeteria. Visitors will be restricted from both dining areas during the peak lunch hour, to allow Medical Center staff time and space to enjoy their meals comfortably. The wall design in the new dining room was conceived by freelance designer Tami Bruce.

New committee to help plan future

Five senior administrators and one University trustee will serve on the Stanford University Medical Center's newly created Strategic Planning Steering Committee, Dr. Lawrence G. Crowley, vice president for medical affairs, announced Monday.

"The committee will provide a framework within which the Center's resources can be allocated in a coordinated and planned manner," Crowley said.

The purpose of stategic planning is to determine the direction and character of an enterprise well in advance of shifting circumstances, the vice president explained. Otherwise forces outside the institution become the determining factors, and the future of an organization is no longer within the control of its management.

Strategic planning is a relatively new phenomenon in the operation of academic medical centers, Crowley said. "Unless resources are treated on an integrated basis, an organization may resemble a federation of separate entities," he explained.

Stanford University Medical Center consists of Stanford University Hospital, Stanford University Clinics which form the base of the full-time faculty's medical practice, and the School of Medicine, one of the seven schools of the University. The three entities in the Medical Center are fiscally and organizationally independent, but they share goals, buildings and personnel in carrying out their mission of teaching, research, and clinical care.

The committee will serve in an advisory capacity, Crowley said. It will review and recommend the strategic plans as formulated by the units of the Medical Center for the purpose of sustaining a balance among programs and resolving possible contradictions before implementation.

Members of the committee are Linda Clever, M.D., member of the Board of Trustees Ad Hoc Committee on the Medical Center; Sheldon King, executive vice president and director of Stanford University Hospital; Kenneth Melmon, M.D., chairman, Faculty Practice Program executive committee; Dominick Purpura, Dean of the School of Medicine; and Donald Tower, executive director of the Faculty Practice Program. Crowley will serve as chairman.

The committee will be staffed by David S.P. Hopkins, director of the Center's office of Analysis and Planning, and David O'Brien, financial management analyst.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

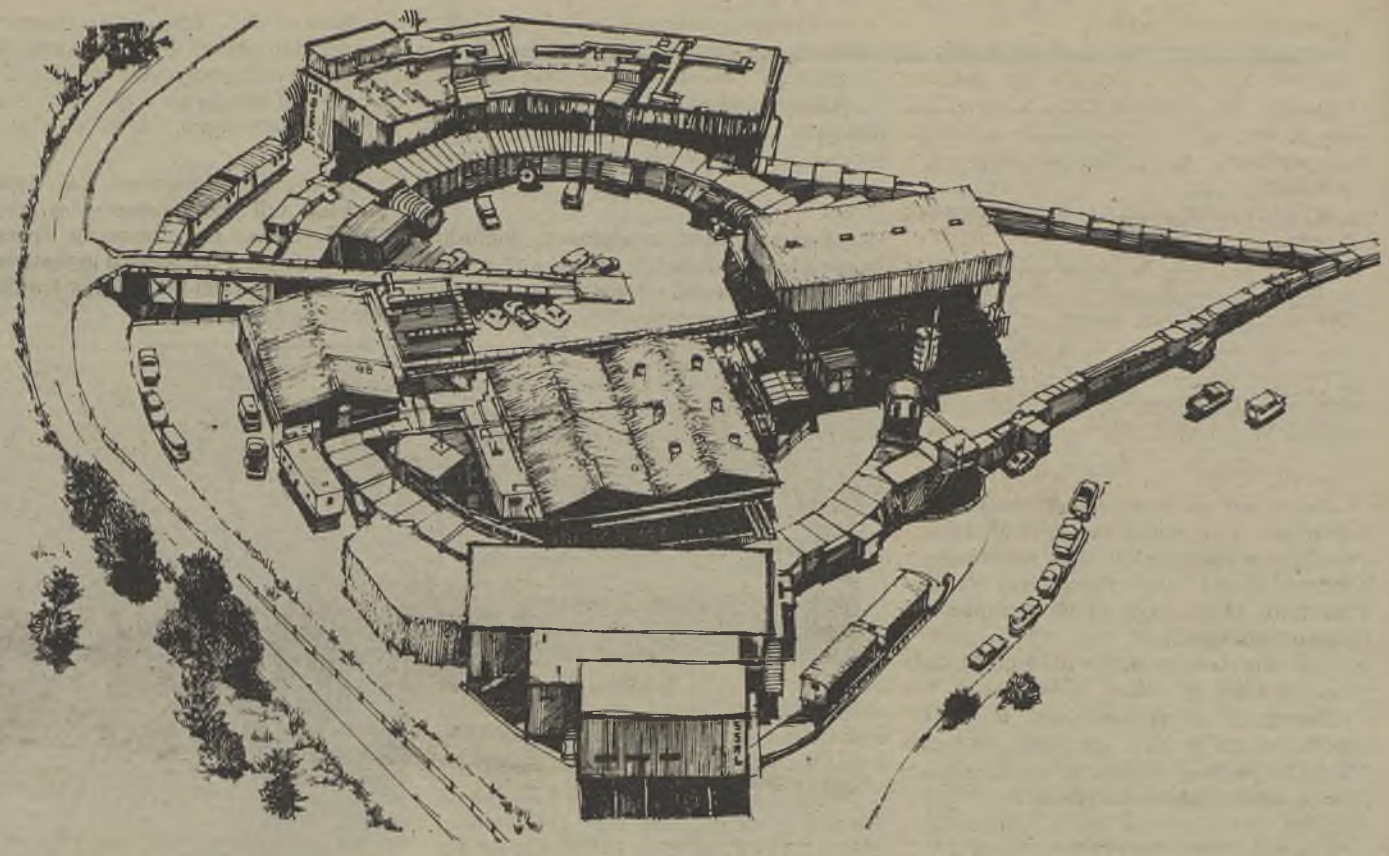
Nearly 300 oppose unclassified, weapons-related research proposal for SSRL

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seeking $1 million in UC research funds for a 50 percent share of the same project. None of their work would be weapons-related. It includes biological, chemical, materials science, and physical sciences research using synchrotron radiation.

The Department of Energy funds SLAC entirely and is the principal funding source for SSRL, an administratively independent organization at Stanford which uses beam lines from SLAC's storage ring, SPEAR, for its fast-growing research program.

"Our electrons are their electrons," said SLAC Prof. Gregory Loew, spokesman for 15 SLAC faculty who petitioned the University's Committee on Research early in January expressing their concern.



Openness an attraction

SLAC's openness and noninvolvement in weapons research have helped attract many high energy physicists, other scientists, technicians and administrators, from the U.S. and around the world. Several SSRL scientists personally opposed weapons-related work, except in national emergencies, including SSRL's director, Stanford Prof. Arthur Bienenstock, applied physics and materials science.

"But I've looked back through history at people who've used their position to try and stop research—and 50 years later, it never looks good," he said in a telephone interview. Bienenstock has worked for and consulted with the Defense Department, but never on weapons.

University research rules require that any SSRL project have a Stanford faculty member as principal investigator. If the proposed project were funded and approved and if Bienenstock declined to serve as principal investigator, it remains uncertain whether others would assume this responsibility.

The SSRL proposal review panel, a group of 10 experts outside the University, has raised several questions concerning the proposal which may take months to resolve. The panel is headed by Columbia Prof. Charles Cantor.

Neither the panel's questions nor Stanford research policy governing SSRL would bar the research on the basis of its application to weapons testing.

Besides funding, key questions concerning the proposal involve the availability of a beam line and the terms of its use.

The high demand for synchrotron radiation research already has resulted in three proposals for beam lines to be adopted by SSRL. Only one more simply adopted, straight-line beam site remains. Further lines would be more complex to build, according to Bienenstock.

As initially submitted, the national laboratories-UC proposal would divide the beam line use equally between these two groups. On past SSRL projects, the University Committee on Research has required at least one-third time be devoted to general scientific research. SSRL's proposal review panel believes it would not be appropriate for the Lawrence Livermore-UC groups to have 100 percent use of any new beam line.

These and other questions have been referred back to the proposing group, whose spokesman is Lloyd Multhauf, of Menlo Park, group leader in the L division of Lawrence Livermore, which works primarily in weapons. . . .

He said about two dozen UC researchers have expressed interest in using synchrotron radiation. "No proposal from UC has anything to do with weapons," he said in a telephone interview.

Synchrotron work can "accommodate many users," he said. "It doesn't make sense to have dedicated sources; it make a lot of sense for the government to fund centers regionally."

SSRL already has about 400 users and is only partially developed, he added. "Weapons detectors are probably not ideal for other users."

But there's increasing recognition that very short x-ray pulses could have useful applications in biological research. Biological research might benefit from the instrumentation done for weapons.

Weapons work important

"Everything we do would be unclassified," he said. "Any work we do would be published. Offhand, I don't see this in any different category than other work done at Stanford.

"Weapons work is important, should be done, and it's important to do the work well," he added. Stanford is conveniently located and "our testing program would be more effective if we have access to a ring like SSRL." Both Lawerence Livermore and Los Alamos have also expressed interest in using a synchrotron light source now under construction at Brookhaven National Laboratory in New York. "We will continue to explore that," he added.

As submitted to SSRL in December, the Lawrence Livermore-UC proposal did not specifically mention weapons, but did identify the funding source. The funding application to the Department of Energy emphasized the weapons testing potential.

On Dec. 16, Bienenstock met with the SLAC faculty and explained the proposal. "We thought it would hurt the image of the lab," Loew said in a telephone interview. "SLAC has 10,000 visitors a year, including school kids. There are tours every day.

"Inevitably, someone asks, 'Is SLAC a place to make bombs?' and the answer is 'no, we're not involved in weapons, we try to understand the basic laws of nature.'

"The idea that we could no longer answer that question in a straightforward way. . . (was) something we felt very uncomfortable with. . . .

"We thought without the consent of the entire staff, we would be captive to some activity we were not hired for.

"We're not interested in publicity. We want the problem solved in an amicable way. We don't particularly want controversy."

The letter asked the Committee on Research to find a way to not have the work done at Stanford. Other signers included Profs. Joseph Ballam, Richard Blankenbecler, Stanley Brodsky, Karl Brown, David Burke, John Jaros, David Leith, Roger Miller, Joseph Murrary, Richard Neal, Pierre Noyes, Michael Peskin, Charles Prescott, and Perry Wilson.

SLAC has 31 faculty. Several nonsigners were off campus or had potentially conflicting committee assignments within the University.

Mary James, SLAC engineering physicist, drafted a staff petition to SLAC Director Wolfgang Panofsky asking him to work with University President Donald Kennedy and the Committee on Research to amend existing policies to prevent the possibility of nuclear weapons motivated research involving SLAC. Friends collected 280 signatures in four days in mid-January.

"Large parts of the staff never saw the petition," she said in a telephone interview. "We were concerned about the image of the lab in the community at large and in our own minds. We think of SLAC as truly dedicated to pure research, and see the high energy physics community as a whole as an example of the positive effects of world-wide cooperation in science."

She personally was "wary" that "with weapons labs picking up 80 percent of the cost, they'd settle for 10 percent of the time." While different uses of technology may overlap, "as a person trying to make moral decisions, I have to look for intent."

Schedule 44 of the Lawrence Livermore proposal to the Department of Energy made it clear "this will directly and immediately benefit weapons programs," she said.

Since the proposed weapons research was "not the primary concern of (SLAC), it is unnecessary and unfair to put us in this position" of having to help the project. Public discussion of the proposal surfaced briefly during Panofsky's "all hands" talks at SLAC Feb. 1.

SLAC continued operations last fall during a four-week strike by about 300 workers. But Bienenstock observed that "we can't function" without beams provided by the two-mile long accelerator.

"Both SSRL and SLAC are trying to do things which are very challenging and difficult—at the forefront of our respective fields," he added.

"These require not that people just do their job, but test the extremes of their intelligence, creativity and enthusiasm.

"We've been helped a lot by the SLAC people, and we're very sensitive to their feelings on this issue. They have contributed ideas we haven't thought of at many different levels."

How does he think the issue will be resolved? "It's inappropriate to speculate, because I ultimately have to make the decision," he replied.

He currently is in the East, attending previously scheduled meetings at the Cystic Fibrosis Foundation and the National Academy of Sciences.

Any final decision appears months away.

Synchrotron radiation is the electromagnetic radiation, including visible light and x-rays, emitted by high energy electrons following curved paths due to the influence of magnetic fields.

An electron going straight ahead does not radiate. An electron going through a magnetic field follows a curved path. Motion in curved paths represents acceleration, and acceleration results in the emission of radiation.

There are four other U.S. centers for synchrotron radiation research besides Stanford—Brookhaven, Wisconsin, Cornell, and the National Bureau of Standards in Washington.

—Bob Beyers

Stanford has $17 million in indirect cost 'carryforwards' from 1980-82

continued from page 1

proposals by the National Institutes of Health for an arbitrary 10 percent reduction in overhead rates resurrected, nor do we wish to encourage imposed caps (or ceilings) on particular rate components. . . .

"In the political arena, we plan to work as hard as we can to retain the concept of partnership with the federal government in research, and to gain understanding for the reality of indirect costs.

"In the meantime, we intend to 'price' our indirects at a level consistent with political and competitive forces, while trying to ameliorate both.

"In addition, we intend to (move) 'back up' toward full recovery by reducing indirect expenses as much as possible consistent with our other responsibilities.

"These measures should enable us to return toward full overhead recovery, and we think that ought to be a significant institutional goal.

"In the meantime, it will limit the risks to our own principal investigators (on research projects) and also limit the political risks to private research universities as the indirect cost rate is being debated in Washington.

"This course represents, however—and there should be no mistake about this—a significant budgetary sacrifice for our academic enterprise. By taking corrective steps. . .I hope we shall minimize the need for future sacrifices of the same kind."

Buildings and equipment, including operations and maintenance, and general and departmental administration account for about 85 percent of the overall rate of indirect costs. "Organized research accounts for about half the costs of our buildings and equipment and for 40 to 45 percent of our general and departmental administrative costs," Kennedy noted.

In the past, Stanford has vigorously pursued full cost recovery on research. Total costs for research exceeded payments from the federal government by $7 million in 1980-81 and $10.5 million in 1981-82, Kennedy said.

To recover these large "carryforwards" from the federal government would require Stanford to have indirect costs rates of 82 percent in 1983-84, 86 percent in 1984-85 and 86 percent in 1985-86, Kennedy said. This compares with a current indirect rate of 69 percent.

Moving away from full cost recovery on research places pressure on other parts of the University's operating budget. The University currently is engaged in a three-year $10 million belt-tightening effort.



Stanford flute teachers Frances Blaisdell (left) and Alexander Hawley, mother and daughter, perform with pianist Robert Hagopian at 8 pm Sunday, Feb. 13, in Dinkelspiel Auditorium.

Academic deans should promptly investigate any alleged faculty fraud

Academic deans at Stanford should conduct an initial investigation of any charges of academic fraud involving Stanford faculty members within four weeks, University Provost Albert Hastorf declares in a memorandum circulated to the deans Feb. 3. *(See text below.)*

"Several instances of academic fraud by faculty members at other universities have come to light recently," Hastorf said. "They have prompted us, as well as such organizations as the American Association of Medical Colleges and the National Institutes of Health, to review our methods of dealing with academic fraud."

Hastorf said "the initial investigation (by the academic dean) must be conducted as quickly as possible and every effort must be made to preserve confidentiality.

"Only those directly involved in the investigation are to be aware that it is under way or to have access to any information obtained. . . . Of course, the faculty member being investigated is always free to disclose the information should he or she wish to do so."

The dean may consult with others on a confidential basis, as needed, in conducting a review "complete enough for the President to determine whether or not a formal charge is warranted."

If the President finds charges are warranted, existing procedures in the Statement on Faculty Discipline take effect. If these involve the Advisory Board—a group of seven professors elected by their colleagues on the Academic Council—the board is urged to make every effort to conclude its proceedings within 60 days.

Normally, the President will wait for a final outcome before deciding whether information about the charges and their disposition shold be disclosed either publicly or to specific parties, such as the research sponsor, if any. This decision should be made following consultation with the Advisory Board.

If at any time during the process, after consultation with the Advisory Board, the President is persuaded that the need for disclosure is so urgent that it should not be deferred, the President may disclose such information as is deemed necessary without awaiting a final determination.

Hastorf said timely responses to allegations of academic fraud are needed to protect the interests of all those concerned, including those who might be misled by publication or communication of fraudulent data or harmed by fraudulent actions. He noted that gross negligence by faculty in supervising others in work for which the faculty member is responsible is also chargeable as professional misconduct.

Text of Hastorf memo to deans details procedures for initial investigation

Following is a Feb. 3 memo to the Deans of Schools and W. K. H. Panofsky, director of SLAC, from Stanford Provost Albert H. Hastorf concerning Academic Fraud.

Dear Colleagues:

Several instances of academic fraud by faculty members at other universities have come to light recently, and they have prompted us—as well as such organizations as the American Association of Medical Colleges and the National Institutes of Health—to review our methods of dealing with academic fraud.

I do not propose to define the term, but some examples of academic fraud include deliberate distortion of research data, falsification of research results, and plagiarism in research publications—all of which constitute professional misconduct in the University.

In the event that such cases arise at Stanford, we need a way to make timely responses to allegations of such misconduct that will protect the interests of all the parties involved—including those who might be misled by publication or communication of fraudulent data or harmed by fraudulent actions.

Our current policies, as set forth in Stanford's Statement on Faculty Discipline, outline steps to be taken **after** the president has brought formal charges against a faculty member. But the Statement does not describe the steps which should be taken to determine if there are sufficient grounds for a formal charge of misconduct. Nor does it speak to issues of confidentiality in cases where others might be affected by the disclosure of such allegations, or the failure to disclose them.

Hence this memorandum. Its purposes are 1) to outline the procedures to be followed in cases where evidence exists or allegations have been made regarding academic fraud prior to making a formal charge and investigation; and 2) to clarify the obligations of University officers involved in investigations of academic fraud with respect to confidentiality.

Individuals who believe an act of academic fraud has occurred at Stanford should inform the dean of the school in which the alleged fraud has occurred. The dean shall immediately begin an inquiry and shall so inform the president or the provost.

(In the event that allegations of academic fraud against a member of the Academic Council are received directly by the president or me, the issue will be immediately referred to the faculty member's cognizant dean. The dean is then responsible for conducting an immediate informal review of the charges.)

The dean will notify the involved faculty members of the charges, and discuss their nature. The dean may consult with others on a confidential basis as needed, depending on the nature of the allegation. The dean's review shall be complete enough for the president to determine whether or not a formal charge is warranted.

The dean will provide me with a summary of the charges and results of the findings no later than four weeks after the issue was brought to the dean's attention. The president will then decide whether formal charges will be filed under the faculty discipline procedures.

In the course of obtaining the necessary information in this initial review process, it is essential to protect the professional reputation of the faculty member involved, as well as the interests of the public and those who might be harmed by the alleged fraud. Accordingly, the initial investigation must be conducted as quickly as possible and every effort must be made to maintain confidentiality.

Only those directly involved in the investigation are to be aware that it is underway or to have access to any information obtained in the course of the investigation. Of course, the faculty member being investigated is always free to disclose the information should he or she wish to do so.

In the event the president finds that charges against a faculty member are warranted, the process set forth in the Statement on Faculty Discipline shall be followed. If the matter is referred to the Advisory Board pursuant to the Statement, the Board is urged to make every effort to conclude its proceedings within 60 days.

Under normal circumstances, the president shall wait until a final determination of the matter has been reached before deciding—after consultations with the Advisory Board—if information about the charges and their disposition is to be disclosed either publicly or to specific parties such as the research sponsor, if any.

However, if at any time during the process, the president, after consultation with the Advisory Board, is persuaded that the need for disclosure is so urgent that it should not be deferred, the president may disclose such information as is deemed necessary without awaiting a final determination.

The above procedures apply to faculty members who are allegedly personally responsible for an act, or acts, of academic fraud. Faculty members are, of course, also responsible for the behavior of staff and students involved in their research enterprises.

Although there are other University disciplinary procedures applicable to staff and students, gross negligence on the part of a faculty member in supervising others in work for which he or she is responsible is also chargeable as professional misconduct.

State support results in lower indirect costs for public universities...

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broad spectrum of colleges and universities, both public and private, has been growing significantly in recent years. Principal investigators at relatively unknown institutions are becoming increasingly competitive for sponsored research support."

Recently ranked with Berkeley and Harvard among the top three universities nationally in overall strength of its graduate faculty, Stanford generally ranks among the top five universities in federally funded research volume. This totals about $136 million annually, excluding $61 million for the Stanford Linear Accelerator Center.

At many public universities, the Stanford report notes, the costs of administration and facilities used in research are part of the core funding supplied by the state. Accordingly, these indirect costs need not be recovered from federal contracts and grants.

"Even more important, most states require that recovered indirect costs go back into the state treasury, rather than to the university research enterprise," the report adds. "Research administrators at these institutions freely concede that they simply do not expend resources on cost accounting (for research) because they see no benefit in doing so. Someone else is getting the money."

At Stanford, in contrast, "we have vigorously pursued a policy of fully allocating research costs and fully recovering them. . . .

"Thus we have a two-tiered 'price system' among the universities for sponsored research, just as we do for the tuition paid by students, and for the same reason: the difference is subsidized by state taxes."

The combination of federal funding shortages for many areas of research and rising indirect costs around the country have led key officers in the Department of Health and Human Resources, and particularly the National Institutes of Health, to seek reductions in overhead rates "by administrative fiat if necessary," the report notes.

Full cost recovery

Where some people believe indirect rates should be based on full cost recovery, others regard them as a "price," like tuition, based on subjective judgment, conditioned by market factors.

"These two views. . .have vied with each other for nearly 20 years," the report notes. "No set of issues has led to greater ill will between research faculty and university administrators across the country, and even between faculty members in sponsored research-intensive fields and those in other disciplines. This has been true especially in the private universities."

A government decision to "cap"—or set ceilings on—indirect rates based on the relatively low figures of public universities "would be catastrophic for the privates," the report notes.

"Experience with the effects upon teaching hospitals of caps on medical cost reimbursement does not make one sanguine about a world where the same philosophy is applied to indirect cost rates for research.

"There is no doubt that high quality private research universities, which rely heavily on indirect cost recovery to fund their operating budgets, would be the hardest hit.

"The result would be a significant downsizing for those institutions, plus an increase in the full average cost of all their activities—including research—which would have to be made up from already scarce general funds."

Faced with increased competition and curtailed funding on research, growing indirect costs for energy and wages, and large "carryforwards" earned in previous years, the report suggests Stanford should:

1) "In the political arena, work as hard as we can to retain the concept of partnership with the federal government" in research;

2) "Set aside, at least for the time being, our policy of full recovery. . .(and) 'price' indirects at a level consistent with political and competitive forces;"

3) "Reduce indirect expenses as much as possible;"

4) "Establish firm policies to prohibit consideration of potential reimbursement of overhead. . .as an enabling fctor (on) proposed new indirect expenditures or as an inhibiting factor with. . .investments aimed at reducing or avoiding future overhead costs.

5) "Set the return to full overhead recovery as a major institutional goal," preferably over a three- to five-year period.

Last year, based on full cost recovery, the negotiated rate for indirect costs at Stanford was 69 percent, an increase of 11 points over the 1979-80 rate.

The major reasons for the increase were:

1) Higher energy costs (about two points);

2) New rules permitting the intensity of space use to be taken into account, correctly attributing more costs to research (more than three points);

3) Higher operations and maintenance costs on new buildings and renovation of old ones (less than one point);

4) Charging major maintenance projects to current year expense rather than depreciating them several years into the future (about one and a half points);

5) Accelerating depreciation on equipment used in research (about four points).

"In general, institutions similar to Stanford have had rather similar histories of change in indirect rates," the student notes. "Yale, Columbia and Rochester are all about where we are, and have risen significantly in the past five years.

"Some—Chicago, Princeton, Brown—are just a few points below.

"Cornell's rate was unusually high due to an unusually large carryforward, and has now come down somewhat. The rate at MIT is down, too, but that is an artifact of broadening the base of direct costs to which it is applied.

"By contrast, the publicly supported research universities all tend to have significantly lower rates, although within this category too there is a considerable spread."

Long range forecast

At present, Stanford's long-range forecast assumes that research volume will increase at a rate of five percent from 1982-83 through 1985-86, or one percent less than the projected inflation rate.

In recent years, the University projected research volume would rise at the inflation rate or one percent year. In 1981-82, the actual increase was only four percent—two points below the inflation rate. The latest estimate for the current year is 3.5 percent—or 2.5 below inflation.

The slower than expected growth of research volume has been described as the prime factor in the University's recently announced plans for a three-year $10 million belt-tightening program.

Stanford still attracts able, diverse student body...

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dergraduates receive scholarships or grants in aid. When those receiving only loans are added, the proportion on financial assistance totals 71 percent.

"Stanford continues to attract strong and growing interest of the most academically able students from all economic backgrounds," the board report noted:

* The number of applicants for next year's freshman class is currently running at an all-time high;

* Entering freshmen come from virtually the same economic backgrounds as five years ago;

* The percentage of students accepting Stanford's offer of admission remains "consistently high at 64 percent, a figure comparable to. . .the past decade";

* This "yield" rate continues to be strong among the highest ability students whose families are just able to qualify for financial aid;

* A majority of those admitted to Stanford but enrolling elsewhere chose similar high cost private institutions—Harvard, Princeton and Yale, in that order—and not lower cost public institutions.

The current freshman class of nearly 1,600 includes 141 blacks and 137 chicanos, an all-time high.

Even so, "we are concerned that sustained high levels of increases in tuition may, at some point, affect the actual or perceived affordability of Stanford," the report said.

"A tuition increase of this magnitude will be consistent with public expectations in a strained economy and will not jeopardize either the continued affordability of Stanford or our ability to maintain the quality of the academic program."

The University currently is engaged in a three-year $10 million belt-tightening program.

In a recent public forum on tuition, Stanford Vice Provost Raymond F. Bacchetti noted that college costs nationally during the past decade rose at approximately the same rate as the personal income of parents with children in college.

"It's a close call as to whether Stanford costs more in relation to income now than in 1970," he added.

The trustees approved an 11.4 percent increase in the basic undergraduate room and board rate, to $3,812 from $3,423. This compares with a 15.5 percent increase last year and brings the combined tuition, room and board rate hike for 1983-84 to 10.3 percent.

Foreign culture experience available for high schoolers

The third anndual "Experience Another Culture at Stanford" workshops for midpeninsula high school students will take place from 9 a.m. to noon Saturdays, Feb. 26 and Mar. 5, at the Bechtel International Center on the Stanford campus.

This year the workshops are directed to advanced level students of French, Spanish, German and Japanese. Stanford students and family members from the countries where these languages are spoken will lead high schoolers through a series of small group discussions, music and dance, slides and information about travel and study abroad, all conducted in the language of the cultures represented.

For example, at the French language workshop representatives from Quebec and Francophone African countries, as well as France, will represent aspects of their cultures and engage participants in conversation in French.

High School language teachers of public and private schools in Los Altos, Mountain View, Palo Alto, Menlo Park, Atherton, Redwood City and San Carlos have been invited to select students for the workshops and will be accommodated on a first-come, first-served basis as space is limited.

Priority will be given to students in fourth year and above level classes. Workshops in Spanish and Japanese will take place on Feb. 26, those in French and German will be presented on Mar. 5.

"The past two years we have presented all day workshops on specific nonwestern cultures with great success, involving several hundred high school juniors and seniors" according to Gwyn Dukes, the project coordinator from the International Center staff.

"This year, in an attempt to address somewhat different needs, we are focusing on language interaction as a means of cultural exchange."

In 1981 the pilot program was funded by a grant from the National Association for Foreign Student Affairs. Last year the Rotary Club of Palo Alto covered all expenses. This year, the Center is requesting modest support from a number of midpeninsula service organizations.

"As our experience in the community builds, we hope to provide many kinds of enrichment to local schools and their students through the sharing of the rich cultural backgrounds of our several thousand students, post-doctoral scholars and family members from all parts of the world," said Lee Zeigler, International Center director.

For information:

For more information, contact Gwyn Dukes or Lee Zeigler at 497-1831.

Colleges nationally face steep decline in top talent

Colleges nationally face a steep decline in top student talent as measured by aptitude and achievement tests, says Stanford Admissions Dean Fred Hargadon, head of the College Board nationally.

Since 1972, the number of students scoring 650 or higher on the verbal scholastic aptitude test has declined from 53,794 to 29,236—a 45 percent drop. The number taking the tests declined only 3 percent.

Similarly, the number of students scoring 650 or higher on the math SAT dropped from 93,868 to 71,916, or 23 percent.

"There are similar drops at the high level, no matter where we set it," he added. "The relatively good news (for Stanford) is that we appear to have attracted a slightly larger percentage of those high scorers, at whatever level."

Whatever their limitations, Hargadon said, these standardized tests are the only way to approach a common standard in measuring student achievement. Otherwise it would be represented only by "the widely varying course content and grading practices of some 20,000 secondary schools."

The Stanford Admissions Office practice of carefully examining individual student transcripts and "obviously favoring those students whose academic programs appear to have been the most rigorous, goes some way toward offsetting whatever limitations the test scores might have," he added.

The distribution of test scores and high school grade point averages for the 1981 freshman class was as follows at right:

Scholastic Aptitude Test Scores

Students scoring	Total	U.S.	Apply	Stanford		Stanford share
	1972	1982	1972	1982	1972	1982
Verbal SAT 650, above	53,794	29,236	3,872	5,260	4%	7%
Verbal SAT 700, above	17,560	8,240	1,164	823	7	10
Verbal SAT 750, above	2,817	1,479	241	168	9	11
Math SAT 650, above	93,868	71,916	3,872	5,260	4	7
Math SAT 700, above	37,067	29,528	2,220	2,973	6	10
Math SAT 750, above	9,966	8,351	875	1,057	9	13
Achievement tests, 750, above						
English composition	2,918	1,302				
Mathematics I	5,679	2,218				
American history	1,757	719				
French	1,884	839				
Biology	1,690	681				
Chemistry	3,285	1,558				

SAT scores, GPA's of 1981 Stanford freshman applicants

Verbal SAT	Number of applicants	Number offered admission	Math SAT	Number of applicants	Number offered admission
700 - 800	1,024	463	700 - 800	2,913	986
600 - 699	3,681	1,121	600 - 699	5,051	1024
500 - 599	4,636	672	500 - 599	3,361	391
Below 500	3,252	212	Below 500	1,267	67

H.S. GPA	Number of applicants	Number offered admission
4.0	2,033	901
3.9	1,046	355
3.8	1,373	382
3.7	1,048	199
3.6	989	170
3.5 & below	4,603	409

Commenting on the recently enacted National Collegiate Athletic Association (NCAA) legislation on student athletic eligibility, which is scheduled to go into effect in 1986, Hargadon said:

"Lord knows, they needed to do something in this area. The requirement of a 2.0 grade point average in high school was a minimal step in the right direction.

"The 700 total SAT requirement, while well intended (contrary to the assertions of those who took objection to it), seems to me to have been the wrong step taken for the right reason.

"Our concern should be that no college enrolls a student to play athletics unless that student's academic credentials (a) are reasonably within the range of the academic credentials of the college's student body as a whole, and which (b) are the kinds of credentials from which successful pursuit of that college's academic program can be reasonably predicted. This will vary from college to college, and it should not be hard to devise a formula by means of which it would be clear when a student was being enrolled largely for athletic reasons and with little hope of graduation.

"Surely, that will mean some colleges can enroll students with lower academic credentials than can other colleges. That is now the case for all students, regardless of whether they participate in athletics.

"Some sort of rule whereby colleges would be allowed to award athletic scholarships to new incoming students only in some proportion to graduating seniors who had been on athletic scholarships would help ensure the students' educational needs and interests were not overlooked.

"Further, it might help if instead of those NCAA halftime pictures of college science labs, which perhaps too few college athletes have ever seen, were replaced by student-athlete graduation statistics for each of the schools, giving the viewers an idea of the role athletics plays within the context of the respective colleges being represented by that particular event."

His views were developed in a report to the fall quarter meeting of the Stanford Academic Council Feb. 3.

$1 million gift to renovate inner courtyard

The inner courtyard of Stanford's architecturally significant Quadrangle will be renovated using $1 million in anonymous gifts donated for that purpose.

The Board of Trustees Feb. 8 approved the renovation concept and authorized development of specific design alternatives and cost estimates.

A Planning Office report on the Inner Quad Courtyard submitted to trustees calls for improvements in paving, seating, lighting, and landscaping consistent with the original—but never completed—plans for the courtyard.

But, the report adds, there is considerable support for "some enhancement rather than a strict restoration." Enhancements should make it a place to "stop, ponder, pause, sit, chat, and relax."

Making the courtyard more of a "people space" would include:

* providing more seating areas;
* enlarging the planting circles to encourage interior use for seating and to create a more generous ratio of planting to pavement;
* changing the paving surface to add color and texture and to provide a smooth surface for bicyles;
* providing more lighting;
* modifying circulation patterns by adding paths; and
* replanting the circles based on landscape schemes emphasizing a special theme or intended use.

For years, people have complained about the poor condition of much of the courtyard's surface.

Against the advice of Frederick Law Olmsted, the University's designer, a large part of the Quad was paved in bitumen, a forerunner of asphalt in the 1890s. It was later covered with gravel.

Olmsted wanted the area paved with artificial paver blocks resembling granite.

In 1914 Olmsted's son suggested that the loose gravel and bitumen be replaced with red brick, red tile, or cement tiles, but for lack of funding, no improvements have ever been made.

Olmsted's plans also called for seat-height edges around the planting circles.

The Planning Office suggests adding seating along the arcade or in the interior of the planting circles to encourage use of the courtyard.

It also recommends removing old trees and shrubs and vigorously pruning plants in the circles. "In replanting the circles, we anticipate an opportunity for some very creative enhancements which can modify the quality and character of the entire courtyard," the report says.

Stanford's Inner Quad courtyard is to be renovated using $1 million in gifts donated for the purpose.



States subsidize indirect costs at public institutions

Private universities face growing competition for research

Following is a background paper on indirect costs circulated to the Board of Trustees last month by President Donald Kennedy:

I
HISTORY AND STATUS

This year, Stanford has experienced a significant reduction in the recovery of indirect costs associated with organized research projects. This pressure has brought about, in turn, a significant effort at expense reduction, internal reallocations of funds, and increased upward pressure on other sources of revenue—especially tuition.

But these are not the only effects of the reduction in our indirect cost recovery. Because of the relationship between research volume and the **rate** of indirect cost recovery, already-existing pressures that tend to drive that rate upward will be increased. Two important kinds of secondary effects are likely to follow.

Locally—on this campus and others—there may be increased tensions between principal investigators and the administration—the former anxious to keep indirect cost rates low in the belief that this will make their projects more competitive, the latter eager to recover all the funds to which they feel the institution is entitled.

On a more national level, further increases in rates are likely to fuel the claim, already made in some quarters, that indirect costs have risen to unacceptable levels and must be contained.

The circumstances in which we find ourselves are, of course, a product of history; Indirect cost rates **have** risen sharply over the past 10 years; and the negotiated rates **do** vary widely between institutions, particularly between public and private universities. These events are not easy to explain, nor is it immediately obvious why the indirect cost recovery rate should be so sensitive to research volume.

The trends that are apparent in this history, as well as the complexities inherent in the relationships that tend to raise rates, have both contributed to the confused and unfortunate political climate in which this issue is being resolved, on the campuses as well as in Washington.

It is extremely important for faculty members, trustees, and others at Stanford to understand this issue thoroughly, despite its complexity. A number of groups have looked carefully at this problem—national committees of scientists, private accounting firms, and the GAO among others.

Each has concluded in the end that the costs are real, the rates based on sound general accounting principles, and the recovery essentially fair. That does not mean that, as a result of careful discussion of the issue here and elsewhere, we may decide on political grounds **not** to press for the full recovery of costs to which we are entitled.

But if that is our decision, it ought to be made with the full understanding of the principles involved, and a realization of what we are giving up. In what follows, we want to expand on other explanations of the indirect costs problem recently provided by Stanford administrators—most recently by the vice provost and dean of graduate studies and research in his December report to the Faculty Senate.

Direct and Indirect Costs

Sponsors of organized research in universities pay two different kinds of costs to get the work done: direct and indirect. Direct costs are for items whose benefits can be seen to flow directly to an identified project—for example, the salaries of workers, laboratory supplies and equipment. Indirect costs are for items whose costs, benefits, or both cannot be firmly associated with the particular project.

For example, money spent on administering the University aids research in general, but neither these costs nor the benefits they generate can be associated with any specific program. When a research project occupies a defined set of rooms in a building, the benefits associated with its being in that space are clear enough—but the costs of constructing and maintaining the space usually cannot be allocated precisely to it.

How are Indirect Costs Figured?

Indirect costs are added up—pooled—and then allocated to individual research projects by means of an overall indirect cost rate applied to most direct costs expended, commonly called "overhead." The complicated part of this procedure, of course, is the cost-accounting by which the allocations are performed. That is done by the application of generally accepted accounting principles to the particular universe that characterizes sponsored research in universities.

The manual governing this process is the famous (or notorious) OMB Circular A-21, a document on which the universities and the government have been working and negotiating for years. The principles set out in A-21, and studies conducted by the University and government auditors, are used in negotiating an indirect cost rate that establishes the permitted level of recovery.

The Components of Indirect Cost

That rate at Stanford is currently 69 percent of net total direct costs. Table 1 sets out the cost pools—that is, the categories of indirect costs—for this year, shows the amount and fraction of each of these pools allocated to sponsored research, and gives the contribution of each pool to the overall overhead rate. The rate that actually results from these pools is 71.54 percent—about two points higher than the rate negotiated with the federal government. The difference occurs because actual experience—that is, what the costs really are, and what the volume really is—often differ somewhat from the predictions.

Stanford is entitled to collect a positive variance (and must pay a negative one!), but this is done by an adjustment in the overhead rate for projects funded two or three years hence. Thus if our negotiated rate is too low—likely if it remains in place for very long—we may develop a substantial carryforward, due to excesses of unrecovered costs. That, as we shall see, is a problem; for as the carryforward accumulates, it necessitates still further increases in the indirect cost rate to recover the money already owed us.

Table 1 shows that buildings and equipment (including operations and maintenance) and general and departmental administration are responsible for all but about 15 percent of the overall rate. Organized research accounts for about half the cost of our buildings and equipment, and for 40 to 45 percent of our general and departmental administrative costs.

These figures are arrived at by actual studies, in which we measure the fraction of space utilized by different kinds of activity, or calculate the amount of other costs that are associated with organized research projects as compared with instructional activities and the auxiliaries. In total, a little over 40 percent of our aggregate indirect costs are allocated by these studies to organized research.

Even though we and the government have both been firmly wedded to a policy of "full recovery," Stanford is not actually allowed to allocate all indirect costs to the organized research projects sponsored by the government. Federal rules prohibit us from taking overhead on the costs of fund-raising, certain interest costs, and the like.

Corporate sponsors of reseach, by contrast, pay for these things; that is why the indirect cost rate on such projects is higher. (Foundations often insist on paying even less than the government overhead rate, and sometimes decline to pay indirect costs at all. Grants for new research projects from such foundations—of which we can afford only a few!—thus really resemble gifts more than they do government grants.)

Changes in the Overhead Rate

In recent years, the rate of indirect cost recovery has gone up considerably at Stanford and most other private research universities. In 1979-80, for example, the negotiated Stanford rate was 58 percent—within a point or two of that prevailing through the '70s. But the **actual** rate for that year, as audited after it was over, was nearly two points higher.

The estimates of volume and costs for 1980-81 (determined in 1979-80) favored a continuation of the 58 percent rate; and due to unusual circumstances Stanford and the government agreed to continue it for still another year, through 1981-82. That negotiation was not based on cost studies; because uncertainties about the revision of OMB Circular A-21 left the methodology for such studies in doubt, Stanford and the government agreed simply to apply the prior year's rate and deal with any variance in the usual way—by carrying it forward.

Thus, when cost studies were done for 1982-83 using the **new** A-21 principles, Stanford's overhead rate had been held at a fixed level for an unusually long time. When something is held constant for a long period and the rules are then changed, it is not surprising that it jumps.

We did get a jump in the overhead rate of 11 points, to 69 percent. Why was the jump as large as it was? These are the main reasons:

* Energy costs have risen much more sharply than the direct costs of research; this meant that the operations and maintenance component of indirect cost was larger by about two points in the rate.

* A number of new buildings have been built, and older ones renovated, between 1979-81 and 1982-83. The added space has been heavily utilized for research; again, the allocations of O&M and depreciation have gone up, but in this case by less than a percentage point.

* There was a change of university policy to charge major maintenance projects to the current year's expense rather than capitalizing them and applying a depreciation charge to future years' rates. This change applies to the overhead on both instruction and research; during the years in question it had the effect of increasing the research overhead rate by about 1½ percentage points.

* New A-21 rules permit universities to weight various allocations according to the intensity with which utilities and other services are used. Research demands are usually more intensive than instructional demands, so the more precise allocation process the government now allows correctly attributes more of the costs to research. This added a little over three points to the research rate.

* A-21 rules allow accelerated depreciation to be taken on buildings and equipment associated with research. Stanford began using this method for equipment only in 1982-83 (we have used it for buildings since 1962); it added about four points to the rate.

In general, institutions similar to Stanford have had rather similar histories of change in the indirect cost rate. Yale, Columbia, and the University of Rochester are all about where we are, and have risen significantly in the last five years.

Some (Chicago, Princeton, Brown) are just a few points below. (Cornell's rate was unusually high due to a large carryforward, and now has come down somewhat. The rate at MIT is down too, but that is an artifact of a broadening of the base of direct costs to which it is applied.)

By contrast, the publicly supported research universities all tend to have significantly lower rates, although within this category too there is considerable spread.

This divergence, perhaps more than any other feature of indirect cost recovery, has produced doubt and even suspicion on the campuses and in Washington. How, it is asked, can a system that runs according to a single, carefully-derived formula produce such divergent results in similar places?

The answer is that institutions really are dissimilar in the way they operate their internal economies, and in their capacity to do the studies, the cost accounting, and ultimately the negotiation that are required to justify to the government a particular rate.

At Stanford we have vigorously pursued a policy of fully allocating research costs and fully recovering them. Institutions also differ in the balance of teaching and research investments they have made—including investments in administrative systems as well as in facilities. Those, like Stanford, that have tried actively to support research ventures find that the ratios between research and instruction pools are tilted toward research, thereby increasing the rate.

There is, in short, no reason to suppose that two institutions, even equally distinguished ones, will have the same indirect cost recovery rate.

For the low rates prevalent at public institutions, there is a special explanation. At many state universities, the costs of administration and facilities are part of the core funding supplied by the state, and accordingly these costs need not be recovered from contracts and grants.

Even more important, most states require that recovered indirect costs go back into the state treasury, rather than to the university research enterprise in which they were incurred. Research administrators at such institutions freely concede that they simply do not expend resources on cost accounting because they see no benefit in doing so; someone else is getting the money.

Thus we have a two-tiered "price system" among the universities for sponsored research, just as we do for the tuition paid by students, and for the same reason: the difference is subsidized by state taxes.

II
PROSPECTS AND POLICY CHOICES

Indirect Cost Recovery in the LRFF

The overhead rate negotiated with the federal government for organized research projects is 69 percent this year, up from 58 percent a year ago. The LRFF assumes that the rate will remain at 69 percent in 1983-84. It goes to 75 percent in 1984-85, and 81 percent in 1985-86.

The increase from 58 to 69 percent was, as explained earlier, caused by rising energy costs, new buildings, and changes in the government rules for allocating the costs of operations, maintenance, and depreciation. The predicted further increases in the rate are driven by the first two factors, significant declines in direct sponsored research

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Indirect costs...

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volume, and positive carryforwards. None of the rates assumed in the LRFF are at the full recovery level, given the indirect expenses and research volumes that are being projected.

Major gaps between total income and total expense for the operating budget are projected in the LRFF. The gap is $6.3 million in 1983-84; there is an additional $2.1 million in 1984-85, and another $0.7 million in 1985-86. The gaps are caused mainly because the projected overhead rates are not at full recovery.

The gap between our present overhead rate and the future rates needed for full recovery is alarmingly large. It is widened by the twin forces of reduced rates of volume increase, and carryforward.

The LRFF projects that annual research volume will increase from 1982-83 through 1985-86 at the rate of inflation minus one percent, or five percent nominal. This is less than was predicted in past years' forecasts, where growth at the inflation rate or inflation plus one percent seemed likely. It is greater than the actual volume increase from 1980-81 to 1981-82, however. That figure was four percent nominal, or about minus two percent real.

Our latest estimate of the volume increase from 1981-82 to 1982-83 (the current year) is only 3.5 percent, or minus 2.5 percent real. A low rate of volume growth results in an upward pressure on the indirect cost rate, other things being equal. So do the positive carryforwards that have been carryforwards for 1980-81 and 1981-82 amount to about $7.0 million and $10.5 million, because the **actual** rates for the two years exceeded the negotiated rates. The first sum would become available for recovery in 1983-84 and the second in 1984-85.

Our current forecast is that an additional $9.0 million of carryforward will be generated in the current year, which could be recovered beginning in 1985-86.

Recovery that Would be Expected with Higher Rates

Table 2 presents four scenarios for negotiated overhead rates during the period of the LRFF, together with the effective recovery rates that are estimated to flow from the negotiated rates. Total indirect cost recovery (including the School of Medicine) and recovery applicable to the LRFF (which excludes Medicine) for each scenario are shown in the lower portion of the table.

Experience has shown that, even with a policy of full indirect cost recovery, all sums that are theoretically available cannot be collected. This problem is particularly significant in a time of rapidly escalating overhead rates. The lead times between proposal, award, and expenditure of funds (which is when the overhead is actually collected) are such that long lags develop between the authorization by the government of a new rate for use in proposals and its actual application to all grants and contracts. Hence the effective rate lags the negotiated rate.

Stanford tries to renegotiate realistic rates on existing projects, but there are limits. Moreover, when a renegotiation results in an authorization by the government to transfer funds from the direct to the indirect category, but there is no increase in total funding for the project, it is our policy to rebate a portion of the "hurt" to the principal investigator. This practice is reasonable but it does reduce the amount of recovery available to the operating budget.

Scenario "A" is the one used in the LRFF. Scenario "B" achieves full recovery, including carryforwards, by 1986-87. (Recovery of each year's carryforward is assumed to be spread out over four years, starting with the first year of eligibility.)

Scenario "C" sets the rate at the full recovery level for that year's allocated costs (the "base rate"), but does not collect any carryforward. Finally, Scenario "D" is full recovery including carryforwards, year-by-year.

The differences in recovery among the scenarios are significant. Though relatively modest for 1983-84 because of the lag in the effective rate, they become quite large in subsequent years. Some $20 million of recovery during the three years of the forecast rides on the variation in rates between scenarios "A" and "D." The annualized difference in 1985-86, the last year of the LRFF, is about $10 million—which is more than the cumulative budget gap.

Could we possibly push the rate high enough to recover everything? That policy decision depends on some political factors, and on different views of what overhead really is.

Political Factors

The combination of rising indirect cost rates around the country and the shortage of federal funds for many areas of research are fostering negative attitudes regarding overhead recovery within certain government agencies. Key officers in the Department of Health and Human Services, and particularly the National Institutes of Health, have become convinced that the overhead charged to grants and contracts should be reduced—by administrative fiat if necessary.

A proposal to reduce the overhead charged to NIH grants, in the current fiscal year, by 10 percent (as compared to the amount determined by the institution's negotiated indirect cost rate) was defeated in the Congress last summer.

We understand that a similar proposal may be considered for inclusion in the president's budget for fiscal 1984. Such an action would represent a unilateral abrogation of OMB Circular A-21 by NIH. Still other proposals for unilateral reductions in overhead have been mentioned as instruments for stretching the number of grants that can be awarded from NIH budgets.

A joint NIH-university task force was proposed by Congress to study indirect costs for research and, if possible, to find methods for limiting these costs. The AAU will represent the university community if and when the study gets under way.

The situation is clouded because of the possibility that the 10 percent cut may surface again for 1984. Whatever the outcome, however, a further large increase in the overhead rates of the major institutions would increase the likelihood of an unforeseen political outcome.

Two Views of Overhead

Some of the negative attitudes about overhead recovery, on the campus as well as in Washington, stem from a lack of shared understanding about the fundamental principles that should govern the allocation of indirect costs to organized research.

There are two quite different views on what overhead rates should represent.

1. The prevailing "official" view holds that the rate is set to recover the full average cost of the work in question as determined by generally accepted accounting principles. The applicable costing principles are negotiated between the higher education community and the federal government, and their application to individual institutions is negotiated with the school's cognizant agency and then applied uniformly to the projects of all agencies. The facts and figures for each school are subject to audit by the government.

The proponents of this view argue that rate-setting should be an objective process of recovering the costs to which the institution is entitled. While the models used for assigning flows of indirect benefit and allocating joint costs are necessarily imprecise, the use of judgment in their application is constrained to a relatively narrow range.

2. The alternative view is that the overhead rate is essentially a "price," like tuition. Accordingly, it should be based on subjective judgment conditioned by market and equity factors—including willingness and ability to pay.

Proponents of the second view understand that the overhead rate is based in part on cost accounting calculations. But they argue that the subjective component in these calculations is very large, citing the relatively low rates of the public institutions as evidence that alternative interpretations of "full recovery" are possible. They say that the process amounts to price setting, with the most aggressive possible cost accounting posture establishing only one end of the feasible range of prices.

The two views of indirect costs have vied with each other for nearly 20 years, ever since overhead rates became significant factors in the funding picture for grants and contracts. The matter is of more than passing interest since, as we shall see, the approach to a number of important policy questions depends upon which view is accepted.

No set of issues has led to greater ill will between research faculty and university administrators across the country (and even between faculty members in sponsored research-intensive and those in other disciplines). This has been true especially in the private universities. The dispute has now become a major factor in the Washington scene, as noted earlier.

Underlying Philosophies

The conceptual basis for recovery of full average cost on federally sponsored projects is the proposition that the government and the universities are in partnership with respect to instruction and research. The university engages in higher education and maintains faculty resources, facilities, and the administrative infrastructure needed to conduct high quality research.

The government decides what research is to be done, by choosing among faculty proposals on the basis of scientific merit in relation to national goals. (Some of these goals are purely scientific and others are related to the missions of the funding agencies.) Each partner, the government and the university, pays its proportionate share of both direct and indirect costs.

The most polar competing theory of federal research support is that grants and contracts should be considered as "add-ons" to the basic mission of the universities. The latter, it is argued, would exist and pursue their present goals even it there were no federal funding for research. The logical consequence of this theory is that sponsoring agencies should pay only incremental research costs. (This is precisely the view taken by most private foundations.) Since it is easiest to associate incremental costs with direct costs, a large direct cost rate is immediately suspect.

While is is correct to say that all direct costs of organized research are variable, the converse is **not** true for indirect costs. **Some** of the latter are fixed, like the salary of the president. But many others are variable, like the cost of processing accounting transactions and those of employment and compensation staff work in the Personnel Department. The costs of building space may be fixed or variable, depending on whether the appropriate space is in short supply. Indirect costs thus reflect a mixture of fixed and variable expenses.

Does the University "make money" on sponsored research projects? If one believes that overhead is just the recovery of full **average** costs to which the institution is entitled, the answer to the question is clearly "no."

But if one thinks of overhead as a price, it is easy to believe that the University does indeed make money work—if for no other reason than because the last project accepted always pays more than its **marginal cost**. (This, in turn, leads to the demand that part of the money collected be returned to the principal investigators who "earned" it, to further support their professional activities.

An incremental sponsored project that pays full overhead does indeed make a contribution to the institution's fixed costs, thus reducing the average cost of all other activities. Yet the project still pays only "its share" of costs. Whether this situation should be viewed as "making money" depends on whether one feels that research sponsors are full partners in the enterprise or supporters of an add-on.

Because the average costs of all academic programs are reduced when sponsored research volume increases, there is room to redistribute funds via the University's central resource allocation process. The converse is true as well: shortfalls must be made up when sponsored research volume falls.

Ideally, the resource allocation process should be viewed as effective in furthering shared institutional goals and equitable with respect to the distribution of funds among disciplines and programs. This is much easier said than done, however, and it is likely that the matter can never be solved to everyone's satisfaction. And, clearly, the difficulties will be greatest in times like the present, when resources are scarce for both the universities and the sponsors of research.

Efficiency Considerations

Other questions about overhead rates are motivated by concerns about efficiency rather than disagreements about philosophy.

Budget-makers in research universities know that a substantial fraction of costs in the indirect category will eventually be paid by research sponsors. According to some critics, this knowledge leads to scrutiny of these costs that is less rigorous than it would be if the university were paying for everything with funds from tuition, gifts, and endowment return.

The analogy to the problems connected with full reimbursement of hospital costs by Medicare and MediCal comes to mind: while the activities in question are worthwhile in absolute terms, they are pushed further than may be deemed desirable.

Some observers also believe that management decisions are "biased" in the direction of maximizing overhead recovery—much as financial decisions in the private sector are affected by tax considerations. Examples include decisions about capitalizing or expensing the acquisition of certain assets, or purchase versus leasing.

The effects of the "externality" of cost reimbursement on management decision-making may reduce the economic efficiency of institutions' administrative and support activities. By treating overhead as a price which is subject to market constraints, it may be argued, indirect costs will be treated the same as all other costs—thus insuring evenhandedness and improving economic efficiency.

Effects of Proposed Changes in the Recovery Rules

The recent proposals by NIH for a 10 percent reduction in overhead rates or caps on certain rate components are motivated by a combination of the arguments given above. The proposed actions would not necessarily have the desired effects, however, and some of them would have disastrous consequences for higher education and research.

These consequences, and indeed the very prospect of moving to the add-on model of sponsored projects, are difficult to square with the concept of a partnership between the government and the universities with respect to national research goals.

The fractional reduction is analogous to a proportionate tax on a commodity. Taxing at the 10 percent level will raise some revenue, but it will have little effect on the demand for the commodity. In the case of overhead, a 10 percent "tax" would save some money for the NIH but it would do little to improve the efficiency of the system. A much larger tax would be needed to cure any "bias" in the decisions of academic administrators, if such a bias does indeed exist, but this could be done only at an impossible cost to the universities. The 10 percent reduction is simply a device for transferring the financial burden of research from one class of payers to another.

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Indirect costs...

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Caps on overhead rates would place the marginal responsibility for the affected classes of indirect costs entirely in the hands of the university. Where the caps operate, symmetry in the treatment of different kinds of costs would be achieved.

Unless the caps were set in a very refined way, however, both the effect on incentives and the financial impact would vary enormously from university to university. It is doubtful that a set of caps that would take legitimate institutional differences into account can be constructed. Without this, the system would be arbitrary, discriminatory and damaging.

A decision to set caps at levels based on the relatively low overhead rates of the public universities would be catastrophic for the privates. We noted earlier that those rates are usually well below "full recovery" as defined by a close reading of OMB Circular A-21. There is a two-tiered system of overhead rates, just as is the case for tuition, with some of the indirect costs of research being paid by state taxpayers in the case of public universities.

Experience with the effects upon teaching hospitals of caps on medical reimbursement does not make one sanguine about a worldd where the same philosophy is applied to indirect cost rates for research. There is no doubt that the high-quality private research universities, which rely heavily on indirect cost recovery to fund their operating budgets, would be the hardest hit. The result would be significant downsizing for these institutions, plus an increase in the full average cost of all their activities—including research—which would have to be made up from already-scarce general funds.

Effects of Market Forces

The operation of market forces is beginning to inhibit further rapid growth of overhead rates. This represents an alternative solution to the problems perceived by government officials, though it does add to the pressure on the established research-intensive private universities. Generally, however, a "market" solution would seem to be preferred to dramatic changes in the rules for overhead recovery.

A number of public universities have very high rankings in terms of the quality of their graduate and research programs. These institutions tend to have lower overhead rates than their private counterparts. As research funds become more and more scarce, part of the public-private competition for research grants and contracts is likely to work itself out in terms of price.

The capacity to do good research is becoming more and more widespread in this country. This is due largely to the fact that graduate programs at the best institutions have been turning out people with doctorates faster than this same class of schools can absorb them as faculty members.

The average quality of faculty at a broad spectrum of universities and colleges, both public and private, has been growing significantly in recent years. Principal investigators at relatively unknown institions are becoming increasingly competitive for sponsored research support. Many of these institutions have relatively low indirect cost rates.

The effects of increased competition for scarce research dollars, especially from the federal government, will mean a hitherto unknown degree of pressure on overhead rates. There are some who believe that this pressure is with us already, and that Stanford's recent decline in research volume is partly due to these price effects.

Stanford's Strategy

In conclusion, while some upward shift of the rate (in relation to the LRFF) may be feasible as a gap-closer, there is little possibility of achieving anything like full recovery during the next few years. Moreover, we do not believe it would be in Stanford's best interest to try to raise the rate to the levels needed for full recovery according to the assumptions of the LRFF.

We face the "triple whammy" of declining direct research volume due to federal cutbacks and increased competition, growing indirect costs due mainly to escalations in wages and energy, and positive carryforwards due to the action of these factors in prior years.

All this is occurring in the context of hardening attitudes against large overhead payments on the part of some important government officials. Full recovery is a casualty of this combination of forces.

The situation has many implications for Stanford's strategy with respect to overhead on organized research projects. Our proposed strategy is set forth below. Needless to say, conditions are volatile—so the strategy may need to change from time to time. Also, a number of important constituencies within the University have a stake in the outcome, and we will want to consult extensively with them before reaching final conclusions.

The strategy:

1. In the political arena, work as hard as we can to retain the concept of partnership with the federal government with respect to research. Attempt to defeat proposals for the unilateral imposition of fractional reductions in or caps on overhead rates. If successful in the above, work jointly with other universities and the government to understand the causes of the recent rapid increases in overhead rates and to identify and implement reasonable mitigations.
2. Set aside, at least for the time being, our policy of full recovery on sponsored research projects. "Price" our indirects at a level that is consistent with political and competitive forces. Learn as much about these forces as we can, so as to do the best possible job of balancing the needs of our operating budget with the realities of the external environment.
3. Reduce indirect expenses as much as possible, consistent with institutional needs and responsibilities.
4. Establish firm policies to prohibit consideration of potential reimbursement of overhead on grants and contracts as an enabling factor with respect to proposed new indirect expenditures, or as an inhibiting factor with respect to any investment aimed at reducing or avoiding future overhead costs. For potential large projects, such as new buildings, include a projection of the effect on the indirect cost rate in the data that informs the decision about whether to proceed.
5. Set the return to full overhead recovery as a major institutional goal. This should be done as soon as possible.

Stanford's record with respect to the control of overhead costs in the operating budget has been very good. For example, the budget cuts in BAP and BEP were disproportionately in the administrative and support areas and a strong discipline has been maintained by the provost ever since. There has been little if any tendency to consider reimbursement effects in making operating budget decisions. Nevertheless, the policy proposals in strategy (4) would provide a useful reminder and safeguard, and also extend the principles to capital projects.

Assuming that the rules are not changed, we hope that a combination of cost reductions and, if conditions warrant, gradual overhead rate increases will return us to full recovery in three to five years. Success will depend, also, upon the faculty's ability to maintain high levels of research volume in the face of increasing competition. We hope that our continued efforts to maintain volume and control costs will result, over the long run, in a full recovery rate that is consistent with political and competitive factors.

TABLE 1

INDIRECT COSTS: 1982-83
(for on-campus research, in thousands of dollars)

	Total allowable indirect cost pools*	Allocation to organized res.	Fract. allocated	Overhead rate
Depreciation:				
Buildings	$ 6,407	$ 3,128	.49	3.84
Equipment	10,462	5,201	.50	6.44
Improvements	990	459	.46	0.56
Operations & maintenance	39,975	19,409	.49	24.11
General & administrative	27,636	11,486	.42	13.08
Sponsored projects admin.	1,496	1,288	.86	1.45
Department administration	26,536	11,324	.43	12.72
Student services	11,795	2,385	.20	2.68
Library	21,182	5,924	.28	6.66
TOTAL	$146,479	$60,603	.41	71.54

**Cost pools exclude unallowable costs of $42.428 million.*

TABLE 2

INDIRECT COST RECOVERY DURING THE LONG RANGE FORECAST PERIOD
(in thousands of dollars)

	1983-84	1984-85	1985-86 Negotiated rate
(effective rate)			
a. LRFF assumptions	69%	75%	81%
	(63%)	(66%)	(70%)
b. Full recovery in 1986-87	72%	80%	88%
	(64%)	(71%)	(78%)
c. Base rate recovery	81%	83%	85%
	(67%)	(75%)	(79%)
d. Full recovery every year	85%	91%	93%
	(68%)	(78%)	(86%)
Total recovery			
a. LRFF assumptions	$62,591	$68,970	$76,206
b. Full recovery in 1986-87	63,385	72,955	83,357
c. Base rate recovery	65,766	76,288	84,232
d. Full recovery every year	66,560	78,789	90,357
Recovery applicable to LRFF			
a. LRFF assumptions	$49,153	$54,422	$60,244
b. Full recovery in 1986-87	49,743	57,125	65,153
c. Base rate recovery	51,515	59,605	65,804
d. Full recovery every year	52,105	61,465	70,360

Political pressures curb full recovery of research costs, Kennedy says

Following is the text of President Donald Kennedy's Feb. 3 Academic Council talk on indirect costs:

History and Status

This year, Stanford has experienced a significant reduction in the recovery of indirect costs associated with organized research projects; and this pressure has, in its turn, brought about significant efforts at expense reduction, internal reallocations of funds, and increased upward pressure on other sources of revenue—especially tuition.

These are not the only effects of the reduction in our indirect cost recovery. Because of the relationship between research volume and the **rate** of indirect cost recovery, already-existing pressures that tend to drive that rate upward will be increased. Two important kinds of secondary effects are likely to follow. Locally—on this campus and others—there may be increased tensions between principal investigators and the administration—the former anxious to keep indirect cost rates low in the belief that this will make their projects more competitive, the latter eager to recover all the funds to which they feel the institution is entitled. And on a more national level, further increases in rates are likely to fuel the claim, already made in some quarters, that indirect costs have risen to unacceptable levels and must be contained.

The circumstances in which we find ourselves are, of course, a product of history. Indirect cost rates **have** risen sharply over the past 10 years; and the negotiated rates **do** vary widely between institutions, particularly between public and private universities. These events are not easy to explain, nor is it immediately obvious why the indirect cost recovery rate should be so sensitive to research volume. The trends that are apparent in this history, as well as the complexities inherent in the relationships that tend to raise rates, have both contributed to the confused and unfortunate political climate in which this issue is being resolved, on the campuses as well as in Washington.

It is extremely important for faculty members, trustees, and others at Stanford to understand this complex issue thoroughly. A number of groups have looked carefully at indirect costs—national committees of scientists, private accounting firms, and the GAO among others.

Each has concluded in the end that the costs are real, the rates are based on sound general accounting principles, and the recovery essentially fair. That does not mean that, as a result of careful discussion of the issue here and elsewhere, we may decide on political grounds **not** to press for the full recovery of costs to which we are entitled. But if that is our decision, it ought to be made with the full understanding of the principles involved, and a realization of what we are giving up. In what follows, I want to expand on other explanations of the indirect costs problem recently provided by Stanford administrators—most recently by the vice-provost and dean of graduate studies and research in his December report to the Academic Senate.

Direct and Indirect Costs

Sponsors of organized research in universities pay two different kinds of costs to get the work done: direct and indirect. Direct costs are for items whose benefits can be seen to flow directly to an identified project—for example, the salaries of workers, laboratory supplies, and equipment.

Indirect costs are for items whose costs, benefits, or both cannot be firmly associated with the particular project. For example, money spent on administering the University aids research in general, but neither these costs nor the benefits they generate can be associated with any specific program. And when a research project occupies a defined set of rooms in a building, the benefits associated with its being in that space are clear enough—but the costs of constructing and maintaining the space usually cannot be allocated precisely to it.

How are Indirect Costs Figured?

Indirect Costs are added up—pooled—and then allocated to individual research projects by means of an overall indirect cost rate, commonly called "overhead." The complicated part of this procedure, of course, is the cost-accounting by which the allocations are performed. That is done by the application of generally accepted accounting principles to the particular universe that characterizes sponsored research in universities. The manual governing this process is the famous (or notorious) OMB Circular A-21, a document on which the universities and the government have been working and negotiating for years. The principles set out in A-21, and studies conducted by the University and government auditors, are used in negotiating an indirect cost rate that establishes the permitted level of recovery.

The Components of Indirect Cost

That rate at Stanford is currently 69 percent of net total direct costs. But the rate that actually results from the cost pools is 71.54 percent—about two points higher than the rate negotiated with the federal government. The difference occurs because actual experience—that is, what the costs really are, and what the volume really is—often differ somewhat from the predictions. Stanford is entitled to collect a positive variance (and must pay a negative one!), but this is done by an adjustment in the overhead rate for projects fnnded two or three years hence. Thus if our negotiated rate is two low—likely if it remains in place for very long—we may develop a substantial carry-forward, due to excesses of unrecovered costs. That, as we shall see, is a problem; for as the carry-forward accumulates, it necessitates still further increases in the indirect cost rate to recover the money already owed us.

What do the cost pools look like? Buildings and equipment (including operations and maintenance) and general and departmental administration are responsible for all but about 15 percent of the overall rate. Organized research accounts for about half the cost of our buildings and equipment, and for 40-45 percent of our general and departmental administrative costs.

These figures are arrived at by actual studies, in which we measure the fraction of space utilized by different kinds of activity, or calculate the amount of other costs that are associated with organized research projects as compared with instructional activities and the auxiliaries. In total, a little over 40 percent of our aggregate indirect costs are allocated by these studies to organized research.

Even though we and the government have both been firmly wedded to a policy of "full recovery," Stanford is not actually allowed to allocate all indirect costs to the organized research projects sponsored by the government. Federal rules prohibit us from taking overhead on the costs of fund-raising, certain interest costs, and the like. Corporate sponsors of research, by contrast, pay for these things; that is why the indirect cost rate on such projects is higher.

Changes in the Overhead Rate

In recent years, the rate of indirect cost recovery has gone up considerably at Stanford and most other private research universities. In 1979-80, for example, the negotiated Stanford rate was 58 percent—within a point or two of that prevailing through the '70s. But the **actual** rate for that year, as audited after it was over, was nearly two points higher.

The estimates of volume and costs for 1980-81 (determined in 1979-80) favored a continuation of the 58 percent rate; and due to unusual circumstances Stanford and the government agreed to continue it for still another year, through 1981-82. That negotiation was not based on cost studies; because uncertainties about the revision of OMB Circular A-21 left the methodology for such studies in doubt, Stanford and the government agreed simply to apply the prior year's rate and deal with any variance in the usual way—by carrying it forward.

Thus, when cost studies were done for 1982-83 using the **new** A-21 principles, Stanford's overhead rate had been held at a fixed level for an unusually long time. When something is held under artificial restraint and then finally released, it is not surprising that it jumps; and we did get a jump in the overhead rate of 11 points, to 69 percent. Apart from this release phenomenon, why was the jump as large as it was? These are the main reasons:

* Energy costs have risen much more sharply than the direct costs of research; this means that the operations and maintenance component of indirect cost is larger.
* A number of new buildings have been built, and older ones renovated, between 1979-81 and 1982-83. The added space has been heavily utilized for research; so again, the allocations of O and M and depreciation have gone up.
* Changed policies allowed us to charge major maintenance projects to current year's expenses rather than capitalizing and then depreciating them.
* New A-21 rules permit universities to weight various allocations according to the intensity with which utilities and other services are used. Research demands are usually more intensive than instructional demands, so the more precise allocation process correctly attributes more of the costs to research.
* A-21 rules allow accelerated depreciation to be taken on buildings and equipment associated with research. Stanford began using this method for equipment only in 1982-83.

In general, institutions similar to Stanford have had rather similar histories of change in the indirect cost rate. Yale, Columbia, and the University of Rochester are all about where we are, and have risen significantly in the last five years. Some others (Chicago, Princeton, Brown) are just a few points below. By contrast, the publicly supported research universities all tend to have significantly lower rates, although within this category too there is considerable spread.

This divergence, perhaps more than any other feature of indirect cost recovery, has produced doubt and even suspicion on the campuses and in Washington. How, it is asked, can a system that runs according to a single, carefully-derived formula produce such divergent results in similar places?

The answer is that institutions really are dissimilar in the way they operate their internal economies, and in their capacity to do the studies, the cost accounting, and ultimately the negotiation that are required to justify to the government a particular rate.

At Stanford we have vigorously pursued a policy of fully allocated research costs and fully recovering them. Institutions also differ in the balance of teaching and research investments they have made—including investments in administrative systems as well as in facilities. Those, like Stanford, that have tried actively to support research ventures find that the ratios between research and instructional pools are tilted toward research, thereby increasing the rate. There is, in short, no reason to suppose that two institutions, even equally distinguished ones, will have the same indirect cost recovery rate.

For the low rates prevalent at public institutions, there is a special explanation. At many state universities, the costs of administration and facilities are part of the core funding supplied by the state, and accordingly these costs need not be recovered from contracts and grants.

Even more important, most states require that recovered indirect costs go back into the state treasury, rather than to the university research enterprise in which they were incurred. Research administrators at such institutions freely concede that they simply do not expend resources on cost-accounting because they see no benefit in doing so; someone else is getting the money. Thus we have a two-tiered "price system" among the universities for sponsored research, just as we do for the tuition paid by students, and for the same reason: the difference is subsidized by state taxes.

So much for the history and present status of the indirect cost problem. What policy choices now confront us?

Here is the difficulty we face:

First, we expect annual research volume to increase at a lower rate than we previously expected: the actual rate as we now forecast it will be at about a percent less than inflation. All things being equal, a low rate of volume growth results in an upward pressure on the indirect cost rate; that is because that fraction of indirect costs that are **fixed** are spread over fewer projects.

Second, the last few years have resulted in large positive carryforwards, amounting to $7 million for 1980-81 and $10½ million for 1981-82. That is because the actual rates for these two years exceeded the negotiated rates.

To recover all of the carryforward and all of the estimated new indirect costs each year based on present accounting policies, would require us to move to rates of 82 percent for 83-84, 86 percent for 84-85, and 86 percent for 85-86. Let me be clear about this: these rates would be perfectly justifiable according to present federal policy and past Stanford practice—that is, insisting upon full recovery. According to the view that rate-setting should be an objective process that seeks to recover all costs to which the institution is entitled, that is exactly what we should do.

But there is a second view of overhead rate, one to which the principal investigators on our faculty are understandably more inclined. According to this view, the overhead rate is essentially a "price," like tuition. It should therefore be based on judgments about market and equity factors, including the competitive status of our own principal investigators versus their counterparts in other institutions, and the political climate in Washington against which future indirect cost policies will be worked out.

These two views of indirect costs have vied with one another constantly over the past couple of decades. The difference between them has produced significant alienation between research faculty and university administrators in many places.

The amount of money at stake in the choice between them is substantial. For example, the full-recovery scenario for the next three years would produce some $20 million more support for the Stanford operating budget than the numbers we have in the long-range financial forecast.

In pressing for **full** recovery, we would face two significant difficulties. First, it is believed by many principal investigators here—with, I must say, more probable cause than in the past—that overhead rates, however realistic, will cause them to suffer a competitive penalty in the allocation of awards. Second, the executive branch agencies and the Congress are both distressed by the rate of increase in overhead. In my judgment, that concern is based upon substantial misunderstanding; but it is nonetheless a political reality.

We are not anxious to have recent proposals by NIH for an arbitrary 10 percent reduction in overhead rates resurrected, nor do we wish to encourage imposed caps on particular rate components.

In conclusion, I think it likely that we will recommend to the Board that it may not be possible, at least in the short run, to stick with our policy of full recovery. The indirect cost rate is being pushed inexorably upward by three forces: declining direct research volume due to cutbacks, escalations in wages and energy, and positive carryfor-

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Financial aid formulas penalize frugal families—Hargadon

College Scholarship Service formulas for calculating student financial need "too often reward spendthriftness and penalize frugality," says Stanford Admissions Dean Fred Hargadon, chairman of the College Board nationally.

The present system "takes a one-year snapshot of a family's financial situation," he told the Stanford Faculty Senate Thursday, Feb. 3.

"If a family has conscientiously saved for their children's college education, so be it. If, on the other hand, they have chosen to spend it on other luxuries rather than save it, they may well be eligible for financial aid under the present system."

The resulting contrasts can be "quite startling," he observed. An immigrant family with no previous college education may have set aside $40,000 toward tuition, while a bank vice president with a large home mortgage could qualify for financial assistance.

"The problem is the system," he emphasized. The dilemma is how to avoid penalizing students for the choices made by their parents. The challenge is to devise a way for rewarding lifetime saving for college, rather than relying entirely on a one-time "snapshot."

For several years, Hargadon has maintained that *willingness* to pay for college may have changed more than *ability* to do so. While student costs have risen rapidly in the past few years, national studies indicate that college expenses now are still about the same fraction of family income they were a decade ago.

"There has been a rather drastic—and from my viewpoint unwarranted—shift in attitude toward financial aid offered students in college," he told the Senate. Where aid was once "gratefully received," now it is "not only expected as some sort of right but...not fully appreciated," even when given.

Stanford is one of the few universities which continues to make undergraduate admissions decisions on a "need-blind" basis, a policy Hargadon strongly supports. About 46 percent of Stanford's undergraduates receive scholarships or grants-in-aid. When those assisted only through loans are included, the proportion receiving some form of aid tops 70 percent.

Since 1966, he noted, the proportion of blacks, Chicanos, and native Americans in the Stanford freshman class has risen to 18 percent. The proportion of women has increased to 42 percent from 32 percent.

Applications have risen to an all-time high of about 14,500, compared to 7,700 in 1966. Class size has remained stable around 1,500, but the number of secondary schools from which it is drawn has risen to 991 from 653.

"When the alumni parents of present applicants applied, perhaps 40 to 50 percent of prospective students were offered admission. Now we offer admission to about 18 percent of applicants," he noted.

During the past decade, the proportion of transfer student applicants offered admission has dropped to 8 percent from 23 percent. A "surprisingly stable" and high enrollment rate of those freshmen offered admission (about 64 percent) and a probable decrease in the number of Stanford students "stopping out" for a while have restricted openings for transfers.

Hargadon said he's "not sure" what the relationship is between tuition rates and those who apply and enroll at the University. But he offered these "hunches:"

1) Since costs at all colleges have risen, there may be a point beyond which parents become a little less sensitive to increases.

"In other words, the difference between $1,000 and $5,000 may appear sufficiently severe so that, oddly, the increment to $10,000 from $5,000 appears less so.

"There is also a point at which some people equate price and quality."

2) The fact that Stanford intends to follow a "need-blind" policy "will undoubtedly attract applicants."

If the University kept its tuition artificially low, the quality of education—and eventually the quality of the applicant pool—would suffer. "The University must walk a tightrope here, and I believe Stanford is doing that with agility and sensitivity."

The basic student budget at Stanford this year totals $12,738. This includes tuition, $8,220; room and board, $3,423; books, $350; and personal expenses, $745.



Bassist Courtney Purrington will give a free concert at 8 pm, Saturday, Feb. 12, in Tresidder Lounge. Joining him will be Jennie Abrahamson, flute; Curtis Smith, cello; and keyboardists Arno Mundt, Jeff Sugarman, and Lee Cosart. Included in the program are works by Lorenziti, Monteverdi, Koussevitzky, Eccles, Handel, Rossini, Bach, Mahler, and Claude Bolling.

Here's an updated summary of copyright laws as they affect Stanford

Following is the text of a preliminary statement on copyright law circulated Jan. 4, 1978 by then Provost William F. Miller to deans, department chairmen, and principal officers of the University.

The first paragraph under "Section II: Course Reserves" was modified by the Legal Office in November, 1978, to read as shown here.

Questions about general provisions of copyright law should be directed to Iris Brest at 497-1324. Questions about library policy and course reserves should be directed to Dale Canelas at 497-2016.

On Jan. 1, 1978, substantial revisions to the U.S. copyright law, embodied in the Copyright Law Revision of 1976, became effective. The law modifies prior copyright law in many respects, including changing the duration of copyright, bringing all copyright under federal law, and modifying certain exemptions from the general rule that a copyright owner has exclusive rights in a copyrighted work.

Of particular importance to teachers and researchers are:

1) A provision that codifies the doctrine of "fair use," under which limited copying of copyrighted works without the permission of the owner is allowed for certain teaching and research purposes.

2) A provision, which is being implemented in the libraries but is not described here, providing special limitations and exemptions for the reproduction of copyrighted works by libraries and archives.

I. Fair Use for Teaching and Research

In respect to the reproduction of copies of copyrighted works for limited purposes associated with scholarship, the law codifies the existing "fair use" doctrine. The fair use provision, Section 107 of the new law, acknowledges that the fair use of a copyrighted work, including reproduction, "for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research," is not an infringement of copyright. The law includes the following factors which will be evaluated by a court in determining whether a permitted "fair use," rather than an infringement of the copyright, has occurred:

"1) The purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;

2) The nature of the copyrighted work;

3) The amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

4) The effect of the use upon the potential market for or value of the copyright work."

The Congressional reports which accompany the new copyright law include two sets of guidelines developed by representatives of publishing groups and educational organizations: a) guidelines for classroom copying in nonprofit educational institutions, and b) guidelines for the educational uses of music. The guidelines set forth specific provisions reflecting the principles that usage must be "spontaneous," limited as to extent of the particular work copied, limited as to its cumulative effect, and limited in not having the effect of depriving the copyright owner of the benefits (royalties) which copyright confers. The guidelines are reproduced in full below, and should be reviewed by persons intending to duplicate a copyrighted work without the copyright owner's permission. The purpose of the guidelines is to state the minimum and not the maximum standards of educational fair use.

Where a deviation from the guidelines is foreseen, permission to use a copyrighted work should be obtained from the copyright owner. Permission to use a copyrighted work may in some instances be given without charge, or a royalty may be required by the copyright owner. A request to copy a copyrighted work should be sent to the permissions department of the publisher in question. Permission request should contain the following facts:

1. Title, author, and/or editor, and edition.
2. Exact material to be used, giving page numbers or chapters.
3. Number of copies to be made.
4. Use to be made of the copied materials.
5. Form of distribution (classroom, newsletter, etc.).
6. Whether or not the material is to be sold.

II. Course Reserves

Libraries at Stanford will accept multiple photocopies or make photocopies of copyrighted materials needed for course reserve if the instructor supplies the permission of the copyright owner.

Lacking such permission, such items will be provisionally accepted while the library seeks permission. When response from the copyright holder is received and the fees are assessed, they will be paid if reasonable. If permission to copy is denied, or if the permission price is unreasonable, we will withdraw the copies and notify the instructor immediately of the withdrawal. (A single photocopy may be made under "Fair use," section 107, without permission.)

Obtaining permission sometimes takes a good deal of time; experience in obtaining permission over the past eight years has shown that, frequently, inquiry of a journal produces information that the copyright is actually held by the author, and four weeks is often quite inadequate to obtain such permission. Four to six weeks may be considered a norm.

Permission may be obtained in several ways. One, a library may be asked to obtain materials for course reserve and writes to obtain permission to photocopy or to purchase reprints; two, written permission may be obtained by the academic department; or, three, oral permission may be obtained by faculty, departmental secretaries or library, in which case a written record is needed of that action. Since use often extends beyond one quarter, the library will, in all cases, request extended use privileges.

Note that filling course-reserve requirements may require two or three months before the quarter begins if the library does not already have the one copy of the publication, if the publication is out of print, or if the copyright holder is not readily available.

Report gives rationale for lowered growth rate of tuition

Following is a background paper on tuition, room and board rates for 1983-84 circulated to the Board of Trustees.

In developing the proposed increase for 1983-84, the several factors taken into consideration in recent years remain essentially the same.

As has been the case in the past, particular attention is paid to the role of tuition in maintaining the quality of the academic program, to our long standing commitment that Stanford continue to draw the best students from a wide range of socio-economic backgrounds, and to charges at comparable institutions.

But this year special effort has been taken to temper the rate of growth of tuition in general recognition of the tightness of the economy. The 9.8 percent recommended increase in general tuition is a drop from the 12 percent figure discussed in the Long Range Forecast presentation in December.

Of principal concern in proposing a tuition increase are maintaining the existing academic program and, further, improving the current program by selectively funding new ventures.

Tuition provides about half the income to the Operating Budget and is the largest single source. Consequently, there is considerable pressure on tuition to meet the costs required to maintain academic quality.

The need to keep faculty salaries competitive with peer institutions is one important example of the cost of maintaining quality. Another is staff salaries. The local labor market in which we compete for staff has not sustained the same kind of dislocation experienced in some parts of the country, although there has been a noticeable slowdown.

Maintaining campus facilities and services adds additional costs that put pressure on tuition. The pressure is moderated, but not significantly lessened, by efforts made this year and in plans developing for next year to cut some costs and keep others from increasing.

With respect to keeping Stanford accessible to a wide range of the most able students, we evaluate the impact tuition increases have had on past student behavior, on the affordability of Stanford in a strained economic period, and on the continued availability of student financial aid.

The studies that are conducted annually to monitor student response to Stanford show findings consistent with those from previous years. Stanford continues to attract the strong and growing interest of the most academically able students from all economic backgrounds.

* The number of applicants for next year's freshman class is currently above what it was last year at this time.
* Entering freshman students come from virtually the same economic backgrounds as was the case five years ago.
* The yield rate for this year (the percentage of students accepting our offer of admission) remains consistently high at 64 percent, a figure comparable to the experience of the past decade.
* The yield rate continues to be strong among the highest ability students whose families are just able to qualify for financial aid. This indicates that the cost of Stanford does not appear to discourage the families who are pinched the hardest—those who pay a large part of college cost and receive the least financial aid.
* A majority of students who were admitted but did not enroll at Stanford chose similar high cost private institutions instead. As in past years our competition is Harvard, Princeton, and Yale (in that order) and not lower cost public institutions.

According to these indices, the applicant pool is large and diverse, and we continue to enroll the kind of students whose characteristics meet the rigorous requirements of the Admissions Office.

Although this information suggests that economic considerations do not deter students from applying and enrolling here, we nonetheless are concerned that sustained high levels of increase in tuition may, at some point, affect the actual or perceived affordability of Stanford.

In this light, we gave considerable weight this year to the general state of the economy. It is our view that a tuition increase of this magnitude will be consistent with public expectations in a strained economy and will not jeopardize either the continued affordability of Stanford or our ability to maintain the quality of the academic program.

About 70 percent of the undergraduates at Stanford receive some form of financial aid—either a loan, a job, a scholarship, or some combination thereof. Slightly less than half of our undergraduates (46 percent) receive scholarship aid through Stanford or through federal and state programs or a variety of outside sources.

Stanford grants (from general funds, gifts, and endowments) total approximately $13.7 million this year, an amount almost double that from 1979-80. State and federal sources have remained virtually constant in terms of absolute dollars over the last year: the California State Scholarship Program provides approximately $2.5 million in grants, and federal grant programs total approximately $1.4 million.

The state grant program may be reduced next year, as the state is cutting budgets to trim its deficit. Our best estimate is that federal sources are more likely to continue at current levels. The bulk of next year's increase in financial aid, approximately $1.8 million, will come from unrestricted funds from the Operating Budget.

Next year the availability of a new state guaranteed loan program, the California Loans to Assist Students Program (CLAS), will also help students meet their educational costs by providing them and their families with a new financial resource.

Stanford's Parent Loan Program will continue, as well. The accessibility of these loan programs along with incremental additions to the financial aid budget will insure adequate financial aid for Stanford students.

The policy of need-blind admissions is growing more expensive as student budgets rise and greater institutional resources are required to meet the demonstrated financial need of all undergraduates. However, determined and creative efforts (such as developing the CLAS Program and monitoring our interest in Sacramento and Washington) have enabled us to remain one of the shrinking number of institutions committed to this important policy.

The following table shows the rate of growth in tuition last year at comparable institutions.

School	1982-83 Tuition Fees	Percent Increase Over 1981-82
Harvard	$8,820	17.8%
MIT	8,700	17.6
Brown	8,427	15.0
Princeton	8,380	15.6
Wesleyan	8,370	13.9
Stanford	8,220	15.1
Yale	8,190	14.5
Dartmouth	8,190	16.2
Northwestern	8,085	17.4
Cornell	8,000	13.5

The average percentage increase for 1982-83 at these other institutions was 15.7 percent over 1981-82 levels. Stanford's tuition increase, at .6 percent below average, was squarely within the range of these comparable institutions, both as to absolute dollars and to rates of change.

Though there has been no prior consultation between us and the listed institutions, it is not surprising to observe this cluster of tuition change within a narrow range. Universities that are similar in so many of their institutional characteristics can be expected to share common features in their cost and income make-up and, thus, in their tuition.

A few concluding background notes are in order regarding the recommendations for Medicine (MD), Law, and Business.

Although Medicine (MD) sets its tuition separately, it is growing next year at the same rate as the general University tuition.

The tuition for the School of Law is $150 higher than the University's general rate, rounded to the nearest even number to be divisible by two for accounting purposes. This differential was established during the Budget Equilibrium Program and made effective in 1976-77.

The Graduate School of Business is recommending that tuition for that School follow the model of the School of Law. Its tuition, beginning next year, is recommended to correspond to the University's general rate, plus a $150 differential. The added revenues from the $150 differential will be used to support innovative teaching and research projects.

Room and Board Rates for 1983-84

. The Committee on Finance and Administration and the Committee on Academic Affairs and Development recommend that the basic undergraduate room and board rate for the academic year 1983-84 be set at $3,812, an increase of 11.4 percent; that the basic room rate for undergraduate residences with full University services be set at $1,729, an increase of 14.5 percent, and the basic board rate for 19 meals per week be set at $2,083, an increase of 8.9 percent. Further, they recommend that the vice-president for Business and Finance be and is hereby authorized to approve a complete schedule fo specific rate increases, averaging 11.4 percent for apartments, residences, and food services.

Background:

In February, 1982, the Board approved a 1982-83 basic room and board rate of $3,423, an increase of 15.5 percent over 1981-82. Room rates for the current year vary from $1,460 for self-operated houses and fraternity clusters to $1,687 for full-service theme houses with self-operated kitchens. Escondido Village rents currently range from $351 per month for one-bedroom apartments to $457 for four-bedroom apartments.

In Governor's Corner, the new student housing complex, 460 spaces have been occupied during the current year. The remaining 360 spaces, still under construction, will be activated in September, 1983. The assumption of nearly $4,000,000 annual debt service on these spaces over a two-year span will produce planned operating deficits of $646,000 in 1982-83, $1,258,000 in 1983-84, and $46,000 in 1984-85. Financial planning for this growth in housing has provided for the accumulation of reserves sufficient to offset these deficits.

For the past six months, a student-staff task group has been examining the internal equity of housing rates, i.e., residence halls vis-a-vis cooperative houses vis-a-vis trailers and apartments. The recommendations of this group call for some modest downward adjustments (0-6 percent) in some rates and for upward adjustments (0-25 percent) in others.

It is expected that the administrative review of these recommendations will be concluded by March 1, 1983, culminating in approval by the vice-president for Business and Finance of a complete schedule of rates for all housing and food service options for 1983-84.

The proposed 8.9 percent increase in board rates will produce a small deficit in the Food Service budget ($52,000 on total expenses of $9,704,000). While food costs are projected to increase at six percent, debt service allocated to the Food Service Department will increase almost four-fold, from $160,000 in 1982-83 to $631,000 in 1983-84, accounting for 2.5 percentage points of the 8.9 percent increase.

Our peer institutions are charging the following for room and board in 1982-83:

School	Room & Board	Over 1981-82
Yale	$3,600	12.9
MIT	3,550	11.6
Harvard	3,280	7.5
Dartmouth	3,307	9.0
Stanford	3,423	15.4
Brown	3,135	7.5
Cornell	3,050	8.2
Princeton	3,150	12.7
Wesleyan	3,080	11.2
Northwestern	3,060	14.2

A comparison of combined rates of tuition, room and board for 1982-83 among those institutions comprising our principal independent sector competition yields the following table.

School	1982-83 Tuition Room & Board	Percent Increase over 1981-82
MIT	$12,250	15.8%
Harvard	12,100	14.8
Yale	11,790	14.0
Stanford	11,643	14.4
Brown	11,562	12.9
Princeton	11,530	14.8
Dartmouth	11,497	14.0
Northwestern	11,145	16.5
Cornell	11,050	12.0.

A summary of the 1983-84 tuition recommendations

Type	From 1982-83	To 1983-84	Dollar Increase	Percent Increase
General Tuition	$8,220	$ 9,027	$807	9.8%
School of Medicine	9,591	10,530	939	9.8
School of Law	8,370	9,178	808	9.7
Graduate School of Business	8,220	9,177	957	11.7

Senate report

Senate to continue discussion of academic calendar Feb. 17

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 8

Summary of Actions Taken 2/3/83

At its meeting on February 3, 1983, the Senate took no action.

Minutes of the Fifteenth Senate
of the Academic Council
February 3, 1983
(Subject to approval)

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, February 3, 1983, beginning at approximately 3:20 p.m. in Room 290 of the School of Law. Present were 35 Representatives, 7 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 1/6/83 were subject to one addition for the record: the entire text of the CIT report was published in the *Campus Report* of 1/19/83, one week after the minutes were published. The minutes were accepted as submitted, subject to this addition for the record.

Report of the Steering Committee

The Chairman reminded Senate representatives that there was an Academic Council meeting scheduled for 4:15 and urged them to remain for it.

Report of the President and the Provost

The President indicated that his report would be given in the next hour to the Academic Council.

The Provost reported that he had recently sent to the Deans of Schools a statement on academic fraud. He had previously consulted with the Advisory Board and the Council of Deans about this statement. The statement will be published in *Campus Report* and the Provost welcomes any questions after its publication.

Report of the *Ad Hoc* Committee
to Study the Question of the Length
of Academic Terms

Chairman Fetter opened the discussion of the major item of business by saying that debate would have to be closed by 4 p.m. because of the upcoming Academic Council meeting. The Steering Committee was not certain how much debate there would be, given the recent discussion on an interim report from this *ad hoc* committee. If necessary, closure on the question could be postponed until the next meeting.

Professor Good, in introducing the report, reminded the Senate of the sole recommendation made by the committee:

> The Committee recommends that Deans and departments consider experimenting with the calendar in such ways as arranging continuing courses and sequences, together with calculating equitable means of faculty teaching assignments. Such experiments must take great care to avoid impeding access to courses by students from outside the School or department.

He pointed out that the committee had considered a number of alternatives to the quarter system, none of them so compelling as to result in a recommendation for change. He also called attention to the minority report prepared by E. Cohen, which presents data challenging one assumption on which the committee report is based, viz., that students learn well on the quarter system.

He then introduced two other members of the committee who were prepared to respond, as he was, to questions on the report: A. Markevich, graduate student in Physics and S. Mahoney, Registrar.

As the discussion began, the question was asked if the committee had considered the technical problems of implementing calendar changes, e.g., how to compute sabbatical credits or the problems of phasing in a new system. Professor Good responded that such problems had been considered, but since no change was being recommended, no planning for implementation had been done.

Professor Good was then asked if the committee had solicited information about the use of the Golub system from the School of Business at Carnegie-Mellon University. He responded that the committee had not done so, primarily because the program had been adopted within a single School there with apparently no impact upon other Schools within that university. If the system were adopted here, it would affect other Schools and would result in different problems.

The comment was made that the Golub system would indeed demand considerable planning and good advising, but it does not appear to be unworkable; for that reason it is regrettable that the committee did not pursue the opportunity to discover conditions at an institution which has adopted the system.

Some variety in course planning within the quarter system was reported for the Medical School. Specialized clinical clerkships, for example, are planned as four-week classes. Biochemistry and Anatomy run for two quarters; Pathology runs for three quarters, with a final exam at the end of the third quarter and examinations at other times to check student progress. The Medical School offers courses both shorter and longer than a quarter, but they all coincide with the quarter schedule.

It was pointed out that in the Humanities and Sciences, partial-quarter courses would be impossible unless the system provided for a compatible set of alternative offerings to finish out the remainder of a partially committed quarter. The committee was charged with having not taken seriously any alternative to the quarter system, and with making its recommendation for experimentation within the quarter system as a compensation for the lack of a recommended alternative.

Professor Good denied the charge, and defended the committee's recommendation as a recognition of the problem and a serious proposal that those who are dissatisfied with the quarter system explore possible ways to get around the problem within the system.

In another comment, the committee was commended for its recommendation that units be used more flexibly to arrange for varied schedules. This suggestion was thought to be a practical and attractive option, making good use of the flexibility that the unit system provides.

There was some discussion of two-quarter courses and why that pattern hadn't proven more popular. There is a concern that such courses result in lower enrollments, either because students don't continue for the second quarter or because they do not enroll initially because of the multiple-quarter requirement. Registrar Mahoney pointed out that for two-quarter courses which are announced as such in advance, the predominant pattern is that students who register in them stay with the course. In many others, the use of either letter grade or N grade indicates that instructor and student have reached an understanding about continuation.

The observation was made that one of the principal reasons the Law School opted for the semester system was that the quarter system resulted in so many two-quarter courses that curriculum planning was inhibited. In order to offer a richer curriculum, the Law School shifted to the semester system and adopted the rule that there would be no sequences, i.e., no two-semester courses. This both provided a time period greater than 10 weeks to cover a substantial body of work and also made it possible to enrich the curriculum enormously. The question was then posed: to what extent is it possible for a School or department at Stanford to conform to the quarter system by registering three times a year (if required to do so) and at the same time conducting all operations essentially on the semester system.

Professor Good pointed out that this is not, apparently, prohibited now and that the committee's report does not explicitly recommend prohibiting it. The report does, however, caution against any action which adversely affects students in other departments and Schools, especially those with sequences of courses required under time constraints.

President Kennedy commented that such unilateral action is much more acceptable for a School like Law which is essentially self-contained. Common sense would indicate that a department or a School with more external interaction would find such a position far more troublesome.

Registrar Mahoney reinforced the point that the issue is really one of fairness to students with rights of access to the curriculum. Decisions made by homogenous groups with highly structured, self-contained curricula are of interest to others, but not of real concern. Independent initiative exercised by other units would raise serious questions involving advising and coherence of programs, especially for the first undergraduate years. This is why the committee suggested experimenting within the quarter system for courses for which it is appropriate, not making independent changes by academic unit.

Student complaints were reported about prohibitive irregularities in course scheduling even within the present quarter system; the fear was expressed that a "looser" system, e.g., the Golub system, might make that problem even worse.

Registrar Mahoney emphasized that the more variations there are in a calendar schedule, the more stringent the requirement that the system be planned and announced definitively in advance. That is not typical of Stanford at present. The variations and late amendments in course scheduling which are characteristic of Stanford under the present system may well be of concern to the new Curriculum Committee of Humanities and Sciences. Adopting a calendar system which features variation would commit us to a prior definitive curriculum.

It was pointed out that in institutions with semester systems (e.g., Yale), faculty may be teaching no more than 25 weeks a year as opposed to about 33 weeks (counting exam weeks) at Stanford. The traditional reading period may extend faculty duty on the semester system, but even so there is some feeling that quarter-system faculty typically spend more time in the classroom and consequently have less time for research. The committee report doesn't indicate that such issues received any consideration by the committee.

Allocation of the work load over the quarter is another issue. Courses with daily homework assignments seem to fit well into a quarter system; project or term paper courses, on the other hand, have problems because the work load peaks later and the start is slower.

Professor Good was asked if the committee had addressed the question of the calendar dates of the beginning and end of the year as had been requested in 1981, since a June commencement is felt by some to put students at a disadvantage in competing for summer employment. He responded that the committee had not considered that question; to his knowledge, it had not been a part of the charge to the committee that it should do so.

President Kennedy commented that he had discussed academic calendars informally with a considerable number of students from time to time over the past year. He found the students he talked to overwhelmingly in favor of keeping the quarter system. Some students are sensitive to the problem of losing early summer job opportunities; others feel that the capacity to work later in the fall is just as valuable for many jobs as the capacity to start earlier in the summer.

Professor Good expressed the view that the only way a substantial change could be made in beginning and ending dates of the academic year would be to go to the early semester system.

With respect to courses in the Humanities, especially those with term paper requirements, the view was expressed that one quarter is felt to be too short a time and two quarters too long a commitment. Even a sequence of five units plus three units is regarded by students as a two-quarter course. For these kinds of courses, the semester system seems ideal and the recommendation of extended unit courses within the quarter system is inadequate to deal with the problem.

The observation was made that systems tend to persist in the patterns in which they began. The problem of dissatisfaction with the academic calendar is real for an important segment of the University. Within that segment there are those who do not believe that the committee's recommendation can ever be implemented in such a way that it will relieve their problems with the quarter system. This observation led to the suggestion that the committee reconsider the problem and come back to the Senate with alternatives.

Upon being asked by Chairman Fetter if his committee was prepared to undertake that task, Professor Good responded that the committee had considered alternatives and was able to recommend none. The Golub system came closest, but even that system did not win majority support.

It was pointed out that the committee was not being asked to propose an alternative to the quarter system, but rather to offer some concrete suggestions on alternatives to ease the problem within the present system.

That might better be accomplished, Professor Good responded, if Senate representatives were to explore the question with their departments and exchange views in the Senate about alternatives.

The view was expressed that the problem is an old one with a long history of debate, that the committee had worked long and hard and seriously to come up with a recommendation that some don't like, that people tend to vote this question mostly on their established values and are not very susceptible to persuasion by debate, and that it would be unjust to send the matter back to the committee.

Though the report had come moved and seconded from the *ad hoc* committee, there were strong differences of opinion expressed about whether or not debate should be closed. Chairman Fetter commented that it seemed reasonable to continue the discussion at the next Senate meeting before taking a vote on the acceptance of this report.

On a motion made and seconded, the meeting adjourned at approximately 4:10 p.m.

Clara N. Bush
Academic Secretary

Evolution of San Francisco Bay studied by research scientists

Fifteen thousand years ago the San Francisco Bay did not exist. Ocean waves lapped up against the shoreline located near the site of the Farallon Islands, and the Golden Gate was only part of a river channel that emptied the Sacramento and San Joaquin rivers out to sea.

This is the theory documented by Brian Atwater, a 1974 graduate of Stanford's masters program in geology, who now works as a geologist for the U.S. Geological Survey in Menlo Park.

Atwater is part of a research team of 20 scientists at the survey, working in cooperation with Stanford's Civil Engineering Department, to study the evolutionary history of San Francisco Bay by examining samples of sediment that are dug up from beneath the bay.

"This project. . . is the first truly scientific and comprehensive study of the Bay as it has changed over time," said John Conomos, director of the study.

Specifically, Conomos has joined together the talents of chemists, biologists, and oceanographers from around the Bay Area to research and document the influence of mankind upon the history of the Bay.

In geological terms, the Bay Area is defined as a "natural estuary"—a dip in the coastline into which a sizable river runs. Both the Sacramento and the San Joaquin rivers flow down to the bay from the Sierra Mountains.

The San Francisco Bay has evolved into the form it takes today because of two major global developments during the past one million years:

1) Movement in the crust of the earth has transformed the Bay from a flat foundation of bedrock into continental hills and valleys, and

2) Worldwide sea-level fluctuations during this time have resulted in the submergence of low-lying valleys.

In a recent book called *San Francisco Bay: the Urbanized Estuary*, Atwater explains that these shifts in the earth's overall geography have brought about the creation of four separate estuarine systems in the Bay Area.

The most recent estuary, which began about 15,000-18,000 years ago, evolved into the San Francisco Bay as we see it today.

At about this time, the Pacific coastline was many miles west of the area that San Francisco occupies today, said Atwater. In order to meet this shoreline, the combined Sacramento and San Joaquin rivers must have flowed through the Golden Gate and traversed an exposed continental shelf.

Only during the past 30 years, Conomos explained, have geologists really explored the natural evolution of the bay at all. "We're trying to understand just exactly how man has modified the bay, and the problems that have resulted because of our presence here," said Conomos.

By studying "core samples" (chunks of sediment that are dug up by engineers to help them in designing bridges and buildings), these scientists are finding that man's settlement around the bay has drastically altered its geography because of four main factors:

* The construction of river diversions;
* The "infilling" of the Bay;
* The increasing number of sewage discharges;
* The effect of channels that are dredged in the Bay's floor for shipping travel routes.

Certain political issues, such as the modification of river channels in the Sacramento Delta, have recently become a threat to the natural evolution of the bay. "These problems might backfire on us in the future," said Conomos.

His group has found that if man were to continue maintaining an efficient system for flushing out the increasing amount of sediment that is being brought down by the rivers, serious problems could result.

"If we choose not to deal with this problem at all, the sedimentation and pollution would someday build up so much that the bay would fill in completely," he said.

According to the results of research work done by Conomos' group, the increasing population of the Bay Area has resulted in rising industrial and domestic waste production. Despite large expenditures on larger and improved wastewater treatment plants, the total volume of pollutants is increasing and the trend is expected to continue into the 21st century when it will have increased two- to three-fold.—**Craig LaGrow**

Spring reserve lists due Feb. 18

Reserve Lists requesting Undergraduate Course Reserve items for Spring Quarter are due in Room 210, J. Henry Meyer Memorial Library on Feb. 18.

Reserve packets, including blank reserve lists and guidelines for placing material on reserve, were sent to department secretaries and faculty Feb. 1.

If you have not received a reserve packet in the mail, please contact the Meyer Reserve Unit at 7-2201, between 8 and 5 p.m. Monday through Friday, so that a packet can be mailed to you. Or you may come to the office to pick up your packet and meet the Meyer Reserves staff. Your prompt return of completed reserve forms increases the potential for materials being available at the beginning of the quarter, particularly for those materials which the Library must order or for which the Library must obtain copyright permission to photocopy.

You can facilitate this process by directly securing permission to photocopy a published article or book from the copyright holder. A copy of written permission secured in this manner must be supplied to Meyer Library.

Financial series still open

Jeannie Thomas, manager of benefits and records, announces that the remaining two of the series of financial planning seminars will be held 7-9:30 p.m. Thursday, Feb. 10 and 17, in the SLAC Auditorium.

Faculty and staff members who missed the first meeting Feb. 3 will still benefit from attending the last two.

For more information, call Mary Simonton, benefits specialist, 7-9393.

The Credit Union: business as usual

The Stanford Federal Credit Union is in a very stable position, says Operations Manager Richard Leigh, who has been acting manager since Ray Brathwaite left the position.

Credit Union members have been worried about their savings, but Leigh emphasizes that "Every nickel of deposit is insured under NCUA federal share insurance."

As to the question of the ill-fated investment in Penn Square Bank, which was taken over by FDIC in July, 1982, "That involved only 2 percent of our assets. We have written down part of that already. The entire investment is being paid out under the control of FDIC. We've lost the earnings, but the total amount of investment is being recovered."

The Credit Union, with a current $12 million in liquidity, is now increasing its loan service to members.

"Members have had to wait for more than two or three weeks for loan approval," said Leigh. "We're trying to reduce that time interval."

Kendall to give doctoral recital

Yvonne Kendall, graduate student in early music and flute, will give her D.M.A. (Doctoral of Musical Arts) recital at 8 p.m. Sunday, Feb. 20, in Dinkelspiel Auditorium.

With pianist Gloria Cheng (A.B. '76), she will perform 20th-century sonatas for flute by Dominutti, Prokofiev, Hovhaness, and Muczynski.

Kendall received her master's degree in flute from the New England Conservatory, where she took master classes with Harvey Sollberger and John Heiss. Before that she studied in New York for a year with Judy Mendenhall.

Kendall is from Tennessee, where she received a degree in music education from Austin Peay State University. She then taught music at an elementary school for two years at Fort Campbell, Kentucky.

At Stanford, Kendall has performed with Alea II, the contemporary music ensemble, and soloed at CCRMA (computer music) concerts. She was a finalist in the National Association of Composers-USA competition in May; Cheng was the winner.

Kendall is also proficient in early dance. Her dissertation will be on 16th-century Italian dance.

Cheng teaches piano in Los Angeles.

How to beat the phone problems

A rash of incoming call-cutoffs has been affecting the University Centrex Telephone System and other high-volume telephone customers in the local area for the past few weeks. Pacific Telephone has been unable to locate the faulty equipment causing the problem and has called in special technical teams to test the lines and circuits in all the local Palo Alto switching centers.

The problem follows a definite pattern of cutting off within the first 15-20 seconds of conversation, affecting incoming calls only, and will, generally, repeat two or three times in a row. The trouble does not seem to be concentrated in one area of the campus, but instead moves around from day to day.

This type of problem is very difficult to locate and your assistance will be appreciated. If you encounter this problem, please ask the caller for the area code and telephone number they are calling from. This is not always possible when the calls continue to cut off, but when you do have the information please report the problem and the originating number to the special Stanford Repair number, 855-1157.

Kennedy on indirect costs...

continued from page 23

wards due to the action of these forces in prior years. In the political area, we plan to work as hard as we can to retain the concept of partnership with the federal government in research, and to gain understanding for the reality of indirect costs. In the meantime, we intend to "price" our indirects at a level consistent with political and competitive forces, while trying to ameliorate both. In addition, we intend to "back up" toward full recovery, by reducing indirect expenses as much as possible consistent with our other responsibilities. We will also give careful consideration to the indirect cost impacts of new projects.

These measures should enable us to return toward full overhead recovery, and we think that ought to be a significant institutional goal. In the meantime, it will limit the risks to our own principal investigators, and also limit the political risks to private research universities as the indirect cost rate is being debated in Washington. This course represents, however—and there should be no mistake about this—a significant budgetary sacrifice for our academic enterprise. By taking corrective steps at the same time, I hope we shall minimize the need for future sacrifices of the same kind.

Volunteer for 'space shuttle flight'

Volunteers are needed for a joint NASA-Ames/Stanford Medical Center study of the role exercise conditioning and health regimen plays in the experience of space shuttle crew members.

The project is recruiting healthy men, 35-50, who are either sedentary or aerobically conditioned. They will spend 54 days sometime after Memorial Day next summer living at the NASA-Ames research facility under conditions that simulate shuttle flight.

Not only will the study be very interesting for participants—they will learn a lot about the space program—but they will be paid for their time.

Those who are interested should call NASA-Ames at (415) 965-5118 and ask for Gail.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

27289-VW (JCC:1914) VICE PRESIDENT: Vice President for Public Affairs; represents Univ in its relationships w/ 'outside world'; manages & directs Univ's relations w/ federal gov't, state gov't, local gov'ts, & local community; supv Univ's informa svs for press, radio, & television; production of official publications; staging of ceremonial events, dedications, & other events open to the public; hospitality to visitors; liaison w/ other colleges & universities & 1 associations of the same; Liaison Officer to Stanford Alumni Assoc & sits on Assoc's Executive Board; QUALIFICATIONS: thorough knowl & understanding of workings of political institutions & processes at federal, state, & local levels; thorough knowl & understanding of workings of higher edu & of its institutions, preferably also of Stanford; must possess sound & articulate verbal & written expression, must have demonstrated commitment to the principles & practices of affirmative action; adept at using staff well & at demonatrating & using sound judgment.; N11; $4166-OPEN.

30504-AW (JCC:2262) FIN/MGMT ANALYST II: Temporary 3/1-12/31 approx; respon budget/acctg offcr for the complex $29 million Utilities Dept budget; develops & implements Utilities budget cycle, consisting of Long Range Forecase, Utilities Funded Budget, Serv Ctr Budgets & chargeout rates, Mid-Yr Rates Adjmts, & Autumn Revisions; presents financial recommendations to top Univ admin; develops & manages a complex sys of monthly mgmt & financial reporting, energy acctg, & Utilities customer billings; advises Dir on Univ financial policies & data processing develop't plans; acts as proj mgr for Utilities Financial Mgmt Sys D.P. Develop't Proj scheduled for completion 11/30/83; QUALIFICATIONS: MBA or equiv exp desirable, but not nec; ability to understand the complex tech Utilities environ & 1 translate it into financial objectives; excel organizational, analytical, & problem-solving skills; extensive knowl of Univ policies & procedures regarding budgeting, data processing, & admin matters.; C07; $2113-2724.

29033-AW (JCC:2270) FIN/MGMT ANALYST III: Staff the Dir of Mgmt & Fin Planning for coord & develop't of policy recommendations in Business & Finance; coord develop't of data processing plans & policies; maint of a basic data base concerning goals, objtives, performance etc; participate as a team member & carry out indiv assignments for various analytical projs involving complex financial & mgmt issues; coord personnel actions & oversee implementation of 9/1 Salary Program; QUALIFICATIONS: understanding of principle & theories of finance, acctg, & data processing; exp in framing complex issues for line mgmt decisions; practical knowl of financial analysis, use of computers as analytical & mgmt tools, & statistics; excel written & interpersonal skills; MBA or equiv work exp.; C08; $2464-3139.

36361-JB (JCC:3330) WRITER II: Fixed term 18 mons fr hire date; asst in documenting acctg policies & procedures for Controller's Offc & Univ manuals; interview Controller's Office people at various levels of mgmt; analyze, organize & write documentation; use computer text editing sys 1 to enter & format mat'l; QUALIFICATIONS: BA in commu or English or equiv exp plus 2 yrs as a tech writer or editor; familiarity w/ computer text editing sys or ability to learn; ability to understand basic concepts of batch & on-line computer sys & fund acctg; able to write clearly, organize a complex body of mat'l, & establish effective working relationships w/ Controller's Offc personnel.; C05; $1670-2086.

16281-TC (JCC:5588) LIFE SCI RES ASST I: Asst principal investigator & research assoc w/ certain lab respon, incl DNA sequencing procedures, isolation & gel analysis of DNA & culture of bacterial & possibly mammalian cells; requires some understanding of theroretical basis for experiments being performed; QUALIFICATIONS: basic theoretical bkground & lab exp in biology, genetics and/or biochemistry; able to use initiative & judgment to interpret results.; C05; $1670-2086.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Feb. 15, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Nonexempt

27090-PM (JCC:1747) LIBRARY SPEC I: Fixed term to 8/31/83; possibility of extension; Mon-Fri & every 3rd Sat.am; act as Circulation assistant in Western Languages Collections, Hoover Institution Lib; charge & discharge lib mat'ls; maint accurate circulation files & daily statistics; registering scholars; explaining lib procedures to users; prep overdue notices; processing reserves; opening lib; asst in photoduplication dept; light typing; QUALIFICATIONS: typ 40+; academic bkground desired; ability to deal pleasantly & effectively w/ public & to handle detailed operations w/ accuracy; applicable lib exp & languages desirable; send appl/resume to Natascha Gass, Hoover Institution, Stanford, CA 94305, 497-2058.; B10; $1189-1246.

29465-PM (JCC:2462) OFFICE ASST III: Fixed term 2/14/83-8/31/83; prov genl sec'l support to Dean's Offc; sort & route mail; type corresp; compose corresp; make arrangements for mtgs & events; act as Dean's sec when sec is out of offc; receive visitors, etc; QUALIFICATONS: typ 60-65; proven ability to handle respon independently & show judgment & discretion in dealing w/ public; good typing skills; familiarity w/ Stanford community, particularly the GSB helpful; send appl/resume to Norma Sandy, Rm 24, GSB, 497-3012.; B11; $1246-1310.

33198-PM (JCC:2512) OFFICE ASST III-SPEC: Respon for all facets of reconciling & entering patient charges into billing sys via computer terminal for adult, pediatric neurology & 3 hospital labs; interface w/ patients & various Stanford Depts concerning procedures & questions about patient charges; compile statistics on revenue & census; respon for all facets of Residency Program; typ resident related corresp; answer phones & route calls, etc; QUALIFICATIONS: typ 60; excel commu, organization & typing skills; ability to interface w/ a wide variety of people & depts; familiarity w/ med terminology helpful; send appl/resume to Phyllis Friedman, Dept of Neurology, Med Ctr C338, 415-5072.; B12; $1310-1373.

24215-PM (JCC:2554) SECRETARY II: 50%; 10-2pm subj to change; flexibility to work some overtime during peak season; prov full range of sec'l serv to Dir of Women's Basketball & her two assistants; answer phone; screen calls; open & distribute mail; typ corresp reports, rosters, lists, instructions; maintain files; must become familiar w/ all letters & files kept in Word Processing Offc pertaining to women's basketball & able to request those records for mass mail projs; submit trip expense reports, check requests, & arranging travel, etc; QUALIFICATIONS: typ 70; well organized & detail oriented; able to handle high pressure offc environ w/ frequent interruptions; excel English 1 grammar/syntax skills; excel typing skills; substantial sec'l exp, preferably in high public contact offc w/ 2 or more supvrs; send appl/resume to Yvette S. Klemm, Athletic Dept., B11; $623-655.

43502-PM (JCC:2554) SECRETARY II: Dept Sec for Med Edu programs(housestaff training program & student edu functions); coord major med clerkships; act as liaison between Student Affairs & the Dept; coord grading sessions & review of courses; coord confidential files on all students entering Med Internships; scheduling of appts, maintaining confidential files & letters of recommendation; prov sec'l support for Student Edu Committee, Dir of Med Training Program, House Staff Administrator & Chief Resident; QUALIFICATIONS: typ 60; prev training or exp performing above listed duties; excel commu skills; knowl of or willingness to learn Xerox 860; send appl/resume to Lynne Aldrich, SUMC S155.; B11; $1246-1310.

30748-PM (JCC:2562) SECRETARY III: Sec II prov full range of sec'l serv to Dir of Men's Basketball & his 3 assistants; receives & screen calls; makes appts; answers corresp; typ corresp; takes dictation in s/h & fr dictaphone; maintains files; uses records fr word processing ctr; maintains expenditures & accts records; trains & supvs work/study students; acts as liaison between Dir & others; arranges mtgs, etc; QUALIFICATIONS: typ 70; s/h 90; substantial (4 1 yrs or more) sec'l exp, preferabl at admin level in high public contact offc for 2 or more suprs; excel English grammar/syntax skills; ability to compose letters or reports independently; must know & apply sound supvry practices; excel typing & s/h skills; send appl/resume to Beverly Yates, AEL 107; B14; $1440-1514

28549-BP (JCC:2562) SECRETARY III: Sec for Dept Chairman; receives & screen calls & visitors; knowl of dept's programs & Chairman's priorities; considerable tact & judgment required; make appts; opens & screens mail; arranges corresp & other bkground mat'ls for reference; answers corresp; writes tech & non-tech reports; require tech terminology; editing; writing, etc; QUALIFICATIONS: typ 80; s/h 120; excel sec'l exp required; college degree or equiv w/ excel English lang bkground; at least 5 yrs exp; word processing exp desired; send appl/resume to Gerda de Werk, Durand 370.; B14; $1440-1514.

SLAC

95086-JM (JCC:8330) UTIL MECH: TMS Unit; operate & maintain eqpt such as boilers, air compressors, DI water plants, sanitary sewer lift stations, pumping sys, pH neutralization sys, environ monitoring sys, cooling tower sys; regenerate a variety of ion exchange resin sys; run chemical tests; QUALIFICATIONS: high sch'l or equiv w/ trade sch'l or training related to pure 1 water sys; must have good mech bkground w/ extensive exp demonstrating high degree of mech ability to operate & maintain pumping sys, air compressors, boilers, etc; must have a couple yrs exp in water chemistry, & in using all types of hand & portable power tools; able to climb ladders & stairs & work outside during inclement weather; able to qualify for gov't driver's license.; A35; $1945. APPLY AT SLAC

95087-JM (JCC:8330) UTIL MECH: TMS Unit; straight or rotating shift; operate & maintain mech utility sys, incl cooling tower, low conductivity water, compressed gases, domestic water, hot water, HVAC, sanitary & storm sewer sys; troubleshoot & analyze mech faults on sys; overhaul & repair eqpt; QUALIFICATIONS: high sch'l or equiv; apprenticeship or equiv desirable; some trade sch'l and/or exp demonstrating high degree of skill in operating & maintaining piping, pumping, compressor, heating, ventilation sys; a couple yrs approp exp or extensive related exp; exp using all types of hand & portable power tools, soldering & brazing eqpt; able to climb ladders & stairs & work outside during inclement weather; able to qualify for gov't driver's license.; A35; $1945. APPLY AT SLAC

Bargaining Unit

31095-PB (JCC:1728) PORTAL MONITOR: TMS Unit; 50%; work schedule varies during bldg hrs; bldg hrs are: M-F, 8am-12 midnight, Sat & Sun, 9am-12 midnight; hrs during Summer Quarter & Intersession vary; some holiday hrs required; performs duties in Meyer Memorial Lib; during assigned hrs examines patrons' book bags & briefcases, etc. to determine that lib mat'ls are properly charged out; enforces lib regulations; transfers the turnstile count of patrons to a tally sheet for each hr & maintains other statistics as approp; answers patrons' questions; opens & closes bldg, etc; QUALIFICATIONS: prev public serv exp; punctuality & dependability; able to work independently; atten to detail; some college and/or lib exp.; A09; $ 6.08.

31094-PB (JCC:1814) BOOK PRESERVER: TMS Unit; performs duties in Binding & Finishing Div of Acquisitions Dept; performs major book repairs; binds paperback volumes into hard covers; prep mat'ls for portfolios; trains students & new staff in book repair procedures; QUALIFICATIONS: good manual dexterity; ability to use various hand tools for making repairs; exp w/ simple machinery in order to effect simple maintenance & adjmts of tools used on job.; A12; $ 6.54.

33001-JB (JCC:3530) REPRO MACHINE OPR II: TMS Unit; 7-4pm; under min supvn will operate a full range of bindery eqpt, the more complex of which eqpt involves set-up & adjmt; also several operations to be done by hand in the bindery; work requires manual dexterity & ability to lift heavy boxes; QUALIFICATIONS: must have training and/or exp in operation of collators, cutters, stitching machines, paper drills & folding machines used in bindery work; able to stand for prolonged periods w/out undue discomfort; A15; $ 7.00.

9294-TC (JCC:5644) LIFE SCI TECH II: Perform skilled procedures involving triglyceride turnover & cholesterol measurements using a Beckman Technicon Autoanalyzer, glucose values, free fatty acid extraction, measurement by Akio's spectrophotometer procedure, & determination of glucose turnover; respon for centrifuging & aliquoting blood specimens obtained fr patients; QUALIFICATIONS: prev exp as a lab tech or equiv training in carrying out biochemical procedures as listed above.; A24; $8.65.

Hospital

Secretary III—Radiation Therapy—#6023 (C-4)— RESPONSIBILITIES: Under direct supvn of Faculty invovled, w/Administration Supvn from Admin. Asst in division of Radiation Therapy. The secy provides clerical support in areas of research & teaching patient care, grant accting, Manuscripts preparation, lecture preparation, & communication necessary for Faculty participation in local, regional, natl & internatl medical responsibilities. Maintains an up-to-date log of continuing medical education credit for licensure, & submits annual record to Assoc Dean of Post Graduate Medical Education. Coordinates Visitor Program to Division, which includes housing, travel, financial arrangemts & facility tours. Assist in preparation & organization of material for internatl & regional committees, as well as Univ, Hosp, Deptl & Divisional Committees which Faculty serve. Coordinates w/Student Affairs the scheduling, visiting student inquiries, evaluations, & record keeping of Radiotherapy Clerkship Program. QUALIFICATIONS: High schl diploma or equiv plus 2-3 yrs directly related experience in academic medical setting. Must have good knowl of med terminology, offc procedures, acctg & word processing eqpt. Must be able to type 60 wpm. Must be able to effectively communicate both orally & in writing, with all Medical Cetner Staff, Physicians, & the general public. Permanent, 7:30-4:30 p.m. M-F, $8.31-$11.46 hrly. Please contact Celia Corchado at 497-6361 or send resume to Employment & Recruitment (SUH), 770 Welch Road, Suite 100, Palo Alto, Ca. 94303.

Health and safety report

Accidents and Injuries Occurring Jan. 31-Feb. 4

Type of Accident or Injury	Number of Incidents	Days Lost
Animal/Insect Contact	1	0
Chemical—Inhalation	1	0
Contact with object:		
Non-impact: sharp object	1	0
Fall from height (includes stairs)	2	0, 0
Foreign body (e.g. in eye)	2	0, 0
Temperature extreme	1	0

Campus crime report

COMMUNITY CRIME INFORMATION
Jan. 31-Feb. 7

Burglary/residence	0	Phone harassment	0
Burglary/nonresidence	2	Controlled substance	0
Burglary/Vehicle	1	Felony arrest	0
Theft/under $200	6	Misdemeanor arrest	5
Theft/over $200	0	Adult booking	5
Bicycle theft	13	Adult cite/release	0
Vehicle accident	5	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	4
Assault	0	Driving under influence	0

Ph.D. oral exams

MONDAY, FEBRUARY 14

Lorne M. Buchman, drama and humanities, "From the Globe to the Screen: An Interpretive Study of Shakespeare through Film," 2:15 p.m., Room 145, Memorial Auditorium. **Philippe Reichenbach,** history, 2 p.m., Room 230, Bldg. 200 (History Corner).

WEDNESDAY, FEBRUARY 16

Rocky Richard Arnold, civil engineering, "Buckling, Postbuckling, and Crippling of Materially Nonlinear Laminated Composite Plates," 3:15 p.m., Terman 251. **Jean Karen Gregory,** materials science and engineering, "Superplastic Deformation in Oxide Dispersion Strengthened Nickel Base Superalloys," 2:15 p.m., Room 550A, Peterson Bldg.

THURSDAY, FEBRUARY 17

Anne Story Miner, business, "When the Person is Antecedent to the Job," 12 noon, Graduate School of Business 272. **Fred Nitzsche,** aeronautics and astronautics, "Aeroplastic Analysis of a Darrieus Type Wind Turbine Blade with Troposkien Geometry," 4:15 p.m., Skilling Auditorium. **Nancy Charlotte Roberts,** education, "Organizational Power Styles: Their Determinants and Their Relationships to Management Effectiveness," Room e114, Education Bldg.

Rental housing

HOUSING AVAILABLE

□ **April 10 to July 15, '83:** London: Hampstead nr Heath. Beautifully furn. hse, 3BR/2BA, FR, study, garden. EXCHANGE or rent. Details incl. photo avail. Call Himmelweit, 321-2052 or 328-6040.

□ **June 22 to July 28, '83:** Fully furn. hse on campus. 3BR/2BA, pool, hot tub. Gardener & clean. woman incl. Must care for dog. $1400 + util. Sec. dep req. Call 497-7196 (day), 493-1882.

□ **May thru July '83 (flex):** Fully furn. hse, 2BR/1BA, nr footbrdge from MP to PA. $475/mo incl. water & ¼ util. Call H. Whiting, 322-5669, 392-1739.

□ **Summer '83:** LONDON HOUSEBOAT. Chiswick-on-Thames. Views, comfort. Suitable for cpl w/teen-ager or 3rd adult. Fully furn. elec. heat, DW, W/D, frig., TV. City water & sewer. $800-1,000/mo. 3 to 5 mo. nego. Call Beard, 323-2755.

□ **NOW:** Tahoe Donner Ski Bowl Condo. 3BR + loft, sleeps 10, color TV, spa. Call Bienenstock, (415) 493-8649.

□ **Aug. to Dec. '83 (flex):** Fully furn. hse 4BR/3BA (1BR/BA w/sep. ent. & rentable), study, FR, 2 patios, 2 frpl, AEK, W/D. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **Late Mar. to early June '83:** Furn. 1BR apt. Menlo Pk. $500/mo. Call 497-3025 or 497-0769 (day), 322-3301 (eve).

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse, 4BR/3½BA, LR, DR, study, library, frpl, pool, view on acre. $1600/mo. incl. grdnr, pool serv., water. Call (415) 327-5204 or 497-4732 (day).

□ **Beg. April 1 for 1 yr:** Charming Los Altos cottage, fully furn., 2BR/1BA, frpl, W/D, cpl. pref., no pets. $700/mo. + util. 1st & last, plus $200 dep. Call (415) 941-4023, or 329-1150 (MWF, 9:30 to 5:30).

□ **NOW:** SKI CONDO. Tahoe Donner, sleeps 8, fully furn. & equipped. Avail Pres. Holiday 2/11-13, wkdys & Easter wk. Low rates. Call Al, 326-3821 (eve).

□ **Beg. Mar. 1:** Professorville historic unfurn. duplex, wood paneled, spacious, 4BR/1½BA, frpl, sleep porch, sm. yd., deck, attic, nooks & crannies. Nr. Stanf, schls. Nonsmokers, no pets. 1 yr. lease, $1250/mo. Call 497-4801 (day) or 427-4830.

□ **Late Aug. to Dec. '83:** RENT OR EXCHANGE: W. Los Angeles canyon hse. 2BR/3BA, 2 dens, easy drive to UCLA, beach. UCLA Law Prof. visit. Stanf. Fall '83. Call Erika, 497-3574 (day).

□ **Mar. to Sept. '83:** M/F to SHARE 3BR/2BA hse, AEK, W/D, nonsmoker, no pets. In Palo Alto, 2 mi. to Stanf. $275/mo. + 1/3 util., $250 dep. Call 856-3680 after 6 p.m.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg. fam. rm., W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, community ctr. Prof. going on sabbat. $1500/mo. Call 325-1709.

□ **June 29 to Sept. 1, '83:** Fully furn. 5BR/2BA hse in old Palo Alto, gardens, deck, tennis, swim priv. $1200/mo. Call 326-5548.

□ **April 5 to July 12, '83:** Furn. hse College Terr., 1BR, patio, TV, garage. $550/mo. Call 857-0585.

□ **July, Aug. '83:** Dwntwn Palo Alto, 1BR/2BA condo, suitable for cpl. Library, pool, security, European air, balcony. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), or 327-3505.

□ **End Mar. to end July (flex):** Los Altos fully furn. hse on cul-de-sac, 6 mi to Stanf., walk to schls, shops. 4BR/3BA. $1200/mo. incl. grdnr, water. Call (415) 948-0936.

□ **Beg. April or May '83:** For 6 mos. to 1yr: 3BR/2BA apt in area 5 mi. from ctr. Paris. 2 cars, wkly clean. incl. Finnish-French Bus. exec. cpl. w/2 daughters wish to EXCHANGE for 2-4BR hse/apt in Bay Area. Will care for pets, garden. Local refs. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Regularly avail.:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Park in good nghbrhds. Close to campus. $525 to $1200/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Beg. Mar. 19:** Furn. 3BR/2BA hse, beautiful, spacious, nr Stanf. New kitchen, W/D, piano, frpl. Fenced yd, no pets. Call COLLECT (602) 299-4499.

HOUSING NEEDED

□ **Beg. April 1:** For 3-4 mo. Cambridge Univ. prof. & wife, seek quiet 2BR hse, apt. nr Stanf. campus. Call 497-2972 or 497-1978 (day), 327-3344.

□ **May 15 to Aug. 15, '83:** Visit. prof., wife, 2 children seek 3BR fully furn. & equipped hse or apt on or nr campus. Call COLLECT, Indiana, (317) 463-3912.

□ **NOW:** VA Resident seeks rm w/ba in Palo Alto during wk. nites in EXCHANGE for my S.F. r. w/ba & priv. entr. Call Margie, (415) 564-2622 (eve) or 493-5000, pager #229 (day).

□ **Mid-Mar. to June (flex):** Visit. prof, wife, 2 pre-sch. child. seek 4BR fully furn hse Palo Alto/Stanf. area. Call (415) 965-1109.

□ **Mid-June thru July '83:** TRADE HOUSES. 4-mbr prof. family seek Bay Area hse for Gattingen, W. Germany. Lovely new home in small vill. nr. Univ. twn. Accessible to fields & forest, 3BR/2BA & study. Car avail. Call (415) 859-4757, (415) 941-4319 (eve).

□ **July '83 to Aug. 31, '83:** Visit. U. of Chicago prof, wife, 2 teenage girls seek fully furn. 3-4BR campus hse. Stanf. refs. avail. on request. Call (415) 856-1145 or (312) 667-3611.

□ **June '83 to Aug. '84 (flex):** Visit prof, Elec. Engr seeks hsng for self, spouse, 12 yr. old daughter. Nonsmokers. Call COLLECT (505) 294-7758 after 5:30 p.m. or write Prof. Etter, EECE Dept., UNM, Albuquerque, NM 87131.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Drawings by Barbara Lynn Scoledes of Los Altos will be shown in the Tresidder Union second floor gallery during the month of February. She has exhibited her expressionistic work widely in the U.S. and also in Canada.

Isaacs piano recital set at TMU

Music doctoral candidate Nicholas Isaacs will present a recital of piano music by Bach, Mozart, Kodaly, and Chopin at 8 p.m. Sunday, Feb. 20, in the Tresidder Union Lounge on the Stanford campus.

The concert is part of the Young Stanford Artists series sponsored by Student Arts at Stanford (STARTS) to celebrate Tresidder's 20th anniversary. Admission is $2.

Isaacs is active as a performer and teacher in the Bay Area, and will also tour with this program in California, Oregon, Vancouver, New Mexico and Oklahoma.

A citizen of Great Britain, Isaacs was for several years professor of music at the United World College of the Atlantic, and a regular recitalist and accompanist in festivals and concert series throughout England and Wales.

He has studied with Adolph Baller, Gerald Moore and Edith Vogel, holds a performer's diploma from the Guildhall School of Music, London, a master's degree in Medieval history from St. Andrews University, Scotland, and is one of several scholars selected by the English-Speaking Union for advanced studies in the U.S.



Nicholas Isaacs

Weilerstein to conduct master class on violin

Violinist Donald Weilerstein will conduct a master class at 7 p.m. Tuesday, Feb. 15, in Dinkelspiel Auditorium.

Weilerstein, a violinist with the Cleveland Quartet, is on the faculty at the Eastman School of Music and teaches at the Aspen Music Festival.

The students in the class will be: Robin Sharp of Palo Alto High School playing Mendelssohn's Concerto in E minor; Michael Moon, of Los Altos High School, playing Mozart's Concerto in A Major; Cristina Ruotolo, of Stanford University, playing Mozart's Concerto No. 4 in D Major or a Wieniawski Concerto. Additionally, Robin Sharp and Michael Moon will play the Bach Double Concerto in D minor.

Tickets at $3 are available at Tresidder Ticket Office and at the door. Stanford students can attend free.

Jazz Band concert in Dinkelspiel Feb. 19

Stanford's Jazz Band, under the direction of Stanford junior Jose Bowen, will perform at 8 p.m. Saturday, Feb. 19, in Dinkelspiel Auditorium.

Presented by the Music Department, the Jazz Band will play tunes by Don Menza, Phil Woods, Les Hooper, and Bowen. Special guests will be Bay Bop and a new jazz quintet.

The Jazz Band will preview their concert outside Tresidder at noon Wednesday, Feb. 16.

Tickets for the Feb. 19 concert are $4 general, $2 students and senior citizens.

Keohane keynote to cover women in communities

Wellesley College President Nannerl Keohane will keynote a scholarly conference on "Communities of Women" at Stanford Sunday, Feb. 20.

Former professor of political science at Stanford, Keohane will speak at 10 a.m. in Annenberg Auditorium.

Made possible by a grant from the Rockefeller Foundation, the conference is sponsored by *Signs: Journal of Women in Culture and Society*, the Center for Research on Women (CROW), and the Stanford Humanities Center.

Editors of *Signs* will serve as facilitators at seven workshops throughout the day. They include Associate Editor Estelle Freedman, assistant professor of history; Editor Barbara Charlesworth Gelpi, associate professor of English; Associate Editor Carol Nagy Jacklin, senior research associate in psychology; Associate Editor Myra H. Strober, director of CROW and associate professor of education; Associate Editor Barrie Thorne, visiting professor in sociology and feminist studies; and Associate Editor Margery Wolf.

The conference is intended for students, scholars, and teachers of women's studies; participants in women's political, cultural and spiritual communities; and the interested public.

Workshop topics

Workshop topics will include: "Bonds and Divisions Among Women in the Workplace," " Cultural Forms and Women's Bonds," "Women's Communities Within Larger Social Movements," "Communities of Single Women," "Networks: Artistic and Political," "Schools as Communities," and "Communities as Survival Strategies."

Commentators will include Lila Abu-Lughod, of the Harvard Department of Anthropology; Sister Joan Chittister, O.S.B., prioress of Mount St. Benedict, Erie, Pa.; Cheryl Townsend Gilkes, Boston University Sociology Department; Sondra Hale, California State University-Long Beach Women's Studies Department; and Paula Harper, University of Miami Art Department.

Also: Emily Honig, UC-Berkeley Center for Chinese Studies; Joan M. Ringelheim, Wesleyan University Center for the Humanities; Leila J. Rupp, Ohio State University Department of History; Kathryn Kish Sklar, UCLA History Department; Martha Vicinus, University of Michigan Department of English Language and Literature; and Luise White, University of Southern California Department of History.

Elizabeth Fitting is conference coordinator. Others helping include Susan Johnson, editorial associate of *Signs*; Helen Neally, Stanford graduate student in political science; Clare Novak, managing editor of *Signs*; and Sylvia Yanagisako of the Stanford Department of Anthropology, associate editor of *Signs*.

Preregistration advised

Due to limited seating capacity, preregistration for the conference is advised. Suggested donation is $5 general, $2 student, and $1 seniors.

Further information may be obtained by calling Fitting at (415) 497-2412. CROW is temporarily located in Room 42, Old Chemistry Building, Stanford, Ca. 94305.



Leslie Friedman

Friedman to be dancer in residence

Dancer-choreographer Leslie Friedman will be in residence at Stanford Feb. 16 and 17 to give a series of workshops and a performance.

Friedman's residency inaugurates the new performance space in the recently constructed Elliot Program Center. According to Alice Supton, assistant dean of student affairs, "This fine new facility will enable residential education to promote more music and dance concerts, poetry and dramatic readings, and faculty-student programs."

Friedman's free public workshops will be held at Otero and Burbank residence halls. The performance will take place at 7:30 p.m. Thursday, Feb. 17.

Based in San Francisco, Friedman has toured her concerts of solo dance nationally. The California Arts Council selected her for its Dance Touring Program, 1981-82, and she is on the Board of Directors of the S.F. Bay Area Dance Coalition.

Friedman received her Ph.D. in history at Stanford. She taught here, at Vassar and Case Western Reserve before leaving academia to devote herself completely to dance.

In her performance, Friedman will present her new full-length work, "Johannes Kepler's Dream," composed of four dances choreographed to Bartok's "Music for Percussion, Strings, and Celeste." Her work has been described as "fresh, witty and inventive, pervaded by a sense of urgency and the unexpected."



Jerusha Stewart will show her designs at 1 and 3 pm Sunday, Feb. 13, at Tresidder.

Chamber Orchestra concert Feb. 18

The Music Department will present the Stanford Chamber Orchestra, under the direction of Andor Toth, in concert at 8 p.m. Friday, Feb. 18, in Dinkelspiel Auditorium.

Featured on the program will be two 1982 student soloist award-winners: Patricia Mikishka, mezzo-soprano, and Yuri Ito, flutist. Chris Christensen, assistant conductor of the Chamber Orchestra, will make his Stanford conducting debut.

Opening the program, Ito will perform the *Flute Concerto in G Major* by Stamitz. Ito is a senior at Stanford majoring in Asian Languages. She studies flute with Frances Blaisdell and is winner of the undergraduate humanities music award.

The beautiful *Les Nuits d'Ete* by Berlioz will be sung by doctoral student Patricia Mikishka. The work is particularly challenging because of the wide range of the *tessitura*.

Mikishka received her bachelor and masters degrees in both vocal performance and music history from the Hartt School of Music in Connecticut. She has soloed with the Stanford Baroque Ensemble, Renaissance Wind Band, and the Stanford Chorus. She studies voice with Lila Stuart.

Closing the program, Christensen will conduct Mozart's *Symphony No. 41, "The Jupiter."* A graduate student in the D.M.A. instrumental conducting program at Stanford, Christensen is also conductor and musical director of the Peninsula Chamber Players and the San Francisco Dance Theatre, and assistant conductor of the San Francisco Ballet spring season. He has conducted SFB performances of *The Nutcracker Suite*.

Tickets are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Black groups plan show on design

The Black Liberation Month Committee, in coordination with the Omega Foundation, will hold an Art and Clothing Design Show from 1-5 p.m. Sunday, Feb. 13, in Tresidder Union.

Various forms of art by Bay Area artists will be displayed all afternoon in the Union's upstairs lobby, where a reception will also be held.

A clothing design show featuring Stanford designer "Jerusha" will be held at 1 and 3 p.m. in Tresidder Room 270. Admission is $3.

Jerusha Stewart is a third-year Stanford Law Student who emphasizes color and movement in her designs. Her work is much influenced by African dress and costume. She also has a collection of unusual handknitted sweaters which will be available in Bay Area stores this spring.

Israeli folkdance

The Israeli Student Organization will sponsor an Israeli Folkdance Workshop and Party from 7:30 to 11 p.m. Sunday, Feb. 13, at the Cubberley High School Pavilion, 4000 Middlefield Road, Palo Alto.

Participants should bring clean, soft dancing shoes and expect lots of good food. Admission is $1.50.



The Cleveland Quartet

Cleveland Quartet plays Feb. 16

The internationally acclaimed Cleveland Quartet will perform at 8 p.m., Wednesday, Feb. 16, in Dinkelspiel Auditorium at Stanford.

The Quartet will perform "Quartet in D Major, K. 499 ("Hoffmeister")" by Mozart; "Quartet No. 1 (1935, revised 1943)" by Tippett; and "Quartet in E-flat Major, Op. 74 ("The Harp")" by Beethoven.

Founded at the Marlboro Music Festival in 1969, the quartet has since toured the world giving nearly 100 concerts annually. They have appeared at the White House, on local and national television, and were the first classical artists ever to perform on the Grammy Awards telecast.

Their RCA recordings have received four Grammy nominations and numerous Best of Year awards from *Time* and *Stereo Review* magazines.

In 1982 the Corcoran Gallery of Art in Washington, D.C., awarded the quartet the use of its "Paganini Strads"—a matched set of Stradivarius instruments once owned by Paganini in the 19th century.

The members of the quartet are Peter Salaff and Donald Weilerstein, violins; Atar Arad, viola; and Paul Katz, cello. All four are on the faculty of the Eastman School of Music and make their summer home at the Aspen Music Festival.

For more information, call Tresidder Ticket Office, (415) 497-4317.

Piano recital by Gloria Cheng

Pianist Gloria Cheng will give a recital at 8 p.m. Sunday, Feb. 13, in Tresidder Union's second floor lounge.

The program will include works of several contemporary composers—Barkin, Martirano, Druckman, and Satie—as well as those of Beethoven and Debussy. Prof. Arthur Barnes of Stanford's Music Department will narrate the Satie.

Cheng received her bachelor's degree at Stanford, where she studied with Nathan Schwartz and Naomi Sparrow, and her master's degree at UCLA under the guidance of Aube Tzerko. She is an experienced solo recitalist, chamber musician, and accompanist whose most recent award was first prize in the first annual Young Performers' Contest of the National Association of Composers-USA.

The program is the second in the four-week Sunday Festival Series sponsored by STARTS in honor of Tresidder's 20th anniversary. Admission is $3 ($2 students and seniors).

Ramsey directs Chorale concert

The Stanford Chorale, under the direction of William Ramsey, will perform at 8 p.m. Tuesday, Feb. 15, in Memorial Church.

University organist Herbert Nanney will join the select vocal group to celebrate the recently installed organ console in Memorial Church.

Featured works on the program will be Haydn's *Missa brevis Sti. Joannis de Deo (Kleine Orgelmesse)* and Britten's *Rejoice in the Lamb*.

Also on the program will be Haydn's *The Musical Clocks* for solo organ; *Psalm 2* and *Ave Maria* by Mendelssohn; *O Sing Unto the Lord* by Mathias; two works by Vaughan Williams: *The Voice Out of the Whirlwind* and *Lord, Thou Hast Been Our Refuge*; two works by Ives: *Psalm 90* and *Circus Band*; and *At the River* by Aaron Copland.

Prof. Ramsey recently returned from a sabbatical, during which he conducted the Philippine Philharmonic and appeared in recital on Philippine national TV.

Tickets for the Feb. 15 concert are $4 geeneral, $2 students and senior citizens, available from Tresidder Ticket Office (497-4317) and the door.

How Rehm, Brown created modern musical 'Cyclops'

Euripides wrote his satyr play "Cyclops" more than 2,400 years ago, but his message is even more valid today: What people do to one another when one says, "I'm No. 1, and don't get in my way."

And in the intervening 2,400 years, the French described it neatly: *Plus ca change, plus c'est la meme chose*.

The connection for Rush Rehm, Stanford Ph.D. candidate in drama, classics and humanities, began in Athens as it did for Euripides. For Rehm it was in 1976, when he met composer Francis James Brown, who lives there, and began talking about possibilities for a modern musical based on "Cyclops."

They've been working on "Cyclops/Nobody's Musical" ever since, often across continents. On Feb. 16 their musical drama will have its premiere in Stanford's Little Theater, as a Drama Department production. Rehm wrote the books and lyrics, and Brown wrote the music.

It's a bold approach to theater, with a jazz-blues-Broadway score, with costuming that dates back to the earliest Greek comedies; and yet offering a story that transforms the musical comedy into a darker mode of revenge and triumph, and man's never-ending inhumanity to man.

"It's very funny, and not heavy-handed," says Rehm. "But while it employs elements of Broadway musical comedy, it's handled in a way that Euripides might approve—setting up expectations in the audience, then undermining and transforming them. The material is substantial, and demands just a little bit more from the audience."

Very free adaptation

Rehm's very free adaptation of Euripides' story of the one-eyed monster named Cyclops and the visitor to his island, Odysseus, provides a disturbing parable of modern times.

Cyclops, a sort of "natural man," has a group of satyrs working as his shepherds. The satyrs, having been shipwrecked, desperately want to get off the island, and call on Dionysus—god of wine, women, joy and sexuality—for help.

Dionysus comes through via theatrical magic, turning the sheep into women, and the women into men. The men are sailors back from the war, looking for food and water. Led by Odysseus, they indeed bring lots of wine. Then mutal duplicity begins as the tale twists.

When Cyclops returns, he feels his island world threatened by the strangers and eats two crew members. Odysseus demands vengeance because, in Rehm's view, "Odysseus is an opportunist who corrupts the pastoral life of Cyclops, a stranger coming to corrupt and destroy a natural world. This has obvious political parallels of invaders and self-appointed bearers of "civilization"—through the centuries and right down to today.

"At first, Cyclops appears to be the victimizer, but turns out to be the victim. At the same time, Odysseus, the manipulator, moves from victim to victimizer. The theme of metamorphosis is central to the play.

"What Euripides is talking about is the double edge of life, the underside of desires, and man's insistent failure to perceive the simple joys of the world, with the result corruption of everyone's dream."



Andre Braugher as Cyclops

The "Nobody" of Rehm's title really is somebody. "Nobody" is what Odysseus calls himself to fool the Cyclops. " 'Nobody,' " explains Rehm, "is the 'they' or 'them' who always are doing something to us, and all too often this 'nobody' is ourselves."

One of the key songs of the production is "Basic Necessities," which relates to food and water, but also, Rehm says, "to other 'basic necessities'—vengeance and triumph. Thus Odysseus justifies himself, as those who would dominate others have justified themselves, confusing selfishness and conquest with real needs. Euripides' day was no different than ours in that respect."

Brown, composer of the score for Christopher Miles' recent film, "Priest of Love," will come to Stanford from his home in Athens for the premiere.

Rehm is directing the production. Costuming and setting are by William Eddelman, past winner of the Bay Area drama critics award for scenic design. The play's theme of male politics and domination is emphasized, as it was in early Greek comedies, by costuming caricature: the satyrs sport oversize phalli.

Musical direction and orchestration are by Steven Ullman, and lighting by John Rathman. Choreography is by Stacey Greenburg.

Performance dates are at 8 p.m. Wednesday-Saturday, Feb. 16-19 and 23-26, with a special matinee at 2 p.m. Feb. 26. Tickets are available at Tresidder Ticket Office, (415) 497-4317.

The production has been made possible by assistance from the Classics Department, Stanford Humanities Center, and the Graduate Program in Humanities, in addition to the Drama Department.

Last year, in discussing the revival of interest in classics at Stanford, Rehm said "There is a tremendous vitality in Greek literature. It's not of a cool order, but extremely alive and kicking. Everything is relevant to today. We are now in a period of political and social fragmentation, and so was 5th century Athens.

Euripides, adds Rehm, still has an important story to tell today.

—Harry Press

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Feb. 9 to cover the week of Mon., Feb. 21 through Sun., Feb. 20.

MONDAY, FEBRUARY 14

African & Afro-American Studies Lecture: "The History of the Afro-American Intellegentsia and Future Trends," with Prof. Emeritus St. Clair Drake. 4 p.m. Bldg. 200, Rm. 30.

Biological Science Seminar: Dr. J. Michael Bishop, Dept. of Microbiology, Univ. of California Medical Center å San Francisco. 4:15 p.m. Room T-175, Herrin Hall, Dept. of Biological Sciences.

Energy Policy Seminar: "The Changing Relationship of Reactor Regulation to Reactor Safety," with Robert J. Budnitz, President of Futures Resources Associates, Inc. Berkeley, Ca. 4:15 p.m. Skilling Aud.

Numerical Analysis Seminar: "On the Nearest Defective Matrix," with James Wilkinson, National Physical Laboratory, England, and Stanford. 4:15 p.m. Rm. 380C, Math Corner.

EE350 Radioscience Seminar: "Computer Simulation of Wave-Particle Interactions," by Hiroshi Matsumoto, Kyoto University, Japan. 4:15 pm. McCullough Bldg., Room 134.

TUESDAY, FEBRUARY 15

Bechtel International Center Film-Lecture: "Acid RainRequiem of Recovery," with commentary by Vance Kennedy, U.S. Geological Survey. Noon to 1 p.m. I-Center. $2.50 for lunch, brown baggers free.

Women's Tennis: vs. UOP. 1:30 p.m. Varsity Courts.

Stanford Museum of Art Lunch Hour Tours: "The Challenge of Modern Art". 12:15 p.m. Stanford Museum.

Baseball: vs. Stanislaus State. 2:30 p.m. Sunken Diamond. General $2, students free.

Communications Design Seminar: "The Use of Spread Spectrum Modulation in Small Satellite Earth Stations," by Rolf Dyce of Equatorial Communications. 4:15 p.m. McCullough Bldg., Room 128.

Applied Physics Colloquium: "Convective Pattern Evolution in Fourier Space & in Color: New Concepts & Experimental Methods in Fluid Dynamics," by Professor Jerry P. Gollub, Haverford College & Univ. of Pa. 4:15 p.m. Applied Physics 200.

S.O.A.R: Meeting for X-Country Ski Clinic to Peter Grubb Hut, Feb. 19-21. 7 p.m. Tresidder Union, Rm. 263.

Music Guild: Violin Master Class, with Donald Weilerstein. 7-10 p.m. Dinkelspiel Aud. General $5, Stanford students free.

Music Department Concert: Stanford Chorale, William Ramsey, conductor & Herbert Nanney, organ. Haydn, Missa Brevis Sti. Joannis de Deo; Mendelssohn: Psalms 2 and 22, Ave Maria; Britten: Rejoice in the Lamb; Vaughan Williams: The Voice Out of the Whirlwind, Thou Hast Been Our Refuge; Copland: At the River; IvesPsalms 90, The Circus Band. 8 p.m. Memorial Church. $4/$2.

Music Department Concert: Voice Recital by Cheryl Karinen. 8:30 p.m. Tresidder Lounge. Free.

WEDNESDAY, FEBRUARY 16

Latin American Studies Bag Lunch Series: "The End of Food Self Sufficiency in Mexico," with Prof. David Barkin, Economist, Universidad Autonoma (Xochimilco). Noon. 582 Alvarado Row, Bolivar House.

Stanford Museum of Art Lunch Hour Tours: "The Challenge of Modern Art". 12:15 p.m. Stanford Museum.

African & Afro-American Studies: Third Annual Black Community Reception. 4-6 p.m. Ujamaa Lounge.

Chemical Engineering Lecture: "Fluorescence Studies of Polymers in Dilute Solutions," by Professor Curtis W. Frank. 4:15 p.m. Chemical Engineering Conference Room.

Electronics in Medicine Lecture: "Artificial Intelligence Consultation System for Clinical Oncology," by Dr. Edward Shortliffe, Dept. of Medicine, Stanford Univ. Medical Center. 4:15 p.m. McCullough-134.

Basic Science Research Colloquium: "Sex and the Single Worm: Reproductive Biology of Schistosome Parasites," by Dr. Paul F. Basch, Dept. of Family, Community and Preventive Medicine. 5:00 p.m. Fairchild Aud.

Men's Volleyball: vs. USC. 7:30 p.m. Maples Pavilion.

Lively Arts at Stanford: Cleveland Quartet featuring Mozart: Quartet in D Major, K. 499, Tippett: Quartet No. 1, Beethoven: Quartet in E-flat Major, Op. 74. 8 p.m. Dinkelspiel Aud. $10.50, $9.50.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

THURSDAY, FEBRUARY 17

Stanford Geothermal Program: "Use of Gravity in Evaluating Reservoir Characteristics of East Mesa," by Tsvi Meidav, Trans-Pacific Geothermal. 1:15 p.m. Mitchell Bldg., Room B67.

Solid Mechanics Seminar: "Aeroelasticity of the Verticle Axis Wind Turbine," with Fred Nitzsche, Grad. Student Aeronautics and Astronautics, Stanford. 4:15 p.m. Skillings Aud.

Financial Planning Program: Financial counseling and free financial analysis by a financial specialist from Waddell & Reed, Inc. of San Jose. 7 p.m. SLAC Auditorium. Restricted to Stanford faculty & staff.

Bechtel International Center Film Series: "Juggernaut" and "Rhythm of Kerala," plus "Glory of Pratishtan" (India). 7:30 p.m. I-Center. .75 donation.

I-Center film on Mardi Gras

Mardi Gras, a high-lighted event in New Orleans and around the world, is the theme of "Always for Pleasure," an hour-long film to be screened at 7:30 p.m. Thursday, Feb. 10, at the I-Center.

The Other Cultures Film Series presents this beautifully photographed and keen observation of Mardi Gras and its musical traditions in New Orleans as part of its regular series at the International Center.

A variety of musical and dance celebrations are depicted, including a jazz funeral, "practice" parades, and a St. Patrick's Day parade. The Black West Indian traditions are explored as well. Particularly colorful sequences show working class blacks competing with one another in dancing, talking, and parading in spectacular hand-sewn Indian costumes of their own design.

The film was finely edited, and the music was recorded live on location by Les Blank. A 75 cent donation is requested at the door for admission to cover the cost of the film series. For further information, please phone the I-Center at 497-1831.

Bechtel to show acid rain film

Acid Rain: Requiem or Recovery, a film distributed by the National Film Board of Canada with commentary by Vance Kennedy of the U.S. Geological Survey, will be presented at noon Tuesday, Feb. 15, at Bechtel International Center.

The film depicts the effect on lakes in eastern Canada and the northeastern U.S. of industrial smoke and automobile exhausts which are injecting sulphur dioxide and nitrogen oxides into the air, traveling hundreds or thousands of miles from their sources, becoming transformed chemically into acids, and coming down to earth in the form of acid rain.

Vance Kennedy was chairman of the first federal agency charged with studying acid rain in 1976 and presently serves on a federal task group which monitors the phenomenon.

The presentation is one of the I-Center's series of Tuesday Luncheon Lectures. Tickets for the lunch are $2.50, available one week in advance and at the door as they last. Brown baggers are welcome at no charge. For more information, call 497-1831 or stop by the I-Center for intercultural hospitality.

The Winter Nuclear Weapons Film Series: "The Ideological Cornerstones of the Nuclear Arms Race". 7:30 p.m. Meyer Forum Room.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

FRIDAY, FEBRUARY 18

Mathematics Dept. Lecture: "Overflow Traffic from a Telephone Trunk Line with Many Channels," by Prof. G. F. Newell, Dept. of Mech. Engineering, UC-Berkeley. 3:15 p.m. Room 380-C, Math Corner.

Materials Science and Engineering Colloquium: "Materials Aspects of High Power, Slab Geometry Solid State Lasers", by Prof. Robert L. Byer. 3:30 p.m. Peterson Lab. Building 550 ,Room 550A.

Music Department Concert: Stanford Chamber Orchestra. Stamitz: Flute Concerto in G Major; Berlioz: Les Nuits d'Ete, Mozart- Symphany in C Major, K. 551, "Jupiter". 8 p.m. Dinkelspiel Aud. $4/$2.

Stanford Law School Film Society: "Lawrence of Arabia". 8 p.m. Kresge Aud. $1.50.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

Coffee House Evening Entertainment: Music featuring many of the areas favorite new & up-and- coming performers. 9-12 p.m. Coffee House. Free.

SATURDAY, FEBRUARY 19

Baseball: vs. UOP. Noon. Sunken Diamond. $2 general, Stanford students free.

Men's Lacrosse: vs. Santa Barbara. TBA. Lacrosse Fields.

Women's Soccer: vs. Humboldt State. 1 p.m. Football practice field.

Women's Tennis: vs. Long Beach State. 1 p.m. Varsity Courts.

Bio. Bridge/S.O.A.R: Jasper Ridge Interpretive Walks. 10 a.m. Jasper Ridge. Free.

Music Department Concert: Stanford Jazz Band. 8 p.m. Dinkelspiel Aud. $4/$2.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

Coffee House Evening Entertainment: Music featuring many of the area's favorite new & up-and-coming performers. 9-12 p.m. Coffee House. Free.

SUNDAY, FEBRUARY 20

The Center of Research on Women: "Communities of Women," a conference to discuss recent scholarship on women's communities. Registration 9:30 a.m. Annenberg Aud. $5 general, $2 students, $1 seniors.

Men's Rugby: vs. Univ. of British Columbia. 1 p.m. Maloney Field.

ASSU Sunday Flicks: "Fast Times at Ridgemont High". 7 & 9:30 p.m. Memorial Aud. $1.50.

Lively Arts at Stanford: Marya Martin, flute. 8 p.m. Kresge Aud. $7.50.

Music Dept. Concert: Yvonne Kendall, flute with Gloria Cheng, piano. 8 p.m. Dinkelspiel Aud. Free.

STARTS concert: Doctoral candidate Nicholas Isaacs will perform piano works of Bach, Mozart, Kodaly, and Chopin. 8 p.m. Tresidder lounge. $2.

EXHIBITS

Recent Acquisitions. Paintings, drawings, sculptures and prints, works of Oriental, Native American and African art grouped by themes. Stanford Art Gallery. Jan. 11 - Feb. 20.

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

Photographs by Olivia Peterson. Coffee House/ Tresidder Union. Feb. 1 - Feb. 28.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Recent Expressionist Drawing Experiences by Barbara Scoledes. Tresidder Union, upper lobby. Feb. 1 - Feb. 28.

"Images in Bloom", by Sally Spence, watercolor paintings. I-Center. Feb. 3 - Feb. 28.

CAMPUS REPORT

Volume XV, Number 20 | A publication for Stanford University faculty & staff | February 16, 1983

Plan to renovate the Farm's historic Red Barn approved

The Red Barn adjoining the Stanford Golf Course, the most significant vestige of Senator Leland Stanford's once world-famous Palo Alto Stock Farm, is slated for restoration.

The Stanford Board of Trustees Feb. 8 approved a renovation concept that calls for preservation of the 37-stall barn and its continued use as stables. The project is estimated to cost between $750,000 and $900,000. Private gift support will be sought. Development of specific restoration and financing alternatives now will proceed.

The University currently is seeking a tenant who will operate the stables and provide equestrian instruction to Stanford students and the public. The paddocks, tracks, paths, outbuildings and land immediately surrounding the barn will be leased on a long-term basis to the tenant. Income from this source may help fund the restoration.

Additional land along Searsville Road will be leased short-term for grazing and riding. That parcel eventually may be needed for other University purposes.

The structure, which one student of Stanford history terms "as much a part of Stanford as Paul Revere's house is of downtown Boston," most likely was built between 1878 and 1880, a search of historic documents in the University's Archives indicates.

The Development Office is "presently assessing the feasibility of fund raising from a small group of interested people principally from the local area," says David Fulton, Development's director of communications.

Fulton expressed hope that the University could tap new or additional gift sources rather than divert money from gifts made for academic purposes.

Stanford alumnus Bill Lane, publisher of *Sunset* magazine, says restoration of the barn provides a "unique opportunity for the University to preserve a heritage and maintain a sense of its roots." Lane said he would be willing to contribute and to encourage others to do the same "assuming that the restoration is architecturally and economically feasible."

If sufficient gifts are received by June, construction will begin this summer and be completed before the next rainy season.

A patched and leaking roof is one of the barn's major problems. The building was closed by the University and horses moved to a smaller barn nearby last November because of the serious leaks. The roof is to be replaced. During earlier rains, water accumulated in horses' stalls and mold

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Students from an equitation class pose in front of Red Barn. Photo dates from about 1948.

Because at this time there is an insufficient number of agenda items to justify the Senate meeting originally scheduled for February 17, 1983, the Steering Committee has asked me to announce the cancellation of that meeting.

The discussion of the report of the **Ad Hoc** Committee to study the question of the length of academic terms will be continued at the next meeting of the Senate, scheduled for March 3, 1983. The usual notification and agenda papers will be mailed to you in advance of that meeting.

Clara N. Bush
Academic Secretary

SPECIAL PULL-OUT SECTION
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Sale of state bonds provides new loan source for students

A new program which will provide loans of up to $3,000 at 12 percent interest soon will be available to help Stanford students and their parents finance college costs. Unlike most other loan programs, no proof of financial need will be required.

The California Loans to Assist Students (CLAS) are available statewide to graduate students, independent undergraduates, and parents of dependent undergraduates. They are funded by a California Student Loan Authority bond issue of $121 million.

Approximately $97 million in proceeds from the bond sale will be available for loans during the next two to three years for students who are residents of California or studying in the state.

Graduate students and parents of undergraduates will be able to borrow

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Personnel task force reports findings, recommendations

Stanford should adopt a human resource philosophy, decentralize personnel responsibilities where appropriate, expand its supervisory training program, and recognize supervision as a principal responsibility.

These recommendations come from a University Task Force on Personnel Policies and Administration.

In a report submitted to the Administrative Council Feb. 2, the task force said there is need for a "broadly shared belief that effective human resource management is everyone's responsibility and that the continuing excellence of the University depends on it."

Recommendations covering human resource philosophy, balance between central and local responsibility, supervision, pay and classification, staff development, affirmative action and employment, and problem solving are included in the long-awaited report.

The task force also seeks adoption and distribution of a statement of human resource philosophy calling for a "culture in which there is harmony between achievement of University goals and regard for each individual's aspirations and capacity to contribute."

The University should continue to maintain a single University-wide pay and classification structure, but should decentralize individual nonbargaining unit classification decisions, the report recommends.

Department heads "often feel they cannot fulfill their responsibilities because of the bureaucratic maze they must travel in dealing with personnel matters," the report says.

Administrators in central offices, on the other hand, "are frustrated because they see departments willing to take actions which, while locally expedient, are without apparent regard for broader institutional interests and commitments. Consequently, they construct an elaborate administrative mechanism in an attempt to safeguard the University from itself," the task force says.

Following presentation of the report, the Administrative Council instructed the Personnel Department and vice-presidential senior staff members to assess the recommendations' likely impact and ways to implement them.

The assessment will take about three months.

The Administrative Council will discuss the proposals with the Deans' Council before deciding, probably in June, which of the 23 recommendations to implement.

The task force of senior officers and faculty members, appointed in August 1981, met 31 times, sponsored an opinion survey of 1,300 nonbargaining unit staff conducted by SRI International, and

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People

James Ware elected trustee for five years

W. James Ware, 36, partner in the Palo Alto law firm of Blase, Valentine, and Klein, has been elected to a five-year term on the Stanford University Board of Trustees, effective immediately.

A 1972 Stanford Law School graduate, he has been active in fund-raising for the University, served on the Law School Board of Visitors during 1977-79, and is a member of the Stanford Commission on Investment Responsibility.

He is vice-president of the board of the Stanford Midpeninsula Urban Coalition and a board member of the Midpeninsula Citizens for Fair Housing, the Santa Clara County Bar Association, and California State Bar Civil Litigation Consulting Group.

He has been president of the California Lutheran College Alumni Association since 1981. He received his bachelor's degree there in 1969, serving as student body president and being chosen most outstanding senior.

At Stanford, he was president of the Black Law Students Association, served on the Stanford Judicial Council, and was a member of the Stanford Legal Aid Society.

He also taught undergraduate courses on "Understanding Racism and Prejudice" and on "Legal Aspects of Campus Unrest" through the Stanford Workshops on Social and Political Issues (SWOPSI). He was a teaching assistant to Prof. John Kaplan in the undergraduate course on the criminal justice system.

He became an associate of Blase, Valentine and Klein in 1972 and a member five years later. His practice is primarily civil litigation in state and federal court, in cases involving trade secrets and unfair competition, breach of contract and other business laws.

Honored by the American College of Trial Lawyers and the International Academy of Trial Lawyers for his moot court activities, he served as president of the Stanford Moot Court Board in his final year at Law School.

He is a member of the bar for the California Supreme Court, the U.S. District Court for both Northern and Central California, and the U.S. Court of Appeal for the Ninth Circuit. He is a member of the Palo Alto, Santa Clara and Charles Houston bar associations.

Born Nov. 2, 1946 in Birmingham, Ala., he was the son of a coal miner. He graduated with highest honors from Carroll W. Hayes School in 1965.

He is married to Susan (Stoll) Ware, a Stanford Law School classmate and attorney. They have two children, Jeremy Patrick, born July 8, 1974 and Carlie Ann, born July 18, 1978.



W. James Ware

Physicists seek nuclear arms limit

The American Physical Society, through its elected Council, has called on the U.S. and the Soviet Union "to intensify substantially, without preconditions. . .efforts to achieve an equitable and verifiable" agreement to limit nuclear arms.

Its position was drafted by Profs. Sidney Drell and Wolfgang Panofsky, both of Stanford University; Hans Bethe, of Cornell; Marvin Goldberger, of Cal Tech; and Herbert York, of UC-San Diego.

Both the U.S. and the Soviets should "reduce significantly" the number of nuclear weapons and delivery systems, the APS said. It urged both sides to:

1) conduct negotiations to restrict the use and limit the deployment of battlefield and intermediate range nuclear weapons;

2) resume negotiations to prevent the spread of nuclear weapons in outer space; and

3) initiate serious discussions to ban the testing of nuclear weapons in all environments for all time, as called for in the Non-proliferation Treaty.

Both sides should avoid military doctrines and deployments that treat nuclear explosives as ordinary weapons of war, APS added. Both should take "all practical measures" to inhibit further proliferation of nuclear weapons to additional countries and to reduce the risk of nuclear wars by accident or miscalculation.

Scott, Sandler win Boothe prizes

Darieck B. Scott of Ft. Leavenworth, Kan., and Susan E. Sandler of Lafayette, Calif., have been named first recipients of the Boothe prizes for excellence in writing at Stanford.

Two prizes, each worth $250, will be awarded each quarter for the best essays in freshman English and in Western Culture, respectively.

Selected by a faculty committee, the awards are named for their donors, Mr. and Mrs. D. Power Boothe, Bay Area residents who have supported the humanities at Stanford.

Scott's essay, entitled "The Devil We Know," was written for English 1D, Section 1, also listed as LAC 8. The essay analyzes D. H. Lawrence's "The Rocking Horse Winner" and concludes that the mother in that story arouses empathy rather than hatred because she is "the villain in us all."

Sandler uses the topic of human frailty in her Western Culture essay to draw comparisons between the works of Thucydides, Aristotle, Homer, Plato, and the Bible. In the characters and philosophies of each of these works, she connects the causes of frailty with some kind of division—between man and the powers beyond him, between man and other men, and within man between the separate parts of the self.

Seven runnersup will receive $25 gift certificates usable at the Stanford Bookstore. Finalists in freshman English were Elizabeth Cheatham, Bradley Chen, Jim McMillan, and Ken Schum. Finalists in Western Culture were Susan E. Rice, Geoff Hindall, and Laura Joy Edelstein.

An inaugural reception celebrating these awards is planned at 4:30 p.m. Tuesday, Feb. 15, 4:30 in the Dean of Humanities andSciences office,Bldg One.

For more information, call Jacqueline Bryan, 7-9784.

Care to exchange faculty position?

A listing of faculty members interested in exchanging positions with colleagues in other institutions for all or part of an academic year is now available from the Western Interstate Commission for Higher Education (WICHE).

The publication, *Faculty Exchanges*, lists over 200 higher education faculty members at western institutions who would like to exchange positions with faculty at other western schools for a semester or longer during the 1983-84 academic year or for the summer.

Individuals may obtain copies, without charge, by writing to: Faculty Exchanges, WICHE, P.O. Drawer P, Boulder, Colorado 80302. For further information contact Karen Fisher at WICHE (303) 497-0273.

Summer housing in dormitories

Summer housing in University residences is available to visitors, guests, and students, according to manager of conferences Lois Fariello.

Stern Hall offers single and double rooms (twin beds) with maid service, blankets, and linens. Bathrooms are shared. Rates vary from $18.50 per night for short-term stay in a single room to $10 per night for a long-term stay in a double room.

Mirrielees Apartments are sometimes available for a minimum stay of four nights. They have one bedroom (twin beds), living room, bath, and kitchenette (no utensils). Cleaning service, blankets and linens are provided. These apartments are only for single persons or married couples without children.

Rates vary from $42 per night for two people staying a short time to $20.25 per night for one person staying for a long period.

Laundry facilities and parking are provided, and other campus facilities—libraries, swimming pools, tennis courts, and golf course—are available for use.

For further information contact the Conference Office, 123 Encina Commons, 497-3126.

Faculty openings

Opthamology needs researcher

Retinal Electrophysiologist. Research Associate or Postdoctoral position available immediately to study the c-wave as a clinical tool in man and investigate responses of the retinal pigment epithelium in mammals.

Send curriculum vitae and references to Dr. Michael F. Marmor, Division of Opthalmology, A227, Stanford University Medical Center, Stanford, CA 94305.

Stanford is an equal opportunity employer; applications from women and minorities are encouraged.

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McBride:Computer matching cuts fraud $2 billion annually

Savings to the taxpayers of up to two billion dollars a year may be possible by matching computerized records in the various government data-banks.

The ability to detect fraud in the 200 federal and state projects that cross-check computerized information is increasingly effective.

But it should not be left to bureaucrats to decide on the safeguards to individual privacy in this process. It should be decided by Congress.

So says Tom McBride, the man who saved large sums for the public while he was inspector-general of two major U.S. departments, Labor and Agriculture. He was personally cited by President Reagan, in March 1982, as an example of an outstanding manager.

McBride headed the President's Computer Matching Project, a key element in the Administration's anti-fraud and waste campaign. Earlier he had prosecuted 20 major corporations and scores of individuals. Among his successful targets were corrupt government and union officials, big-time illegal contributors to politicians, and backstairs purchasers of ambassadorships.

McBride now has a new task, as associate dean of Stanford Law School, a post he took up last October.

In a campus interview he explained how computer matching helped to catch cheaters in government programs of all types, from kickbacks and bribery in government to agriculture corporations which tried to double-dip in farm relief programs.

"Let's talk first of those programs which are most visible to the taxpayers," suggested McBride. "This is where the public is most worried.

"There are 58 government benefit programs in which eligibility for participation depends on financial need as determined by the applicant's income and assets. In addition, there are the large insurance programs, such as social security and unemployment compensation.

"Social security retirement benefits are now running at about $150 billion a year, while federal and state costs for unemployment compensation total some $26 billion. There are also tremendous government expenditures involving such areas as highway construction, public works and defense contracts.

"Audits and investigations have amply demonstrated that fraud and waste occur in all of them, and that modern computer applications can be employed effectively to help contain costs, prevent fraud, and detect overpayments."

The Computer Matching Project, he said, was sponsored by the President's Council on Integrity and Efficiency. It was established to promote the use of computer matching and related applications of modern information technology, to help detect and prevent fraud and overpayments in government programs.



Tom McBride

Losses from mismanagement and criminal activities preying on the programs amount to billions of dollars a year. The General Accounting Office estimated that overypayments from major benefit programs amounted to $867 million in fiscal year 1979.

The GAO estimated that by 1982, without corrective action, overpayments in federal expenditures would exceed $1 billion.

"Most people realize that this is going on, but they don't know the extent," said McBride. "It is apparent that the public is increasingly aware that cheaters are successfully exploiting the nation's taxpayers, and that management countermeasures have been insufficiently effective.

"This undermines not only support for the continuation of government programs, but also respect for the government itself."

An interviewer asked McBride to comment on fears that computer matching may lead to possible invasions of privacy and violations of individual rights.

"That has been a principal concern of the Computer Matching Project people right from the start. In fact, the project work plan characterizes its overarching purpose as expanding the use of computer matching and related techniques 'with effective safeguards to protect the rights and privacy of individuals.'

"What we are talking about is, in effect, drawing a balance. On one hand, government managers must responsibly employ the most modern and effective means available to ensure that taxpayers' money is not being wasted through fraud or error. on the other hand, safeguards must be built in to make sure that privacy rights are protected."

A concern often expressed about computer matching is that it will incrementally lead to the development of a national data base which contains complete information on each citizen, a source which could be freely tapped and used.

McBride does not agree with this concern.

"That is patently impossible," he said. "The rules are that as soon as a 'match' of data from the computer records is made, the file that was used must be returned to the agency that supplied it, or be destroyed. Lists of the matching items, or 'hits,' have to be destroyed as soon as investigations have been conducted. Thus, no files accumulate."

Who gets access to the files while the investigation proceeds?

"There are administrative, technical and physical security safeguards for all files matched in order to prevent unauthorized access. Files cannot be duplicated or disseminated within or outside an agency performing a match. They can be used or accessed only to match the files previously described and agreed to in writing.

"Furthermore, files cannot be used to extract information concerning individuals that has nothing to do with the match being performed. In this way, fishing expeditions are precluded."

Last year the Administration authorized the IRS to help the social security and selective service agencies. Legislation was passed covering other areas so that private debt collection agencies working for the federal government could get tax-return information. It was also made easier for law enforcement agencies to gain access to tax data in criminal investigations. What did McBride feel about this?

"The safeguards are as I explained earlier. You have to balance the privacy interest against legitimate governmental interests. We cannot blink at the fact that there is a substantial amount of fraud, that unfortunately people do lie and cheat, and that many of the government programs, because of the lack of adequate verification, are little more than self-certification programs."

McBride believes strongly that government administrators should not be expected to ıe perform the balancing between governmental needs on the one hand, and the on requirement for individual privacy on the other.

"This should be decided by Congress," he said. "If, for example, Congress is concerned about cheating in certain of the welfare programs—where a very poor job is done, in my opinion, in verifying elgibility—then Congress should direct the administrators of the program to gain access to wage and other data."

What about tracking down defaulters in government debts?

"That is a legitimate concern. There are about $30 billion outstanding in delinquent government debts, ranging from student loans to VA loans, and the government has had a lot of problems in trying to collect this. Now that I am in a university setting I realize what a problem the student loan defaults are."

What about the use of IRS records to track down draft resisters?

"That is essentially a political and ideological question, It is one thing to get IRS data to go after someone who owes the government money. It is quite another to use that data for totally unrelated (and non-financial) investigative purposes, such as violations of the selective service laws.

"I am not clear whether Congress has authorized this, and personally, I don't think they should."

So McBride's position was that in some cases the need for information by the government may outweigh concerns for individual privacy, but not in all cases?

McBride agreed with this summing up. He was

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Asian Languages offers graduate students chance to study in Beijing

An opportunity to study in the Department of Chinese Language and Literature at Beijing University is available to advanced Stanford graduate students whose work would be enhanced by study in the department (language, linguistics, literature, and certain areas of philosophy and history).

This program is offered under the Chinese Language and Literature Department at Beijing University and the Department of Asian Languages at Stanford University. Applicants must have at least intermediate level Chinese language skills.

Students going to Beijing under this exchange will only be able to enroll in courses offered by the Beijing University Department of Chinese Language and Literature, not in other University departments.

Stanford students selected for this program will be registered at Stanford at the appropriate tuition rate for their level of study. They will pay, in addition to the Stanford tuition, a program fee of $4,500. This fee will cover the expenses of study or research and board and room at Beijing University. Full residence credit toward the Stanford University degree will be received for work in Beijing.

Any financial support for which the Stanford student would normally be eligible if in residence at Stanford may be applied to the program fee and tuition charges. Additional expenses beyond the program fee which should be anticipated are travel costs (mainly round-trip to the PRC), plus minimal miscellaneous costs.

Students interested in this exchange program should see Prof. John Wang, chairman, Department of Asian Languages, and obtain the necessary application forms from him. All material should be on file by March 31, 1983.

Selection will be made by a Stanford Ad Hoc Committee on PRC Exchange, and notification of nomination will be made by April 30. The credentials of those selected will be sent to Beijing University for final selection.

A deposit of $500 must be paid by June 15. The balance of the program fee is due by August 15. These funds are to be deposited in the Graduate Awards Office. In the event a student withdraws for personal reasons, all funds will be refunded up to August 15. After that date the $500 deposit will be retained. Students on Stanford fellowships may have these funds automatically applied on request.

In the event that the student is unable to go to the PRC because no placement is offered in Beijing University, the full payment will be refunded.

Health and safety report

Accidents and Injuries Occurring Feb. 7-11

Type of Accident or Injury	Number of Incidents	Days Lost
Contact with object:		
Pinched, squeezed, crushed	1	0
Fall from same level	2	0, 0
Eye strain	1	0
Temperature extreme	1	0

McBride/ continued from page 3

invited to give an example of results obtained by computer matching.

"In some early tests in Memphis and Nashville, we found over 1,600 cases of unreported income in the Food Stamp program, through computer matching. Nearly half of those people were also benefiting from other government programs. Losses from that sample of cases were over $3 million. Monthly savings for the food stamp program alone were over $80,000.

"Expected savings in New York State from matching wage records was over $114 million from 1979 to 1982.

"It has become more and more apparent that computer matching is a quick, efficient and highly effective means of detecting fraud and overpayments."

Is the information supplied by taxpayers on their income tax forms kept secret?

"The Tax Reform Act of 1976, and IRS interpretation of it, serve to make virtually all categories of tax information unavailable for verification and anti-fraud efforts. I believe this is a correct procedure.

"A valid distinction can be made, however, between information provided by the individual taxpayer and financial information routinely provided under the law by such third parties as employers, banks, insurance companies and stockbrokers.

"There is plenty of evidence that great savings would result to the public if third-party information on assets and income were made available and used to ensure integrity in claims on government programs."

McBride gave Massachusetts as an example, where by using such third-party information savings of up to $300 million were made in the aid for dependent children (AFDC) program alone. Total savings to all government programs there might reach as high as $9.8 billion.

"Failure to use information that is available deprives us of basic and necessary safeguards against deliberate fraud. There is no good reason why taxpayers whose payments make humanitarian government possible should be held to higher standards by the government than people who benefit from such payments.

"Taxpayers are well aware that their tax returns and the information submitted by third parties such as banks and brokerage houses are subject to computer matching to make certain that they are reporting their income.

"Why should beneficiaries of needs-based programs not be subject to the same sort of safeguards to ensure that they are complying with the laws that specify conditions of elgibility for participation in such programs?"

An interviewer referred to the argument that any lessening of confidentiality regarding tax information is dangerous, because effective tax collection depends on voluntary compliance by taxpayers, which in turn depends on complete confidentiality.

"That doesn't bear close scrutiny," replied McBride. "The information we have in mind is not taxpayer-supplied but reports submitted by third parties. It is hard to see how gaining access to third-party data could adversely affect taxpayer compliance.

"Congress has seen fit to permit release of taxpayer-supplied information to assist in the collection of debts owed to the government, and to assist locating absent parents for child support purposes. There is no evidence that this has undermined taxpayer compliance.

"Why then should not information supplied by third parties be made available to verify eligibility for benefit programs, and so save the immense sums which are lost through fraud?

Where can the fulcrum be found in this delicate balance between investigatory needs and privacy rights?

"Congress must resolve any problems that may develop. The legislators should specify both the degree to which data should be made available from tax authorities, social security records, employers records, banks and financial institutions, and also the procedures and conditions under which such availability takes place.

"These are not decisions that should be left to program administrators."

To what degree are the various government programs now safeguarded against fraud?

"During the time I helped to monitor the food stamp program that there was very little checking. If a person walked in and filled out the boxes on the application form in an apparently correct manner the chances were that nobody would check. No matter how false the answers, the applicant stood a good chance of getting the food stamps.

"I realized that by the regular use of good checking of eligibility we could save several hundreds of million dollars a year. Doing standard verification, particularly wage verification, by computer is very inexpensive. Why wasn't this checking done long ago? It was prevented basically by governmental fragmentation and lack of cost-saving incentives.

"Also, an attitude of mind had grown up during the Great Society years that the purpose of these programs was to pump out the money and the accountability and making sure that the money reached the right people, was secondary.

"The information is there, in the data-banks. There is a wide range of public programs such as food stamps, ADFC, welfare, student loans. They all depend on some criteria of eligibility, and the appropriate information exists within the respective data banks. There are also large banks which contain wage data on most employees."

Where are the largest savings possible?

"Probably in the welfare programs. I don't imply that welfare applicants are more inclined to cheat than other people, but the sheer size of the programs makes them the likeliest place to save money.

"AFDC probably costs $10 billion a year, food stamps cost some $12 billion, unemployment over $20 billion, and given the scale of these programs the potential savings are considerable.

"It is also important to scrutinize such areas as highway contractor fraud and fraud in other loan or benefit programs.

"I found in the Agriculture Department that some multi-million-dollar farm operators would take advantage of disaster programs. Some farm operators were getting their losses covered by both the Department of Agriculture and the Small Business Administration.

"Computer verification turned up many instances of massive bid-rigging in highway construction contracts, and there were well over 100 indictments in that area last year.

"If you get a lot of greedy people crowding in and getting money from the government to which they are not entitled, then the public perception grows that the programs are rampant with fraud. Then public support for the programs falls.

"Food stamps, for example, have been under fire for a long time because the public thinks there is a high level of cheating. Everybody has their own story of seeing food stamps laid out on a supermarket counter and then the bags being loaded in a late-model luxury car.

"I am a firm supporter of the food stamp program, but it can only run with public support, if it is tightly run and benefits go to those who are eligible.

"There are programs which are well run, such as Head Start, and as a result, this has enjoyed increasing support. There are other areas, such as the summer feeding program, which have been run poorly and characterized by a lot of fraud, and therefore face loss of public and political support and extinction."

After 20 years of going after frauds, racketeers, chisellers and cheats, why has McBride chosen to enter the academic life?

"By the fall of 1982 I was feeling jaded with Washington, D. C. I felt the need to seek new horizons.

"But I keep up my interest in bringing responsible management into the government. There is still plenty of room for improvement."—**Donald Stokes**

Jeanne Kennedy gives reporters preview of Queen's visit



Jeanne Kennedy welcomes Channel 7 news team at preview of Queen's visit.

Two women will shake hands on Mirada Avenue, Stanford at 12:30 p.m. on Thursday, March 3, and thereby begin an historic occasion for the University.

The Queen of England will be coming to lunch, accompanied by her husband, the Duke of Edinburgh.

Mrs. Jeanne Kennedy, wife of Stanford President Donald Kennedy, will greet the Queen as hostess at the Hoover House lunch. Inside the residence some eighty guests will be waiting.

This event, which will mark the first time a reigning monarch is the guest of Stanford, has attracted such wide interest that Mrs. Kennedy agreed to receive the media on Friday, in order to answer their inquiries about the arrangements.

Here are some of the questions she was asked, and her answers:

What special preparations are you making?

"We are planning this in the same manner that we do for all our entertaining for distinguished visitors who come to the University. These are quite frequent.

"We are using the same people to provide the meal as we normally do, the same person to arrange the flowers, similar people to serve, and so on."

What will happen when the royal pair arrive?

"After greeting the Queen and the Duke, the president and I will bring them inside the residence, and escort them as they move around among the guests, who will be gathered in several rooms and perhaps—if it is a fine day—on the terrace. The Provost, Al Hastorf, and other senior officers and their wives will escort other distinguished guests."

Are you treating the Queen any differently from other guests?

"Not really. We are using the same furniture and decorations and having the meal prepared in the same way as we always do.

"Of course, this is a very special occasion, as the Queen is the head of state of a thousand-year-old country from which we received much of our culture.

"I am of course excited, as we all are. This is an important event in Stanford's history. It is an honor and a pleasure."

Why Hoover House for the lunch?

"It is very appropriate that the lunch should be held here. Originally built by former U.S. President Herbert Hoover, it is the residence of Stanford's president, it is a State historical landmark, it is on the National Register of Historical Places, and at Stanford we care very much about it."

Menu secret

What will be served?

"The meal will be catered by a local firm (Victoria Emmons) which we have used very often. The menu will be simple and light, and will include California wines. I do not propose to announce in advance what will be served, as I would not do that in advance with any meal I was offering. We shall probably issue details afterwards if asked. Rumors of salmon mousse and caviar? Sounds delicious, but I'm not commenting!

"The total number of people sitting down will be 92. Detailed seating arrangements are not finalized, but probably there will be five tables in all. President Kennedy will have the Queen on his right and the Duke of Edinburgh on his left. I shall sit on the left of the Duke."

Who is on the guest list?

"We tried to make sure that each of the main components of the Stanford 'family' is represented, including trustees, faculty, administrators, staff, and students.

"We shall have about 20 students present. We asked those students who would like to be considered for an invitation to write in giving their reason for inclusion. We received about 200 replies. In addition there were a number of imaginative attempts by some students to draw their claims to our attention. These ranged from singing telegrams to delivery of baked goods.

"We tried to have a list which represents the great diversity of the student body, not just in intellectual achievement (although Rhodes Scholars were invited), but also in arts and athletics. We also tried to represent the diversity of backgrounds that our students have."

What would you most like to show the Queen in the residence?

"Perhaps the very fine Coramandel screen, which was brought here in the era when Wallace Sterling was president. The rug in the dining room is a very old and valuable Persian one, with poetry woven into its surround. The paintings come from the Stanford Museum, and are from the school of Joshua Reynolds."

What worries you most about the arrangements?

"I have no special worries. We will carry out our plans in much the same manner as we always have. I am perhaps a little worried about possible demonstrators, but the University has been here a long time and it is quite used to demonstrators."

What is the lunch going to cost?

"I don't think any hostess would expect to announce the cost of a meal she was going to give, and I don't propose to do so on this occasion. That is a private matter."

What chinaware and table setting?

"I remembered that I had my grandmother's silver, and thought how excited she would be to know that the Queen had used it. What I've decided to do is to mix a number of chinaware sets—some that belong to my family, others that belong to the residence.

"It will be pleasant for people to be able to say afterwards that so-and-so set of chinaware was used by the Queen of England.

"The table is a copy of a Chippendale, and the chairs are in antique style. The flowers will be arranged by the same talented person who usually does this for us. I expect she will have spring flowers and perhaps English bouquets, but I will leave it entirely to her."

Do you expect the lunch to be rather formal?

"Oh no. The royal visitors are known to enjoy a comfortable atmosphere where people are having a good time. Our people here at Stanford include some of the most brilliant, and our students are quite uninhibited, so I am sure we shall all have a good time."

Making conversation

What do you plan to talk about to the Queen?

"One tries to avoid controversial subjects. My husband will probably do most of the talking with the Queen, while I shall be talking mainly to the Duke of Edinburgh.

"I am sure I shall have a lot in common with the Duke because he is very interested in wildlife preservation, and Don and I visited, with Stanford alumni, the Galapagos Islands, which Darwin brought to the world's attention because of their remarkable wildlife."

Do you think the guests will wonder about protocol?

"We have just had a meeting of some of those invited to discuss arrangements. Some of them wanted to know such things as when and how to shake hands with the Queen; the answer is that you shake her hand if she extends hers to you.

"Some of the ladies wanted to know what they should wear. The answer was the clothes you would wear to any important lunch.

"Music? No, with 92 people there will be quite enough noise."

No time for tour

Is the royal party going to tour the campus?

"We hoped for quite a while that there would be time for the Queen to tour the campus and be seen by everybody. Our original hope was that the royal party could drive, for example, up the new Campus Drive extension to the Medical Center, up Palm Drive, round the Oval, right through the center of campus past Hoover Tower and Memorial Church.

"That is all a fond hope which won't be possible because of timing problems."

—Donald Stokes

Theresa Rhyne's collages shown

Collages by CIT long-range planner Theresa Marie Rhyne will be shown Feb. 28 to April 28 at the Palo Alto College Terrace branch library, 2300 Wellesley Street. Her work may also be seen throughout the year at the Old Town Art Center in Los Gatos.

Rhyne will attend the International Design Conference in Aspen, Colorado, later this year.

Petition to Committee on Research questions weapons work

Following is a Jan. 7 petition to Prof. James D. Meindl, chairman of the Committee on Research from 15 members of the SLAC faculty concerning nuclear weapons-related research at SSRL.

Background

It has come to our attention that SSRL, the Stanford Synchrotron Radiation Laboratory, has received and will soon be reviewing a proposal to build a new facility at SPEAR (SLAC) for work partially related to nuclear weapons tests.

We first became aware of this proposed work through a FY 1984 Budget Request by the Lawrence Livermore National Laboratory (LLNL) to the Department of Energy. . . . The facility which is to be added to SPEAR will be called the X-Ray Calibration and Standards Facility. Of the $6.35 million to be funded, roughly $5 million would be spent at SSRL over a period of three years for parts of a building, klystrons, magnets, two beam lines and four experimental ports.

To clarify our understanding of these activities, we invited Prof. Arthur Bienenstock, director of SSRL, to a SLAC faculty meeting on Dec. 16. At this meeting, Bienenstock gave us some information on the contents of the proposal which he had recently received.

The proposal, which has not been made available to us, was submitted jointly by the Lawrence Livermore National Laboratory (LLNL), the Los Alamos National Laboratory (LANL), the Sandia Corporation and members of the University of California faculty. It will be reviewed by an SSRL Review Panel in January, 1983 and Bienenstock informed us that a decision is expected within this month.

The work proposed for the facility contains a variety of projects and experiments, some of which are clearly identified as support tests for nuclear weapons research programs. We have been told that the proposal requests that 50 percent of the experimental time be allocated to the National Laboratories and 50 percent to the University of California groups.

This allocation is different from the allocation recently established by the guidelines of the Committee on Research for the SSRL-Exxon line which specifically reserves one-third of the experimental time for general use. Furthermore, it is our understanding that after the proposal is approved, time allocation and control of how the beam line is used will be in the hands of the proponents for a period of three years, without any SSRL review.

Undesirability of Nuclear Weapons Work at SLAC

While SSRL has clearly spelled out that research proposed and to be performed on its beam lines cannot be classified and must meet Stanford University's rules on proprietary research, quality of scientific work, etc., we believe that work motivated by and related to nuclear weapons on the SLAC site is both inappropriate and undesirable.

We wish to express this conviction while fully realizing that SLAC and SSRL have separate administrations. We have several reasons for this: some are fundamental while others have to do with our image in the outside world.

a) Fundamental Reasons

One of the features that has made work at SLAC so satisfying and successful has been our central motivation: pure research for the pursuit of fundamental knowledge and presumably for the betterment of mankind. While it is true that scientific knowledge can often have military spinoffs, the intent of our work here is to understand the fundamental laws of nature and not to help make better nuclear weapons.

Whether one feels strongly about contributing or not contributing to the development of nuclear weapons is of course a personal question. As a practical matter, however, if the nuclear weapons work is confined to a small group operating under a single principal investigator, one has the option as an individual to divorce oneself from it if one does not wish to contribute to it.

This option, on the other hand, does not exist for a large number of individuals at SLAC. Indeed, anybody who does theoretical or applied work related to operating, maintaining or improving the linear accelerator to fill the SPEAR storage ring with electrons, or work related to operating, maintaining and improving this storage ring to produce synchrotron radiation, has no choice but to contribute directly to the proposed nuclear weapons work.

This marked departure from our present mission is of serious concern to us because it will pose serious conflicts to some fraction of the 1,400 or so SLAC employees and might create morale problems. While one could argue that unhappy individuals always have the option of leaving the laboratory, it is also the case that when they came to work at SLAC, nuclear weapons-related work was not part of the program here. The sudden use of equipment and facilities for a purpose so different from the original mission of the laboratory seems to violate an unspoken agreement, even if it is not spelled out as written University policy.

b) Image Reasons

In all its history, SLAC has been a single-purpose laboratory. The fundamental research done here has not only been the source of much pride for our staff but it has created an image of our laboratory in the outside world.

For years, we have been able to tell visiting school children, students, engineers, scientists, laymen and the press that we are there to do basic research on the fundamental properties of matter and that we do not do any military work. We have always been able to answer the question whether we do work related to nuclear weapons by a clear "No." It would be most unfortunate if, as a result of this new work, we could no longer make this statement in good faith. Sooner or later, our involvement in this work will become known in the outside world and it will change our image. At best it will just tarnish it, at most it may have unfortunate practical repercussions which could hurt the laboratory.

For all the above reasons, we would like to strongly recommend that proposals to conduct nuclear weapons-related work not be authorized on the SLAC site.

Issues and Request for Action

We would like to make clear that our intent in this letter is not to oppose nuclear weapons-related research in the United States but to oppose its being done on the SLAC site, as a function of the laboratory. We do not wish to restrict the activities of SLAC staff as individual consultants.

We understand that a parallel proposal is being presented to the National Synchrotron Light Source (NSLS) at Brookhaven National Laboratory. Indeed, it would seem feasible for NSLS to also accommodate the fraction of work devoted to nuclear weapons research in the SSRL proposal.

Hence, preventing the work from being done at SLAC would not make it impossible for the government to get the information it wishes. However, any approval of work at SLAC specifically motivated by and dedicated to nuclear weapons research would create a situation which could only open the door to further and deeper involvement.

Whether the above solution is feasible or not, we believe that the issues we have raised in this letter should be thoughtfully examined by the University before the proposal submitted to SSRL proceeds any further. We request that your Committee on Research review whether research explicitly dedicated to nuclear weapons tests and instrumentation, whether classified or not, should be conducted on the SLAC site, or for that matter on the Stanford campus.

Gregory A. Loew
Stanley J. Brodsky
Perry B. Wilson
Michael E. Peskin
Joseph J. Murray
Roger H. Miller
Joseph Ballam
David L. Burke
John A. Jaros
H. Pierre Noyes
Richard Blankenbecler
Karl L. Brown
Richard B. Neal
David W. G. S. Leith
Charles Y. Prescott

Any Jazz fans out there?

Jazz is an important, indigenous art form of the United States. There are many of us on campus that follow various aspects of this rich American voice. We are interested in finding out how many others there are on campus who might privately appreciate or even participate in jazz.

Those who connect with this statement please send a note explaining the extent of your interest—including which period of jazz, and, your status at Stanford (Faculty/Staff/Student). Send to JAZZ, Nathan Cummings Art Building, Stanford.

Letters to the editor

Everyone should bear overhead

Editor, *Campus Report*:

President Kennedy's recent report to the Academic Council concerning indirect costs is disappointing, because once again the subject is not really indirect costs in the University—only indirect costs on **sponsored research** in the University.

Once again we are led through the intricacies of cost pools, A-21, carry-forwards and the like; but no mention is made of the most fundamental characteristic of the system—namely that the University deploys a massive and sophisticated accounting process to collect indirect costs on outside sponsors' money, while continuing to budget and spend its own academic funds (tuition, gift and endowment income) in a manner that removes and even hides the realities of indirect cost from the deans, departments, and faculty who budget and spend those funds.

University overhead rates are said to be a political problem in Washington. Might this not have something to do with the fact that agency officials in Washington see the University aggressively collecting every last percentage point of overhead from government funds, while completely ignoring any concept of an overhead or indirect cost rate in budgeting and spending their own University funds?

Indirect costs are also said to cause problems in "faculty competitiveness." Might this in part also be a problem in faculty morale, when faculty members who raise sponsored funds to carry out their academic activities must confront the reality of indirect costs immediately and directly, while knowing that other colleagues who use University funds are totally buffered from indirect cost considerations?

Could it be, finally, that the recurring cycles of budget crises in which the University seems to find itself have something to do with the fact that indirect costs are not visibly or directly or immediately involved in the budgeting and planning of every single dollar spent on campus, by every single individual who budgets or spends such dollars?

To say it once again, the only effective way to make everyone equally aware of and concerned about indirect costs is to make **everyone** pay the overhead that supports those indirect costs.

A. E. Siegman
Director, Edward L. Ginzton Laboratory
Professor of Electrical Engineering

Huh? Cohn's letter draws a response

Editor, *Campus Report*:

I'd like to comment on Robert Greer Cohn's letter, published in your issue of February 2. If you publish this letter, please headline it "Huh?".

Another word about headlines: His read, "Do computers add glibness to writing?" Though delightfully absurd, that headline also "says" a great deal about the concerns of his letter. Who would ask such a question? And why?

We must wink at Professor Cohn's expedient lumping of "scientists" and "humanists." After all, bad science and bad humanities (humanism?) usually are distinguishable, one from the other. On the other hand, good science and good humanism (humanities?) often are tough to pigeonhole; you don't know which they **are**, but you know they're **good**. I suggest that the good, more often than the bad, is created and performed by people who, consciously or not, have learned to make rather clear discriminations among "event, sign, symbol, word, fact, form, content, meaning, theory, truth." We may not know what those words, or the things they represent, **are**, but it behooves us to know they are **distinguishable**. That is trivially obvious, crucially important, meaningless, or some combinations thereof.

Thank you for publishing Professor Cohn's letter. Thank you, Robert Cohn, for writing it.

Mark Barnett
Programmer of Computers
SLAC

P.S. This letter was processed by a computer. There I was, pecking away, and it just happened.

Brittle books challenge librarians—valuable works literally crumble

Brittle books pose a growing challenge to librarians nationally, according to Sally Buchanan, conservation officer for the Stanford University Libraries.

In 1979, a survey of the 1.5 million volumes in the humanities and social sciences at Stanford's Green Library showed that 22 to 32 percent had become so brittle they required conservation attention.

The U.S. Library of Congress has estimated that up to 30 percent of its collections have become embrittled.

The problem originated around 1850, when world-wide demand for paper far exceeded the availability of rags then used for its production. Conversion to wood pulp required chemicals and sizings resulting in an acidic product.

Now librarians find that valuable holdings in 19th and early 20th century scholarship are literally crumbling before they can be saved.

The Library of Congress has established a *National Register of Microfilm Masters* to provide information about books already filmed, a process which costs about $40 per volume for those which have become brittle.

The Research Testing Office at the Library of Congress also is working on mass methods of deacidifying books before they become brittle.

The most promising process, according to Buchanan, uses diethyl zinc in a vacuum chamber.

Extensive testing of this method is now being undertaken at the Goddard Space Flight Center of the National Aeronautics and Space Administration. Stanford, Columbia and Yale have contributed books for this study, as have the National Archives, the New York Public Library, and the Northeast Document Conservation Center.

The target cost for deacidifying books on a mass basis is $3 to $5 per volume.

A national committee of publishers, paper manufacturers and librarians headed by Herbert Bailey, director of the Princeton University Press, has published standards for paper quality to be used in new books intended for permanent retention.

Paper manufacturers can produce high quality alkaline paper, which may even prove to be less expensive because of reduced Environmental Protection Agency restraints on its manufacture.

At Stanford, the brittle books program organized in the Libraries' Conservation Office concentrates on brittle materials which circulate, those which curators determine are unique, and those identified by library staff or users as requiring attention.

Once identified, these books are searched for other copies or editions in the libraries' current holdings. Standard reference works are checked for information about reprint editions or microcopies. If no commercial replacement is available, the Conservation Office may microcopy, photocopy, box or withdraw the volume from circulation.

Cooperative preservation programs have been initiated by the Research Libraries Group and the Association for Research Libraries. These include cooperative microfilming projects and an on-line index of master negatives.

"If 20 libraries could each save 2,000 different volumes a year, in a decade much would have been preserved," Buchanan notes.



Sally Buchanan

"But research libraries and their university faculties and curators must be willing to analyze carefully which materials are truly worth saving, and which can be allowed to deteriorate deliberately as part of a total collection conservation plan.

"Phased deterioration involves difficult choices about what should be allowed to disappear and, of the rest, whether to save only those items of great artifctual and aesthetic value or those of purely intellectual value.

"Given that not everything can be saved, a balanced approach—guided by those who are experts in scholarly fields and in library conservation—will make sensitive and objective inroads in the preservation of the vast numbers of brittle materials held in this country's research libraries."

Sabbatical leave is often a bittersweet experience

A sabbatical leave is often undertaken to further professional growth and development. It can be an enriching, rewarding experience.

However, it's important to put the sabbatical leave in perspective. It is not a magical time or a perfect time. Problems occur just as they do at any other time in one's life. Awareness of the potential for problems enhances rather than detracts from the sabbatical leave.

These were some of the conclusions from the workshop, "Sabbatical Leave, a Bittersweet Experience," sponsored by the Stanford Help Center last month.

The workshop included a panel which consisted of Prof. Bernard Siegel, anthropology; Charlotte Siegel, social worker at Counseling and Psychological Services; Tim Hayes, physicist at Xerox Corporation, and Linn Hayes, social worker at Stanford Help Center.

The need for preplanning was suggested to ease the transition process—that is, the leave-taking and settling into a new environment and routine. The amount of preplanning will vary according to the individual and his needs.

Each person going on sabbatical should participate in the planning process (spouse, children, significant other, and the person granted the sabbatical). Each must assess for himself or herself the costs, the gains, and what he or she personally hopes to derive from the experience.

The need to be flexible is as important as the need to preplan. Nothing ever goes exactly as planned, and one constantly has to make adjustments in daily life. At home we do this automatically, but somehow these adjustments seem more disorienting on sabbatical.

It is important to express one's negative and positive feelings about an impending sabbatical leave. There is a great deal of validation for positive feelings, but little or none for the negative and ambivalent ones that are both normal and inevitable. Voicing these feelings frees one to more fully participate in and enjoy the sabbatical leave.

McPherson gift for journalists: 20 computers

Stanford journalism students will work in an environment similar to the most up-to-date newspaper city room with the installation this month of a Computek computer system consisting of 20 keyboard-terminals and two high speed printers.

Made possible by a gift from members of the McPherson family, pioneer Santa Cruz newspaper publishers, this equipment is the first step in planned complete modernization of the Department of Communication's journalism, broadcasting and film teaching facilities. Lillian McPherson Rouse of Watsonville, Dr. Mahlon D. McPherson, and Fred D. McPherson, Jr., her brothers, joined in making the gift.

"The importance of this gift cannot be over-emphasized," said Prof. Henry Breitrose, chairman of the Communication Department.

"It brings state of the art technology to Stanford journalism instruction in an area where we previously have lagged badly. Now our students will be trained not only in the analytical and reportorial aspects of journalism, but also in the practical techniques that prospective employers are increasingly coming to require," he said.

Prof. Lyle Nelson, director of the Knight Professional Journalism Fellowship program and Thomas More Storke Professor of Communication, emphasized the importance of having the McPherson name associated with the Stanford department.

"It's one of the oldest family ownerships in California newspaper publishing. We're delighted that the McPherson name will continue to be associated with journalism in California and the West, in this case in the training of future reporters, editors and managers," Nelson said.

Medical Center MEMO

M.D.s' cosmos course finds exobiology alive and well

Physicians and biomedical scientists who attend Stanford University's annual course "Basic Science for Clinicians" will be in for a special treat Feb. 26 and 27 in Fairchild Auditorium.

After a week-long review of medical science on earth, the doctors will be exposed to a minicourse on "Life in the Universe," particularly the controversial search for extraterrestrial intelligence now sponsored by the National Aeronautics and Space Administration (NASA).

The special course has been organized by Dr. Edward Rubenstein, associate dean for postgraduate medical education, and Dr. John Billingham, chief of the Extraterrestrial Research Division at NASA's Ames Research Center in Mountain View, Calif. It is open to physicians and non-physicians, and tuition is charged.

Why should a course about life in the cosmos interest a group of medical specialists?

Out in the boondocks

By any yardstick earth is but a minor planet of a below-average star in the galactic boondocks, goes the reasoning. As far as science goes, life is simply the end result of a batch of chemicals excited by a star's energy and mixed in a certain way. If life can exist on earth, it can occur elsewhere.

"A course for clinicians shouldn't necessarily restrict the discussion of recent scientific advances to those issues directly connected with medical science," said Rubenstein. "Physicians have strong interest in areas of research beyond medicine, especially when they have deep biological relevance."

The program Feb. 26 will begin at 9 a.m. and will cover these topics: "The Biogenic Elements of Compounds: From Stardust to Planets," "The Search for Other Planetary Systems," "Chemical Evolution and the Origin of Life," and "The Origin and Evolution of Molecular Asymmetry."

Speakers from NASA-Ames Research Center will include Billingham; Sherwood Chang, chief of Extraterrestrial Research Division; and James Lawless of the Chemical Evolution Laboratory. The Stanford speaker will be William Bonner, professor of chemistry. (*Editor's note: Prof. Ronald Bracewell of Stanford's department of electrical engineering and author of* The Galactic Club: Intelligent Life in Outer Space, *originally listed on the program, will not appear because of illness.)*

The program Feb. 27 will deal with "Precambrian Biology," "The Evolution of Complex Life," and "The Search for Extraterrestrial Intelligence."

Speakers include Harold Klein, director of Life Sciences at NASA-Ames Research Center; Kevin Padian, assistant professor of paleontology at the University of California, Berkeley; and Bernard Oliver, retired vice president for research and development at Hewlett-Packard Corporation, Palo Alto.

Stanford is an especially appropriate locale for the course, Billingham said, "because of the many faculty links here."

It was Nobel Laureate Joshua Lederberg, now president of Rockefeller University, who back in the fifties coined the word *exobiology*, the search for extraterrestrial living organisms.

Lederberg's colleagues designed devices that would study chemical events on other planets, including possible life forms. They served as principal researchers on the Viking 1975 lander imaging team and the 1971 Mariner Mars mission.



"Physicians have strong interest in areas of research beyond medicine."

—Edward Rubenstein



"There's the innate curiosity that I think all human beings have about their own existence, their origins."

—John Billingham

Some of the instruments they designed are now used in the fields of biology and medicine.

Prof Allen Peterson of Electrical Engineering at Stanford is currently involved with NASA's Search for Extraterrestrial Intelligence program (SETI), according to Billingham.

Prototype machine

Peterson, he said, is building a special machine called a Multichannel Spectrum Analyzer to aid in the detection of radio signals that might be transmitted by other civilizations out in the galaxy.

"We don't know what frequencies to look for," Billingham said, "but we do know there's a region of the spectrum that's best to start in, called the Microwave Window."

This is a huge region with 10 billion channels, according to Billingham. There is no machine that can listen to so many separate channels all at once. To reduce the odds, a prototype 74,000 channel analyzer is being built in Peterson's laboratory. Using a sophisticated data processing system, the machine will aid SETI scientists in distinguishing radio signals which occur naturally in the galaxy from any that might be artificial.

After the prototype machine is tested, Billingham estimates that in five years six machines capable of distinguishing signals from 10 to 100 million channels will be built. They will be hooked up to radiotelescopes in California, Puerto Rico, Spain and Australia which are now tracking the Pioneer and Voyager missions that flew past Saturn and Jupiter.

The new SETI research, by conservative estimates, will be a million times more extensive than all other searches for space signals combined, he said.

Despite skeptics who doubt that extraterrestrial intelligence exists, Billingham asserts that the search is justified on its scientific merits. This is why the National Academy of Sciences and the International Astronomical Union

continued on page 11

Hemodialysis proves beneficial to some lupus patients

Margie Sterner has nothing good to say about steroids.

"You bloat up like a fat pig when taking those drugs," said the slender, 35-year-old Foster City woman. "I never want to go back to them."

But until 1978, Sterner was dependent on large doses of the steroid "prednisone" to control her lupus erythematosus, a disease of the immune system that can lead to severe joint pain, loss of hair, and damage to the heart, liver and kidneys. When the illness severely damaged her kidneys, traditional therapy suggested that her already high steroid dose be upped even further.

Instead, under the direction of her doctors at Stanford University Hospital, Sterner stopped taking prednisone and began hemodialysis, an unorthodox treatment for lupus patients. Within a few months, her kidney disease subsided without the use of steroids.

Simultaneously, most of Sterner's lupus symptoms disappeared, though Dr. Robert Swenson, associate professor of medicine at Stanford, emphasized that the timing of the onset of dialysis and remission in lupus were not causally related.

Sterner is one of 28 patients with lupus and severe kidney failure that Swenson and Dr. Norman Coplon, a clinical faculty member, have studied in the last 13 years.

Results of the research, published in the Jan. 27 *New England Journal of Medicine*, point to hemodialysis as an unforeseen option in dealing with the double curse of lupus and renal failure.

Although hemodialysis is a routine treatment for most patients whose kidneys fail, most physicians have spurned its use in lupus patients because of expense and an assumption that the physical and psychological burden of dialysis would do more harm than good to a patient already suffering from chronic disease, Swenson said.

But the Stanford study showed that the lupus patients responded well to dialysis. Eight of the patients showed enough improvement in kidney function that they could be weaned from hemodialysis—some for long periods of time.

"What we're trying to do is to get physicians to stop giving prednisone to these patients once they reach a certain point in their renal failure," Swenson said.

"Previously, physicians were working so hard to beat renal disease with prednisone that the patients succumbed to severe infection."

Prednisone is a valuable tool when physicians seek to "turn off the immune system," said Swenson. Recipients of heart and kidney transplants, as well as patients whose diseases stem from an overzealous immune system, can benefit from the drug. But, by stripping away the immune defenses, high doses of prednisone leave patients dangerously vulnerable to infections, and other side effects such as brittle bones and fluid retention.

Like Sterner, 25 of 28 patients in the study lost their lupus symptoms subsequent to the blood cleansing.

"However, we are not in any way suggesting that dialysis be considered as a treatment for lupus," Swenson said. "Hemodialysis only removes waste products of renal failure. It doesn't remove lupus toxins."

Why the lupus symptoms disappeared remains a mystery, Swenson said, though the mechanism probably relates more to a chemical by-product of severe kidney failure than to dialysis.

About 110,000 Americans suffer from lupus, which most often affects women in their 20s and 30s. Only a small fraction of those, Swenson said, experience severe kidney failure, and would be candidates for hemodialysis.

—Deborah Franklin

Volunteers in medical research: why do they do it?!

BY LISA AMES

In one clinical study at Stanford, volunteers are instructed to have a little more ice cream, cookies, and soda than they're used to for about three days before coming in.

"The high carbohydrate intake primes the pancreas for optimum response to our metabolic testing," explained Dr. Mark Rosenthal, associate investigator in gerontology.

"But some of our volunteers hesitate to comply, since they're very concerned with their weight and health." Rosenthal is studying the relationship between metabolism and physical conditioning in the elderly, by comparing the glucose tolerance of sedentary and athletic older men.

Why do these men, healthy and active with many other things to do, bother to join a study that requires them not only to eat foods they don't want, but spend two nights and two mornings in the clinical research center (CRC) at Stanford?

And what prompts participants in the Medical Center's many other clinical studies to make that first call to researchers in which they generously offer their time and energies?

The answers vary, say both researchers and volunteers, depending on the nature of the study, benefits to participants, and other factors.

"In our study," said Rosenthal, "the well-conditioned men seem to want to prove the benefits of their active lifestyles, while the sedentary ones are curious, and have altruistic reasons for participating in medical research."

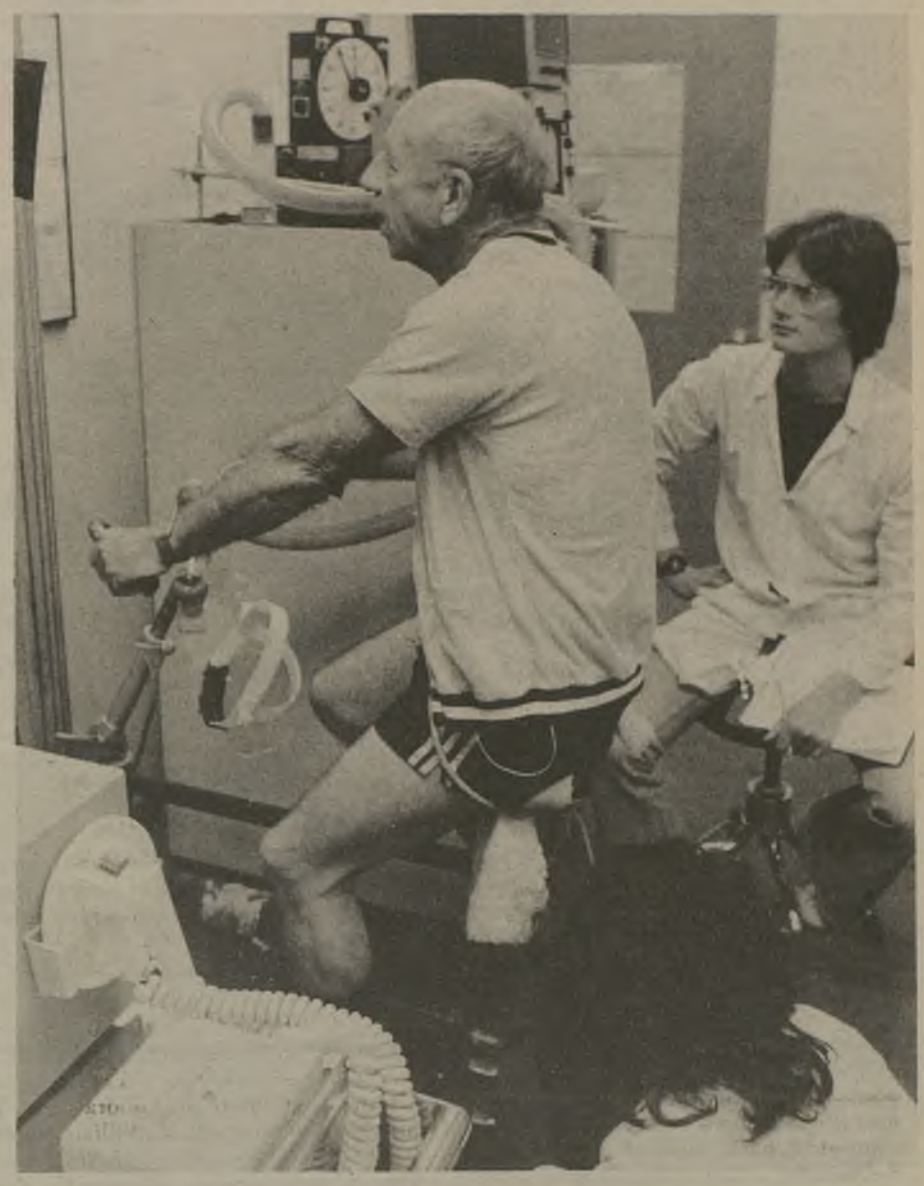
Altruism—and the wish to do something important with their lives—is often a motivation, concurred investigators, especially with elderly and well-educated volunteers.

"I have a pacemaker, and I figure that somewhere along the line someone volunteered for research that made this possible," explained Eleanore Evans, a recent volunteer for the control group in a diabetes study. "Now if I volunteer, maybe someone else will benefit in the future."

Dr. George Liu and his associates conduct many studies on the various treatments of diabetes, under the direction of Dr. Gerald Reaven at the CRC. Many people who volunteer for control groups, Liu said, are Stanford-affiliated and, knowing first-hand the difficulties researchers face, "want to help us out."

Diabetic volunteers, he said, are often unhappy with treatments they've received thus far, and come to the study hoping to find something better. "They frequently become much more informed about their role in controlling the disease after joining us," Liu explained, thanks to the intensive teaching provided by researchers during testing.

"And they keep coming back for other studies," he added.



An enthusiastic volunteer for a study on physical conditioning, Mr. Tom Donovan has his aerobic fitness tested while "riding" a bicycle ergometer at the Stanford Heart Disease Prevention Program. Research assistant Kurt Mueller (a Stanford University undergraduate) measures Donovan's oxygen consumption as his workload and exertion increase. The volunteer's blood pressure is monitored throughout. Volunteers like Donovan join clinical research projects in large numbers for a variety of reasons, ranging from altruism to the benefits of medical testing.

The studies that compensate volunteers are generally those in which no other personal benefits are offered. Often, for example, a study will provide its volunteers with a whole battery of medical tests and evaluations free of charge—an incentive that plays a large role in recruitment.

Liu, a physician specialist in the Division of Endocrinology, said some of his volunteers are people who have very early diabetes or lipid metabolism disorders, and the early screening and detection provided by the studies attract them.

Evans said she suspected she might have hypoglycemia when she first volunteered for the diabetes study. "But I found out I was fine and the doctors told me what I could do for the symptoms."

The investigators, she said, were very good about discussing her concerns and spending time with her. She said she probably wouldn't hesitate to call them again if she had a medical problem.

"We do build friendships with many of our volunteers and their families," said Liu.

He said all the studies his group conducts ask variations on the question: how much and in what combination will certain specific therapies help in controlling diabetes? Every protocol has its own time frame, he said, at the end of which the researchers evaluate how much improvement was made and what the next step should be.

What about risks to the volunteers? Under guidelines set by Stanford's medical committee for the protection of human subjects in research, volunteers for clinical studies must give "informed consent" as a requirement for participation.

Kathy Turner-Tamiyasu, R.N., now nurse manager of the gynecology/obstetrics clinic, previously held a position as research nurse in the Division of Clinical Pharmacology, under the direction of division chief Dr. Terence Blaschke. Ongoing research there examines age-related changes in the liver clearance of drugs metabolized by different pathways.

"It's not a dangerous study," she said, "but there *are* some risks associated with the drugs administered to volunteers."

The study includes compensation for the week a volunteer must spend in the CRC. "I found the money was the most common motivation," Turner-Tamiyasu said, adding that this could interfere with the informed consent process.

"People would decide in their own minds that they wanted to participate. So sometimes I felt they weren't listening attentively when I'd explain the details."

She described a similar interference that would occur when volunteers—especially older ones—had a "blind trust" in the medical establishment.

Turner-Tamiyasu also met people who needed a change in routine for a week, or to get away from a difficult personal situation. Some volunteers, she remembers, went so far as to spend their vacation time participating in the study—out of curiosity, perhaps, or because they needed the money.

"There's often an interplay of several motivations in the same individual," she said, adding that "clinical research is a very rough job. There's so much to go through with each person."

It starts with the initial screening, when potential volunteers first call the number they've probably read in a newspaper, heard on the radio, or obtained from a referring physician.

We ask for a medical history," said Liu, "and look for certain criteria. Usually we get a far greater response than we need, and less than half the people who call end up in the study."

Turner-Tamiyasu said she never had too many phone inquiries, since "most we had to screen out right away. In the whole time I probably recruited 100 people, after talking to about 500."

After the phone call, if the volunteer sounds right, a meeting takes place for further explanation and physical examination.

At any point during screening or even during the study, Turner-Tamiyasu explained, volunteers are free to change their minds about participating. "Or sometimes during the physical exam something is found that disqualifies them that they didn't even know about."

But most volunteers who stick with clinical research end up feeling pretty good about it, whatever their initial motivations. They've helped others, and it's likely they've also helped themselves.

Ed Souza, photographer with the Stanford University News Service, was generally concerned about the state of his health when he volunteered for one of Liu's studies last summer. "I seemed to fit the criteria they were looking for since my father had had adult-onset diabetes," he recalled.

Souza thought he might have the disease, but instead he left the study reassured "that I still belonged in the control group." Meanwhile, he'd helped researchers gather data important to bettering treatments for those less lucky.



William Watson



D. Craig Miller



Gordon Ringold

Faculty promotions at the Medical School

Dr. William Watson became a full professor and two of his Medical School colleagues received tenure by action of the Board of Trustees last week.

The new associate professors are Drs. D. Craig Miller, cardiovascular surgery; and Gordon Ringold, pharmacology.

Watson completed his residency in dermatology at Stanford in 1970 and then joined the faculty here in that field as an assistant instructor. After a brief absence serving on the faculty of the State University of New York, Downstate, Watson returned to Stanford. He became an associate professor of clinical dermatology in 1978.

He has pursued clinical research into the treatment of herpes, psoriasis and other ailments.

Last year he received the Arthur Bloomfield Award for Excellence in Teaching of Clinical Medicine at Stanford. In 1976 he was granted the Kaiser Award for Excellence in Teaching.

Miller received his M.D. training at Stanford. He joined the faculty in 1978, and currently serves as director of the peripheral vascular surgery division of the Department of Cardiovascular Surgery and as chief of the cardiac surgery section at the Palo Alto Veterans Administration Medical Center.

An active researcher, Miller is internationally recognized as an expert on the treatment of aortic aneurysms and of peripheral vascular disease. Current research includes a federally sponsored project entitled "Ventricular Dynamics from Surgically Inserted Markers."

Ringold is also internationally recognized for his research efforts. His primary area of interest is steroid hormones, which are important for treatment of arthritis, other inflammations, metabolic diseases and certain cancers.

He received his Ph.D. in microbiology from the University of California at San Francisco in 1976 and then served at his alma mater as a postdoctoral fellow. He joined the Stanford faculty as an assistant professor in 1978.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, FEBRUARY 16

Progress in Medicine Lecture Series: "Who Shall Live? Progress and Ethical Dilemmas of Intensive Care"—a community outreach program sponsored by SUMC. First of a six-part series scheduled for Wednesday evenings at 7:30 p.m. in Fairchild Auditorium. Tonight's topic, after an introduction by Dr. James Silverman, is "Intensive Life Support Systems: Present Practice and Moral Issues," with Dr. Thomas Raffin. For further information call the Office of Public Events, at 497-6389.

Div. of Hematology Noon Conference: "Erythropoetin in Red Cell Development"—Tanya Weiss, Ph.D. (Univ. of Chicago). Noon, L201.

Basic Science Research Colloquium: "Sex and the Single Worm: Reproductive Biology of Schistosome Parasites"—Dr. Paul Basch. 5 p.m., Fairchild Auditorium.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Artificial Intelligence Consultation System for Clinical Oncology"—Dr. Edward Shortliffe. 4:15 p.m., McCullough 134.

THURSDAY, FEBRUARY 17

Div. of Plastic and Reconstructive Surgery Lecture: "Salvage for Stage IV Oral Cancer"—Dr. Robert Ryan (Tulane University). 4 p.m., M112.

Dept. of Pharmacology Seminar: "Induction of Rat Liver Glutathione S-Transferase B and Cytochrome P-450 by Xenobiotics: Analysis of mRNA Levels Using cDNA Probes and *In Vitro* Translation"—Dr. Cecil Pickett (Merck Institute for Therapeutic Research, Rahway, NJ). 4:15 p.m., R358.

Dept. of Medicine Grand Rounds: "Vasodilators"—Dr. Ferid Murad. 8:30 a.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "The Role of Cations in the Interaction of RNA Polymerase with DNA"—Dr. M.T. Record (Univ. of Wisconsin). Noon, M316.

Dept. of Structural Biology Seminar: "Size Regulation in Protein Homopolymers: Pressure-Jump Studies on the Length-Regulation Kinetics of Myosin Filament Assembly"—Dr. Julien Davis (Johns Hopkins University). 4 p.m., Fairchild Bldg., D102.

FRIDAY, FEBRUARY 18

Nursing Educational Services Workshop: "Selected Concepts in Surgical Nursing." 8 a.m. till 4:30 p.m., Hyatt Palo Alto. To register, call Carole Kidder at 497-6366.

Div. of Surgical Pathology Conference: "Sclerosing Lesions of the Retroperitoneum"—Dr. Jeffrey Curtis. 8 a.m., L201.

Dept. of Gynecology and Obstetrics Grand Rounds: "Mesenchymal Tumors of the Uterus"—Dr. Michael Hendrickson. 8 a.m., A336.

Dept. of Neurology Seminar: "Pharmacological Properties and Spatial Distribution of Sodium Channels in Developing Nerve and Muscle"—Gary Strichartz, Ph.D. (Harvard University). 5 p.m., Neurology Conference Room, C364.

Dept. of Pediatrics Grand Rounds: "Accidental Poisoning"—Dr. Larry Hammer. 8 a.m., M106.

FEBRUARY 21 Through 25

Office of Postgraduate Medical Education: "Basic Science for Clinicians." To register, call 497-5594.

TUESDAY, FEBRUARY 22

Psychiatry Grand Rounds: "Psychohistory of the 1970s"—Dr. Peter Carroll, historian and author of *It Seemed like Nothing Happened.* Open to all. 11:30 a.m. till 1 p.m., M104.

FEBRUARY 26 and 27

Office of Postgraduate Medical Education: "Life in the Universe." 8 a.m. till 5 p.m. Saturday; 8 a.m. till noon Sunday, Fairchild Auditorium. To register, call 497-5594.

SATURDAY, MARCH 5

Dept. of Dietetics: "Trends in Nutrition 1983—A Symposium on Marketing your Profession in the '80s." This program addresses the reasons marketing is essential to the survival of health professional careers. Fees required; early registration recommended. Presented by the San Jose Peninsula Dietetic Association. 7:45 a.m. till 3:15 p.m., Fairchild Auditorium.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

News Notes

Materials Management has moved its administrative office from Trailer A to Trailer B, announced director Ron Kepner. Purchase requisitions and correspondence to Kepner or Deb McConnell should now be addressed to this new location. Telephone numbers remain the same.

Don Olson, central distribution manager, now resides in Trailer A at 497-7979 along with Cor Tamayo, technical coordinator, who can be reached at 497-7925.

* * * *

Jane Woeckener, R.D., M.S., assistant director of Dietetics/Nutritional Services, has accepted an invitation to become a member of the Professional Services Advisory Committee for Saga Corporation. Woeckener is the first non-employee (of Saga) professional to be extended this honor.

The national group, which meets twice a year, will convene in New York this March to discuss such issues as quality assurance, standards of care, new patient programs, policies and procedures, diet manuals and guidelines, and patient education.

* * * *

A program to acquaint new employees to the Medical School is scheduled to begin Feb. 23. The first "new employee welcome" sponsored and presented by the Human Resources Group, it will be offered three times annually in January, May and September.

The intention of the new employee welcome is to provide medical school employees with knowledge of the history, organizational structure, and services available to them. A tour of the medical school and parts of the hospital is included in the program, as well as a chance to have lunch with medical school administrators.

Invitations have been sent to employees who began working at the medical school from September through December. Employees should still attend the Stanford University New Employee Orientation.

* * * *

Dr. Margaret Chesney, consultant, and Nancy Houston Miller, B.S.N., program nurse coordinator at Stanford's cardiac rehabilitation program, are among the faculty for the tenth annual cardiovascular nursing symposium on "Heart Health Education: Developments and Strategies," to be presented in San Jose by the Santa Clara County Chapter of the American Heart Association March 16.
For fees, registration, program and other information, call (408) 247-8555. Prior reservations are required.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Miller elected Society president

Robert Miller, director of pharmacy services at Stanford University Hospital, has been elected to the office of president-elect of the California Society of Hospital Pharmacists, a professional organization of about 2,100 members and 15 regional chapters.

Miller has served in his current position at Stanford since March, 1978. Before



Robert Miller

that, he served for five years as director of pharmacy and central sterile supply services at Yale-New Haven Hospital. He was also an assistant clinical professor at the University of Connecticut's School of Pharmacy.

He was president of the Connecticut Society of Hospital Pharmacists in 1975.

From 1968-70 Miller was a hospital pharmacy resident at Ohio State University Hospital in Columbus. He holds a B.S. degree in Pharmacy from the University of Kansas and an M.S. degree in Hospital Pharmacy from Ohio State.

On the Society's board of directors for the past two years, Miller will start his one-year term as president in October, 1983.

Jogging at SUMC

Stanford University Hospital has received a $5,000 grant from Wells Fargo Bank to install a jogging course and exercise stations near the Medical Center.

The Gamefield will include a jogging course similar to the Gamefield near Angell Field and the Perrier Parcourse near Lake Lagunita.

An added special feature will be a 32-foot square cluster of exercise stations.

The aim is to provide a facility closer to the medical center complex for use by medical center employees.

"Physical fitness, employee well-being and productivity, and the long-term reduction of employee health problems are the primary factors that motivated this project," said Don Thomas, director of Personnel.

The project was developed by the hospital personnel department in consultation with the Stanford Health Improvement Program, the Heart Disease Prevention Program, the School of Education graduate program in physical education, and the Department of Athletics.

Total cost of the facilities is expected to be about $9,000 in addition to the grant. The project is in design stage now, with opening planned for later this year.



Crane arrives for short visit

Monday the Medical Center greeted a 280-foot-long crane to its premises.

As tall as some 30-story buildings, the crane will be used to lift steel into the Boswell Building courtyard as part of the renovation project. It will be here through mid-March.

Though clearance will be maintained for vehicles, at least four parking spaces will be unusable during crane operations and pedestrian traffic will be limited.

Patients and others may be dropped off in the temporary loading zones. Only emergency vehicles may stop in front of the crane.

New committee to help shape Hospital's future

Formation of a Stanford University Hospital strategic planning committee to establish future directions for the hospital has been announced by Sheldon King, executive vice president and director.

"The strategic planning process will be a deliberate and conscious approach to shape the hospital's future," said King. "Changes in federal, state and other third party reimbursement systems, and increasing competition among hospitals, are making strategic planning indispensable."

The new committee will meet quarterly and provide periodic reports to the Medical Center Strategic Planning Committee and to the hospital board of directors.

Members of the committee include members of the SUH board of directors, faculty and community physicians on the medical staff, and representatives of hospital and medical center administration.

King will serve as chairman, and the committee will be staffed by Roland Merchant, director of the Office of Management and Strategic Planning.

Members of the committee are: Dr. Malcolm Bagshaw, chairman of the Department of Radiology; Dr. John Collins, chairman of the Department of Surgery; Dr. William Fielder, Palo Alto; Dr. W. Leroy Heinrichs, chairman of the Department of Gynecology and Obstetrics; Dr. Robert Hill, Palo Alto; David Hopkins, executive assistant to the vice president for medical affairs; Dr. David Korn, chairman of the Department of Pathology; and Dr. William Massy, member of the hospital board of directors.

Also, Dr. F. Burt McDowell, Menlo Park; Linda Meier, member of the hospital board of directors; Dr. Kenneth Melmon, chairman of the Department of Medicine; Dr. Jonathan Parmer, Palo Alto; Dr. Dominick Purpura, dean of the School of Medicine; David Sakai, director of Finance; Dr. James Silverman, chief of staff; Geraldine Steinberg, member of the hospital board of directors; Donald Tower, executive director of the Faculty Practice Program; and Duane Walker, R.N., M.S., director of Nursing Services.

Med faculty openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

Stanford University School of Medicine and the Palo Alto Veterans Administration Medical Center seek a division chief for respiratory medicine. This is a senior level position, as an associate or full professor, with responsibility for coordinating clinical, educational, and research programs at Stanford University and affiliated hospitals.

Applicants should have expertise in clinical pulmonary medicine and in ongoing and funded research programs. Send curriculum vitae, bibliography, and covering letter to: Ferid Murad, M.D., Ph.D., chairman of the search committee, chief of medicine, Veterans Administration Medical Center, 3801 Miranda Ave., Palo Alto, CA 94304.

The division of plastic and reconstructive surgery at Stanford University School of Medicine is seeking an individual for a faculty position at the assistant professor level. Broad training in reconstructive surgery is a prerequisite, preferably including six to nine months of formal and separate hand surgery training, and an equal amount of time devoted to full-time research. Demonstrated ability as a teacher is desirable.

The successful candidate will be expected to devote clinical efforts to reconstructive plastic surgery and hand surgery, and to compete effectively for funds to initiate his or her own research program.

Letters of inquiry and curriculum vitae should be sent to: Lars M. Vistnes, M.D., head, Division of Plastic and Reconstructive Surgery, Stanford Uniyersity Medical Center, Stanford, CA 94305.

Exobiology. . .

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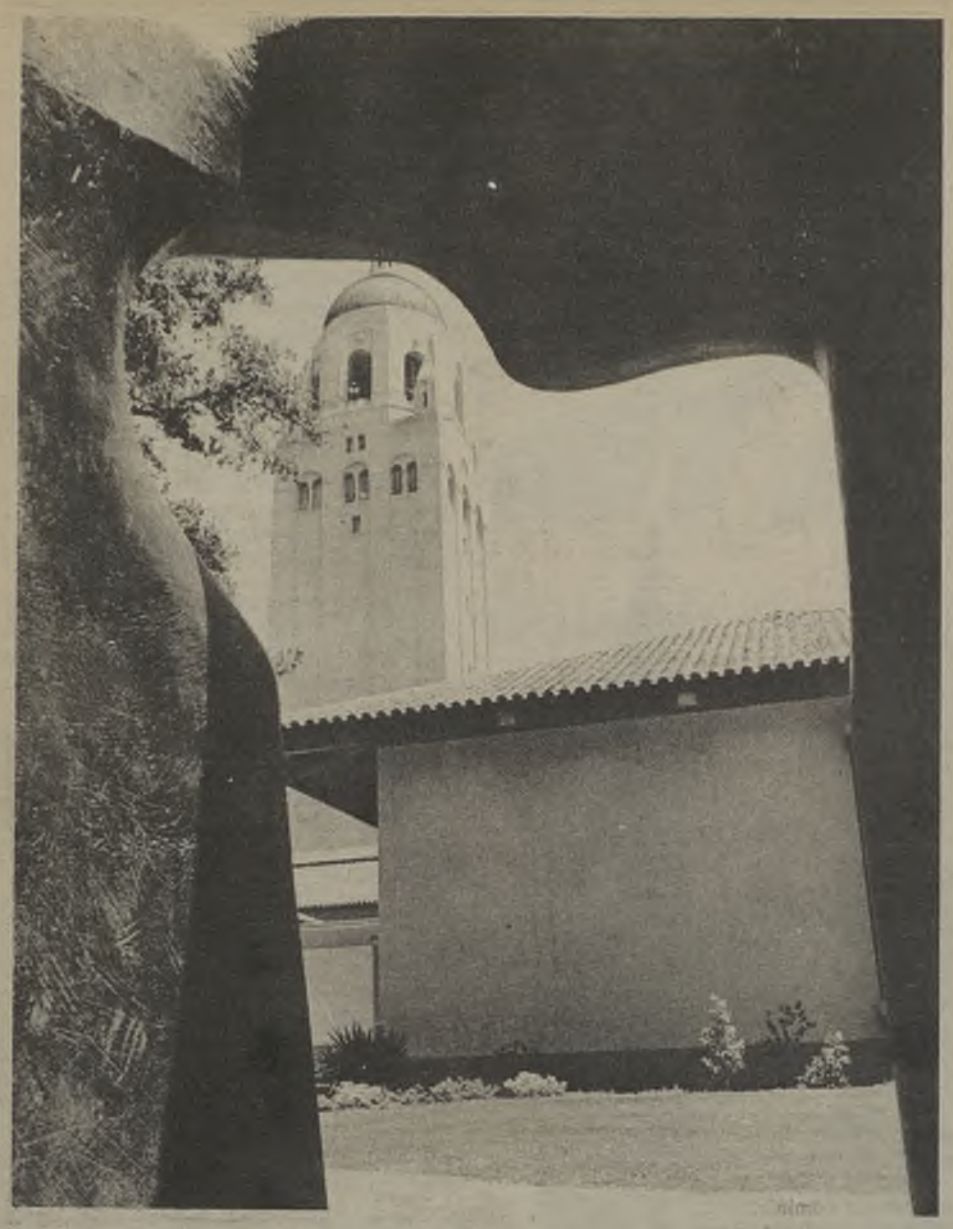
support the project, including the Congress which has provided initial funding of about $1.5 to $2 million a year for the next five years.

"Part of the reason for this support is based on the realization that we now have the technology to carry out a search for extraterrestrial intelligence," Billingham said. "There has been an absolute revolution in microelectronics, particularly with advances in large-scale integrated circuits and custom chips.

"And there's the innate curiosity that I think all human beings have about their own existence, their origins."

Individuals interested in enrollment information should contact the Office of Postgraduate Medical Education at 497-5594.

—Spyros Andreopoulos



Fire safety hazard closes Hoover Tower for 13 months

The observation deck of Hoover Tower has been closed to visitors because of inadequate fire safety mechanisms. It will remain closed until the University installs fire sprinklers in the tower which should be finished in March, 1984.

"There is no safe means of exit in case of a fire," said John Hughes of the Provost's Office.

The University currently is planning a $650,000 to $800,000 project to install automatic sprinklers, audible alarms, and smoke detectors in the tower. A standby generator for the elevator also may be added.

Construction could begin in September and last approximately six months, Hughes said.

Preliminary project approval will be sought from the Board of Trustees at its March meeting. If approved, detailed plans will be drawn and submitted to county officials for approval. Final approval could come from the trustees in May or June, according to Hughes.

Hughes said Hoover staff members who work in the top floors of the tower will not be barred from the building "because they know procedures that will afford them some degree of safety. Our particular concern is visitors who aren't aware of saftey procedures.

Approximately 45,000 visitors annually view the campus from the platform, which is 250 feet high.

Student guides will continue to staff an information desk in the lobby of Hoover Tower, according to Rene Cortinaz, director of the Guide and Visitors Service. Maps, booklets, postcards, and other information is available to visitors.

Two daily tours of the campus will continue to be offered by the service. They leave from the information booth at the main entrance to the Quad at 11 a.m. and 2:15 p.m. Tours of the Stanford Linear Accelerator, Art Museum, and Medical Center are available by arrangement.

Damis, Duignan see prolonged conflict between Morocco, Polisario front

Continued conflict between the Morrocan government and the Polisario national liberation front is likely to persist "for some time to come," John Damis suggests in a new Hoover Institution Press book on *Conflict in Northwest Africa: The Western Sahara Dispute*.

Little noticed in the U.S. since it started in 1975, the West Saharan conflict could become another example of "local festering wars that, left unresolved, eventually escalate into regional—and occasionally international—conflicts," he warns.

The conflict represents a fundamental struggle between two systems—a pro-Western monarchy and a liberal economy in Morocco versus an authoritarian, one-party regime and a socialist economy in Algeria. . . .

"There is little question that the Polisario movement is animated by a genuine core of. . .nationalists highly dedicated to a long and difficult struggle for an independent Saharan state. At the same time, however, the movement has virtually no material resources of its own.

"Unlike the National Liberation Front in Vietnam or the Popular Movement for the Liberation of Angola, the Polisario Front is heavily dependent on outside sources of support.

"While many outside observers have been struck by the ideological purity of the Polisario's cause, few have noted that the front would be rendered ineffective if Algeria and Libya ceased to supply military and economic aid as well as the necessities of daily life. It is one thing to capture weapons; it is quite another to produce food and purchase gasoline.

"Outside powers have only marginal influence in the Western Sahara conflict." The critical decisions have been made in Rabat, Algiers, and Nouakchott, not Paris, Washington or Moscow.

"Neither the U.S. nor the Soviet Union has anything to gain from a continuation of the military struggle in northwest Africa," he adds. Damis served as the U.S. State Department's foreign affairs analyst for North Africa between 1975 and 1977 and has visited the region in 1978, 1979, and 1981, including a visit to the Polisario camps. Damis is a political science professor at Portland State University.

In an editor's forward to the book, Peter Duignan, senior fellow at Hoover and coordinator of international studies, says the U.S. should continue to support King Hassan of Morocco.

"The U.S. requires a friendly ruler in control of the Strait of Gibraltar with a foothold both in the North Atlantic and the western Mediterranean," he adds. "The U.S. has used Moroccan territory for air bases and communications and will need to do so again if the Rapid Deployment Force is to become a reality.

"The U.S. will have to provide money, arms and food to help Morocco in the struggle against the Polisario. It is worth the price to keep Morocco friendly and stable."

New student loan program available

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$3,000 per year. The limit for independent undergraduates will be $2,500.

In most cases the loans are due in 10 years, but repayment begins within 60 days. Student borrowers will pay only interest until they graduate, while parents immediately begin paying both interest and principal.

CLAS will provide an "additional resource for those who have either exhausted their eligibility or are ineligible under other loan programs," according to Financial Aids Director Robert Huff.

In October 1982 a "needs test" was instituted in the federally subsidized Guaranteed Student Loan (GSL) program, requiring students whose parents earn more than $30,000 annually to justify their loan applications. Such justification will not be required for CLAS loans.

Approximately 3,800 Stanford students this year will borrow $13 million through the GSL program. The federal government subsidizes the nine percent interest payments while students remain enrolled in school. Undergraduates may borrow $2,500 and graduates $5,000 through GSL.

Students may supplement their GSL loans with loans from CLAS, as long as the amount borrowed from both does not exceed attendance costs less any other financial assistance received.

Stanford's financial aid administrators will begin processing applications after they attend a Feb. 22 workshop explaining program details, Huff said. Information about the program and applications will be available in the University Financial Aids Office.

CLAS will "help lots of parents hard pressed to deal with the rising costs of higher education," said Associate Provost Timothy Warner, who participated in the new state program.

CLAS loans will be made through financial institutions and other organizations. They will be guaranteed by the California Student Aid Commission.

Historic barn restoration project...

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grew on hay stored in the loft.

Architectural consultants Esherick Homsey Dodge and Davis last summer told the University that the barn has sagged and the second floor walls should be straightened.

"Besides problems of dry rot, termites, and general deterioration, it is critical to entirely replace the existing wiring—it is substandard and represents a fire hazard." A new foundation is needed and the building should be painted, they said.

The barn was the training stable of the stock farm Leland Stanford built beginning in 1876 to test his innovative and controversial ideas about horse breeding and training.

Stanford believed speed could be bred into trotters by crossing them with thoroughbreds (English racing horses). He also thought breeding advances could increase the productivity of horses generally, which at the time numbered about 13 million nationwide, and that the U.S. economy would benefit as a result.

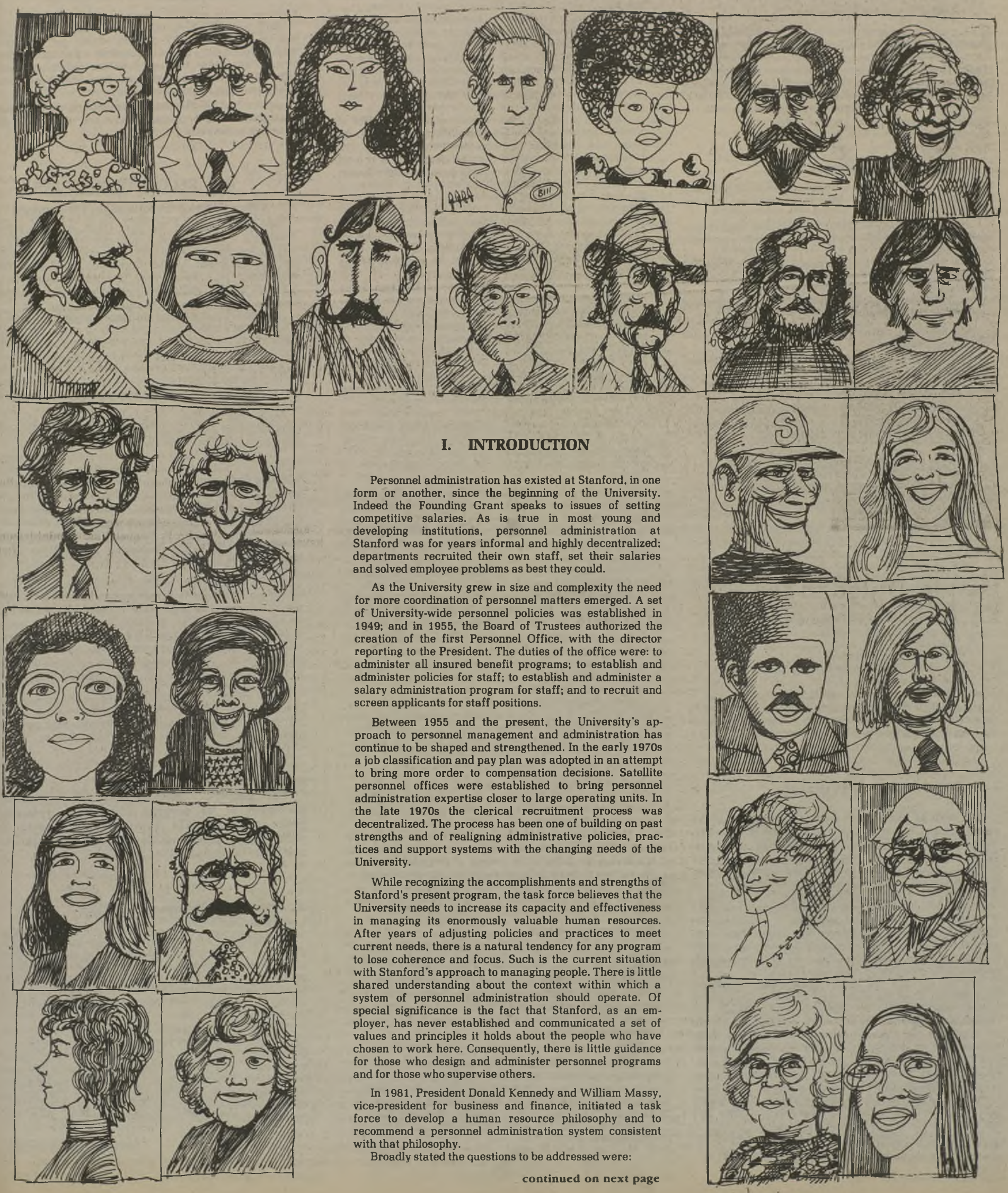
His theories about horse locomotion were tested photographically on the farm in 1878. The experiments proved a horse has all four feet off the ground at one point in its stride. This work also led to development of motion pictures. The site of the experiments was declared a California Historic Landmark in 1969. A plaque is to be placed soon by E. Clampus Vitus, a fraternal society with a long-standing interest in California history.

Between 1880 and 1895, 13 of Stanford's trotters set 19 world records, an unprecedented accomplishment that earned the Palo Alto Stock Farm acclaim as the leading horse breeding and training establishment in the world.

The farm, from which the University derives its nickname, went into rapid decline following Stanford's death in 1893. Horses were sold to support the University during the financial crisis caused by litigation over his will. The farm closed in 1903.

—Karen Bartholomew

Task Force Report on personnel policies



I. INTRODUCTION

Personnel administration has existed at Stanford, in one form or another, since the beginning of the University. Indeed the Founding Grant speaks to issues of setting competitive salaries. As is true in most young and developing institutions, personnel administration at Stanford was for years informal and highly decentralized; departments recruited their own staff, set their salaries and solved employee problems as best they could.

As the University grew in size and complexity the need for more coordination of personnel matters emerged. A set of University-wide personnel policies was established in 1949; and in 1955, the Board of Trustees authorized the creation of the first Personnel Office, with the director reporting to the President. The duties of the office were: to administer all insured benefit programs; to establish and administer policies for staff; to establish and administer a salary administration program for staff; and to recruit and screen applicants for staff positions.

Between 1955 and the present, the University's approach to personnel management and administration has continue to be shaped and strengthened. In the early 1970s a job classification and pay plan was adopted in an attempt to bring more order to compensation decisions. Satellite personnel offices were established to bring personnel administration expertise closer to large operating units. In the late 1970s the clerical recruitment process was decentralized. The process has been one of building on past strengths and of realigning administrative policies, practices and support systems with the changing needs of the University.

While recognizing the accomplishments and strengths of Stanford's present program, the task force believes that the University needs to increase its capacity and effectiveness in managing its enormously valuable human resources. After years of adjusting policies and practices to meet current needs, there is a natural tendency for any program to lose coherence and focus. Such is the current situation with Stanford's approach to managing people. There is little shared understanding about the context within which a system of personnel administration should operate. Of special significance is the fact that Stanford, as an employer, has never established and communicated a set of values and principles it holds about the people who have chosen to work here. Consequently, there is little guidance for those who design and administer personnel programs and for those who supervise others.

In 1981, President Donald Kennedy and William Massy, vice-president for business and finance, initiated a task force to develop a human resource philosophy and to recommend a personnel administration system consistent with that philosophy.

Broadly stated the questions to be addressed were:

continued on next page



Task Force Report

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A. Human resource philosophy

1. As an employer, what values and principles does Stanford hold about the people who work here?

2. How can those values and principles be expressed so that they will inform personnel administration, planning, and budgeting at Stanford? How can they provide guidance to all employees in their relationships with Stanford and to supervisors and managers in their relationships with the people they supervise?

B. Personnel Administration

1. To what extent is the present system of personnel administration consistent with the conclusions reached above?

2. Given the above, what changes are suggested to make personnel administration at Stanford more responsive and effective?

Rob Parker, director of personnel, and John Schwartz, university counsel, were asked to organize and cochair the task force.

In addition to the cochairs, the task force was composed of the following faculty and staff:

Ray Bacchetti, vice-provost, management, and director of university budgets;

Ken Creighton, associate vice-president, business and finance and controller;

David Korn, chairman and professor of pathology;

Sally Mahoney, registrar and associate provost;

David Mendelow, associate dean, School of Medicine;

Rene McPherson, dean, Graduate School of Business;

John Rees, associate director and adjunct professor, SLAC;

Santiago Rodriguez, affirmative action officer;

Elizabeth Salzer, head of Meyer Library;

Norman Wessells, dean of humanities and sciences and professor of biological sciences;

Robert White, professor and chairman of electrical engineering.

The task force began meeting in August 1981 and met 31 times between August 1981 and November 1982.

Information and opinions were sought from many sources throughout the University community. A partial list of those consulted includes:

* department staff affairs officers;
* senior staff to the vice-presidents;
* the administrative council;
* the deans;
* La Raza staff association;
* the staff affairs committee of the Stanford black
* community caucus;
* SLAC and campus personnel offices.

Information from these sources was supplemented by letters from individual staff members and an opinion survey of 1,300 staff members by SRI International.

II. FINDINGS

Our findings were of two kinds. One kind was of the systematic and, to a significant extent quantifiable variety. Here we had survey results, the carefully considered opinions of groups with which we met, and the expert testimony of those close to personnel policy and practices. Before we report on those findings we want to comment on findings of a more diffuse, but no less important, nature.

The task force had not been about its business long when it became aware of a general perception of over-regulation at Stanford. Though this feeling did not focus exclusively on personnel procedures, those procedures were often cited as examples of means that were excessively cumbersome with respect to the ends they were designed to achieve.

We did not find, we should quickly add, significant disagreement about the ends: open access to employment opportunities, equity in compensation, fairness in classification, the need for an orderly and understandable set of policies and a set of practices consistent with those policies. But we did hear vigorously expressed concerns that certain processes took too long to accomplish (e.g., reclassification recommendations), that some processes weren't accomplishing their intended ends (e.g., merit pay), and that a large part of the administration of personnel policies was too remote from the front line supervisor and her or his immediate supervisors.

The task force considered the changes of the past 15 years and the progress those changes helped achieve. From an institution with considerable unevenness in the way staff members were hired, classified, and compensated, Stanford has progressed to one which is in much better shape in regard to the way these functions are carried out and to how well they measure up to contemporary legal and institutional standards. Whatever changes are recommended and adopted should break new ground, not backtrack on the achievements that present policies have helped make possible.

We make this admonition because of the concern we have (and that was often expressed to us) that many of the natural tendencies in any university are toward concrete and immediate results and that policies and procedures whose function is consistency and continuity that interfere with achieving those results are at times not carefully and thoughtfully followed. To make this observation is to remark on the obvious.

One of the principal dynamics in universities—equal to them in age because it is inherent—is the tension between order and flexibility, between institutional policies and individual latitude, between central standards and local action. Because this dynamic is both obvious and profoundly important, how it is dealt with in those periodic reviews of the type our task force undertook is a crucial matter. In what follows, then, we shall be recommending change not because we espouse either polar position on the issue of institutional standards vs. local initiative, but because we believe that the optimum relationship between them requires periodic realignment with the evolution of the University.

Returning to the systematic findings, the task force received a wealth of information through the consulting and survey efforts mentioned earlier. A complete rendering of the findings here would make this report unwieldy and not particularly useful; instead what follows are highlights of the principal findings from the comprehensive SRI survey. More detailed information is available in the SRI survey report and in the reports we received from campus groups. Copies of the reports are available for review in the Green and Meyer Libraries and in the Personnel Department.

The survey measured staff satisfaction and dissatisfaction on a variety of subjects using a random sample of 1,300 regular staff members who were neither bargaining unit nor teaching or research academic staff. For the population surveyed the overall findings are as follows:

Staff tend to have **very positive** attitudes about Stanford as a place to work, job security, the types of work they do, their coworkers, their supervisors, the independence and flexibility they have in their jobs, the size of their workload, and the intellectual stimulation they receive working at Stanford.

Staff are **slightly positive** regarding advancement opportunities and their salaries.

Responses were **split fairly evenly** regarding satisfaction and dissatisfaction with management-staff communication and with Stanford's grievance procedure.

Staff are **slightly negative** about the job classification system and the quality of faculty-staff relationships.

Staff are **very negative** about parking and, among the relative few to whom it applies, about the availability of suitable, convenient child care facilities.

Some subjects covered in the SRI survey did not lend themselves well to the satisfaction-dissatisfaction summary. They include individual salary and classification, performance communication, benefits, personnel services and Stanford's problem-solving and grievance mechanisms. Principal findings with respect to these issues are:

Salary and classification

* Staff generally believe their salaries are slightly lower than salaries paid for similar work by other employers within the Bay Area.
* Staff favor a salary policy which keeps salaries up with inflation and provides a bit more to reward superior employees. Staff dislike the concept of giving all employees the same percentage increase regardless of performance.
* Thirty-three percent of the staff believe their jobs are not properly classified. The other two-thirds believe their jobs are properly classified, or they are not sure.

Performance evaluation

Most staff (64%) agree that their performance is evaluated fairly; however, 25% say they do not receive a formal performance evaluation at least once a year, and 13% report never having received a formal evaluation. Less than half of the staff report that they understand how their performance is evaluated. Overall, only half say they are mostly or very satisfied with the feedback they receive about their performance.

Benefits

In general the staff have positive attitudes about the benefits available to them. The most favorable responses were about holidays, sick leave, vacation, release time for personal business, health insurance, and tuition for dependent children. Less favorable, but still positive, ratings were given for retirement benefits and tuition for job-related courses.

Personnel services

Services receiving the most positive ratings by staff include staff development courses, communication about personnel policies, new employee orientation, service and advice about staff benefits and usefulness of the job posting system.

Less favorable responses include assistance in recruiting exempt and nonexempt staff, job reclassification and career or job counseling.

Problem-solving and grievance mechanisms

Only a small percentage of staff have used or are familiar with Stanford's problem-solving and grievance mechanisms, i.e., grievance procedure, affirmative action offices, Help Center, Employee Relations and Ombudsman's office. Of the staff who have used these resources, about one half rate them as not very useful.

Survey findings for staff subgroups and findings from the reports of other campus groups are reported in the Appendix of this report.

III. RECOMMENDATIONS

A. A Human Resource Philosophy for Stanford

The early work of the task force was devoted to developing a statement of human resource philosophy. It was agreed that any such statement must be linked to the enduring purposes of the University. Implied in this relationship is a belief that the ultimate purposes of Stanford will be fulfilled best when the people who work here are properly valued and treated by the University.

We believe that a stated philosophy is needed to provide a context for personnel administration. It should serve as a point of central reference and provide guidance for the entire University community. Such a philosophy, reinforced by intent and action over time, can create a culture in which there is harmony between achievement of University goals and regard for each individual's aspirations and capacity to contribute.

With this culture, Stanford's reputation and accomplishments as an employer can be as outstanding as those of its teaching and scholarship.

The task force appreciates that desired cultural changes happen slowly and then only with careful and sustained attention and commitment. The existence of the task force provides a special opportunity for beginning the effort. To that end we are recommending a statement of Stanford's purpose and its human resource philosophy. While the value of such a statement is that it endures over time, we recognize that it will need periodic review and modification to clarify it or make it more responsive to new University directions.

For such a statement to acquire the significance that we intend for it, it must be introduced and supported by the senior officers of the University, be distributed widely and be reinforced regularly. It should be a part of employee orientation, supervisory and management selection and training, performance appraisal and salary increase considerations, staff handbooks and other University publications and programs. In other words, it needs to be institutionalized and internalized by all.

These efforts, complemented by thoughtful policies and practices, have the potential to create a climate in which the University's work is well and faithfully done, people's abilities are developed and their expectations of job satisfaction are realized.

Accordingly the task force recommends that,

Recommendation #1:

The University should adopt the proposed statement of its purpose and human resource philosophy and take appropriate measures to distribute it widely within the University and to reinforce it regularly. *(See page 15.)*

B. The Balance Between Central and Local Responsibility

The proposed statement of Stanford's human resource philosophy emphasizes the importance of shared responsibilities and commitments. The concept of each employee's personal responsibility, joined with special responsibilities of supervisors and responsibilities of the University as a whole, suggests a context for successful personnel administration.

Such a context requires a blend of role and responsibility which is different from what currently exists. Local departments regularly conclude that matters are "out of their hands" and that the offices really making the final decisions are Personnel or staff to the vice-presidents. The department heads and administrators know they are accountable for the operation of their units but often feel they cannot fulfill their responsibilities because of the

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bureaucratic maze they must travel in dealing with personnel matters.

Conversely, people in the central offices are frustrated because they see departments willing to take actions which, while locally expedient, are without apparent regard for broader institutional interests and commitments. Consequently, they construct an elaborate administrative mechanism in an attempt to safeguard the University from itself.

The people in these central functions believe that they are being held responsible for guarding the integrity of the University's principles. Hiring decisions are questioned in the interest of affirmative action, requests for reclassification are scrutinized in an attempt to preserve classification equity, and so on. And in the middle, of course, are the employees being affected.

The achievement of a better balance of role and responsibility is of special importance to the University if the human resource philosophy is to be meaningful. More people throughout the University should be involved in effective human resource management. Departments must feel more accountable for balancing local and University-wide needs. Central and local functions must be realigned in order that the various offices perform those functions best suited to them. At root is the need for a broadly shared belief that effective human resource management is everyone's responsibility and that the continuing excellence of the University depends on it.

Recommendation # 2 reflects the general theme of the need for greater local responsibility. It is the central notion from which many of the subsequent recommendations are derived. Some of the recommendations underscore the responsibilities that department supervisors and administrators already have for human resource management, e.g., performance communication, staff development and affirmative action. Other recommendations advocate a conscious and carefully managed shift in the balance of responsibility for some aspects of personnel administration from central to local functions, e.g., classification decisions.

For such changes to be successful, there must be a clear mutual understanding between central and local units regarding the intent of each change and the means by which it will be accomplished. Such changes require an evolutionary process, not a cataclysmic event. Those involved will need training, support, encouragement, and recognition. The form and timing of the changes should depend to a large extent on local capacity and readiness. Some organizations are prepared to accept a larger role immediately while others will require months or even years to prepare. To force such changes prematurely would undermine the entire concept of a culture of shared commitment.

On the other hand, the task force is not suggesting that the acceptance of greater local responsibility be a local option. It won't work for example, if supervisors in department "X" take the position that affirmative action or responsible salary administration is the provost's problem. We must all be involved to some extent in the shifting balance. How and when that shift is accomplished can vary from unit to unit. Our recommendations are intended to initiate that process and serve as a predisposing context within which other issues will be addressed in the future. Accordingly the task force recommends that,

Recommendation #2:

The University should increase local responsibility for personnel matters and, where appropriate, shift responsibility for personnel administration from central to local organizational units.

Increased decentralization cannot reduce institutional obligations regarding compliance with external regulations and with the University's own principles and basic policies. As local units take on greater responsibility for personnel matters, there should be explicit understanding as to the responsibilities of the line officers for the implementation of University-wide policies and principles and for the development of compatible local policies and practices. Evaluation and oversight mechanisms will be especially important to assure that this shift in responsibility is meeting its intended goals. Accordingly the task force recommends that,

Recommendation #3:

As local responsibility increases and decentralization occurs, the University should establish clear expectations of and understandings with line officers as to their responsibilities for the implementation of University-wide policies and principles, and the development of compatible local policies and practices. Evaluation and oversight mechanisms should be established to assure that University obligations and commitments are met and that the desired benefits of these changes are being realized.

During the work of the task force it became clear that persons throughout the University have fundamentally different perceptions about the role and effectiveness of the Personnel Department. Some see the department functioning in a strictly advisory role, while others are convinced that it has final authority on many personnel matters. Some see the department playing a vital and useful role, while to others it represents the epitome of unfettered bureaucracy. Similar confusion and attitudes exist about the roles of vice-presidential staff who are heavily involved in personnel matters.

As the balance between central and local responsibility is adjusted and as the other task force recommendations are implemented, we believe that the University needs to clarify the purpose and role of these functions. Accordingly, the task force recommends that,

Recommendation #4:

The University should clarify the role of the central Personnel Department and the roles of vice-presidential staff involved in personnel administration. Once clarified, these roles should be communicated to the faculty and staff.

C. Supervision

A necessary companion to greater decentralization of personnel administration is the greater need for broadly competent supervision throughout the University. The supervisor plays a critical role in any organization; in one that decentralizes functions and responsibilities previously centralized, supervision takes on added immediate importance as well as new longer-term dimensions. We believe, therefore, that supervision needs to be paid special attention so that its present strengths can be preserved, that its present weaknesses can be corrected, and that the further responsibilities that our recommendations will lay upon it can be handled with skill and confidence.

The survey conducted for the task force by SRI reflected, in general, a fairly high degree of satisfaction with supervision across a wide range of aspects of the supervisory relationship. Supervisors are generally perceived as knowledgeable, available, fair, and as setting high standards for both the quality and amount of work expected from those they supervise. Areas where survey respondents expressed a material, but in no case high, level of dissatisfaction about the supervisory relationship were career development, motivation, and performance evaluation.

The supervisor is a pivotal person. Situated organizationally between the University and other employees, the supervisor has a dual responsibility. As a representative of the University, the supervisor defines the tasks to be done and provides guidance on how to do them best; he or she reviews performance, provides feedback, and recommends salary increases; the supervisor has the obligation and opportunity to facilitate employee advice and comment about the workplace and its improvement; and the supervisor reflects the University's human resources philosophy in all other aspects of the supervisory relationship.

As colleague and mentor of those with whom he or she works, the supervisor is concerned with employees' growth in competence, with their career development, with providing assistance in problem solving, and with assuring both fair treatment and recognition of accomplishment.

The supervisory skills of defining work to be done, of delivering feedback (both positive and critical) at frequent intervals, of giving career advice, and of doing other things vital to the supervisory relationship do not come naturally to most individuals. Some supervisors are better than others; some supervisors are better at some parts of their job than they are at others.

Nevertheless, the several aspects of the role can be taught by example and by design. Further, supervisory skills work best when reinforced by attitudes that project an affinity to the University's philosophy and a confidence in one's ability to relate as a supervisor to one's staff. Accordingly the task force recommends that,

Recommendation #5:

The University should expand its supervisory training and general educational program for staff.

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Stanford's Purpose and Its Human Resources

Stanford's special and enduring purpose—the creation, preservation, and transmission of knowledge—distinguishes it from most other places of work. The University is an academic culture in which a unique partnership exists between faculty, who are responsible for maintaining the standards of excellence in education and research, and staff, who provide vital direct and indirect support to that end.

Fulfillment of Stanford's purpose depends on a shared commitment between the University and its staff. Because the people who work here are Stanford's human resource, the University respects each person's worth, dignity, capacity to contribute, and desire for personal growth and accomplishment. In return, Stanford depends on its staff to share a common understanding of and commitment to work for the achievement of the University's goals.

This shared commitment provides the foundation and context for Stanford's personnel policies and their administration. The commitment will be realized if individual staff members:

*** understand how their work contributes to the University;**

*** know what is expected of them and whether they are meeting those expectations;**

*** perform their work with skill and dedication;**

*** have the opportunity to develop their skills and to grow in their careers;**

*** are appreciated and recognized for their work;**

*** treat one another with understanding, dignity, and respect;**

*** receive adequate and equitable compensation;**

*** have access to help in resolving work-related problems;**

*** work in a community which reflects society's cultural and ethnic diversity.**

In common and in different ways, everyone who works for Stanford shares responsibility for serving the University's purpose and for upholding its human resource principles.

Each person is responsible for understanding the University's purpose, for understanding how his or her own work contributes to that purpose, and for performing at a level which serves both the University and other employees well.

Because the relationship between employees and their supervisors or managers is a reflection of the University's regard for its human resources, those people who also manage, supervise, or guide others have special and additional responsibilities. Accordingly, Stanford recognizes its commitment to enable and encourage managers and supervisors to:

*** know how the work of the people they direct serves the University's purpose, and convey their understanding by communicating purposes, policies, plans and methods clearly and regularly to the people they direct;**

*** treat each person with dignity and with respect for individuality;**

*** strive for mutual understanding of performance expectations, and reinforce that understanding through regular performance reviews and training;**

*** encourage and consider employee input in decisions that affect the work and careers of those employees;**

*** encourage career development by helping individuals achieve their goals within the University, by encouraging self-development, by promoting from within and, when appropriate, by helping them move on to opportunities outside the University;**

*** provide the means for resolving work-related problems;**

*** administer wage and salary policies equitably, with recognition of the diversity of jobs, the nature of service, individual performance and achievement, and growth in the job;**

*** understand and fulfill the University's commitment to equal opportunity and affirmative action;**

*** respond with understanding and compassion to people experiencing personal crises;**

*** help mitigate the impact of work reduction on those employees affected;**

*** recognize the relationship of individual departments to the University as a whole.**



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By themselves, however, supervisory skills are not enough. For supervisors to be effective, their roles need to be well defined and their performance carefully evaluated. In other words, supervisory responsibilities need to be well understood and communicated when performance expectations are established; and supervisory effectiveness needs to be a major element in the evaluation of those who have the supervision of others as one of their responsibilities. Accordingly the task force recommends that,

Recommendation #6:

Systematic recognition should be given to supervision as a principal responsibility and to the expectation that those who supervise others should be evaluated in part on their effectiveness at supervision.

The involvement and commitment of the University leadership will be crucial as local responsibility is enhanced and as supervision is strengthened. Despite the obvious nature of this observation, the task force has noted troubling examples of senior officers who are unaware of existing University personnel policies. Such a condition must be remedied if greater local responsibility and more effective supervision are to be realized. While no single measure is sufficient, several efforts in combination can be effective. Accordingly the task force recommends that,

Recommendation #7:

Prior to the appointment of a senior University officer, that person should be made aware of the University's philosophy of human resource management and the leadership role that that person would be expected to assume with respect to that philosophy. Following appointment the University should provide systematic orientation to acquaint the person more thoroughly with the University's human resource principles, policies, and practices.

In academic departments, supervisors are often faculty members. As members of the faculty, they are often neither trained nor inclined to give to supervision of staff the priority they assign to teaching and research. This is not inappropriate, for a faculty as distinguished as ours should not be diverted into unchosen administrative pursuits except as absolutely necessary. For this reason we propose an institutional supplement to the faculty member's supervisory role. We believe that by assigning a partnership role to nonacademic staff, such as departmental administrators, a productive division of supervisory responsibility can be worked out to the advantage of all concerned. Accordingly the task force recommends that,

Recommendation #8:

The role of appropriate administrative staff in assisting in the supervision of staff in academic and research areas should be increased.

Finally, the relationship between a supervisor and those supervised must be two-way. Getting the most out of one's job requires taking initiative, making suggestions, participating in the setting of objectives, evaluating strengths, and determining means and methods. While supervisors should make provision for such participation, staff members should also take responsibility for their parts in the dialogues through which difficulties are confronted, problems defined and solved, and progress made. Accordingly the task force recommends that,

Recommendation #9:

The University, in its training and orientation programs and in the other ways in which the institutional philosophy is communicated, should emphasize the expectation of joint participation and encourage dialogue between supervisors and those supervised with respect to the establishment of means and methods of accomplishing objectives and for the resolution of difficulties.

D. Pay and Classification

The task force devoted a significant portion of its efforts to the discussion of pay and classification issues. These discussions ranged from issues of broad compensation policy and administration to technical matters such as pay range and classification structures. While specific recommendations follow, the context in which they are set is crucial to understanding and implementing the recommendations and ultimately to the effectiveness of the compensation system.

The compensation system needs to reinforce the fact that Stanford is a single institution and a single employer. In so doing the system needs to include: a) a single, centrally maintained (**not** necessarily administered) classification and pay system with an articulated set of supporting policies and guidelines, and b) sufficient flexibility to recognize the differing needs of operating units and individual employees. Accordingly the task force recommends that,

Recommendation #10:

The University should continue to have a single, centrally established and maintained classification and pay system.

The compensation system must be built from, and dependent upon, a shared understanding of and commitment to a set of fundamental policies and principles. The task force believes that the basic principles and policies that have guided the present compensation system are sound and we set them forth explicitly as follows:

1. Within the context of the University's available resources, pay should be based on a combination of the requirements of the position, individual performance, amount and quality of experience, length of service and market factors. In applying these factors special efforts should be made to recognize the value and contribution of employees at least as much as market factors.
2. The classifications of individual positions should be based on the responsibility assigned to incumbents and not their performance in carrying out these tasks. Job title, the position of the person to whom an employee reports, and the volume of works are not determinants of classification. However, many of these factors may directly affect the nature of the assigned responsibilities which, in turn, influence the classification of a position, e.g., a person who performs very well may be assigned increased responsibilities thereby changing the job and possibly the classification.
3. Over time the source of funds (research, operating, etc.) should not be a factor in determining appropriate rates of pay for individual employees. If specific grants and contracts cannot support appropriate salary rates, staffing cutbacks or reductions in employees' work hours should be considered in order to maintain equitable rates of pay for continuing employees.
4. The University's compensation program must meet all essential external legal and contractual requirements (FLSA, OFCCP, EEOC, DOE, etc.).

Administration of the compensation system will result in significant classification differences among positions and salary differences among individuals. Such differences should be justifiable by reference to the principal determinants of pay and classification (1 and 2 above). Additionally, the compensation system must provide room for reasonable and justifable pay and classification exceptions. When exceptions are frequent, the associated policies or practices should be reviewed for either revision or reaffirmation. The task force recommends that,

Recommendation #11:

Within the context of available resources and with an understanding that the compensation program should meet all essential legal requirements: pay should be based on a combination of the requirements of the position, individual performance, amount and quality of experience, length of service and market factors; classifications should be based on the responsibilities assigned to incumbents rather than on their performance in carrying out these tasks; and the source of funds (operating or research) should not be a factor in determining appropriate rates of pay for individual employees.

Decentralization of Classification Decisions

The task force spent considerable time discussing the process by which compensation decisions are made. At present there appears to be substantial dissatisfaction: decisions take too long, there is too much paperwork, the process is often intimidating to employees, and there may be inadequate sensitivity to local needs. The source of these problems is that too many routine decisions require extensive review by a multitude of offices.

A small midyear adjustment in pay typically is recommended by a supervisor and then is reviewed, in laborious succession, by a departmental administrator, a dean's or director's office, a vice-presidential office, and finally the Personnel Department. The task force concluded that a reduction in unneeded bureaucracy is required and can be best accomplished by enhancing local control and simplifying approval processes.

The general area of pay and classification decisions is particularly well suited to this approach. Currently, some aspects of pay administration are already highly decentralized. For example, the system for setting individual exempt merit increases allows for substantial responsibility and control by supervisors; the primary constraint is budgetary rather than procedural or structural. Other aspects, such as the classification system, are closely monitored by the compensation section and vice-presidents' offices.

The task force believes that in certain of those areas which are currently highly centralized, heightened local responsibility will result in solutions better tailored to the unique circumstances of individual academic and administrative units and in an improvement in employee and supervisory morale.

The task force is not, however, recommending a return to the uncontrolled 'free market' of the '60s and before. The application of a decentralized decision-making process for compensation decisions must occur within the framework and guidance of centrally maintained policies and systems; individual units must not design and install their own pay and classification systems. A move toward decentralization also should not be imposed on ill-prepared units, and the form that such changes take should be adapted to each area according to its particular needs.

Classification determinations are well-suited to the process of decentralization, and many departments are already prepared to assume this responsibility. Implementation should occur as units are interested and able to support the process; the decision to decentralize classification decisions within a given unit, and its timing, should rest with the dean or director of the unit and the appropriate vice-president. Personnel should be involved in a consultative capacity to give advice on the timing and advisability of the action, as well as to suggest ways to make the change maximally successful.

Medium and large sized units (schools such as Engineering or the Medical School) may be best prepared for these responsibilities because of their administrative resources or their groupings of similar jobs. The addition of these responsibilities may also be feasible for smaller units; however some small units with similar staff compositions may need to pool their administrative resources in order to handle the responsibility of reviewing classification recommendations.

The implementation of decentralization may also vary; some units may focus first on nonexempt (clerical); many may include low- and mid-level exempt staff, and others may feel ill-prepared to deal with technical positions (programmers, engineers, and/or research assistants). It is presumed that there is a stratum of senior-level positions that will continue to require some form of central review. We also believe that bargaining unit positions should be administered as they are currently, given the greater need for consistency in the interpretation and administration of the bargaining unit contracts.

The success of this proposal rests heavily on the preparedness of the affected units. It is hoped, however, that within the next two years substantial changes will occur. Gradualism should not result in inaction.

In considering the proposal to decentralize classification decisions we reviewed a variety of opportunities and risks, and these are outlined below. The task force concluded that the balance was clearly on the side of opportunity and that many of the risks could be mitigated by gradual and thoughtful implementation and by careful and continuing review of the program's results. In order to support these efforts, the Personnel Department must play a critical role by assisting in the development and implementation of a process for effective and ongoing audit of decentralized classification decisions.

Opportunities include:

1. Responsiveness to the desire of some operating units to move in the direction of a decentralized classification process.
2. A streamlined process that requires less time, fewer steps, and reduced paperwork.
3. Improvement in the quality of decisions; opportunity to develop better solutions to the unique problems of varied working environments.
4. Reduction in employee and supervisor stress associated with the existing process, and improvement in staff morale.
5. Reinforcement of the relationship between staff members and their own departments.
6. An increase in compensation's ability to serve as a resource to departments.

Risks include:

1. The inability or unwillingness of some supervisors to assume added responsibility and to utilize effectively available University resources.
2. Reduced consistency in the application of the University's classification system; possible exacerbation of the negative impact of subtle biases (male/female, minority/nonminority) or personality preferences or conflicts.
3. Migration of superior employees from poorer to

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richer departments, if the latter inappropriately manipulate classifications in order to make them more attractive financially to employees from other departments.

4. Reduction in the central administration's understanding of local needs, which may impair its ability to design or revise the classification system and to formulate annual salary programs.

5. Decreased attention to legal obligations.

6. Increased budgetary pressure resulting from reduced central controls on individual reclassifications and possible patterns of 'grade creep' (e.g., most secretaries being promoted to administrators while still performing secretarial tasks). If this were to occur, there is a risk of unintended and possibly severe pressures on the University's financial resources.

Mitigation or elimination of these risks can occur if there is effective review by adequately trained administrators within each operating unit. Decentralization requires, therefore, an enhanced commitment to supervisory training and an institutional willingness to hold supervisors accountable for effective personnel management. In conjunction with this effort, there also needs to be a close working relationship between personnel and the operating units. The compensation section, for example, must provide adequate resources to supervisors; this will require an increase in time devoted to consultation, revisions in the classification system, communication and training, and market research. In addition, compensation should assist the process by conducting periodic studies of the consistency and accuracy of classification assignments in University departments. The purpose of such review would be to identify favorable or troublesome patterns and to propose the necessary corrective measures. Finally, units should be encouraged to develop formal mechanisms to support the decentralization process (e.g., classification committees) and to participate in interunit consultative and review bodies (e.g., a monthly or quarterly meeting of staff affairs officers or associate deans).

The task force believes that, in combination, the efforts described above can reduce substantially the principal risks: inconsistency in classifications across the University, increases in the University's legal liabilities, and unintended budgetary pressures. Accordingly the task force recommends that,

Recommendation #12:

The University should decentralize nonbargaining unit staff classification judgments and associated salary determinations into organizational units at a level where there is adequate administrative support for personnel activities.

Pay Administration: The Need For Increased Flexibility

Within the University there is a widespread concern that the current pay system may have the effect of compensating employees too uniformly and too automatically. The combination of the design of the present pay system and its application has resulted in pay increases for many nonexempt and exempt staff which are virtually across-the-board, and without regard to job performance. The task force believes that Stanford's approach to pay administration ought to be modified in order to provide the enhanced flexibility and incentives necessary to reward outstanding performance and to acknowledge the value of an employees' work to the University. We hope to see, as a consequence, an increased dispersion, based on performance, of both salaries and annual increases.

The desired flexibility is needed to support two objectives. First is the need to reward superior performance generally and, specifically, to provide particular recognition to long-term, high-performing staff whose salaries may be constrained unduly by range maxima. Second, poor performers ought not to be rewarded with increases which are greater than their performance warrants.

Our recommendations are premised on the belief that rewarding high performance acknowledges the kind of quality and productivity upon which the University depends. A companion premise is that denying substantial pay increases for poor performance would more clearly communicate the need for improvement.

While the existing exempt structure can provide adequate flexibility with only minor revision, significant modifications to the nonexempt step structure are required. The latter tends to reward all levels of performance equally, given the annual automatic range and step increases.

More than one member of the task force observed that the guaranteed nonexempt range adjustment may not only deny performance recognition for nonexempt staff, but also may establish an expectation on the part of exempt staff that their increases will be no less than the nonexempt range adjustment, regardless of performance. The step increases, moreover, are granted automatically by most supervisors, despite provision for their delay or acceleration, and we believe that the current system encourages that practice.

The following considerations should guide any modifications to the nonexempt pay structure:

1. Salary increases should be based on performance; automatic increases should be minimized.

2. Salary ranges need to provide adequate latitude to reward strong performers, especially those who have long tenure at the University.

3. A structure sufficient to guide the judgments of supervisors and to support the explanation of significant salary differences among employees is needed.

4. Nonexempt pay ranges, especially their minima, should be competitive with the market for hiring purposes; moreover, it would be useful to continue to specify a minimum and maximum salary for each pay range, as well as a normal hiring range for new hires to the University.

The Personnel Department should be charged with the responsibility of designing a system of nonexempt pay administration best suited to Stanford's needs. Alternatives may range from a significantly modified version of the current structure to an altogether new system, e.g., an open range structure with only a minimum and maximum specified. While final implementation may be phased in over time, the task force is recommending that two specific changes be initiated by next September.

First, the maxima of the ranges should be extended considerably. The current ranges have a span (percentage spread) of 37 percent (recently increased from 25 percent), as compared to the 50 percent span of the exempt curve ranges. The task force believes that strong performing nonexempt staff deserve treatment similar to that of exempt employees. An extension of the range maxima would remove the reality and appearance of disparate treatment and provide increased recognition for long-term nonexempt employees.

The increase in the pay range spans should be accomplished over time, in a manner that avoids undesirable outcomes. Our intention is to increase the rewards for the superior performance of long-term employees; but the cost of this proposal, however small, should not result in smaller increases to the minima of the pay ranges, as this would detract from the University's ability to hire qualified staff. Instead the cost should be recovered by reducing increases for less satisfactory continuing staff. In addition, while it is desirable for the nonexempt and exempt pay structures to be more similar, the increase in the nonexempt maxima should be coordinated with changes in the exempt ranges so that appropriate relationships are maintained.

The second change that the task force recommends for implementation by next September is a provision for exceptions to the constraint of range maxima, in order to recognize the extraordinary performance of a small number of long-term employees. Justification ought to be required, however, when proposing that an employee be paid more than the top of the range, and the action should be subject to approval by the dean or director within guidelines established by the vice-presidents.

Changes to the present exempt and nonexempt pay structures and policies are not without risk. The success of our recommendations rests heavily on the willingness of supervisors to accept additional responsibility and on the University's capacity to provide supervisory training and other needed resources. While most supervisors will welcome additional flexibility, some may find burdensome the requirements for judgment, decision, and communication.

One example of such a risk is that increased flexibility in nonexempt increases will place a strain on the existing salary program controls ("control percents.") With a more flexible structure these controls will represent the primary constraints on nonexempt salary increases, as opposed to other factors imbedded in the nonexempt pay structure (the programmed increases of the current system).

While significant flexibility has worked reasonably well for exempt staff, there are many more supervisors of nonexempt than exempt staff. This larger number of supervisors results in greater complexity in the administration, evaluation and communication of a salary program. The proposal for increased flexibility requires, therefore, that departmental administrators charged with personnel administration be given substantially increased responsibility and accountability for coordination and review of the nonexempt salary-setting process.

The employee response to greater flexibility in the nonexempt structure is uncertain but we believe that most employees, and certainly those whose performance is above the average, will respond favorably to a clearer linkage between performance and recognition through the compensation system. Some, however, may resent a loss of or reduction in increases that they have perceived as virtually guaranteed, and a few may feel that differences in salaries or annual increases are arbitrary or inequitable.

There may also be increased speculation by employees about the salaries or increases of others. Thoughtful communication of the proposed changes, the University's willingness to listen to feedback and to make sensible adjustments to the program, and more effective performance communication (discussed elsewhere in this report) can offset these risks. The task force recommends that,

Recommendation #13:

The nonexempt pay structure should be modified to provide greater flexibility to reward performance. The span of each nonexempt pay range should be as much as 50 percent to give supervisors greater flexibility to reward outstanding performance. There should be provision for limited exceptions to the policy of not allowing salaries to exceed the maxima of the pay ranges.

While the exempt range structure currently provides adequate flexibility to reward performance, a majority of the task force members believe that the annually published salary guidelines do not augment, and possibly impair, the ability of supervisors to differentiate among the performance levels of their employees through salary increases. The task force agreed that budgetary controls and the constraints of the curve structure provide sufficient guidance.

Specifically, there should be no centrally established guidelines linking performance categories and specific percentage increases. A description of the next year's curve ranges and the budget controls for exempt increases is sufficient. It may also be useful to communicate that salary increase control percents will vary somewhat among units, insofar as some areas will need to use part of their allocation to solve problems of salary equity and/or may choose to withhold a portion of the authorization for selected midyear increases; any resources withheld are intended to be used for future salary increases, not other departmental needs.

If more guidance is needed, individual operating units may exercise the option of formulating salary increase guidelines tailored to their own circumstances, provided that they are not inconsistent with the constraints of the salary control percentage and the curve range structure.

The risks and opportunities associated with this proposal are similar to those identified in the previous recommendation for nonexempt staff. The risks, however, are far more modest; namely, some employees and supervisors may regard the existing guidelines as helpful in determining and explaining annual merit increases. If this response is widespread and the expected benefits do not materialize, it would be relatively easy to modify the approach or return to our current method in future years. The task force recommends that,

Recommendation #14:

Centrally established guidelines on individual exempt annual salary increases should be discontinued; the University should rely on the curve range structure and the limits imposed by the budgetary process to provide adequate guidance to supervisors in setting individual salaries.

Changes to the Classification Structure

The task force reviewed at some length the efficacy of the existing classification system. Discussion centered around several troubling characteristics: rigidity, complexity, ambiguity, lack of responsiveness to local needs and, in some cases, obsolescence. The task force believes that our present system's attempt to categorize each of the University's thousands of employees into job classifications with bounded salary ranges may be unrealistic, unresponsive to the University's complexity, and perhaps unresponsive as well to the different job performances of different employees.

It appears that the commitment to maintain consistency has led the University to equate and compare jobs which often are not comparable or even of equal importance to the functioning of their respective departments. A substantial reduction in the number of classifications and an associated broadening of the assignment pay ranges should be considered, such as replacement of a series of classifications with a single title.

At the same time it is recognized that for some occupations progression through a hierarchy of titles (junior to senior, I through IV) provides a source of gratification and motivation to employees. Also in some circumstances highly specialized classifications will be required. Broad clerical classifications may, for example, be coupled with a set of highly specific titles for selected word processing positions.

Early and significant attention is required most in the

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area of nonexempt classifications. Specifically, we propose that the major classifications for nonexempts be broadened and that there be clearer delineations between levels. Exempt classifications should be studied in order to improve their clarity and specificity. The goal of these efforts should be to make the system simpler to understand and easier to administer.

Our recommendation to decentralize the classification process presumes a system that is understood and accepted. The existing classification system is perceived by supervisors and employees to be cumbersome and restrictive. While our discussion reflected competing desires for simplicity versus specificity, and for ease of administration versus the provision of a source of motivation, the task force believes that a middle ground is achievable and that thoughtful modification to the classification structure will serve to support and accelerate the decentralization process. The task force recommends that,

Recommendation #15:

The Personnel Department should be charged with the responsibility for undertaking a review of the current classification structure for exempt and nonexempt staff. Wherever possible the structure should be streamlined and made simpler to administer. There should be fewer and more clearly defined classifications except for those occupations which are highly specialized and viewed as such in the local labor market.

E. Staff Development

The opportunity to grow in responsibility and skill is the essence of a developing career. We believe the University should provide avenues for and encourage such development through honest, timely and constructive performance communication, policies encouraging employee career growth and promotion, and educational programs supporting employee efforts to improve job performance and foster career development. Accordingly, we are making recommendations or comments in these three areas:

Performance communication

The task force has learned that, while significant performance communication is occurring presently, much is yet to be done. By performance communication, we mean the ways through which employees learn clearly what is expected of them and how well they are meeting those expectations. It is also the process by which employees can communicate with their supervisors.

The fact that 25 percent of the staff surveyed do not receive performance evaluations even once a year, and 13 percent have never received one, suggests that the University is missing an important opportunity to help staff develop while accomplishing the University's work.

Even more troubling is the finding that less than half of the staff surveyed understand the bases on which their performance is evaluated, and only half say they are satisfied with the performance feedback they receive. The possibility of miscommunication and discouragement in such a situation is evident.

We also learned by consulting with ethnic minority staff that supervisors are often reluctant to give constructive criticism to minority employees. This phenomenon only serves to frustrate affirmative action efforts and may be one contributing factor to our findings that minority staff are less satisfied with working at Stanford than are nonminorities. The task force recommends that,

Recommendation #16:

The University should expect and encourage effective performance communication for every staff member. All line officers should hold each succeeding lower-level officer accountable for insuring that performance communication is accomplished and that this communication includes, but is not limited to, a program for regular performance evaluation.

Career Growth and Promotion

Filling jobs from within Stanford is generally a preferred alternative to hiring from outside. Such an approach recognizes and encourages both productivity and loyalty. Institutional efforts are required to develop the internal talent pools from which to draw in the future to assure that well qualified internal candidates are available and to assure that affirmative action goals can be met.

It is especially important to understand that career development is a mutual responsibility of the employee and the University. Employees need to take the primary responsibility and initiative in charting their growth. The University can be instrumental in facilitating this growth by providing information about internal career directions, helping supervisors improve their skills in encouraging career development and developing employee potential, and providing financial assistance for educational activities. Accordingly the task force recommends that,

Recommendation #17:

The Affirmative Action Office and the Personnel Department should develop and publish periodically a report on career paths at Stanford. Such a report should focus on specific job titles and describe how current University staff reached those levels. In addition, information on relevant staff development offerings should be provided.

This is only one example of actions which can be taken to facilitate career growth. There are many others which require varying degrees of time and commitment. For instance, the University might consider an internal staff exchange program which would move middle level management staff from one vice-presidential area to another, thereby facilitating knowledge and understanding of University operations. Such a concept may also be workable within departments for both exempt and nonexempt staff.

Educational programs

While on-the-job learning is fundamental in the evolution of an individual's career, educational programs within Stanford and elsewhere can be significant in expanding the scope or extending the reach of career development.

A number of educational programs is offered presently by the Staff Development section of personnel. Supervisory and management development, skills training, and career counseling all exist currently. Yet, access to the programs is limited. Many of the offerings are filled very quickly, and staff are frustrated regularly when they are turned away from courses that would be immediately useful to them. Also, there are significant gaps in the categories of offerings; for example, while we have programs for people who are already supervisors, there are no programs to help prepare employees to become supervisors. Accordingly the task force recommends that,

Recommendation #18:

Existing staff development offerings should be augmented in those areas which have proven to he the most useful for staff, and new programs should be offered to fill existing gaps and build a more coherent set of programs for career growth, as well as for improved current performance.

In addition to courses offered within Stanford, a rich array of job-related educational programs is offered in the surrounding area. Many of our staff participate in these programs, and they serve as a useful adjunct to our own offerings. For years Stanford has provided tuition assistance for these programs at a rate of $75/quarter under STAP (Staff Training Assistance Program). That amount is inadequate today if we are to maintain sufficient incentive for staff to continue their learning and career development. Accordingly the task force recommends that,

Recommendation #19:

The University should adjust the staff training assistance program reimbursement rate to a more adequate level in order to make job-related educational growth more accessible to staff. This rate should be reviewed and adjusted periodically to maintain its adequacy.

F. Affirmative Action and Employment

A human resource development strategy without a vital affirmative action strategy is incomplete. Diversity is essential to the vitality of the University. It creates an environment of vigorous exchange and furthers the University's mission by incorporating a breadth of human experience.

This part of the task force's recommendations, while dealing broadly with affirmative action, also includes substantial reference to the University's employment policies and practices, which are so closely integrated with our affirmative action practices. This approach is based on our belief that affirmative action must be a principal consideration in the development and implementation of employment policy. Issues of the effects on minorities and women of our policies and practices in the areas of career development, pay and classification, grievance procedures and the like are considerably less meaningful if the basic employment policy and practice do not reflect an active commitment to affirmative action.

The diversification of the University's workforce began in earnest around 1970, chiefly as a result of the social and political issues raised by the civil rights movement. Minorities and women were hired into positions from which they traditionally had been absent.

By 1973 the University had established a formal affirmative action program aimed at increasing the overall numbers of minorities and women, as well as improving their distribution within the workforce. Systems were put in place that identified appropriate job-related criteria for positions, suggested means to improve recruitment, and addressed issues such as salary equity among groups. A major training effort designed for managers and supervisors was also implemented.

All of these approaches served to increase the diversity of the Stanford community until the mid-1970s. Since then, however, the University has experienced the development of a "plateau" whereby most programmatic efforts have not yielded a significantly higher level of diversity. Rather, most efforts have focused on maintaining the numerical ratios of minorities, and, to a major extent, women, already extant in the Stanford community. In fact, by the end of the decade, some erosion in both the numbers and percentages of minorities in the workforce had occurred, a trend that was not reversed until quite recently.

Thus, despite our successes, some significant problems remain. The challenge to the community becomes one of addressing and overcoming the present plateau, and of striving for increased diversity consistent with our general commitment to excellence.

No minorities or women currently hold positions as vice-presidents or deans of schools. Very few minorities or women currently occupy the top 100 policy-making positions in the University. On the most general scale, the University will have achieved diversity when a significantly larger number of women and minorities participate in the decision-making processes of the institution.

Another indication of success will be when affirmative action consideration becomes an integral part of the management process; that is to say when managers seek out diversity for its own value. Ultimate success will have occurred when formal mechanisms, such as an affirmative action office, are no longer needed because those functions operate regularly throughout the organization.

The University's official commitment to the principle of diversity has been reiterated at the highest levels. However, the need exists to translate that commitment into concrete action by having the senior administration actively and visibly committed to and practicing affirmative action. This commentary and the accompanying recommendations, then, are intended to propose full or partial solutions to some of the specific problems which lead to the conclusion that we have not yet fully integrated affirmative action into our human resources considerations.

Most of the input that we have received from minority staff members indicates a concern that greater decentralization may result in inattention to affirmative action. The task force shares those concerns and also believes that the University has a need for consistency from a legal perspective, for regular reporting to government agencies and, most importantly, for University-wide programs which are aimed at achieving greater diversity. Accordingly the task force recommends that,

Recommendation #20:

The Affirmative Action Office should retain its centralized programmatic responsibilities.

We mentioned earlier that few women and minorities are represented in senior and middle management positions. Approximately 100 positions throughout the University currently fall within those categories. They include such job classifications as University Officer IV, University Manager IV and V, Associate Provost, Development Officer V, Financial Manager II and III, and Associate Dean (Administration). All of these positions are of a key policy-making nature. Women occupy 14 of these positions, and minorities five.

In an effort to focus more attention on affirmative action at these levels, the task force concluded that the vice-presidents should be involved more directly when a vacancy at this level is filled. Because the total number of positions is relatively small and the turnover in these jobs is low, increased involvement by the vice-presidents should not prove unnecessarily burdensome.

This increased involvement of the vice-presidents in reviewing the hiring process should be augmented by a periodic review by the Administrative Council of progress made and problems to be resolved. Accordingly the task force recommends that,

Recommendation #21:

All searches, waivers and hires for senior and middle management should be reviewed and approved hy the cognizant vice-president for conformance with the University's affirmative action policies and that area's affirmative action hiring goals. Once a year the director of personnel and/or the employment manager and the affirmative action officer should meet with the administrative

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council to discuss specifics of goal attainment at these key levels and jointly to develop specific strategies to address areas of concern.

In addition to the focused review of middle and senior management hires, the task force believes that each vice-president should review periodically the overall progress made in his area of responsibility, and that he should emphasize the role and the importance of his affirmative action coordinator(s) in supporting managers in their responsibilities for effective personnel administration. Accordingly the task force recommends that,

Recommendation #22:

Each vice-president should delineate clearly and communicate to the staff as a whole the duties and responsibilities of his area's affirmative action coordinator; and at least once a year each vice-president should meet jointly with his affirmative action coordinator, his senior staff and representatives from personnel and the Affirmative Action Office to discuss affirmative action progress.

In addition to the preceding recommendations there are many other ways to advance the state of Stanford's affirmative action efforts. One, for example, is the concept of providing positive recognition to faculty and staff who have made outstanding contributions to affirmative action in the University. While such recognition should be a part of performance communication between a supervisor and an employee, there can be substantial value in recognition which is more formal and public, such as a program whereby once a year a limited number of University employees (faculty and staff) would be formally recognized by the University for their outstanding contributions to affirmative action in the University.

Another example is based on the fact that a large percentage of our minority workforce was referred by other minority individuals already employed by the University. Consequently it has been suggested that the University consider methods of tapping the existing networks of minority and female staff to obtain referrals of existing applicants, perhaps through an employee referral program which, while not limited to minorities and/or women, would target those groups.

G. Problem-Solving Mechanisms

The proposed statement of human resource philosophy indicates that effective problem-solving mechanisms are an essential ingredient in an environment that values human resources. The statement also reinforces the belief that supervisors and managers have central responsibility for providing the means by which employee problems are addressed.

Stanford has several resources outside the supervisory line to assist in problem solving. Some of these resources are specialized offices such as the Help Center, affirmative action offices, the office of the Ombudsman, and the Employee Relations section of personnel on campus and at SLAC. Others take the form of policy mechanisms such as the grievance procedure.

While the task force was not able to spend significant time examining each of these resources in detail, it did gain some insight into the perceived usefulness through the staff survey.

The survey tested staff familiarity with and attitudes about the problem-solving resources mentioned above. We found that less than 50% of the staff are familiar with these resources. Of those having personal experience with the resources, the Help Center and the Employee Relations section of personnel were perceived as the most useful. Even so, 30% of the staff who had used these resources found them "not at all useful." Over 50% of the staff who had used the Affirmative Action Office, the Ombudsman's Office, and the grievance procedure found them "not at all useful."

The reasons for these perceptions are not clear. The general lack of familiarity with the resources available may mean that people do not focus on such resources until they are involved personally in a problem situation. The lack of perceived usefulness of the Ombudsman's Office and the Affirmative Action Office may reflect a misunderstanding by staff of the roles of those offices. The reason that the grievance procedure is perceived as not being useful could be that most grievances which would be decided in favor of the staff member are so resolved before they reach the formal process. The perceptions regarding the usefulness of each resource may also be due, in part, to expectations which the particular resources were not designed to meet.

While such interpretations may be plausible, they are not the results of focused study. The task force, therefore, recommends that,

Recommendation #23:

Additional efforts should be made to understand the staff's perceptions about existing problem-solving resources and to clarify their purposes.

H. Miscellaneous Issues and Acknowledgements

During the course of our consulting we learned of opinions which either do not fit the preceding categories or which are outside the charge of this task force.

Two of the latter categories warrant mention. The SRI survey indicated that staff are especially dissatisfied with the parking situation at Stanford. We have referred this finding to the Committee on Parking and Transportation for their consideration.

Similarly, the survey showed significant staff dissatisfaction with the availability of suitable, convenient child care facilities. This finding was reported to the Dean of Student Affairs.

The task force would like to express its appreciation to the many members of the Stanford community who have contributed to its work. Special appreciation is due to Dorothy Antwine, Paul Fearer, Caroline Gordon, Linda Haines, and Stephen Peeps.

IV. BUDGET IMPLICATIONS OF THE RECOMMENDATIONS

The task force did no analysis of the budget implications of these recommendations; indeed, we could not, given the combinations of plausible mixtures of recommendations and approaches to implementation. In talking about the subject, however, we found that two general points of view emerged about the likely budget effects.

One point of view is that, with the exception of a temporary investment of money, the net effect of these recommendations on the budget can be zero. The tendency toward incremental costs can be offset by simplification of administrative procedures, by leveraging staff efforts and by better aligning personnel policies and practices with local needs. The key to the success of a new matching of resources to needs will lie in how well we can increase efficiency—by improving the relationship of effort to results—and effectiveness—by increasing the impact of results on our human resources objectives.

The other point of view is that although simplification, leveraging, and aligning can mitigate cost increases, there will still be a residual and recurring net cost to implement these recommendations. More attention to human resource management throughout the University, coupled with significant decentralization of some activities, will require more time, effort, staff and other resources than can be offset by administrative redesign. How much more is not at all clear without analysis.

No doubt there are auspicious times for recommending increased attention to a major facet of organizational life, but the eve of an episode of retrenchment surely is not one of them. The budgetary climate into which our report is being introduced gives us considerable concern. Our principal worry is that consideration of our ideas and proposals will be attenuated if they appear, at first glance, to be too costly. We want to discourage that reaction and instead urge that careful thought be given to the recommendations in the context of the probable budget consequences.

APPENDIX

1. SRI Survey Findings by Staff Subgroups

In addition to the general findings, the survey report also provided an analysis of staff attitudes along dimensions of sex, minority/nonminority status, age, years of service, exempt/nonexempt status, supervisory/nonsupervisory status, salary and vice-presidential group.

Key findings from this analysis are:

Sex

- Of those surveyed, women tend to be younger than the men and to have worked at Stanford a shorter time than men.
- Men are more likely to be exempt employees and to be supervisors than are women. Women are just as likely as men to feel that they are paid about the same as others at Stanford who have similar responsibilities and experience and that their salary increases are determined fairly.
- Men earn significantly larger salaries than women (a larger percentage of higher-paying jobs are filled by men).
- Both men and women are more satisfied than dissatisfied with their jobs, with men being slightly more satisfied than women.
- Men and women do not differ importantly in their ratings of their supervisors; both perceive their supervisors more positively than negatively.
- Women are less satisfied than men with the classification system and its application.
- Women are more apt than men to feel that they understand how their performance is evaluated and that their last evaluation gave them an idea of their strengths and weaknesses.
- Both men and women rate the benefits quite highly.
- Women are less likely to be satisifed with the treatment of women at Stanford than are men.
- Ninety-four percent of men mostly or strongly disagree that they are discriminated against because of their sex, while 78% of the women mostly or strongly disagree that they are discriminated against.
- Men are more likely than women to be familiar with problem solving mechanisms, e.g., grievance procedures, Employee Relations section of personnel.

Minority/Nonminority

- Minorities are likely to be young and female and have worked at Stanford fewer years than nominorities.
- Nonminorities are more likely to be exempt and therefore to have higher salaries.
- Minorities are significantly less satisfied with their salaries than are nonminorities, less likely to think their increases are determined fairly, and less likely to think they are paid the same as others at Stanford with similar responsibilities and experience.
- Minorities are generally less satisfied with their jobs than are nonminorities.
- Minorities have consistently less positive views of various aspects of the supervisory relationship than do nonminorities.
- Nonminorities and minorities do not differ reliably in their attitudes toward staff development.
- Minorities are less satisfied with the job classification system than nonminorities.
- Minorities and nonminorities feel about the same regarding performance evaluations.
- Minorities consistently rate Stanford's benefits as less adequate than do nonminorities.
- A third (35%) of the minorities, as opposed to 15% of the nonminorities, are at least somewhat dissatisfied with the overall treatment of minorities at Stanford. Conversely, 38% of the minorities and 49% of the nonminorities ar mostly or very satisfied with the treatment of minorities.
- Twenty-five percent of the minorities believe that, to some degree, they are discriminated against in their jobs because of their race.
- Minorities are no more likely than nonminorities to be familiar with Stanford's problem solving or grievance mechanisms or to have found them useful.

Age

- Age is positively related to job satisfaction at Stanford, but job satisfaction does not increase continuously over the life cycle. Staff over 50 are significantly more satisfied with most dimensions of their jobs than are other age groups. Staff age 31 to 40 and 41 to 50 do not differ greatly in job satisfaction. Those under age 31 are significantly less satisfied with the type of work they do and with their independence and flexibility than are other age groups. This may be due to the fact that they are least likely to have exempt status or to be supervisors.
- Although staff under 31 earn significantly less than other age groups, they are just as satisfied with their salaries as are those age 31 to 40 or 41 to 50. Staff over 50 are more likely to be satisfied with their salaries than are their younger colleagues. Staff of all ages believe that staff who have similar responsibilities and experience should be paid similar salaries regardless of where in the University they work.
- Staff members over 50 are most apt to perceive their supervisors positively.
- Staff over 50 are most likely to say that they are very satisfied with the job classification system.

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Staff over 50 are most likely to rate their last performance evaluation highly, to say that it helped them in their career development and planning, and that they understand how their performance is evaluated.

Staff members over 50 are most likely to perceive Stanford benefits as adequate.

Staff over 50 are significantly more likely to rate highly various personnel department services.

Staff members under 31 are more likely than their older colleagues to be female and minority; also they are less familiar with Affirmative Action offices, staff grievance procedures and the Ombudsman's Office than are other age groups.

Age groups do not differ significantly in their ratings of the helpfulness of various problem solving and grievance mechanisms.

Years of Service

Most staff have had relatively short tenure at Stanford. Fifty-seven percent have worked here less than six years, 15% for six to 10 years, 13% for 11 to 15 years, and only 15% for over 15 years.

Staff who have worked here for more than 10 years are more likely to be employed at SLAC than are staff with shorter service.

Employees with over 15 years of service are significantly more satisfied with their salaries than are employees with fewer years of service.

Length of employment at Stanford is positively associated with job satisfaction, though not as strongly as age is. For example, staff with fewer than six years of service are significantly less satisfied than are other employees. The lower satisfaction of this group may be due to the large percentage who are nonexempt. Nonexempts are significantly less satisfied with their jobs than are exempts.

Staff with fewer than six years of service are significantly less apt than employees with more years of service to say that their supervisors are not overly critical, are competent managers, are open and democratic, or give recognition for good performance. Conversely, staff with over 15 years of service are most likely to rate their supervisors highly.

Length of service does not appear to make a difference in satisfaction with the job classification system, in staff ratings of their most recent performance evaluations, or in ratings of personnel department services.

The longer staff have worked at Stanford, the more likely they are to say that Stanford benefits are adequate.

Exempt and Nonexempt Status

Almost all (93%) of the nonexempt staff surveyed are women, while women represent about half (46%) of the exempts.

Nonexempts tend to be less satisfied than exempts with their salaries and less likely to believe their increases are determined fairly.

Relative to nonexempts, exempt staff are generally more satisfied with their jobs.

Exempts and nonexempts differ very little on ratings of their supervisors.

Nonexempts are more likely than exempts to have participated in staff development activities at Stanford within the last 12 months, but the opposite is true for staff development activities away from Stanford.

Nonexempts are considerably less satisfied with the job classification system in general than are exempts and less likely to think the reclassification system is applied fairly.

Nonexempts tend to see performance evaluations as better vehicles for downward than for upward communication. Conversely exempts see performance evaluations as somewhat better for upward than for downward communication.

Exempts are generally more satisfied with Stanford's benefits than are nonexempts.

Nonexempts feel less familiar than exempts with Stanford's problem solving and grievance mechanisms. For those that have used these resources, nonexempts give lower usefulness ratings except for the Help Center and the Ombudsman's Office.

Supervisors and Nonsupervisors

Approximately one-third of the staff surveyed are supervisors.

Supervisors tend to be more satisfied with their salaries than are nonsupervisors.

Supervisors tend to be more satisfied with their jobs than nonsupervisors.

Supervisors of exempt staff feel they have more flexibility to reward superior performance through pay increases than do supervisors of nonexempt staff. For both types of staff, considerably more flexibility is desired than is currently perceived to exist.

Only about a third of the supervisors feel that current pay levels are mostly or very adequate for recruiting purposes.

Supervisors are more likely than nonsupervisors to have participated in staff development activities both at Stanford and away from Stanford.

Supervisors are somewhat less negative about the job classification system than are nonsupervisors.

Relative to supervisors, nonsupervisors tend to give more positive ratings to their last performance evaluation.

Supervisors are generally more positive about Stanford's benefits than are nonsupervisors.

Supervisors and nonsupervisors do not differ reliably in their ratings of most personnel department services.

Supervisors are substantially more familiar with Stanford's problem solving and grievance mechanisms than are nonsupervisors.

Salary Level

The distribution of the survey respondents by salary level was less than $16,000 (22%), $16,000 to $20,000 (26%), $20,000 to $28,000 (26%), and over $28,000 (26%).

Generally, the higher the income, the higher the job satisfaction is, although satisfaction with the size of the work load tends to decrease with increasing salary.

Salary level does not appear to make much difference in regard to staff perceptions of their supervisors.

Higher paid staff are more satisfied with their salaries than are lower paid staff and are more likely to believe their increases are determined fairly.

Staff with higher salaries tend to be more positive about the job classification system.

Higher paid staff are generally more satisfied with Stanford's benefits than are lower paid staff.

Staff with higher salaries are more likely to be familiar with Stanford's problem-solving and grievance mechanisms and to consider them useful.

Vice-Presidential Area

SLAC employees are significantly more apt to be satisfied with most aspects of their jobs than are employees in other parts of the University.

Business and Finance employees are significantly less apt to be satisfied with their intellectual stimulation, with their independence and flexibility and with the size of their work load than are employees in other vice-presidential areas.

Provost (non-SLAC) staff are significantly less likely to be satisfied with communication between management and staff and with faculty-staff relationships than staff in other vice-presidential areas.

Medical Affairs staff are less likely to be satisfied with their job security than are employees in other vice-presidential areas.

SLAC employees are more likely to say their supervisors give them recognition for good performance. Perceptions of supervisors on other characteristics do not differ reliably by vice-presidential area.

Provost (non-SLAC) employees and Business and Finance employees are more apt than are Medical Affairs or SLAC employees to have participated in staff development activities at Stanford in the past 12 months. Business and Finance staff are significantly more likely to have participated in staff development activities away from Stanford than are employees in other vice-presidential areas.

SLAC staff are more likely to be satisfied with their salaries and to feel their salaries are determined fairly.

SLAC employees are most apt to be satisfied with the job classification system whereas Medical Affairs employees are least apt to be satisfied.

Business and Finance employees are most likely to say that their most recent performance evaluations gave them an opportunity to communicate with their supervisors.

SLAC staff are most likely to consider Stanford benefits adequate.

SLAC employees and Business and Finance employees are more likely to be familiar with affirmative action offices, grievance procedures and the Employee Relations section of Personnel. Provost (non-SLAC) staff are most familiar with the Ombudsman's office. Familiarity with the Help Center does not vary importantly by vice-presidential area.

2. Task Force Findings from Other Staff Groups

In addition to the survey findings, two staff groups offered especially thoughtful input to the task force. They are La Raza Staff Association and the Staff Affairs Committee of the Stanford Black Community Caucus. A few of the principal recommendations from these groups are listed below. The complete texts of their reports are available on request.

La Raza Staff Association

La Raza Staff Association was supportive of the need for a sound personnel philosophy which recognizes that people are the most valuable resource the University has. Many of the principles suggested by the Association are reflected in our proposed statement of human resource philosophy.

The Association also expressed a concern for policies and practices which result in significant changes in the presence and status of chicanos and Hispanics at Stanford. Recommendations were made on the subjects of recruitment, retention, status, and compensation. Examples within recruitment, retention and status include proposals for:

An employee referral program which would provide incentives for employees to refer qualified minority applicants.

The establishment of statistical programs and analyses of chicano employment patterns.

A junior (C4-C6) management development program.

Career needs surveys.

Better tuition reimbursement programs.

In the area of compensation some examples of the Association's proposals or ideas include:

A reexamination of the assumption upon which Stanford's compensation program is based.

A set of values about pay including a belief that "pay for value to the University is the foundation of an equitable compensation policy."

The importance of a solidly based central classification and audit system, especially if compensation decisions are decentralized.

Analyses of salary relationships among exempt, nonexempt and bargaining unit employees.

Stanford Black Community Caucus

The Black Community Caucus expressed their view that the formation of the task force was a positive sign. In consulting with the task force they expressed an array of concerns and made several recommendations. Some of the concerns and recommendations from the Caucus are:

Managers and supervisors should be evaluated on their effectiveness in attaining affirmative action goals.

The University needs to articulate the career paths through which upward mobility can occur. There is an absence of black staff in middle and senior levels and it appears that more white women are being recruited and promoted to management positions than blacks and other minorities.

Much work needs to be done to improve the quality of existing supervisors and to provide training and support for new supervisors. "Many supervisors feel frustrated and burnt out. They feel expectations are high but support is low from top management."

Stanford's mid-market compensation philosophy precludes hiring highly qualified black applicants. Additionally in lower job classifications the pay is too low for the kind and quality of work expected.

There needs to be a stronger message from the University that career growth is important. Too many staff come in at one level and leave at the same level. The perception is that black staff are not really supported in their career growth.

There is a lack of opportunity for support staff to participate in decisions which affect their job. Additionally there is little minority representation on University committees.

The grievance procedure is not effective. It takes too long to process grievances and it appears biased in favor of management.

While it is difficult to be procentralization for personnel administration, there are very real concerns about our environment with weak central policies and guidelines. Minority staff are concerned that in a highly decentralized environment, policies will not be followed and there will be no central advocate to turn to for help. There appear to be inadequate incentives for supervisors to act responsibility.

Staff survey results: Stanford a nice place to work, but parking criticized

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solicited opinions from individuals and groups before writing its report.

(A composite summary of the survey appears under section II, Findings, on page 14 of *Campus Report*. An analysis by staff subgroups (i.e., by sex, minority/nonminority, exempt/nonexempt, vice-presidential group, etc.) is on page 19.

(Copies of the full text of the survey are available at the following libraries: Green, Meyer, Art, Music, Cubberley, Engineering, Earth Sciences, Math, Computer Science, Falconer Biology, Physics, Swain Chemistry, and Lane Medical.

(The survey also is available from Caroline Gordon at Personnel, ext. 7-9228, and at the SLAC Personnel Department.)

The survey revealed that exempt and nonexempt staff hold a slightly negative view of the job classification system, with one-third believing they are inappropriately classified. The task force proposes restructuring and streamlining the classification system by cutting down the number of classifications and making the system easier to administer.

Judgments about appropriate classification for nonbargaining unit staff should be decentralized to the organizational units at levels where there is adequate administrative support for personnel activities, the task force says.

According to the survey, most nonbargaining unit staff dislike the concept of giving all employees the same percentage salary increase. The task force suggests increased flexibility to reward performance of nonexempt staff by increasing the ceiling of the merit zone and allowing exceptions so salaries of selected strong performers could exceed the range maximum.

The survey showed strong support for salary equity across the institution. The task force says the University should continue its practice of not allowing the source of funds to be a factor in determining employees' salaries.

Feelings are slightly positive about advancement opportunities and salaries. Attitudes split evenly on satisfaction with management-staff communication and the grievance procedure. In addition to the job classification system, faculty-staff relations are viewed slightly negatively.

The staff survey showed Stanford employees have very positive feelings about their work environment, but feel very negative about parking and, for those to whom it applies, the availability of child care.

Minority staff, however, are less satisfied with working at Stanford and feel less positive about their supervisors than nonminorities. "Supervisors are often reluctant to give constructive criticism to minority employees," the task force was told. "This phenomenon only serves to frustrate affirmative action efforts and may be one contributing factor" to the findings about minority staff satisfaction.

Formed by President Donald Kennedy and Vice-President for Business and Finance William F. Massy, the task force was asked to develop a human resource philosophy and recommend changes in the personnel administration system to make it consistent with the philosophy.

Members of the task force were: cochairs Rob Parker, director of personnel, and John Schwartz, University council; Ray Bacchetti, vice-provost, management, and director of University budgets; Ken Creighton, assoc. vice-president, Business and Finance, and controller; David Korn, chairman and professor of pathology; Sally Mahoney, registrar and assoc. provost; David Mendelow, assoc. dean, School of Medicine; Rene McPherson, dean, Graduate School of Business; John Rees, assoc. director and adjunct professor, SLAC; Santiago Rodriguez, affirmative action officer; Elizabeth Salzer, head, Meyer Library; Norman Wessells, dean of Humanities and Sciences and professor of biological sciences; and Robert White, chairman and professor of electrical engineering.

"The task force had not been about its business long when it became aware of a general perception of over-regulation at Stanford," members say in their report.

"We did hear vigorously expressed concerns that certain processes took too long to accomplish, that some processes weren't accomplishing their intended ends, and that a large part of the administration of personnel policies was too remote from the front line supervisor and her or his immediate supervisors."

One of the principal dynamics in universities, they say, "is the tension between order and flexibility, between institutional policies and individual latitude, between central standards and local action.

"We shall be recommending change not because we espouse either polar position on the issue of institutional standards vs. local initiative, but because we believe that the optimum relationship between them requires periodic realignment with the evolution of the University.

"While recognizing the accomplishments and strengths of Stanford's present program," the task force nevertheless feels the University "needs to increase its capacity and effectiveness in managing its enormously valuable human resources."

Nearly two-thirds of Stanford's operating expenditures are for people.

"After years of adjusting policies and practices to meet current needs, there is a natural tendency for any program to lose coherence and focus," the report says. "We hope (our report) will be useful as a source for University initiative and direction for the coming years as Stanford enhances its capacity to manage its human resources."

Human resource philosophy

The task force drafted a statement of "Stanford's Purpose and Its Human Resources," emphasizing a "shared commitment" between the University and employees to fulfill Stanford's purposes and provide the context for the University's personnel policies and their administration.

"The University respects each person's worth, dignity, capacity to contribute and desire for personal growth and accomplishment. In return, Stanford depends on its staff to share a common understanding of and commitment to work for the achievement of the University's goals," the statement says in part (see full text, page 15).

"Each person is responsible for understanding the University's purpose, for understanding how his or her own work contributes to that purpose, and for performing at a level which serves both the University and other employees well."

Individuals with managerial or supervisory responsibilities "have special and additional responsibilities.

"Stanford recognizes its commitment to enable and encourage managers and supervisors to. . .treat each person with dignity and with respect for individuality; strive for mutual understanding of performance expectations, and reinforce that understanding through regular performance reviews and training; encourage and consider employee input in decisions that affect the work and careers of those employees; and encourage career development by helping individuals achieve their goals within the University, by encouraging self-development, by promoting from within, and when appropriate, by helping them move on to opportunities outside. . . ."

Central vs. local responsibility

In addition to shifting personnel responsibilities from central to local units "where appropriate," the task force recommends establishment of "explicit understanding" of the responsibilities of line officers for the "implementation of University-wide policies and principles and for the development of compatible local policies and practices."

In addition, the report says the role of the central Personnel Department and the roles of the vice-presidential staff involved in personnel administration should be clarified and communicated to appropriate faculty and staff.

The shift to greater local control should not be optional, according to the task force. If approved by the Administrative Council, it should be an "evolutionary process, not a cataclysmic event. The form and timing of the changes should depend to a large extent on local capacity and readiness.

Supervision

"A necessary companion to greater decentralization of personnel administration is the greater need for broadly competent supervision throughout the University," the task force says in recommending expanded supervisory training.

In addition, "the involvement and commitment of the University leadership will be crucial as local responsibility is enhanced. Despite the obvious nature of this observation, the task force has noted troubling examples of senior officers who are unaware of existing University personnel policies."

The task force proposes that senior officers or potential officers be made aware of the leadership roles expected of them in human resource management.

On the other hand, a "faculty as distinguished as ours should not be diverted into unchosen administrative pursuits except as absolutely necessary," so the task force recommends increasing the supervisory roles of appropriate administrative staff in support of faculty who also serve as supervisors.

Pay and classification

In recommending decentralization of classification decisions, the task force is "not recommending a return to the uncontrolled 'free market' " that existed prior to 1970, it says. Rather, it seeks to reinforce that "Stanford is a single institution and a single employer."

Therefore it proposes a "single, centrally maintained classification and pay system with an articulated set of supporting policies and guidelines" that allow "sufficient flexibility to recognize the differing needs of operating units."

On the positive side, decentralization could lead to, among other things:

* a streamlined process that requires less time, fewer steps, and reduced paperwork;
* reduction in employee and supervisor stress associated with the existing process, and improvement in staff morale; and
* reinforcement of the relationship between staff members and their own departments.

But the task force cautions, risks will include:

* reduced consistency in the application of the University's classification system, which could exacerbate subtle biases (male/female, minority/nonminority) or personality preferences;
* migration of superior employees from poorer to richer departments, if the latter inappropriately manipulate classifications;
* decreased attention to legal obligations; and
* increased budgetary pressure resulting from reduced central controls on individual reclassifications and possible patterns of 'grade creep.'

"Our recommendation to decentralize the classification process presumes a system that is understood and accepted. The existing classification system is perceived by supervisors and employees to be cumbersome and restrictive."

The task force suggests that Personnel streamline the current exempt and nonexempt classification structure, making it easier to administer. There should be "fewer and more clearly defined classifications."

Concern that the present pay system may appear to compensate employees "too uniformly and too automatically" led members to propose greater flexibility in rewarding superior performance and recognizing "long-term, high performing staff whose salaries may be constrained unduly by range maxima."

Nonexempt merit zone ceilings should be "extended considerably," and provisions for "exceptions to the constraint of range maxima" should be established the task force said.

Long-term, the task force proposes that the Personnel Department redesign the nonexempt pay system. "Alternatives may range from a significantly modified version of the current structure to an altogether new system, e.g., an open range structure with only a minimum and maximum specified."

Exempt pay curves currently have a span (percentage spread) of 50 percent, while the nonexempt step structure span is 37 percent, up recently from 25 percent. Extending the range maxima for nonexempts would "remove the reality and appearance of

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Admissions Dean Hargadon reports to Academic Council

Tests point to sharp drop in supply of top academic talent

Following is the text of Admissions Dean Fred Hargadon's comments to the Academic Council Feb. 3, 1983.

When I was invited to speak at the Academic Council, it was suggested I might want to talk about "The State of Admissions." What I have to say to you this afternoon is neither as lofty nor as comprehensive as that title would imply.

Since a good deal of the nitty-gritty of the admissions process has been rather thoroughly covered in a number of campus publications during the past year and a half, I thought it might be useful were I to use this occasion to provide a broader perspective on admissions than that which normally characterizes discussions of the subject.

The points I intend to make (and in some cases to illustrate) can be summarized as follows:

a) It is not everyone's dream in life to attend Stanford.

b) The potential college applicant pool in a given year is far less manipulable than is generally assumed to be the case.

c) Significant changes in the makeup of a student body are possible over time, and if one looks at the last 10 or 15 years at Stanford, at least three trends have been established which I think are both positive and noteworthy: an increase in the number of minority students enrolled, an increase in the number of women enrolled, and an increase in the number of different secondary schools from which our applicants, admits, and enrolled students come.

d) Sheer geographical proximity to particular institutions of higher education exerts a strong influence on the college application and enrollment decisions of high school seniors.

e) For colleges like Stanford, the rather sharp decline in the absolute numbers of students scoring at the highest levels on one or another national standardized test is far more significant than the more highly publicized declines in the mean test scores.

This seems to be the year for college and university ratings of one sort or another. However well or poorly we fare in such ratings, I am not as enamored of such measures as some may be. But like almost everyone else, I am inclined to wonder how well, in my own area of admissions, we appear to be doing. And when I get to wondering about that, I am invariably reminded of the fellow who, when asked how his wife was, replied "compared to what?" The question is not an easy one to answer nor are the appropriate or relevant comparisons to be made ones which are easily determined.

For instance, which is more noteworthy: that we receive 14,000 applications for 1,500 available places in the freshman class, or, that of approximately three million high school graduates in a year, only 14,000 of them applied to Stanford? I think I know the answer to that question, but I'm not sure.

The factors which influence the college application and enrollment decisions of high school graduates each year are far more numerous and varied, frequently even trivial, and far less amenable to the efforts of college admissions offices than is generally imagined.

It is the lot of admissions officers to travel a good deal and we thereby gain a different perspective. For instance, one meets exceptionally talented young men and women who (a) have never heard of Stanford, and (b) have grown up all their lives wanting nothing so much as to attend a particular college which many of **us** have never heard of.

Nathan Glazer once wisely observed that "the taste for higher education does seem to have a limit. . . the combination of economic advantage, consumption opportunities, social pressures, and institutional encouragement finally faces the stubborn and unmoveable resistance of some young people to what the institution does, and what it expects those in it on occasion to do." To his observation we might well add that so, too, is there a limit to the attractiveness of a particular institution of higher education among those who **do** intend to enroll in college.

For about 10 years now, we have surveyed both the admitted students who have decided not to enroll at Stanford as well as those who did enroll. Among the things we have learned from that exercise is the fact that there is no reason anyone cites for deciding not to enroll which is not cited as the reason for deciding to enroll by someone else. We are either too close to home, or too far from home. We are thought to do either exceptionally well, or poorly, by our undergraduates. I could go on.

In any event, let me say simply that the potential applicant pool for colleges comes nowhere near close to operating like a "perfect market." To cut through all of that noise in order to enroll a first-rate freshman class each year is not without its problems.



While it is highly improbable that we could ever fine-tune a freshman class with respect to the frequently expressed, and particularly defined, wishes of the many members of this academic community, some changes in direction **are** possible over time. Let me mention several changes in the makeup of Stanford's undergraduate student body which have taken place over the past decade and a half.

Most significant of all, perhaps, is the increased enrollment of Black, Chicano and Native American students. Because students from these particular ethnic backgrounds were ones which previously had enrolled in schools like Stanford only in extremely small numbers, commitments for special recruitment efforts on their behalf were begun in the late 1960s and early 1970s. They are ongoing commitments, and as a result, the proportion of such students in each freshman class has steadily risen from an estimated three percent in 1966 to 18 percent in the current freshman class.

Similarly, a change has taken place in the percentage of women enrolled in each freshman class, from 32 percent in 1966 to the last four entering freshman classes in which, respectively, women have comprised 45 percent, 43 percent, 44 percent, and in this year's freshman class, 42 percent.

The opportunity for the Admissions Office to admit on a sex-blind basis was provided in the early 1970s, by which time coed dormitories have been launched and there was no longer any need to specify a particular number of men (900) and women (500) to be enrolled in a given freshman class.

A third change which has occurred over time has to do with the number of secondary schools from which we have received applicants, offered them admission, and enrolled a freshman class. The increases in each of these areas, as the tables show, have been rather steady ones.

The numbers on Tables 1, 2 and 3 (next page) may, and probably do, understate the actual number of **different** secondary schools with which we have dealt, since there are a number of schools each year from which we receive applicants (and perhaps admit and enroll them) for the first time.

Now would be an appropriate time to treat of the question of geographical distribution. I am not in a position to comment on changes in geographical distribution over the years (for applicants, admits, and enrollees), simply because the data, while there, would have required time I did not have to bring it together.

I am frequently asked about geographical distribution, the reasons for asking the question being no doubt quite varied. What most people want to know, of course, is whether any advantage or any disadvantage accrues to residing in a particular place at the time of making an application for admission.

We do not make our admissions decisions with regard to the particular state, or even country, in which an applicant resides. We don't know until the process is over, how many students have been admitted from any given geographical location.

Circumstance, i.e., growing up on a farm or growing up on Park Avenue, may, of course, play a role when it comes to admitting a diverse freshman class, but in the sense that most people mean by "geographical distribution," i.e., the state one lives in, it does not play a role. Perhaps it did before my time. No matter. Given the geographical mobility of this society in the past couple of decades, a large number of applicants live in a part of the country other than that in which they were born anyway (perhaps a few of them, I suspect, having moved precisely in an effort to enhance their chances for admission).

But what frustrates me most about the question of geographical distribution has to do with the surprise frequently expressed at the fact that a large fraction of our undergraduates come from the single state of California (for instance, 42 percent of the current freshman class).

In some cases (**many** cases), the query about the high percentage of Californians is simply a matter of geographical ignorance. Neither the size of the state nor its considerable diversity are quite as apparent to the inhabitants of the east as to the rest of us. They don't teach

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TABLE 1

Number of Secondary Schools From Which Freshman Applications Received

Year	Number of Schools
1964	2,302
1965	na
1966	2,614
1967	na
1968	2,733
1969	2,934
1970	2,865
1971	2,857
1972	2,648
1973	2,899
1974	2,865
1975	2,907
1976	3,087
1977	3,107
1978	3,342
1979	3,513
1980	3,703
1981	4,038
1982	4,059

TABLE 2

Number of Secondary Schools From Which Freshman Applications Admitted

Year	Number of Schools
1972	1,182
1973	1,227
1974	1,227
1975	1,260
1976	1,292
1977	1,296
1978	1,322
1979	1,309
1980	1,346
1981	1,361
1982	1,427

TABLE 3

Number of Secondary Schools From Which Freshmen Entered Stanford

Year	Number of Schools
1966	653
1967	728
1968	784
1969	777
1970	823
1971	801
1972	829
1973	863
1974	878
1975	900
1976	937
1977	913
1978	945
1979	951
1980	967
1981	954
1982	991

geography in the schools anymore. And, of course, there are those who believe that the sun and the intellect are mutually exclusive phenomena.

More importantly, I think many people labor under the impression of the "perfect market" of applicants to which I referred above, not realizing that the great majority of students in this country attend college within 400 miles of their homes.

The geographical pull, both in terms of where students apply to college and where they eventually enroll, is a **very** strong one. And this is particularly the case where the more distant and less distant colleges to which a student has been admitted are generally recognized as being of similarly high quality.

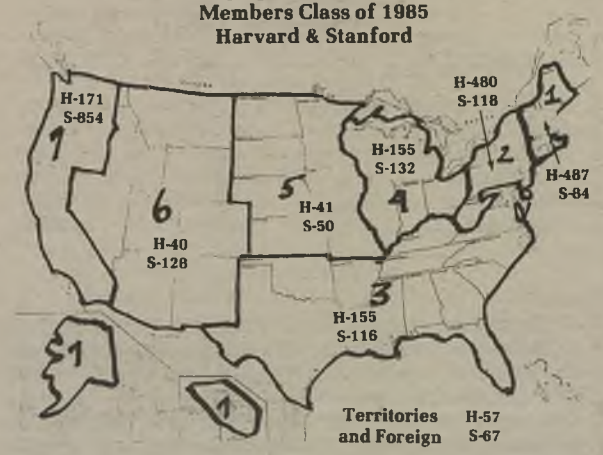
There is no undergraduate student body in the country which is "national" in its makeup in the way graduate and professional schools are. Some undergraduate institutions, Stanford included, **do** have more of a national representation among their undergraduates than do others.

To illustrate several of the points I have just made, I compared Harvard's Class of 1985 and Stanford's Class of 1985 in terms of where their respective members attended secondary school.

The divisions of the country by region are borrowed from Harvard, in part because their classification of the states of Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin as the "Old Northwest Territory" just seems to me to have a better ring to it than, say the "Midwest."

TABLE 4

Geographical Distribution Members Class of 1985 Harvard & Stanford



What do we find? That 31 percent of their Class of 1985 comes from New England (area 1 on the Table), and another 30 percent from the Middle Atlantic States (area 2). Now while those two areas include 12 states and the District of Columbia, I can't quite bring myself to believe that having 61 percent of a freshman class from New England and the Middle Atlantic States represents any more diversity than the 55 percent of Stanford's Class of 1985 which came from just the five states of California, Oregon, Washington, Hawaii and Alaska (area 7). Surely, diversity is not measured by the sheer number of states from which students come, but rather by a host of background characteristics of the individual students themselves.

While 10 percent of Harvard's Class of 1985 are from the five Pacific states, 13 percent of Stanford's Class of 1985 are from the New England and Middle Atlantic states. Students enrolled in our respective Classes of 1985 from the other geographical areas are as follows:

Southern (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia):
Harvard: 155
Stanford: 116

Old Northwest Territory (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin):
Harvard: 155
Stanford: 132

Central (Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota):
Harvard: 41
Stanford: 50

Mountain(Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming):
Harvard: 40
Stanford: 128

Territories and Foreign:
Harvard: 57
Stanford: 67

These two first-rate universities situated on the opposite coasts of the United States are among a number of universities and colleges which enroll some of the most talented students in the country. Each has a national representation of sorts among its students.

But it is also clear that the sheer geographical location of each has much to do with where the majority of their students come from. Having made that point, I should say that few colleges or universities have the national spread that both of these institutions obviously have.

Let me now turn to some contextual matters, and the question of "how well do we do?" I doubt that any among you are more concerned with the academic caliber of the students Stanford enrolls than am I.

Just as it is inevitable that there will be occasions on which you wonder whether the admissions standards are as high as they should be, so, too, there are occasions on which I have reason to question whether yours are as high as mine. You wonder on occasion how we could have let somebody in. And, on occasion, I wonder how you could have given a high grade on some of the papers I have read. There are surprises everywhere.

Most of you are somewhat familiar by now with the fact that on national standardized tests of one sort or another (indeed, on almost every state test), the scores have been declining for the past two decades. They reached their peak in about 1962 and apparently just bottomed out this year.

On the College Board SAT examinations, the mean Verbal score fell by 34 and the Math SAT by 35 during that period of time. Although we don't have records of the freshman **class** median SAT scores in our files (they were kept separately for men and women until 1971), I think it reasonable to estimate that over that 20 year span, the median class Verbal SAT declined in parallel fashion, if not as severely, while the Math SAT (for the class) has declined only slightly. The high school median grade point average of our entering freshmen (calculated by Stanford after we discount non-academic courses) remains as high as ever.

Less apparent than the declines in national median test scores are the declines on various tests of the absolute numbers of students scoring at the high end of these tests. And since schools like Stanford draw a significant number of their applicants from among such high scorers, it is **those** declines I want to call to your attention today.

TABLE 5

National Number H.S. Seniors Scoring 650 + on Verbal SAT
Stanford Applicants Scoring 650 + on Verbal SAT
Percentage National 650 + on Verbal SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	53,794	2,641	5
1973	39,779	2,319	6
1974	43,393	2,506	6
1975	33,457	2,091	6
1976	35,500	2,186	6
1977	31,607	1,962	6
1978	32,019	2,230	7
1979	33,948	2,516	7
1980	29,019	2,390	8
1981	29,895	2,569	9
1982	29,236	2,430	8

For instance, in just the past 10 years (1972-1982), the number of students scoring 650 or better on the Verbal SAT has declined from 53,794 to 29,236. (The number of test takers dropped by three percent while the number scoring 650 + dropped by 45 percent.) Similarly, 21,952 **fewer** students scored 650 or better on the Math SAT in 1982 than scored that high in 1972.

TABLE 6

National Number H.S. Seniors Scoring 650 + on Math SAT
Stanford Applicants Scoring 650 + on Math SAT
Percentage National 650 + on Math SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	93,868	3,872	4
1973	86,123	3,842	4
1974	90,271	4,186	5
1975	76,045	3,927	5
1976	84,896	4,242	5
1977	78,656	4,100	5
1978	75,552	4,365	6
1979	72,228	4,677	6
1980	73,386	5,290	7
1981	70,307	5,523	8
1982	71,916	5,260	7

There are similar drops at the high level no matter where we set it. In 1972, 17,560 scored 700 + on the Verbal SAT, and in 1982, that number had dropped to 8,240. **(see Table 7)** On the Math SAT at 700 +, the numbers scoring at that level went from 37,067 in 1972 to 29,528 in 1982. **(see**

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Table 8) At the 750 + level, on the SAT Verbal, the total scoring at that level declined from 2,817 in 1972 to 1,479 in 1982. **(see Table 9)** And on the Math SAT at that level, from 9,966 in 1972 to 8,351 in 1982. **(see Table 10)**

That is the bad news. The good news (or **relatively** good news) is that we appear to have attracted a slightly larger percentage of those high scorers, at whatever levels, in our applicant pool, though certainly not sufficiently great to offset the rather large declines in the national pool scoring at those levels.

If one looks at the Achievement Tests, the news is no better.

TABLE 7

National Number H.S. Seniors Scoring 700 + on Verbal SAT
Stanford Applicants Scoring 700 + on Verbal SAT
Percentage National 700 + on Verbal SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	17,560	1,164	7
1973	12,537	950	8
1974	14,677	1,081	7
1975	11,380	898	8
1976	12,288	999	8
1977	11,426	836	7
1978	10,362	902	9
1979	12,879	1,105	9
1980	10,454	1,049	10
1981	10,262	1,024	10
1982	8,240	823	10

TABLE 8

National Number H.S. Seniors Scoring 700 + on Math SAT
Stanford Applicants Scoring 700 + on Math SAT
Percentage National 700 + on Math SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	37,067	2,220	6
1973	31,588	2,115	7
1974	36,242	2,361	7
1975	33,005	2,354	7
1976	37,511	2,582	7
1977	32,758	2,422	7
1978	32,555	2,594	8
1979	30,539	2,736	9
1980	29,225	2,932	10
1981	26,928	2,913	11
1982	29,528	2,973	10

TABLE 9

National Number H.S. Seniors Scoring 750 + on Verbal SAT
Stanford Applicants Scoring 750 + on Verbal SAT
Percentage National 750 + on Verbal SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	2,817	241	9
1973	1,793	178	10
1974	2,305	211	9
1975	1,937	189	10
1976	2,464	246	10
1977	2,055	180	9
1978	1,900	181	10
1979	2,650	272	10
1980	1,892	233	12
1981	2,041	213	10
1982	1,479	168	11

TABLE 10

National Number of H.S. Seniors Scoring 750 + on Math SAT
Stanford Applicants Scoring 750 + on Math SAT
Percentage National 750 + on Math SAT Applied to Stanford

Year	National	Stanford	Percentage
1972	9,966	875	9
1973	8,780	829	9
1974	9,871	940	10
1975	9,381	873	9
1976	11,549	1,099	10
1977	8,929	931	10
1978	9,329	983	11
1979	9,059	1,058	12
1980	7,675	1,036	13
1981	6,570	977	15
1982	8,351	1,057	13

TABLE 11

Total U.S. Students Scoring 750 + on Achievement Tests

Achievement Test	1972	1982
English Composition	2,918	1,302
Math 1	5,679	2,218
American History	1,757	719
French	1,884	839
Biology	1,690	681
Chemistry	3,285	1,558

Here are a representative group of Achievement Tests at the level of 750 or better (the declines occur all the way down the line, regardless of the score level set). As with the SATs, the percentages of those scoring at this high level who apply for admission to Stanford have been steadily increasing (fortunately), but again not sufficient to offset the rather severe drops in the absolute numbers scoring at high levels on these various tests.

I don't intend to discuss the merits of the various tests on this occasion. Suffice it to say, they are the only national standardized tests we have, the only means, whatever qualifications we might attach to them, by which it is possible to approach a common standard in measuring student achievement which is otherwise represented only by the widely varying course content and grading practices of some 20,000 + secondary schools in this country.

I happen to think that the Stanford Admissions Office's practice of carefully scrutinizing transcripts and, in our decisions, obviously favoring those students whose academic programs appear to have been the most rigorous, goes some way toward offsetting whatever limitations the test scores might have. But the point here is simply that of catching you up on some of the changing characteristics of the potential applicant pool from which we draw our students.

That applicant pool is increasing in size, as you can see from the following tables (Table 12 and Table 13).

TABLE 12

Freshman Applications

Year	Number	% Admitted	Year	Number	% Admitted
1948	2,585	52	1966	7,700	25
1949	2,109	64	1967	8,051	25
1950	2,014	77	1968	8,200	26
1951	2,016	85	1969	9,320	22
1952	2,674	64	1970	9,880	23
1953	2,912	62	1971	9,228	26
1954	3,508	56	1972	8,748	28
1955	3,703	54	1973	9,308	26
1956	4,467	46	1974	9,373	27
1957	4,766	41	1975	9,730	25
1958	4,623	47	1976	10,007	25
1959	4,740	47	1977	9,900	25
1960	6,546	31	1978	10,920	23
1961	6,091	34	1979	11,787	21
1962	6,561	30	1980	12,731	19
1963	6,447	31	1981	14,029	18
1964	7,103	28	1982	13,889	18
1965	7,689	25	1983	14,500 (est)	17 (est)

TABLE 13

Transfer Applications (All Quarters)

Year	Number	% Admitted
1972	2,506	23
1973	2,389	25
1974	2,430	25
1975	2,313	18
1976	2,325	18
1977	2,326	16
1978	2,327	16
1979	2,529	11
1980	2,151	11
1981	2,420	11
1982	2,118	8

We have a relatively small staff for handling that number of applications in a given year, but I don't show these tables to evoke the sympathy of a faculty which itself is hardworking. Rather, you can see, among other things, why the alumni of Stanford whose children have applied in recent years are somewhat confounded by the fact that their children have a more difficult time in being offered admission than may have been the case when they, the parents, applied.

When the alumni parents of present applicants applied, perhaps 40 or 50 percent were offered admission. Now we offer admission to about 18 percent of the applicants.

You might also notice that whereas 10 years ago, 23 percent of the transfer applicants were offered admission, this past year only eight percent were offered admission.

My guess is that this rather steep decline in the percentage of transfer applicants admitted is the result of (a) the pressure the steadily increasing number of freshman applicants puts on those of us who have to make decisions, (b) a surprisingly stable yield (percentage of those offered admission who decide to enroll) in freshman admissions in the face of significant tuition increases each year, and (c) probably a decrease in the number of students "stopping out."

In terms of the context within which admissions must operate, one additional point is worth making. Few in the University are not aware of the changing aspirations of students over time. Ten years ago, the School of Engineering asked me why there weren't more engineering majors. Today, they ask me why there are so many. Since we admit students without regard to their perspective majors (a policy I happen to think we ought to hold onto), we are vulnerable to the changes with regard to career patterns which occur nationally.

For instance, here (in Table 14, next page) are the changing "intended field of study" choices of college-bound high school seniors over the past 10 years. However disappointing these changes may be to members of the various departments, quite frankly, there is relatively little the Admissions Office can do about them.

I must say that given the disproportionate amount of publicity accorded pre-meds and various pre-med syndromes in recent years, I chuckled when reading in Paul Starr's book on **The Social Transformation of American Medicine** that things were not always so. He notes the fact that among the most educationally talented in the late nineteenth century, there was a decided distaste for medicine.

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A medical journal of that period remarked that "when a student of merit and ability chose to become a doctor 'the feeling among the majority of his cultivated friends is that he has thrown himself away.' " (It is also interesting to read that at the turn of the century, almost six percent of the doctors were women; there were some 7,000 women doctors at that time.) At any rate, times obviously change.

Three points in closing. The first has to do with the fact that admissions at a place like Stanford is a zero-sum game. While we do not try to be all things to all people, we **are** asked to be a lot of things to a considerable number of them.

It is simply impossible to maximize any single criterion, be it scores on a given test, or grade point average, or intended major (if known), or a particular talent, or a particular relationship to the University, without something else giving.

For instance, there are some 50+ majors in the University. I am not aware of any study which indicates that students scoring high on a particular national standardized test will distribute themselves equally over all possible major fields. It simply does not work out that way. I could give many other examples to illustrate my zero-sum point, but many of them should be obvious to you. Those of us in admissions try our best to achieve some balance overall.

The second point I would make has to do with the matter of tuition and its relationship to the applicant pool and enrollment. Frankly, I'm not sure what the relationship is. Applicants are distributing themselves to colleges these days for reasons not entirely clear to most of us.

I have two hunches. First, since costs at **all** colleges have risen, there may be a point at which parents decide that if what they're going to have to spend rises beyond "x" amount, then they will jump to "x + some amount." In other words, the difference between $1,000 and $5,000 may appear sufficiently severe so that, oddly, the increment to $10,000 from $5,000 appears less so. There is also a point at which some people equate price and quality.

My second hunch has to do with our policy of admitting without regard to the financial aid a student may need, and meeting whatever financial need that turns out to be with some combination of grant, job and loan. I don't think many colleges have that policy at present, and the fact that Stanford intends to keep that policy will undoubtedly attract applicants.

It seems to me clear that if the University kept its tuition at an artificially low level, the quality of the education offered here would suffer. And if that happened, the quality of the applicant pool would eventually suffer.

The dilemma, of course, is that part of any tuition increase results from the additional financial aid needed to enroll a student body of high quality which is also diverse in terms of the backgrounds of the students. So, the University must walk a tightrope here, and I believe that Stanford is doing that with both agility and sensitivity.

I should say that I am far from convinced that the present system for estimating financial need and awarding aid is without fault. Stanford's Financial Aids Office offers the most comprehensive and sensitively administered financial aids policy in the country.

But the basis for calculating need (using the College Scholarship Service) seems to me to too often reward spendthriftness and penalize frugality. The system takes a one-year snapshot of a family's financial situation. If that family has conscientiously saved for their children's college education, so be it. If, on the other hand, they have chosen to spend it on other luxuries rather than save it, they may well, under the present system, be eligible for financial aid. On occasion, the contrasts between families eligible for financial aid and those not eligible (or eligible for very little aid) can, on occasion, be quite startling.

I also think that there has been a rather drastic (and from my viewpoint unwarranted) shift in attitude toward the financial aid offered students in college, a shift from a time when such aid was gratefully received to a time when it is not only expected as some sort of right but, when granted, not fully appreciated even then.

My last shot has to do with the recently enacted NCAA legislation on athletic eligibility which is to go into effect in 1986. Lord knows, they needed to do something in this area. The requirement of a 2.0 grade point average in high school was a minimal step in the right direction.

The 700 total SAT requirement, while well intended (contrary to the assertions of those who took objection to it), seems to me to have been the wrong step taken for the right reason.

TABLE 14

Percentage College-bound H.S. Seniors Indicating Intended Field of Study (from SAT data)

Year	Math	Physical Sciences	Engineering	English/Lit
1972	4	4	6	4
1973	3	4	6	4
1974	3	4	5	3
1975	2.4	2.8	6.7	2.4
1976	1.9	2.4	8.4	1.9
1977	1.7	2.3	8.8	1.8
1978	1.4	2.3	9.4	1.6
1979	1.2	2.2	10.1	1.6
1980	1.1	2.1	11.1	1.5
1981	1.1	2.0	11.8	1.4
1982	1.1	1.9	12.6	1.4

Our concern should be that no college enrolls a student to play athletics unless that student's academic credentials (a) are reasonably within the range of the academic credentials of the college's student body as a whole, and which (b) are the kinds of credentials from which successful pursuit of that college's academic program can be reasonably predicted. This will vary from college to college, and it should not be hard to devise a formula by means of which it would be clear when a student was being enrolled largely for athletic reasons and with little hope of graduation.

Surely, that will mean some colleges can enroll students with lower academic credentials than can other colleges. That is now the case for all students, regardless of whether they participate in athletics.

Some sort of rule whereby colleges would be allowed to award athletic scholarships to new incoming students only in some proportion to **graduating** seniors who had been on athletic scholarships would help ensure the students' educational needs and interests were not overlooked.

Further, it might help if instead of those NCAA halftime pictures of college science labs, which perhaps too few college athletes have ever seen, were replaced by student-athlete graduation statistics for each of the schools, giving the viewers an idea of the role athletics plays within the context of the respective colleges being represented by that particular event.

In any event, I hope our president, our athletic director, and our faculty representative, in their various roles with the NCAA, while continuing to support efforts to raise the academic standards of intercollegiate athletics everywhere, will push to revise the recently enacted 700 score rule so that it more fairly and squarely meets the problem it was meant to address.

Staff survey results...

continued from page 21

disparate treatment," the task force says.

Centrally established guidelines on individual exempt annual increases should be discontinued and the University should rely instead on the "limits imposed by the budgetary process to provide adequate guidance to supervisors in setting individual salaries."

Staff development

Citing survey results showing 25 percent of staff do not receive performance evaluations at least once a year and 13 percent have never received one, the task force recommends that line officers assure that performance communication is done regularly.

A report on career paths that focuses on specific job titles and describes how current University staff reached those levels should be published periodically, the report recommends.

It also recommends an increase in the reimbursement for job-related classes to provide a greater incentive for "staff to continue their learning and career development."

Affirmative action and employment

Because of concerns that decentralization might reduce affirmative action commitments, the task force says the Affirmative Action Office should retain its centralized responsibilities.

The task force notes, however, that the ultimate success of affirmative action will occur when the office is "no longer needed because those functions operate regularly throughout the organization."

"The University will have achieved diversity when a significantly larger number of women and minorities participate in the decision-making processes of the institution."

Vice-presidents should be more involved in planning for recruitment and hiring of middle and senior management positions to "focus more attention on affirmative action at these levels." Of the approximately 100 such positions at Stanford, women currently occupy 14 slots and minorities 5, the task force says.

Vice-presidents also should review progress in affirmative action annually and clarify the roles of their affirmative action coordinators.

The University should consider publicly recognizing "faculty and staff who have made outstanding contributions to affirmative action," the task force suggests.

Problem-solving mechanisms

Survey results showed that less than half of the staff was familiar with the University's problem-solving resources, including the Help Center, Affirmative Action Office, Ombudsman, Employee Relations section of Personnel, and grievance procedure.

The Help Center and Employee Relations received the highest ratings, but 30 percent of the staff who had used these resources found them "not at all useful." More than 50 percent said the Affirmative Action office, Ombudsman's Office, and the grievance procedure were not useful in solving problems, the task force noted.

Although the "reasons for these perceptions are not clear," they could be "due, in part, to expectations which the particular resources were not designed to meet."

The task force recommends additional study of staff perceptions. Efforts to clarify the purposes of the various problem-solving resources also should be undertaken, it says.

—Karen Bartholomew



Board of Trustees report

Trustees approve $3 million for general plant improvements during 1983-84

The Board of Trustees took the following actions at its meeting on February 8, 1983:

1. Approved actions already taken by the Office of the Vice Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of November, 1982, totalling $6,807,952 and for the month of December, 1982, totalling $8,367,227. The monthly average of such awards for the twelve-month period ending December 31, 1982, was $13,958,246 compared with $12,569,777 for the corresponding period the year before.

2. Accepted gifts received during the month of December, 1982, totalling $13,315,211 and during the month of January, 1983, totalling $10,357,984.

3. Amended signature resolutions to reflect inflation by delegating to the Vice President for Business and Finance decisions regarding projects costing less than $550,000 (raised from $500,000). Furthermore, actions taken under this delegation which cost more than $70,000 (up from $60,000) will be reported to the Board no less often than three times per year.

4. Authorized continuation of the Parent Loan Program for originating loans to eligible parents of Stanford students up to a maximal outstanding balance of $6.5 million.

5. Authorized an investment of up to $1,500,000 in the Aegis Fund.

6. Authorized an investment of up to $2,000,000 in Greylock Ventures, Ltd.

7. Authorized an investment of up to $500,000 in Nellcor, Inc.

8. Heard a report from Rosenberg Capital Management on the management of bonds in the University's endowment investment pools.

9. Discussed possible revisions in the Statement of Investment Goals and Objectives.

10. Approved the concept for restoration of the Inner Quad Courtyard.

11. Approved the concept for the reconstruction of the Red Barn and Stable.

12. Approved the project and approved the design to construct the Medical School's Research Animal Facility-I at a total budget of $12,000,000.

13. Approved projects included in the Program of General Plant Improvements (GPI) for 1983-84 for improvements to and extension of utility services, roads, paths, lighting, and other facilities at a total budget of $3,135,000.

14. Approved the concept for the extension of Building 120 of the Stanford Synchrotron Radiation Laboratory at the Stanford Linear Accelerator Center.

15. Approved the concept and site for the development of residential housing for faculty to be known as Rural Lane.

16. Heard a further report on the Electronic Communications Media Project.

17. Heard a report on action taken between meetings, pursuant to provisions in the By-Laws for conduct of business between meetings, to purchase the IBM 3081-D computer already installed for activities of the Research Libraries Information Network.

18. Received a report on the status of construction projects costing more than $60,000.

19. Established the Charles Lee Powell Professorship in the School of Engineering.

20. Established the Nora Eccles Harrison Professorship in Diabetes Research.

21. Heard a report from Professor Eleanor E. Maccoby, Barbara Kimball Browning Professor of Psychology, on "Child-Rearing Strategies."

22. Established tuition for 1983-84 of $9,027 for general tuition (up 9.8 percent), $9,178 in the School of Law (up 9.7 percent), $9,177 in the Graduate School of Business (up 11.7 percent), and $10,530 for M.D. students in the School of Medicine (up 9.8 percent).

23. Established rates for 1983-84 for room of $1,729 (up 14.5 percent) and for board of $2,083 (up 8.9 percent), making the aggregate increase 11.4 percent and the total standard amount $3,812. The Vice President for Business and Finance was authorized to approve specific rates for residences, food services, and apartments which may vary from the standard rate.

24. Elected W. James Ware a member of the Board of Trustees.

Board approves promotions, appointments

On February 8, 1983, the Board of Trustees approved the following actions, effective September 1, 1983, unless indicated otherwise:

PROMOTIONS:

Ben S. Bernanke, associate professor of economics, GSB; Jeremy I. Bulow, associate professor of economics, GSB; Gary J. Feldman, professor at the Stanford Linear Accelerator Center; D. Craig Miller, associate professor of cardiovascular surgery; Lynn W. Phillips, associate professor of marketing, GSB; Gordon M. Ringold, associate professor of pharmacology; William Watson, professor of dermatology; Steven C. Wheelwright, professor of management.

REAPPOINTMENTS:

Jonathan B. Bendor, assistant professor of public policy and public management, GSB; Douglas B. Lenat, assistant professor of computer science; Thomas E. Macurdy, assistant professor of economics; Hajime Miyazaki, assistant professor of economics; Daniel I. Okimoto, assistant professor of political science; Robert Schreiber, assistant professor of computer science.

APPOINTMENTS:

Alicia G. Herrmann, professor of mechanical engineering, effective 1/1/83; James M. Lattin, assistant professor of marketing and management science, GSB; Llewelyn R. O. Storey, professor of electrical engineering, effective 2/1/83; Carol H. Winograd, assistant professor of medicine; Bruce D. Winstein, professor of physics.

REPORT MATTERS:

Elie Abel, Harry and Norman Chandler Professor of Communication, appointed chairman of the Department of Communication, 9/1/83 to 8/31/86.

John P. Bunker, professor of anesthesia and family, community and preventive medicine, appointed acting chairman of the Department of Anesthesia, effective 1/10/83.

John J. Csongradi, assistant professor of surgery, appointed assistant professor, by courtesy, of mechanical engineering, 1/1/83 to 8/31/84.

Dorothy A. Huntington, associate professor of speech and hearing sciences, appointed associate professor, by courtesy, of linguistics, 9/1/82 to 8/31/87.

Perry L. McCarty, Silas H. Palmer Professor of Civil Engineering, reappointed chairman of the Department of Civil Engineering, 9/1/83 to 8/31/85.

Ronald I. McKinnon, professor of economics, appointed the Eberle Professor of Economics, effective immediately.

Anne K. Mellor, professor of English, appointed the Howard H. and Jessie T. Watkins University Professor in Feminist Studies, 9/1/83 to 8/31/88.

Julius Moravcsik, professor of philosophy, appointed chairman of the Department of Philosophy, 9/1/83 to 8/31/85.

David S. Nivison, professor of Asian languages, philosophy and religious studies, appointed the Walter Y. Evans-Wentz Professor of Oriental Philosophies, Religious and Ethics, effective immediately.

James B. Stockdale, reappointed senior research fellow at the Hoover Institution, 5/1/83 to 4/30/86.

Elizabeth C. Traugott, professor of linguistics and English, reappointed chairman of the Department of Linguistics, 9/1/83 to 8/31/86.

Thomas A. Wasow, associate professor of linguistics and philosophy, appointed acting chairman of the Department of Linguistics, 9/1/83 to 8/31/84.

Education School, Interactive Sciences plan summer institute on micros

Interactive Sciences, Incorporated and Stanford University's School of Education will jointly sponsor a unique, intensive five-week summer International Institute on Microcomputers in Education starting June 27. One hundred educators, administrators, and researchers from around the world will attend the Institute.

Participants will receive a broad exposure to computer technology and its potential in education, along with practical methods for integrating microcomputers into the school and community. Key computer-using skills will be taught using the innovative Computer Tutor peer tutoring method developed by Interactive Sciences. Institute graduates will acquire the background needed to establish successful computer programs in their home school systems and to serve as resource persons for others.

The Institute will feature a Distinguished Speaker series of talks and panel discussions given by leaders in the fields of computers and education. Social and economic implications of automation will be emphasized. Participants will tour major education/computer sites in the San Francisco Bay Area. In addition, a wide range of recreational and cultural activities on the Stanford campus will be available.

The Institute will serve as a showcase of advanced educational computer products. IBM, Apple, Radio Shack, Atari, and Hewlett-Packard are among the companies providing equipment for participants to use.

Educators will observe youngsters at a concurrently-offered computer camp, Computer Tutors at Stanford. Four two-week sessions will be offered for resident and day campers.

Further information on the Institute is available from the School of Education at Stanford University, Stanford, CA 94305, (415) 497-2102. Those with no prior computer or special math background are especially welcome. Enrollment is limited so early application is advised. For information about the camp, call (415) 461-7533 (in California) or (800) 227-2866.

Program planning session in residences

"Program Planning in the Residences" is the title of a workshop co-sponsored by the Offices of Residential Education and Student Activities, to be held on Thursday, Feb. 24, from 4 to 5 p.m. in the Elliot Center Common Room in the new Governor's Corner living complex.

The workshop will be tailored to address the specific aspects of planning an event to be held in a residence, as opposed to events in a large auditorium. It will be of special interest to groups trying to reach students on an informal basis within their home environments, emphasizing program theme development, planning and publicity. It also should be of particular interest to current and prospective R. A.s.

For more information, contact Nancy Torrey at OSA (497-3542) or the Office of Residential Education (497-3044).

Lagunita Players to present musical

The Lagunita Players, a residence-based theater company at Stanford, will present "How to Become a Legend in Your Own Mind"—an original musical production, written and produced by dormitory residents Feb. 24-27. The free show will run at 8 p.m. Thursday through Sunday in the Lagunita Dining Hall, Lagunita Court at Stanford.

The story revolves around two college seniors—a man and a woman—who, in trying to resolve questions regarding their own identities and independence, discover love and happiness together.

The script was written by senior Michael Weiss and edited by a committee of dormitory residents. The music was composed and arranged by sophomore John Sawoski. Sawoski and Weiss collaborated on the lyrics.



Drawings by Tia Rich will be shown in the Clubhouse Common Room, Old Union, through March 18. The exhibition, sponsored by the Ecumenical Ministries at Stanford, includes works in pastel, charcoal, pencil, gouache, and pen-and-ink. Rich is a Stanford senior majoring in drawing and human biology. She has taught art in her own studio in Maryland for five yeaars and is also engaged in portrait commission work. After graduation she plans to continue her work as a professional artist and as a teacher of preventive medicine.

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the months of November and December:

FEDERAL

New Contracts

Ronald K. Hanson, Donald Baganoff, Craig Bowman, Robert L. Byer, Brian J. Cantwell, Lambertus Hesselink, and Sidney A. Self, mechanical engineering, "Advanced Instrumentation and Diagnostics for Chemically Reactive Flow Systems," $690,000 from the Department of the Air Force for 1 yr.

Albert E. Dien, international studies, "Joint East Asia Language and Area Center at the University of California Berkeley and Stanford University," $229,140 from the Department of Education for 1 yr.

Philip E. Oyer and Allen K. Ream, cardiovascular surgery, "Development of an Implantable Integrated Left Ventricular Assist System Utilizing a Balanced Solenoid Electrical Energy Converter and a Dual Pusher-Plate Blood Pump," $250,265 from NIH for 1 yr.

Theodore H. Geballe, W. W. Hansen Laboratories, "Superconducting Thin Films: Composites and Junctions," $877,513 from the Department of the Air Force for 2 yrs.

New Grants

Peter M. Banks, Stanford Electronics Laboratories, "Study of the Dynamics of Atmosphere-Ionosphere-Magnetosphere Interactions," $200,000 from NASA for 1 yr.

William M. Fairbank, W. W. Hansen Laboratories, "Program to Search for Gravitational Radiation Using Low Temperature Techniques," $455,000 from NSF for 1 yr.

John W. Farquhar, Department of Medicine, "Stanford Five City Multifactor Risk Reduction Study," $372,862 from NIH for 1 yr.

Oleg Jardetzky, Magnetic Resonance Laboratories, "High Frequency NMR Biotechnology Resources," $316,424 from NIH for 1 yr.

Edward Kavazanjian and Haresk C. Shah, civil engineering, "Risk and Damage Analysis Associated with Seismically Induced Pore Water Pressure Build Up," $230,900 from NSF for 2 yrs.

William Robinson, Department of Medicine, "The Viruses of Hepatitis B and Ground Squirrel Hepatitis," $257,171 from NIH for 1 yr.

Stanley G. Wojcicki, physics, "Program in High Energy Physics," $450,000 from NSF for 1 yr.

David S. Hogness, biochemistry, "The Molecular Basis for Genetic Control for Development," $326,353 from NIH for 5 yrs.

Philip A. Berger, psychiatry, "Biological Correlates of Psychopathology," $472,782 from NIH for 1 yr.

J. Martin Brown, radiology, "Experimental Radiotherapy/Basis and Modification," $220,603 from NIH for 1 yr.

Ronald W. Davis, biochemistry, "Cell Regulation: Biochemically Isolated DNA Segments," $301,564 from NIH for 1 yr.

Robert S. Feigelson, Center for Materials Research, "Materials for High-Temperature Thermoelectric Conversion," $250,000 from NASA for 1 yr.

Gerald M. Reaven, Department of Medicine, "General Clinical Research Center," $475,456 from NIH for 1 yr.

Robert T. Schimke, biological sciences, "Enzyme Synthesis and Degradation in Metabolic Control," $210,215 from NIH for 1 yr.

Irving Schulman, pediatrics, "General Clinical Research Center," $222,893 from NIH for 1 yr.

Eric M. Shooter, neurobiology, "Nerve Growth Factor in Neuronal Development," $252,358 from NIH for 1 yr.

NON-FEDERAL

New Contracts

John W. Lewis, political science, "Arms Control and Disarmament," $250,000 from the Weingart Foundation for 5 yrs.

William C. Fowkes, Department of Medicine, "Women's Health Care Training Project Primary Care Associate Program," $203,096 from the State of California for 1 yr.

Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, "Research on Portability of LISP Systems and Applications," $211,800 from International Business Machines for 1 yr.

Edward A. Feigenbaum, computer science, "Use of Design Models in the Diagnosis of Computer Hardware," $660,000 from International Business Machines for 3 yrs.

Workers in older industries fund new ventures through their pension funds

Through their pension funds, workers in older industries are becoming big backers of new ventures, according to Pitch Johnson, veteran Peninsula venture capitalist.

By the turn of the century, pension funds may approach $1 trillion in value, he noted at an informal seminar Feb. 8 with associates of Stanford's Center for Economic Policy Research.

"The result may be a lot more, big scale entrepreneuring," Johnson suggested. Startups of new firms with as much as $20 to $50 million in capital may become common. Established firms may have trouble keeping their own people.

Johnson and Ralph Landau, award winning chemist, entrepreneur and academic, agreed that changes in the tax laws in the late 1970s triggered a major flow of venture capital in the U.S.

Contrary to the expectations of many economists, the returns on venture capital investments have averaged as high as 30 percent, compounded annually.

"The number of entrepreneurs has risen to meet the supply of dollars," Johnson observed. Classes at Stanford and Harvard on entrepreneuring are "jammed."

Pension funds and other big investors are able to limit their risks by participating in several different ventures.

Eventually, "so much (venture capital) will slosh in that the rates of return will drop. It won't be orderly; there will be some sharp readjustments," Johnson predicted.

Landau, cofounder of the Halcon SD Group, which pioneered advanced technology in petrochemicals, said that, besides capital formation, the biggest long-term constraint on the U.S. economy is human capital.

"We're way below where we ought to be" in supporting education and job retraining, he said.

A fundamental adjustment involves steelworkers and others accustomed to getting $25 per hour in wages and benefits, who may realize only $10 an hour after retraining. Social resistance to such downward mobility will be strong.

Worker attitudes

How workers might feel about having their pension funds used to support high technology, productivity enhancing firms could be another problem.

Johnson agreed that underinvestment in job retraining and education is a "severe, profound" threat to the economy. This could result in a sharply stratified society, with major gaps between younger people with access to advanced education and those lacking this opportunity.

Investment in education is "much too small," he said. "We're not investing in our young."

Stanford Prof. Kenneth Arrow, a Nobel Laureate in economics, said California's schools are "pinched and starved."

Landau observed that the last decade has seen great emphasis in the U.S. on income redistribution rather than capital or human investment.

This may change in the future. "That's what the social security dispute is all about," Landau added.

Frank Lodato, an early Peninsula venture capitalist, noted that "in the old days we couldn't get insurance companies to (participate in) joint ventures." Now venture capital "seem to be magic words. . . .

"If the government will stay out of our way, we'll solve many economic problems in relatively short time."

Johnson noted that in a recent study of business-government relations, the GAO estimated that 1,332 companies founded with venture capital in the 1970s now have $88 billion in sales, generate $1.7 billion in corporate taxes, employ 1.9 million workers, and yield an additional $5 billion annually in employee personal income taxes.

The U.S. may be moving into an era reminiscent of a century ago, when a series of major innovations triggered long-term economic growth, he suggested. A strong entrepreneurial environment is the most rapid, long-lived source of productivity improvement.

It includes seven key elements, Johnson said I) permitting individuals to make and keep money; 2) equity financing; 3) stock markets; 4) a basic pool of knowledge and human talent to develop innovations; 5) large markets to help recover the costs of research; 6) venture capital for startups; and 7) social respect for those who take risks and help create new jobs.

Johnson noted that England was once strongly supportive of entrepreneurs, then looked down on them, and now pays them more respect.

East versus west

In the U.S., many of the key players in the East come from investment banking backgrounds with a tough, competitive edge.

In Silicon Valley and the West, venture capitalists "grew up out of engineering" and have been known for a more collegial, live-and-let-live approach. But with the growth of venture capital, it's getting more competitive: "You don't talk loudly at Rickey's at breakfast any more," he observed, drawing lots of laughter.

Landau noted that a recent MIT study showed that of the 9.5 million new jobs created in 1970-79, 6.5 million came from small business firms, 3 million in government and none in large firms. Automation may have slowed job growth in big companies.

With a venture capital investment rate six to ten times that of the 1970s, "even with only a 10 percent success rate, we're talking about millions of new jobs" from small companies, he said.

Historically, smaller companies have been the source of "breakthrough technologies," especially in the chemical industry, he noted. But whether this will continue in the future is uncertain.

Landau noted that several large companies—Merck, IBM, and Bell Laboratories—have excellent records for research and innovation, plus the "deep pockets" of funds necessary to commercialize resulting products.

While there are many specific ways in which the tax laws might be improved, he said the best advice might be to leave the internal revenue act alone for the next 10 years. "You can't plan and take risks when the rules keep changing," he explained.

While many proposals for tax changes can be expected prior to the 1984 elections, the likelihood of passage does not appear great.

Many states now trying to solicit high technology industries, "simply don't have the infrastructure needed," including strong colleges and universities, he observed.—**Bob Beyers**

Staff employment opportunities

Nonexempt

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

42651-PM (JCC:1747) Lib Spec I: 50%, flexible as needed; subj to temp layoff during summer quarters; charges out reserve books & other circulation mat'ls; prov genl informa to lib users; issues lib cards; registers patrons; monitors eligibility of the public for access to lib & for borrowing; assts w/ circulation control based on electronic security sys; interprets & carries out lib policies & procdures; files & maintains records; answers genl phone inquiries; searches for mat'ls for Public Services use; collects fees & fines & maintains cash records; opens & closes lib as assigned, etc; works nights, wkends & holidays as necessitated by schedule; QUALIFICATIONS: ability to work w/ the public; exp in interpreting & carrying out detailed, written policies; phone answering skills needed; able to remain on feet for better part of the day; lib exp is a major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib - GSB, Room 119, 497-2162.; B10; $595-623.

29523-PM (JCC:1747) Lib Spec I: 50%, flexible as needed; subj to temp layoff during summer quarters; charges out reserve books & other circulation mat'ls; prov genl informa to lib users; issues lib cards; registers patrons; monitors eligibility of the public for access to lib & for borrowing; assts w/ circulation control based on electronic security sys; interprets & carries out lib policies & procdures; files & maintains records; answers genl phone inquiries; searches for mat'ls for Public Services use; collects fees & fines & maintains cash records; opens & closes lib as assigned, etc; works nights, wkends & holidays as necessitated by schedule; QUALIFICATIONS: ability to work w/ the public; exp in interpreting & carrying out detailed, written policies; phone answering skills needed; able to remain on feet for better part of the day; lib exp is a major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib - GSB, Room 119, 497-2162.; B10; $595-623.

31096-PM (JCC:1755) LIBRARY SPEC II: 50%; Mon-Tues, 1-5pm; Sat, 3-12pm; Sun, 6-10pm; schedule will change during Intersession; performs duties in Circulation Serv Div of Meyer Lib; oversees Loan Desk & bldg operation during assigned hrs incl staffing Portal Monitor Booth & AV Serv Desk as needed; supv student assistants; keeping bldg eqpt operational; open or close the bldg; answer basic reference & informa questions during hrs that Reference Desk is not staffed, etc; QUALIFICATIONS: typ 40; prev public serv exp; prev lib exp; good commu skills, both orally & in writing; prev lib circulation exp, knowl of LC classification sys, prev supvry exp & prev exp w/ RLIN & SPIRES desirable; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $655-687.

36376-BP (JCC:2194) ACCOUNTING ASST I: Perform basic purchasing procedures & process related documentation; process vendor invoices for payment; frequent telephone contact w/ academic depts as well as w/ outside vendors; read & interpret data processing output related to Accts Payable sys; required to assign vendor numbers & prep vouchers under dollar control for input to data processing; QUALIFICATIONS: high sch'l diploma or equiv exp in A/P or related exp desired; must know touch sys on electronic calculator; good at detail work; commu effectively in English, both verbally & in writing; require on-line computer interface in near future; working knowl of Calif State Sales/Use tax laws desirable; send appl/resume to M. Willis, 20 Encina Hall.; B10; $1189-1246.

30749-PM (JCC:2454) OFFICE ASST II: Prep participants' officials passes & credentials, sample boards for game operation for charge events; prep ticket sellers' bags for minor sports; charging out tickets & money, assigning genl admission tickets, etc by price & color; sell tickets to faculty, staff, students, public over the counter; process ticket applications & balance sales to money received on 10-key adding machine, prepare deposits; answer frequent phone calls & other duties for as assigned by Ticket Mgr; QUALIFICATIONS: typ 40; knowl of basic acctg procedures & ability to use 10-key adding machine; prev exp on computer terminal preferred; must work well under pressure of frequent deadlines, interruptions & phone calls; prev exp in ticket sales; good verbal skills; able to work accurately w/ cash & prepare ticket acctg reports; send appl/resume to Marilyn Roellig, Athletic Dept, Stanford, CA 94305.; B09; $1130-1189.

30513-BP (JCC:2454) OFFICE ASST II: Fixed term 3/1/83-8/31/83; receive, screen & route visitors & phone callers; maintain logs of req received, reviewed & returned to Empl Control; maintain log of inhire salary review requests received; request indiv employee job descriptions for newhires/transfers; open & sort mail; photocopy various documents & distribute, etc; QUALIFICATIONS: typ 40; genl offc exp required; good oral commu skills; able to work under pressure during peak periods; able to pay atten to detail; send appl/resume to Cathy Jara, Old Pavilion, Stanford, CA 94305, 497-4083.; B09; $1130-1189.

31097-PM (JCC:2462) OFFICE ASST III: 50%; perform duties in Dept of Special Collections; respon for the production & coord of exhibits & exhibit-related programs; prep & installs exhibits; asst in hiring exhibit researchers; edits exhibit texts & captions; asst in purchasing eqpt & supplies & keeping accts & budgets; prep & cood publicity; works w/ designers & printers in coordinating Dept'l publications; QUALIFICATIONS: typ 40; prev public serv exp; good commu skills, incl editorial skills and/or exp; knowl of and/or exp w/ exhibit design & production required; prev lib exp, preferably in Special Collections; prev exp w/ publications; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B11; $623-655.

20573-BP (JCC:2462) OFFICE ASST III: Prov full range or staff support to Overseas Resource Ctr; inform & advise students about scholarships & all aspects of study, work, & travel abroad; order, update, receive, read, process, & file lib mat'ls; write, edit, & reproduce inform sheets; make Internat'l Student I.D. cards & youth hostel cards; keep financial records for both; collect, review, organize, & forward students' completed scholarship applications, etc; QUALIFICATIONS: typ 60; effective commu skills, oral & written; ability to deal w/ all types of people; atten to detail; willingness & ability to work under pressure w/ constant interruptions; prior exp w/ study, work, and/or travel abroad; knowl of campus helpful; prev offc exp required; send appl/resume to Cathy Gamon, 2nd floor, Bechtel International Ctr.; B11; $1246-1310.

Life Sci Research Asst I: 25%; for Med/Oncology; maintain cell lines in cell culture; subculture cell lines, freeze & thaw cells; prepare tissue culture medium; prepare sterile supplies; hrs flexible but require 3 days/wk - totally 10 hrs/wk; exp in cell culture, sterile tech & handling of cell lines; Science degree desirable, contact Gloria Garcia, 497-6483. $1670-2086.

43079-BP (JCC:2462) OFFICE ASST III: 8-4:30; act as Clerk Typist/Data Entry Clerk; performs clerical data entry functions required for the smooth processing of customer orders & vendor payments; maintains computer inventory; prov genl typing, etc; respon for collecting key informa fr purchase orders, sales orders & invoices, & applying computer codes & tables & notations to accurately enter data; typ purchase reqs, purchase orders & other Stanford forms; answer phones, etc; QUALIFICATIONS: able to use 10-key calculator; able to grasp the interrelationships of various commissary functions, i.e., knowl of computer terminal but dept is willing to train exceptional candidate; independently carry thru assignments exercising flexibility, & inquisitiveness; send appl/resume to K.Klitgaard, c/o Commissary, 765 Pampas Lane.; B11; $1246-1310.

30748-PM (JCC:2562) SECRETARY III: Sec II prov full range of sec'l serv to Dir of Men's Basketball & his 3 assistants; receives & screen calls; makes appts; answers corresp; typ corresp; takes dictation in s/h & fr dictaphone; maintains files; uses records fr word processing ctr; maintains expenditures & accts records; trains & supvs work/study students; acts as liaison between Dir & others; arranges mtgs, etc; QUALIFICATIONS: typ 70; s/h 90; substantial (4 yrs or more) sec'l exp, preferabl at admin level in high public contact offc for 2 or more suprs; excel English grammar/syntax skills; ability to compose letters or reports independently; must know & apply sound supvry practices; excel typing & s/h skills; send appl/resume to Mrs. B. Sheldon, Athletic Dept.; B14; $1440-1514.

28549-BP (JCC:2562) SECRETARY III: Sec for Dept Chairman; receives & screen calls & visitors; knowl of dept's programs & Chairman's priorities; considerable tact & judgment required; make appts; opens & screens mail; arranges corresp & other bkground mat'ls for reference; answers corresp; writes tech & non-tech reports; require tech terminology; editing; writing, etc; QUALIFICATIONS: typ 80; s/h 120; excel sec'l exp required; college degree or equiv w/ excel English lang bkground; at least 5 yrs exp; word processing exp desired; send appl/resume to Beverly Yates, AEL 107.; B14; $1440-1514.

36146-BP (JCC:2470) OFFICE ASST IV: Answer questions re housing; serv as referral & resource ctr for students seeking housing informa; prov sec'l/ clerical support; answer letters re petition responding to questions, coord clerical tasks; check residents' eligibility, process requests for transfer, submit occupancy reports, compile waiting lists, process & check termination notices; compose & type corresp; maintain files; coord & assign apts. for occupancy by summer-only tenants; liaison w/ Univ offices; update & maintain computer files & rosters, etc; QUALIFICATIONS: knowl of & ability to practice offc procedures; abil to eval. admin procedures & prov feedback; good oral & written commu skills; accuracy w/ numbers & details; sensitivity to residence programming & abil to prov prog support; typ 45; send appl/resume to Christine Griffith, Escondido Village Office, Stanford, CA 94305.; B14; $1440-1514.

25393-PM (JCC:2554) SECRETARY II: Prov sec'l assistance to 3-4 faculty members; typ course mat'ls, corresp & grant proposals; receives & screens calls & visitors; maintain course work files & tech reports master files; makes travel arrangements; respon for placement committee work involving computerized letter prep, mailings against stringent deadlines, meticulous cross-referenced filing sys; frequent contact w/ students & profs; QUALIFICATIONS: typ 70; 2 yrs of sec'l exp; good commu skills; good English grammar & spelling; exp w/ word processors or willingness to learn; prev work exp in an academic environ desirable; send appl/resume to Mika Koutsoyannis, Dept of Sociology, Bldg. 120.; B11; $1246-1310,

5522-PM (JCC:2580/2596) Sec II-S/Trainee: 8:30-5:30; typ tech manuscripts, class notes, corresp; act as Editorial Assistant for a tech journal; screen phone calls & make travel arrangements; ability to deal w/ a wide variety of individuals; QUALIFICATIONS: typ 70, s/h 90; 2-3 yrs sec'l exp; knowl of or willingness to learn tech typing; s/h required; good typing, spelling, & grammar essential; contact: Judi David, 497-2625.; B00/B12; $1244/1310-1373.

5521-PM (JCC:2580/2596) Sec II-S/Trainee: 8:30-5:30; typ tech manuscripts, class notes, corresp; order supplies & textbooks; maintain tech report files for entire dept; sort mail; act as bkup for dept sec; ability to deal w/ a variety of indivs & to set work prior; QUALIFICATIONS: typ 70; s/h optional; 2-3 yrs sec'l exp; knowl of or willingness to learn tech typing; good typing, spelling & grammar essential; some knowl of univ helpful; willing to learn tech (Greek keys) typing; s/h helpful, but not required; contact: Judi Davis, 497-2625.; B00/B12; $1244/1310-1373.

Bargaining Unit

9296-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; routine but skillful prep of lipoproteins fr human & rat cells; membrane fractionation w/ sucrose gradients; routine assays: triglyceride, cholesterol & glucose analyses using enzymatic methods; treatment of rats w/ hormones or other agents; killing rats for plasma or experimental tissues; some column & electrophoresis work w/ supvn; QUALIFICATIONS: lab exp in biochemical assays: pipetting, preparing solutions & buffers; dealing w/ instruments such as ultracentrifuges, spectrophotometers, & scintillation & gamma counters.; A24; $ 8.65.

44331-TC (JCC:5736) TISSUE TECH II: TMS Unit; Mon-Fri, 7:30-4pm; alternate Tues-Sat; cutting 3-5 micron sections of paraffin embedded tissue incl lymph node, spleen, liver, & kidney biopsies w/ a high degree of skill & speed; perform routine H & E and special stains; embedding, coverslipping, & labeling surgical specimens; lab bookkeeping other misc histology lab duties such as knife sharpening, solution prep, etc; QUALIFICATIONS: ASCP in Histology preferred; exp as active HistoTech; skills in high quality sectioning w/ speed.; A30; $ 9.97.

24647-PB (JCC:5794) LAB ASST II: TMS Unit; genl molecular biological lab maintenance; making sterile bacterial & phage media & agar plates; keeping stocks of solutions, buffers, salts, etc; maintaining stock strains of bacteria & phage, stocks of chemicals, isotopes, enzymes & other lab supplies; keeping records of eqpt servicing; maintenance of marine organisms in salt water aquarium; QUALIFICATIONS: some lab exp nec — either college course work or prev employment; requires manual dexterity, neatness & ability to perofrm complex non-tech lab tasks; basic knowl of elementary chemistry & biology is a must.; A16; $ 7.16.

42601-PB (JCC:5835) ANIMAL CARE ASST I: TMS Unit; Wed-Sun, 7:30-4pm; basic husbandry & care of lab dogs & other species; cleaning cages, watering, feeding, conducting daily observations for signs of illness or disease; required to work w/ a variety of animal species; will conduct assigned duties on wkends under a reduced level of supvn; capable of lifting 50 lbs. or more; able to follow written & oral instruc in proper animal care tech; QUALIFICATIONS: some prior animal handling exp; possess some mech ability; requires personal habits of cleanliness, neatness, & atten to details; able & willing to read, write, understand & commu in English, & follow written & oral instruc; free of allergic reactions to animals; capable of undergoing physical exam & immunizations; willing & able to work some holidays on a rotating schedule; may handle some biohazardous and/or radioactive mat'ls or animals.; A12; $6.54.

42602-PB (JCC:5844) ANIMAL CARE ASST II: TMS Unit; 7:30-4pm; change & clean animal cages; prov water & prescribed diets to animals assigned to his care; will receive, cage & identify newly arriving animals; record & report signs of illness or abnormal conditions of animals; commu effectively w/ supvn, lab personnel & PIs, & to follow detailed instruc , written & oral; transport animals, cages & supplies between animal facilities; assume respon for safe, concientious operation of div's motor vehicles; QUALIFICATIONS: prior animal handling exp; some mechanical ability; personal habits of cleanliness, neatness & atten to details; read, write, commu & understand English; free of animal allergies & undergoing a physical exam & immunizations; may be required to work occasional holidays.; A16; $ 7.16.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, Feb. 22, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Ph.D. oral exams

WEDNESDAY, FEBRUARY 16

Rocky Richard Arnold, civil engineering, "Buckling, Postbuckling, and Crippling of Materially Nonlinear Laminated Composite Plates," 1:15 p.m., Terman 251.

WEDNESDAY, FEBRUARY 23

Thomas E. Carney, psychology, "Spatial and Temporal Factors in Apparent Motion," 1:15 p.m., Room 358, Jordan. **Bruce E. Gardner,** aeronautics and astronautics, "Feedforward/Feedback Control Logic Design for Robust, High-Performance Target Tracking," 4 p.m., Skilling 191. **Scott Mainwaring,** political science, "The Catholic Church and Politics in Brazil, 1930-1982," 9:30 a.m., Political Science Faculty Lounge.

THURSDAY, FEBRUARY 24

Laurence Kenneth Shore, communication and education, "The Crossroads of Business and Music: A Study of the Music Industry in the United States and Internationally," 2:15 p.m., Bldg. 120, Room 325.

FRIDAY, FEBRUARY 25

John Alfred Hildebrand, applied physics, "Quantitative Acoustic Microscopy," 2:15 p.m., Applied Physics 200.

Kirshner to speak on Franco Sacchetti

Prof. Julius Kirshner of the University of Chicago will present a free public lecture on " 'Ubi est ille?' Franco Sacchetti in the Monte Comune of Florence" at 4:15 p.m. Thursday, Feb. 24, in History Corner, Building 200, Room 205 at Stanford.

Kirshner's expertise in the history of Italian city-states in the Middle Ages and the Renaissance. His most recent publications are Between Nature and Culture: *An Opinion of Baldus of Perugia on Venetian Citizenship as Second Nature*, 1979, and *The Dowry Fund and the Marriage Market in Early Quattrocento Florence*, 1978.



Graham H. Winton and Anthony J. Haney as drunken, boisterous satyrs in the Drama Department production of the new musical "CYCLOPS/Nobody's Musical, directed by Rush Rehm. With book and lyrics by Rush Rehm and music by Francis James Brown, performance dates are Wednesday-Saturday, Feb. 16-19, and Feb. 23-26, at 8 p.m. in Little Theater with a special matinee at 2 p.m. on Saturday, Feb. 26. Tickets at Tresidder Ticket Office (415 497-4317) and at major Bay Area agencies.

Rental housing

HOUSING AVAILABLE

□ **April 10 to July 15, '83:** London: Hampstead nr Heath. Beautifully furn. hse, 3BR/2BA, FR, study, garden. EXCHANGE or rent. Details incl. photo avail. Call Himmelweit, 321-2052 or 328-6040.

□ **June 22 to July 28, '83:** Fully furn. hse on campus. 3BR/2BA, pool, hot tub. Gardener & clean. woman incl. Must care for dog. $1400 + util. Sec. dep req. Call 497-7196 (day), 493-1882.

□ **May thru July '83 (flex):** Fully furn. hse, 2BR/1BA, nr footbrdge from MP to PA. $475/mo incl. water & ¼ util. Call H. Whiting, 322-5669, 392-1739.

□ **Summer '83:** LONDON HOUSEBOAT. Chiswick-on-Thames. Views, comfort. Suitable for cpl w/teenager or 3rd adult. Fully furn. elec. heat, DW, W/D, frig., TV. City water & sewer. $800-1,000/mo. 3 to 5 mo. nego. Call Beard, 323-2755.

□ **NOW:** Tahoe Donner Ski Bowl Condo. 3BR + loft, sleeps 10, color TV, spa. Call Bienenstock, (415) 493-8649.

□ **Aug. to Dec. '83 (flex):** Fully furn. hse 4BR/3BA (1BR/BA w/sep. ent. & rentable), study, FR, 2 patios, 2 frpl, AEK, W/D. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **Late Mar. to early June '83:** Furn. 1BR apt. Menlo Pk. $500/mo. Call 497-3025 or 497-0769 (day), 322-3301 (eve).

□ **March 27 to Sept. 15, '83:** Fully furn 3BR/3BA, FR, So. Palo ALto hse. Nghbrhd pool assoc, gardener, 15 min. to Stanf. Walk to shops. Ideal for children. $1100/mo. Call Cornish & Carey, 325-6161 (day), Rita Benedict, 327-7190 (eve).

□ **March 1, '83: 7 to 10 mo. (flex).** Fully furn 2BR/2BA luxury condo, view, pool, tennis, W/D. 12 min. to Stanf, 35 min. to S.F. Nonsmoker, no pets. $850/mo. Call (415) 853-5212 (day), (415) 591-7085.

□ **Beg. Mar. 1, '83:** Professorville historic wood-paneled charm. Unfurn duplex, 4BR/1½BA, frpl, sleep. porch, deck, attic, nooks & crannies, sm. yd. Close to Stanf, schls, shops. Nonsmokers, no pets. 1 yr. lease, $1250/mo. Call 497-4801 (day), 327-4830.

□ **Avail for 1 yr:** Hse in Stockholm, fully furn, 4BR, lib., 2 dens, safe area, 20 min. to town ctr. $1200/mo. Write: Dr. Jan Karlsson, Dept. Clin. Physiology, Karolinska Hosp. Stockholm, Sweden. Local contact, Wm. Haskell, 497-6254 (day).

□ **July 1 to Aug. 31, '83:** Spac. furn. hse on campus. 4BR. No pets, must feed cats. $1000/mo. incl. gardener, water. Sec. dep. req. Call (415) 857-1653.

□ **Mid-Mar. to Mid-June (flex):** Hse in Palo Alto, 4BR/2BA, fully furn. 10 min. to Stanf. $1300/mo., incl. gardener. Call 858-0434, or 497-4645 (day).

□ **July 1, '83 to July 1, '85 (flex):** 1 yr. rental poss. Fully furn. Palo Alto fac. hse, 3BR/2BA, FR/den, LR, DR, W/D, AEK, pool w/deck, patio. $1200/mo. Call Anne Mellor, 323-5329, 497-2724 (day).

□ **April Exchange:** Apt. in Paris & hse in Grenoble & car. EXCHANGE for hse or condo & car commute dist. to Stanf. Call Rosemary, 497-9165 (day), 967-8157 after 5 pm.

□ **July, Aug.:** Very attrac. summer rent. Dwntwn Palo Alto. 1BR/2BA fully furn. condo. Suit. for cpl. Lib. w/spiral staircase, balc., pool, secure. 18th C. European style. $1500/mo. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **Beg. June 1:** Summer rent and/or 1 yr. High Portola Val. (Ladera). Beaut. 3BR/2BA fully furn. hse. Atrium, lrg. self-maint. gardene, oaks, pool, tennis. 7 min. to Stanf. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **March thru June, '83:** Oak Creek apt. 2BR/1-1/3BA, furn, built-in bar, gar. space. Util. incl. Call 321-2625.

□ **April thru Nov. 15, '83:** Fully furn. Palo Alto hse, 3-4BR/2BA, LR, FR, lrg. cov. patio. Lush garden, easy upkeep, auto. sprink. Adults, no pets. $1200/mo. incl. water. Call (415) 858-0880 (eve), 497-1580 (day).

□ **NOW:** Furn. studio nr. Stanf. 2 blocks to Calif. Av. shops & train. $300/mo. incl. util. Hot tub & laundry priv. $50 more. Call 856-0849.

□ **Aug. to Dec. '83 (flex):** Fully furn. 4BR/3BA, study, FR, 2 patios, 2 frpl, AEK, W/D. 1BR/1BA w/sep. entr. & rentable. 5 min. walk to campus ctr. Call Nancy packer, 857-0908.

□ **Now to June '83:** Prof. woman seeks M or F rmmate to share lrg. 2BR/2BA condo in scenic San Carlos hills, view wilderness area. Fully furn, cathedral ceil., frpl, pool, tennis. See to appreciate. $400/mo. + ½ util. Call Leslie, (415) 697-1300 (day), (415) 591-1480 (eve or lv msge).

□ **Late Mar. to late June (flex):** Fully furn. campus hse, 4BR/2½BA, DR (convert to study), frpl, AEK, W/D, patio. 5 min. walk to campus ctr. Call Paul W. Berg, 857-0245.

□ **Late Aug. to Dec. '83:** RENT OR EXCHANGE: W. Los Angeles canyon hse. 2BR/3BA, 2 dens, easy drive to UCLA, beach. UCLA Law Prof. visit. Stanf. Fall '83. Call Erika, 497-3574 (day).

□ **Mar. to Sept. '83:** M/F to SHARE 3BR/2BA hse, AEK, W/D, nonsmoker, no pets. In Palo Alto, 2 mi. to Stanf. $275/mo. + 1/3 util., $250 dep. Call 856-3680 after 6 p.m.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg. fam. rm., W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, community ctr. Prof. going on sabbat. $1500/mo. Call 325-1709.

□ **June 29 to Sept. 1, '83:** Fully furn. 5BR/2BA hse in old Palo Alto, gardens, deck, tennis, swim priv. $1200/mo. Call 326-5548.

□ **April 5 to July 12, '83:** Furn. hse College Terr., 1BR, patio, TV, garage. $550/mo. Call 857-0585.

□ **July, Aug. '83:** Dwntwn Palo Alto, 1BR/2BA condo, suitable for cpl. Library, pool, security, European air, balcony. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), or 327-3505.

□ **End Mar. to end July (flex):** Los Altos fully furn. hse on cul-de-sac, 6 mi to Stanf., walk to schls, shops. 4BR/3BA. $1200/mo. incl. grdnr, water. Call (415) 948-0936.

□ **Beg. April or May '83:** For 6 mos. to 1yr: 3BR/2BA apt in area 5 mi. from ctr. Paris. 2 cars, wkly clean. incl. Finnish-French Bus. exec. cpl. w/2 daughters wish to EXCHANGE for 2-4BR hse/apt in Bay Area. Will care for pets, garden. Local refs. Write: Fourmeaux, 12, rue S. Vigneras, 92380 Garches, France.

□ **Regularly avail.:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Park in good nghbrhds. Close to campus. $525 to $1200/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Beg. Mar. 19:** Furn. 3BR/2BA hse, beautiful, spacious, nr Stanf. New kitchen, W/D, piano, frpl. Fenced yd, no pets. Call COLLECT (602) 299-4499.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse, 4BR/3½BA, LR, DR, study, library, frpl, pool, view on acre. $1600/mo. incl. grdnr, pool serv., water. Call (415) 327-5204 or 497-4732 (day).

□ **Beg. April 1 for 1 yr:** Charming Los Altos cottage, fully furn., 2BR/1BA, frpl, W/D, cpl. pref., no pets. $700/mo. + util. 1st & last, plus $200 dep. Call (415) 941-4023, or 329-1150 (MWF, 9:30 to 5:30).

□ **NOW:** SKI CONDO. Tahoe Donner, sleeps 8, fully furn. & equipped. Avail Pres. Holiday 2/11-13, wkdys & Easter wk. Low rates. Call Al, 326-3821 (eve).

Carpools

Carpoolers wanted, 7:30 a.m. to 4 p.m., or 7 a.m. to 3:30 p.m. Fremont, Union City, Newark area to Stanford University. Call Tami, 7-6444.

Carpool wanted from Newark to Stanford, M-F, time flexible. Call Polly, 7-4281.

Ride needed to S.F. MWF. Money negotiable. Brandt, ext. 7-1171.

Carpool wanted to Santa Cruz from Palo Alto M, W, F. Call Mark, 856-2428.

Join existing carpool. Leaves Homestead and Foothill Expressway to Stanford. M-F, 8-5. Call Jeannette, 7-9627.

I'm looking for a carpool between S.F. and Stanford (preferably from the Haight-Ashbury) 4-5 days/week, approx. 9-5. Please call Nora at 431-9649 eves.

Looking for two persons to join a Mission Noe Valley-Stanford Univ. carpool. M-F, 8-5. Call John, 821-1665, or Yinon, 431-0951.

HOUSING NEEDED

□ **Beg. April 1:** For 3-4 mo. Cambridge Univ. prof. & wife, seek quiet 2BR hse, apt. nr Stanf. campus. Call 497-2972 or 497-1978 (day), 327-3344.

□ **May 15 to Aug. 15, '83:** Visit. prof., wife, 2 children seek 3BR fully furn. & equipped hse or apt on or nr campus. Call COLLECT, Indiana, (317) 463-3912.

□ **NOW:** VA Resident seeks rm w/ba in Palo Alto during wk. nites in EXCHANGE for my S.F. r. w/ba & priv. entr. Call Margie, (415) 564-2622 (eve) or 493-5000, pager #229 (day).

□ **Mid-Mar. to June (flex):** Visit. prof, wife, 2 pre-sch. child. seek 4BR fully furn hse Palo Alto/Stanf. area. Call (415) 965-1109.

□ **Mid-June thru July '83:** TRADE HOUSES. 4-mbr prof. family seek Bay Area hse for Gattingen, W. Germany. Lovely new home in small vill. nr. Univ. twn. Accessible to fields & forest, 3BR/2BA & study. Car avail. Call (415) 859-4757, (415) 941-4319 (eve).

□ **July '83 to Aug. 31, '83:** Visit. U. of Chicago prof, wife, 2 teenage girls seek fully furn. 3-4BR campus hse. Stanf. refs. avail. on request. Call (415) 856-1145 or (312) 667-3611.

□ **June '83 to Aug. '84 (flex):** Visit prof, Elec. Engr seeks hsng for self, spouse, 12 yr. old daughter. Nonsmokers. Call COLLECT (505) 294-7758 after 5:30 p.m. or write Prof. Etter, EECE Dept., UNM, Albuquerque, NM 87131.

□ **NOW:** Prof. female seeks sublet, apt. or hse. Pay to $400/mo. or HOUSESIT. For 6 to 8 mo. Refs. avail. Call (415) 595-2950 (eve), (415) 965-0557 (day).

□ **NOW:** Reliable Stanf. staff seeks HOUSESIT in P.A. area. Pref. long term, 3 to 6 mo. but will consider shorter per. Will give excl. care to hse, pets, plants, yd. No charge. Loc. refs. Call Donna, 497-3967 (day).

□ **NOW:** Prof. here on leave seeks HOUSESIT, 1 to 8 mos. Very resp. nonsmoker, will give excl. care. Call Rosemary (415) 948-8694 (eve), 396-7173, Wed. & Thurs.

□ **NOW:** Prof. R&D Manager seeks rm w/BA in furn. condo. Pref. quiet, resp. male condo-mate. Mt.V., P.A., Sunnyvl area. Call Fred, (415) 494-1165, ext. 1407 (day).

□ **July 1 for 1 yr:** Campus hse for Stanf. family of 3. Excl. tenants. Call after 2 pm, 856-6417.

□ **NOW:** Concert pianist/teacher, long time P.A. resid., seeks to lease unfurn 1-3BR hse w/20 x 40 LR or studio suitable for 2 concert grand pianos. Call 323-6641.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Patricia Mikishka, mezzo-soprano, will solo with the Stanford Chamber Orchestra Friday, Feb. 18, in *Les Nuits d'Ete* by Berlioz. She is a D.M.A. candidate in early music.

Dallin to discuss Soviet outlook

"The Soviet Union After Brezhnev" is the subject of a talk by Alexander Dallin, Stanford professor of history and political science at noon, Tuesday, Feb. 22, at Bechtel International Center.

Dallin was director of the Russian Institute at Columbia University from 1962-67 and Adlai E. Stevenson Professor of International Relations there from 1966-71.

A specialist in Soviet affairs, he has also taught at Harvard and Berkeley and has served as a consultant to the U.S. government.

The lecture is one of a series held on Tuesdays at the International Center. Luncheon tickets are available at $2.50 one week before the event at the I-Center office or at the door as they last. Brown baggers are also welcome at no charge.

For more information about this or other programs call 497-1831 or stop by the I-Center for intercultural hospitality.

President's Day

Athletic facilities

OPEN: Encina lockers and showers, 9 a.m.-6 p.m.; Roble complex (except pool), noon to 5 p.m.; Encina weight room, noon to 5:30 p.m.; deGuerre pools, noon to 2 p.m.; deGuerre courts, 11 a.m.-7:15 p.m.; tennis courts, sign up as usual; Tresidder Recreation Center, regular hours; Golf course, first available starting time after 11 a.m.; Driving range, 7 a.m. to one hour before dark; Angell Field-Olympic Gamefield-Perrier Parcourse, open daylight hours; IM Fields, reserved, call 497-0505.

CLOSED: Maples Pavilion, Roble Pool.

Tresidder services

The following Tresidder Union services will be open on President's Day, Feb. 21:

Coffee House, 10 a.m.-12 midnight
The Store, 7:45 a.m.-8 p.m.
Recreation Center, 10 a.m.-12 midnight
Wells Fargo Express Stop, 24 hours

All other offices and services will be closed in observance of this official Stanford University Holiday.

Panel, concerts highlight Dance Week Feb. 22-26

A free public panel discussion on the performing arts at 4:15 p.m. Wednesday, Feb. 23, in Tresidder Memorial Union and two dance and music concerts at 8 p.m. Friday and Saturday, Feb. 25-26, in the Roble Dance Studio will highlight Stanford's fourth annual Dance Week Feb. 22-26.

Six events are planned under the sponsorship of the Stanford Dance Division, coordinated by Jancy Limpert, and by the Stanford Dance Quorum.

Limpert and Gwendolyn Watson, resident dance musician, will lead an intermediate level modern dance class in improvisation at 4:15 p.m. Tuesday, Feb. 22, in the Roble Dance Studio. Open to qualified students, the free class will include guest musicians. Visitors are welcome to observe from the studio balcony.

Participants in the panel discussion on "Topics in Performance: Dance and the Other Arts" on Feb. 23 will include choreographer-dancer Lucas Hoving, Mellon Fellow Adrian Piper, Stanford academic news writer Millicent Dillon, and Profs. John Chowning, music, and Martin Esslin, drama. It will be held at 4:15 p.m. in the Tresidder Large Lounge.

A lecture-demonstration on "Mexican Regional Dance Forms" with Susan Cashion of the Stanford Dance Division and Ballet Folklorico of Stanford will be held at 8 p.m. Wednesday in the Burbank dining hall of Stern dormitory. Cosponsored by Burbank, it is free.

Three folkdance films from different cultures—"Step Style," "Buckdancer," and "Balkan Dancing"—and videofilms of East European folk ensembles will be shown at 6:30 p.m. Thursday, Feb. 24, in Room 17 at Roble Gym. A party will follow.

Diane Freccero, faculty coordinator for Dance Week, will join Cashion, Limpert and Watson in two separate programs of dance and music at 8 p.m. Friday and Saturday in the Roble Dance Studio.

Bay Area guest artists for these programs will include percussionist Rodman Marymor, harpsichordist John Toenjes, and choreographers Christopher Beck, John Goodwin, Leslee Lewis, and Julienne Weston.

There is an admission charge.

The Dance Division's production-management workshop taught by Limpert is providing support for the week's events.

Further information may be obtained by calling (415) 497-1234.

Noble to speak on Karakorum

British outdoorsman John Noble, long associated with the National Mountaineering Centre, North Wales, will give a free public illustrated lecture on the Karakorum mountain range of Central Asia Wednesday, Feb. 16, at Stanford.

The presentation, sponsored by the Stanford Alumni Association Travel/Study Program, will be held at 7:30 p.m. at the Elliott Program Center in Governor's Court.

The Karakorum range extends from the easternmost part of Afghanistan some 300 miles southeast and includes "K2," the second highest peak in the world.



Stanford Jazz Band performs at 8 p.m. Saturday, Feb. 19, in Dinkelspiel Auditorium. They preview their concert today (Feb. 16) outside Tresidder. Special guests: Bay Bop.

Barnes to direct Symphonic Band concert Feb. 27 in Dinkelspiel

The Stanford Symphonic Band, formerly the Stanford Wind Ensemble, will present an exciting program at 8 p.m. Sunday, Feb. 27, in Dinkelspiel Auditorium under the direction of Prof. Arthur Barnes.

Featured work on the program will be *Grand Pianola Music* by John Adams—San Francisco Symphony's adviser on new music and a composer of formidable talent.

After the work's premiere in San Francisco last February, Richard Pontzious of the *San Francisco Examiner* wrote: "If the warm response it was accorded by the virtually sold-out house is any indication, it will be played repeatedly.

Grand Pianola Music is scored for winds, percussion, two pianos, and three voices. Pianists will be Stanford faculty members Naomi Sparrow and Jodi Gandolfi; singers will be Nancy Wait, Nancy Kass, and Jan Wilcox.

Prof. Barnes describes *Grand Pianola Music* as "stream of consciousness music. . . a visual, aural, sensual experience. . . a spoof on music, past and present."

Also on the program will be Will Gay Bottje's *Concerto for Trumpet, Trombone, and Winds*, with James Duncan and Anne Witherell. Trumpeter Duncan is an M.D. at Stanford Hospital; Witherell is a Department of Music Ph.D. and freelance trombonist. Bottje is resident composer at Southern Illinois University.

Rounding out the program will be *Suite No. 1* and *Mars* and *Jupiter* from *The Planets* by Gustav Holst. "*Mars* and *Jupiter* are bombasitc," says Barnes, while the *Suite* is diametrically opposed—singable, conservative, based on English folk tunes."

Nelhybel's *Symphonic Movement* will also be performed.

Tickets are $4 general, $2 students and senior citizens, available from Tresidder Ticket Office (497-4317) and the door.

Panel set on U.S. political prisoners

Amnesty International has recently added the United States to the list of countries holding political prisoners.

Nationally known criminal defense lawyers William Kunstler, Chokwe Lumumba, Francisco "Kiko" Martinez, Bruce Ellison, Susan Tippograph, and Stewart Hanlon will speak at a free public forum about political prisoners in the U.S. at 7:30 p.m. Thursday, Feb. 24, in Kresge Auditorium at the Stanford Law School. The program is sponsored by the National Lawyers Guild, the Black American Law Students Association, and LaRaza Law Students Association.

The participating attorneys have represented leaders in many movements protesting U.S. government policies. Kunstler currently represents Dennis Banks and Leonard Peltier, leaders of the American Indian Movement. Kunstler is best known for his defense of anti-Vietnam War protestors in the Chicago Seven conspiracy trial.

Lumumba is Minister of Justice for the Republic of New Africa. He has represented members of the Black Liberation Army and is currently defending Sekov Odinga in the Brinks robbery trial.

Martinez has been repeatedly harassed for his representation of Chicano activists in Texas.

Ellison is also representing Peltier and has successfully obtained documents under the Freedom of Information Act exposing government attempts to harass the American Indian Movement.

Tippograph is representing two members of the Weather Underground arrested in connection with the Brinks robbery. In the past her clients have included Puerto Rican nationalists.

Hanlon is a Bay Area attorney who represents Geronimo Pratt, a former Black Panther, and Bill and Emily Harris, former members of the Symbionese Liberation Army.

Immediately following the forum a reception will be held in the Law School Lounge.

Young flutist, Marga Martin to play Feb. 20

The Lively Arts at Stanford will present flutist Marya Martin at 2:30 p.m. Sunday, Feb. 20, in Dinkelspiel Auditorium.

Martin's program will include "Sonata in B flat Major" by Telemann, "Sonatina" by Berkeley, and "Duo for Flute and Piano" by Copland.

It also includes Schubert's "introduction and Variations on a Theme, 'Ihr Blumlein alle,', Opus 160" and Chopin's "Variations on a Theme by Rossini".

New Zealand-born Martin made her debut in the 1979-80 Young Concert Artists Series in New York at the 92 Street Y and in Washington D.C. at the Kennedy Center. She won the 1979 Young Concert Artists international auditions and received the Young Concert Artists' Mortimer Levitt career development award for women artists.

Martin has performed with Jean-Pierre Rampal in the "Mostly Mozart" Festival at Lincoln Center, and with Alexander Schneider at the Metropolitan Museum. In addition, she has performed with the Brandenburg Ensemble and has appeared in Lincoln Center's "Great Performers Series."

Martin has studied with Jean-Pierre Rampal and James Galway in Europe and at Yale University with Thomas Nyfenger.

Martin's solo debut recording was released in 1982 by the Musical Heritage Society.

For more information call Tresidder Ticket Office, (415) 497-4317.

Zapf to discuss new type design

Internationally recognized type designer Hermann Zapf will discuss "The Designer in the Age of Metafont," the design of types in the computer age, at a free public meeting of the associates of the Stanford University Libraries Sunday, Feb. 20.

Zapf is visiting from Germany. His talk is scheduled for 3 p.m. in Bishop Auditorium of the Graduate School of Business. A reception in the Lurie Rotunda of Cecil H. Green Library will follow.

Zapf has designed more than 130 type faces for hand and mechanical composition and for computer use. These include Palatino, Optima and Marconi.

Working with Stanford Prof. Donald E. Knuth and the American Mathematics Society, he developed a typeface which has been named Euler in honor of the Swiss mathematician. In 1974 the city of Mainz in Germany awarded him the Gutenberg Prize and in 1977 and '78 he was Melbert B. Carey professor of typography at the Rochester Institute of Technology.

'Station' cuts hours

Encina Station will close its Monday through Friday evening service beginning Feb. 14.

The Station will continue to be open from 7:30 a.m. to 2:30 p.m. Monday through Friday serving full breakfasts, lunch, snacks and beverages.



Tashi:(left to right) Richard Stoltzman, Fred Sherry, Ida Kavafian, Toby Appel, Theodore Arm.

Tashi, Tibetan for 'good fortune,' plans chamber music concert here Feb. 23

Tashi, one of the most versatile chamber music ensembles will perform at 8 p.m. Wednesday, Feb. 23 in Dinkelspiel Auditorium at Stanford.

The program will include Beethoven's "String Trio in G Major, Op. 9, No. 1," Takemitsu's "A Way a Lone (String Quartet)," Douglas' "Dances" and Von Weber's "Quintet for Clarinet and Strings in B flat Major, Op. 34."

Tashi, whose name is Tibetan for "good fortune," combines traditional repertoire with new music. Initially formed to perform Messiaen's "Quartet for the End of Time," they have since inspired the compositions of Bill Douglas, Peter Lieberson, Tori Takemitsu and Charles Wuorinen.

Members of the ensemble are clarinetist Richard Stoltzman, violinists Ida Kavafian and Theodore Arm, violist Toby Appel, and cellist Fred Sherry.

Since making their New York debut in 1973, Tashi has toured North and South America, Europe and the Far East. During the 1982-83 season Tashi will have presented their own series with guest artists at the 92nd Street Y featuring a variety of repertoire from the Mozart and Brahms quintets to Schoenberg, Stravinsky, the American premiere of Charles Wuorinen's "Fortune," and some jazz improvisations.

In addition to their performance, Tashi will give an open rehearsal from 3 to 4 p.m. Wednesday, Feb. 23, in Dinkelspiel Auditorium. There will also be a record signing from 4:30 to 5 p.m. at Classical Wax, 1190 Chestnut Street, Menlo Park.

For ticket information call Tresidder Ticket Office, (415) 497-4317. Tashi is presented by the Lively Arts at Stanford.

Toth to direct Symphony Orchestra concert featuring Bartok, Vivaldi

Stanford's Symphony Orchestra, under the direction of Andor Toth, will perform music by Vivaldi, Bartok, and Beethoven at 8 p.m. Saturday, Feb. 26, in Dinkelspiel Auditorium.

Featured work on the program will be the Bartok *Violin Concerto No. 2*, performed by violinist Toth and directed by assistant conductor Eric Kujawsky. This will mark Kujawsky's conducting debut at Stanford, where he is a doctoral candidate in instrumental conducting.

A native of Los Angeles and a UCLA graduate, Kujawsky conducted the Los Angeles premiere of *The Berlin Requiem* by Kurt Weill and the 1982 UCLA Dance Company's concerts.

Following the Bartok, Toth will conduct Beethoven's magnificent Symphony No. 3, the "Eroica." Flutist Diana Peterson will open the program, performing Vivaldi's *Piccolo Concerto in C Major*.

Toth has a special affinity for Bartok's works. His quartet, the New Hungarian Quartet, received great acclaim for their recordings of Bartok's *Complete String Quartets*. The Bartok Violin Concerto is recognized as perhaps the most intricate and violinistically difficult in the repertoire.

In April, Toth will give recitals in London, The Hague, Rome, and other European cities.

Tickets are $4 general, $2 students and senior citizens.

Early Music Singers concert

Four Centuries of Music in Italy will be featured in a free concert by the Early Music Singers, under the direction of Prof. William Mahrt, at 8 p.m. Tuesday, Feb. 22, in Dinkelspiel Auditorium at Stanford.

The concert will trace the development of Italian music from the 14th through the beginning of the 17th centuries—a time when vocal music flourished in Italy.

Both sacred and secular works will be performed: songs by Landini (14th century); sacred pieces by Dufay and Matteo de Perugia (15th century); songs in Italian by 16th-century French composer Jacob Arcadelt; madrigals and motets of the later 16th century; and works by Cipriano de Rore, Luca Marenzio, Gesualdo, and, finally, Monteverdi in the early 17th century.

Mazon to review Zoot Suit Riot of June, 1943

Mauricio Mazon, associate professor of history at USC, will speak on "The Psychology of Symbolic Annihilation: The Los Angeles Zoot Suit Riot, June 1943" at 7 p.m. Thursday, Feb. 17, in History Corner, Room 34, at Stanford.

The free public lecture is sponsored by the Chicano Fellows Program.

Mazon will present a psychoanalytic interpretation of the Zoot Suit Riot, an infamous confrontation between servicemen and Mexican-American youths.

For nearly a week in early June, 1943, army and navy personnel stormed through the Mexican communities of Los Angeles, determined to stamp out a crime wave among gangs of Mexican teenagers. The crime wave did not exist, but the zoot suit, a sytle favored by jitterbug fans, denoted a hoodlum in public opinion.

Most studies of the riot center on juvenile deliquency as the cause of the troubles; others emphasize the role of yellow journalism. In contrast, Mazon's psychoanalytic interpretation focuses on the ritualized and symbolic behavior of servicemen.

Mazon, who earned his doctorate in history at UCLA, also received training at the Southern California Psychoanalytic Institute in Beverly Hills, where he is a research clinical associate. Besides teaching at USC, Mazon is a consultant at the Wright Institute in Los Angeles, where he offers courses in psychoanalytic theory and is a supervisor of psychologists in training.

Mazon will publish a book on the subject of this lecture with the University of Texas Press.

I-Center to show 3 Indian films

The Other Cultures Film Series goes to India this week via three films, *Juggernaut*, *Rhythm of Kerala*, and *Glory of Pratishtan*. The films will be shown at 7:30 p.m. Thursday, Feb. 17, at the International Center.

In India's annual festival of the cult of Juggernaut, the image of the god Vishnu is dragged through the streets. In the film *Juggernaut*, a modern day "juggernaut"—the 70-ton heart of a nuclear reactor—moves on a 600-mile journey across India. And as it passes, a people whose lives are rooted in poverty and the past watch.

Rhythm of Kerala unfolds the rhythm of life in this state by using vibrant sound from a large number of drums. *Glory of Pratishtan* shows the rich cultural heritage of the people who once lived on the banks of River Godavari in South India.

A donation of 75 cents will be requested at the door. For further information, phone 497-1831.

Psychohistory of '70s discussion set

"Psychohistory of the 1970s" is the topic of a Psychiatry Department talk, to be given next week by Dr. Peter Carroll, historian and author of *It Seemed like Nothing Happened*.

Open to anyone interested, the grand rounds lecture will be held 11:30 a.m. till 1 p.m., Tuesday, Feb. 22, in room M104 of the Medical School.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Feb. 16, to cover the week of Mon., Feb. 28, through Sun., Mar. 6.

MONDAY, FEBRUARY 21

Baseball: vs. Santa Clara. 1:00 p.m. Sunken Diamond. $2 general, Stanford students free.

Biological Science Seminar: Dr. Frank Stockdale, Division of Oncology, Dept. of Medicine, Stanford Medical Center. 4:15 pm. Room T-175, Herrin Hall, Dept. of Biological Sci.

Film Society: "Smiles of a Summer Night" (1955). 7:30 p.m. Bishop Aud. $2.

Men's Volleyball: vs. Hawaii. 7:30 p.m. Maples Pavilion.

TUESDAY, FEBRUARY 22

Bechtel International Center Luncheon Series: "The Soviet Union after Brezhnev," by Alexander Dallin. Prof. of History, Stanford. Noon. I-Center. $2.50 for lunch, brown baggers free.

Men's Tennis: vs. Canada College. 1:30 p.m. Varsity Courts.

Stanford Museum of Art Lunch Hour Tours: "The Harmony of Japan". 12:15 p.m. Stanford Museum of Art.

Music Dept. Concert: Early Music Singers, William Mahrt, director. 8 p.m. Dinkelspiel Aud. Free.

WEDNESDAY, FEBRUARY 23

Center for Latin American Studies Lecture: "The Metamorphosis of the State under Authoritarian Regimes: Argentina, 1976-82," with Prof. Oscar Oszlak, Director of the Centro de Estudios de Estado y Sociedad (Buenos Aires). Noon. 582 Alvarado Row, Bolivar House.

Men's Tennis: vs. University of San Diego. 1:30 p.m. Varsity Courts.

Stanford Museum of Art Lunch Hour Tours: "The Harmony of Japan". 12:15 p.m. Stanford Museum of Art.

Women's Softball: vs. Mission. 2 p.m. Roble Field.

Lively Arts at Stanford: Tashi, free open rehearsal. 3-4 p.m. Dinkelspiel Aud.

Men's Rugby: vs. University of Victoria. 3:30 p.m. Maloney Field.

Electronics in Medicine Lecture: "Digital Radiographic Methods for Blood Vessel Imaging," by Dwight Nishimura, Dept. of Elect. Eng'g & Adv. Imaging Techniques Lab at Stanford. 4:15 p.m. McCullough-134.

Chemical Engineering Lecture: "Slender Bodies, Thin Films and the Micromechanics of Dennse Suspensions," by Prof. Joe Goddard, Univ. of Southern California. 4:15 p.m. Chemical Engineering Conference Room.

Basic Science Research Colloquium: "Molecular Analysis of Genes Controlling Development of Drosophila," by Dr. David S. Hogness, Dept. of Biochemistry. 5:00 p.m. Fairchild Aud.

Squash: vs. Berkeley #1. 6 p.m. DeGuerre Courts.

Women's Basketball: vs. Fresno State. 7:30 p.m. Maples Pavilion. $2 adults, $1 children.

La Casa Italiana Lecture: "Speaking of a President: Italian and American Coverage of Reagan's Trip to Europe," by Paolo Mancini, University of Perugia. 7:30 p.m. La Casa Italiana, 562 Mayfield.

Lively Arts at Stanford: Tashi, playing Beethoven:String Trio in G Major,Op. 9, No. 1; Takemitsu: String Quartet; Douglas: Dances (2); Weber: Clarinet Quintet. 8 p.m. Dinkelspiel Aud. $9.50, Students:$6.50.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

Art Dept. Lecture Series: "Frederic Edwin Church and the Art of Manifest Destiny," by Prof. David Huntington. 8:15 p.m. Annenberg Aud.

THURSDAY, FEBRUARY 24

Materials Science and Engineering Symposium: "Application of Contemporary Electron Microscopy". 1-5 p.m. and 8-9:30 p.m. Peterson Lab, Room 550-A.

Stanford Geothermal Program: "Application of Geochemistry to Understanding Geothermal Systems," by Robert W. Potter II, Occidental Research Corp. 1:15 p.m. Mitchell Bldg., Room B67.

Office of Student Activities/ Residential Education: Program Planning in the Residences. 4 p.m. Elliot Common Room/ Governor's Corner Program Center.

Medieval Italian History, Univ. of Chicago: "Ubi est ille?" Franco Sacchetti in the Monte Comune of Florence, by Professor Julius Kirshner, Renaissance and. 4:15 p.m. Bldg. 200, Room 205. Free.

Solid Mechanics Seminar: "Stability of Nonlinearly Elastic Rods," with Prof. John Maddocks, Dept. of Math, Stanford. 4:15 p.m. Skilling Aud.

EE-370 Informations Systems Laboratory Seminar: "Computer Communications," by Prof. Fouad Tobagi,Stanford. 4:15 p.m. Skilling Rm. 191.

Industrial Engineering Symposium: "Facts and Values in Risk Analysis for Environmental Toxicants," with Prof. Alice Whittemore, Stanford Univ. 4:15 p.m. to 5:30 p.m. Terman Aud.

Latin American Film Series: "On Company Business," a film about the CIA's role in the third world. 7 p.m. Zapata Lounge, Stern Hall. Free.

Bechtel International Center Film Series: "Innocent Door" and "Jerusalem" (Jerusalem). 7:30 p.m. I-Center. .75 donation.

Men's Basketball: vs. Washington State. 8 p.m. Maples Pavilion. $7, $6, $5, $4, students $2.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

Spirit of Japan Lecture Series: "The Emperor's Villa and Other Gardens," by Ron Herman of U.C. Berkeley. 8:15 p.m. Annenberg Aud. Non members $5, Comm. for Art members & students $4.

FRIDAY, FEBRUARY 25

Women's Tennis: vs. University of San Diego. 1:30 p.m. Varsity Courts.

Men's Tennis: vs. West Valley College. 1:30 p.m. Varsity Courts.

Women's Softball: vs. USC. 3 p.m. Roble Field.

Mathematics Dept. Lecture: "Steady Currents in Materials with Thin Inclusions," by Dr. P. Hagan, Exxon Corp., New Jersey. 3:15 p.m. Building 380, Room 380-C.

Materials Science and Engineering Colloquium: "Recent Results in Tetrahedral Amorphous Semiconductors," by Prof. Josef Stuke, Univ. of Marburg, FRG. 3:30 p.m. Peterson Lab., Building 550, Rm. 550A.

African & Afro-American Studies: "The Harlem Renaissance," a film on this historic era of Afro-American intelligentsia. 4 p.m. Bldg. 200, Rm. 30.

Mexican Students Association and Bechtel International Center: "Reed: Insurgent Mexico". 1971 Film about radical journalist John Reed, of "Reds" fame, who before writing *Ten Days That Shook the World* joined Pancho Villa's army. 7 & 9 p.m. I-Center. Tickets on sale in advance at I-Center for $1.50.

Men's Gymnastics: vs. UC-Davis. 7:30 p.m. Maples Pavilion. $2 Adults, $1 Children.

Democratic Socialists of America West Coast Student Conference: "Plenary: Students in a Changing World," by Michael Harrington, DSA National Chairperson, and Dorothy Healey, KPFA Radio, Los Angeles. 7:30 p.m. Jordan-040. Free to Stanford affiliates.

Women's Gymnastics: vs. Arizona State/ San Jose State. 7:30 p.m. Maples Pavilion. $2 Adults, $1 Children.

STARTS Great Directors Film Series: "Diary of a Shinjuku Thief," by Japanese director, Nagisa Oshima. 8 p.m. Geology Corner, Room 320. $2.50.

Stanford Law School Film Society: "Roman Holiday". 8 p.m. Kresge Aud. $1.50.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

SATURDAY, FEBRUARY 26

Democratic Socialists of America West Coast Student Conference: Program will include Harry Britt, San Francisco Board of Supervisors; Elinor Glenn, President Emeritus, California SEIU-Los Angeles DSA. All Day, Registration at 8:30 a.m. History Corner, Room 2.

Men's Rugby: vs. Univ. of British Columbia. 1 p.m. Maloney Field.

Lively Arts at Stanford: Guitar Master Class Audition by Michael Lorimer. 1- 5 p.m. Dinkelspiel Rehearsal Hall. Open to residents of Greater Bay Area.

Women's Softball: vs. Santa Clara. 11 a.m. Roble Field.

Men's Lacrosse: vs. San Francisco Lacrosse Club. 2 p.m. Lacrosse Fields.

Men's Basketball: vs. Washington (on TV). 3:30 p.m. Maples Pavilion. $7, $6, $5, $4, $2 students.

Stanford Hillel: "Purim Madness!". Megillah reading, followed by the band "Eshkoliot" at 9:00 p.m. 7:30 p.m. Tresidder Union, Large Lounge. Reading is free, party: $2.

Music Department Concert: Stanford Symphony Orchestra. Bartok- Violin Concerto No. 2, Andor Toth, violin, Beethoven-Symphony No. 3, "Eroica". 8 p.m. Dinkelspiel Aud. $4/$2.

Drama Department: "Cyclops/Nobody's Musical", book and lyrics by Rush Rehm. 8:00 p.m. Little Theater. $4 general, $2 students & senior citizens.

Coffee House Evening Entertainment: Music featuring many of the area's favorite new & up-and-coming performers. 9-12 p.m. Coffee House. Free.

SUNDAY, FEBRUARY 27

Democratic Socialists of America West Coast Student Conference: Program includes Gus Newport, Mayor of Berkeley; and Peter Cervantes-Gautschi, Business Manager, Santa Clara County Central Labor Council. Program commences at 9:30 a.m. and continues all day. History Corner, Room 2.

Lively Arts of Stanford: Chamber Music Society of Lincoln Center. Open rehearsal. 11 a.m. to 12:30 p.m. Dinkelspiel Aud. Free.

The Lively Arts at Stanford: Chamber Music Society of Lincoln Center. Brahms: Trio for Clarinet, Cello, and Piano in A minor, Op. 114; Beethoven: Serenade No. 6 for Flute, Violin, and Viola in D Major, Op. 35; Dvorak: Quartet for Piano and Strings in E-flat Major, Op. 87. 2:30 p.m. Dinkelspiel Aud. $11.50, $10.50; students $8.50, $7.50.

ASSU Sunday Flicks: "Author,Author". 7 & 9:30 p.m. Memorial Aud. $1.50.

Music Department Concert: Stanford Wind Ensemble. John Adams: Grand Pianola Music, Will Bottje: Concerto for Trumpet, Trombone, & Winds, Holts- Mars,from the Planets, Nelhybel-Symphonic Movement. 8 p.m. Dinkelspiel Aud. $4/$2.

Young Stanford Artists Classical Series: Marianne Cleary, cello and Artis Wodehouse, piano. 8 p.m. Tresidder Union, Rm. 280. $3 general, $2 students.

Armchair Traveller Series: Showing two films, "South America" and "Colombia". 8:30 p.m. I-Center. Free.



Flutist Yvonne Kendall performs 20th-century sonatas with pianist Gloria Cheng Sunday, Feb. 20, at 8 p.m. in Dinkelspiel Auditorium. The concert is free.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

Photographs by Olivia Peterson. Coffee House/ Tresidder Union. Feb. 1 - Feb. 28.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Recent Expressionist Drawing Experiences by Barbara Scoledes. Tresidder Union, upper lobby. Feb. 1 - Feb. 28.

"Images in Bloom", by Sally Spence, watercolor paintings. I-Center. Feb. 3 - Feb. 28.

Photographs of Old Russia. The rich artistic and architectural heritage of traditional Russia, photographed by Jack Kollmann. Faculty Club. Through March.

CAMPUS REPORT

Volume XV, Number 21 | A publication for Stanford University faculty & staff | February 23, 1983



STANFORD'S WORKERS: Employees of the Palo Alto Stock Farm, predecessor to Stanford University, pose for a group portrait. An account of the farm's achievements appears on pages 11-14.

Homosexual gift offer refusal seen

Stanford probably will reject a $500 gift offer for scholarships to males who publicly identify themselves as homosexuals, President Donald Kennedy said February 17. *(Related story, page 6.)*

The University has returned a check in this amount from an anonymous donor, who is not a Stanford alumnus. The prospective donor returned it with a more extensive explanation, which is still being reviewed. This does not appear to change the basic terms of the initial offer.

Kennedy said the initial offer "has two strikes against it."

"First, it asks for a declaration of belief which is impossible to verify without an impermissable invasion of privacy.

"Second, it violates policy dating from the mid-1970s at Stanford."

In October 1976, Dean of Student Affairs James Lyons informed the Gay People's Union it would not be possible for the University to receive or administer loan or scholarship funds with a designated preference based on sexual orientation.

"Sexual orientation is a private matter and should not be used by the University as the basis for either extending or denying to students the services and benefits of the University," Lyons declared.

Kennedy noted that the recent gift offer "is not merely a proposal to give some (financial aid) to students on the basis of sexual orientation, but a proposal to restrict those funds to a student who announces a sexual orientation publicly."

In general, the University seeks the fewest possible restrictions on gift offers, so they may be used to meet the highest priority needs. It will accept student aid gifts with stated preferences for minorities, sex, or geographic origin.

It does not accept gifts with specific restrictions by race, national origin or religion.

"I'm very worried about any proposal that requires a declaration of faith on the part of an individual as a requirement—and I don't care what that declaration of faith is," Kennedy said in an interview with campus radio station KZSU tape recorded Feb. 15 for broadcast Monday, Feb. 21.

continued on page 6

Anthropologists consider report on Mosher

The Stanford Anthropology Department faculty wil meet privately at 8:30 a.m. Thursday, Feb. 24 to consider a committee report on the professional conduct of Steven W. Mosher, doctoral candidate in the department.

The committee, headed by Prof. Jane Collier, anthropology, and ineluding Profs. Joseph Greenberg, anthropology, and Thomas Grey, law, has not disclosed its recommendations.

Four news media—*Time* magazine, the *San Francisco Examiner*, the *San Jose Mercury*, and the *Peninsula Times-Tribune*—independently informed Stanford University News Service this week that they had been told the recommendation was to "expel" Mosher. One was directly informed by Mosher, who was given a copy of the committee report with a request to maintain its privacy.

Mosher has been flown to San Francisco at the University's expense and given an opportunity to respond both in writing and in person to the committee report before the department faculty.

In October, 1981, the faculty committee opened an investigation of Mosher's conduct while doing field research in the People's Republic of China in 1979-80 and publications stemming from this work.

Specifically, the committee was asked to determine the following:

* Did Steven Mosher properly protect the privacy of the community and the individuals he studied?

* Did he violate any obligation, as an anthropologist and graduate student in the department, to properly protect the standing of the discipline and its practitioners?

* Did he abuse his status as an anthropologist and a graduate student to engage in illegal activities?

In response to repeated questions from reporters, Prof. Clifford Barnett, department chairman, Tuesday, Feb. 22, released a synopsis of procedures followed in the case to date and the professional concerns involved. *(See text, page 16.)*

Mosher was paid round trip air fare from Taiwan to meet with the committee in November 1981. The great bulk of evidence was sent to him April 27, 1982.

The committee report was sent to Mosher Oct. 27, 1982. A written reply was received Feb. 16 and distributed to the department faculty.

Trustees approve concept of housing on Rural Lane

Stanford trustees have approved the concept of a 15-unit clustered residential development for senior faculty and staff overlooking the 13th hole of the University's golf course.

The four-acre site, known as Rural Lane, is southwest of the intersection of Alpine Rd. and Junipero Serra.

About half the site now lies within the City of Menlo Park. Annexation to Menlo Park will be sought for the remaining half, which is now unincorporated area within San Mateo County.

Sales prices for two and three-bedroom clustered homes are expected to range from $275,000 to $325,000, averaging about $300,000.

Two floor plans are contemplated: a one-story unit of 1,800 square feet with two bedrooms, two baths, and study; and a two-story, 2,200 square-foot unit with three bedrooms, two and a half baths, and a study.

A report to the trustees notes that "Rural Lane is intended as attractive, alternate housing for senior faculty and staff, who may presently own single-family homes on campus.

"The opportunity for golf course views and low-maintenance homes on campus lands should appeal to families whose homes now exceed their space requirements.

"The inherent premium for golf course frontage does not make this a suitable project for first-time home buyers, nor does the location lend itself. . .for families with young children."

Menlo Park is "receptive" to annexation, the report notes. If this is obtained and the project given final approval by the trustees, construction could start in mid-to-late 1983, with completion 14 to 18 months after ground breaking.

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People

David Nivison

The Stanford University Board of Trustees has confirmed the appointment of David S. Nivison—professor of Chinese, of philosophy and, by courtesy, of religious studies—as first holder of the endowed Walter Y. Evans-Wentz professorship of Oriental philosophies, religions and ethics.

Nivison was born in Maine and educated at Harvard. He has taught Chinese at Stanford since 1948 and philosophy since 1953, was curator of Far Eastern Collections in the University Libraries from 1950 to 1952, and has served twice as chairman of the Philosophy Department.

He is the author of *The Life and Thought of Chang Hsueh-ch'eng (1738-1801)* and editor of the four-volume *The Stanford Chinese Concordance Series*.

Nivison teaches a wide range of topics and periods in Chinese intellectual and religious history at both introductory and advanced levels, as well as introductory and advanced language courses in classical Chinese.

His research interests include Chinese intellectual history, especially Confucianism in the pre-Han period and the Ming and Ch'ing dynasties, and the character of the Chinese language as it affects religious and intellectual life.

Arthur Bienenstock

Prof. Arthur Bienenstock, materials science and engineering, applied physics, and SSRL, has been appointed a member of the U.S. National Committee for Crystallography (USNCCr) for a three-year term ending Dec. 31, 1985.

The Committee, part of the National Research Council, maintains liaison between the International Union of Crystallography (IUCr) and U.S. crystallographers. Its purpose is to promote the advancement of the science of crystallography in the U.S. and throughout the world.

The Committee also advises the president of the National Academy of Sciences on matters pertaining to U.S. participation in the IUCr.

Robert Freelen

Robert E. Freelen, 48, Stanford associate vice-president for public affairs, has been appointed acting vice-president, effective immediately, President Donald Kennedy announced Thursday, Feb. 17.

He will fill the vacancy created by Robert M. Rosenzweig, newly appointed president of the Association of American Universities in Washington, D.C.

Kennedy noted that Freelen "served with distinction" as acting vice-president while Rosenzweig was on leave of absence during 1980-81.

"I know Bob will continue the tradition of strong leadership of Stanford's critical efforts in government relations, public events, community affairs, and news and publications," Kennedy said. A consultative group headed by Vice Provost Gerald Lieberman, dean of research and graduate studies, is working on recommendations regarding this vice presidential search.

A former Stanford student body president, Freelen received his bachelor's degree in political science in 1957 and his MBA from Stanford in 1959. He returned to the University in 1961 as associate general secretary and director of the Stanford Annual Fund.

He was named associate dean of students in 1969, director of student services in 1970, and associate director of university relations and director of government relations in 1972. He was promoted to associate vice-president for public affairs in 1978.

He lives in Watsonville with his wife and their two children.



Robert Freelen



Anne Mellor



W. Glenn Campbell



John Schwartz

Rene Girard

A week-long conference on the work of Prof. Rene Girard of the Department of French and Italian will be held from June 11 to June 18 by the Centre Culturel International de Cerisy-la-Salle.

A group of eminent European scholars will focus on Girard's writings, including *Violence and the Sacred* and on the relationship of his work to that of Lukacs, Durkheim, Nietzsche and others. Girard will address the closing session of the conference.

W. Glenn Campbell

W. Glenn Campbell, director of the Hoover Institution at Stanford, has been appointed a member and chairman of the American Panel of the Joint Committee on Japan-U.S. Cultural and Educational Cooperation. The committee is responsible for promoting mutual understanding between the two countries.

In the appointment letter, Director of the U.S. International Communication Agency Charles Z. Wick noted that Campbell also becomes a member of the Japan-U.S. Friendship Committee which administers a $30 million trust fund for cultural activities between the two countries. The three-year appointment begins July 1, 1983.

Campbell, director of the Hoover Institution since 1960, currently serves as chairman of the Board of Regents of the University of California.

Noey Lozano

Noey Lozano has been appointed assistant dean in graduate studies and research at Stanford, with primary responsibility for recruitment of Chicano graduate students, providing academic support services, and other administrative duties.

Lozano received his bachelor's degree in psychology at UC-Santa Cruz and an M.A. in curriculum development, administration, and policy analysis at Stanford's School of Education. He is currently enrolled in the doctoral program in applied social sciences at UC-Berkeley.

For the past four years Lozano has been assistant to the dean of the graduate division at UC-Santa Cruz. His responsibilities there included management of graduate recruitment and admissions, and advising graduate students on financial aid, career planning, and study progress.

Anne Mellor

The Stanford University Board of Trustees has confirmed the appointment of Anne K. Mellor, professor of English, as first holder of the endowed Howard H. and Jessie T. Watkins University professorship in feminist studies. The term of her appointment is from Sept. 1, 1983, to Aug. 31, 1988.

A native of Albany, N.Y., Mellor was educated at Brown and Columbia. She has been a member of the Stanford faculty since 1966. Her courses—ranging from English romantic literature and art to Shakespeare, Yeats, literary theory, women writers, and feminist literary criticism—recently won her the School of Humanities and Sciences dean's award for outstanding teaching.

As chair of the new Feminist Studies Program, she developed the introductory course, "Women's Situation," and has given numerous guest lectures on feminist issues in the Western Culture, Human Biology, Structured Liberal Education, and Residential Education programs.

Her publications include *Blake's Human Form Divine*—in which she initiated a critical strategy for study of the relationship between William Blake's poetry and illustrations that has become standard in analyses of his work—and *English Romantic Irony*, widely praised for its methodological innovations and enlightening readings of major poems.

John Schwartz

University Counsel John Schwartz, 48, has been named a vice-president at Stanford, President Donald Kennedy said Thursday, Feb. 17.

The Board of Trustees approved the additional title at their February meeting.

"For the past several years of his excellent service at Stanford, John has functioned as a vice-president in all ways except in name," Kennedy said.

"The new title will permit the role of the University's Legal Office and its senior officer to be understood more precisely both inside and outside the institution.

"It will also conform Stanford's title for this position to common practice in other institutions with which we deal—including, increasingly, other universities.

"No changes in the function of the office are contemplated."

Kennedy said the proposed change was discussed with Stanford's five other vice-presidents last fall and with the faculty Advisory Board before going to the trustees.

Schwartz was named University counsel by President Richard W. Lyman in September, 1977. A graduate of Cornell (B.S., physics, 1955), Harvard (Bachelor of Laws, 1958), and Rochester (Ph.D., physics, 1965), Schwartz came to Stanford as assistant professor of physics in 1968. He served as special assistant to the President from 1970 to 1973, when he was named counsel for medical affairs. He was promoted to associate vice-president for medical affairs in 1977.

He practiced law in Phoenix, Ariz. from 1958 to 1961 and taught at the University of Rochester for three years before coming to Stanford. He was admitted to the California Bar in December, 1974.

Born June 3, 1934, in Brooklyn, N.Y., he is married and has four children.

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McBride: Public morality lowered by bad examples up top

BY DONALD STOKES

The time of reckoning has come in the handing out of taxpayers' money in the scores of programs that disburse megamillions, sometimes with very little checking, says Tom McBride.

Until November, 1982, McBride was for several years a watchdog of many of those programs, and saved huge sums of public money as inspector-general of two major government departments—Labor and Agriculture.

Now he is beginning a new career as associate dean of Stanford Law School.

In a campus interview McBride discussed the scale of corruption and fraud in the U.S., the need for those in the public eye to set a better example, and the unsung heroes of the government's investigatory agencies. Some questions and answers:

Is there a growing momentum of fraud and cheating by the American people?

"Even if the Reagan administration had not come to power, I think the legislators in Congress had begun to realize that the time of reckoning has come," said McBride.

"They had been on a spending jag for social programs in the late 1960s and '70s. Now they realize that many of the programs are not achieving all they had hoped, that some were fraught with serious mismanagement and administration problems, and that they were wrecking the national budget.

"There came a strong Congressional sentiment for tightening up. The passage of the Inspector General Act of 1978, which appointed watchdogs over major government departments, symbolized the new Congressional attitude.

"I think it transcends party lines. I have worked closely with Democrats and Republicans."

What party does McBride belong to?

"I have been a registered independent for years. I have found that on the issue of proper management of government programs, support crosses party lines."

He had sometimes been portrayed as a right-winger who was keen on "cracking down?"

"Occasionally, yes. It is easy to translate a record of securing proper management into 'cracking down,' and from there to project that I am an 'enemy' of a particular program. And of course, there are politicians who have used fraud and waste as a rallying cry to try to gut programs they don't like.

"That is what I had to guard against—to make sure that our findings about laxness in some programs were not misused in order to make political hay."

Does fraud and corruption exist at every level of American government, including local?

"I like to think it is not all that common. There are places, such as New Jersey, New York, and Reading, Penn., where I prosecuted the mayor and police chief, and other pockets round the country such as Chicago, where historically there has reputed to have been corruption. I think there is some truth in that.

"I don't think that there is necessarily less corruption in local government than in federal government. In New York City you will find more corruption at all levels than you will find in, say, Kansas City or Phoenix."

Is that due to bad government in New York City?

"I don't pretend to be a social scientist. But I cannot deny my observations and experience as a public prosecutor in the matter of corruption. It seems to me that cities which have been dominated for years by political machines, where corruption has been a way of life, and favored contractors kicked in to the party kitty in exchange for street paving contracts—such a climate endures. It's part of the culture.

"We have recently read of more scandals in Boston, for example. There is nothing new in that—there have been scandals about political corruption in Boston for decades, going back long before Mayor Curley.

"Nor is government corruption a phenomenon of the east and mid-west. Corruption of municipal officials in California, or sheriffs in Georgia, is often reported.

But I am not a pessimist about morality in our various governments. Over the years I have worked with thousands of local and federal officials, and by and large the great majority of them are honest.

"Where you find payoffs as a way of life it is not restricted to government. For a time I worked on investigations into payoffs in the garment district in New York City, and it became clear to me that in that instance there were probably more payoffs in industry than there were in government.

"It is part of the human condition that a small percentage of people will try to make a fast buck in an illegal way when the opportunity presents itself. One task of management should be to reduce those opportunities as much as possible.

"Corruption is found wherever you go. I worked overseas in India for some time, and found corruption to be rampant there. I remember that on one occasion a person had to pay off in order to be admitted to a hospital emergency room.

"In some parts of the world, including pockets in America, the perception is that with the job come the payoffs and kickbacks."

Is dishonesty and fraud by members of the public influenced by the frequent publicity about dishonesty and corruption in high places? Is the public attitude "I might as well get mine—the people up top are busy feathering their nests"?

"Yes, I think Watergate and Abscam, and publicity for expensive Congressional junketing on trips abroad, do influence the public's standards of morality. Perhaps we need to proselytize that those in public office should have a higher standard of morality.

"There are these impersonal corporate conglomerates, there are those stories about officers absconding with huge sums, reports of conflicts of interest. The motivation of the offenders may be 'They have so much—they won't miss it.' But the effect spreads to the general public.

"I have always lived a fairly simple life, and I have watched public figures who have done the same. I think it is proper that people who are in the public eye should live by ethics that can withstand public scrutiny.

"I think the examples set by Presidents Truman and Carter—irrespective of the latter's effectiveness in performance—were good from the point of view of encouraging higher standards of public morality. I am sure that Carter did not leave office a great deal richer than when he arrived, which cannot be said of many other presidents.

"I read recently that Lyndon Johnson left office richer than any president before him. He certainly did not enter office that rich.

"You cannot sustain public faith in government programs and elected officials when cases of corruption are frequent.

"I think that since Watergate and Abscam there has grown up a great deal more public skepticism. People don't believe their elected officials as much as they used to. From one point of view that is terrific—a healthy level of skepticism and disbelief is one of the best parts of a democracy."

Surely if public skepticism grows very large it encourages public dishonesty?

"Exactly. It becomes corrosive."

Was this one reason why there seems to be so little ideal of public service in America, as compared to some other countries where it is considered a prestigious calling to be a public servant, and such service is often given for lower salaries, or even for nothing? Most magistrates in Britain, for example, are unpaid, and are given great prestige and respect.

"I don't think that as strong a tradition of selfless public service has grown up in the U.S., as exists in a few countries. I know that in some countries the finest universities have historically trained the best people for the public service.

"On the other hand there are a large number of American public officials—I might even include myself—who regard public service as a high calling to which they have given their best."

Including some very great ones such as the late Robert Moses of New York City?

"And a great number of less publicized ones. There are many bureaucrats right here in California who are handling great responsibilities and achieving

continued on next page



Tom McBride saved millions for taxpayers when he was federal 'watchdog'

McBride/ continued from page 3

important results for the public, often under very frustrating conditions. The public knows too little of their efforts.

"I think one of the most unfortunate things since the Reagan administration reached power is a tendency for it to dump on the public service bureaucracy."

When public officials became corrupt, did it have anything to do with the fact that they were resentful because their salaries were lower than they would get in the open market place?

"I don't know that to be true. I take a rather simplistic view of corruption. I don't think you need to look too deeply into psychological reasons. The plain fact is that they decide they want more money, and they proceed to get it."

When McBride went after those suspected of fraud had he relied solely on computer matching or had he used detectives and other methods of detection?

"We used all the usual methods of detection, including investigators, surveillance, legal wiretapping, and—probably far more than the public realizes—a heavy reliance on expert examination of financial records of all types.

"The investigator who tends to be most successful is a sort of hybrid between the traditional detective and a fairly sophisticated tracer of complicated financial transactions.

"When I was inspector general I had two large units, one composed of investigators and the other of auditors, and I tried to cross-train as many of them as possible in both disciplines. This produced a few highly specialized detectives, but more usually it was necessary to send one from each discipline on a case.

"The work of such people is not particularly well paid, and it is not glamorous, but it can be very satisfying when it results in exposure of largescale fraud. They have the joy of the chase, and every day there is something new.

"It can also be very frustrating. After two years of hard work we prosecuted the mayor and police chief of Reading, Penn., and the judge did his best to influence the jury into voting an acquittal, but fortunately the jurors had more sense and found them guilty on all counts. Then the judge had the last laugh—he sentenced the mayor to only 30 days!"

Are there any unsung heroes who have saved the public millions of dollars?

"Oh yes, probably there should be a medal for such people. I recall one investigator who had a consummate combination of all the skills I have mentioned. He was a highly skilled detective, with a keen knowledge of human nature, and a fine accounting mind.

"He was Carmine Bellino, who was chief investigator for the Senate Permanent Investigations Committee.

"He was a key figure in the cases against Dave Beck of the Teamsters Union and against James Hoffa, and in many other big cases when I was an inspector general. I used him as an instructor, and he was something of a guru and role model for the younger investigators.

"Carmine was exceptional, but not that much more so than scores of other dedicated investigators who keep on the trail, with very little public realization of their skills."

Did fraud and excesses tend to be concentrated in poorly-run departments?

"Yes, whenever there is a combination of poor administration and the opportunity to make some fraudulent money you will find people taking advantage of it. That is why I shaped my career as I did. I started off as a prosecutor, but I tended to become more of an administrator and manager, for that is the best way to cut down mismanagement and fraud."

How can junketing by elected officials be cut down? You mentioned their bad effect on public morality.

"The best place to start is in securing proper oversight. When I was inspector general I would hear, let us say, that some department was planning to sponsor a conference in a pleasure resort. I would make it known that this was a dumb idea, and that a better place would be somewhere like Kansas City.

"I think that because there are now inspectors general supervising major departments there are more controls over flagrant abuses of public trust and money."

Who supervises Congressmen and their junkets?

"There is no inspector general for Congress, which is a self-policing body. I have seen no change in the scale of congressional junketing. At the end of every session you see the phenomena of the world trip for lame duck members of Congress."

Is there anyone who orchestrates the work of the various inspectors general, so that the efforts against fraud can be nationally organized?

"President Reagan set up a White House Council on Integrity and Efficiency which coordinates this effort against fraud and waste."

...whenever there is a combination of poor administration and the opportunity to make some fraudulent money, you will find people taking advantage of it.

—Tom McBride

It all began for McBride when he was a deck yeoman on the newly launched superliner *United States*, a job he had taken to finance his further education, after his B.A. at N.Y.U.

"The year I spent at sea coincided with the Senator Joe McCarthy era, and reading about the goings-on at the famous hearing I grew increasingly interested in public policy, government and politics," said McBride. "I also realized that my earlier plans for an academic career were not so attractive to me.

"I decided to go to Law School, as that would be the key to a wide variety of career opportunities where the buttons and levers of power could be used. I was accepted at Columbia Law School.

"I was a sort of phantom student at law school. I worked at nights on the west side piers in Manhattan as a cargo checker, and studied by day, slept when I could, and kept my fingers crossed that I would make it.

"It was a struggle to keep body and mind together, but, Saints be praised, I made it."

McBride's first job was with the District Attorney's Office for New York State. He conducted major investigations and trial work. He moved on to become, in turn, assistant counsel to the Commission on Government Operations of New York City, then a supervisory investigator in the Department of Labor, and Organized Crime trial attorney in the U.S. Department of Justice.

He first went to Washington to join an investigative group at the Department of Labor dealing with labor union racketeering. Within a matter of months Robert Kennedy became U.S. Attorney General, and a massive move against organized crime and labor racketeering began.

"In spite of his youth, Bob Kennedy became an extraordinarily effective Attorney General," said McBride. "He inspired the career attorneys in the department to do better than they had ever done before. The bottom fell out of our world with the assassination of John Kennedy, and the departure of Robert Kennedy to run for the Senate seat in New York."

McBride joined the Peace Corps, had some stirring adventures in the field, and rose to be named deputy director of the Latin America region, where he supervised the work of 5,000 volunteers in 19 countries.

He left to join the presidential campaign of Robert Kennedy, on whose assassination he found himself jobless, with a wife and three children to support. He went to work for the newly-formed Urban Coalition, while the riots were occurring in cities across America. He helped to organize local urban coalitions of social action groups consisting of business, minorities, governmental and other leaders.

In 1969 he became deputy chief counsel of the Select Committee on Crime, for the House of Representatives. His next post was with the Police Foundation, a Ford Foundation-funded group that supported innovative social and criminal justice programs.

I used to be embarrassed by the frequency with which I changed jobs. I was afraid of being considered a job-hopper, but now that I am older, I am sure glad I got all that experience."

Then came Watergate. Archibald Cox was appointed Special Prosecutor and McBride directed the largest of Cox's task forces, dealing with campaign contributions.

After the famous "Saturday night massacre," when Cox was fired by President Nixon, McBride continued to serve under Leon Jaworski. He prosecuted over 30 individuals and 20 major corporations. Among the felonies investigated were the purchase of ambassadorial appointments and illegal contributions to politicians.

This was draining work. In October 1975 he was glad to become director of the Bureau of Enforcement of the Civil Aeronautics Board. Here he managed a staff of 100 lawyers, auditors and investigators. He redirected the enforcement program toward greater emphasis on big cases, antitrust actions and consumer protection work.

He took an even bigger job in 1977 when he became inspector general of the Department of Agriculture. His oversight responsibilities covered about $40 billion of expenditures a year, and included over 300 programs, ranging from Food Stamps to the land grant university research and support programs.

On the Inauguration Day of President Reagan he was fired, along with all the other inspectors general. There was a backlash from Congress and within a few days the administration said that it intended to reappoint the better inspectors general. McBride was shifted to the Department of Labor.

As inspector general at Labor he led the President's Computer Matching Project, a key element in the administration's anti-fraud/waste program.

"By the fall of 1982 I was feeling jaded with Washington. I had put in 20 years on major jobs, and I felt the need for new horizons. So I accepted with pleasure the offer of the associate deanship of Stanford Law School."

McBride's wife, Catherine Milton, has successfully pursued her own career. She became closely involved with criminal justice work. She worked for the Commission on Campus Unrest, and has written several books, including *Women in Policing*, *Police Use of Fatal Force*, and coauthorship of *History of the American Negro*.

Her book, *Little Sisters and the Law* revealed the plight of children detained in custody, often for reasons which have nothing to do with their own actions. She drew attention to the fact that many such children were institutionalized in circumstances where, if they had been adults, nothing would be done to them.

Most recently, she was the key Senate staff person in the drafting and passage of the "Victims Assistance Act, 1982," the first major piece of federal legislation aimed at helping victims of crime.

Todd sees more interest in Russian studies among students

BY MILLICENT DILLON

After a decade and more of progressive decline in Russian studies, registration now seems to be on the upturn, says Prof. William M. Todd III of the Stanford Department of Slavic Languages and Literatures.

"Enrollment in the survey course on 19th century Russian literature has doubled this quarter from 12 to 26. The figures are admittedly small, but they are significant.

"Enrollment in the first year Russian has also gone up dramatically, from 30 last year to 50 this year.

"This increase seems to be happening around the country. We're hearing about it from people at Berkeley and Columbia as well."

The graduate program in Slavic at Stanford is thriving. Todd notes that Stanford for several years has led the country in the number of graduate students going to the Soviet Union.

"We now have six students there, one in comparative literature with a Russian specialty, two from Slavic, and three from history.

"I believe we have made such an excellent showing because of our strong research orientation."

An exciting time

Todd's own interest in Russian studies began in the late '50s when he was a junior high school student and Sputnik was launched. In high school he elected to take a unit on Russian literature. He read the works of Dostoevsky, Chekhov, Gogol, and Tolstoy, and he was "hooked."

"It was a very exciting time for Russian studies, both because of scientific advances in the Soviet Union and because of the Western discovery of such writers as Pasternak and Solzhenitsyn.

"Reading the paper as a young student growing up in New Jersey, I had the sense that Russia was everywhere and that we were entering a period of great change with respect to the Soviet Union. There seemed to be a thaw in the making.

"I was aware then, in an intuitive way, that the world of the 1950s was dominated by two great powers, America and the USSR, and the future of the world would be decided by what took place between these two powers.

"The study of Russian history and literature and politics thus seemed to me to be a very urgent thing. I remember being worried that the moment might pass and leave me without an understanding of what was going on," he says.

Demanding study

Todd received his B.A. in Russian at Dartmouth, then went on to Oxford for his second B.A. He considers the course at Dartmouth as an excellent one, but he still was not prepared when he came to Oxford for the difficulty of the work.

"The standards were very high," he recalls, "almost overwhelming. I felt for the first month that I was hanging on by my fingernails."

From Oxford Todd went on to Columbia, where he received the Ph.D. He came to Stanford directly from Columbia.

Todd took his first trip to the Soviet Union in the summer of '65 when he was 20. "I went on a summer program funded by the government. It was tremendously exciting for many reasons, for the direct contact with a culture I'd been studying so intensively, for the chance to speak the language outside of the classroom, for the chance to explore out-of-the-way parts of the country."

He has returned to Russia twice since then, for 10 months in '70 and for three months in '76.

"The last was a very dreary time.

"I had been very excited about going, but then when I was there I was uneasy with the situation, in part because contacts were more limited than they had been in 1970."

Defined by roles

The period of the 1970s was a time of increasing repression in the Soviet Union, even though it appeared to be on a "smallish" scale, with the Soviet government anxious to avoid making martyrs out of prominent dissidents, says Todd.

"It was also a time of what might be called the sociologization of Soviet culture.

"By this I mean that the Russian writers no longer perceived themselves as living in a heroic age of mass transformation, as they did in the earlier periods of Soviet history.

"To themselves they have become sociological beings. I use that term to suggest an individual who is defined by the various roles and relationships he has in subsystems in a society."

A specialist in the Russian literature of the 19th century, Todd emphasized the difference between the view of a human being in Soviet literature of the last decade and in the great works of the 19th century.

"Authors such as Gogol and Dostoevsky dealt with human beings in terms of their social relationships, too, of course. But they also confronted directly the major problems of human existence. Is there a God? Is there justice? Does life make sense?

"In those 19th century works nearly every character had to find his own individual response to these questions.

"And it was precisely these very large questions and the way the characters grappled with them that made it possible for that literature to amaze the rest of the world.

"To be sure I am not an expert on modern Soviet literature. Yet as I read it, I can see that these questions have not been addressed with equal grandeur and directness."

The sociologization of the literature reflected the stagnation and disenchantment in the society, says Todd, and may in part have accounted for the decline of interest of students in the last decade. "It has just not seemed a very interesting culture to study."

"To some of us, for a time, it seemed as though studying Russian literature was like studying the classics—great in the past, but nonexistent in the present.

"However, I no longer feel quite so pessimistic."

Looking toward the future in curricular terms, Todd would like to see a cooperative effort between his department and history and other interested departments to produce a sequence of courses on Russian culture, to include intellectual history, social history, and linguistic and literary history.



Russian literature of the 19th century amazed the world, but William Todd III isn't so sure about modern writing.

New book explores U.S.—Soviet relations in crisis era

The steady deterioration in U.S.-Soviet relations has created "dangerous instability and uncertainty," warns Prof. Alexander George of Stanford.

Winner of the 1975 Bancroft prize for his book on *Deterrence in Foreign Policy*, George is the author of a new book on *Managing U.S.-Soviet Rivalry-Problems of Crisis Prevention* (Westview Special Studies in International Relations, 415 pp., paper $11.75, cloth $30, Westview Press, Boulder, Colorado)

While both sides may be drifting toward Cold War II, "they continue to have a common interest in managing their rivalry in order to avoid war threatening crises," he declares.

Strengthening U.S. defense is "essential, given the failure of detente and the continued buildup of Soviet forces," he adds. But "strengthening military capabilities cannot substitute for a well conceived, realistically grounded foreign policy.

"The end itself—the kind of relationship with the Soviet Union that the strengthening of U.S. military posture is designed to help achieve—must be clarified."

Strengthening U.S. defense alone is "not sufficient. . .for achieving the limited objective of 'containment without confrontation' in U.S. relations with the Soviets."

During the Cold War, deterrence alone was of only limited use in preventing encroachments on U.S. interests in third areas outside the two superpowers immediate spheres of interest.

"This gap in deterrence is even greater in today's world. . .particularly in situations characterized by low-level conflict, internal instability, national liberation struggles, indirect and limited involvement by outside powers, use of proxies, etc," George notes.

Even when successful, deterrence can at best be regarded as "no more than a time buying strategy. . .it cannot compensate for a foreign policy that is confused or mistaken, or one that enjoys inadequate or unstable support from Congress and the public," he declares.

"It may well be that the Reagan Administration has not evolved any clear or fixed view. . .that its day-to-day actions are not guided by any well-defined or predetermined concept of what kind of U.S.-Soviet relationship it should strive for."

While it is "very unlikely" the two superpowers would agree to general purpose rules of engagement across the board, "specific rules contrived to limit or regulate competition in a particular area are much more feasible," he believes.

Repeated outbreaks of war between the Arab states and Israel have shown that the superpowers "must cooperate, if necessary, to bring about a timely ceasefire before (either side) is threatened with a devastating defeat."

But both superpowers have stepped up noncrisis deployments and military exercises in the Middle East, he adds.

"Specifically, the deployment of U.S. ground forces to the Sinai in 1982 as part of the multinational force lowers a longstanding norm against stationing superpower ground forces in the area during more or less normal periods. The possibility arises that the Soviets will not be far behind in seeking a way to position a limited contingent of Soviet troops in the area, possibly in Syria.

"Erosion of the firmer norm concerning Cuba is also a possibility, as the Soviets continue their arms buildup there and the Reagan Administration speaks of 'going to the source' to oppose Cuban interventionism in the Caribbean and in Latin America. . . .

"Because the present crisis presents no sense of urgency and poses no deadlines for remedial measures, each side has shifted to the other side the burden of responsibility for taking corrective action.

"Since the Soviet invasion of Afghanistan doomed whatever possibility had remained for Senate ratification of SALT II, each side has succumbed to the temptation of developing its own self-serving account—all the more dangerous because sincerely believed—of why detente eroded. . . .

"Instruments of self-justification and assertions of blame are steadily hardening, fueled by new developments, such as those in Poland.

"This inflexibility is leading inexorably to a new group of rigid mind-sets and mutually hostile images that will severely constrain efforts to halt the drift into a new version of the Cold War."

George is the Graham H. Stuart professor of international relations at Stanford. His previous works include *The Limits of Coercive Diplomacy* and *Presidential Decision-Making in Foreign Policy*.

Letters to the editor

Affirmative action assessment of progress 'misleading,' La Raza staff say

Editor, *Campus Report*:

The University Administration has in recent months created an impression within the campus community that Stanford has distinguished itself as an affirmative action employer. This has been done primarily by publication of various newspaper articles.

For example, on Oct. 7, 1982, an article entitled "Minority hiring here betters national rate" appeared in the **Stanford Daily**. The article stated that it was unrealistic to expect significant gains in affirmative action because "Now the original available group of minorities has been drained and monumental gains, as then occurred, are **impossible** (emphasis added) to achieve right now."[1] Moreover, the article pointed out that ". . . other member schools have not done as well as Stanford in affirmative action."

Recently an article appeared in the Jan. 12, 1983, issue of the **Campus Report** entitled "Substantive progress in affirmative action." As evidence of **substantive** progress it was pointed out that "There has been 'very slow but consistent growth' in the proportion of minority employees in exempt job categories (ranges C-4 through C-10). . . . "

The thrust of these articles is that, given the lack of qualified minorities available, Stanford has achieved favorable results from its affirmative action efforts. The impression, we believe, is erroneous.

Worse yet, the University's misleading assessment of its progress abets continued inaction by the administration. For, in fact, affirmative action at Stanford has suffered a further setback because it has created a false sense of achievement, thus sending the wrong signal to those who make hiring and other personnel decisions at Stanford. The reality of affirmative action at Stanford is quite different from the impression created by these articles.

First, there is no truth to the statement that there are no longer qualified minorities available to be able to achieve affirmative action gains. Since the 1960s a great number of Hispanics and other minorities have gained valuable experience qualifying them for even greater responsibilities. A critical problem is, however, that we still are not represented in higher levels of the organization.

Second, while both articles acknowledge "underutilization"[2] of minorities in management, the jargonese of affirmative action tends to blur the reality of how miserably small minority representation really is.

This viewpoint is written from an Hispanic perspective. However, it is enlightening to view the actual status of minority and women staff at Stanford by examining the following data for the period beginning January 1981 through January 1983.

Senior Management[3]

	1981		1982		1983	
	N	%	N	%	N	%
Total	21	100	21	100	23	100
Non-Min Females	1	4.7	0	0	0	0
Asians	0	0	0	0	0	0
Hispanics	0	0	0	0	0	0
Blacks	0	0	0	0	0	0

Middle Management[4]

	1981		1982		1983	
	N	%	N	%	N	%
Total	96	100	96	100	84	100
Non-Min Females	22	23	24	25	15	17.9
Asians	1	1	0	0	0	0
Hispanics	2	2	1	1	2	2.4
Blacks	4	4	5	5	3	3.6

Lower Management[5]

	1981		1982		1983	
	N	%	N	%	N	%
Total	231	100	228	100	243	100
Non-Min Females	99	42.8	97	42.5	115	47
Asians	8	3.4	8	3.5	10	4.1
Hispanics	13	5.6	14	6.1	11	4.1
Blacks	7	3	12	5.3	13	5.3

The University Affirmative Action Plan published in the Jan. 12 **Campus Report** fails to provide the perspective offered by the above data (these data were obtained from the University Affirmative Action Office).

The front-page cover article in the **Campus Report** cited the increase in exempt minorities from 13.6 percent to 16.4 percent since 1978 as the basis for claiming **substantive progress**.

Yet, while Hispanics are the fastest growing minority population in the state, the above data show that there isn't even one Hispanic in senior management, only two in middle management (no better than in 1981), and our numbers have decreased in lower management from 13 (5.6 percent) to 11 (4.1 percent).

The fact that there may be more minority exempt employees than in 1978 is largely irrelevant when you consider that they are heavily concentrated in the lower ranks and are all but absent in higher positions.

These data illustrate that for Hispanics, Blacks, Asians, and to some extent even white females there has been **regression** and not progress, substantive or otherwise. Moreover, even if "full utilization" is achieved, according to the University's "availability" statistics these figures would remain largely unchanged.

For example, the availability figure set for Hispanics in middle management is four percent, according to the University's January 1983 affirmative action availability data. This means that the hiring of only two more Hispanics would result in "full utilization." Thus, not only has the University failed to achieve "full utilization" but the availability and goal figures are established so low that its achievement would be all but meaningless.

In view of the above data La Raza Staff Association urges the University to depart from its established hiring and career mobility patterns. A good starting point would be to stop patting itself on the back, admit to the serious nature of this situation for Hispanics, other minorities and women and adopt strategies which produce meaningful affirmative action results.

La Raza Staff Association
Central Committee:
Edward Escobedo
Olivia Peterson
Hector Cuevas
Yvette Sanchez-Klemm
Personnel Policy Committee:
Conrado Hinojosa

[1]The Affirmative Action Office has stated that the article misquoted. The impression created remains, however, and a correction has not been issued.

[2]This term means that representation of a particular group is lower than their "availability." "Availability" data are a theoretical demographic estimation of the presence of a particular group in the relevant labor market.

[3]Typical classifications: President, V. P., University Officer IV.

[4]Typical classifications: Admin. Deans, Assoc. Deans-Admin., University Manager IV, Financial Manager II. (Note: These are not working titles. Typical ranges: C-9, C-10, NA-11.)

[5]Typical classifications: Asst. Dean-Admin., Asst. Provost, Univ. Manager II & III, Admin. Services Manager II & III, Administrative Asst. III. (Note: Some working titles are similar, e.g., "Asst. Dean," but are covered by different classifications not included in this category. Typical ranges included: C-6/C-9.)

Gay and Lesbian Alliance responds: there is no need to 'check' gay ID

The steering committee of the Gay and Lesbian Alliance at Stanford has responded to recent comments by Stanford President Donald Kennedy indicating that the University may turn down an offer by an anonymous donor to establish a scholarship for an openly gay student.

The group stated that its primary concern is one of equity compared to other minority groups. In a letter to Kennedy, the group suggested that the University should apply the same standards to the acceptance of scholarship funds for gay and lesbian students which it would apply to scholarship funds for other minorities.

The group expressed its concern that the University may be about to create the same type of discrepancy in its policies on gift acceptance as that which presently exists in its policies on admissions. The University states that it prohibits discrimination in admissions based on sex, race, color, national and ethnic origin, but not sexual orientation.

In an article in Thursday's *San Jose Mercury*, Kennedy is quoted as saying the proposed scholarship "requires an assertion that we couldn't possibly check without interfering in a person's privacy." The group responded that the Stanford community contains a large and ever-growing number of people who openly refer to themselves as gay or lesbian.

"They are no more difficult to identify than members of any minority group, who generally are also required to identify themselves to the University prior to being recognized as a member of the group," the letter stated.

The group asserted that there is no need for the University to "check" this self-identification. They state that discrimination *against* gay men and lesbians is usually based on knowledge of their public, and not private, behavior; scholarships can certainly be distributed on a similar basis. "If our society ever reaches the point that the stigma of being a homosexual has diminished enough that people are willing to falsely state that they are gay just to get a scholarship, such scholarship restrictions will no longer be needed."

The group expressed an interest in working with the Stanford administration to help bring in gifts which would benefit both the University and the gay community. The group stressed the importance of a clear statement of policy from the University regarding the acceptance of gifts targeted toward the gay community.

The group asserted that gays and lesbians make up a significant and increasingly well-organized portion of the University's students and alumni. The group told Kennedy it hopes that "with some encouragement from you, we can put this organizing effort to work to serve our mutual interests."

Gift rejection seen as likely

continued from page 1

The University received $77 million in gifts last year.

In 1973, the Gay People's Union at Stanford received a federal grant to fight alcoholism in the gay community. In 1974, the GPU was instrumental in obtaining a $30,000 grant to the Whitman-Radclyffe Foundation in San Francisco from the State of California for professional mental health services and research involving the bisexual and homosexual community in the Mid-peninsula.

While neither of these grants went through the University, there is no barrier to such organizational funding, according to University Counsel John Schwartz.

Eight to receive Dean's Student Service awards Wednesday

Eight students, including a trio who work together on a project, have been named recipients of six 1982-83 Dean's Student Service Awards at Stanford.

Each recipient will be presented with a bronze medallion and a personalized certificate at a dinner honoring them Wednesday, Feb. 23.

The three sharing an award are Mary Crouter, Dubois, Wyo.; Bernie Mehl, Cali, Colombia, South America; and Erin Moore, Hayama, Japan.

Other honorees are Meg Donovan, Glastonbury, Conn.; Ana Marcovich, Mexico City; Jonathan W. Siegel, New York; Thomas Wu, San Jose, Calif., and Nick Zirpolo, Palo Alto.



Erin Moore
Bernie Mehl
Mary Crouter



Meg Donovan



Thomas Wu



Nick Zirpolo



Ana Marcovich



Jonathan Siegel

Crouter, Mehl, and Moore, all senior history majors, were honored for creating a peer advising program in the History Department. As members of the History Undergraduate Student Association (HUGSA), they began the program with help from career counselor Audrey Bernfield to answer undergraduates' questions about courses, professors, the honors program, career possibilities, and how to structure a major in history.

Each works about two hours a week to "get people excited about history and the History Department."

Along with others active in HUGSA, "our motivation is to make majoring in history an integral part of students' lives so they enjoy it and get a lot out of it," the trio said.

Donovan was selected for her involvement in numerous activities including: helping organize a six-mile race that raised $600 for the Peninsula Children's Center; serving as a Big Sister in Volunteers for Youth; serving in Amnesty International; co-directing the Student Center for Innovation in Research and Education (SCIRE), which helps establish student internships; serving as a dorm resident assistant; organizing intramural sports in the dorm; and working as a student editor for *Approaching Stanford* and assisting with the sports section of the *Quad*.

She also has worked in community affairs and other capacities for the athletics department. A fifth year senior in English, Donovan has "astonishing time management skills and selfless motivation," her award notes. She's considering law school for the future, but says right now she'd "love to work for the Olympic Committee."

Marcovich Mexican by birth but of Polish and Russian descent, is studying for a master's degree in education. Interested in health and fitness education, she leads aerobic dance classes for graduate students as part of the Health Promotion Program at Cowell Student Health Center. She also choreographs routines and teaches others to lead classes.

Marcovich was cited for "making aerobic dancing as fun as it is healthful." She's interested in holistic medicine and nutrition, and may pursue study in public health at UC-Berkeley.

A graduate of Universidad Iberoamericana in Mexico City, she taught high school history for four years in Mexico before coming to Stanford with her husband, who is studying for his Ph.D.

Siegel, a sixth-year graduate student in political science, was honored for "effectively presenting graduate student concerns in so many committees, councils, and associations."

Long active in housing issues, Siegel was described as a "hard worker with a knack for asking apt questions and spotting injustice at 50 yards." He was president of the Escondido Village Council in 1978-79 and earlier served on a task force studying the Village.

He has served on the Committee on Services to Students and as student representative on several administrative search committees. Siegel earned his bachelor's degree in political science in 1977 from University of Pennsylvania. Siegel is writing his dissertation on member participation in Common Cause with assistance from a National Science Foundation grant.

Wu, a third-year senior in electrical engineering and biology, is a candidate in the honors programs in biology and the honors program in Values, Technology, and Society.

One of two tutors for undergraduates in a dorm of 250, Wu was cited for "responding to a competitive environment by sharing his knowledge and skills in many settings." He spent a year coaching students in statistical analysis for their study of diffusion of home computers recently released from the Institute for Communication Research at Stanford. He also has served as a volunteer consultant to students taking introductory computer science classes.

As survey coordinator for the Stanford chapter of Tau Beta Pi, national engineering honor society, Wu analyzed results of a survey taken to determine what constitutes good teaching in the School of Engineering. He's never taken a statistics course, but read some books on the subject.

An active swimmer, he also plays violin and piano. Wu hopes to earn a Ph.D. in engineering and an M.D., working eventually in clinical medicine and doing research in biomedical engineering.

Zirpolo was honored for his "successful service as advisor, advocate, and analyst, helping to make the campus both physically and psychologically accessible to those with disabilities."

In 1978 Zirpolo began working with architects, project managers, and others at Stanford to determine what "constitutes accessibility—not just mechanical, but also psychological and social accessibility," he said.

Currently teaching "The Disabling Society" in the Human Biology Program, he also has taught a course on "Severe Disabilities" for the Department of Family, Community, and Preventive Medicine.

A board member of the Center for the Independence of the Disabled in Belmont, he instigated a national computerized bulletin board on rehabilitation engineering design.

A native of New York, Zirpolo has resided in Palo Alto for 17 years. He expects to complete his Ph.D. in June 1984 on psycho-social aspects of physical adaptation. —**Karen Bartholomew**

Medical Center MEMO

Life and death decisions getting tougher, says Raffin

One night a depressed college sophomore raised a shotgun to her own neck and pulled the trigger. Instead of killing her, the blast destroyed her spinal column and crushed the bony vertebrae of her neck.

The extent of brain damage was unclear, but physicians were certain that her limbs were completely paralyzed and that she would never speak again. Artificial breathing machines, drugs to boost the pumping of her heart, and an artificial kidney machine were necessary to keep the young woman alive. Family members were adamant that the machines be turned off. The physicians were faced with a decision.

"The family said, 'Take my daughter off life support.' What would you do?" Dr. Tom Raffin asked the 300 laypersons gathered at Stanford University last Wednesday to hear him discuss the practical and moral issues faced each day in a hospital's intensive care unit.

"Turn the machines off," said several members of the audience, but Raffin, assistant professor and assistant chief of medicine and associate director of Stanford's 60 intensive care beds, cautioned them not to be hasty.

"She tried to commit suicide, that's true, but that's no reason to let her die," Raffin said. "If you are a physician, who are you responsible to, the family or the patient? Several hundred thousand patients a year try to commit suicide. The great majority of these take drug overdoses and must be placed on respirators. Many of these recover and then go on to live productive lives.

"You might say, 'but what about the idea that she faces such a miserable life?' Well, what about the soldiers in Vietnam who were shot in the neck and were forced to go on breathing machines? You can visit them at VA hospitals around the country. . .You can see how complicated this is," Raffin said. "These are not easy situations to deal with, but decisions have to be made."

The decisions may become tougher, Raffin said, as medical costs skyrocket. Currently, there are more than enough ICU beds in the 6,000 U.S. hospitals to care for all critically ill patients, at an average cost of $2,000 each day. But the number of beds available may soon drop.



Intensive care nurses B.J. Beames (left) and Marilyn Brett adjust the intravenous lines and monitors on a patient just back from open heart surgery.

"With the recent changes in health care legislation and the coming changes in benefits from private insurance, there will be a limit to the number of intensive care unit beds in the future," Raffin said.

"The old days of triage decisions are going to come back," he predicted. ("Triage" refers to a method of prioritizing patients for treatment in a way that maximizes the number of survivors.)

"When you have a 70-year-old and a 30-year-old who are equally critically ill and you have one bed, the 30-year-old gets the bed," Raffin said. "The 70-year-old who might be salvageable doesn't get the bed and has a greater chance of dying. Those days will be coming back, and I believe the people who will first experience the brunt of those tough decisions are the underprivileged."

Eventually though, nearly everyone will be touched by the painful choices of the intensive care unit, either personally or through a family member or friend, said the physician. With even the best health insurance paying only 80 percent of an ICU bill, several weeks or months in an intensive care unit can render even financially stable families monetarily, as well as emotionally, bankrupt.

The high costs stem from expensive life support and monitoring equipment such as respirators, artificial kidney machines, and heart and lung monitors that the critically ill patient needs to stay alive, as well as from the host of physicians, nurses and specialists who render round-the-clock health care.

If the patient can be healed and returned to a reasonable quality of life, the cost is well worth it, Raffin said. The tragedy comes for the significant percentage of all ICU patients who have essentially no quality of life and are suffering for weeks in ICUs on extraordinary life support systems.

"Cost is not the most important issue," Raffin said, "though it is important." More important is the reality that many ICU patients languish for weeks or months in a critically ill state with almost no chance to recover, while anguished families and health care teams try to guess what choices the patient would make if he could talk.

A "living will," which frees the family and physician to withdraw extraordinary means of life support once it has been determined that the patient has almost no chance of regaining "an acceptable quality of life," is an important document that everyone should sign, Raffin said.

Though "acceptable quality of life" could be different for each individual, the working definition in Stanford's four ICUs is the ability to leave the hospital, he said.

While such a will would not prevent, for example, an elderly patient from being put on a breathing machine in the emergency room, it could be used to help the family and health care team decide whether or not to withdraw artificial life support when a comatose patient is deteriorating after several weeks on a breathing machine.

Such wills can be obtained in the

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Regional NLRB overrules union's objections and certifies fall election

The regional director of the National Labor Relations Board in Oakland, Calif., has certified as final the Nov. 5-6, 1982 election in which service and maintenance employees at Stanford University Hospital rejected representation by a union.

In a Feb. 7, 1983 communication to Stanford, James Scott, the NLRB regional director, upheld the results of the election and overruled seven objections filed Nov. 10, 1982 by Local 715, Service Employees International Union, AFL-CIO (United Stanford Workers). The group sought to represent 1,150 workers at the hospital.

Approximately 90 percent of the eligible employees cast ballots, resulting in a vote of 778 against representation by Local 715, 253 in favor, with 22 ballots void or challenged.

Michael Baratz, executive secretary of Local 715, said last week the union has appealed the certification order to NLRB headquarters in Washington. The regional director's decision is final unless it is overruled by NLRB headquarters.

The regional director overruled without comment four of the objections because the union "presented no evidence in support of the allegations," he wrote.

The other three objections drew comments from Scott but were overruled in their entirety:

Concerning one objection, the regional director discussed a union charge that some employees scheduled to work on neither election day were told they could receive two hours' pay for coming in to vote. SUH did not dispute that it made such an offer and that some employees did receive that benefit.

In his comments, the regional director found "that the Employer's conduct at issue herein was in furtherance of the election process," especially since there was no evidence that the benefit was conditioned on whether the employees voted against the union.

In a second objection, the union had alleged that one of its organizers was escorted from the hospital cafeteria by hospital security guards in September 1982, when Local 715 employees at the university—not at the hospital—were on strike.

The guards allegedly observed the union organizer blocking the access of supply trucks to the Medical Center.

The regional director ruled that even if this charge could be proven, the union during a one-year campaign "enjoyed unlimited access to the employees."

He wrote that the incident would not have created an atmosphere which would alter the outcome of the election.

A third objection by the union alleged that one day, a supervisor took down some union literature from a bulletin board in the hospital. Again the regional director ruled that even if this charge could be proven, it would not have significantly interfered with the union's right to disseminate information, including posting of notices on a wide variety of other bulletin boards throughout the hospital.

He said that such a charge did not constitute "conduct which substantially interferes with the election."

No employees are represented by Local 715 at the hospital, a wholly-owned nonprofit subsidiary corporation of Stanford University.

A nonaffiliated organization, the Committee for the Recognition of Nursing Achievements (CRONA) represents about 1,250 registered nurses and is the only labor organization currently representing employees at the hospital.

At the university, a Local 715 contract covers a bargaining unit of 1,350 workers.



The chief of staff believes only physicians are qualified to make diagnostic decisions and treat patients.

M.D.s vs. 'healers': Silverman takes stand

A proposed change in California's Medical Practice Act would ultimately decrease the quality of health care if passed, said Dr. James Silverman, chief of staff at Stanford University Hospital.

Silverman reviewed the reasons for and the effects of the suggested revision that would allow a group of nonphysician practitioners to register with the state as health care providers, in the recent issue of *Stanford M.D.* The magazine is published by the Stanford Medical Alumni Association.

"The proposal would accept unorthodox and unproven therapies as having real value and classify them as health care services," said Silverman. "It would legalize quackery, and mock the present stringent controls of new drugs and new therapies."

Sponsored by the Board of Medical Quality Assurance (BMQA), the proposal calls for rewriting Section 2052 of the Medical Practice Act to allow alternative practitioners such as homeopaths, lay midwives, naturopaths, Indian shamans, and body workers to register with the state in order to treat patients. "They would be required to simply inform their clients of their training and background," Silverman explained.

The BMQA is California's regulatory agency charged with overseeing medical quality assurance, licensing, and allied health professions. It is made up of 12 physicians and seven nonphysicians.

The Medical Practice Act now states only physicians may diagnose and treat any mental or physical disorder. The change would register nonphysician practitioners, which would allow them to treat patients. "Even if they are only registering with the state, it still implies their acceptance as health care providers," Silverman commented.

"Nonphysician practitioners do fulfill a perceived need of society. The question is whether their services fall under health care, are good for sick people, and whether they should be available to replace scientifically proven treatments," Silverman said. By condoning registration of this group of practitioners, he added, "the public may be misled into thinking they are qualified to substitute for trained people (physicians) in caring for the sick."

The proposal has been a controversial issue since its inception, and legislative action on it has been delayed a number of times. Public hearings were held in January 1983 in San Francisco, and Feb. 19 in Los Angeles.

The controversy over the proposal has been presented as a battle between organized medicine and the "healers," Silverman said. Proponents feel some illnesses need not be treated by physicians, but rather nonphysicians can provide cheaper, faster care. They also feel alternative providers are necessary to make health care affordable by all segments of society.

Opponents feel physicians, because of their vast amounts of training and experience, are the only ones with the skills and confidence necessary to make diagnostic decisions.

"The belief that it is possible to have effective, less expensive, and successful health care services rendered by nonphysician practitioners seems to be based on the assumption that cheaper—albeit inferior—care is better than no care at all," Silverman said. "This assumes that nonphysicians know enough about medicine to do at least some good.

"Unfortunately," he concluded, "much alternative providers' knowledge is based on folklore, stylish fads, and other nonscientific sources. They have little, if any, knowledge of the human body or medicine."

—Shirley Kraus



Dr. Ronald Levy (left) and David Maloney are Friday's speakers.

Lecture series ends with a SMASH

"Custom-tailored antibodies for tumor diagnosis and therapy" is the topic of this week's S*M*A*S*H lecture, the last of the winter 1983 series, to be held 4:30 p.m. Friday, Feb. 25, in Fairchild Auditorium.

Speakers are Dr. Ronald Levy, associate professor of medicine, and David Maloney, fifth-year M.D./Ph.D. student. The presentation is open to all interested members of the Medical Center community, and will be followed by a TGIF gathering in the lobby.

Eat right, enjoy nutrition month

"Say Yes to Less. . .Les Fat, Less Salt, Less Sugar. . .A Health Plus" and "Juggle the Foods You Eat. . .Be Bright, Eat Right" are the themes of the 11th annual National Nutrition Time to be promoted by the American Dietetic Association (ADA) during the entire month of March.

The clinical dietetic staff of the Department of Dietetics at SUH have planned a wide range of educational activities to promote this year's theme of nutrition and fitness with patients, staff, and community.

The events will include:

- Announcements through posters, bulletin boards, National Nutrition Month (NNM) buttons, table tents in the cafeteria dining rooms, and distribution of nutrition education materials to patients and staff;
- Free Jazzercise demonstration to be held from 3:45-4:30 p.m., March 3. Patty Jones, R.D., part-time clinical dietitian and certified Jazzercise instructor will lead the physical exercise in the north cafeteria dining room (P1060). Space is limited and admission will be on a first-come, first-served basis. Participants should be dressed to get the full benefit out of the demonstration. Bring a towel.
- On Saturday, March 5, the department of dietetics will sponsor the San Jose Peninsula Dietetic Association's Trends in Nutrition 1983 symposium for health care professionals at Fairchild Auditorium. The program this year is "Marketing Your Profession in the 1980s." Fees will be charged, and early registration is recommended. For further information about the symposium, call 497-6904.
- A patient and cafeteria lunch meal special offered sometime during the month of March will promote the principles of sports nutrition.
- Clinical dietitians will present nursing grand rounds March 9, on "The Confusing World of Food and Nutrition Fads." A 56-page booklet, *Popular Diets—How they Rate*, will be available for purchase through the dietetics department. The booklet, written by dietitians of the Los Angeles District Dietetic Association, reviews and critiques 14 currently popular diets. Nursing grand rounds will be presented by Beth Douglas, R.D., Diane Madgic, R.D., Diane West, R.D., and Janet Cecchino, R.D.
- Dietitians from SUH and Children's Hospital at Stanford will participate in the Pediatric Health Fair at the Stanford Shopping Center on Saturday, March 19. Patsy Obayashi, R.D., and Lynn Adams, R.D., are coordinating the nutrition booth.

National Nutrition Month is a united effort by members of ADA to focus national attention on nutritional needs of this country. The event was proposed by the California Dietetic Association and passed by the ADA, and the initial effort began in March, 1973.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

FEBRUARY 21 through 25

Office of Postgraduate Medical Education: "Basic Science for Clinicians." To register, call 497-5594.

WEDNESDAY, FEBRUARY 23

Div. of Hematology Conference: "Bone Changes in Hematologic Disease"—Dr. Henry Jones. Noon, M208.

Depts. of Biochemistry and Chemistry Seminar: "Site-Directed Mutagenesis as a Probe of Enzyme Structure and Catalysis"—Dr. Alan Fersht (Imperial College, London). 4 p.m., Karl F. Braun Lecture Hall, S. Mudd Bldg.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Digital Radiographic Methods for Blood Vessel Imaging"—Dwight Nishimura. 4:15 p.m., McCullough 134.

Basic Science Research Colloquium: "Molecular Analysis of Genes Controlling Development of *Drosophila*"—Dr. David Hogness. 5 p.m., Fairchild Auditorium.

Progress in Medicine Lecture Series: "Who is Saved?"—second of a six-part series on Progress and Ethical Dilemmas of Intensive Care. Speaker is Dr. Myer Rosenthal. 7:30 p.m., Fairchild Auditorium. For further information, call the office of public events at 497-6389.

THURSDAY, FEBRUARY 24

Dept. of Medicine Grand Rounds: "Chronic Ambulatory Peritoneal Dialysis"—Dr. Charles Feldman. 8:30 a.m., Fairchild Auditorium.

Nursing Educational Services: Deadline for March 7 and 8 course "Interventions in Neonatal Nursing: Beyond Medical Care." The course is recommended for those caring for the long-term neonate (hospitalized for longer than one week), and focuses on the nurse's role in achieving and maintaining an optimal level of health in the newborn through interventions in nursing, physical therapy, nutritional support and social services. 8:30 a.m. till 4 p.m. each day, Tresidder Union. To register, call Carole Kidder at 497-6366.

Dept. of Biochemistry Seminar: "The dnaK Gene, Macromolecular Biosyntheses and Heat-Shock Control in *E. coli*"—Dr. Costus Georgopoulos (Univ. of Utah). Noon, M316.

FRIDAY, FEBRUARY 25

Dept. of Pediatrics Grand Rounds: "Computers in Medical Decision Making"—Dr. David Bergman (UCSF). 8 a.m., M106.

SMASH Lecture: "Custom-Tailored Antibodies for Tumor Diagnosis and Therapy"—Dr. Ronald Levy and David Maloney, fifth-year student. 4:30 p.m., Fairchild Auditorium.

FEBRUARY 26 and 27

Office of Postgraduate Medical Education: "Life in the Universe." 8 a.m. till 5 p.m. Saturday; 8 a.m. till noon Sunday, Fairchild Auditorium. To register, call 497-5594.

MONDAY, FEBRUARY 28

Dept. of Gynecology and Obstetrics REI Conference: "Spontaneous Miscarriage"—Dr. Jean Curran. 8 a.m., A336.

Nursing Educational Services: "Pediatric Critical Care, Level II." First session, 7:30 a.m. till 4:15 p.m., Faber Auditorium, Children's Hospital. Second session on Tuesday, March 1. For further information, call Carole Kidder at 497-6366.

Dept. of Pharmacology Seminar: "Solubilization and Characterization of MU and Kappa Opiate Receptors"—Dr. Suzanne Zukin (Albert Einstein College of Medicine). 4:15 p.m., R358.

SATURDAY, MARCH 5

Dept. of Dietetics: "Trends in Nutrition 1983—A Symposium on Marketing Your Profession in the '80s." This program addresses the reasons marketing is essential to the survival of health professional careers. Fees required; early registration recommended. Presented by the San Jose Peninsula Dietetic Association. 7:45 a.m. till 3:15 p.m., Fairchild Auditorium. (*See related article on National Nutrition Month activities.*)

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Hecht and Yonchenko leave Stanford to begin their own new business

Bob Hecht, coordinator of Instructional Media (IM) and the Fleischmann Learning Resource Center, and Michael Yonchenko, audio visual/television manager at IM, have resigned effective Feb. 15.

Elwood Pierce, operations manger for the School of Medicine, said a personnel search is under way for replacements for the two men but that virtually all services, including medical illustration, photography, film processing, and pamphlet production, will continue normally under appropriate unit managers.

Complete video productions, including production planning, scripting, recording and editing, will be halted or delayed until restaffing occurs, Pierce said, however video taping service will be available.

The two men left Stanford to form their own business.

Hecht began work at Stanford as a media specialist in 1970 and was promoted to his most recent post in 1976.

Yonchenko joined the deppartment as a media specialist in 1977 and remained for three years. After a one-year absence he rejoined the department as AV/TV manager.

IM's services were set up to provide comprehensive media support for the Medical Center, but its services are available to the entire university community, Pierce said.

Med faculty openings

Stanford University is an affirmative action employer and welcomes nominations of women and minority group members and applications from them.

Applications are invited from surgical pathologists with strong academic orientation for the position of assistant professor in the department of pathology at Stanford University School of Medicine.

Respondents must either be eligible for or possess California licensure and must be certified in anatomic pathology by the American Board of Pathology. Applicants must have a comprehensive knowledge of and a strong background in general surgical pathology, prior experience in research and teaching, and diagnostic expertise in renal pathology, cytopathology, and gynecologic pathology.

Duties will include teaching medical students and housestaff, diagnostic and supervisory responsibility in general surgical pathology, and participation in the diagnostic, teaching and research programs in renal pathology and gynecologic pathology. A record of prior publications is essential.

Applications should be dated no later than April 1 for an appointment to commence Sept. 1, 1983. Send curriculum vitae and the names of at least three referees to: David Korn, M.D., chairman, Department of Pathology, Stanford University Medical School, Stanford, CA 94305.

News Notes

The new post office hours are 9 a.m. to noon and 1 to 3 p.m., Monday through Friday. Located in the basement of the Hospital, the post office will now be closed during the noon hour.

* * * *

The telephone number listed on page 20 of the new Medical Center directory for the neurosurgery clinic in room R103 is incorrect, a mistake which has resulted in many misdirected calls. The correct number for the neurosurgery clinic is 497-5798. The correct number for the orthopedic clinic is still 497-5643.

* * * *

Telecommunications and the Community Relations Department have developed a new telephone sticker for all inpatient Hospital rooms. The stickers, which explain clearly the procedures for dialing in-Hospital, within the University, locally, and long-distance, are now being distributed to all nursing units.

Favorite recipes shared in book

Have you tasted Kay Zehr's persimmon pudding? Jeanne Kennedy's semi-truffled pate? Or Caroline Zlotnick's Mexican fiesta salad?

If these recipes sound especially tempting, you can find them in the newly-published *Favorite Recipes of the Friends of Nursing*. The cookbook is now for sale, for $10, in the Nursing Administration Office (C020), the Hospital gift shop, and at both Stanford bookstores (downtown and on campus).

Favorite Recipes was compiled by Jane Binger, R.N., Ed.D., and Patricia Allen Sparacino, R.N., M.S., and features family-tested recipes from around the world. Contributors include more than 300 nurses in clinical, educational, and management roles at Stanford University Hospital, Clinics, and Cowell Student Health Center, and nurse alumnae of Stanford University.

Recipes range from simple, easy-to-prepare delights like mud pie and chicken-on-Sunday, to more sophisticated specialties such as almond pear supreme and eggplant parmigiana. (*Check display soon at the Community Relations bulletin board.*)

Binger is a relief staff nurse on Orthopedics (W2A) and a lecturer in the master's program in community health administration, department of nursing, San Jose State University. Sparacino is a clinical nursing specialist in cardiovascular surgery, University of California, San Francisco. Both are charter members of Friends of Nursing and alumnae of Stanford University.

All proceeds from the sale of the cookbook will go to Friends of Nursing, a newly-founded philanthropic organization dedicated to fostering excellence in nursing at Stanford. For information about joining the group, call 497-5311.

Raffin/ continued from page 8

chaplain's office of most hospitals, said Raffin.

"I believe it's very important for people, young or old, to discuss with their family, friends, and physicians their ideas and viewpoints about being on life support equipment in an intensive care unit," Raffin said. "If there is 'almost no chance' for survival, do you want your family and friends to work with physicians in withdrawing you from external support?"

Raffin's was the first in a series of six weekly lectures at Stanford on the progress and ethical dilemmas of intensive care. Admission is free for all the "Progress in Medicine" public lectures, which begin at 7:30 p.m. on successive Wednesdays in the medical school's Sherman Fairchild Auditorium.

This evening's lecture, entitled "Who is Saved?" will be presented by Dr. Myer Rosenthal, associate professor of anesthesia, medicine and surgery, and director of the intensive care units at SUH.

For further information on the series, call the medical center's office of public events at 497-6389. —**Deborah Franklin**





Photo/Stanford University Archives

The Stanford campus today is a center for technological innovation. Prior to the founding of the University, Leland Stanford, who saw the potential of the horse to boost American productivity, used his land for biological innovation. His horse experiments yielded numerous trotting champions and a new approach to breeding on. . .

The Farm a century ago

BY KAREN BARTHOLOMEW

The roof is patched, but rain still leaks in. Windows are broken. The Victorian wood siding and the hayloft floor are rotting.

The once-grand training stable of Senator Leland Stanford's Palo Alto Stock Farm still stands, one of the few remaining remnants of a grandiose experiment in scientific breeding and training of horses that took place on what is now the campus between 1876 and 1903.

The Stanford Board of Trustees recently approved renovation of the historically significant Red Barn. Reconstruction could start as early as June, if sufficient funds become available. The Development Office is assessing fundraising possibilities.

The Palo Alto Stock Farm operated for 27 years and was at its peak between 1880 and 1891. The farm was best known for its trotting department, located on land now used for the golf course, driving range, and Governor's Corner dormitory complex. The recent extension of Campus Drive West bisects the trotting department site.

The stock farm's founder, Governor and later Senator Leland Stanford, has been viewed by some as simply a wealthy man indulging his hobby. But the stock farm was, in fact, a giant biological laboratory where he tested his progressive and controversial ideas on horse breeding and training.

It also was the site of photographic experiments he commissioned to prove his theories that a horse in motion has all four feet off the ground at one point in its gait. The experiments, conducted by Eadweard Muybridge, gave rise to the idea of moving pictures.

The stock farm never earned a profit. The Senator never expected it to. His immediate goal was to develop speed in trotters, horses that pulled sulkies—latter day chariots—in the then-popular harness races.

In the years preceding development of the automobile, Senator Stanford thought careful breeding of horses could increase their productivity, thereby boosting the U.S. economy. There were approximately 13 million horses in the country in the late 1800s.

Stanford told the New York *Spirit of the Times* that "there is a great difference in the capacity of horses to perform labor. . .some horses lasting three or four times as long in laborious service as the average. It seems to me that the majority might be bred up to the standard of the best, thus increasing the average value $100 per horse. The increased value would represent a gain of 13 hundred millions of dollars to the United States."

In 1876, Leland Stanford began acquiring the 8,800 acres first used for the stock farm and later the University.

His initial purchases were the Gordon estate and the Hoag ranch, together covering land roughly from El Camino Real to Junipero Serra Blvd. between San Francisquito Creek and the area near Galvez St. The Stanfords enlarged the house on the Gordon property, near the current Children's Hospital, for use on trips from their San Francisco home.

Several buildings on the Hoag property formed the nucleus of the trotting department, but most of the structures, including the Red Barn, were added by Stanford, probably in 1878 and 1879.

Stock farm records in the University Archives do not include dates various structures were built, nor are architects or contractors recorded.

Charles Marvin, who eventually became superintendent of the trotter farm, said in his 1890 text, *Training the Trotting Horse*, that "the track was just being built, new buildings were hardly yet planned, and there (were) only about a dozen men employed on the farm" when he began work in April 1878.

Yet only two years later the Palo Alto farm would win the first in its string of 19 world record.

While the trotting department's 37-stall training stable remains, more than 100 years after it was built, few other farm buildings were saved. A similarly styled but slightly smaller barn that housed colts was moved to the vicinity of the present-day Press Building in 1914 to house the University's team of work horses.

Near the stock farm's two large barns was a two-story carriage house with sleeping quarters upstairs and space for carriages and wagons downstairs. Numerous shed barns, several of them L-shaped, dotted the landscape.

The trotting farm had a blacksmith shop, a

continued on next page



1

Old map shows layout of the P Alto
map show locations from whic com

No. 1: Group of horses, train nd
called Red Barn) prior to 188 lan
right on his pony. Horse in fro bar

No. 2: Horses line the fence a Gov
occupied by the Governor's er d
lane still can be seen in severa es o

No. 3: Buildings of the trotti epa
dining hall, the feed mill, and barn
be seen in background. Photo hot

No. 4: Scenic view of three ke ildi
Blvd. near Campus Drive W the
barns. In the distance on the l s the
carriage house, and on right is colt

Stock farm/continued from previous page

wheelwright shop, its own feed mill, approximately 50 paddocks, eight tracks, an office building with sleeping facilities for 40 men upstairs, a dining hall, a harness shop, a superintendent's house, and a school.

At its height, the farm employed 150 workers and boarded 600 horses.

A 115-million gallon reservoir built by Stanford around 1878 or 1879, now known as Lagunita ("little lake"), supplied water to grow crops. The reservoir was then, and still is, filled by a network of flumes that divert water from nearby San Francisquito Creek. Large tanks near the dam held water for the farm.

A eucalyptus-lined road connected the trotting farm to the Stanford home near the present shopping center. Although planted by the previous owners workers dubbed it "the Governor's avenue" because Leland Stanford used it regularly. The name still holds and some of the trees still stand, although in recent years many have died of old age and stress caused by the drought of the mid-1970s.

Riding along the Governor's avenue 100 years ago, visitors could see acres of carrots, corn, barley, alfalfa, orchard, and vineyards. Another Stanford barn, converted in recent years for commercial use at the Stanford Shopping Center, was the center of a small wine production facility. Nearby, Stanford was planting an arboretum of trees which he hoped eventually would contain all species that were adapted to the area's Mediterranean climate.

In 1882 Stanford expanded his stock farm with land purchased from Peter Coutts. In the vicinity of what is now Escondido Village he built a thoroughbred department for breeding English race horses. The "running" farm was much smaller and less significant than Stanford's trotting department.

A contemporary writer who had seen the major stock farms of America reported: "It is easy to say that no two or three of them rolled into one would duplicate Palo Alto. . .Governor Stanford is easily the first (place) trotting-horse breeder in the world."



The stock farm's most famous horse, Electioneer, poses for one photographer while another captures the scene.

Three factors accounted for the trotting farm's success: Stanford's theories of breeding and training along with his financial resources, the competence of superintendent Marvin, and the consistent quality of colts sired by the prolific stallion Electioneer, mainstay of the breeding program.

At a time when many thought speed in a horse was the result of chance rather than hereditary qualities that could be cultivated, Leland Stanford advocated crossbreeding trotters with the best of English thoroughbred stock. His goal was to "engraft by degrees" the "superior qualities of the thoroughbred" without disturbing the resulting colt's trotting inclination.

Stanford also had innovative ideas for training trotters. His "Palo Alto system" included training colts as soon as they were weaned, and driving horses at full speed for short runs instead of the standard practice of longer distances at slower speeds.

The system eventually was widely accepted, but even Marvin had serious doubts about it at first: "While I was determined to do the best I could to carry out my employer's instructions, I had very little faith in the ultimate success of the experiment.

"None of the old trainers would entertain the idea," Marvin added.

Stanford also believed in "calling forth the best natural qualities of an animal by kindness and encouragement." A horse was "never touched with a whip, although it is accustomed to the crack of the lash in the air, to the shouting of the trainers and to other signals of encouragement or disapprobation," Marvin said.

The hardworking superintendent was perfectly suited to carry out Stanford's wishes. Marvin was said to be a man of quiet demeanor and few words, a thoughtful man with an educated wife and several children.

The third component of the stock farm's success, Electioneer, often was called the "world champion sire of world champions." He fathered nine of the 13 world record champions bred at Palo Alto.

Stanford purchased Electioneer for $12,000 in 1876, against the advice of friends. "They could not see what I wanted of that horse, with his heavy shoulders like a cart horse and with high hindquarters like a steer. It did look a little risky," Stanford later admitted.



In nine years at Stony Ford in New York, Electioneer had not produced any progeny of significance, so he had been largely ignored. But in 14 years at Palo Alto he sired 166 colts that could trot the mile in less than 2:30.

Stanford called Electioneer "the most prepotent sire the world has ever known," and Marvin simply said he was "the greatest of all trotting sires."

Electioneer died in August 1890 of the disease sciatica. In a series written for the *Daily Palo Alto Times* in 1925, stock farm trainer C.C. Crippen estimated that the disease cut short Electioneer's life by five years.

Electioneer's three most famous colts were Sunol, Arion, and Palo Alto.

Sunol set the world record for 2-year-olds in 1888

Palo Alto Stock Farm's trotting department. Numbers on the accompanying photos were shot.

2 and others pose in front of the training stable (now ...and Stanford Jr., who died that year, is seen at far ...barn door is the famous sire Electioneer.

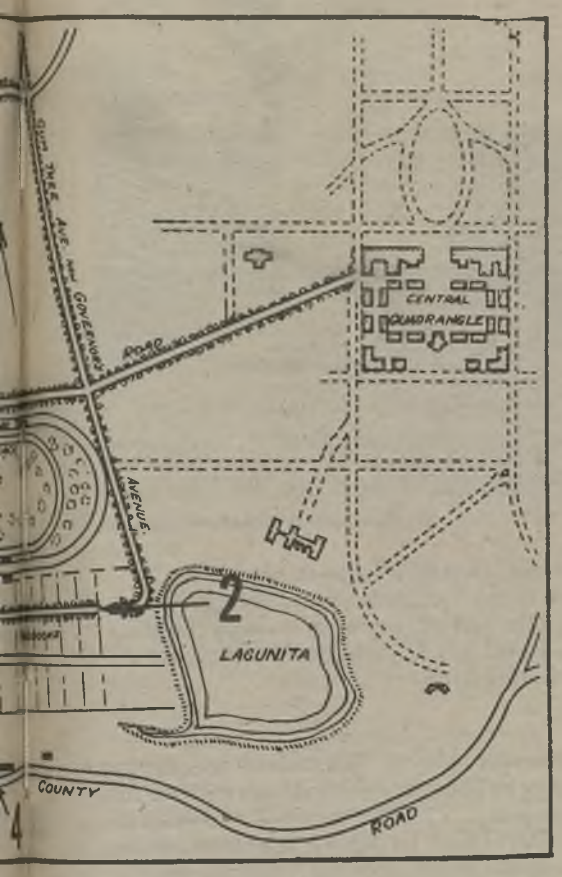
...Governor's Avenue in ahout 1895. The area now is ...r dormitory complex. Remnants of the eucalyptus ...on campus.

3 ...partment are (from left) the two-story office, the ...harness shop. Various barns and other buildings can ...shot from the curve in the mile track.

...dings taken from above current-day Junipero Serra ...the foreground is one of the large L-shaped shed ...the surviving training stable, center building is the ...colt barn.

Photos and map/Stanford University Archives





at 2:18. The following year she won for 3-year-olds, then again at 4 and at 5, when she also won the "all ages" category with a time of 2:08¼, making her the world's champion trotter and the first to hold all age records. She was sold for $41,000.

Arion sliced Sunol's record for 2-year-olds in 1891 with a new mark of 2:10¾, a remarkable record that stood for 18 years and, in fact, was surpassed only when a new, faster sulky was introduced. But the extraordinary Arion almost lost his chance to perform for the Palo Alto farm. The year before, Stanford had agreed to sell the yearling for $5,000, but the purchaser later changed his mind and the deal was called off.

According to C.C. Crippen, stock farm business manager Ariel Lathrop, Stanford's brother-in-law, tried to prevent Marvin from entering Arion in the fateful 1891 race. Returning from several months in the East the day before the race, he read in the newspapers that Arion would run at Stockton against his previous time of 2:14½. Arriving in Stockton by train just before the scheduled race, Lathrop challenged Marvin, declaring Arion's earlier time couldn't be beat and that Marvin and the colt would look like fools for trying.

The long-standing antagonism between the two men may have spurred Marvin and contributed to the outstanding victory.

Arion's fame spread quickly and many purchase offers were received. The Senator sold him for the incredible sum of $125,000. Of the earlier sale, Crippen observed: "If the man who had purchased Arion a little more than a year before for the paltry sum of $5,000, but failed to come through with the price, died of heart failure when he read of the colt's sale for 25 times the amount he was to have paid, I never heard of it. But he must have experienced a queer sensation."

A document in the University Archives indicates Arion was fitted with a special shoe to correct a foot problem. Alumnus Archie Rice, '96, in 1938 said Arion, when young, stepped "violently" on his right front foot with his left, and thereafter walked with the foot toeing out.

Extra weight was added to the inside of the shoe, Rice said. He traced in blue on one page of his letter the outline of the modified shoe Arion was said to have worn during the Stockton race.

Electioneer's third great colt was of such outstanding breeding and showed so much promise that the Senator honored him with the name Palo Alto. But tragedy was to plague the horse and cut short his life.

Palo Alto was injured in an 1888 fire that destroyed the stable in which Marvin's most prized horses were boarded. The horse might have died along with several others, but, according to Crippen, trainer Jack Phippen struck Palo Alto a hard blow with the handle of a stable fork, dazing the animal so he could lead it to safety.

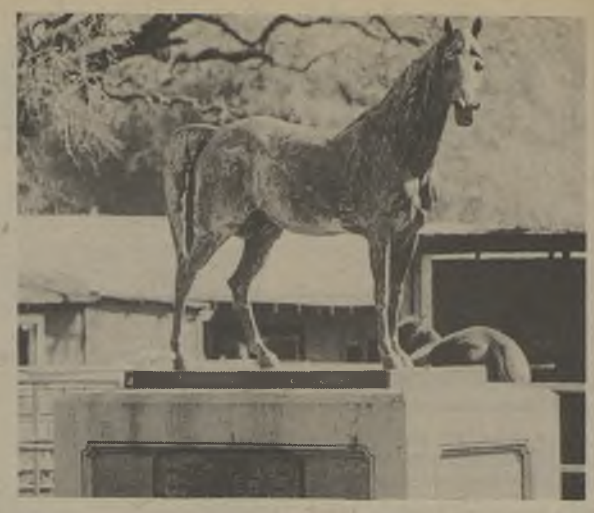
Palo Alto recovered from his burns, won all his races on the California circuit in 1889, and was defeated only once in the East during 1890.

Palo Alto's moment of glory came in November

continued on next page



Occident in harness with farm employee Yank Smith in sulky. Photo taken by Eadweard Muybridge is from University Archives. Printed from glass negative by Leo Holuh.



Horse statue (right) replaced shaft (lower right) in 1925 as "royal cemetery" marker.



Photo/Stanford University Archives

Stock farm/continued from previous page

1891 when he set the world record for stallions with a time of 2:08¾.

Palo Alto's decline began in spring of 1892 when he was boarded in a new "fire-proof" brick stable under construction. The stable's heavy brick walls and earthen floor were damp from spring rains and many of the horses, including Palo Alto, became ill.

Palo Alto succumbed to complications from pneumonia in July despite the "heroic efforts" of San Francisco's most skilled veterinarian, "who never left his patient day or night while there was life and hope," Crippen recalled. When Palo Alto died, the veterinarian "broke under the strain and wept."

According to Crippen, Palo Alto's death "cast a shadow of gloom and sadness over the entire establishment and other eyes than those of the famous doctor's were moist with sorrow.

"No worse place could have been found in which to place a horse in training than that new brick stable," he added. "That Palo Alto's life was so jeopardized was not his trainer's fault but that of those in higher authority."

Remembering the earlier fire, Senator Stanford ordered the brick structure built to protect the horses. Painted white, it still stands near the Red Barn, and is now used by the athletic department to store golf course maintenance equipment.

The fire that almost cost Palo Alto his life killed seven horses and injured others. Newspaper clippings in the Stanford family scrapbooks dramatically describe the valiant rescue efforts of farm employees led by Marvin.

In the confusion, two horses broke loose and rushed into the flames. Moments later a section of roof fell, trapping several horses. The farm's most valuable yearling, Norlaine, survived but was badly burned, according to newspaper accounts. Later articles indicate she was a victim of the fire, so it appears she died of injuries shortly after the blaze.

The loss of Marvin's 12-stall stable was estimated at $2,000, but the value of the dead horses pushed the damage estimate to $100,000. The 10 p.m. fire was believed to be of "incendiary origin."

Norlaine's death was a great loss, for "she would doubtless have won other championship honors and developed with age into one of the fastest trotters ever bred at Palo Alto," Crippen said.

Norlaine was buried beneath an oak grove in the middle of the "cool down" walking ring near the burned stable.

The site evolved into a "royal cemetery," ultimately containing the remains of 15 of the farm's most famous horses, according to Crippen. For years a white shaft marked the burial place, which became a "shrine" visited by "hundreds of trotting horse lovers every year," Crippen said.

But in February 1925 the shaft was replaced by a statue cast in France of a horse named Sherwood. Writing in the *Stanford Illustrated Review* that April, Basil L. McGann, '27, said the statue for "many years" was located at the Menlo Park estate of Timothy Hopkins. Hopkins had strong personal ties with the Stanfords and served as president of the Board of Trustees during the early years of the University. Sherwood was the name of the Hopkins estate, now the site of Menlo Park's civic center.

The original shaft was "already timeworn and was certain to be obliterated eventually," McGann wrote. Inscriptions from the shaft were engraved on the base of the Sherwood statue, which still marks the "royal cemetery" across the road from the brick barn.

The skeletons of Palo Alto, Electioneer, and Occident, the star of the horse-in-motion photo experiment, were preserved in the Stanford Museum until the 1906 earthquake. Their remains were buried in the equine cemetery.

The year the University opened—1891—was the premier year for the farm, with the Senator's trotters garnering world's records for all ages: 1-, 2-, 3-, 4-, and 5-year-olds, plus aged performers and the stallion record.

But the glory soon would fade. At the end of 1891, a month after he defied Lathrop and set the extraordinary record with Arion, Marvin resigned his position to take a similar post in Pennsylvania. Only one more record was set after his departure.

The death of Electioneer the year before had been a severe blow to the trotting farm's breeding program.

Senator Stanford, who had hoped that "long after I shall have crumbled into dust the breeding establishment founded by me at Palo Alto shall endure," died in 1893.

With its three driving forces gone, the stock farm's demise came quickly.

To help the financially ailing University, horses were sold off for a fraction of their earlier value. Electricity, for whom the Senator had refused $25,000, was sold for $2,800, as was Advertiser, for whom $150,000 had been turned down. Electioneer's colts, which previously brought thousands, sold for as little as $60.

The stock farm officially closed in 1903, but the old brood mares were allowed to live out their lives in the pastures. In 1909 the last important horses were added to the "royal cemetery," bringing the total to 15. The rest of the horses through the years were buried near San Francisquito Creek, covered now by the golf course.

On Founder's Day in 1918 students honored the horses by planting redwood trees and two rose bushes at the "royal cemetery." A message by Chancellor David Starr Jordan was read in which he asked participants to keep in mind "the horses that saved the University even as the Romans keep in mind the geese that saved their city."

Jordan overstated somewhat the financial impact of the horse sales, but he expressed accurately the students' warm feelings about the farm.

In 1885 a writer from the *Spirit of the Times* concluded that "whatever the future uses of Palo Alto, as demanded by the exigencies of the grand institution which Senator Stanford is about to found, the history of the training park cannot soon be forgotten, and there is nothing to lead to the supposition that the business of stock raising may not be continued as a superior source of income."

But neither the eloquent writer nor the Senator had forseen that a technological innovation of great impact—the automobile—would appear. The economic importance of horses quickly waned.

As the University evolved into a world-famous 20th century center for technological innovation, the Senator's world-renowned 19th century experiment in biological innovation has, but for the large Red Barn, mostly faded into the background.

The author wishes to express her appreciation to University Archivist Roxanne Nilan for her help and encouragement in the preparation of this article.

Horse exhibit set for summer

An exhibit of art work and documents from Senator Leland Stanford's various horse-related projects will be on display this summer at the Stanford Art Gallery.

"The Stanford Horse Show" will include displays about the Palo Alto Stock Farm. Featured will be the zooepraxiscope, showing horses in motion.

The zooepraxiscope projects images from rotating glass disks in rapid succession, giving the impression of motion pictures. Developed in 1879 by Eadweard Muybridge at the suggestion of Leland Stanford, it remained the only commercially demonstrated motion-picture projector in the U.S. until Thomas Edison exhibited his vitascope in 1895.

The first showing of "motion pictures" took place in autumn 1879 in Leland and Jane Stanford's Palo Alto home.

The exhibit will open June 28 and remain through mid-August, according to curator Carol Osborne.

Alphabet designer foresees type as 'dynamic composition'

Printed materials may become "dynamic compositions," where the shape of letters and words visually reinforces the content of written messages, internationally famed alphabet designer Hermann Zapf suggested at Stanford University Sunday, Feb. 20.

Creator of several of the most widely used typefaces in the world, Zapf for the first time publicly described how typographers could use computer assisted design systems to basically alter the way books look.

He has been working with Stanford computer science Prof. Donald Knuth, creator of Metafont, a schematic description of how to draw a family of type fonts—not simply the drawings of individual letters.

"We are used to hundreds of pages looking all the same in a book," Zapf said. "With Metafont we are able to get an expressive and an additional visual explanation of the words of the author.

"Such a Metafont book design looks completely different. The type area is not done as now—repeated page by page, looking monotonous and dull.

"Here we may change the line length, several times jumping from justified to unjustified lines, having different interline spacing within the running text or ending up it describes only a situation.

"We are running for our life to catch a train. The type gets slanted, even more slanted, for we are in a real hurry.

"To go further in our imagination of 'dynamic composition': the vibration on a steamboat may be demonstrated, even the break of a glass, etc."

Expressionistic approach

In the "expressionistic approach" to book design made possible by Metafont, he added, "The type size can change within the lines. Important or loud spoken words or paragraphs can be larger or heavier.

"For example, the answer of the beauty to her boyfriend whispering, will be in a relatively small and very light version of the text face, looking sweet on the printed page, like the touch of a teenager's kiss on the paper.

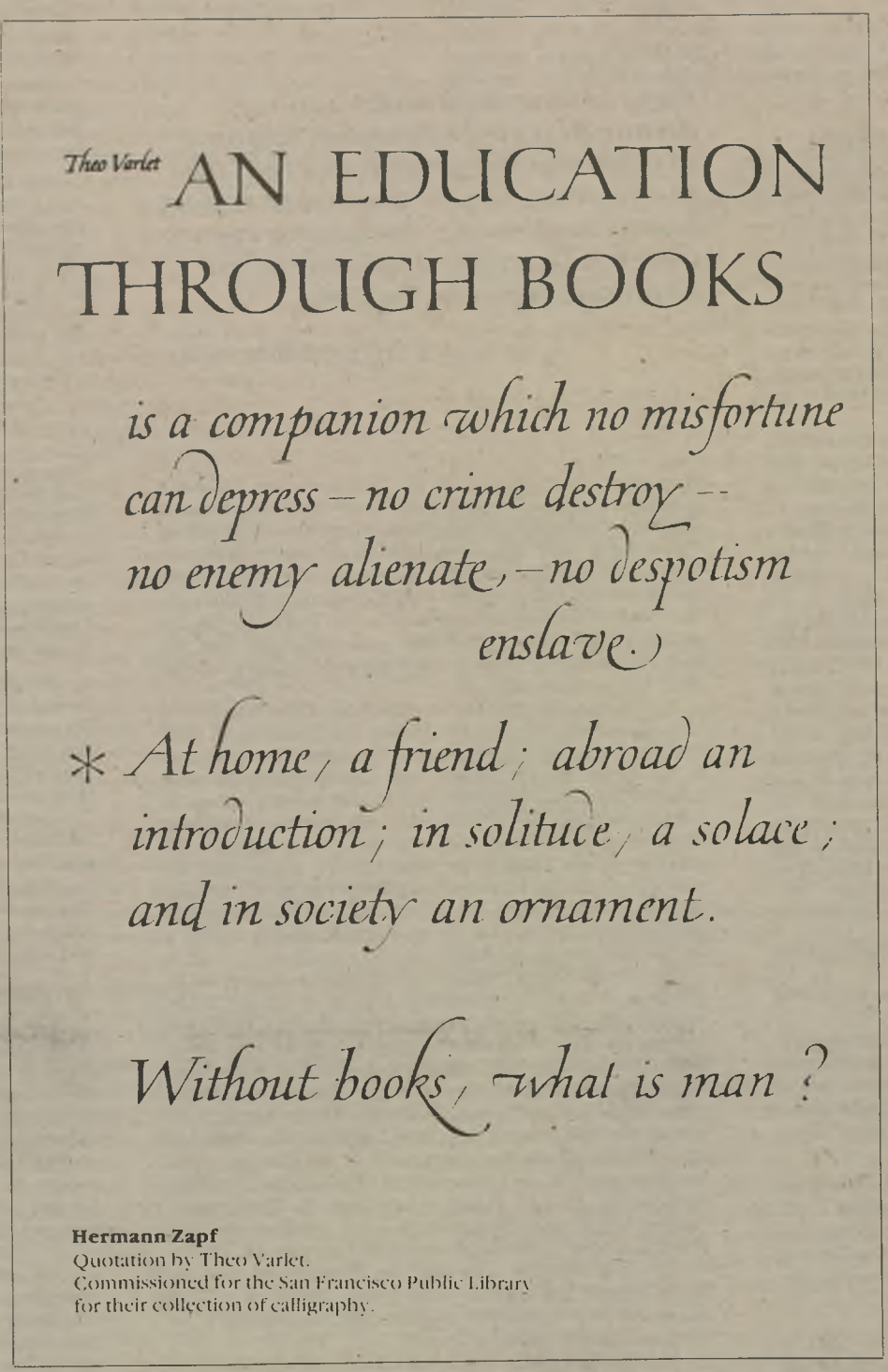
"Yes, you can visually demonstrate kissing and touching in such a kind of typography in the future: the letters are connected by minus spacing, which means contact each other really.

"Some parts of the story can be shown in a free arrangement of lines, which means that life and action run through the pages.

"Browsing through a book like this, your eye will be caught by the dynamic appearance of every page. If two or more people are involved in our story, different type faces can be used to express the different characters: bold, masculine, sweet and gentle, etc.

"The reader of such a novel would be stimulated, invited to look at the book. In our age of visual mass communication, perhaps this is the way to bring some people back to reading. . . .

"In our daily work, by doing our business correctly, we may enable intelligent people, including scientists or teachers, to continue to see in the future the difference of quality, of legibility, of adequate presentation of a properly designed text compared to poorly printed photocopies, of which millions are produced every day, which have ruined so many eyes and have undermined the interest of the reader in quality printing."



Hermann Zapf
Quotation by Theo Varlet.
Commissioned for the San Francisco Public Library for their collection of calligraphy.

Instead of fearing the future, "we will use the new possibilities," he said.

Zapf is working with Knuth and his Metafont computer-assisted design system to prepare mathematical fonts for the American Mathematical Society—a Roman, Greek and Fraktur, together with a Bold and a Script.

"Designers have fewer limitations in designing alphabets for the new systems of today," Zapf said. "Digital composition and the use of the laser beam need designs tailored especially to these electronic devices. . . .

"More and more mathematics and technical knowledge are involved in our work. . . I would not call us artists any more, creating new alphabets. I think alphabet designer is a correct term and his comrade is no longer the punch-cutter but the electronic engineer.

"If the technician finds out that he doesn't have to work along with a crazy artists, and if the designer learns a little about electronics, about the abstract world of an engineer, then this is the ideal team."

The designer today "may find poor copying of his drawings everywhere, which may make him sad for the rest of his life. He sees his children, his alphabets, manipulated in wild modifications. . . .

"Specially prepared lenses stretch, hit, bend and distort our letters in every direction. . . ."

Photocomposing machines can change the spacing between individual characters. "The letters are not separated any more," Zapf said. "They are not individual characters as they have been for 500 years. The characters now touch each other, kiss each other, and—oh my dear—sometimes they go into each other.

Sexy spacing

"One name for this funny game is 'sexy spacing.' But as always, as in sex, it is mostly overdone.

"Logical principles based on common sense and developed over centuries are ignored these days, for some people think it is old fashioned. To be modern—to be 'in,' as we say—they think every foolish idea cooked up on Madison Avenue must be followed, for the crowd is following them.

"No, please, too narrow intercharacter spacing reduces readability. . . .

"Many people are fascinated by the speed of machines (with sophisticated typographic programs). I think we should find an economic compromise whereby part of the time that is saved by the extreme speed of our composing machines is reinvested in the typographic layout—given back to the typographer."

Zapf's talk on "The Designer in the Age of Metafont: Design of the Family of Types in the Computer Age" was sponsored by the Associates of the Stanford University Libraries.

Among other typefaces, Zapf designed Optima, now used by *The Stanford Daily*, and Melior, now used by *Campus Report*, the University's weekly newspaper for faculty and staff.

Edgardo Garlit pleads innocent to grand theft charges

Edgardo Garlit, 37, financial analyst accused of embezzling $17,518 from Stanford's Center for Information Technology, pleaded innocent to four charges of grand theft in Palo Alto Municipal Court Friday, Feb. 18.

A resident of Mt. View, he remains free on $3,000 bail. A preliminary hearing is scheduled March 8.

Garlit has been placed on investigatory leave, with pay, by the University.

He was arrested by Stanford detectives Feb. 9. He allegedly submitted phony invoices for work done by a non-existent company.

According to Stanford Police Capt. Raoul Niemeyer, Garlit had "an intimate and complete knowledge" of the payment process and was able to circumvent normal checks in the system.

An accounting manager became suspicious in late December when Garlit inquired about a check to the phony firm that was held up for lack of information, according to an affadavit filed with the court. Garlit told the manager that the firm was his brother-in-law's.

Other Stanford employees later said they had seen Garlit pick up a check for the firm and submit work authorizations for the firm, according to the affidavits. The accounting manager checked the firm's name and could find no telephone listing for it. Internal auditors charged that neither the work contracts nor the firm existed.

Auditors told police that in many cases the phony work requests were issued under a blanket order set up for emergency work. Garlit is suspected of forging the signatures of Herb Fong, manager of operatons and maintenance, and Bruce Wiggins, assistant director of operations and maintenance, on some of the work orders.

According to Niemeyer, the case is still under investigation. Police are still looking for additional evidence. Until it is obtained, "we won't know if there were any accomplices or whether additional charges should be filed," he said.

Procedures, professional concerns in Mosher case given

Following is a statement by Prof. Clifford Barnett, head of the Stanford Anthropology Department concerning procedures and professional concerns in the Steven Mosher case:

I. PROCEDURES WHICH WERE FOLLOWED

1. In August 1981, allegations about mr. Mosher's professional conduct in the field were brought officially to the attention to the Chair of the Anthropology Department by two members of Mr. Mosher's Dissertation Committee.

2. Following University rules with regard to allegations of student misconduct, the Office of the President was contacted. After several meetings in September 1981 it was decided by the appropriate officials that the allegations involved professional conduct and therefore lay within the purview of the Department, rather than with the University-wide procedures to be invoked for alleged violations of the Fundamental Standard.

3. The fall session of the University had not started, but a meeting of the Anthropology Department faculty was held at the earliest possible date, September 29, 1981, to discuss the matter. The faculty voted unanimously to establish an Ad Hoc Committee of Investigation to inquire into the allegations which related to professional conduct. The Committee was charged to contact all appropriate parties, including mr. Mosher, and make a report to the faculty on their findings and any recommendations for action. The Chair of the Department was charged with appointing the memers of the Committee. The faculty agreed, however, that in order to avoid any possibility of conflict of interest, no member of the Committee should be a China specialist. Further, the faculty agreed that in the interest of further assuring objectivity, at least one member of the committee should be chosen from outside of the Department. In order to protect Mr. Mosher's interests, the faculty agreed that he should receive a full copy of the report and be given appropriate time to respond to the report in writing, before the faculty would meet to consider the findings and recommendations of the Committee.

4. The charge to the Committee read in part as follows:

"Specifically, the Committee is asked to determine the following:

1. Did Steven Mosher properly protect the privacy of the community and the individuals he studied?

2. Did he violate any obligation, as an anthropologist and graduate student in this department, to properly protect the standing of the discipline and its practitioners?

3. Did he abuse his status as an anthropologist and a graduate student in this department to engage in illegal activities?

The faculty members appointed to serve on the Committee were: Professor Jane F. Collier (anthropology), Chair of the Committee; Professor Joseph Greenberg (anthropology); and Professor Thomas Grey (law). The Chair of the Department sent Mr. Mosher a copy of the charge to the Committee and notified him of the membership of the Committee.

5. The Committee first met on October 12, 1981 to discuss procedures and the relevant people to be contacted. The Committee decided that no material or statement would be considered as evidence unless it could be shown to Mr. Mosher and he could be made aware of its source.

6. In correspondence with the Committee, Mr. Mosher indicated his willingness to meet with the Committee and the Department paid Mr. Mosher's round trip air fare from Taiwan for him to meet with the Committee in November 1981. During his meetings with the Committee, it was agreed with Mr. Mosher that the Committee would send him all of their accumulated evidence so that he could respond to it before the Committee wrote their final report.

7. The great bulk of the evidence assembled by the Committee and considered pertinent to the allegations in the charge to the Committee were sent to Mr. Mosher on April 27, 1982 along with questions the Committee requested he respond to. Three supplementary items were sent to him after that date. Mr. Mosher was given a deadline by which to respond to the evidence and questions that were sent to him. Several extensions of the deadline were made in the hope that Mr. Mosher would respond. The last deadline given was October 1, 1982. When advised of the last deadline, mr. Mosher responded that the deadline was "absurd" because the Committee had already "reached its conclusions and begun drafting its final report." He demanded that the report be sent and he would respond to it when it arrived. The Committee then proceeded to draft its report.

The report was submitted to the Chair of the Department on October 27, 1982 and on the same date it was sent to Mr. Mosher. The letter of transmittal requested that Mr. Mosher respond by December 8, 1982, at which time his response would be distributed to the faculty along with the report of the Ad Hoc Committee. Mr. Mosher also was advised that he had the right to appear personally before the faculty and that his round-trip coach fare (Taiwan-San Francisco) would be paid by the University. Mr. Mosher's response was sent by him to the Vice-Provost and Dean of Graduate Studies and Research and was received by him on December 2, 1982. In his response, Mr. Mosher stated that: he would not be prepared for such a meeting until at least the end of February; and he would present his response to the faculty when he arrived back in the United States. He requested 30 days of per diem and demanded that the faculty meeting be "open to the press and to whomever else that I choose to invite."

Field research in anthropology. . . demands a clear demonstration to others in the profession that (the researcher) can be trusted to report events accurately, including events which involve the behavior of the anthropologist in the field.

—Clifford Barnett

8. In response to his letter, the Chair of the Department of Anthropology advised Mr. Mosher on december 7, 1982 that given the fact the evidence in the report had been sent to him seven months earlier, and that he had been most insistent on avoiding further delays, the meeting would be held on January 13, 1983. He also was told that three days of per diem would be provided for him. With regard to the meeting of the faculty, he was advised again that the meeting would be closed, since as he had noted himself, some of the materials in the Report of the Ad Hoc Committee involved innocent parties. He was urged again to submit a written response to the Report.

9. Mr. Mosher's response to this letter was received by the Dean of Graduate Studies on December 23, 1982. Mr. Mosher reduced his per diem request to 15 days, continued to demand that the meeting be open to all, but also stated explicitly that he would come to a meeting if it was held during the last half of February. Mr. Mosher was sent a cable by the Dean of Graduate Studies for the Department stating that the meeting date had been reset for February 24, 1983. Mr. Mosher was advised that the meeting would be closed and that no additional per diem support would be forthcoming. He was asked to telephone the Department, "collect" to arrange transportation. Mr. Mosher also was urged to submit a written statement by February 15, 1983.

10. Mr. Mosher informed the Department that he would attend the meeting and would submit a written statement. The statement was received on February 16, 1983 and distributed to the faculty.

11. Finally, we report on the status of Mr. Mosher, as a student, during the course of the investigation. At the time the Ad Hoc Committee was established by vote of the Department Faculty on September 28, 1981, Mr. Mosher was a student in good standing, registered as a terminal graduate student in absentia. He was writing his dissertation on research he did on Taiwan, and was residing on Taiwan. He was receiving a stipend from the University and he continued to receive a stipend during the academic year, September 1, 1981-June 30, 1982.

Immediately after the Department voted to establish the Ad Hoc Committee, two of the three faculty members of Mr. Mosher's Dissertation Committee resigned. He was assisted by the Chair of the Department in obtaining two new members of the Committee, all suggested by Mr. Mosher. One new member was from the Department and the other was from outside of the Department. Mr. Mosher indicated his satisfaction with the Committee and stated he would proceed to complete a draft of his dissertation and submit it to his Committee.

In April 1982, without forewarning his Dissertation Committee, Mr. Mosher submitted a dissertation draft dealing not with Taiwan, but with the research he had carried out in the People's Republic of China. Nevertheless, Mr. Mosher received comments on the dissertation from the members of the Committee. One of the Departmental members of the Committee also notified Mr. Mosher that since he had changed not only the area but the topic of his dissertation to one for which the faculty member was not a specialist, he was resigning from the Committee. Mr. Mosher withdrew the dissertation draft on the People's Republic of China, but also dismissed the second Departmental faculty member from the Committee.

In the course of these events the Department learned that Mr. Mosher was eligible for dissertation write-up support from the Social Science Research Council, (which had sponsored his reseach on Taiwan), if the Chair of his Dissertation Committee would support a request for funds for him to complete writing his dissertation while on Taiwan. Eligibility for these outside funds automatically made Mr. Mosher ineligible for the University funds he had been receiving. His funding was temporarily stopped and then resumed (retroactively) to complete the academic year.

Mr. Mosher was advised by the Chair of the Department that it would be in his best interests to rapidly reconstitute a Dissertation Committee so that he could obtain funds and complete work on his Dissertation. Mr. Mosher responded by stating that he would not accept any Committee which had a member of the Department as a member, since all departmental faculty were biased against him and would not give his dissertation a fair reading. The Chair of the Department responded that since the degree would be awarded through the Department, at least one member of the Committee must be a member of the Department. In order to assist Mr. Mosher in constituting a Committee, since he was on Taiwan, the Chair found an appropriate Departmental faculty member to serve and also learned that the faculty member who had been dismissed from the Committee by Mr. Mosher was still willing to serve and provide an objective reading of the dissertation when it was submitted. These members were suggested to Mr. Mosher at the same time he was advised that he was free to add or substitute other suitable members (from outside the Department or University) so long as one Departmental faculty person was included on the Committee.

Mr. Mosher restated his position that he would not accept any Departmental faculty person on his Committee. He requested the Dean of the Graduate Division to overrule the Chair. The Dean of the Graduate Division advised Mr. Mosher that he would not accept a Dissertation Committee that varied from the University rules without the support of the Department. Lacking the support of the Department, he would be willing to formally consider Mr. Mosher's request and any evidence he had that he could not get a fair reading, if Mr. Mosher filed a formal grievance with the Dean of the School of Humanities and Sciences. Mr. Mosher chose not to file a grievance and he thus has remained without a Dissertation Committee.

II. CONSIDERATIONS SPECIFIC TO ANTHROPOLOGY

Field research in anthropology heavily involves the anthropologist in responsibility for the welfare of those he is studying and demands a clear demonstration to others in the profession that he or she can be trusted to report events accurately, including events which involve the behavior of the anthropologist in the field.

The reasons for this professional imperative for sensitivity to others, prudent judgment and unquestioned honesty are inherent in the nature of the anthropological research process.

1. Anthropological research most often involves a solitary researcher rather than a research team. In anthropology it is difficult for other researchers to go to the "laboratory" and replicate the findings of another researcher. Since replication of results is so difficult, special demands are placed upon the professional anthropologist to be open and honest in accounting to others in the profession about his behavior in the field.

2. Anthropologists often study populations which have relatively little power in their national units and often are at the mercy of officials and others who have power over them. The study populations often have little realization of the uses that can be made of information collected by anthropologists. Some of those uses, unfortunately, can work against the interests of those who have supplied information to the anthropologists. Therefore, anthropologists have a special responsibility not only to protect the confidentiality of those who provide information to them, but to consider and attempt to anticipate the repercussions for their study populations of the content and form of their disseminated research findings.

3. Anthropologists are responsible for protecting the good name and standing of the discipline. This is a functional necessity, since the standing of the discipline determines the ability of anthropologists to get access to the populations they wish to study. One of the ways anthropologists can protect the name of the discipline is to abstain from engaging in activities while in the field that are judged to be "illegal" in the areas in which they work.

4. Points 2 and 3 are more than simple admonitions. They involve the making of very complex decisions demanding considerable judgment. In some situations, actions judged "illegal" by a national government may not be perceived as "illegal" by the study population and may even be necessary to protect the interests of the study population. Similarly, unconsidered action taken by the anthropologist after leaving the field to further the welfare of the study population may foreclose the opportunity of other researchers to carry out research in the same area, and might harm the populations the anthropologist would like to assist. Sound judgment and fully considered action are thus, requisite for the professional.

Hall, Rabushka say flat tax would boost personal income 9% in 7 years

Prompt adoption of a 19 percent flat rate tax would boost real incomes of Americans by an average of nine percent in the next seven years, two Stanford economists estimate.

Robert E. Hall and Alvin Rabushka, senior fellows at the Hoover Institution, put the flat tax on the national political agenda with a column published in the *Wall Street Journal* Dec. 10, 1981.

They flesh out their basic idea and respond to its critics in a new McGraw-Hill book, *Low Tax, Simple Tax, Flat Tax* (137 pp, $9.95 paper, $18.95 cloth).

Urging that the reform be adopted "cold turkey," they concede that it may raise taxes by three to five percent of income among those with taxable incomes up to $21,000. But faster economic growth triggered by the flat tax will quickly make up this loss.

Tax income once

All income should be taxed only once, at the same low rate, on a form simple enough to fit on a post card, they declare. The poorest families should pay no tax, and lower income families should pay a smaller fraction of their income in tax than those who earn more.

To achieve this result, only those earning above a personal allowance would be taxed. They recommend an allowance of $7,700 for a family of four in 1982, increasing with the cost of living in subsequent years.

Four-fifths of the population could then simply fill out a post card for their federal taxes. At present, taxpayers spend $9 to $10 billion preparing and verifying their taxes. In 1977, the Treasury Department estimated the time spent on tax forms at about three hours for every man, woman and child in the country.

Besides cutting paperwork, Hall and Rabushka note, the flat tax "increases incentives to work, save and invest. . . . It lowers interest rates immediately. It balances the federal budget in a few short years. It creates new jobs and raises living standards. It supports the values of honesty and integrity of the American people."

The Internal Revenue Service currently estimates tax evasion at more than $87 billion annually and projects the loss at $120 billion by 1985. These figures do not include unreported income from drugs, prostitution, and gambling, which represent an annual tax loss of an additional $10 billion.

Eliminate deductions

Their proposed flat tax would eliminate all deductions, exclusions, credits and other "loopholes," insuring that all millionaires paid a fixed percentage of their income in taxes.

"A flat tax would discourage underground economic activity, cheating and shelters. It could provide more—not less—revenue to sustain government spending on social programs," they declare. A 19 percent flat rate could balance the federal budget by 1985.

In 1979, half of all gross income was taxed at marginal rates of 28 percent or higher. A uniform flat rate of 19 percent would dramatically improve incentives for almost everyone who is economically active, they argue.

MIT economist Jerry Hausman has projected an increase of 8 percent in total hours of work in the U.S. economy for a flat rate tax plan similar to the Hall-Rabushka proposal. This would be equivalent to about three hours a week, with some people taking second jobs, while others worked longer per week.

Such a change would boost U.S. production of goods and services about 6 percent, or almost $200 billion—nearly $1,000 per person.

"Dramatically improved" entrepreneurial incentives could add at least 3 percent more to this gain over the next seven years, Hall and Rabushka believe. "By 1990, it means each American will have an income about $1,400 higher in 1982 dollars as a consequence of tax reform. This economic dividend is more than enough to offset most of the adverse immediate effects of tax reform."

The simple tax would pull down interest rates immediately, they note. "There are good reasons to think interest rates would fall by about 4 percentage points—say from 16 to 12 percent for mortgages.

But the tax deductibility of mortgage interest payments would be eliminated. This would especially hurt those who took large, fixed-interest mortgages in the late 1970s at rates around 12 percent.

While tax reform would not stimulate the housing market, its total impact on housing prices probably would be small. The stimulus from lower interest rates would be offset by the loss of deductions for interest payments on mortgages.

Decline in giving

The tax deductibility of charitable contributions also would be eliminated. The immediate effect of a flat tax probably would be a small decline in giving, followed by a recovery as the economy improves. They estimate the decline at 10 percent, at most.

In 1979, Hall and Rabushka note, total contributions from individuals and corporations to charitable causes in cash and voluntary work was about $94 billion, of which only $24 billion was deducted on tax returns.

"We can confidently expect the continuation of $70 billion in contributions being made today without any special tax benefits," they add.

"Further, the bulk of contributions is made today by people in modest tax brackets—less than $7 billion in contributions was deducted in 1979 by families with taxable incomes over $35,000.

"Churches have nothing to fear from tax reform and, like most people and institutions, would have much to gain from better economic conditions brought about by reform.

"Institutions serving the absolute economic and social elite—universities, symphonies, opera companies, ballets, museums—are protesting the loudest.

"No compelling case has ever been made that these worthy undertakings should be financed by anybody but their customers. A glance at the crowd in any of them will tell you it is perverse to tax the typical American in order to subsidize the elite institutions. But granting tax deductions for gifts is precisely such a subsidy.

"Tax reform will be a tremendous boon to the economic elite from the start. Removal of tax deductions from their favorite cultural activities is a reasonable price to pay. With substantially higher after-tax incomes among their customers as well as donors, the universities and other institutions will make up part or perhaps all of the ground they will lose when tax deductions disappear."

Under the Hall-Rabushka flat tax of 19 percent, families with incomes around $130,000 would receive tax breaks of about 7 percent of income. Those with incomes around $700,000 would get 10 percent and the handful with incomes approaching $2 million would get 13 percent.

The flat tax also would eliminate personal and corporate deductions for depreciation. But it would allow a 100 percent first-year writeoff for new investment. The burden of this change would fall mainly on business firms now in the doldrums, with low current investment and large backlogs of capital depreciation.

Lower business tax

Taxes on business income would be lowered from the current 46 percent rate for corporations and up to 50 percent for unincorporated businesses to a low, standard charge of 19 percent. It would permit unlimited carryforward of tax losses, effectively reducing the tax burden on young, innovative, rapidly growing firms, like Apple Computer, and raising taxes on established, high-ranking firms, like Exxon.

"Our plan is a tax on consumption," they explain. "Money invested in the economy is not taxed; thus investment is encouraged. Money withdrawn and consumed is taxed. . . .

"We think our package of low tax rates and improved incentives for businesses more than offsets the loss of deductibility of excise and property taxes, preferential treatment for corporate pensions, taxation of fringes, and the loss of interest deductions."

Hall and Rabushka note that "our colleague and friend, Milton Friedman (senior fellow at Hoover and Nobel laureate in economics) started the flat tax movement more than 30 years ago. . . .

"Now public support for a flat-tax reform collectively exceeds all of the individual sentiments to preserve one or more tax breaks added together. 1982 marked the first year in modern history that members of the Democratic Party opened and led the drive for tax reform to improve incentives. . . .

"Intellectuals and liberal politicians have always said that high marginal tax rates were inherent in any progressive (tax) system. But the dismal performance of the economy since 1975 has jolted their thinking—even Joe Pechman of the Brookings Institution favors lowering all marginal rates.

"There is even a growing consensus that graduated rates are not essential to progressivity. It would have been nearly impossible just two or three years ago to gain endorsement of the flat tax from such people as Ralph Nader. With the turning of the intellectual tide, we expect the political tide to turn as well."

Biographical background

Hall is a professor of economics at Stanford and director of the National Bureau of Economic Research's program on economic fluctuations. He is the head of the NBER Committee on Business Cycle Dating, which maintains the semi-official chronology of the U.S. business cycle. He recently edited an NBER volume on "Inflation: Causes and Effects." A Palo Alto native, he was educated and taught at both Berkeley and MIT before joining the Stanford faculty in 1978.

Rabushka holds three degrees from Washington University, St. Louis, and taught at the Universities of Rochester and Hong Kong before joining the Hoover Institution in 1976.

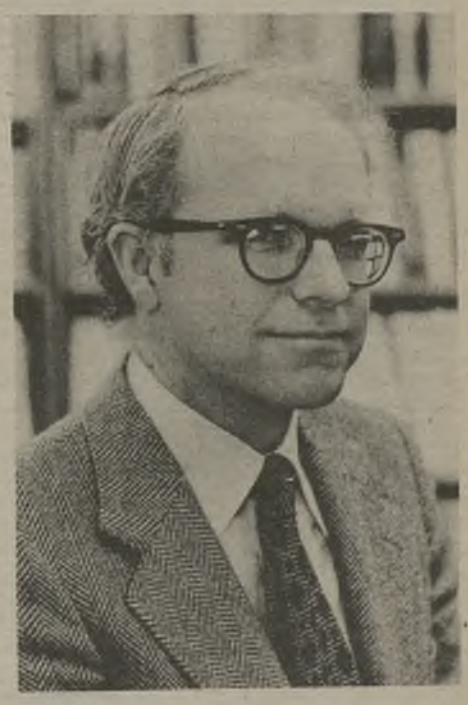
Coeditor of "The United States in the 1980s," the Hoover Institution's most extensive project, his most recent work is "The Tax Revolt," a study of Prop. 13 and the national tax limitation movement, published last year.

By 1990, each American will have an income about $1400 higher in 1982 dollars as a consequence of tax reform.

—Robert Hall, Alvin Rabushka



Alvin Rabushka



Robert E. Hall

Kennedy responds to Menlo Park concerns on Stanford West: housing 'critical'

Following is a Feb. 8 letter from President Donald Kennedy to Menlo Park's Mayor Pro Tem Peg Gunn, on the Stanford West housing project:

Thank you for coming to us last week to present so clearly and forcefully Menlo Park's position on the proposed Stanford West housing project—and for your warm letter of Feb. 1. We have always known (and have tried to consider) the concerns about the project on the part of our neighbors across San Francisquito Creek. You, Mr. Bedwell, and Mr. Pirofalo set out those concerns exceedingly well.

You left with me a letter detailing the points you made. I want to assure you that we will give them careful consideration as we work toward a final plan. All of the impacts that you noted, the total costs of the various mitigations that have been suggested, and the basic economics of the project itself, are causing us to look carefully before we leap.

I hope you will share several of our responses with your colleagues on the City Council, and with other Menlo Park residents. The first is that had Stanford agreed years ago to limit the size of a project on the 46 acres to 800 units, we would abide by that agreement.

It is probable that the figure was mentioned by Menlo Park representatives during the Sand Hill Road Improvement Project discussions, but the memories of those who were there from Stanford—and the written record—show that the only agreements were that Stanford would consult with Menlo Park when housing was to be built, and that a 90-foot set-back from the Creek would be established. We **have** consulted with you, and the 90-foot set-back has been accepted.

The consultation consisted of four, voluntary, open planning process meetings preceding the design of the project, joint meetings with the Menlo Park and Palo Alto staffs, and meetings of the EIR consultants and our staff with our Council, Planning Commission, and Transportation Committee. As a result, the housing proposed for the 46 acres is 20 percent less dense than the zoning allows; smaller units have been placed near the creek; noise and light-generating activities are located toward the center of the project; and additional landscaping has been proposed along the green buffer zone. Those measures may not go as far as Menlo Park would like, but they surely supply evidence that we were listening.

Your letter also suggested that Stanford and Palo Alto are doing something to Menlo Park that they would not do themselves. That's not quite right. The Lytton Gardens housing in Palo Alto consists of 100 units on one acre near residential areas. The Peter Coutts Hill housing project on our campus consists of buildings larger than those at Stanford West nearest Menlo Park, and closer to our faculty homes than Stanford West would be to houses in your city.

Our new student housing project across from the Searsville Road faculty subdivision will house some 800 students. Some 3,500 Stanford students live in Escondido Village, across a street from a Palo Alto residential area. The Pearce Mitchell condominiums were built on a former school site near single-family homes.

Most of those developments are not as large as Stanford West, to be sure, but they do suggest that we have been willing (as have many other places) to build multifamily units near areas in which single family residences predominate.

As we discussed at our meeting, Stanford does not have a standard density of 11 units per acre for housing elsewhere on its lands. We have exceeded that density in the past, and probably will do so again, given the severe shortage of housing in this area.

The question often asked is: Why not elsewhere? Why this site, so close to Menlo Park? The answer is that the 46 acres are ideally suited for general housing. The land is flat, it has utility lines in place, it is within a city, it is close to the main campus, it is zoned for housing—and we have been strongly encouraged over the years to build there.

In fact, Santa Clara County policy calls for the development of general housing within cities, and **not** in unincorporated areas. Finally, from a planning point of view, we believe that it makes much more sense to hold our central campus lands for educational facilities and faculty and student housing, and to use peripheral areas for staff and public units.

I think a word also is in order regarding the strong pressures—internal and external—that have come to bear on Stanford in recent years. The need for housing has become critical in our efforts to recruit and retain a front-rank faculty.

At the same time, study after study by off-campus groups have urged the University to build more housing, and to develop it at higher densities on in-fill sites near existing services, so as to reduce commute traffic and the jobs/housing imbalance. In fact, we have been told that we are socially irresponsible for **not** building such housing.

It is my hope that the impacts from Stanford West may not be as great as you fear, any more than the Oak Creek Apartments adversely affect Menlo Park as a whole. The project EIR shows that the main traffic flow will be toward the campus, and that it can be alleviated or facilitated by various measures.

The purpose of this long recital is to let you and your colleagues know that Stanford has not acted hastily, nor insensitively, nor without strong reasons and encouragement, in proposing Stanford West. I also want you to know that we will be giving even further attention to what you have reported to us. We value our long and friendly history with Menlo Park, and would like to retain that friendship in the future.

Sincerely yours,
Donald Kennedy
President

Hastorf, Hinchliffe outline practices on access to prospective donors

Following is a memorandum to vice-presidents, deans of schools, department chairs, and directors from Provost Albert H. Hastorf and Acting Vice-President Bruce Hinchliffe concerning access to prospective donors.

Hastorf notes that it is the first of a series of papers on principles of fundraising at Stanford—principles which need to be reviewed and reaffirmed from time to time in order to insure that we conduct our business with donors in such a way as to maximize gift utility and hence, benefit to the University.

The memoranda to be issued soon will deal with the establishment of fundraising support groups and with a system of assigning priorities to fundraising objectives.

Organized fundraising at Stanford has been guided by a set of tacit understandings with respect to the relationships between the schools, departments, institutes, and other entities on the one hand, and the Offices of the President, the Provost, and the Vice-President for Development on the other.

These principles have served the University well. The effectiveness of its fundraising program in terms of dollars raised, purposes served, and the careful manner in which gift solicitations are planned and carried out, speaks for itself. We have benefited from the experience of other institutions by incorporating their best features into our program and avoiding pitfalls that have for some, at least, proved troublesome.

It is a good system, but it is fragile, and its integrity must be guarded. Thus, while we want to keep rule-writing to a minimum, we think the time has arrived at Stanford when tacit principles must be translated into written guidelines. The reasons have to do with the growing complexity of the University, and the fact that many of us, including several development officers, are relatively new in our jobs.

The basic principle we wish to affirm is that gift procurement at Stanford is centrally guided. While the schools, departments, institutes, and other entities have needs for gift support, their fundraising activities are conducted in a spirit of collaboration with the other parts of the University, and are consistent with the objectives and priorities of the University. Those activities are therefore guided by an office with University-wide responsibilities, that of the Vice-President for Development.

In operational terms, this means that all prospective donors rated as having the capacity to make gift commitments of $25,000 or more are reviewed periodically by the Office of Development, at its initiative, to determine whether they are appropriately matched with respect to field or fields of interest, and—equally important, with respect to the University's priority needs. In this way, access will be determined. While some donors are now considered to be prospects for only one school, and are likely to remain so, scheduled review has the salutary effect of ensuring that gift income is maximized in line with University priorities. Schools and other entities may also request an **ad hoc** review of the current assignment of an individual donor or a group of donors. All solicitations are to be cleared by appropriate development staff.

Prospects rated as having the capacity to make gift commitments of $1 million and over are a special group. Although the principles enunciated above also apply to them, there is a variation in how they are treated. These prospects are of such transcendent importance to Stanford that they are regarded as University prospects.

All approaches to them are approved by, and planned in close consultation with, the central Office of Development. Where there is disagreement between the Office of Development and a school, institute or other entity as to the appropriate course to be followed with respect to a prospective donor rated at $1 million capacity or greater, the Development Office shall refer the matter to the Provost for adjudication.

In setting forth these guidelines, we would like to underscore their relationship to the University's priority objectives for fundraising, the establishment of which are the responsibility of the Provost and his staff. These represent a continuing, and at times changing, statement of the University's most important objectives, and it is implicit that those judged to be our highest priorities deserve the greatest attention from the Development staff—both centrally and the schools.

It follows that all strategies for obtaining gifts from such significant prospects be formulated with special attention to University priority needs. In the near future, a new set of guidelines will be issued on the system of setting priorities and the allocation of fundraising effort to them.

What is said above, we emphasize, is neither basically new nor different. It is a restatement—and to an extent a refinement—of what has been generally accepted policy and practice.

What makes this memorandum necessary is that there have been recent instances which made it clear that the policy is not universally understood. Stanford's success in fundraising, just as in its academic program, has been built on commonly shared ambitions for the entire University; we believe the observance of these policies is consistent with that spirit.

Heath and safety report

Accidents and Injuries Occurring Feb. 14-18

Type of Accident or Injury	Number of Incidents	Days Lost
Animal contact	1	(0)
Contact with object:		
Impact with object	1	(0)
Cut by sharp object	3	(0, 0, 0)
Pinched, squeezed, crushed	1	(0)
Fall from height (incl. stairs)	2	(9, 0)
Foreign body (i.e. in eye)	1	(0)
Lifting improperly	2	(0, +4)
Overexertion	1	(0)
Other	1	(0)

I-Center program on Swedish outlook

"Where is Sweden Heading? A Post Election Discussion of the Political/Economic Situation in Sweden Under the Newly Elected Government" is the title of the Tuesday Luncheon/Lecture at Bechtel International Center at noon March 1.

The two speakers will be Gunnar Heckscher, former ambassador and former leader of the conservative party in Sweden; and Berndt Ahlqvist, chief editor of a provincial newspaper in Sweden specializing in economics. The program is cosponsored by the New York and San Francisco offices of the Swedish Information Service.

This is the last Tuesday Luncheon/Lecture for winter quarter. The programs will resume on April 5. Luncheon tickets are available at a cost of $2.50 one week before the event at the I-Center office or at the door as they last. Brown baggers are also welcome at no charge.

For more information about this or other programs call 497-1831 or stop by the I-Center to see what's happening.

University to honor general academic advisers Wednesday

Faculty and staff members who have served five years or more as general academic advisers will be honored at a reception hosted by the School of Humanities and Sciences at 5 p.m. Wednesday, Feb. 23, at the Stanford Museum.

President Donald Kennedy will present 17 advisers who have served 11 years or more with certificates naming them "master adviser" and copies of the book, *Stanford: From the Foothills to the Bay*. Copies of the same book will be given to 78 advisers with five to 10 years service.

This event is the first broad public recognition of academic advisers at Stanford.

Every year, about 375 faculty and staff members serve as general academic advisers to freshmen and sophomores who have not declared a major.

Those advising freshmen, about 275 in all, are assigned six to 10 students from the same residence and become part of its advising team.

Responsibility for coordinating the general advising program has been shifted to the School of Humanities and Sciences this year as part of an administrative reorganization of undergraduate education at the University.

Associate Dean Carolyn Lougee oversees academic advising with support from the Academic Information Center. She and Provost Al Hastorf are scheduled to speak at the reception.

Those honored and their departments are:

Five to Ten Years

David Abernethy, political science; Mary Lou Allen, engineering; David Barnett, materials science; Dan Bershader, aero and astro; Mason Blacher, development; Richard Britt, surgery; Richard Brody, political science; George Brown, English; Phyllis Brown, freshman seminar program; Kevin Callaghan; Sally Cole, dean of student's office; Christos Constantinou, surgery; Anne Coxon, academic information center; Kenneth Creighton, controller; Doug Davis, freshman seminar program; Carroll G. Diaz, APER;

Albert Dien, Asian languages; George Duca, Hoover Institution; Franklin Ebaugh, medicine; Arlee Ellis, political science; C.W. Francis Everitt, Hansen Labs; Joel Ferziger, mechanical engineering; Jean Fetter, graduate division; Michael Fogel, medicine; James Gibbs, anthropology; Donald Goffinet, radiology; Thomas Gragg, psychiatry; Tatiana M. Granoff, academic information center; Alan Grundmann, Jasper Ridge Biological Preserve; Robert Hamerton-Kelly, Memorial Church; Glen Haydon, pathology and materials science; Jean Helliwell, APER; Robert Houghton, registrar's office; E. Barrie Hughes, Hansen Labs; Madelyn Hunt, engineering; Paul Johnson, Graduate School of Business; Robert Kessler, surgery;

Carolyn Lougee, history; Elizabeth Lucchesi, Law School; Linda J. Marks, development; William H. Marshall, Jr., radiology; David M. Mason, chemical engineering; David Maurice, surgery; Marsh McCall, classics; James McClenahan, Cowell Student Health Center; I. Ross McDougall, radiology; Robert McGinn, industrial engineering; Dwight Miller, art; Monica Moore, humanities special programs; Thomas Moser, English; Mary Munter, Graduate School of Business; Richard Muth, economics; Herbert Nanney, music; Anne Peck, Food Research Institute; Richard Placone, radiology; John Planting, music; Robert Polhemus, English; Helen Quinn, SLAC; Theresa Marie Rhyne, CIT; David Riggs, English;

Channing Robertson, chemical engineering; Norm Robinson, residential education; Paul Robinson, history; Richard Schupbach, Slavic languages; Carlton E. Schwerdt, medical microbiology; Alan Schwettman, physics; Laura Selznick, undergraduate specials; Richard Shevell, aero and astro; Wendy Smith, Memorial Church; Pamela L. Strathairn, APER and education; Mary Sunseri, mathematics; John Thomas, biology; Robert Wagoner, physics; Ward Watt, biological sciences; David Wellbery, German studies; Douglass J. Wilde, mechanical engineering; Don Woodward, biological sciences; Karl Pribram, psychiatry.

Eleven Years or More

Troy Barbee, materials science; John Bunnell, undergraduate admissions; Bernard Cohen, sociology; John Goheen, Ombudsman; G. Robert Hamrdla, president's office; David Haskin, chemistry; Robert Helliwell, electrical engineering; Marvin A. Karasek, dermatology; Jon Kosek, pathology; Sally Mahoney, registrar; Leonard Ortolano, civil engineering; Henry "Hank" Parker, civil engineering; Antony Raubitschek, classics; Ruth Schneider, career planning and placement center; Peter Sylvester, development; Evelyn Thomas, freshman seminar program; Larry Thomas, education.

Sloss to participate in seminar on security in an insecure world

Leon Sloss, former assistant director of the U.S. Arms Control and Disarmament Agency, has been added to the program of the Great Powers Seminar on "Security in an Insecure World" to be held at Stanford February 26 and 27.

Currently president of the Stanford Alumni Association and head of his own consulting firm in Washington, D.C., Sloss will speak on "The Role of Nuclear Weapons in International Politics."

Sloss, who has a number of years of service with the Department of State, largely with the Bureau of Political-Military Affairs, has also been a vice-president of the Stanford Research Institute stationed in Washington. A specialist on strategic arms, he served as acting chief of the Arms Control and Disarmament Agency and directed a 1977 National Targeting Policy Review on nuclear warfare.

The faculty for the seminar, sponsored jointly by the Stanford Alumni Association and the Stanford Arms Control and Disarmament Program, includes a number of Stanford professors and Stanford Linear Accelerator Center officials affiliated with the Stanford program. Also scheduled to lecture is William G. Hyland, senior associate at the Carnegie Endowment for International Peace. Prof. John Lewis, political science, is seminar chairman.

The seminar, which will be held in the Terman Engineering Center Auditorium, will run from 8:30 a.m. to 4:30 p.m. on both days.

Saturday evening there will be a showing of the film *The Day After Trinity*, the story of the Alamagordo project to build the atom bomb.

The program is open to the public. For further information, contact the Continuing Education staff of the Stanford Alumni Association, 497-2021.



THIS IS DANCE WEEK AT STANFORD, with events every day through Saturday. A panel will discuss "Topics in Performance: Dance and the Other Arts" at 4:15 p.m. today (Wednesday) in the Tresidder large lounge. Performances will be given tonight at Burbank, Thursday, Friday, and Saturday in the Roble Dance Studio. Above are Jancy Limpert and Jean Massicotte.

Henry Kaiser to play guitar

Undergraduate Special No. 31 is pleased to present experimental guitarist Henry Kaiser in an evening of solo improvisations at 8 p.m. Saturday, March 5, in Stanford's Skilling Auditorium.

The Oakland-based Kaiser has appeared on over 30 records and has performed with notable avant-gardists such as Fred Frith, the Rova Saxophone Quartet, Greg Goodman, Evan Parker, and is currently working with vocalist Diamanda Galas.

He was recently proclaimed "the most innovative and important guitarist in the country" in the Los Angeles *Herald Examiner*. Although his music is highly creative and challenging, Kaiser remains one of the most eloquent and accessible experimental musicians working today.

The concert is sponsored by Stanford's Undergraduate Special Course No. 31, entitled "Experimental and Avante-Garde Rock, 1965-Present."

Tickets at $4 each are available at Chimaera Records, 405 Kipling (at Lytton) in downtown Palo Alto.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

36484-JB (JCC:2128) Accountant II: Applying standard acctg concepts, practices, & techniques in analyzing, modifying, monitoring, & maintaining the Accts payable sys as we continue the conversion fr a manual to a computerized sys; working closely w/ all accts payable staff on campus to establish & document Accts Payable policy & procedure; write operational & training manuals; work closely w/ Procurement & Genl Acctg to contribute Accts payable knowl to future major sys development such as PRESS & the Core Acctg sys; respon for update of Univ Guide w/ current payment policy, etc; Bachelor's degree in Acctg or a related field; 3 yrs of professional acctg exp; EDP exp in Acctg or Finance area; prev Accts Payable exp or on-line & batch sys processing exp; ability to write policy & document procedure; excel oral & written commu skills.; C06; $1854-2312.

42477-VW (JCC:2048) ADMIN SERVICES MGR IV: Associate Dir is expected to represent the Executive Dir on committees w/ members of FPP Executive Committee, the FPP/Clinics Executive Board, & in negotiations w/ Hospital & Univ offcs as well as reps in external community; acts for the Executive Dir in his absence; full respon in the long range planning for FPP & clinics, legislative analysis, develop't & implementation of market strategies, establishing & monitoring work standards & procedures for all FPP & clinic operations; QUALIFICATIONS: strong analytical & statistical skills;.ability to interpret health care trends, gov't regulations, & demographic informa; demonstrated skill & prior exp in formulating operating plans, writing reports & making verbal presentations of complex mat'ls; prev exp and/or training in all aspects of mgmt at a senior level; ability to negotiate w/ a variety of constituencies, etc.; C09; $2972-3642.

33719-LL (JCC:2160) ACCOUNTANT II: Direction & mgmt of activities of Payment ID & application staff; coord activities of payment application unit w/ those of other depts w/in FPP & Med Ctr; coord w/ Hosp. counterpart on payment ID & transfer problems relating to accts common to both FPP & Hosp.; coord payment application activities w/ FPP genl acctg to ensure that payments received & processed are in balance w/ genl acctg records; recommends & implements cash ID policies & procedures w/in FPP; develops & maintains a control of credit balances & refunds generated by FPP; QUALIFICATIONS: bachelor's degree preferred but not nec; 3-5 yrs supvry exp nec; good knowl of acct principles & practice is required; good knowl of cash acctg controls & procedures as they relate to Univ acct practices; ability to function in a highly complex & dynamic environ; prior exp in either a hosp or physician group practice setting is desirable.; C06; $1854-2312.

33720-LL (JCC:2168) ACCOUNTANT III: Assure timely response to all patient's inquiries; consults w/ physicians & clinic staff to resolve patient issues; maintain accurate & timely patient acctg informa using detailed data sys; respon for develop't of written procedures for Patient Relations in coord w/ other units & divisions; interpretations & application of admin policies; attend mtgs; makes independent mgmt decisions & participates in mgmt decisions affecting FPP, etc; QUALIFICATIONS: broad working knowl of physician billing & must have a basic understanding of mgmt & supvn as they relate to a prof'l practice offc setting; analytical & problem solving skills; ability to work & commu w/ people both w/in & outside the areas of respon; knowl of basic business functions incl acctg, data processing sys & med terminology; must have maturity in dealing w/ public, sr. executives & med staff.; C07; $2113-2724.

26093-VW (JCC:3062/3062) Assoc Staff Counsel: Staff Attorney will prov legal support principally in the health care area; advising SU Hospital, SU Sch'l of Medicine, & SU Clinics; areas of emphasis will be in practicing before those State & Federal regulatory agencies respon for health care, working w/ issues arising fr third party reimbursement (such as Medicare & Medicaid), med staff issues, contracts, & patient care issues such as informed consent; exp in one or more of these areas is desirable; expected to work w/ increasing independence as fast as indiv develop't will permit; QUALIFICATIONS: demonstrated interest in health law; ability to draft complex legal documents; commu effectively, orally & in writing; ability to analyze complex legal problems & to engage in legal research; LL.B. or J.D. degree; membership in Calif Bar or willingness & ability to become a member at first opportunity.; C09/C10; EN/OPEN.

16282-LL (JCC:5588) LIFE SCI RES ASST I: 9-6; Research Assistant to do bacterial transformation, agarose gel electrophores, rapid & large-scale plasmid preps, Southern blots, microbial tech for purifying, characterizing, & maintaining bacterial strains, microbial genetics, DNA cloning, performance of mutagenesis, & radioisotope handling; respon for modifications of protocols if nec; analyze & interpret results of experiments & make independent decisions; QUALIFICATIONS: BS in Biochemistry or equiv exp; extensive exp (at least several yrs) w/ above tech.; C05; $1670-2086.

33354-TC (JCC:5588) LIFE SCI RES ASST I: Respon for developing HRP staining tech for studies in animal central nervous sys; respon for setting up lab for EM perfusion tech & sectioning nervous tissue using a Vibratome; performing histological stains on a variety of brain tissues & must have a thorough knowl of spec neurohistological stains; respon for screening mat'l & giving an Initial interpretation of the histological mat'l; QUALIFICATIONS: BS/BA degree in biological sciences or equiv exp; min 2 yrs of exp in histological work, preferably neurohistology; thorough knowl of all aspects of histology (incl a theoretical understanding of stains & how they work): embedding (paraffin), frozen section tech, a knowl of routine & spec neurohistological stains (Retic, HVG, Trichrome, Creysl Violet-IfB); knowl of HRP tech & EM perfusion tech would be an advantage.; C05; $1670-2086.

30044-AW (JCC:7578) PROJECT MANAGER III: Respon for completing assigned facilities projs w/in budget, on schedule & mtg the program requirements, given the financial constraints established by Univ; program requirements incl not only needs defined by using dept but sys requirements to meet those needs such as HVAC, mechanical, electrical, energy, maintenance, aesthetic, etc; respon for reporting progress on all aspects of the proj; liaison between dept & all others involved in the proj; has sufficient authority for making proj mgmt decisions, etc; QUALIFICATIONS: BA/BS or equiv of edu & exp required; MBA or executive course in business mgmt desirable; skills in planning, scheduling, cost control, contract admin, organizational behavior helpful; strong leadership w/ the capability of exercising authority to get job done; excel interpersonal skills w/ proven success in proj mgmt.; C08; $2464-3139.

Nonexempt

27092-PM (JCC:1755) LIBRARY SPEC II: 50%; lib support in East European Collection of Hoover Institution; pre-selection of new Soviet publications for Deputy Curator's approval; bibliographic searching in acquisitions files & card catalog for items to be purchased; maintenance of corresp & records for exchanges of mat'ls w/ numerous libs in Eastern Europe & Soviet Union; organization & listing of duplicate & out-of-scope mat'ls prior to exchange or sale; filing & updating current orders; QUALIFICATIONS: typ 40+; good reading knowl of Russian lang; working knowl of one or more other East European langs; familiarity w/ an academic lib; ability to do some light typing; send appl/resume to Joseph D. Dwyer, Hoover Institution Stanford, CA 94305, 497-2066.; B12; $655-687.

32577-BP (JCC:2210) ACCOUNTING ASST III: Review documents (salary reqs, check requests, expense reports, etc) for allowability & applicability according to Univ, Gov't & non-Gov't policy; prep contracts & billing as required; answer dept inquiries concerning expenditures; correct expenditure statements to various cost centers; prov guidance & assistance to offc asstants when unusual acctg matters occur; various acct reconciliations; QUALIFICATIONS: 2-3 yrs exp, training or equiv education; requires a thorough knowl of basic acctg procidures as well as ability to use calculator; maturity & judgmental ability required in applying policies; send appl/resume to Kenneth Cummins, 30 Encina Hall.; B14; $1440-1514.

11057-PM (JCC:2554) SECRETARY II: Academic Affairs Sec; set up & maintain all undergrad & grad student academic files, grad admission files, & alumni files; handling corresp, transcripts, study lists, gradeslips, supplimentary grad report cards, & all petitions & applications required by Registrar & Dean of Grad Studies; produce copy for COURSES & DEGRESS, & typ qrterly Time Schedules; originate and/or typ routine memos & letters; serv as receptionist in Dept'l Offc & share respon for answering Dept telephones, as well as sorting mail; QUALIFICATIONS: typ 50; substantial exp in genl offc work; some exp w/ computer text-editing essential; ability to set constantly changing work priorities using high level judgment & discretion; ability to interact effectively w/ diverse group of faculty, students, staff & the public; send appl/resume to Betty Kaplan, Dept. of Communication, Bldg. 120.; B11; $1246-1310.

29539-BP (JCC:2554) SECRETARY II: Prov sec'l serv for 2 staff members of Med Develop't Offcs respon for fundraising, donor relations, & research; typ corresp w/ high level of accuracy & appearance; draft routine corresp; arrange appts & group mtgs; maintain calendar & tickler file; prep various Univ forms; prep letters on word processing eqpt; hand address envelopes, name tags, etc; code & retrieve computer informa; check monthly budget statements; read & sort mail; QUALIFICATIONS: typ 60; detail oriented; excel spelling, grammar, & punctuation skills; good typist, neat & legible handwriting; willingness to Interchange job assignments; commu effectively by telephone; self-motivated; send appl/resume to Liz Trujillo, Office of Development, 301 Encina Hall.; B11; $1246-1310.

33721-PM (JCC:2672) MED SERV ASST III: 7:45-4:30; respon for identification of remittances to patient's accts; involves batching remittance, balancing batches, entering batches on acct & correcting errors; accuracy is a must; other related duties & spec projs as assigned; QUALIFICATIONS: typ 35-40; high sch'l degree; clerical & terminal work exp nec; dependable, reliable; have analytical & problem solving skills; work well under pressure & time-limits; contact: Patti Barber, 328-5461.; B11; $1246-1310.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, March 1, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Bargaining Unit

17850-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 50%; anesthetizing dogs & mice for irradiation procedures; giving total lymphoid irradiation to mice w/ 250 KV X-ray machine; prep of solutions & supplies for multiple automated sample harvester; sterile reagent & equipment preparation; mouse & rat spleen cell prepartion; plaque-forming cell assays; QUALIFICATIONS: licensed Animal Health Tech w/ min of 6 mos lab exp; able to work some wkends; willing to work in early evening (5-7pm) 2-4 times wkly.; A18; $ 7.50.

22523-TC (JCC:7082) STOREKEEPER II: TMS Unit; maintain Biochemistry storeroom; order & inventory all stock items; fill in for purchasing assistant when absent; receive, process & distribute all goods received; handle & store stock items requiring special treatment; maintain eqpt records; perform dept'l duties as assigned; QUALIFICATIONS: bkground in biology desirable; good organizational skills; typ 40-60; good physical condition to lift & store large, heavy items; non-smoker preferred.; A22; $ 8.25.

Ph.D. oral exams

MONDAY, FEBRUARY 28

Ellen K. Eliason, food research, "A Stock Adjustment Model of Contraceptive Use in the Philippines," 11 a.m., Food Research 214. **Lauro T. G. Fortes,** engineering-economic systems, "Quality-Differentiated Products, Consumer's Uncertainty and Incentives to Innovation," 2:15 p.m., 332 Terman. **Alan Irwin Murray,** business, "Determinants and Consequences of Differences in the Composition of Top Management Groups," 1:45 p.m., GSB 272.

TUESDAY, MARCH 1

Laszlo T. Juhos, physiology, "Activation and Regulation of Collagen Metabolism of Fibroblasts," 2:15 p.m., Physiology Library.

WEDNESDAY, MARCH 2

John J. Monaco, Jr., medical microbiology, "Major Histocompatibility Complex Linked and Unlinked Antigens of Murine Macrophages," 1:15 p.m., M114 Medical Center. **Ralph Dale Samuelson,** engineering-economic systems and economics, "Regulation and Efficiency in a Public Utility; the Economics of the Natural Gas Pipeline and Distribution Industry," 2:30 p.m., Terman 332.

THURSDAY, MARCH 3

Agatha Dillard Haun, Japanese and Slavic languages & literatures, "Ooka Shohei's *Furyoki* (*Prisoner of War Memoirs*): Translation and Commentary," 2:15 p.m., Bldg. 250, Room 252A. **Terry Dean Jones,** geophysics, "Wave Propagation in Porous Rock and Models for Crustal Structure," 2:15 p.m., Mitchell 350.

FRIDAY, MARCH 4

David Gutierrez, history, "Immigration Policy and the Chicano Community, 1930-1970," Room 230, History Corner. **Steven J. McNall,** pharmacology, "Characterization of a Serotonin Receptor Coupled to Adenylate Cyclase in the Liver Fluke, *Fasciola hepatica*," 10 a.m., Pharmacology Library, R-358. **Paul Veitch Preckel,** operations research, "Intertemporal Equilibrium Models: Development and Results," 2:15 p.m., Terman 202. **Eunice Mary Schroeder,** music, "The Term *Mensura* as Used in Theoretical Treatises from 1400-1540," 2:15 p.m., Knoll 300.

Dinkelspiel wheelchair lift sought

Stanford is applying to the Occupational Safety and Health Standards Board for a variance to install a Garaventa incline wheelchair lift on one of the two stairs that serve the Dinkelspiel Auditorium stage.

This lift will be for handicapped use. The mechanism is installed to one side of the stairway. The chair is partially encumbered when the lift platform is down and in use.

Any party wanting information regarding the hearing or wishing to speak at the hearing can request permission to do so by writing to the:

Occupational Safety and Health Standards Board
1006 Fourth Street, Third Floor
Sacramento, California 95814

Democratic Socialists consider "Reviving the Left" Feb 25-27 at Stanford

"Reviving the Left" will be the theme of the first Democratic Socialists of America Western youth conference at Stanford Feb. 25-27.

Featured speakers will include DSA Chairperson Michael Harrington, author of *The Other America*, Congressman Ron Dellums, San Francisco Supervisor Harry Britt, vice chair of DSA, and Berkeley Mayor Gus Newport.

Several hundred students from Western states are expected. DSA currently has about 2,000 student members on 40 campuses, plus another 5,500 older adults.

DSA members have a political orientation similar to that of European Socialist and Social Democratic parties, according to Michael Lighty, head of the Stanford group.

"Unlike the 1960s student radicals, who often rejected the reforms of standard liberalism, DSA joins with other liberals in the labor, minority and women's movements to win reforms such as the ERA and the nuclear freeze," he explains.

"But at the same time, DSA works to convince its coalition partners that resolving the nation's current economic problems will ultimately require much more far-reaching changes in the distribution of wealth and power in America."

Harrington will discuss "Students in a Changing World" at the opening plenary session, scheduled for 7:30 p.m. Friday, Feb. 25, in Jordan Hall Room 40. Dorothy Healy of KPFA, Los Angeles, also will speak.

"American Democracy in Crisis" will be discussed by Supervisor Britt and Elinor Glenn, president emerita of the Service Employees International Union, at 9:30 a.m. Saturday, Feb. 26, in History Corner, Room 2. Workshops on the corporate nature of the university will follow.

Congressman Dellums will speak in Room 2 at 1:30 p.m. on "Guns versus Butter: Militarism and Social Spending Cuts." Workshops on the peace movement, domestic and foreign policy will follow.

Mayor Newport will discuss "Building Coalitions" at 9:30 a.m. Sunday, Feb. 27, in Room 2. Peter Cervantes-Gautschi, business manager of the Santa Clara County Labor Council, also will speak. Workshops on feminism, religion, and Third World issues will follow.

Preregistration fee for the conference is $10. Further information may be obtained from DSA at 29 29th St., San Francisco 94110, phone (415) 550-1849 or from Lighty (415) 323-7693.



Trombonist to give master class

The Department of Music presents a Master Class by trombonist Ralph Sauer at 7 p.m. Tuesday, March 1, in Dinkelspiel Auditorium at Stanford.

All trombonists are invited to attend. Admission is $3 for participants, free to observers.

Sauer is principal trombonist with the Los Angeles Philharmonic. He received his early training in trombone from Robert Harper of the Philadelphia Orchestra, then studied with Emory Remington while obtaining a B.M. degree and performer's certificate from the Eastman School of Music.

At age 23, Sauer joined the Toronto Symphony Orchestra as principal trombonist at the invitation of Seiji Ozawa. His summer engagements have included the Marlboro Festival in Vermont.

Sauer has given many master classes and recitals, most recently in Tokyo and Mexico City.

Rental housing

HOUSING AVAILABLE

□ **March 27 to Sept. 15, '83:** Fully furn 3BR/3BA, FR, So. Palo ALto hse. Nghbrhd pool assoc, gardener, 15 min. to Stanf. Walk to shops. Ideal for children. $1100/mo. Call Cornish & Carey, 325-6161 (day), Rita Benedict, 327-7190 (eve).

□ **March 1, '83: 7 to 10 mo. (flex).** Fully furn 2BR/2BA luxury condo, view, pool, tennis, W/D. 12 min. to Stanf, 35 min. to S.F. Nonsmoker, no pets. $850/mo. Call (415) 853-5212 (day), (415) 591-7085.

□ **Beg. Mar. 1, '83:** Professorville historic wood-paneled charm. Unfurn duplex, 4BR/1½BA, frpl, sleep. porch, deck, attic, nooks & crannies, sm. yd. Close to Stanf, schls, shops. Nonsmokers, no pets. 1 yr. lease, $1250/mo. Call 497-4801 (day), 327-4830.

□ **Avail for 1 yr:** Hse in Stockholm, fully furn, 4BR, lib., 2 dens, safe area, 20 min. to town ctr. $1200/mo. Write: Dr. Jan Karlsson, Dept. Clin. Physiology, Karolinska Hosp. Stockholm, Sweden. Local contact, Wm. Haskell, 497-6254 (day).

□ **July 1 to Aug. 31, '83:** Spac. furn. hse on campus. 4BR. No pets, must feed cats. $1000/mo. incl. gardener, water. Sec. dep. req. Call (415) 857-1653.

□ **Mid-Mar. to Mid-June (flex):** Hse in Palo Alto, 4BR/2BA, fully furn. 10 min. to Stanf. $1300/mo., incl. gardener. Call 858-0434, or 497-4645 (day).

□ **July 1, '83 to July 1, '85 (flex):** 1 yr. rental poss. Fully furn. Palo Alto fac. hse, 3BR/2BA, FR/den, LR, DR, W/D, AEK, pool w/deck, patio. $1200/mo. Call Anne Mellor, 323-5329, 497-2724 (day).

□ **April Exchange:** Apt. in Paris & hse in Grenoble & car. EXCHANGE for hse or condo & car commute dist. to Stanf. Call Rosemary, 497-9165 (day), 967-8157 after 5 pm.

□ **July, Aug.:** Very attrac. summer rent. Dwntwn Palo Alto. 1BR/2BA fully furn. condo. Suit. for cpl. Lib. w/spiral staircase, balc., pool, secure. 18th C. European style. $1500/mo. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **Beg. June 1:** Summer rent and/or 1 yr. High Portola Val. (Ladera). Beaut. 3BR/2BA fully furn. hse. Atrium, lrg. self-maint. gardene, oaks, pool, tennis. 7 min. to Stanf. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **March thru June, '83:** Oak Creek apt. 2BR/1-1/3BA, furn, built-in bar, gar. space. Util. incl. Call 321-2625.

□ **April thru Nov. 15, '83:** Fully furn. Palo Alto hse, 3-4BR/2BA, LR. FR, lrg. cov. patio. Lush garden, easy upkeep, auto. sprink. Adults, no pets. $1200/mo. incl. water. Call (415) 858-0880 (eve), 497-1580 (day).

□ **NOW:** Furn. studio nr. Stanf. 2 blocks to Calif. Av. shops & train. $300/mo. incl. util. Hot tub & laundry priv. $50 more. Call 856-0849.

□ **Aug. to Dec. '83 (flex):** Fully furn. 4BR/3BA, study, FR, 2 patios, 2 frpl, AEK, W/D. 1BR/1BA w/sep. entr. & rentable. 5 min. walk to campus ctr. Call Nancy packer, 857-0908.

□ **Now to June '83:** Prof. woman seeks M or F rmmate to share lrg. 2BR/2BA condo in scenic San Carlos hills, view wilderness area. Fully furn, cathedral ceil., frpl, pool, tennis. See to appreciate. $400/mo. + ½ util. Call Leslie, (415) 697-1300 (day), (415) 591-1480 (eve or lv msge).

□ **Late Mar. to late June (flex):** Fully furn. campus hse, 4BR/2½BA, DR (convert to study), frpl, AEK, W/D, patio. 5 min. walk to campus ctr. Call Paul W. Berg, 857-0245.

□ **July 1 to Dec. 31, '83:** Fully furn. & equipt hse in Sharon Hgts. 1 mi. to Stanf. Sep. DR, 2 frpls, on 1/3 acre. $1500/mo. incl. grdnr. Call 497-3785 (day), 854-7471 (eve).

□ **April 1 thru mid-Aug. '83:** Lovely furn. studio apt. in dwntwn Palo Alto. Sublet (end of July, nego.). Fully furn. incl linens, ktchnware. Laund. facil. 5 min. to Stanf. Call 321-6871.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. hse, Ladera, 5 min. to Stanf. 4BR/3BA, lib., study, FR, frpl, lovely garden, decks. $1800/mo. incl. grdnr, swim/tennis priv. Call (415) 854-2509, 497-6169 (day).

□ **NOW:** Attrac. furn. 4BR/2½BA hse (2200 sq. ft.), study, DR, FR, 3-car gar., patio. Year lease. Incl. ktchn ware, linens, 2TV, lrg front & back yd, quiet, safe nghbrhd. $1400/mo. incl. gardener. Call (415) 965-1302 (eve).

□ **NOW:** Flat in London, 2BR/1½BA, new central heat, 1 min to Willesden Green Stn. undergrnd. $600/mo. Call Dr. Preger, (415) 661-4067 or (415) 387-7300.

□ **NOW:** Ski Cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 47-2501 (day), (408) 739-3141 (eve).

□ **Regularly Avail.:** 1 & 2BR furn. & unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $525 to $1200/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Beg. Mar. 19:** Furn. 3BR/3BA hse. in Palo Alto nr. Stanf. Beaut. spac., new ktchn, W/D, piano, frpl. Fenced yd. No pets. Call COLLECT (602) 299-4499.

□ **June thru Aug. '83:** Exec. fully furn. hse, 5BR/4BA, W/D, pool, panoramic view. Portola Valley. Rent incl grdnr, cleaning, pool serv. Call 851-2481.

□ **Beg. Apr. to beg. Aug. '83:** Los Altos fully furn hse on cul-de-sac. 6 mi. to Stanf., walk to sch & dwntwn shops. 4BR/3BA. $1200/mo. incl grdnr & water. Call (415) 948-0936.

□ **Beg. Mar. 5, '83:** Female to share 4BR/2BA hse, W/D, DW, frpl, patio, 10 min. to Stanf. Nonsmoker, no pets; over 30 pref. $260/mo. + 1/4 util. $125 dep. Call 494-3255 (eve) or Dorothy, 497-1078 (day).

□ **12 mo. rental:** To begin July 1, Aug. 1, or Sept. 1 (flex). Fully furn 4BR/3BA hse on Stanf. campus. 2FR, 2 studies, 2 decks, lrg. pool, spa, sauna; antique furn. $1800/mo. incl. clean. serv., grdnr, pool serv. Call 497-0627 (day), 321-4002.

□ **NOW:** 2BR/1BA hse. Excl westside Redwood City location. 12 min. to Stanf. New kitchn, fenced front & back yd. Gar. & wrkshp. Children & pets ok. Call Lynn, (415) 859-4292, (415) 361-1636.

□ **Spring Qtr:** For 3 mo. (flex): Furn. hse 1½ mi to Stanf. 3BR/2BA, frpl, piano, DW, children ok, no pets. $700/mo. Call Perkins, 497-2421 (day), 854-3225.

HOUSING NEEDED

□ **NOW:** Prof. female seeks sublet, apt. or hse. Pay to $400/mo. or HOUSESIT. For 6 to 8 mo. Refs. avail. Call (415) 595-2950 (eve), (415) 965-0557 (day).

□ **NOW:** Reliable Stanf. staff seeks HOUSESIT in P.A. area. Pref. long term, 3 to 6 mo. but will consider shorter per. Will give excl. care to hse, pets, plants, yd. No charge. Loc. refs. Call Donna, 497-3967 (day).

□ **NOW:** Prof. here on leave seeks HOUSESIT, 1 to 8 mos. Very resp. nonsmoker, will give excl. care. Call Rosemary (415) 948-8694 (eve), 396-7173, Wed. & Thurs.

□ **NOW:** Prof. R&D Manager seeks rm w/BA in furn. condo. Pref. quiet, resp. male condo-mate. Mt.V., P.A., Sunnyvl area. Call Fred, (415) 494-1165, ext. 1407 (day).

□ **July 1 for 1 yr:** Campus hse for Stanf. family of 3. Excl. tenants. Call after 2 pm, 856-6417.

□ **NOW:** Concert pianist/teacher, long time P.A. resid., seeks to lease unfurn 1-3BR hse w/20 x 40 LR or studio suitable for 2 concert grand pianos. Call 323-6641.

□ **July, '83:** Seeking 4BR hse nr Stanf. EXCHANGE 5BR hse w/garden nr Lyons, France (10 min. to Lyons) + small flat in Paris. Write: G. Adam, 2 chemin du Trouillat, 69130 Ecully, France.

□ **June 15 to Sept. 15, '83 (flex):** Reliable missionary cpl seeks 1BR furn. apt, small hse, or hsesit position while on leave from Philippines. Call Monty or Lori, 324-5684 (day), 321-0237 (eve).

□ **Aug. 1, '83 to end July '84:** Visit. chem. engr. seeks furn. 2-3BR hse/twnhse for self, wife, 2 boys (13, 15) & small dog (Scottie). Assure exclnt care for yd, plants. Nonsmokers. Prefer within 15 min. to Stanf. Poss. exchange for 4BR furn. hse on wooded lot nr Wash DC. Call COLLECT (202) 696-4410 or 4409 or write Dr. K.J. Wynne, Off. Naval Research, Chem. Div., 800 North Quincy St., Arlington, VA 22217.

□ **June thru Sept. '83:** Visit French prof seeks 3-4BR hse for self & fam. Call Marilyn Yalom, 493-7083 or 497-1994 (day).

□ **Oct. 1 to Dec. 31, '83:** Autumn Qtr. Visit prof. CERAS, Sch. of Ed. seeks rm on or nr campus. Nonsmoker. Call 497-9532 (day), BEFORE Mar. 9.

□ **June 1 to Sept. 15, '83:** French academic fam. seeks 3-4BR hse. on campus. EXCHANGE for lrg. modern apt. in Paris 16th, or will rent. Stanf. refs. Call Lehman, (415) 857-0494, eves or wknds.

□ **Sept. '83 to June '84:** Prof. on sabbatical, U. of Iowa Med. Sch., wife & 2 children (4 & 7) seek hsng; pref. on campus. Call Betty Bray, Dept. of Bio. Chem., (415) 497-6161 (day).

□ **Beg. May 1, '83:** Classical violinist seeks 1BR guest cott. or small hse. Palo Alto to Burlingame. Call after 9 pm Mon-Fri. (408) 354-7549.

□ **Mid-Mar. to mid-July '83 (flex):** Woman prof. from London, w/o family, careful tenant, seeks to rent and/or hsesit 2BR hse. Prefer on campus. Call Himmelweit, 321-2052 (day) or 328-6040.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Pianists Jodi Gandolfi and Naomi Sparrow (above l. to r.) will join singers Nancy Wait, Nancy Kass, and Jan Wilcox in a performance of John Adams' Grand Pianola Music in a concert at 8 p.m. Sunday, Feb. 27, in Dinkelspiel Auditorium. Prof. Arthur Barnes will conduct the Symphonic Band concert, which also includes works by Will Gay Bottje, Gustav Holst, and Nelhybel.

Award-winning pianist Murray Perahia to perform at Mem. Aud.

Pianist Murray Perahia, the first American to win the Leeds International Piano Competition will perform at 8 p.m. Friday, March 4, in Memorial Auditorium at Stanford.

Presented by the Lively Arts at Stanford, the program will include: Beethoven's "Sonata in D Major, Op. 10, No. 3," Schubert's "Four Impromptus, Op. 142," and Liszt's "Sonata in B Minor."

Perahia made his Carnegie Hall debut in 1968 with Alexander Schneider conducting and has appeared in the Casals and Edinburgh Festivals, at Spoleto and in the Lincoln Center Mostly Mozart Festival. He has also performed with members of the Budapest, Guarneri, and Galimir Quartets, and has toured with "Music From Marlboro."

In January 1975 Perahia was selected as the first recipient of the Avery Fisher prize. He was also winner of the Kosciusko Chopin prize.

In 1972, Perahia became the first pianist signed by CBS Masterworks to an exclusive contract in almost 10 years and his first recording, released in 1973 was selected as best solo piano record of the year by *Time* magazine. In 1978, 1981, and 1982, Perahia received the Edison prize, Europe's most prestigious recording award.

Perahia was born in the Bronx, New York in 1947 and now lives in London with his wife. His family descends from the branch of Sephardic Jews that lived in Spain until 1492 when they were exiled.

Though the Sephardics then migrated to other countries, they kept up with their Jewish and the Spanish traditions, and the language that Perahia first spoke was not English but the language of 15th century Spain called Ladino.

Perahia is a graduate of Mannes College of Music in Manhattan where he studied conducting. He studied piano with Jeannett Haien and Mieczyslaw Horszowski and chamber music coaching with Artur Balsam.

For ticket information call Tresidder ticket office, 497-4317.

'Study in Britain' session at I-Center

Stanford's second annual "Study in Britain Celebration" will be held at 4:30 p.m. Wednesday, March 2, at Bechtel International Center. The program, sponsored jointly by the Overseas Resource Center, Stanford Overseas Studies, and the Stanford Rhodes-Marshall Panel, will highlight diverse opportunities for study in Britain as well as scholarships to fund graduate study.

Specific opportunities to be covered in the program include summer study; academic year study either through programs sponsored by U.S. universities other than Stanford or directly through Britian institutions; graduate degree study; and Rhodes, Marshall, Churchill and Fulbright awards for graduate study.

Students interested in study abroad are often not aware that there are alternatives to the Stanford programs, according to Catherine Gamon, assistant director for overseas resources at the International Center.

"This year, it is particularly important that we help students learn about the many exciting possibilities open to them, since the Cliveden campus will be closed in 1983-84 and the Oxford program will not yet be in place," she says. "Although deadlines for some programs have passed, it is still possible to apply to a wide range of summer or academic-year programs."

At the same time, the sponsors of the Study in Britain Celebration want to encourage more students to consider applying for scholarships for study in Britian.

"We are very pleased with the results so far of this year's Rhodes and Marshall Scholarship competition," says Prof. Stephen Ferruolo, Stanford Rhodes-Marshall panel chairman. "We hope to do even better next year by encouraging a greater number of qualified candidates to apply."

During the week when interest in Britian is high, the Study in Britain Celebration will provide an opportunity for students, faculty, and staff to hear speakers, peruse information tables, and meet informally with colleagues who have interest and experience in Britain. British refreshments will be served.

For more information, please contact the Overseas Resource Center, 7-0856.

Susan Owicki to lecture

Prof. Susan Owicki, electrical engineering, will speak on "Generals and Traitors: Building Reliable Systems from Unreliable Components" at 4:15 p.m. Thursday, March 3, in room 420-041 (entrance in basement of Math Department).

Her talk is part of the 1982-83 lecture series of Stanford Women in Science and Engineering (WISE). The series is designed to promote interdisciplinary discussion among women by providing a regular forum where nontechnical lectures on research topics are followed by informal discussion over refreshments.

The sponsors are WISE and the Office of the Dean of Graduate Studies. Questions may be directed to ext. 7-2496.

Baroque harpsichordist

Harpsichordist Vera Kochanowsky will present her Doctor of Music Arts recital at 8 p.m. Saturday, March 5, in Annenberg Auditorium.

Presented by the Department of Music, Kochanowsky will perform music of the German and French Baroque—four Bach sinfonias and suites by Froberger, Boismortier, and Rameau. Also on her program is Bach's *Capriccio on the Departure of His Most Beloved Brother*.

Kochanowsky received her master's degree in performance of early music from the New England Conservatory, where she studied with John Gibbons. She received her bachelor's degree in piano from Oberlin Conservatory, then spent a year studying the harpsichord at Penn State, where she was raised.

Draft Awareness Week Feb. 26-Mar. 4

Stanford Against Conscription will sponsor Draft Awareness Week on campus between Saturday, Feb. 26 and Friday, March 4.

Events include:

1. Workshop on the linking of draft registration and financial aid, led by SAC members. 11 a.m., Saturday, Feb. 26, in History Corner Room 34.

2. Showing of slide show "Choice or Chance" on military recruitment, economic conscription, and draft registration, led by SAC members. 4 p.m., Saturday, Feb. 26, in History Corner Room 34.

3. Panel on the history of the draft and draft resistance. Speakers include Stanford History Profs. Paul Seaver and Clay Carson. 7:30 p.m., Tuesdday, March 1, in Cubberley Room 133.

4. Panel on third world people, economic conscription, and the draft. Presented by members of the Draft Information Alliance. 3:30 p.m., Wednesday, March 2, in Ujamaa Lounge.

5. Workshop on women and resistance, led by SAC members and other local women resistance organizers. 4:30 p.m., Thursday, March 3, in Zapata Lounge.

6. Panel on draft resistance today. Speakers will include indicted non-registrant David Waite and other resistance organizers. 7:30 p.m., Thursday, March 3, in Terman Auditorium.

7. Anti-draft/Anti-war coffee house. Singing and poetry on anti-militarist themes. 9 p.m., Friday, March 4, in Columbae House.

This series of events is part of a coordinated week of activities on a number of campuses around the state, including Berkeley, Chico, Humboldt, Santa Cruz, UCLA, San Diego State and others.

Purim Holiday to begin on Feb. 26

Celebration of the Jewish holiday of Purim begins at 7:30 p.m. Saturday, Feb. 26, with the traditional reading of the Megillah.

In "Megillah Madness" the story of Purim will be acted out as well as read. At 9 p.m. the celebration continues with "Munchie and Music Madness," featuring food, drink, and dancing to the band "Eshkoliot."

Both parts of the celebration take place in Tresidder Union large lounge at Stanford and are open to the public. The Megillah reading is free; there is a $2 admission charge for "Munchie and Music Madness."

The event is sponsored by the Shabbat and Festivals and the Graduate Students Activities Committees of Stanford Hillel.

For more information, contact Stanford Hillel at 497-1602.

'Hazing' foe to speak

Eileen Stevens, founder of the Committee to Halt Useless College Killings (CHUCK), will speak on fraternities in the modern university at 7 p.m. Tuesday, March 1, in Kresge Auditorium.

A question-and-answer session will follow her talk.

Stevens founded CHUCK after her son was killed in a hazing incident at Alfred University in New York. Though she is in favor of the fraternity system, she has dedicated herself to stopping the kinds of fraternity pranks that sometimes result in death.

She has spoken on many college and university campuses and has appeared on the Phil Donahue Show and the Tom Snyder show, in addition to being featured in *People* magazine.

Her lecture at Stanford is sponsored by Delta Tau Delta.

Robert Luc to speak

Ambassador Robert Luc of France will present a free public lecture on "France and the Future under the Mitterand Administration" at 4:15 p.m. Tuesday, Mar. 1, on the Stanford campus in History Corner, Building 200, Room 205.

Luc is teaching at the Fromm Institute of Life Long Learning, and the University of San Francisco. His field is contemporary French history, especially foreign policy.



Andor Toth (above) will be soloist in the Bartok Violin Concerto No. 2 when the Stanford Symphony performs at 8 p.m. Saturday, Feb. 26, in Dinkelspiel Auditorium. Assistant conductor Eric Kujawsky will take over the baton from Toth for the Bartok; also on the program are Beethoven's Eroica and Vivaldi's Piccolo Concerto in C major.

Opera Workshop presents two one-acts

Stanford Music Department's Opera Workshop, under the direction of Andor Toth, will present two one-act *opera bouffas* at 2:30 p.m. Saturday and Sunday, March 5 and 6, in Dinkelspiel Auditorium.

The two operas are *The Necklace* by Music Department Prof. Leonard Ratner—a bittersweet comedy based on Maupassant's famous short story, and *Mavra* by Stravinsky—a charming, hilarious farce written for the Paris Opera in 1922 and rarely performed today.

Production of these two operas represents a combined effort by students of the Music and Drama Departments at Stanford, as well as guest artists from the community.

Stage direction is by Tom Lindblade, graduate student in Drama. Lindblade wrote the score for Brecht's *The Good Soul of Setzuan* and directed Brecht's *The Human Voice*, both produced by the Drama Department last fall. His score for Brecht's *Don Juan* will be heard in March. Assistant stage director is Stephen Weeks, with lighting by Nan Buck.

The cast includes Stanford voice students Cheryl Karinen and Nancy Kass, sopranos, and Patricia Mikishka, mezzo-soprano. All three study with Lila Stuart. Mikishka, a doctoral candidate in Early Music, recently soloed with the Stanford Chamber Orchestra.

Guest artists will be soprano Kay DeVries, who recently appeared in the San Jose Opera production of *Rigoletto*; mezzo-soprano Wendy Green, a graduate student at Notre Dame college; baritone Michael Morris, who has sung with West Bay Opera and Stanford Savoyards; and tenor Mark Daniels, soloist with the Carmel Bach Festival and Bay Area orchestras.

Pianists for the performances will be Camilla Passarelli and Kay Bedenbaugh.

Tickets are $4 general, $2 students and senior citizens,

Alea II concert includes Carillon piece

A la Mode is the title of Alea II's free concert at 8 p.m. Wednesday, March 2, in Dinkelspiel Auditorium.

Stanford Music Department's ensemble for contemporary music will present medieval and Renaissance music along with new works that quote, parody, or employ early music techniques.

Under the direction of Jonathan Berger, the program will feature *Missa Supra Le Homme Arme* by Peter Maxwell Davies—a theatre piece for actress, two keyboard players (organ, harpsichord, and honky tonk piano), flute, clarinet, violin, and cello. Jeannine Wagar will conduct.

Also on the program will be the premiere of Paul Wieneke's *Poured Brilliant* for solo contrabass and chamber orchestra. Shinji Eshima, principal bass with the Marin Symphony, will solo; Wagar will conduct.

A la Mode will commence, weather permitting, outside on the steps of Dinkelspiel Auditorium for the premiere of *Piece for Carillon* by Paul Nahay. Electrical Engineering Prof. James Angell will perform.

The audience will then move inside for the remainder of the program: *We Made the Dogs for Your Delight* for magnetic tape by Doug Fulton; *Music for a Bird* for recorder by Hans Martin-Linde; the premiere of *Piano Piece No. 2* by William Sussman, who will also perform it; and the premiere of David Jaffe's *String Quartet for Two Players*, with Christina Ruotolo, violin, and John Lin, viola.

Interspersed between these works will be medieval and Renaissance pieces, performed by members of the Early Music Singers and the Baroque Orchestra, that are sources of direct quotes, or written with the same compositional techniques, as the contemporary works they preface.

"Watch Your Step"

"Watch Your Step," a program of dance and film, will be presented at 8 p.m. Wednesday, March 2, in Tresidder Lounge. Sponsors are Stanford Dance Quorum and STARTS.

Swedish folk dance, student choreography, and Alvin Ailey's film, "Images and Visions," will be featured.

Admission is $2. For further information call Lisa Christensen, 497-4254.

Stegner reading slated Monday

Wallace Stegner, novelist, biographer, historian, critic, dedicated environmentalist, will read from his works at 8 p.m. Monday, Feb. 28, in Annenberg Auditorium at Stanford for the 1982-83 Jean and Bill Lane Lecture Series.

Stegner is profoundly concerned with the plight of man in his environment and with the durability of essential human values. His numerous works include *Big Rock Candy Mountain*, *Mormon Country*, *The Women on the Wall*, *A Shooting Star*, *Wolf Willow*, *All the Little Live Things*, *Angle of Repose* (which won the Pulitzer Prize in 1972), *The Spectator Bird* (which won the National Book Award in 1977), and *One Way to Spell Man*, his most recent book.

Stegner taught at Stanford from 1945 until 1971. He founded the Creative Writing Program in 1946.

He is a member of both the National Institute and Academy of Arts and Letters and the American Academy of Arts and Sciences. He has repeatedly won the gold and silver medals of the Commonwealth Club of California, and his works have frequently been Literary Guild selections.

The Lane lecture series, sponsored by the Creative Writing Program, will host one other lecture in April, in which E. L. Doctorow will speak.

For further information, call the Stanford Writing Program at 497-2637.



William Ramsey

St. John Passion heard next week

Bach's monumental *St. John Passion* will be performed by Stanford's Chorus, under the direction of William Ramsey, at 8 p.m. Friday and Sunday, March 4 and 6, in Memorial Church.

The Chorus will be joined by a chamber orchestra and distinguished guest artists: Sara Ganz, soprano; Miriam Abramowitsch, contralto; Gregory Wait and David Howell, tenors; and Leroy Kromm and Thomas Hart, baritones.

Prof. Ramsey will give a free lecture on the *Passion*, sponsored by the Music Guild, at 8 p.m. Tuesday, March 1, in Annenberg Auditorium. The public is invited to attend.

Tickets for the March 4 and 6 performances are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door.



Cellist Leslie Parnas

Lincoln Center chamber group coming Sunday

From New York's Alice Tully Hall, where it has played to sell-out audiences since 1969, the Chamber Music Society of Lincoln Center will perform at 2:30 p.m., Sunday, Feb. 27, at Dinkelspiel Auditorium.

Presented by the Lively Arts at Stanford, the group's program includes the "Trio for Clarinet, Cello, and Piano in A Minor, Op. 114" by Brahms, and "Serenade No. 6 for Flute, Violin, and Viola in D Major, Op. 25" by Beethoven. The final work on the program will be the "Quartet for Piano and Strings in E-flat Major, Op. 87" by Dvorak.

The Chamber Music Society of Lincoln Center, the resident performing organization at Alice Tully Hall, is the outgrowth of an intensive survey of the chamber music field and its audience. Artistic director Charles Wadsworth has brought together strong musical personalities from all parts of the world, whose combination and interaction generate true excitement for the music they play.

The Society's commitment to program not only master works, but also infrequently heard works from the past and challenging contemporary compositions for a wide variety of instrumental and vocal combinations, has lured a brand-new audience to chamber music.

Performing regularly for sold-out audiences both in New York and at Kennedy Center, the Chamber Music Society of Lincoln Center has toured the U.S. annually since 1975. The group has twice been the subject of a "Live from Lincoln Center" international telecast, and it records for the Book-of-the-Month Club and the Musical Heritage Society.

Under a program to encourage outstanding contemporary composers to broaden the repertoire, the Chamber Music Society has commissioned more than 30 works to date, and has given world premieres of 32 compositions.

The Society has a permanent membership of 14 virtuosi, each with special skill in the chamber repertoire, who perform together in constantly varying combinations. The Stanford concert will feature: Paula Robison, flute; Gervase de Peyer, clarinet; James Buswell, violin; Scott Nickrenz, viola; Leslie Parnas, cello; and Lee Luvisi, piano.

For more information call Tresidder Ticket Office at (415) 497-4317.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Feb. 23, to cover the week of Mon., Mar. 7, through Sun., Mar. 13.

Calendar correction: "The Harlem Renaissance," a film on the historic era of Afro-American intelligentsia, will be shown at 4 p.m. Wednesday, Feb. 23, in Bldg. 200, Rm. 30 (**not** on Friday, Feb. 25, as printed in last week's calendar).

Calendar correction: The open rehearsal of the Chamber Music Society of Lincoln Center, originally scheduled for 11 a.m.-12:30 p.m., Sunday, Feb. 27, in Dinkelspiel Auditorium, has been cancelled.

MONDAY, FEBRUARY 28

Energy Policy Seminar: "Risk and Decision Processes in the Public Sector," with Elisabeth Pate-Cornell, Industrial Eng. & Eng. Management Dept., Stanford Univ. 4:15 p.m. Skilling Aud.

Center for East Asian Studies Colloquium: "Zen Community". Dennis Merzel, Zen Buddist priest from the Zen Center in Los Angeles will speak. 4:15 p.m. Rm. 238, Lou Henry Hoover Bldg.

Numerical Analysis Seminar: "Parameter Estimation in Ordinary Differential Equations," by James Varah, Univ. of Waterloo. 4:15 p.m. Room 380c, Math Corner.

EE350 Radioscience Seminar: "Radio Occultation Studies of the Solar Corona," by Jan Martin ,Stanford. 4:15 p.m. McCullough Bldg., Room 134.

Biological Sciences Seminar: "The Neurobiology of Bird Song," by Dr. Mark Konishi, Prof. of Biology, California Institute of Technology. 4:15 p.m. Room T-175, Herrin Hall.

Film Society: "Saturday Night & Sunday Morning" plus "Loves of a Blond". 7:30 p.m. Kresge Aud. $2.

Jean & Bill Lane Lecture Series: Wallace Stegner reading from his works. 8:00 p.m. Annenberg Aud. Free.

TUESDAY, MARCH 1

Bechtel International Center Luncheon Series: Swedish Politics: Analysis. Allan Larsson, former Undersecretary of State for Labor; Gunnar Heckscher, former ambassador and leader of the conservative party in Sweden. Noon. I-Center. $2.50 for lunch, brown baggers free.

Stanford Museum of Art Lunch Hour Tours: "The Chinese Tradition." 12:15 p.m. Stanford Museum of Art.

Center for Russian & East European Studies: "The Refractory Art of Soviet History," by Dr. Robert Conquest, Senior Fellow & Scholar-Curator of the Soviet & East European Collection, Hoover Institution. 2:15 p.m. Room 102, Lou Henry Hoover Building.

History Dept. Lecture: "France and the Future under the Mitterand Administration," with Ambassador Robert Luc. 4:15 p.m. History Corner Room 205. Free.

Music Department Auditions: Trombone Master Class by Ralph Sauer. All trombonists invited to attend. 7 p.m. Dinkelspiel Aud. $4 participants; Free to observers.

WEDNESDAY, MARCH 2

Gifts and Exchange Division, Stanford Univ. Libraries: Book Sale. Books and periodicals in many fields. Hardbounds $1.50 and up, paperbacks 25 cents and up, periodicals 10 cents. 11:00 a.m. to 1:30 p.m. Green Library, West Wing, First Floor, Rm. 101. n.

Stanford Museum of Art Lunch Hour Tours: "The Chinese Tradition." 12:15 p.m. Stanford Museum of Art.

Materials Science & Engineering Colloquium: "A Variety of Non-Crystalline Solids: Their Preparation and Structures," by Prof. Rustum Roy, Director of Materials Research Lab., Penn. State Univ. 3:30 p.m. Peterson Lab., Rm. 550A.

Structural Biology Seminar: "Dissection of Antigenic Determinants on Human Histocompatibility Antigens," by Dr. Victor Engelhard, Univ. of Virgina. 4 p.m. Fairchild Bldg., Rm. D-102.

Joint Applied Physics-Physics Colloquium: "Josephson Computer Technology," by Dr. Hans Zappe, IBM Yorktown Heights. 4:15 p.m. Physics 100.

Electronics in Medicine Lecture Series: "Status of a Clinical Left Ventricular Assist System," by Dr. Peer Portner, Novacor, Inc. 4:15 p.m. McCullough 134.

Chemical Engineering Colloquium: "Catalytic Reactions over Modified Surfaces," by Dr. Wayne Goodman, Sandia Laboratories. 4:15 p.m. Chemical Engineering Conference Room.

Drama Dept: "Don Juan," by Moliere. Directed by Lawrence Maslon. 8 p.m. The Nitery. Free.

Music Department Concert: "Alea II—Contemporary Music Ensemble," with members of the Baroque Ensemble & Early Music Singers. Medieval and Renaissance music interspersed with recent works using Medieval and Renaissance techniques and tunes. 8 p.m. Dinkelspiel Aud. Free.

Art Dept. Lecture Series: "The Amazing Career of Mme. Vigee Lebrun (1755-1842)," by Prof. Lorenz Eitner. 8:15 p.m. Annenberg Aud.

THURSDAY, MARCH 3

Stanford Geothermal Program: "High Temperature Geothermal Developments in the Basin and Range Province," by W. Richard Benoit, Phillips Petroleum Company. 1:15 p.m. Mitchell Bldg., Room B67.

Solid Mechanics Seminar: "Fracture Response of Materials under Short Pulse Loads," with Dr. Donald Shockley, Director, Metallurgy and Fracture Mechanics, SRI International. 4:15 p.m. Skilling Aud.

Center for East Asian Studies Colloquium: "Backyard Furnaces in 1958". Dr. Donald Wagner, visiting scholar, will speak. He is a research fellow at the Danish Research Council for the Humanities. 4:15 p.m. Rm. 238, Lou Henry Hoover Bldg.

EE-370 Information Systems Laboratory Seminar: "Robust Adaptive Control," by Robert Kosut. 4:15 p.m. Skilling 191.

Stanford Women in Science and Engineering Lecture: "Generals and Traitors: Building Reliable Systems from Unreliable Components," by Prof. Susan Owicki, Assoc. Prof. of Electrical Engineering. 4:15 p.m. Building 420, Room 041.

Latin American Revolution Film Series: "The Cost of Cotton". Filmmaker Jim Watson will discuss his film about Guatemala. 7 p.m. Casa Zapata, Stern Hall. Free.

The Winter Nuclear Weapons Film Series: "The Nuclear Battlefield". 7:30 p.m. Meyer Forum Room.

Weil to give first de Leeuw lecture

Prof. Andre Weil of the Institute of Advanced Study in Princeton will give the first Karel deLeeuw memorial lecture at 3:15 p.m. Wednesday, March 2, in Physics Auditorium at Stanford.

Weil, one of the great modern universalists in mathematics, has made basic contributions covering virtually the entire spectrum of mathematics of this century. His lecture will be on "Euler and Number Theory." Euler is considered one of the greatest mathematical universalists of all time.

According to mathematics Prof. Robert Osserman, the deLeeuw lectures are not intended to be of a specialized or technical nature, but rather to illuminate the many facets of mathematics.

The lecture series is being sponsored by the deLeeuw Memorial Fund, set up by the Mathematics Department after his murder in 1978. ESL, Inc. of Sunnyvale supported the series.

"Karel deLeeuw was unique in his involvement and success with students on all levels," notes Osserman.

"He had a large number of Ph.D. students, many of whom became close personal friends. At the other end of the spectrum, he spent many years developing a course for freshmen with weak mathematical backgrounds.

"He taught a variety of undergraduate and graduate courses, and was renowned for his lucidity, his humor, and his innovative approach.

"At the center of all his activity was his focus on the human aspect of his work.

"Partly out of concern for graduate students during a period when jobs in pure mathematics were becoming scarce, he made considerable efforts to establish communication with other disciplines and to become involved with applications of mathematics."

Bechtel International Center Film Series: Animation—titles include "Hunger," "No Apple for Johnny," "Citizen Harold," "A Token Gesture," "Metamorphosis of Mr. Samsa," "My Financial Career," "The Street," "Bead Game," "A Chairy Tale," and "Boomsville" (Canada). 7:30 p.m. I-Center. .75 donation.

Drama Dept: "Don Juan," by Moliere. Directed by Lawrence Maslon. 8 p.m. The Nitery. Free.

FRIDAY, MARCH 4

Music Dept. Concert: Stanford Chorus. Bach–St. John Passion, with chamber orchestra and soloists Wendy Hillhouse, mezzo; Gregory Wait and David Howell, tenors; Leroy Kromm and Thomas Hart, baritones. $4/$2. Memorial Church. $4/ $2.

Applied Mathematics Lecture: "A New Model for Generating Biological Patterns: Applications to Cartilage Formation and Skin Organ Primordia," by Prof. J. Murray, University of Oxford & CalTech. 3:15 p.m. Room 380-C, Math Corner.

Materials Science and Engineering Colloquium: "A Variety of Non-crystalline Solids: Their Preparation and Structures," by Prof. Rustum Roy, Director of the Materials Research Laboratory, Pennsylvania State Univ. 3:30 p.m. Peterson Lab., Rm. 550A.

Drama Dept: "Don Juan," by Moliere. Directed by Lawrence Maslon. 8 p.m. The Nitery. Free.

The Lively Arts at Stanford: Murray Perahia, piano. Beethoven: Sonata in D Major, Op. 10, No. 3; Schubert: Four Impromptus, Op. 142; Liszt: Sonata in B minor. 8 p.m. Memorial Aud. $11.50, $10.50, $9.50, $8,50. Students $3 off regular price.

Lively Arts at Stanford: Murray Perahia, piano. 8 p.m. Memorial Aud. $11.50, $10.50, $9.50, $8.50.

STARTS Great Directors Film Series: "The Man Who Left His Will on Film," by Japanese director Nagisha Oshima. 8 p.m. Geology Corner, Room 320. $2.50.

Stanford Law School Film Society: "Psycho". 8 p.m. Kresge Aud. $1.50.

Coffee House Evening Entertainment: Music featuring many of the area's favorite new & up-and- coming performers. 9-12 p.m. Coffee House. Free.

SATURDAY, MARCH 5

Women's Swimming: Cardinal Invitational. All Day. DeGuerre Pool.

Music Dept. Concert: Opera Matinee. Featuring Andor Toth, director and Kay Bedenbaugh, pianist. Program includes Ratner "The Necklace"; and Stravinsky - "Mavra". 2:30 p.m. Dinkelspiel Aud. $4 & $2.

Music Dept. Concert: Vera Kochanowsky, harpsichord. Music of the German and French Baroque: works by J.S. Bach, Froberger, Rameau. 8 p.m. Annenberg Aud. Free.

Dance Quorum Slide and Music Show: "The Way of the White Clouds"-Dymaxion Dance; "On Wings of Breath"-Continuum; and "Lightstream"-Jeanett Stoble. 8 p.m. Dinkelspiel Aud. General $8, seniors, students, & children under 12: $6.

Drama Dept: "Don Juan," by Moliere. Directed by Lawrence Maslon. 8 p.m. The Nitery. Free.

Undergraduate Special #31 Concert: Henry Kaiser, experimental guitar. An evening of solo improvisations with electrical guitar and a digital sound processing system. 8:00 p.m. Skilling Aud. $4.

SUNDAY, MARCH 6

Music Dept. Concert: Stanford Chorus. Bach - St. John Passion, with chamber orchestra and soloists Wendy Hillhouse, mezzo; Gregory Wait and David Howell, tenors; Leroy Kromm and Thomas Hart, baritones. $4/$2. Memorial Church. $4/ $2.

Music Dept. Concert: Opera Matinee. Featuring Andor Toth, director and Kay Bedenbaugh, pianist. Program includes Ratner "The Necklace"; and Stravinsky - "Mavra". 2:30 p.m. Dinkelspiel Aud. $4 & $2.

ASSU Sunday Flicks: "Diamonds are Forever." 7 & 9:30 p.m. Memorial aud. $1.50.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"Photographs of Old Russia," by Jack Kollman. Faculty Club. Jan. 17 - March 26.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 30.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Paintings by Marina Goodier. Tresidder Union, Upper Lobby. March 1 - March 31.

CAMPUS REPORT

Volume XV, Number 22 | A publication for Stanford University faculty & staff | March 2, 1983



President Donald Kennedy, behind railing at lower right, thanks dozens of faculty and staff members who have served as general advisors to Stanford undergraduates for five years or more. The ceremony last Wednesday was the first such public recognition for general advisors.

Anthropology faculty ousts Mosher, 11-0

The Stanford Anthropology Department faculty unanimously voted to terminate Steven Mosher as a Ph.D. candidate Thursday, Feb. 24.

A focal point of international controversy, Mosher was one of the first U.S. anthropologists to conduct field research on a Chinese commune in 1979-80.

The faculty decision followed the findings, conclusions and recommendations of a three-member investigating committee, which was not made public on grounds that "it contains information that may be injurious to third parties."

Mosher, who was sent a copy of the report in October, refused to make it public, saying that doing so could "undermine" future legal action against the University.

After dramatically opening a letter from Prof. Clifford Barnett, department chairman, informing him of the decision—and thus making it public—Mosher said he was terminated "basically because the faculty chose to believe charges brought against me by the Chinese."

The confidential report "goes on to accuse me of 'poor judgment' " for publishing an article on China's birth control program and a photo of a woman about to be aborted in a popular Taiwanese magazine, Mosher said. The report also alleges his actions "gravely endangered innocent villagers," he added.

Mosher said a letter in the report from his former wife "makes a number of slanderous allegations against me concerning my research behavior in China."

She is Maggie So, a Hong Kong Chinese, whom Mosher described as "the scorned woman." Mosher said she threatened to "ruin me" (her words) when he made clear he wanted a divorce in March 1980, while she was visiting him

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Kennedy sharply criticizes proposed financial aid regs

Stanford President Donald Kennedy Monday, Feb. 28, sharply criticized proposed new federal regulations on student aid, saying they "will almost surely penalize students" who already have registered for the draft.

The proposed rules issued by the U.S. Department of Education are "directly contrary" to Congressional intent and "impose a very heavy and wholly unjustifiable administrative burden on colleges," the former federal food and drug commissioner charged.

"The proposed regulations go out of their way to place colleges and universities in an adversarial relationship with their students," Kennedy said. The law simply requires students to file statements certifying they have complied with Selective Service registration requirements.

"The regulations' grasp far exceeds the statute's reach," he added. Every student applying for federal aid would have to file statements which the institutions would have to verify prior to any awards.

"The proposed regulations conscript Stanford into the enforcement process," Kennedy said.

"The regulations assume an unreasonable level of efficiency from Selective Service. The system proposed

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Which way will Queen come here?

The Stanford community will not be able to see Queen Elizabeth II when she comes to lunch on Thursday, March 3, except for. . .

* the guests at the lunch, which is being given at Hoover House, Mirada Avenue, the residence of President Donald Kennedy and Mrs. Jeanne Kennedy, or

* those who guess correctly the route the royal cavalcade will take to Hoover House.

The Secret Service and the other security forces which have responsibility for protecting Great Britain's head of state do not wish the possible routes to be publicized.

This is far from the hopes which President and Mrs. Kennedy had when they first began their planning for the visit by the Queen and her husband, the Duke of Edinburgh.

Stanford's intention at that time was to bring the royal party through the heart of the campus, giving the Queen the fullest opportunity to see and be seen.

Security people rejected this idea, for their own good reasons, and also subsequent modified suggestions for the route.

The decision to keep the route secret has led to great disappointment on campus and in the surrounding areas, including many local schools which had hoped to bring entire classes to see the Queen.

The roads around Hoover House will be cordoned off on Thursday by police and other security forces. Special arrangements will be in force for residents in the closed areas.

The guests at the Hoover House lunch have been asked to arrive well before the Queen, and they will be waiting to greet her in the various street-level rooms of the residence.

Accredited journalists, photographers and TV people will be able to go to a designated area to record the royal arrival and departure. Those without the required accreditation will be barred from the area.

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People

Former Stanford administrator to help in survey of black alumni

When James Simmons worked as a Stanford University administrator from 1968-72, much of his time was spent seeking out minority students to attend Stanford. Today he's searching for them again.

Simmons says he hopes his "seek and find mission" will be able to locate approximately 1,200 former black students as part of a joint, six-month project of the Stanford Alumni Association and the Dean of Student Affairs Office.

The purpose of the effort is to survey the black alumni on how they feel their Stanford experience influenced their professional and personal growth, what their attitudes are toward the university, and what kinds of association they have had with other Stanford graduates and alumni clubs.

"We are interested in what these former students can bring back to the current and future student populations," Simmons explained. "One of the other spin-offs of the survey will be the development of programs and activities that students can do while here to make them more readily aware of and keen to alumni activities.

"We ought not have students come in here and feel they are not part of this university. The university's good health depends on the good will of its graduates."

Simmons is finding that it is no easy task tracking down former students. He's had to dig out his old files from the University Archives as well as research financial aid and registrar records. However, most addresses on record are usually outdated.

Simmons also plans on contacting parents of former students, since he believes that they are not as likely to have moved. In addition, he plans on enlisting the aid of the alumni he finds to help him spread the word and locate more people.

The largest concentration of alumni is believed to be in California, mostly the Bay Area and Los Angeles. Large groups of alumni are also thought to be in New York, Washington, D.C., and Texas.

Simons asks that any former black students contact him at P.O. Box 7275, Stanford, California, 94305 or at (415) 497-4568.

GLAS plans new scholarship offer

The Gay and Lesbian Alliance at Stanford (GLAS) plans to offer the University scholarship funds for a medical student who has shown a commitment to serving the gay community.

The funds would not be limited by sex or by the sexual orientation of the recipient.

The GLAS Steering Committee already has raised $550 toward such a scholarship and will seek additional funds for this purpose before April 15.

Meeting with University attorneys Russ Meyer and Iris Brest, GLAS representatives expressed hope the new scholarship would meet objections raised by the University to an anonymous gift offer of $500 toward a scholarship restricted to males who publicly identified themselves as gay.

Douglas Bernard of GLAS said the group would contact the anonymous donor, who had asked the University to inform the Gay People's Union at Stanford, the predecessor of GLAS, about the initial offer. GLAS hopes to enlist the prospective donor's support for their new proposal.

"Should the University refuse this (new) scholarship offer, the GLAS Steering Committee will attempt to negotiate modifications to the gift restrictions which are acceptable to the University and consistent with the spirit of the offer," according to a GLAS news release.

"GLAS believes it is important that the gay community demonstrate its willingness to work with the University administration, and that the University demonstrate its willingness to work with the gay community. . . .

"We hope the proposed scholarship will not only assist a medical student with a commitment to gay health care, but that the very existence of the scholarship, and its administration by a major university, will help make gay health care a more accepted and legitimate field of practice within the medical profession. . . .

"Besides the shortage of health care professionals with skills and commitment to serve the gay community. . .there has been little research directed at the health care needs of gay people."

Among the ways a commitment to serving the gay community might be shown, GLAS said, are 1) active involvement in an organization oriented toward serving the gay community, 2) pursuing a course of studies directed service to the gay community, or 3) doing research specifically directed toward developing health care techniques for gay men and lesbians.

Meyer noted that fairly wide consultation within the University would be needed before a decision would be reached on the prospective offer.

GLAS said that if an agreement could not be reached which was satisfactory to the Steering Committee, all funds collected would be returned to the original donors.

Gutenberg Express riders have choice

Users of the Stanford-Berkeley Gutenberg Express shuttle will be asked this month if they prefer paying for the ride or having the service cut down, according to Libraries director of administrative service Joe Jezukewicz.

The Gutenberg Express originating from Stanford has a general fund subsidy to cover the cost of this service. To assist the University in closing its budget gap, it has been suggested that the level of general fund support for the Gutenberg Express be reduced with revenue generated from a $2.50 one-way fare, or by eliminating the mid-day shuttle service, leaving only one round trip in the early morning and one in the late afternoon or early evening.

During the month of March, the Gutenberg registration service located at the Privileges Desk in Green Library will survey riders as to their preference between the current level of service with a fee or a reduced level of service with no fee.

Based on the results of this survey and input from the campus-at-large, a recommendation will be made to the provost this spring regarding the future service level of the Gutenberg Express.

Additional comments on this subject can be addressed to Jezukewicz, 245 Green Library.



Charles Horngren

Charles Horngren

Stanford Business School Professor Charles T. Horngren, 56, has been named recipient of the 1982 Distinguished Professor Award of the California Society of Certified Public Accountants.

The CPA Society cites Horngren for his "outstanding long-term contributions to accounting education and the CPA profession." He was presented with the award last month at the 1983 Accounting Educators and Practitioners Conference.

Horngren is the first person to have won both of the California CPA Society's special awards for accounting educators. The organization presented its Faculty Excellence Award to Horngreen in 1975.

Bernanke, Kreps, Macurdy

Stanford University professors have won three of six research fellowships awarded to young economics scholars from throughout the nation by the Alfred P. Sloan Foundation.

Selected as Sloan Research Fellows are Ben S. Bernanke, 29, David M. Kreps, 32, of the Graduate School of Business, and Thomas E. Macurdy, 31, of the Economics Department. Each will receive a two-year grant of $25,000 for basic research.

Bernanke, assistant professor of economics, will use the grant to continue his research in empirical macroanalysis. Kreps, professor of decision sciences, will use the funds to continue his game theory analysis of industrial competition. Macurdy, assistant professor of economics, will use his grant to continue empirical analysis of consumption and labor supply in a life cycle framework.

. . .and my father can beat yours up

Stanford ranks fifth nationally among research universities in its holdings, according to an index developed by the Association of Research Libraries and published in the *Chronicle of Higher Education*.

Harvard ranked first, followed by Berkeley, UCLA, and Yale. Toronto, Texas, Michigan, Illinois, and Columbia completed the top 10, in that order.

The index takes into account volumes held; gross number of volumes added; mircoforms held; current serials received; expenditures for library materials, binding, salaries and wages, and other operating costs; and number of professional and nonprofessional staff members.

In total volumes held, Harvard was first with 10.4 million, followed by Yale, 7.7 million; Illinois, 6.2 million; Berkeley, 6.1 million; Michigan, 5.5 million; Columbia, 5.2 million; and Stanford, 4.9 million, in round figures. UCLA, Texas, and Toronto were closely clustered behind Stanford.



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'Burned' bankers may weaken U.S. world trade

The international banking system will survive the potential landslide of debt, hundreds of billions of dollars worth, which the Third World is unable to repay.

However, the bankers will say "No" more often to developing countries that ask for more loans.

This will constrict the one-third of U.S. trade that depends on the Third World.

Prof. Stephen Krasner, who makes these forecasts, is a Stanford political scientist who studies the world situation from a political rather than an economic point of view. Krasner's research focuses on the politics of international economic relations, particularly U.S. foreign economic policy.

He is now writing a book on the confrontation between the industrialized nations and the developing countries.

"I study how the actions and attitudes of nations affect international trade," he said in a campus interview. "The openness and liberalization that occurred in the international economic system after World War II very much depended on the power of the U. S. That is changing very rapidly now.

"The critical question is how far and how fast it will change in the future. For the first time in its history the U.S. is intimately involved and dependent on international trade. That was never true in our history up till about the 1960s.

"The share of American foreign trade as a proportion of our gross national product went up from about six percent in the 1940s to about 17 percent now. We are importing more than we export, so we have a negative trade balance. Our biggest bilateral deficit is with the Japanese.

"It is not clear whether the whole system of international trade is going to unravel because of the growing moves towards protectionism.

"Partly it will depend on the attitude of the U.S., partly on the staying power of various international institutions. I think it is quite striking that so many countries have turned to the International Monetary Fund to deal with the vast problem of world debts.

One unconventional view I hold is that the world system is not so interrelated that protectionism in one area necessarily leads to protectionism in others. For example, most nations have intervened in the market, in one way or another, in order to protect their domestic agriculture, but this hasn't necessarily meant that the rest of the system became more protectionist.

"I am not sold, for example, on the idea that U.S. restrictions on Japanese auto imports would automatically spill over into other areas.

"Twenty years ago the U.S. was in a position where it was able strongly to influence general political and economic developments in the rest of the world, but that is no longer the case either in American capability or in terms of American preferences.

"The world economic system is certainly more fragile but the fragility doesn't necessarily indicate that the system will shatter. But it might."

Was Krasner worried that the international bankers are owed hundreds of billions of dollars by such countries as Brazil, Mexico and Argentina?

"I don't believe that the principal of those loans will ever be repaid, in most cases. But that is by no means unprecedented historically.

"I don't think there will be a banking collapse or a liquidity failure of the sort we had in the 1930s. Why? Because the international banking system has far more official support than it had in those days. The system is certainly not going to fall apart.

"The problem is that bankers are likely to become excessively pessimistic in a way similar to their excessive optimism in the 1970s.

"The result will be that bankers will be much more reluctant to hand out loans. This will mean a lower level of world demand and downward pressure on the level of world trade, and on the level of economic activity as a whole."

Will the banks ask for guarantees from their domestic governments for loans to other countries?

"That they won't get. In most cases the loans that are now in peril were made to governments. I am sure that our banks won't get U.S. Government guarantees for foreign loans.

"This means that loans to developing countries will become less, perhaps much less, in the years to come. This will be compounded by the fact that if oil prices break sharply, which is quite possible, then the amount of money that banks have to lend will go down. This is because the banks will not have an avalanche of petrodollars to push out to anxious borrowers in the Third World."

Did this foreshadow a sharper confrontation between North and South?

"I don't think so, in fact it may have the opposite effect. Some countries, such as Brazil, will have more interest in striking deals that would be beneficial for the U.S. as well. For instance, both American bankers and Brazilian exporters have an interest in preventing U.S. trade restrictions."

Krasner was asked the reason for the high level of conflict between North and South during the 1970s.

"I think the efforts by the Third World in the 1970s to get a new sort of economic order were very heavily motivated by political and not just economic concerns. These countries have problems of vulnerability, both domestically and internationally.

"Those weaknesses led them to try to change the rules of the game in the international system. The basic rules have been market-oriented, in other words the market determines the allocation of resources. This is great if you are strong and powerful, able to insulate yourself from or adjust to undesirable market pressures.

"The Third World countries, nearly all of which are weak internationally—with a few exceptions such as Brazil and Nigeria—also tend to be weak domestically. They will be in severe difficulties if world trade collapses. It would not only be a blow to their export-import trade, but also to government revenue.

"What the Third World wants to do is to change from basically liberally-oriented regimes to ones based on authoritative state allocation. Such efforts have had some successes but they create enormous tensions, because there is a real conflict of interest between industrialized states and Third World countries."

Why did the international bankers overlend in such an apparently irresponsible manner?

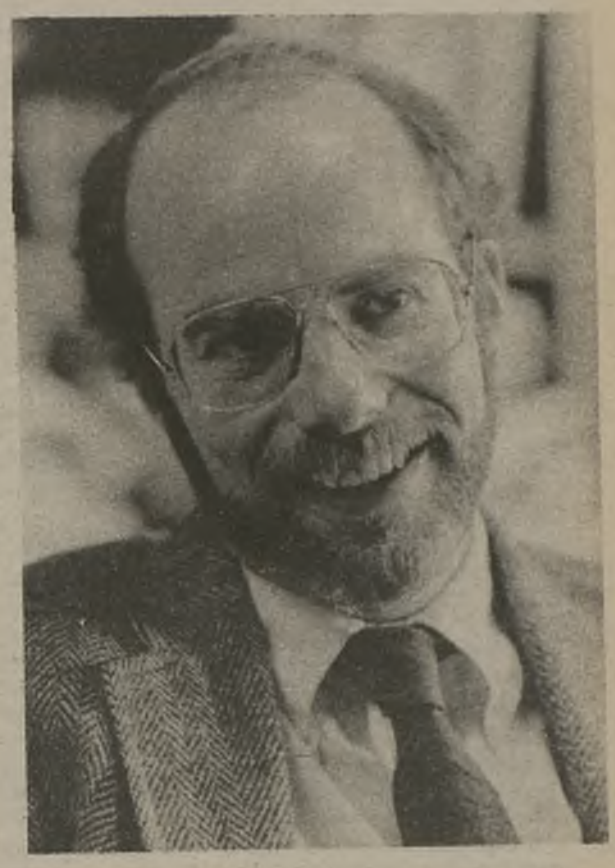
"Much of the attitude of the bankers is psychologically determined. In the 1970s they had a lot of oil money which they needed to put to work. They made a number of optimistic but not unreasonable assumptions about the future level of macroeconomic performance in the industrialized world, which would determine how much money the Third World countries could ask for.

"The bankers were optimistic about what U.S. interest rates would be— and these determine world rates. They made guesses about what oil prices would be. They were wrong. American interest rates skyrocketted, oil prices went up, and there was a recession in the North. Those wrong guesses led to the general recession.

"I think that most but not all of the bankers were excessively optimistic. The likelihood now is that they will be excessively pessimistic. They have been burned and made to look foolish.

"The basic problem is not that the banks will collapse, nor that there will be a world liquidity crisis, but that the overall level of lending will be lower than is warranted.

"This will be serious for the Third World and also present difficulties for the U.S. One-third of our exports go to Third World countries. So if Mexico, Brazil, Taiwan and Korea, for example, find themselves unable to finance imports from the U.S., it will have a dampening effect on American trade as well."



For the first time in its history the U.S. is intimately involved and dependent on international trade.

—Stephen Krasner

Won't this have the effect of making those countries which import substantial amounts of goods from the U.S. ask for loans from the U.S. government, in order to continue to do so?

"They will go through the I.M. F. rather than the U.S. The fund is now rapidly increasing its resources, in anticipation of this."

But the U.S. is the principal contributor to the fund?

"Yes, it puts in about 20 percent of its budget. The quotas were originally set just after World War II."

Surely the contributions should reflect countries' relative shares of world trade, in which case Japan and Germany should bear far larger burdens?

"There have been incremental changes, but the proportions have not fully reflected changes in world trade shares. U.S. contributions still reflect the sort of power that the U.S. had back in the 1950s.

"It would be more fair in some ways if America's falling share of world trade were reflected in our contribution to such institutions as the I.M.F. and World Bank. But equally, it is clearly in the American interest to make sure that we don't have short-term contractions in world trade, and that U.S. influence in the I.M.F. remains strong.

"I think we can see an American foreign policy emerging that is more oriented toward American interests in a narrow sense."

That is why U.S. aid to the Third World is going down?

"The U.S. is near the bottom of the list in aid given by major industrialized countries as a percentage of G.N.P. Some European countries have increased their aid substantially."

But from a low base, and in the cases of such countries as France, aid to countries which can be regarded as their satellites?

"Yes, and the Japanese are giving their money to

continued on next page

'New federalism' battles the tides of history, David Kennedy declares

President Reagan's "new federalism" battles the tide of history, says Prof. David Kennedy of the Stanford History Department.

While the federal government apparatus remains relatively small for a country as large as the U.S., its growth stems in part from the past shortcomings of state government, he maintains.

"Too often, as in the case of regulating interstate economic enterprises, the states have proven incapable of coping with problems whose real dimensions far exceed their geographic boundaries or political powers.

"Too often, as in the case of Depression welfare programs, they have been unwilling or unable to cope with problems even well within their strictly political jurisdiction.

"Too often, as in the case of gross rural over-representation in their legislatures, the states have perpetrated patent political absurdities.

"And far too often, the states have indeed been instruments of oppression.

"When asked to respect our 'traditions' of local government, one is tempted to recollect Winston Churchill's description of the 'traditions' of the British Navy—'grog, sodomy, and the lash."



David Kennedy

The benevolent myth

Alexis deTocqueville, whose writings contributed powerfully to the "largely mythical image of the benevolence of local American governments" conveniently overlooked the presence of two million slaves in America, Kennedy notes.

"It is only the central government, by virtue of its aloofness from local passions, that has proven capable—even if only occasionally—of lifting us above petty parochialisms and sometimes vicious prejudices, and holding us up to our own highest ideals, especially the ideal of equality. . . .

"Federal power has not expanded, as the British Empire was alleged to have done, in a prolonged fit of absent-mindedness, nor has it increased by some perverse process of national usurpation.

"It is even arguable that federal power has grown exceptionally modestly in this country. . . .

"To the extent that the U.S. has managed to preserve a less centralized governmental system than other modern nations, the explanation is perhaps to be found in the fact that we as a people have been singularly spared the scourges of modern warfare that have been visited upon almost every other society.

"It has not been our collective national virtue or political wisdom, but our fortunate—and entirely accidental—geographic location that has allowed us for so long to maintain our distinctive political system of *imperium in imperio*. . . .

"Decentralization is a luxury. . .affordable only in circumstances of guaranteed national security, abundant economic resources, and assured social peace.

"When all, or any, of these conditions are absent, a pressure arises—almost with the regularity of a law of nature—for unitary leadership from the center. . . .

"Contrary to popular legend, the First World War did not constitute a notably permanent advance toward federal intervention in the economy. Not a single one of the major wartime mobilization agencies survived; most, in fact, were disbanded within days of the armistice.

"The Civil War had left a much more long-lived legacy of centralized government agencies."

Kennedy is the author of a recent book on the impact of the First World War on American society, titled *Over Here*.

"Again, contrary to popular legend, Franklin Roosevelt's New Deal did not move aggressively in 1933 to snatch relief and welfare programs away from the states," he adds.

"By that date, after four grinding years of depression, the states were broke, many of them even on the brink of defaulting on their debt obligations.

"Virtually no states had unemployment compensation plans, and only 17 had old-age pension plans, most of those dismally underfunded.

"The states, in short, came begging for federal assistance; they did not have it roughly shoved down their throats. . . .

"There were then, as there remain today, compelling reasons for national uniformity of welfare programs, necessarily entailing federal administration. Without it, the most generous states justifiably fear becoming saddled with an unfair share of welfare costs, as they become magnets drawing the nation's needy.

"Poorer states are painfully tempted to deprive their citizens of social services, including adequate education, in order to attract industry by keeping their tax bases low. These fears and temptations thrive in an environment that lacks strong central government direction.

"The absence of that direction may not lead again, as it did in 1861, to a shooting Civil War, but it encourages a kind of federalist economic fratricide that is analogously harmful to the national interest."

His views were developed in a recent paper for the American Enterprise Institute.

Krasner/cont. from page 3

South East Asia where they have a lot of trade, and so on."

Such facts, Krasner says, reinforce his belief that economists are blinkered in their tendency to regard economic relations as autonomous, flowing along on their own, whereas economic behavior is more or less conditioned by political interests and power.

He believes that a statist interpretation which focuses on high-level policy-makers and their conceptions of national interest is superior to either pluralistic or Marxist methods.

Asked to develop this idea he said: "Most Americans, and many scholars, look on public policy as the result of conflict and compromise among opposing groups. Most people believe that public policy emerges from this pluralistic conflict, and that the great danger is that private groups will 'capture' the U.S. government.

"My view is that state institutions, especially the White House, the State Department and the Treasury, have a great deal of autonomy, in terms of the preferences they have, and a fair amount of autonomy in carrying out those preferences. Certainly not all the time, for there are many constraints, but a great deal of autonomy in implementing policy.

"In the research for my book, I studied about 15 cases of raw materials investments, in many of which there were conflicts between American public officials and American multinational corporations.

"What I found in almost all those cases was that the government prevailed. The final outcome reflects in a powerful way that the final decisions are made by the governmental institutions and not by the multinational corporations.

"The belief that American foreign policy is run by multinational corporations is just bunk."

But wasn't the American decision not to sign the draft Law of the Sea influenced by the multinational corporations?

"Industry was divided on this issue. However, the Reagan administration was concerned about restrictions on deep seabed mining and resentful of Third World influence on the Treaty's final provisions. The treaty illustrates the pitfalls of trying to negotiate with over 120 nations."

Krasner believes that the present period is a very challenging one for the U.S., both domestically and internationally.

"It is difficult domestically because we have a governmental structure that fragments and decentralizes power. At the same time we have social and economic problems that demand a coherent governmental response.

"Internationally, this is the first time in American history that the U.S. has been what I call a normal power, that is involved in the world but not able to control events. Up till 20 years ago we had an enormous amount of influence over the non-communist world. We were more powerful and influential than any other state has been in the last 500 years.

"Today much of that has changed. We are deeply involved with the rest of the world, and in many ways—oil for example—dependent on others. We do not have institutions or political traditions which allow us to function well in this sort of situation.

"On the domestic side decisions have to be filtered through so many layers of control and bureaucratic agencies. Another factor is that in the U.S. we have deeply-rooted ideological beliefs about the illegitimacy of too much power being given to central government.

"Yet we may now be entering a political and social environment where central decision-making is imperative."

Krasner believes that the Cancun world conference in 1981, which attempted to deal with North-South problems, was the last gasp of the universal negotiating process. He says there is not underlying consensus, only underlying disagreement.

"I think we are much more likely to have a stable international situation if only those countries negotiate which have a specific interest in a particular issue. This will be better than trying to secure general agreement on all issues. The failure of the attempt to get a Law of the Sea is an example.

"It will always be feasible to have negotiations between nations on issues of specific interest to particular parties, such as the question of emigration from Mexico, for example. But it is chimerical to expect general agreement in principles and norms between industrialized and developing countries. That simply won't be productive.

"The U.S. will continue to support liberal principles. Developing countries will favor more direct state control.

"Looking ahead, I think there are a relatively small number of Third World countries which are very important to the U.S. and the rest of the industrialized world. We shall have a lot of interaction with newly emerging industrialized countries such as Taiwan, Brazil, South Korea, Singapore, and a few big countries such as India.

"I think we shall ignore, or tend to pay much less attention to the rest of the Third World. The major industrialized countries will act in a similar manner. As a result there will be a number of Third World countries which will be ignored."

* * * *

Three hundred students crowd Krasner's Political Science 35 "How Nations Deal with Each Other," which serves as the introductory course for the international relations major. He also teaches graduate seminars and undergraduate courses on American foreign policy, and the politics of international economic relations.

There are advantages at women's colleges —Nan Keohane

Women's colleges as separatist institutions continue to provide advantages for women that are not available to them in coeducational colleges, Wellesley College President Nannerl Keohane said Feb. 20 at a conference on communities of women held at Stanford.

Keohane was formerly a professor of political science at Stanford and head of the Faculty Senate.

Women's colleges, according to Keohane, provide the opportunity for women to obtain leadership training and for them to define themselves through forms of association such as clubs and sports and governance on their own terms.

They also make it possible for women to be treated seriously as scholars, for them to function in an environment without "hassle," no matter how subtle, and to form close friendships with other women.

"Of course there are still problems," said Keohane, "problems having to do with social life, with making male friends, with depression and eating disorders and with some pressures of ambivalence about sexuality.

"But the continuing advantages of separatism are clear. Until true and full coeducation is achieved, there must be room for a separate path, at least for some women."

The question whether, in the long run "in a better world" there will still be a need for single sex colleges for women is not resolved, she said.

"The reasons why a women's community such as a women's college and also communities of women within coeducational universities and wherever they may be found are important now for our lives are well expressed in an editorial in the most recent issue of the *Wellesley News* written by Wellesley undergraduates," said Keohane.

The editorial said in part:

"Our generation has been accused of being grim preprofessionals lacking social concerns, and expressing political apathy.

"We would like to contest that image. First, unlike the sixties, the eighties is a time of economic recession. The job market is tight. In order to compete in it with men, we must work as hard as men. That doesn't leave much time for volunteerism.

"For awhile it seemed that we might be the new superwomen, juggling family, career, and personal satisfaction while still leaving time for good works and political involvement. No one believes that anymore.

"Instead, we are at the beginning of a series of tough choices. Should we marry now, or later in our career? Should we have children early, later, or not at all? Do we want a job, a profession, or a career? Should we major in Anthropology or Computer Science? Rather than exhilarating, these choices are exhausting. Most of them lead us in the direction not of satisfaction or complacency, but of guilt. Will we neglect our children for our careers or vice-versa? Rather than supporting us, we find that society is adding more guilt. Who will read to the blind and put up campaign posters while we are in the board room?

"Further, we know that the fight is not over. Women do not have equal rights in this country, nor are they paid equally, but we cannot afford to solve this problem by withdrawing from the work force nor by becoming, at the expense of ourselves, superwomen. We must all accept equal responsibilities for the future as well as equal rights, as we share equally the pressure of finding employment as men.

"The fact that another more vocal generation chooses to condemn our lifestyles does not make them invalid. If our 'sisters' will not support us then we, at least, can start this year by supporting each other in what is going to be for many of us much tougher lives than Gloria Steinem ever led us to believe."



. . .we are at the beginning of a series of tough choices.
—Nannerl Keohane

The conference on communities of women was sponsored by SIGNS: Journal of Women in Culture and Society, The Center of Research on Women, and the Humanities Center. It was funded by a grant from the Rockefeller Foundation.

—Millicent Dillon

Attention must be paid to younger people in the country —Donald Kennedy

"The best single social test of a nation's regard for the future is the way it treats its children," according to Stanford University President Donald Kennedy.

As the huge post-war "baby boom" generation moves toward retirement over the next 30 years, "there is a real danger that we will increase our absorption with the end of the life-cycle, instead of attending to its beginning, where the future lives," he observes.

"The elderly deserve and need our help; I doubt they would ask for our preoccupation."

Former commissioner of the Food and Drug Administration, Kennedy says, "Our resources for health care and health research are selectively consumed by the diseases of age, while those of infancy are, by comparison, given less attention.

"As the head of a federal agency concerned with public health, I was constantly struck by the emphasis given to carcinogenic risks, which have their primary effects on older Americans, as compared with equally prevalent teratogenic risks, which affect the very young.

"Within the past few years, we have watched our welfare system stagger as benefits to the retired under Social Security rise twice as fast as the wages paid in by younger workers.

"And a sluggish job market, clogged by the overabundance of young people, has made youth unemployment a chronic national disease—and we have meanwhile decreased entry-level opportunity by delaying or abolishing mandatory retirement."

Public education

Public schools deserve increased support, he adds. "In 1969, national expenditures for education and health were about equal. Now we spend only two-thirds as much on education as on health."

Stanford, Yale, Harvard and Berkeley are among the major research universities now focusing attention on public primary and secondary education.

"The business community has also been more active at the local level in school improvement," he notes. Both need "to build a national faith that the schools can be improved and that success in that venture will guarantee our future."

Years ago, he noted, "the argument for public responsibility was that it spared matters important to the society's future—like investment in the education of the young, the management of non-renewable resources, and the conduct of innovation—from market forces we feared were heedlessly concentrated on the present.

"But these public responsibilities have become more and more vulnerable to the short-term payoff incentives of the electoral system."

Since 1968, he notes, federal support for non-defense research and development has declined 38 percent, with half of the decrease taking place in the first two years of this decade.

One third of the pupils enrolled in New York public schools now are defined as chronic truants—"that is, they are absent essentially all of the time," he adds.

"Society is not managing its capital in a future-oriented way," either in human talent or in "hard" capital assets that improve productivity.

Many highly publicized visions of the future "turn out to be higher in entertainment value than in utility," he observes. "For example, the latest entrant in the Grand Scenario parade is a float called the High Technology Society. It depicts an industrial culture in the U.S. based entirely on smokeless information—an appealing vision indeed.

"But there are a number of things wrong with it.

"First, both the number of jobs it will create and their average skill level have been overstated.

"Second, computers and similar products move a lot of wealth but create relatively less than the classical extractive and productive sectors.

"Finally, we just can't get along without what we now please to call low-tech; we can't afford the balance-of-payments losses, and we can't get along without the stuff it makes.

"It is all very well to be entranced by our future. But we should avoid the fate of Holden Caulfield, the hero of *Catcher in the Rye*, who was 'not merely entranced by beauty, but impaled upon it.'"

Kennedy's views were developed in a Feb. 18 talk to the Young President's Organization in Phoenix, Arizona.

Mosher 'took full advantage of the situation' when China first opened its doors

continued from page 1

briefly at the commune in Guangdong province.

Soon afterwords, Mosher said, "she went to Peking. . . (and) began to cooperate in a Chinese campaign to slander me." He has not seen her in two years and the University refused to disclose her whereabouts to him, at her request.

Mosher said Prof. Jane Collier, head of the three-member faculty investigation group, had written a statement in the final report on the basis of "a half-dozen phone calls" with So.

Talking later with reporters, Barnett emphasized that the committee had relied only on materials from sources willing to be identified both to Mosher and the full anthropology faculty.

Mosher was given an opportunity to reply to the report both in writing and in person. Flown from Taiwan to Stanford at the University's expense, he spoke for 45 minutes at a closed session of the department faculty Thursday morning, then answered questions.

The faculty then deliberated its decision while Mosher met reporters. After learning of the decision from Barnett at 4 p.m., Mosher said his former wife was "obviously lying" and "reluctant to put things in writing."

In effect, he added, "the reason Stanford is not making the report public is that they offered my ex-wife confidentiality in return for this statement."

Reasons not given

All 11 professors who participated in the decision signed a statement that "the faculty does not intend to publicly discuss or release the substance of the report and we have urged Mr. Mosher to exercise the same discretion."

Stamped "confidential," the cover of the report—shown to reporters by Mosher— said it "contains information that may be injurious to innocent parties."

Mosher said "the only innocent person harmed was myself."

Earlier, looking tired and drawn, he calmly described how hundreds of peasant women were coerced into abortions when the Chinese government drastically tightened its family planning program months after they had become pregnant.

In a commune of 80,000 there were as many as 400 abortions a month early in 1980, he said.

"Perhaps I should have seen" that publishing an article on this in the popular press of Taiwan a year later "would upset many" and "perhaps I should not have permitted the photo to be printed," he conceded.

Published in the *Sunday Times China Weekly* his photo showed a woman in advanced pregnancy being prepared for abortion. She was naked around the waist and her face was fully visible.

The concept of privacy "does not exist in the current Chinese state," Mosher said. With Chinese censorship, the peasant "will never see that" photograph.

Under questioning, he added, "I should have published the article under my name" instead of using only his first two names, Steven Westley.

Faculty greatly upset

Mosher said publication of the article and picture in what he described as a Taiwanese "clone" of *Time* magazine "upset the Stanford faculty greatly."

He had presented the same material to an academic audience in Taiwan without controversy. Mosher said that Prof. William Skinner of Stanford, a member of his doctoral dissertation committee, had described his article as "good" before it appeared in the popular press.

Mosher submitted a similar piece to *Asian Survey* which published it around April, 1982. This was delayed several months because of what Mosher called the reaction of "angry academics" after the Taiwan publication.

He felt it was "necessary" and "appropriate" to make the birth control information public "sooner than the body of work" stemming from his field research. He expects MacMillan will publish his book, *Broken Earth: The Rural Chinese* later this year.

Lots of pressure

The popular article generated "a great deal of pressure" and hate mail from other Sinologists, who said there was "no possibility" of changing Chinese practices by such means, Mosher noted.

The faculty "never questioned the truth of (my) charges" about birth control. "What they have questioned is my right to say the truth at a time and place of my choosing."

During the course of the faculty meeting Thursday, Mosher told reporters, Prof. Arthur Wolf admitted he had heard charges in Peking about Mosher's work that led to the faculty investigation. It was "irresponsible behavior" for Wolf to raise these issues "without contacting me," Mosher said.

Wolf was in China doing research on several different communes from September 1980 until August 1981. Contacted by Stanford News Service, he said he had first learned of the Chinese charges against Mosher through correspondence from faculty colleagues on campus, who provided him with a copy of Mosher's response. He found this "quite convincing."

Only 48 hours prior to his planned departure from China, he was personally briefed by his Chinese hosts and decided to discuss their concerns further with the U.S. Embassy. On his return to campus, he told his faculty colleagues there might be a serious problem but "they already knew more about it than I did," Wolf said.

Wolf responds

He noted that Mosher "never informed me" of the Chinese accusations, even though he was head of Mosher's dissertation committee. Wolf resigned this position.

Both Skinner and Wolf heard Mosher's presentation to the faculty Thursday, but left the room and did not participate in either the deliberation or the vote to avoid any possible conflict of interest.

Mosher told reporters that the faculty was "well aware" the Chinese "threatened harm" against exchange programs unless he was disciplined. "The extent to which they succumbed (to this threat) only the Stanford faculty knows," he added. Mosher's research in China was done as an independent scholar, arranged through the Committee on Scholarly Communication with the PRC.

Mosher told reporters he had "no strong political feelings" when he first went to China. "My disillusionment was very gradual," shaped by what he learned from "peasants, workers and officials."

Women now literally "take to the hills"



'Perhaps I should have seen' that publishing an article (on Chinese abortions) in the popular press 'would upset many' and 'perhaps I should not have permitted the photo to be printed.'

—Steven W. Mosher

when the government intensifies its birth control program with personal checkups every six months. Infanticide by parents is increasing, especially for female babies, who normally leave home after marriage. Sons remain responsible for older parents.

While he did "nothing unethical or unprofessional" in China, Mosher said, "I took full advantage of the situation." Official rules were few as "the world's largest bureaucracy"—the Chinese government—proved slow to respond to changes stemming from normalization of relations with the U.S. The current restraints on scholarly research there "certainly derived in part from some of their concerns with me," he added.

Anthropology is "a very loose discipline" with "no elaborate codes of conduct," he declared. "Every researcher who works alone in the field has to decide how to protect his informants. . . how to protect privacy. . . in what manner to publish his work.

"I could only use my best judgment. If others think that judgment was somehow lacking—and they certainly do—then that's their opinion. . . .

"Regardless of the faculty decision, I will continue to write up my research in China."

Termination from the Ph.D. program may "hang like a cloud over me for the rest of my life, but it should not undermine my credibility as a reporter of events." He suggested his style might resemble that of Margaret Mead's accounts of Samoa.

Talking with reporters before the decision, he said that without a Ph.D. "I would not be able to go on to an academic position. I would essentially have to support myself doing creative writing. I would be a pariah. I would be outside academia.

"It would essentially put my academic career on academic hold for the rest of my life."

In his letter to Mosher, Barnett said the faculty "wishes to emphasize that the decision to terminate you from the program was made with great regret."

Professorial votes

"You have had an excellent academic record, and as with all advanced students, the faculty feels that they have invested very heavily of their time and effort in your training. The decision was made after careful and full consideration of the facts of the case and extenuating circumstances."

Active, tenure-line faculty joining in the vote included Profs. William Durham, James Fox, Charles Frake, James Lowell Gibbs Jr., Joseph Greenberg, Gilbert Herdt, Renato Rosaldo, Bernard Siegel, Robert Textor, and Sylvia Yanagisako. Harumi Befu had to leave before the four-hour session ended.

Collier and several other faculty currently are in the field.

An additional four hours elapsed before Mosher received Barnett's letter and made it public.

Mosher said the 47-page committee report covered three basic points: his Taiwan article, statements by the investigating committee for his ex-wife, and statements by the Chinese communist government.

"I will use every resource at my disposal" to contest the outcome, he said. Existing student grievance procedures provide for written appeal to the dean of the School of Humanities and Sciences, the vice provost and dean of graduate studies and research, and finally to the president.

Mosher said he has consulted an attorney, but noted that the case was "very complex" and could cost $3,000 to $5,000—"not an easy sum" for a graduate student to obtain.

Background on Mosher

Now 34, he lives in Taiwan with his new wife, a teacher. His parents live in Fresno. A graduate of Hoover High School in Fresno, Mosher received bachelor's and master's degrees from the University of Washington and came to Stanford in 1976.

He expects to stay in California about three weeks and visit his publisher in New York before returning home. His father sat quietly in the background through most of the discussion with reporters. A departmental flyer posted in the halls noted that graduate students would hold a discussion on ethical questions in field work that night. Mosher was not included on the program.

A departmental flyer posted in the halls noted that graduate students would hold a discussion on ethical questions in field work that night. Mosher was not included on the program. *(More on page 16.)*

—Bob Beyers

Mosher accuses Peking of 'campaign of slander,' makes no apologies to anyone

Following is a statement by Steven Mosher, Stanford graduate student in anthropology, dated Feb. 9, 1983.

In 1979-80 I carried out a community study of a production brigade—what formerly would have been called a village—in the People's Republic of China as an exchange scholar under the newly signed U.S.—P.R.C. cultural exchange agreement. My research was the first and, as it turned out, the last full-length rural field study ever permitted by the Communist Chinese, who quickly realized that it was not in their interest for the impoverished and oppressed conditions under which rural Chinese live to become generally known.

Although these conditions were in many respects depressingly dismal, in my experience nothing topped the population control program for sheer barbarity. I found that abortions—were regularly carried out on women seven, eight, and even nine months pregnant, often against their will, and that there were even occasional cases of officially instigated infanticide. PRC statutes which prohibit these and other inhumane practices were simply ignored by Communist cadres in their drive to meet the stringent birth quotas they were given.

Primarily because of my efforts to bring these atrocities—and here I choose my words as carefully as I can—to the attention of China and the West, Peking officials have embarked upon a campaign of slander intended to destroy my academic reputation and undermine the credibility of my charges. Since fall 1980 each American academic exchange delegation to visit Peking has had to sit through a lengthy recounting of the research improprieties I am alleged to have committed.

There is another reason I have been singled out. Out of the more than one hundred research scholars who have thus far participated in the U.S.—P.R.C. exchange program, I am the only one who has yet to receive the Ph.D. degree, who does not hold an academic position, and who does not enjoy the support of an academic institution. Peking correctly calculated that I could be slandered without fear of American reaction. American scholars, including those at Stanford, instead of coming to my defense, have abandoned me. Stanford University, rather than aiding my cause, has subjected me to an investigation.

The final report produced by the Stanford investigation, which has run on an incredible 17 months and has caused me much mental and emotional suffering, follows the PRC line in falsely accusing me of "grave misconduct." It recommends "the termination of Steven Mosher's doctoral candidacy in Anthropology."

* * *

Everything was in flux when I first arrived in China, and I was allowed to carry out my study of a village without official supervision or even surveillance. *Newsweek*'s characterization of me as adopting "a freewheeling style that smacked more of Indiana Jones than Margaret Mead"is exaggerated, but it is true that I took full advantage of the unprecedented latitude I was given by Peking to gather a wealth of information on all aspects of life in the Chinese countryside.

Not that all was smooth going. In the opening stages of my research several misunderstandings occurred. In February 1980 I received a note from John Jamieson, the U.S. Academic Adviser in Peking, informing me that Peking had expressed concern that I had (1) imported a van, (2) engaged a research assistant from Hong Kong, (3) obtained sensitive documents, and (4) hired local villagers to help with my research. Peking's charges were false and fatuous, since I had received permission from provincial authorities for the van and assistants, and the rural reports and notices I was gathering could scarcely be considered "sensitive," but I nevertheless bent over backwards to alleviate Chinese concern.

Immediately and on my own initiative, I (1) requested and received permission to donate my van to the local village, (2) sent my assistant back to Hong Kong, (3) became more circumspect in collecting written materials, and (4) requested that Jamieson convey to the Chinese that I was not hiring locals to help with my research, although under arrangements made by provincial officials villagers were helping me with domestic tasks. I even wrote a letter to Peking expressing my regret over any misunderstandings that had arisen.

These steps had the desired effect. On May 2, 1980, I was notified by the Committee on Scholarly Communication with the People's Republic of China, the semiofficial body charged with overseeing the American end of the exchange program, that "there has been a resolution of questions and concerns raised in Peking."

During these same months, though, I had grown increasingly concerned about China's birth control movement. I witnessed first-hand the spring 1980 campaign in my commune, and saw hundreds of often very pregnant women forced to undergo abortions. Initially I felt that these excesses were caused by overzealous local cadres, of whom there are many in China. After some deliberation, I decided to contact Vice-Premier Chen Muhua, who heads the national birth control program, about the problem. The short, carefully worded report I sent her pointed out that in Guangdong Province, where I was doing my commune study, the PRC's own birth control regulations, which forbid abortions after the sixth month of pregnancy and the use of coercion, was being regularly and systematically violated. By bringing these violations discreetly to the attention of the high official directly responsible for overseeing the program, I was hoping that there was a hard core of integrity and decency in the upper reaches of the Deng-led Communist Party capable of mitigating its own evils.

I was naive. During the year after I sent this report the campaign continued, indeed, intensified. I began to receive reports that to escape abortion women were taking to the hills at the onset of each semiannual birth control campaign, there to give birth under the most primitive of conditions, without medical facilities or trained midwives. More tragically still, infanticide began to reappear as families sought to reserve their quota of one child for the birth of a boy.

The only achievement of my report was to anger the Peking authorities. Not only did they now resurrect their old complaints about the van, the assistant, and "sensitive" material, they embellished them beyond belief. As relayed to me by former Carter Administration China adviser Micheal Oksenberg, the van was now alleged to have been used to bribe village officials, and the originally "sensitive" material was upgraded to "highly classified materials. . . .state secrets, particularly about the work of the public security forces and the Communist Party, which caused Chinese officials in Peking to believe that (Mosher) was an intelligence agent." Nor was this all. I was also accused of having travelled in the van through South China without proper authorization (even though I had been issued a valid travel permit for the trip), and of trying to exit the country with "undeclared gold coins."(In fact the coins were not gold but copper, had been approved for export, and were declared by me to customs—which confiscated them anyway.) In short, by questioning the implementation of the birth control program I had drawn the wrath of the Chinese powers-that-be, whose instinctive response to criticism is to crush it.

Another reason why Peking chose to renew their allegations against me at this time was their desire to restrict research on contemporary social problems. The Chinese cannot live with American social scientists getting on the inside of their society. At the same time, they were anxious to ensure that this move would not adversely affect their ease of access to American academic and research institutions and the transfer of American technology. What better way to accomplish this than to select from among past American researchers someone to blame this shift in policy on, and further forestall reprisals by enlisting American academics and scholarly organizations in the effort to scapegoat him.

So it was that the Chinese began threatening American scholars with "negative consequences" for the exchange program if I were not punished. To give just one example, in a conversation with Kenneth Prewitt, President of the Social Sciences Research Council, held in Peking on Nov. 14, 1981, PRC official Zhao Fusan stated that "the exchange program could be harmed if the American scholarly community took no action on what the Chinese regarded as improper behavior by Mosher." (Letter from Kenneth Prewitt to Stanford University.) Even though the Communist Chinese have since banned social science research altogether, they continue to demand that I be punished.

In the meantime I decided that the time had come to begin making public the excesses of the Chinese birth control program. In an article first published in Taiwan, and then later in the United States, I detailed the progress of birth control in the Chinese countryside. This article was factual, Peking was imposing its will on a powerless populace. Pictures that accompanied the article showed young village women seven and eight months pregnant being prepared for abortions. One of these was picked up and carried in the Nov. 2, 1981 issue of *Newsweek* (without permission).

It was this graphic evidence of human rights violations that led Peking to go public with its charges against me. In a formal statement sent to Stanford University, the Communist Chinese claimed that "the photographs taken by Mr. Mosher during his stay in (China) exceeded the scope of his research topic (and) had nothing to do with any conceivable social science research topic." After repeating a number of earlier allegations, the statement concludes that "We hope that Stanford University will deal with this matter severely and that (we) be informed as to its disposition." (Copy of statement enclosed.) In effect, they asked for my head.

It is a measure of the success of my research that the Chinese Communists are so anxious to discredit it. They are apparently acting under the belief, shared by some American academics, that if I am expelled by Stanford University my work in China will go unpublished. They could not be more wrong. Although I face certain financial hardship in continuing to write without the support of an academic institution, I have an obligation to the rural Chinese whose lives I shared to document the reality of village life under Communism. My first book, entitled *Broken Earth: The Rural Chinese*, will be published by MacMillan later this year. Others will follow.

I have long since given up the naive notion that the Communist Chinese will correct their own abuses in the area of birth control. Neither do I expect that these abuses will be curbed by embarrassing the PRC before Western public opinion. But I have at least borne witness to them in articles and photographs. And I apologize to no one for having done so.

Steven Westley Mosher

Letter from Barnett disclosed by Mosher

Following is a letter from Anthropology Dept. Chair Clifford Barnett informing graduate student Steven W. Mosher that he has been terminated from the Ph.D. program. It was released by Mosher shortly after Barnett gave it to him.

I am writing to inform you of the decision taken by the faculty of the Department this morning to terminate you from the Ph. D. Program in Anthropology.

The faculty of the Department unanimously endorsed the findings, conclusions, and recommendations contained in the Report of the Ad Hoc Investigating Committee. You have a copy of that report as well as all of the documents which are utilized in drawing up the report.

As you know, the cover of the report states that: "It contains information that may be injurious to innocent parties." You have remarked on the truth of this statement in a letter you wrote when you received a copy of the testimony contained in the Report. For that reason the faculty does not intend to discuss publicly or release the substance of the Report and we urge you to exercise the same discretion.

The faculty wishes to emphasize that the decision to terminate you from the program was made with great regret. You have had an excellent academic record, and as with all advanced students, the faculty feel that they have invested very heavily of their time and effort in your training. The decision was made after careful and full consideration of the facts of the case and extenuating circumstances.

If you have reason to believe that the decision was unjust, either substantively or procedurally, you may file a grievance. To do so, as you know from the material I sent you earlier, you can address an appeal to Dr. Norman Wessells, Dean of the School of Humanities and Sciences.

Sincerely,
Clifford R. Barnett, Ph.D.
Professor & Chair, Anthropology

Faculty statement

Following is a statement released by the Anthropology Dept. faculty members who voted to terminate Steven W. Mosher from the Ph.D. program.

The Faculty and the Department of Anthropology who participated in the discussion and vote taken on the case of Mr. Steven Mosher have subscribed to the following statement.

The full substance of this case is contained in the Report of the Ad Hoc Investigating Committee and in the documents which are attachments to the Report. Mr. Mosher has a copy of the Report and of all of the documents that were utilized in drawing up the Report.

The cover of the Report states that: "It contains information that may be injurious to innocent parties." Mr. Mosher has remarked on the truth of this statement in a letter he wrote when he received a copy of the testimony contained in the Report. For this reason, the faculty does not intend to publicly discuss or release the substance of the Report and we have urged Mr. Mosher to exercise the same discretion.

Clifford R. Barnett (Chair)
William Durham
James Fox
Charles Frake
James Lowell Gibbs, Jr.
Joseph Greenberg
Gilbert Herdt
Renato Rosaldo
Bernard Siegel
Robert Textor
Sylvia Yanagisako

Medical Center MEMO

Contaminated 'heroin' provides clues to Parkinson's

The freak accident in a drug dealer's laboratory that sent several young Bay Area heroin users to the hospital with symptoms of Parkinson's disease last summer may have opened a new door to understanding and treatment of the disease, according to research by Stanford University scientists.

A poison, probably made as an accidental byproduct when a kitchen chemist used too much heat or acid in preparing a homemade batch of a narcotic, has been found to selectively kill cells in the part of the brain most severely affected by Parkinson's. If the drug induces the same symptoms in laboratory animals—and preliminary research indicates that it does—the physicians may have uncovered an animal model for the disease.

"The six young people we have studied have symptoms that are virtually indistinguishable from Parkinson's," said Dr. J. William Langston, an assistant professor of neurology at Stanford who conducts clinical research at Santa Clara Valley Medical Center in San Jose.

"The rigidness of posture, slow movement, and tremors are classical Parkinson's symptoms. But Parkinson's is a disease of the elderly, and these are young people. We were stunned when they came in."

Langston and colleagues Philip Ballard, James Tetrud and Ian Irwin reported their findings in the Feb. 25 issue of *Science* magazine.

The findings are significant for two reasons, Langston said. "First, if the drug has the same action in animals—and early indications from the National Institute of Mental Health indicate that it does—we'll have a new way of studying potential treatments for Parkinson's disease."

Until now, creating an animal model of the disease has been difficult because no other substance tested is specific enough to selectively affect only those cells responsible for Parkinson's.

"The second implication is more theoretical, but potentially just as important," he said.

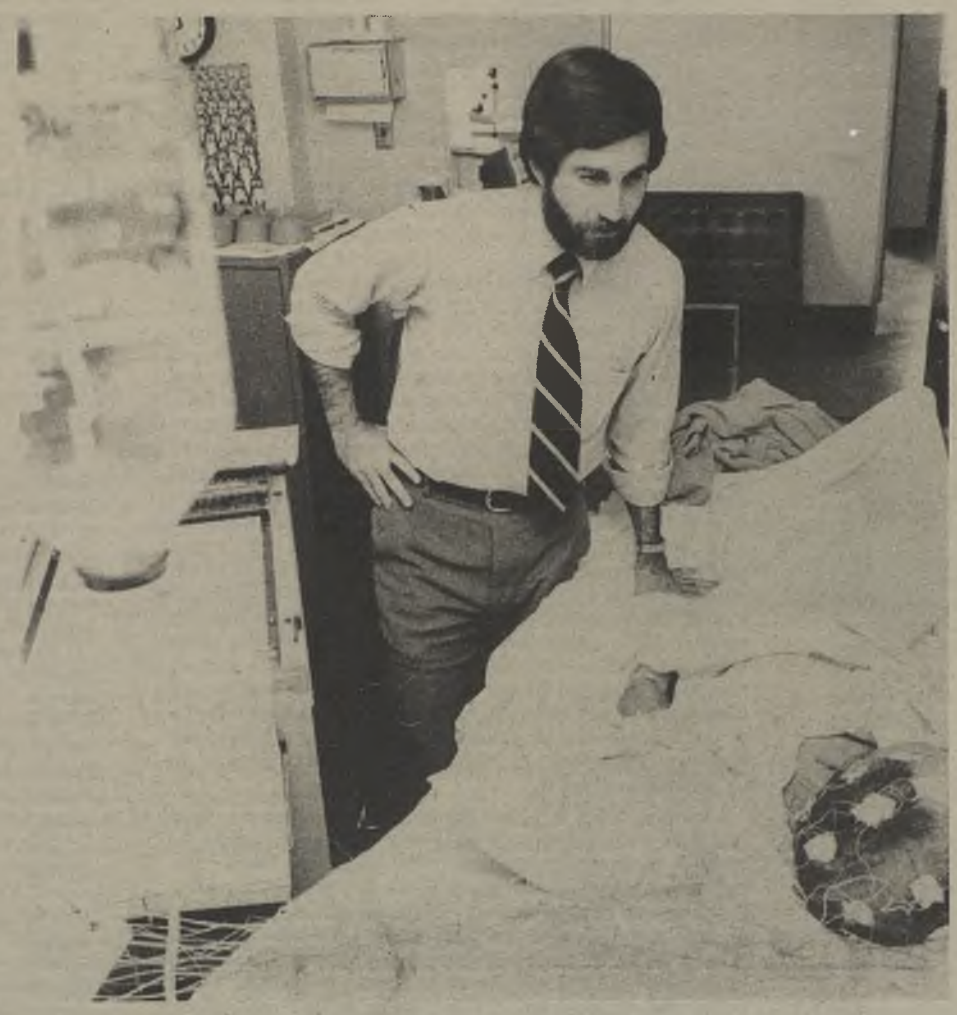
Understanding the disease

"No one knows why, but in some diseases, such as Parkinson's, only certain specific brain cells die. One theory says that as some people get older, waste products accumulate in these nerve cells—the cells can't take out the garbage.

"Now we have a drug that we're pretty sure is toxic to only these cells," he said. "As we learn more about the chemistry and function of this drug, we may get a clue to understanding what's happening in the natural disease."

The chemical culprit responsible for the artificial Parkinson's seems to be 1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine, called MPTP for short. Used as a tool in synthesizing other chemicals, MPTP has had no known biological properties, and has been readily available from the Aldrich Chemical Company for years, Langston said. However, he added, the recent findings have prompted the Bureau of Narcotics to begin reclassifying the chemical as a "controlled substance."

Langston theorizes that, while attempting to make a drug similar to the analgesic Demerol with "a little more kick," a drug dealing chemist mistakenly produced MPTP instead, and sold it on the street as heroin. Drug users from Salinas to Santa Clara county bought the contaminated drug and injected it. At least six developed full blown, advanced stage Parkinson's symptoms.



Langston monitors a neurology patient. In a detective story that stretched from coast to coast last summer, Langston and colleagues traced six cases of apparent Parkinson's disease to a contaminated batch of a drug dealer's narcotic. Their findings, published in last week's *Science*, may help scientists simulate Parkinson's in animals, Langston said, as an aid to understanding and treating the disease.

While researching the bizarre occurrence of the disease in young people, Langston and his colleagues found a case reported in 1979 of a graduate student who developed the same symptoms after injecting homemade drugs.

"For four to six months he had been synthesizing MPPP (using a reaction which produces MPTP as a by-product) and injecting it intravenously without problems," the researchers wrote. (MPPP stands for 1-methyl-4-phenyl-4-propionoxy-piperidine, a chemical closely related to MPTP in structure.) "Apparently, after taking several 'shortcuts' in synthesis and injecting the resulting product, he developed marked parkinsonism."

When the student died of a drug overdose two years later, an autopsy of his brain showed substantial, selective damage to his substantia nigra, an area half the width of a pencil and two inches long at the base of the brain, that is involved in coordinating movement. Damaged cells from that region looked "indistinguishable" from analagous cells in elderly patients with advanced Parkinson's disease, Langston said.

"This situation is both tragic and ironic," Langston said. "Usually scientists try a lot of substances in animals first, in their attempts to understand mechanisms and treatments of disease, long before they're tested in humans. It's very ironic to develop the animal model in humans first."

Where to call

All six of the patients Langston has thus far studied injected multiple doses of the drug, ranging from five grams over four days to 20 grams over five to eight days.

"But we have some evidence that even one dose of this chemical may have permanent effects," said Langston, who urged anyone who thinks they may have used some of the contaminated drug to contact the department of neurology at the Santa Clara Valley Medical Center, (408) 279-5246, for confidential testing.

"Heroin" contaminated with MPTP triggers a burning sensation during injection, and frequently causes hallucinations, said Langston. Precise laboratory tests can confirm or debunk a suspected case of MPTP poisoning.

"Though the people who have had only one or two doses may have no Parkinson's symptoms now, they may be at greater risk for developing symptoms at some point in the future," Langston said.

Though the exact mechanism of Parkinson's disease is unclear, one result of destruction of the brain cells is a reduction in the vital neurotransmitter dopamine. In current treatment for the disease, Parkinson's patients take daily oral doses of "L-dopa," a substance the brain can use to make more dopamine. Patients with the disease get progressively worse over a number of years, though the L-dopa treatments can permit them to return to normal lifestyles.

The patients Langston has studied who injected MPTP have responded just as well to L-dopa treatments, he said. However, side effects from L-dopa, such as movement disorders, which usually occur in Parkinson's patients only after years of treatment, already are appearing in some of the young patients.

—Deborah Franklin

Guest lecturer to discuss multiple sclerosis

Dr. Byron Waksman, a noted investigator in neuroimmunology, will deliver the seventh annual George A. Zimmermann Lecture at Stanford University Medical School Friday, March 4.

His talk, "Is Research on Mutliple Sclerosis Getting Anywhere?" will begin at 4 p.m. in the Fairchild Auditorium. It is open to the public.

Waksman, an internationally recognized authority on immunology, has been director of research programs, National Multiple Sclerosis Society, since 1979. He has made numerous contributions to the understanding of immune disorders of the nervous system.

Waksman was appointed professor of microbiology at the Yale University School of Medicine in 1963, and in 1964 he became chairman of the department. Since 1979 Waksman has been an adjunct professor of pathology and biology at Yale University and adjunct professor of pathology at New York University. He served as president of the American Association of Immunologists in 1970-71.

Waksman has published more than 250 papers in the field of immunopathology, especially dealing with autoimmune reactions, reactions of "cellular" hypersensitivity, the role of the thymus, specific acquired tolerance, suppressor cells and their mediators, cyclic nucleotides in the regulation of immune responses, and cell cycle phenomena in lymphocyte function.

The Zimmermann Lectureship was established by the Department of Neurology in 1977, as part of a gift by the late George A. Zimmermann, a long-time San Francisco businessman, for multiple sclerosis research and treatment at Stanford.

Changes with new Medi-Cal contract to be minimal

A contract with the state to continue to provide care for Medi-Cal patients has been signed by Stanford University Hospital officials.

Stanford was among six hospitals on the Peninsula notified by telephone Feb. 4 by the Medi-Cal special negotiator that a contract would be sent for hospital review and signature. The contract, effective March 1, was negotiated under a law passed last year by the state Legislature in an effort to reduce Medi-Cal costs.

The effect on most hospital operations at Stanford will be minimal. In fact, "physicians, patients, and most of our staff will not notice any difference when the contract takes effect," said Sheldon King, executive vice president and director. "The same authorizations for treatment will be required, and there will be no change in the care patients receive."

Medi-Cal contracts do not cover care for Medically Indigent Adults (MIAs). Since Jan. 1, county facilities have responsibility for care of MIAs.

The main change under the new Medi-Cal contract at SUH will be in the billing department, King said. The hospital will be reimbursed at a single daily rate for each patient, regardless of the severity of the illness or the extent of the treatment.

In the past, the state reimbursed hospitals for "reasonable" costs incurred for treatment of Medi-Cal patients. These costs differed according to the intensity of care and amount of services required by the individual's illness.

King said that if the current level of Medi-Cal patients at Stanford is sustained, the hospital will be able to manage with the current single reimbursement rate. If, however, it receives a heavy load of very ill patients requiring intensive and expensive care, the new rate might be difficult to accept for a prolonged period.

"I expect that the mix of cases of patients requiring major and minor levels of care will enable us to sustain the one-rate arrangement for the immediate future," he said.

The reimbursement rate will be renegotiated annually, and both the state and the hospital have the right to cancel the contract with 120 days' notice.

Rates not public

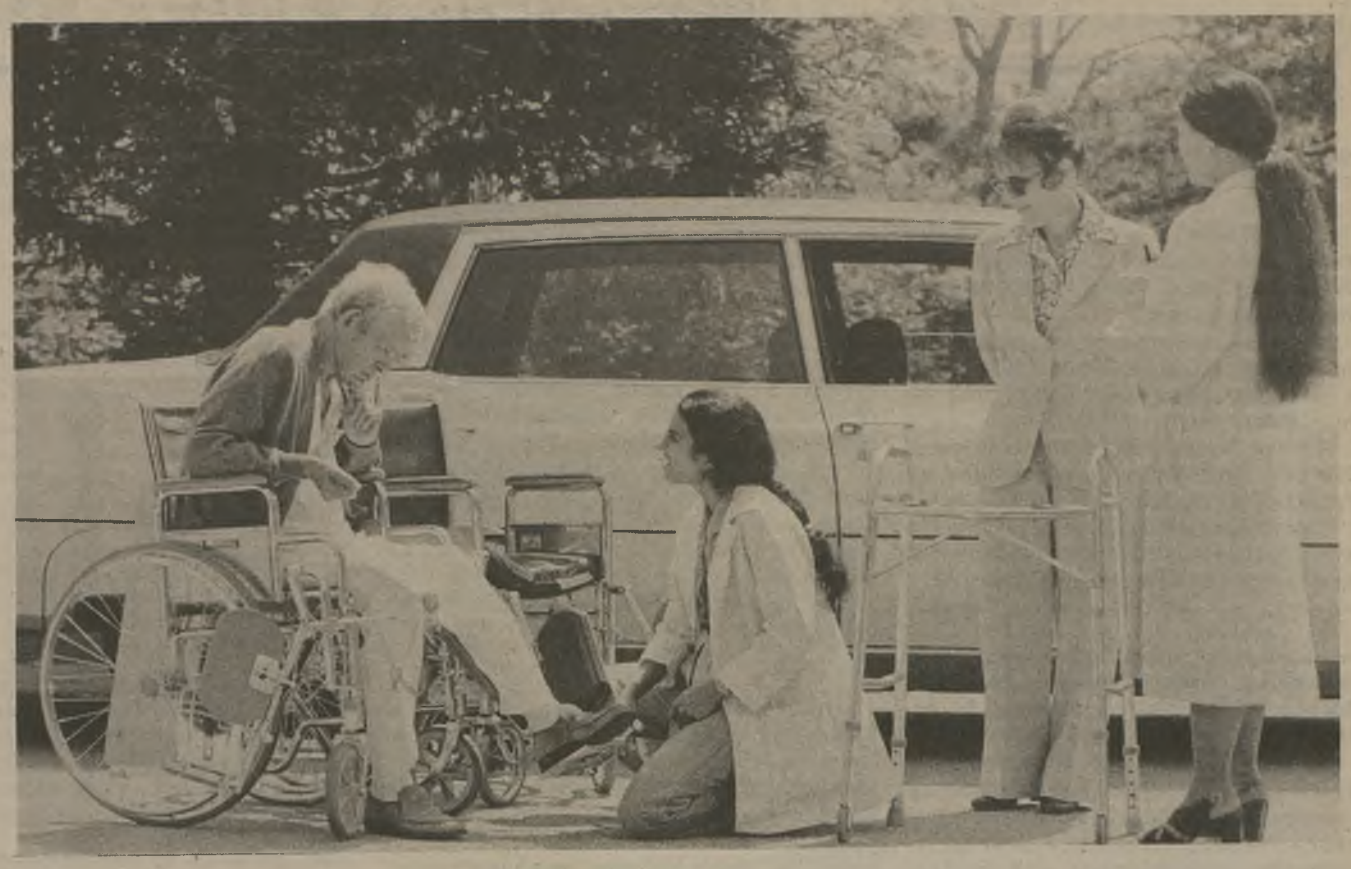
Specific conditions of the Medi-Cal contracts are not made public. Hospitals negotiated for contracts without knowledge of other hospitals' rate proposals.

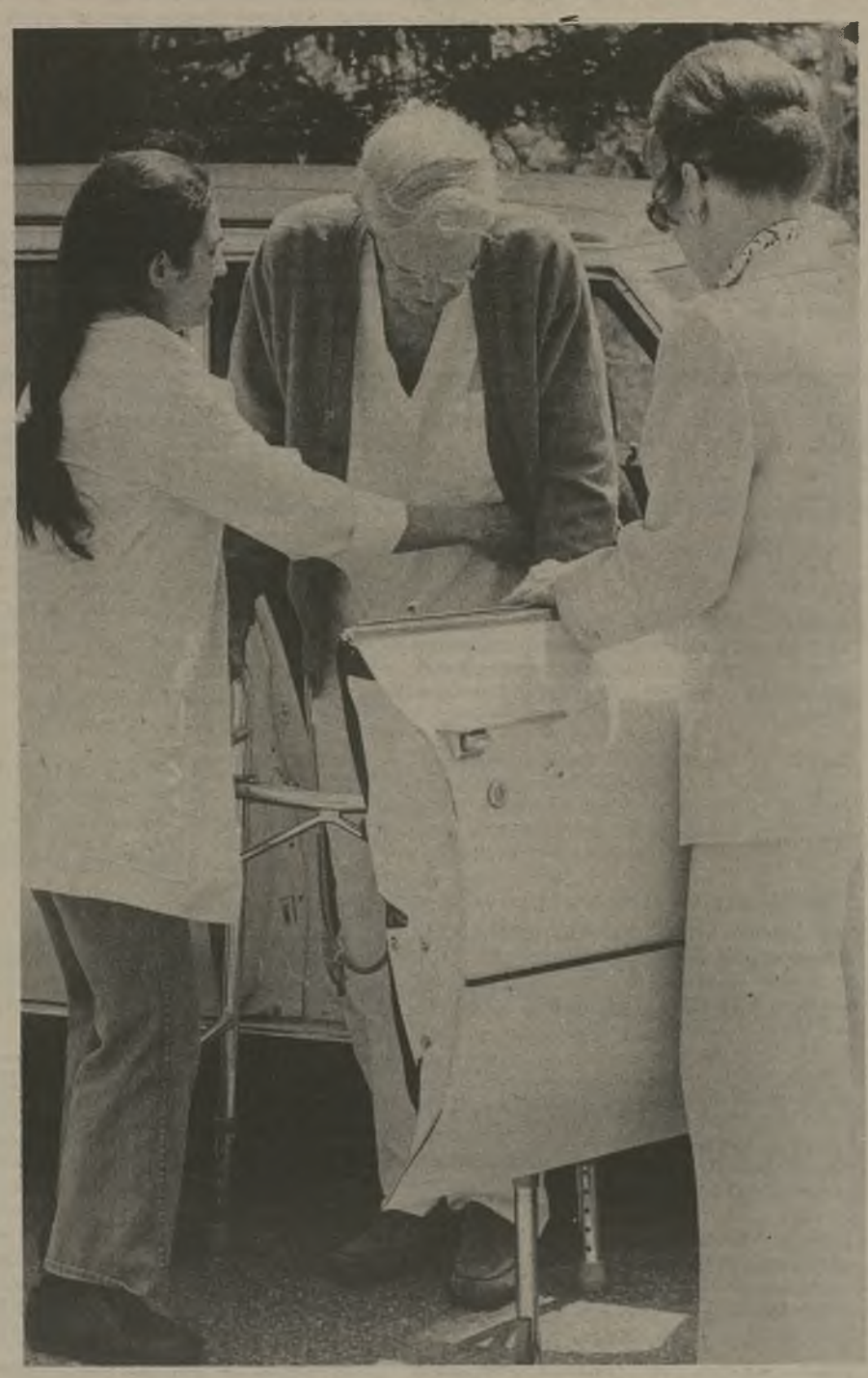
The Medi-Cal changes are derived from the first of two new laws passed by the Legislature last year bringing fundamental changes in the way health care is paid for in the state. The second law allows private insurance companies to negotiate prices in advance for their subscribers with specific hospitals and doctors.

Insurance companies can write reduced rate packages for groups of patients receiving care from these providers, although patients might be required to pay more for coverage of high-priced services.

According to King, Stanford Hospital officials are in preliminary discussions with several insurance companies.

—Barbara Battino





Coordinated community care: giving patients a headstart home

In earlier days when patients had complex or chronic illnesses, they would spend considerable time recuperating in a hospital. Now, because of changing times and high costs, many patients get long-term care at home.

But easing the transition from hospital to home requires preparation for patients and their families. At Stanford, home care is organized by a team of professionals who begin planning for it almost as soon as the patient is admitted.

Discharge planning may involve teaching patients to take their own medications, advising on insurance coverage, or lining up community services.

Above, 80-year-old Earle Smith listens intently as occupational therapist Matra Majmundar teaches him to transfer from wheelchair to car with the aid of a walker. After spending five weeks in the Hospital last spring, suffering from a neurological disorder that left him without sensation from mid-chest down, Smith was eager to return home with his wife Dorothy (second from right).

In order to discharge Smith, many arrangements for equipment and home care had to be planned by discharge coordinator Jeanette Muzac (above, far right). "I was as helpless as any patient they get," remarked Smith, who with humor and pluck, succeeded in mastering the wheelchair-to-car maneuver in record time (photo at left).

...News Notes...News Notes...News Notes...

Ronald Just, director of Operations and Maintenance, has announced that a major utility shut-down will take place from 8 a.m. to 6 p.m. Sunday, March 6. There will be a tie-in of the power factor capacitors affecting: Core, East, West, Boswell, Grant, Lane, Medical and Edwards Buildings.

A similar shutdown was scheduled for Feb. 27. It will be in full effect March 6, weather permitting. There will be momentary interruptions to the normal electrical service during the course of the day. Emergency power will be affected as during Monday weekly tests.

For further information regarding the interruption call 497-5555. In case of emergency during interruption, dial 86.

* * * *

Daniel Robinson has accepted the position of acting director of Personnel Management effective March 1, announced Sheldon King, director of SUH.

Robinson began at Stanford four years ago, and has served as assistant director of Personnel for the last two years. He brings to his new position an extensive background in the field of personnel management and labor relations.

Robinson replaces Donald Thomas, who is resigning from his current position to pursue other career opportunities. Thomas has been director of the department since 1979.

King remarked, "Don Thomas' philosophy and practices regarding people, their importance as individuals, and their significance in the overall efforts of SUH to become an even better place to work, are a major contribution he has made to us all. His active efforts to improve communications between people are also well recognized."

Thomas has agreed, at King's request, to continue as an internal consultant for SUH for several months beyond his resignation.

* * * *

The Garden Patio is closed through March 9 for spring cleaning and reparation activities, announced the Department of Dietetics. During this period, the Deli Bar and Soup Station have been moved up to the cafeteria north seating area, with hours of operation from 11:30 a.m. to 1:30 p.m. weekdays.

Normal Garden Patio operations will resume Thursday, March 10.

* * * *

Arthritis self-management classes will again be offered by the Stanford Arthritis Center in conjunction with Midpeninsula Health Service starting in April. These courses are open to anyone with arthritis and will provide information about arthritis, how best to use arthritis medication, how to design an appropriate exercise program; dealing with emotional and physical problems caused by arthritis, and working more closely with your physician.

There will be morning, afternoon and evening sessions held at 11 locations in the Bay Area, including Palo Alto, Redwood City, Cupertino, Santa Clara, San Jose and San Francisco. Classes meet for two hours weekly and run for six weeks.

Pre-registration is necessary and enrollment is limited. A small fee will be charged, and scholarships are available. For information and applications for the course, call 497-7935.



For my Mom and Dad is the title of a new handbook being given to all parents in the Hospital's intensive care nursery. The book, a collaborative effort by many nurses in the unit, is meant to serve as a resource of information for parents.

"They get a lot of information from the staff when they're here," explained Janet DeLong Pettit, one of the nurse editors, "but there is so much to remember. The book, coordinated with the staff's efforts, should fill in the gap for parents when they're at home."

Topics covered include "Transport of your Baby," "Special Features of the Premature," "Ultrasound in the Nursery," "Discharge from the Hospital," and many more. There is a glossary of terms for easy reference at the end of the book.

The SUMC Auxiliary held its annual general meeting and luncheon, Saturday, Feb. 26, at the Sharon Heights Country Club. Ernle Young, chaplain of the Medical Center and associate dean of Memorial Church, spoke on the subject of medical ethics—a topic he teaches to medical students.

Elected as executive officers on the Auxiliary Board of Directors for 1983-84 were Donnie Ellington (president); Phyllis Alper (first vice president); Virginia Thoits (second vice president); Gerald White (treasurer); Margaret Mahoney (assistant treasurer); Pat Parker (corresponding secretary); and Laura Warner (recording secretary and three-year term).

Reelected for three-year terms were Donnie Ellington, Phyllis Alper and Virginia Thoits. The nominating committee for 1983-84 will include Joyce Vincenti, Robbie Sharp, Judy Dayle and Betty Keil.

Four annual Auxiliary-funded scholarships were awarded to Gary Roper, Janet Smick, Dawn Hocevar and Christine McElroy. Roper and Smick are students in Stanford's physical therapy division, and will receive $2,500 each.

Hocevar, a student at San Jose State University, works in the clinical lab at SUH as a lab assistant, and plans to train at Peninsula Hospital for a license as a medical technologist. She was awarded $1,500. McElroy, a nursing assistant in the Emergency Department, plans to become a registered nurse. She also was awarded $1,500.

The scholarships are intended to help SUH-affiliated persons fund their education in a medically related field.

Medical Center Calendar

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MARCH 2

Basic Science Research Colloquium: "Brain Distribution Opioid Peptides and Their Precursors"—Dr. Eckard Weber. 5 p.m., Fairchild Auditorium.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Status of a Clinical Left Ventricular Assist System"—Dr. Peer Portner (president, Novacor, Inc.). 4:15 p.m., McCullough 134.

Progress in Medicine Lectures: "Impact of the Intentive Care Unit on the Critically Ill Patient with Chronic Lung Disease"—Dr. Andrew Newman; and "Impact of the Intensive Care Unit on the Critically Ill Patient with Heart Disease"—Dr. Robert Sladen. Third program of a six-part series on Progress and Ethical Dilemmas of Intensive Care. 7:30 p.m., Fairchild Auditorium. For further information, call the Office of Public Events at 497-6389.

Dept. of Medical Microbiology Dissertation Presentation: "Characterization of a New Class of Major Histocompatibility Complex Controlled Antigens. . .Or 'Nobody Knows But Me and My Macrophage' "—John Monaco, Jr. 1:15 p.m., M114.

Nursing Educational Services Pediatric Critical Care Course Level II: "Congenital Heart Disease." 8 a.m. till 4 p.m., Faber Auditorium, Children's Hospital at Stanford. To register, call Carole Kidder at 497-6366.

Dept. of Structural Biology Seminar: "Dissection of Antigenic Determinants on Human Histocompatibility Antigens"—Dr. Victor Engelhard (Univ. of Virginia). 4 p.m., D102.

THURSDAY, MARCH 3

Nursing Educational Services Critical Care Course Level II: "Shock Symposium." 8:30 a.m. till 4:30 p.m., Faber Auditorium, Children's Hospital at Stanford. To register, call Carole Kidder at 497-6366.

Free Jazzercise session—led by Patty Jones, R.D. 3:45 till 4:30 p.m., north cafeteria dining room (P1060). Part of National Nutrition Month activities. Space is limited and admission will be on a first-come, first-served basis. Dress comfortably and bring a towel.

Dept. of Neurology Grand Rounds: "MS as a Disease of Disordered Immune Regulation"—Dr. Byron Waksman (director of research programs, National Multiple Sclerosis Society, New York). 5:15 p.m., M114.

Dept. of Medicine Grand Rounds: "Drugs for the Third World"—Drs. Philip Lee and Albert Bowers. 8:30 a.m., Fairchild Auditorium.

FRIDAY, MARCH 4

Nursing Educational Services: "Leadership Challenges for Nurse Clinicians." 8 a.m. till 4 p.m., Tresidder Union, Room 282. To register, call Carole Kidder at 497-6366.

Dept. of Pediatrics Grand Rounds: "Herpes"—Dr. Anne Yeager. 8 a.m., M106.

Dept. of Pharmacology Dissertation Presentation: "Characterization of a Serotonin Receptor Coupled to Adenylate Cyclase in the Liver Fluke, Fasciola Hepatica"—Steven McNall. 10 a.m., R358.

Div. of Child Psychiatry and Child Development Grand Rounds: Topic to be announced—Dr. John Bowlby (consulting psychiatrist at the Tavistock Clinic, London). 11 a.m., Faber Auditorium, Children's Hospital at Stanford.

Dept. of Neurology George A. Zimmerman Lecture: "Is Research on Multiple Sclerosis Getting Anywhere?"—Dr. Byron Waksman (National Multiple Sclerosis Society, New York). 4 p.m., Fairchild Auditorium.

SATURDAY, MARCH 5

Dept. of Dietetics: "Trends in Nutrition 1983—A Symposium on Marketing Your Profession in the '80s." 7:45 a.m. till 3:15 p.m., Fairchild Auditorium.

SUMC Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call 497-6636.

MONDAY, MARCH 7

Dept. of Structural Biology Seminar: "Approaching a Structural Basis for Understanding Protein DNA Interaction: Catabolite Gene Activator Protein (CAP) and DNA Polymerase I"—Dr. Thomas Steitz (Yale). Noon, D102.

MARCH 7 and 8

Nursing Educational Services: "Interventions in Neonatal Nursing—Beyond Medical Care." 8:30 a.m. till 4 p.m., Tresidder Union, Room 282. Tuesday's program in Tresidder Union, Room 270. To register, call 497-6366.

WEDNESDAY, MARCH 9

Dept. of Structural Biology Seminar: "X-Ray Diffraction Studies of the Structure of the Gap Junction Channel"—Dr. Lee Makowski (Columbia). Noon, D102.

Nursing Grand Rounds: "The Confusing World of Food and Nutrition Fads"—Registered dietitians Beth Douglas, Diane Madgic, Diane West, and Janet Cecchino. Part of National Nutrition Month activities. 3:30 p.m., M114.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Self-regulation vital for scientists' credibility with public

Following is the text of President Kennedy's Oct. 20 speech at Yale University. A news summary was published Oct. 27 in **Campus Report.**

The Social Sponsorship of Innovation

I

Introduction

Ours is a society that was built on innovation. The Constitution recognizes that: it specifically grants to the Congress the power "to promote the Progress of the Science and useful Arts, by securing for limited time, to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

Accordingly we have, throughout our recent history, incorporated into our social institutions arrangements for the sponsorship of innovation. Of prime importance was the mid-19th century development, through the Morrill Act and the Hatch Act, of the land-grant university system and the network of State Agricultural Experiment Stations. That created an automatic flow of public funds for agricultural research, and a group of institutions responsible for its diffusion and application.

The base for science of a more fundamental kind was laid with the grafting of the German graduate university concept onto the tradition of liberal humanistic education that had been a British inheritance. Finally—still before the turn of the twentieth century—some relatively new institutions of private character were declaring a strong commitment to the practical arts, including engineering. Among these were first Cornell and MIT, and later Stanford.

The institutional apparatus for doing science was, except for agriculture, a vessel relatively empty of public funds until World War II. The need to do something with it had been recognized—if not widely, at least by an astute few. Shortly after building the house in which I now live, Herbert Hoover, an engineer-scientist of considerable distinction, was named Secretary of Commerce. His major initiative was an effort to raise a fund of ten million dollars from American industry to support basic research in the nation's universities. Hoover argued tirelessly for his project, on the grounds that American industry needed the fundamental research as well as the trained scientists that could be produced by academic institutions. He told industry leaders that they would be losing a form of intellectual capital if they did not make it possible for able researchers in the universities to be relieved of some of their teaching obligations, and equipped to do first-rate scientific work. It was the first effort by a national leader, as far as I know, to link academic research explicitly to productivity objectives.

Hoover's campaign fell far short of its goal, although it did help to create the initial support for the National Research Council and a program that helped keep scientists alive during the Depression. But following World War II, there was a dramatic realization of the Hoover vision—through public instead of private funds. The extraordinary scientific apparatus built for military purposes was transformed, under the influence of Vannevar Bush and others, into a system for the support of peacetime science in the universities. That support began largely with the Department of Defense, especially the Office of Naval Research; but in the early 1950s, it was mostly transferred to the National Science Foundation and the rapidly-growing programs of the National Institutes of Health. As these organizations took over the sponsorship of fundamental research, Defense and other mission-oriented agencies concentrated on programs related to their special areas. The outcome was a complicated patchwork of affiliation. In a large midwestern state university, for example, one would find a department of engineering supported largely by Defense agencies, a physics department mainly dependent on NSF and AEC monies, and two departments of biochemistry—one formula-funded by Agriculture and the other almost entirely dependent upon NIH biomedical research money.

The Trajectory of Innovation

Despite these complexities, the public support of fundamental science has become an effective instrument for meeting national goals, and it has been successfully integrated with our commercial style of product development. As a result of more than three decades of that coexistence, we have developed a fairly standard historical sequence of innovation, within which particular kinds of institutional sponsors play defined roles. The innovative process normally begins in a university or government laboratory. This first phase is characterized by loose, informal organization, very open communication, including quick publication of all the details of an experiment. This phase is publicly funded, and oriented toward the discovery and explanation of **phenomena**. Examples of institutions in which it might take place would be university departments of biology or chemistry or physics, a laboratory in an NIH Institute, or a special industrial organization like Bell Telephone Laboratories.

The second phase is best called **application**. It is focused upon **processes**, and takes place in various settings: applied institutes, some university departments (of engineering, for example), nonprofits (like SRI International or Battelle), and industrial laboratories. There is a mix of public and private funding, and environments that are variable with respect to proprietary secrecy.

In the third stage, **development**, attention is given to practical application—including such matters as scale, rates, and means of economical production. The innovative emphasis is on **products**; funding is by private risk capital, and the environment tends to be closed for proprietary reasons and tightly managed. Essentially all such work takes place in commercial laboratories.

Individual innovations have histories; though these are seldom simple, they usually follow a trajectory that takes them along a sequence from phenomenon through process to product. That trajectory is represented in Figure 1. The curve is concave upwards, because the rate of development normally quickens as the application is first glimpsed and then seen as certain. The ordinate can be expressed in terms of proportion of private financing, or degree of secrecy, or tightness of management control. The three segments marked off on the curve correspond to the three phases I have just described. Although they are arbitrary, they do signify sharp differences in style, control, and financing. And the contrast between the two ends of the curve is dramatic: research of the most fundamental sort is an entirely different social process from product innovation.

Public Understanding of the Innovation Process

That point may not seem worth all the attention I have been giving it. But in fact it has been the subject of important public misunderstanding and, as a consequence, of serious policy errors. A recent case in point is the so-called Small Business Innovation Act passed by Congress in July of this year. This legislation sets aside one and one-fourth percent of the research budget of each major federal research agency and establishes Small Business Innovation programs that will channel these reserves to qualifying small businesses. Like most statutory 'fixes,' this one was well-intentioned: it sought to increase the incentive to innovate in a sector of our economy that has been responsible for many of its best ideas, not to mention most of its new jobs. But, because it mistakes one kind of research for another, it will actually reduce total scientific productivity. Note that public funds will be removed from Area I—fundamental research—and used to support Area III—product innovation. The flow of new ideas **into** the stage at which application becomes possible will thereby be reduced. Furthermore, these public funds will be applied in an area in which, thanks to recent changes in the tax laws, abundant sources of private venture capital already exist to support good ideas. So the net effect will be a transfer of increasingly scarce public funds from basic science that can be supported in no other way to applied science that is already very attractive to private investment.

(Proponents of the legislation argued that funds for the small business innovation programs need not be set aside from basic research programs. But the law permits a diversion of basic research funds to product innovation, and that diversion will surely happen to some extent. Proponents also claim that small businesses are capable of, and want to conduct, truly basic research—a proposition that few scientists would accept.)

How, might you ask, could such a thing happen? It happened, I think, because of authentic confusion about how innovation happens and what kinds of social arrangements we have already made for encouraging it. Small Business is, of course, a good thing to be for these days; indeed the Senate version of the bill came through Committee in record time and was passed on the floor by a 90-0 vote before anyone in the scientific community woke up and looked seriously at the bill. As the **Washington Post** later editorialized, when a piece of legislation is passed in that way you **know** somebody isn't looking very hard. But the House gave the matter less perfunctory treatment, with some encouragement from us, and so proponents had to muster more serious arguments.

(There were some early opponents, notably the American Association of Medical Colleges, but for the most part the political arms of the university and scientific organizationals did not become actively involved until late in the legislative process.)

One sample of their logic is particularly revealing: the Small Business Committee prepared a list of innovations that could be credited to small businesses. Included on it was the invention of penicillin. I do not think the proponents deliberately ignored Alexander Fleming; my own experience in government always inclines me to favor confusion over conspiracy as an explanatory hypothesis.

My point is that misrepresentations that would have produced an outburst of laughter among scientists passed almost without notice in the Congressional debate over this bill. To their credit, the Office of Management and Budget and the President's Science Adviser recognized what was happening and testified forcefully against the bill in the early stages in both the House and Senate—only to have the Administration, for political reasons, reverse itself and actually support the legislation.

More than anything else, the passage of this legislation symbolizes a state of social bewilderment about science and how we should get it done.

There are other signals as well: the hot-and-cold recent history of investment in genetic engineering; the disturbing differences of view between the universities and government about federal authority over the transfer of technology; and the controversy over how much corporate support universities should accept for their research programs, and under what conditions.

I want to devote the rest of this lecture to considering some changes now underway in how we manage innovation. My argument will be that the social sponsorship of discovery is being rearranged in a very fundamental way. Specifically, I shall try to make the case that we are seeing a revolutionary compression of the innovation process I described earlier; and that, as a consequence of that compression, traditional roles are being redefined and well-understood customs challenged. I will conclude by suggesting how the universities and the scientific community might cope with these changes.

Recent Changes

To begin let me list some forces that are tending to compress the innovation process and to blur the relationships that up to now have characterized its three phases. I think I can recognize four.

First a number of scientific disciplines are now being recognized as "ready" for accelerated application. Our perceptions of what is possible are sharpened in such fields; as a discipline matures in power and confidence, leaps from the laboratory to applications that once seemed intimidating become commonplace. That now appears to be the case, for example, in immunology and "genetic engineering" as well as in microelectronics.

Second, there is a growing social awareness of that importance of scientific discovery to national productivity, and a consequent impatience with the traditional time requirements for technology diffusion. In the past fen years, various studies (for example, that by Comroe and Dripps) have demonstrated—particularly for biomedical research—that the time lag between initial research discovery and practical application is very long, of the order of a decade or more. Thus the message from a small but growing body of "research on research" is that we need better devices for speeding technology transfer.

Third, there is increasing concern in the centers of fundamental research—and by that I mean the research universities, where over two-thirds of the nation's basic science is done—about the retreat in public support of that activity. Federal funds for nondefense research have shrunk by about 38 percent in real dollar value since 1968, and half that decline has taken place in the first two years of the 1980s. It is therefore, not surprising that the universities and university scientists are looking for alternative means of support.

A fourth and final cause, perhaps the most unexpected of all, has to do with the venture-capital financing of small research-intensive companies in fields like biotechnology and microelectronics. In the nearly four years since major changes were wrought in the capital-gains tax, the investment available for such ventures has jumped from an estimated $70 million in the mid-1970s to about $1.5 billion in 1982. Very large changes in value can take place with successive generations of private investment in high-technology firms, and larger changes still when the firms go public. At the time of its public offering, Genentech stock was valued at $38 per share. Shortly after the offering had been snapped up, it soared to $80.

As you will observe, things have come back down to earth and Genentech, still without a product to sell, is listed at $30 a share.

But that story is worth telling, even as a cautionary tale. What made Genentech so appealing was the promise of good ideas, of "breakthroughs." Like other high-technology offerings it made much of its affiliation with first-rate university scientists; in short, it promised to short-circuit the technology transfer process.

The lesson—and it made a strong impression in the financial community, despite some subsequent disillusionment about the soundness of biotechnology investment—is that in this new work the big potential is associated with the **early** possession of an idea. The result has been an array of new affiliations between the institutions formerly associated with Stage III innovations and scientists doing Stage I research.

continued on next page

Kennedy speech. . .

continued from page 11

II

Let me pause to summarize what has happened. The familiar trajectory of American innovation has become compressed in time. Once there was clear separation between an early, fundamental research phase, publicly supported and characterized by open communication, and a later, applied phase financed by private risk capital and featuring proprietary protection of information. I have tried to analyze some of the forces that have been led to this compression: the scientific "readiness" of biotechnology and other fields for a broad range of applications; the need for new funds to replace those lost in the federal withdrawal from the support of basic research; and the style of venture capitalization, which places new premiums on the early capture of intellectual property.

The New Environment: Pressures and Problems

The result is an entirely novel mixture of influences upon university scientists and their institutions. For the university itself, there are new and challenging pressures on investment policy (does the institution go into business with its own faculty?), on technology licensing (should the university license inventions to faculty-led ventures? to their competitors? and if yes, under what terms?), or research contracts with industry (what restrictions on communication are acceptable, and should there be full disclosure of terms?) and on policies relating to consulting, faculty conflict of interest, and the protection of graduate student interests. But many of the problems are simply not soluble by the institutions alone. For the scientists themselves, and the "invisible colleges" that hold them together in national and international networks, there are special challenges: how much can or should journals or societies guard against the withholding of information and exchange for proprietary reasons? and how much involvement **outside** a faculty member's primary institutional affiliation is appropriate?

I emphasize the role of the professoriate in this last decision particularly because I doubt that **institutional** regulation will be effective or even very influential in establishing the limits. What is thought to be proper by one's community of scholarly peers will eventually set the standards; the best institutions can hope to do is reinforce those social norms, and perhaps to play some useful role in helping to shape them.

Having said that, what can I suggest as to ways in which we might deal with the compression of innovation and the problems it poses for universities and their faculties? To begin with, I think we need to examine the traditions that have grown up regarding the institutional obligations of the professoriate, for that is the background against which new proposals will have to be evaluated.

The Universities and Their Faculties

Two resources dominate any consideration of the relationship between the faculty member and the university: time and intellectual property. Established tradition is that institutional purposes have exclusive call on the professional time and energy of faculty members during the period of full-time employment. Three things, however, are worth noting. First, institutional purposes are usually interpreted broadly. As a consequence, a variety of activities that might at first be thought private or even self-serving are regularly judged to be in the interest of the university. Service on peer review panels, advice to local and national governments, and work for scholarly organizations and journals "count" as work for the university—often even when the organizations are for profit and the faculty member's participation is compensated. Few universities have carefully-drafted policies on this; the informal test has usually been that the compensation is light (relative, say, to that for consultation) and that the work serves some interest of the discipline and hence—from the university's vantage point—is **pro bono publico**.

Second, limited "consulting" is permitted. Consulting is a professional service, reimbursed at something like the market value of the faculty member's time. It is permitted on the theory that the faculty member will benefit professionally—as may students, and the educational process—from exposure to applied problems which might otherwise never be encountered. It also happens that in many applied fields valuable literature is held under such tight proprietary control that consulting represents the only route of access to it.

The university sometimes has a secondary motive for permitting consulting: it may establish useful relationships between faculty and a source of corporate research support or philanthropy. But the time expended on such activities is limited quite explicitly by most universities, to the extent of about one day per week.

(It is often asked, of course, whether "weekends count." Some universities aren't prepared to say, but government rules aobut professional effort establish a **de facto** policy—and under it, weekends most assuredly **do** count. That is, **all** of the time one spends professionally, whether it is 40 hours per week or 100, constitute "100 percent time." Accordingly, a faculty member who has a government grant and consults Friday, Saturday, and Sunday is accounted as spending three-sevenths time consulting—which is against government rules if that faculty member is reporting the usual 100 percent research effort on the grant. So in practice, one day a week means just that.)

Third, it is important to note that what is being claimed here is **professional** time, not time, period. Neither the University nor the government cares how much "free" time a faculty member spends on remunerative "moonlighting," as long as it is outside the professional role of scholar/teacher—and, of course, as long as it does not infringe on the performance of that role. Thus, paradoxically, it is all right to consult all day Wednesday, but not again on Sunday; whereas it is perfectly permissable to teach skiing on Sunday but never on Wednesday.

Now that you understand the matter of time, let me turn to intellectual property. The difficulty here is that different traditions have developed, chiefly out of convenience, to deal with different kinds of property. As to the most basic issue of all—who owns the rights to a discovery made by a faculty member on university-compensated time in a university facility—there is lack of consistency.

Federal law vests patent ownership with the inventor. A few universities vest ownership in the faculty member where contract or grants permit it, but most claim it for the institution, through required patent agreements with faculty members. The difference is not thought significant, or even known, to most faculty members; but to a few it is critical.

Now, created works are different from patentable ideas. They are subject to the laws of copyright, and in this area federal law gives ownership to the institution rather than the individual. Most institutions assert that ownership—even those that do not do so for patentable processes or devices. Thus the professor who owns the rights for a piece of computer hardware does not own the rights to the software developed to go with it.

But from this zone of apparently sweeping institutional claim, an important class of exceptions has been carved out by custom. The university does not assert copyrights to books written by faculty—scholarly, text, or trade—nor does it try to attach other creative works. Reflected glory, and that alone, is the traditional institutional reward for such faculty **oeuvres**. The issue is not exactly trivial: it is easy to forget, amidst the present excitement, that the universities have sponsored many more millionaire textbook writers than millionaire computerists or cloners.

It is a little difficult to perceive a structural rationale arching over all of this. The difficulty may be pointed a bit if you imagine that you are a space visitor, unfamiliar with our economy or traditions, trying to figure out our rules. After learning the foregoing, you are told that a university employs a surgeon and a sculptor on its faculty. Each has learned extraordinary skills in a demanding course of graduate study; each does campus-based work that is hailed as pioneering; each teaches in credit-bearing courses for advanced students. Which, you are now asked, is allowed to practice it for financial return outside the institution? I suggest that you will be unable to answer the question without some special knowledge—consisting, in this case, of the history of clinical practice restrictions imposed by U.S. medical schools to achieve the "geographic full-time" system, and of some artistic traditions.

It follows that normative judgments are difficult to make in this universe. We place limits upon outside commitments with respect to time, not income—except when special considerations intervene, in which case we limit income. We define some work-products of the creative process as belonging to the university, but others as belonging to the scholar. And—as the sculptor/surgeon example shows—we treat even the same kind of work differently in different parts of the same institution.

So—to summarize this account of university rules—there is not a consistent ethical framework for outside involvement by faculty, or for the ownership of intellectual property. Yet there are, I think, some guides that may be helpful in dealing with the new incentives resulting from "innovation compression."

Dealing with the New Environment: Some Principles

First, one of the real values in our system of fundamental research is the coexistence of research and training. As my colleague Robert Rosenzweig put it so well in the introductory chapter of **The Research Universities and Their Patrons**:

"A research university is one whose mores and practices make it clear that enlarging and disseminating knowledge are equally important activities, and that each is done better when both are done in the same place by the same people."

(Rosenzweig, R. M. and Turlington, B. **The Research Universities and Their Patrons.** University of California Press, Berkeley, 1982.)

The university should, in its own interest and society's, pursue policies that act to retain that connection. These will include resisting proprietary influences upon university research, as well as supplying incentives for faculty members to concentrate their own research activities at the university, under university rules. They will also give careful attention to the rights of students: the right of access to information about research programs, and the right of freedom from exploitation in the interest of a faculty member's research program, whether it is on **or** off campus.

Second, the university is entitled to primary claim upon the time and energy of its faculty. The claim can, in practice, only be pressed so hard—as the University of Chicago found to its sorrow, several decades ago, when it tried to retain all forms of professional income, while offering what is claimed to be "full salary." That experiment failed, probably because tradition is powerful and we retain strong arguments in favor of the University's claim. It is paying for full time, in most cases. It does provide the facilities for scholarly work, not to mention the environment. Its institutional **imprimateur** lends value to whatever the faculty member does, because the outside world has learned to respect its judgments about quality. That does not mean that the University owns the faculty member; but it does constitute a primary claim on time and energy.

Third, there is a balancing flow of benefits that dictates institutional restraint in pressing that claim. **Whatever** a faculty member does that is professionally credit-worthy—and given the quality of our selection process, that should be the overwhelming majority of his or her output—redounds to the prestige of the institution. That should make us wish to be generous about terms and conditions; after all, if we get the credit anyhow, ownership is perhaps not so important.

Policy Directions for the Universities

What position, given all these considerations, should the university take with respect to outside faculty involvement? I think it should continue to make its primary claim, but permit limited outside involvement when that clearly offers benefits **both** to the faculty member's professional development and to the university-based research and training programs.

Disclosure of these relationships should, as now, be required on demand—and, if it proves necessary, as a matter of routine. Management responsibilities outside the university should generally be viewed as inconsistent with the primacy of university commitment—including significant personal respensibility for any regular laboratory operation off campus.

Such roles not only become compelling time commitments; they may lead, as we have learned, to awkward mixtures of proprietary and non-proprietary work. They also encourage the introduction of secrecy to university-based programs, and impose troublesome conflicts on graduate students.

On the other hand, I think that intellectual property rights should be vested primarily in the faculty member. After all, one of the attributes of university research that distinguishes it from that done in corporate settings is its independent, individual character.

If we are to assert primary claims to faculty time and energy, it would seem appropriate to reward that loyalty by assigning the proprietorship of intellectual accomplishment to the innovator. It is then up to us to structure incentives that will encourage inventors to assign rights to the university and to share the returned value with the entire enterprise.

However the university obtains control over intellectual property, it must consider the responsibilities it accepts along with that control. First, there is an institutional obligation to the process of technology transfer. No valuable invention should be delayed in its progress toward human service by the institution's own need for financial return. In most cases, that principle will lead to a first preference for non-exclusive licensing, and a fee structure designed to encourage broad participation by commercial developers. Second, there should be care to avoid pressures on faculty and students to concentrate unduly upon "developable" ideas, or to keep secrets in the course of developing them. Finally, the university-as-licensor must take careful note of its other roles as investor and research proprietor, and maintain a strictly neutral policy with respect to licensing ventures that may be partly owned by the university or its faculty members.

Even if it has solved all of these problems, the university has still another role: the design and execution of policies regarding the acceptance of research projects. In practice this is usually a matter for decision by members of the research faculty—who resemble, as someone has said, a federation of small, sometimes even medium-sized entrepreneurs. The terms are limited by university rules worked out by faculty committees; but if an outside agency proposes terms unacceptable to the faculty member who is to do the work, there will be no project.

The evolution of institutional policy **and** of a tradition of faculty acceptance has been heavily conditioned by the patterns of federal support that has developed in the postwar years. There are no restrictions on publication, and the federal patrons of research have, as I said, not

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usually claimed patent rights. By contrast, a number of private research sponsors have asserted such rights in advance, through requirements that they hold exclusive licenses on any patentable discoveries made under their support.

Where the institution claims no such rights, the acceptability of such conditions becomes a matter for the faculty member to determine. But where the institution retains rights to the intellectual property, the decision becomes more complex and difficult. If a faculty member were to assert that a line of important work could only be supported **if** a private sponsor were granted exclusivity in advance, I think the university would agree to take the project. What if the institution were deciding the matter on its own? I confess I would have difficulty. The situation offers too many temptations for **a priori** restraints on communication, too much emphasis on investment return, to leave me comfortable. I expect this to become one of the main policy issues in this area, the more so because large grants of this type have been made to several institutions.

The university does, of course, impose rules designed to protect freedom of access, publication rights, and other features that might be vulnerable where there is strong proprietary interest. In many places these are being reviewed to see if they are strong enough. It is important to note that this is **not** entirely, or even mainly, a response to the proprietary impulse.

For entirely different reasons the government has moved toward the application, in certain research contracts, of restraints upon access or freedom to publish promptly. Because we clearly cannot have one set of rules for industrial research sponsors and another set for the government, these federal actions have added urgency to our consideration of the value of openness in research programs.

The case usually made for freedom in scientific communication rests on the need for rapid transfer of methodologies and ideas from one research group to another, and on the demonstrated utility of published and pre-publication exchange in maintaining the vigor of a discipline. It derives mostly from convincing assertions by working scientists, nearly all of whom say it is essential. A few more formal studies also support the special role played by informal communication in advancing a new idea; notable among these is the analysis by Wolff of the exchange of pre-publication information in the development of our understanding of the role of cyclic AMP as a cellular "second messenger"—a function Wolff wittily attributed to informal exchange among scientists in the title of her paper. I think it is safe to say that both that kind of communication—ranging from laboratory visitation between scientists to attendance at scientific meetings—and the more formal sort of entailing publication are critical parts of the scientific process.

(Patricia Woolf. **The Second Messenger: Informal Communication in Cyclic AMP Research**. Minerva XIII, No. 3, 1975.)

There is a second part of the case that relates only to formal communication. Science relies very heavily on the capacity to replicate experiments; it is the only systematic way we have to recognize error, and the only way at all to correct fraud. Although we referee journal articles, evaluate the logic of propositions, and check arithmetic, we cannot decide, merely from reading a report, that a result is right—only that it is not wrong in some obvious way. Accordingly, we argue that scientific communications include enough detail about the way an experiment was done so that a competent investigator in the field can do it in exactly the same way. This is an exacting requirement; it compels the release of **all** relevant information about methods and techniques. Secret ingredients, magic sauces and your own special glassware are fine in cookery or in product development, but in fundamental science they are **out**.

Proprietary and governmental threats have forced universities to take some recent actions to protect both kinds of communication, and it is not unlikely that the challenge will escalate. Using the regulatory authority provided by the Internal Traffic in Arms legislation, the Departments of Commerce and Defense have attempted to restrict U.S. scientists (and succeeded, in some cases) from delivering papers at international meetings on basic research relating to "critical technologies." Language has been attached to university research contracts that would restrict the access of foreign graduate students or fellows or even faculty members to university projects. And the Department of State has sought to place onerous monitoring requirements on universities receiving Soviet bloc visitors so that the latter will not have access to projects or even conversations on critical topics. We have argued vigorously against these restrictions, sometimes refusing visitors or contracts; and we are trying hard to press upon the government our own conviction that the social value inherent in open science far outweighs the losses we may risk by being too permissive about the transfer of technologies.

As to proprietary influences, most universities—as I have said—refuse any but the briefest delays in publication time, and reject restrictions upon access to programs. They have also had to cope with the increasing threats to informal communication posed by the actions of commercial firms, especially in biotechnology.

Several active or prospective litigations concern the patenting of DNA sequences by companies who obtained required material through informal exchanges with academic scientists. And for each lawsuit, there are a dozen horror stories.

Whatever the merits of these, the perception is that people are prepared to take advantage of naive informality on the part of academic researchers. The latter, predictably, are reacting by becoming more cautious. Meanwhile, the universities are trying to provide them with increasingly aggressive legal protection, and evolving policies for the distribution of research-derived materials that will prevent their commercial appropriation while encouraging academic circulatioin.

Policy Directions for the Scientists

In this as in other areas, however, there are sharp limitations on what the universities can accomplish themselves. I began this section with an assertion that the compression in the course of innovation and the consequential reordering of how and where it is accomplished requires much more than the development of new regulatory policies by universities and new patterns of financial support by government and industry. It also challenges the scientific community itself to develop new rules, because many of the current problems are beyond the regulatory reach of the institutions. Although many people suppose that something vaguely called "academia" has a single position or set of attitudes on such matters, that is actually far from the truth. Frequently the interests of working faculty scientists and the university science administrators who are their former colleagues diverge sharply; indeed, one can now regularly find them giving conflicting testimony before the Congress on such issues as indirect costs and mandatory retirement. In the present case, their interests are not so much divergent as different, and complementary.

Standards of the profession, publication policies, criteria for the acceptance of work, and peer review are functions that the professoriate rather than the academy must regulate. And there are other areas in which regulatory controls by the university, though theoretically plausible and often urged, would probably prove unacceptably corrosive in practice. Extreme forms of regulation of outside involvement, or Draconian limitations on faculty ownership of intellectual property, would be examples.

Thus there are two reasons for the assertion of self-regulation by the scientists and their networks. The first is because the task is more appropriate to them; the second is that failure to do so may invite unwelcome attention from others. I should point out that regulatory attention by the **university** is not the only, and not even the worst, alternative prospect. The Congress is now making concerned gestures about matters ranging from the treatment of animals to scientific fraud, and one hears proposals for government auditing of research to insure proper practice.

What areas are particularly important for self-regulation by scientists? One surely is the firm protection they can give to the open character of scientific work. Journals should not publish any articles from which proprietary information has been held back so as to make the work more difficult to replicate, and societies should refuse to allow papers to be presented at meetings if they are subject to similar restraints. Individual scientists can reject efforts to attach access restrictions or similar provisions to research grants and contracts. In these ways, the scientific community can make clear the essentiality of open communication to the conduct of its affairs.

A second area requiring self-regulation involves the public perception that fundamental science is now "commercial," and that its practitioners are subject to temptations that cast doubt upon their objectivity. I think this is a serious problem, which has been unduly abetted by some biomedical scientists, who have reacted to financial opportunity with an appalling lack of restraint. The use of university facilities to house the back-contracted spillover from an outside commercial venture; the use of a university position and laboratory to promote corporate commercial claims for a new venture; the coercive inducement of graduate students to "join in" on an outside operation; all these have happened at major universities within the past three years.

Surprisingly, there has been little criticism of the researchers involved from within the scientific community. I find that shocking, given the willingness of scientists to engage in frank criticism of institutional practice in these same areas.

Unless there is firm rejection of such behavior, the public will be perfectly entitled to conclude that the scientists are more interested in profits than results.

Fundamental research is still deeply respected in this country, much more so than most professions. Public confidence in its own objectivity is the best thing science has going for it; but without some care we may find one day that "scientific objectivity" has become an oxymoron, a self-contradiction like "express mail" or "easy credit."

Ph.D. Oral examinations

MONDAY, MARCH 7

Anupam Khanna, engineering-economic systems, "An Approach to Modelling Systems of Political Economy: Towards Introducing the Notion of Power in Economic Analysis," 2:15 p.m., Terman 332. **Masami Kojima**, chemical engineering, "Low Reynolds Number Flows Past Drops, Porous Particles, and Colloids," 4:15 p.m., Chemical Engineering Gazebo. **M. Laurentius Marais**, business and mathematics, "Computer Intensive Statistics in Empirical Research in Accounting," 2:15 p.m., Room 243, Graduate School of Business. **Meera Viswanathan**, comparative literature, "Defining the Genre of Courtly Narrative: An Examination of its Development in Medieval English Literature and in Classical Japanese Literature Based on Speech Act Theory," 2:15 p.m., Room 52T.

TUESDAY, MARCH 8

Rose Marie Beebe, Spanish and Portuguese, "Gabriel Miro: Apprenticeship Through the Short Story and Short Novel," 1:15 p.m., Room 282 G. **Nicholas C. Burbules**, education, "Ideology and Radical Educational Research," 2:15 p.m., Room e114, Education Bldg. **Blaine Francis Nye**, business, "Demand for Health Care," 2:15 p.m., Room 243, Graduate School of Business.

WEDNESDAY, MARCH 9

Frederick Dobb, education, "Compliance Management and Manipulation: The Case of the California State Language Census," Room e114, Education Bldg. **Chi-fu Huang**, business, "Essays of Financial Economics," Room 272, Graduate School of Business. **Robert Steven Jaffe**, electrical engineering, "Extended Pulsed Doppler Mean-Frequency Estimation Range Using Mean-Frequency Prediction," 3:15 p.m., AEL 109. **Man Bun Kwan**, history, 2:15 p.m., Room 244, History Corner. **Andrea Lash**, education and psychology, "A Multidimensional Item Response Model with Implications for Use of the Rasch Model," 2:15 p.m., 146 M. Jacks Hall. **Alan P. Wood**, operations research, "Multistate Reliability," 2:30 p.m., Terman 202. **Faustin K. Yao**, communication, "Communication Technology Transfer for Development: Issues from the Ivory Coast ETV Program," 9 a.m., Bldg. 120, Room 325.

THURSDAY, MARCH 10

Edward Ian Leland, education and psychology, "Self-Efficacy and Other Variables as They Relate to Pre-Competitive Anxiety Among Male Interscholastic Basketball Players," 2:15 p.m., 103 CERAS. **S. Thomas McCormick**, operations research, "A Combinatorial Approach to Some Sparse Matrix Problems," 2:15 p.m., Terman 217. **Wenda B. O'Reilly**, education and psychology, "Where Equal Opportunity Fails: Corporate Men and Women in Dual-Career Families," 2:15 p.m., Room e114, Education Bldg.

FRIDAY, MARCH 11

Mark N. Broadie, operations research, "Piecewise Linear Methods for Solving Equations," 2:15 p.m., Terman 217. **Steven Grant Duvall**, operations research, "Parametric Algorithms for the Linear Complementarity Problem," 9:15 a.m., Terman 217. **Christian Jan Faltis**, education, "Transfer of Beginning Reading Skills from Spanish to English Among Spanish-Speaking Children in Second Grade Bilingual Classrooms," 2:15 p.m., Room e114, Education Bldg. **Hyung Sik Oh**, engineering-economic systems, "Product Differentiation in Markets with Congestion," 2:15 p.m., Terman 329.

Stanford Staff Development Courses

March through May 1983

WORKPLACE SKILLS DEVELOPMENT

Challenges of the workplace will be explored in the following courses. each of which is structured to develop skills helpful to effective work performance in many different kinds of jobs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore, please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy. ext. 7-0657.

Telephone Techniques—This workshop focuses on using the telephone and having an effective telephone personality. Topics include an overview of the skills required, tactful phraseology, and examination of issues and problems.

- Wednesday, 4/13, 10-12

Office Interaction: Getting and Giving Cooperation—Does your job include answering questions, giving information, assisting people who call or come to your office? This workshop focuses on how to make these interactions both efficient and productive. Participants will explore the ways that they and the people they work with experience the communication/problem solving process.

- Schedule to be arranged

Office Interaction: Working With Pressure—How to function at your best in spite of the pressure of continuous office interactions. Participants will examine ways to increase concentration and patience for effective workplace relations.

- Schedule to be arranged

Assertiveness Training—Assertiveness Training introduces verbal and nonverbal skills for handling uncomfortable situations. As a result of active involvement in this course, participants will be able to ask for what they want in clear statements, assertively deal with conflict on the job, maintain a feeling of self-worth while effectively dealing with manipulative demands, and make assertive decisions.

- Thursday, 4/14, 8:30-4:30
- Thursday, 4/21, 8:30-12
  (Attend both sessions.)

Career Exploration Workshop assists staff members in making more effective career decisions. It consists of seven sequential one-hour workshops which provide methods for self-assessment (interests, skills, values, career motivations, interpersonal skills), information about Stanford career possibilities, and practice in decision making and development of action plans. Checking ideas against job market reality is emphasized.

Some of the tools used in the self-assessment process include the Strong-Campbell Interest Inventory Test, the Quick Job-Hunting Map, Firo-B and problem-solving and values clarification exercises. Discussion includes reality testing of the kinds of skills the University looks for, the kinds of jobs on campus, and the personal qualities necessary to get ahead. Exercises on strategizing and decision making are used along with the development of short and long term career goals. Instruction and information on resume writing and interviewing are included, with information on the use of the Stanford Employment Department and its organization.

- To register, call Marilyn Gilla, ext. 7-0659.

On-The-Job Goal Setting—How can you focus your energies and skills more effectively to increase the satisfaction you get from your work, as well as the contributions you make? Susan Strong will provide practical steps for setting and reaching well-stated workable goals.

- Schedule to be arranged.

Skills Development Center—The clerical skills program upgrades skills of employees on their present jobs, helps them prepare for additional responsibilities, and provides clerical training specifically related to Stanford's policies and procedures.

For information about the clerical skills program,
call Marilyn Gilla, clerical skills program coordinator,
ext. 7-0659.

Is lack of typing skills getting in the way of effective use of your computer terminal? Marilyn Gilla teaches both beginning and intermediate keyboard skills for staff members starting to use a terminal. For information, call ext. 7-0659.

SUPERVISORY DEVELOPMENT PROGRAM

The supervisory development program includes a two-session orientation to the personnel administration aspects of supervision, two intensive supervisory skills courses, and shorter workshops on specific aspects of supervision. All courses and workshops combine theory and practice and apply directly to participants' on-the-job experience.

Supervisory courses and workshops are given regularly through Staff Development. They may also be adapted to specific departmental needs and presented in departments. New workshops are developed to meet general and departmental needs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Supervisory Orientation explains general personnel processes (employment, classification and compensation, staff development, employee relations, benefits) and outlines supervisory responsibilities in personnel administration. This program is especially useful for supervisors recently promoted or new to Stanford.

- Schedule to be arranged.

Fundamentals of Supervision is a course in how to develop employee performance, establish effective supervisor-employee communication, and establish and maintain the supervisory role. Participants learn through discussion and practice of skills, incorporating new skills into their own supervisory style. An orientation meeting prior to the sessions introduces the basic principles on which the course is based.

Participation in the course requires at least three months of experience as a supervisor. Attendance at all sessions is also required.

Session topics are:

Session 1, Setting Job Standards
Session 2, Teaching a New Job
Session 3, Communicating about Performance
Session 4, Giving Recognition
Session 5, Identifying and Solving Performance Problems
Session 6, (Group Choice of Topic) Review

Fundamentals of Supervision (A)
- Thursday, 4/28-6/9, 9:00-12:00

Fundamentals of Supervision (B)
- Tuesday, 4/26-6/7, 9:00-12:00

Effective Interviewing introduces methods for making productive hiring decisions by getting sufficient appropriate information in interviews. The workshop is centered around practice exercises that are progressively more complex; participants will learn to plan and conduct interviews related to the specific responsibilities and duties of open positions.
is a practical three-step procedure for giving directives of all kinds. Participants will also learn the specific effects of language on directives.

- Thursday, 4/7, 8:30-4:30

Managing Conflicts which can and do occur in any work setting, and when well handled can renew motivation and be a catalyst for innovation. When ignored or mismanaged, however, conflicts can cause serious damage to morale, productivity and well-being. Effective conflict management involves guiding the disputants to solve their own problems. In this workshop participants will learn how to find out the nature and scope of the conflict, how to elicit suggestions, and how to get agreement to an action plan while controlling bickering and outbursts without taking either disputant's side.

- Wednesday, 4/20, 8:30-4:30

Confident Speaking——This workshop is for staff members who regularly present talks as a routine part of their jobs. Special techniques to help you prepare, practice, and deliver your train-of-thought will be demonstrated and practiced in class.

- Tuesday, 4/12, 8:30-4:30
- Tuesday, 4/19, 1:00-5:00
- Tuesday, 4/26, 1:00-5:00
  (Attend all sessions.)

Basic Attending Skills—Listening actively and intelligently is a major communications skill. In this workshop participants learn to follow what is being said, to ask open questions, paraphrase, and reflect feeling. Skills are learned through demonstration, discussion, and practice.

- Friday, 5/6-6/3, 10:00-12:00

SPECIAL INTEREST COURSES

Courses from the Learning Assistance Center

The following courses have been developed by the LAC to respond to specific staff training requests. Each course combines classroom instruction and individual tutorials with the instructor. Class size is limited to provide for maximum participant involvement, and enrollments are accepted in the order received.

Effective Writing: Letters, Memos, Minutes (A)—Is writing an increasingly important part of your work? In Effective Writing, participants review fundamentals of skillful writing, analyze and develop their writing style, and practice purposeful writing of letters, memos, and minutes. The class meets for one hour a week for eight weeks, and the instructor meets with each participant for five individual half-hour sessions.

- Monday, 4/4-5/23, 12:00-1:00
- To register, call Staff Development, ext. 7-0657.

Time Management—Is a day simply not long enough? This workshop helps participants discover where their time goes, set up a schedule and establish priorities, and become more effective at accomplishing what they decide to do. The class meets four times (one hour each time), and the instructor meets with each participant for three individual half-hour sessions.

- Friday, 4/1-4/22, 12:00-1:00

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Stanford Staff Development Courses

March through May 1983

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Effective Writing: Letters, Memos, Minutes (B)—Is writing an increasingly important part of your work? In Effective Writing, participants review fundamentals of skillful writing, analyze and develop their writing style, and practice purposeful writing of letters, memos, and minutes. The class meets for one hour a week for eight weeks, and the instructor meets with each participant for five individual half-hour sessions.

- Monday, 4/4-5/23, 12:00-1:00
- To register, call Staff Development, ext. 7-0657.

ESL III—Intermediate Writing and English as a Second Language—Two hours a week of class, four 30-minute conferences, per student. For those who are very fluent in English, but whose writing show significant weaknesses in grammar usage and idiomatic constructions. Focus on understanding and practices the conventions of written English. Limited to 15. Pleace contact the Learning Assistance Center (497-2207).

- Monday and Wednesday, 4/11-6/6, 12:00-1:00

Courses from the Association for Continuing Education

The Association for Continuing Education delivers courses accredited by local colleges and universities. For more information call ext. 7-0657.

BUS 1AS-Principles of Accounting I—This is the first of a two-part, 4 unit course which concludes in the summer quarter. An introduction to the theory and practice of accounting. Analysis of books of original entry and their relationship to the general ledger; accounting equation; classification of accounts; preparation of working papers; adjusting and closing entries; and financial statements as these relate to the service and business enterprise.
Instructor: Staff
Presequisite: None. (2 quarter units)
(Tuition $90; book $34.72.

- Tuesday, Thursday, 3/29-6/2, 12:00-1:00

CPL 102—Introduction to BASIC—A good beginning course in BASIC, the most popular and easily understood computer language available today. Students will learn the computer operations they seek for a given application through a process of self-checking exercises and flow-charting. It will not be necessary for students to have access to a computer to learn from this course. (Certificate only.)
(Tuition $90; book $14.86.)

- Tuesday and Thursday, 3/29-6/2, 12:00-1:00

CPL 105—Introduction to PASCAL—An introductory course in PASCAL for people who want to acquaint themselves with modern programming tools and concepts. It will give students with no previous programming experience a good grasp of the fundamentals and provide a foundation for learning correct and disciplined programming skills. (Certificate only.)
(Tuition $90; book $12.25.)

- Monday and Wednesday, 3/28-6/1, 12:00-1:00

For additional information or to register for ACE courses call Staff Development, ext. 7-0657. The Staff Training Assistance Program provides reimbursement to $75 per quarter for cost of courses related to employee's job performance.

CONTROLLER'S OFFICE WORKSHOPS

The Controller's Office schedules these workshops throughout the year. For more information and/or the current schedule of workshops, call Alice Forbes, 7-4531.

Course 1: Introduction to the Stanford Accounting System—(two two-hour sessions). For employees new to Stanford who monitor either departmental or auxiliary activity expenditure statements. The course includes the organization of the Controller's Office, discussion on account numbers, responsibility for the use of funds and record retention. Practical work includes practice in reading an expenditure statement and in forecasting for future results.

Course 2: Travel— (one two-and-a-half-hour session). For employees who need to understand the University's travel policy (Guide Memo 36.7) to complete travel and expense reports. The Travel Workshop summarizes travel policy, defines allowable travel costs, and provides practice in completing the necessary forms for Advances (SU-34A) and Expense Reports (SU-35).

Course 3: Equipment Administration—(One two-and-a-half-hour session). For employees who are new to the field of equipment administration as well as for those who want to "brush up" and/or need more information on the new computerized system. Teh emphasis of this workshop is on how to use the manual, forms and reports.

Course 4: Payroll/Personnel—(three two-hour sessions). For employees completing forms related to Payroll/Personnel actions and record keeping. This workshop includes a review of policies and procedures, and practice in completing all necessary forms.

Course 5: Fund Accounting at Stanford and How to Read Fund Statements—(two two-hour sessions). The purpose of this workshop is to teach interested employees the fundamentals of fund accounting as practiced at Stanford. The University's financial statements are discussed as well as fund statements and fund summary reports.

Course 6: Fundamentals of Grant and Contract Administration—(four two-hour sessions). This workshop is planned for administrators and others involved with the preparation of proposals as well as accounting procedures for expenditures, monitoring and forecasting for sponsored research projects. Members of the Sponsored Projects Office will participate in the workshop. The sessions planned are:

1. Introduction and Overview of Definitions, Federal Regulations and the role of SPO.
2. Proposal Preparation.
3. proposal Processing and Post-Award Administration.
4. Contract and Grant Rebudgeting, Forecasting and Financial Management.
5. Grant and Contract Closeout, Updates, Issues, and Trends.

Course 7: Grant and Contract Administration Update—(one two-hour session). This new workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session.

Course 8: Procurement—(two two-hour sessions). This new workshop reviews the procurement process along with criteria for choosing the correct form amongst the SU-10, SU-11, SU-12, SU-13, SU-14, SU-15, SU34A, SU-34B, SU-35, SU-40, SU-41, and SU-43.

Course 9: Grant and Contract Administration Update—(one two-hour session). This new workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session. The topic for this first workshop is the closing out of sponsored projects. A panel discussion is planned, followed by a guest speaker, Fred Bentley, associate director of SPO, who will speak on current issues.

Draft/

cont. from page 1

calls for the Service to provide, within a two-week period, acknowledgments of thousands of students' registration.

"Yet if Selective Service fails to achieve this extremely demanding standard of performance, many students—through no fault of their own—will face denials or subsequent cutoffs of aid because of delays in receiving their acknowledgment letter; schools will be denied reimbursement for funds advanced in good faith to students in fact entitled to receive them; and students and schools alike will be thrust into the pointless and expensive process of attempted retrieval of funds properly disbursed and properly expended.

"Students who have fully complied with the statutory requirement will suffer from this burdensome and unnecessary system."

Kennedy suggested that the statutory requirement could be met with a simple form as follows:

If you are a male born after Dec. 31, 1959, complete the following:

I certify that I am registered with Selective Service; or

I certify that I am not required to be registered with Selective Service because:

I am in the armed services on active duty;

I am a permanent resident of the Trust Territory of the Pacific Islands or the Northern Mariana Islands.

Signature, birth date, and selective service registration number or social security number.

This would be in keeping with the legislative history of the statute, which says the regulations should "minimize the administrative burden on colleges and universities and the delays in processing aid applications and awards" (House Conference Report 97-749) and that the burden of verification be placed on Selective Service.

"Neither the statute nor the legislative history contains any suggestion that verification of registration status may be required prior to the award of aid," Kennedy noted. This could result "in an actual loss of educational opportunity" for some students.

As drafted, the proposed regulations "place the burden of verification wholly upon the educational institutions. . .require statements from all students seeking federal aid regardless of whether they are required to register with Selective Service," Kennedy said.

The proposed regulations would:

1) Make the verification documentation part of the student's record;

2) Require institutions to attempt to recover funds already disbursed to students who fail to file and verify compliance; and

3) Require institutions to recover as overpayments funds distributed to newly turned 18-year-olds who file affadavits as temporary verification of registration but do not provide additional documentation within 120 days.

"By unnecessarily thrusting the university into the role of primary enforcer of a controversial statute that has other, ample, and far more appropriate methods of enforcement, the regulations are inimical to the traditional relationship between academic institutions and their students," Kennedy said.

His views were expressed in a letter to Andrea Foley in the Department of Education's Office of Student Financial Assistance (Room 4318, Regional Office Building 3, Washington, D.C.).

Health and safety report

Accidents and Injuries Occurring Feb. 21-25

Cause of Accident	Number	Number of Days Off
Contact with object:		
Impact with object	1	1
Cut by sharp object	2	0, 3
Rubbed, scraped,	1	0
Fall from same level	2	0, 3
Lifting improperly	3	2, 3, 1

Barnett explains standards in field

In a statement published by *Campus Report* last week, Prof. Clifford Barnett noted that field work in anthropology "demands a clear demonstration to others in the profession that (the researcher) can be trusted to report events accurately, including the events which involve the behavior of the anthropologist in the field.

"The reasons for this professional imperative for sensitivity to others, prudent judgment and unquestioned honesty are inherent in the nature of the anthropological research process. Anthropological research most often involves a solitary researcher rather than a research team. . .it is difficult for other researchers to go to the 'laboratory' and replicate the findings.

"Anthropologists often study populations which have relatively little power in their national units and are at the mercy of officials and others who have power over them. The study populations often have little realization of the uses that can be made of information collected by anthropologists." Some of these can work against the interests of those who supplied the information.

Anthropologists have a special responsibility not only to protect the confidentiality of those who provide information to them, but to consider and attempt to anticipate the repercussions for their study populations of the content and form of their disseminated research findings. . . .

"One of the ways anthropologists can protect the name of the discipline is to abstain from engaging in activities while in the field that are judged to be 'illegal' in the areas where they work. . . . In some situations, actions judged 'illegal' by a national government may not be perceived as 'illegal by the study population and may even be necessary to protect the interests of the study population.

"Similarly, unconsidered action taken by the anthropologist after leaving the field to further the welfare of the study population may foreclose the opportunity of other researchers to carry out research in the same area, and might harm the populations the anthropologist would like to assist.

"Sound judgment and fully considered action are thus requisites for the professional."

Queen. . .

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President Kennedy has invited the Stanford Band to play during the lunch on the lawn at the back of Hoover House.

The list of those invited to the lunch will not be made public. This is reported to be at the request of the British government, on grounds of protocol.

Thursday will be a very busy day for the Queen, even for a monarch who has been accustomed to grinding schedules for 31 years. She will arrive in San Francisco, Pier 50, aboard the royal yacht Britannia, at 9:30 a.m. Nancy Reagan, wife of the President, will also be aboard, having sailed as a guest from Santa Barbara.

The Queen and the Duke of Edinburgh will go to Davies Hall for a civic reception in her honor.

The royal party will come to Stanford by car. After the Stanford lunch the royal party will visit the Hewlett-Packard plant at Cupertino. By 4 p.m. the Queen and her party will be back at the yacht Britannia, to prepare for the state dinner that will be held that evening at the DeYoung Museum, hosted by President and Mrs. Reagan.



Barricades

Roads around the President's House will be barricaded early Thursday, March 3, as shown above, in anticipation of the Queen's visit.

Police Chief Marvin Herrington urges drivers to avoid the area. No access will be allowed inside the perimeter, except to authorized individuals.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

SLAC

94668-JM (JCC:2296) Program Planner: Develop annual dept'l expense & capital budgets; develop monthly plans of expenditures & manpower requirements; analyze detailed acctg statements; review & update plans; develop proj schedules (CPN) for work being performed by the dept(s) fr develop't stage thru design, fabrications, installation & sys testing; prep written status & progress reports; carry out studies of proposed new projs; participate in prep of long range plans of depts; QUALIFICATIONS: Industrial or Mgmt Engrg degree or equiv required; understanding of the basic concepts of program planning; coureswork should have provided training in budgeting & acctg for proj control, as well as critical path network schedule preparation, updating, analysis & reporting; ability to deal effectively w/ scientists, engrs & administrators; ability to commu effectively both orally & in writing.; C07; $2113-3432. APPLY AT SLAC

94112-JM (JCC:7550) FACIL ENGINEER/COORD I: Respon for daily direction of maintenance & repair work of bldgs & grounds as follows: determines most econimical method of performing maintenance & repairs; directs, monitors & inspects subcontractor performance; QUALIFICATIONS: must have approx 5 yrs exp related to bldg craft trades; be knowledgeable in principles & practices of bldg maintenance, standards & codes, methods of fiscal control & cost analysis; must be effective in oral & written commu; have excel demonstrated interactive skills; must have work exp in a highly complex tech environ & be able to read drawings & interpret tech specifications.; C06; $1854-2354. APPLY AT SLAC

94931-JM (JCC:7902) Laborer/Driver: TMS Unit; drive bus, trucks, forklifts & other vehicles; operate light eqpt; use hand & power tools; move furniture & eqpt; perform other work as assigned; must possess valid Calif. Class 1 or 2 driver's license; ability to perform some heavy work in all types of outside weather conditions; ability to follow job-related instructions.; A18; $1300. APPLY AT SLAC

94679-JM (JCC:2262) Financial Analyst II: Assist in preparing annual budget documents for submittal to DOE; review & analyze cost performance against budget; participate in special analyses as required; asst in long range planning process; establish group/proj budgets; development & maintenance of computer models; QUALIFICATIONS: BS or equiv exp in Bus. Admin., Economics or technical discipline w/ some acctg bkground; MBA desirable; ability to commu both orally & in writing.; C07; $2113-2773. APPLY AT SLAC

Bargaining Unit

9300-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; perform procedures under supvn of triglyceride turnover & cholesterol measurements, glucose values, free fatty acids, & determination of glucose turnover; centrifuging & aliquoting blood specimens obtained fr patients; QUALIFICATIONS: 1 yr prev exp as a lab technician or equiv course work in a lab science.; A18; $ 7.50.

44322-JB (JCC:6604) SR S&E TECH -ELECTRO MEC: TMS Unit; 8-5 w/ some shift work; assist visiting scientists to set up experiments; assure safe efficient operation of the lab by monitoring beam line instrumentation, safety interlocks & radiation; participate in develop't of new beam lines & instrumentation; perform maintenance & repair of existing eqpt; QUALIFICATIONS: Associate of Science Degree in Electronics or Electrical Engr or military Tech school grad or 5-8 yrs of work exp in a lab environ; specialized skills in electronics, vacuum, or computer sciences desired.; A34; $10.97.

Hospital

PAYROLL PROCESSOR—General Acctg—#3326 (C-28): Responsibilities: Audit time cards for accuracy & compliance w/personnel policies; compute, type, & balance interim checks; complete wage & other information for State & Fedl agencies; process personnel action forms; compute retroactive adjustments; able to work under stress, answer phones & employee questions/problems in pleasant manner; interface w/computer. Qualifications: Accurate typing; 10 key by touch; high schl grad or equiv; payroll experience preferred; permanent full time M-F $7.56-$10.38 hrly

TRANSCRIPTION SUPVR—Radiation Therapy—#6022 (C-8): Responsibilities: Under direct supvn of Administrative Asst, for Radiation Therapy, transcribes & types history & physical forms, follow-up repts, letters, treatmt summaries; works w/ dictaphone & word processor; supervises other personnel of section who are performing transcription duties; performs related duties as assigned; Qualifications: minimum of 3 yrs' transcription experience preferred; type at corrected rate of 60wpm; knowl of medical terminology for entire human body including: medicines, chemotherapy, laboratory, pathology & radiology terms; abilities to transcribe dictation & supervise effectively; permanent full time permanent M-F 7:30-4:30pm; $9.19-$12.63 hrly

Nonexempt

23598-PM (JCC:2512) OFFICE ASST III-SPEC: Prov clerical support to Image Understanding/Robotics Research Group & to the Admin Sec for the group to incl screening & responding to calls & visitors, arranging for demonstrations; scheduling appts; opening & screening mail; assemble tech mat'l fr libs & research organizations; make travel arrangements for research trips & local arrangements for visitors; prep of manuscripts, proposals, reports, forms, etc., as well as maintenance of records will utilize the Computer Sci text editing sys; QUALIFICATIONS: typ 60; computer text-editing skills or willingness to learn required; exercise good judgment; knowl of Univ forms & procedures helpful; neat typing skills; good interpersonal skills required to interface effectively w/ faculty, staff & students; send appl/resume to M. Yearwood, Bldg. 460, Room 256.; B12; $1310-1373.

36209-BP (JCC:2554) SECRETARY II: Prov sec'l support to Asst & Assoc Deans in Grad Studies & Research; schedule mtgs & make appts; make travel arrangements; preparing Univ forms; type corresp & reports; word-processing on IBM Personal Computer; filing; working on large mailings; prov support serv for various projs; answer phones; greet visitors, etc; QUALIFICATIONS: typ 60; sec'l exp; accurate typing; good English grammar & spelling skills; familiarity w/ or willingness to train on IBM-PC; good interpersonal skills & ability to interact well w/ faculty, staff & students; exp w/ ethnic minorities desirable; smoking not permitted in work area; send appl/resume to Jean H. Fetter, Bldg. 1, Room 2B.; B11; $1246-1310.

41739-PM (JCC:2596) SECY II-SPEC: Serv as sec to 2 or 3 professors active in copyright & property law; handle all manuscripts, classwork, correspondence, phone calls, expense reports & travel arrangements as needed; data processing on personal computer; able to accept respon to prior own schedule at extremely busy desk; excel skills a must to keep up w/ heavy work load; QUALIFICATIONS: typ 80; excel typing skills; good offc bkground; exp w/ data processing & dictating eqpt; must be detail-oriented & have demonstrated organizational & commu skills in prev work exp; send appl/resume to Dena Landsman, Room 113 Crown Quad.; B12; $1310-1373.

27093-PM (JCC:1747) LIBRARY SPEC I: 50%; lib assistance for North & Latin American Collections; search lib card catalogs & files, standard bibliographic tools, & RLIN data base for book & periodical titles selected for purchase & for books received as gifts; maintain curator files & records; typ letters & reports; asst in their preparation; asst in the preparation of spec bibliographies; answer telephone in curator's absence; QUALIFICATIONS: typ 45; an extensive application of Spanish is nec; prev lib exp helpful; requires typing ability; ability to gain a working knowl of lib operations relating to the work of these collections; send appl/resume to Joseph W. Bingaman, Hoover Institution, Stanford, CA 94305 or call 497-2106.; B10; $595-623.

31098-PM (JCC:1755) LIBRARY SPEC II: Performs duties in Dept of Special Collections; circulation of mat'ls; maintenance of records; paging & reshelving of mat'ls; supvn of reading room; trains, supv & schedules student assistants; processes all photoduplication orders & maintains files of copy negatives; oversees genl maintenance of stacks; collects & reports statistics on public serv & dept'l space; on-line bibliographic searching; retrieves electronic mail & supv terminal maintenance; assts in documenting, updating & revising operational procedures; QUALIFICATIONS: typ 40; required: prev lib exp; prev public serv exp; demonstrated clerical & organizational skills; good commu skills, both orally & in writing; desirable: prev supvry exp; ability to work well w/ students; familiarity w/ academic res libraries, preferably w/ Spec Collections depts; knowl of and/or exp w/ RLIN & WYLBUR; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $1310-1373.

32590-BP (JCC:2210) ACCOUNTING ASST III: Review documents (salary reqs, check requests, expense reports, etc.) for allowability 7 applicability according to Univ, Gov't & non-Gov't policy; prep contracts & billing as required; answer dept inquiries concerning expenditures; correct reject lists & prep transfer of expense when indicated; prov guidance & assistance to offc assistants; various acct reconciliations, etc; QUALIFICATIONS: 2-3 yrs exp, training or equiv education; requires a thorough knowl of basic acctg procedures as well as ability to use calculator; maturity & judgmental ability required in applying policies; send appl/resume to D. Monica, 30 Encina Hall.; B14; $1440-1514.

31849-BP (JCC:2462) OFFICE ASST III: Respon for maintaining orderly flow of work & prov liaison between two parties in a shared job; typing, proofreading & distribution of gift acknowledgements; maintenance of accurate files & records of monetary & non monetary gifts to Univ; handle some clerical duties for Dir of Commu/Events, w/ a variety of duties assoc'd w/ organizing social events for Univ donors; answer phone; supvn & training of student or part time employees; order supplies, etc; QUALIFICATIONS: typ 50-55; extremely careful regard for accuracy & respect for confidentiality; excel typing skills, incl exp w/ NBI and/or Lexitron; familiarity w/ Univ computer sys desirable; good written & verbal commu skills; proofreading ability & excel memory are vital; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B11; $1246-1310.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, March. 8, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Carpools

Carpoolers wanted, 8-5, M-F, from Pleasanton, Livermore, Union City, Fremont area to Stanford. Call Patty, ext. 7-2071.

One person to join existing carpool to Stanford. M-F, 8-5. We meet at Stevens Creek & Wolfe Road, Cupertino Please contact Ana Errico at 7-0612.

Carpool wanted from Newark to Stanford, M-F, time flexible. Call Polly, 7-4281.

Carpool wanted to Santa Cruz from Palo Alto M, W, F. Call Mark, 856-2428.

Carpoolers wanted, 7:30 a.m. to 4 p.m., or 7 a.m. to 3:30 p.m. Fremont, Union City, Newark area to Stanford University. Call Tami, 7-6444.

Hortensia de Allende of Chile to speak on human rights

Hortensia Bussi de Allende, widow of Salvador Allende, President of Chile from 1970-73, will speak at 7:30 Monday, March 7 in the History Corner, Rm. 2, Stanford University. She is being sponsored by the Feminist Studies Program.

Sra. Allende, a long-time fighter for the rights of women and the poor in Chile, will speak on the role of Latin American women in the struggle for the preservation of human rights in Chile and in other Latin American countries.

On September 11, 1973 the military coup overthrew the democratically elected government of Salvador Allende. Sra. Allende was in the Presidential Home which was bombarded by air and ground forces on that morning. Several days later, without being allowed to see the body of her slain husband, she was able to escape to Mexico with her daughters.

Since 1973, Sra. Allende has been active in organizing international solidarity efforts for her people and has traveled extensively throughout Europe, Asia, Africa, and the Americas.

For more information contact Elizabeth Fitting, 497-2412.

Letters to the editor

She has sticker but no parking place

Editor, *Campus Report*:

I am confident, based on my daily observations, that my complaint is shared by a large number of employees who purchased "C" stickers for the privilege of securing a parking space on the Medical Center campus.

You are all aware that after 8:45 a.m. all "C" lots are completely full and that in order to make it to work one ends up receiving parking tickets for parking "illegally." I feel this is an unfair practice vis-a-vis "C" sticker holders. If one purchases a parking permit, one expects to find a space and not be penalized for shortage of parking spaces.

To those of you who share my dissatisfaction, please voice your concern to the Stanford University Police Department with copy to Rosemary Hornby (M-118). I am confident that an exceptionally talented, competent and snazzy administration such as I believe and hope Stanford to be can find a fair solution to this problem.

Mery Clausen
Pediatrics

Rental housing

HOUSING AVAILABLE

□ **July & Aug. '83:** Dutch cpl seeks hse in or nr. Los Altos for vacation period (4 to 6 wks). EXCHANGE for hse in Oegstegeest (nr Leyden) Netherlands, 8 mi to beach, 8 mi. no. of The Hague, 25 mi. so. of Amsterdam. Call 969-1924.

□ **June 19 to Aug. 26, '83:** Furn. campus hse, 4BR/2½BA, FR, piano. Will EXCHANGE for London hse/flat, or RENT for $1500/mo, incl water, cleaning, grdnr. Nonsmokers, no pets. Call 493-8874.

□ **Beg. Mar. 1:** Furn. apt. 2BR/1BA, sep. wing of priv. residence. Priv. entr., immaculate cond., nr. shops, bus, access main rds. Nonsmokers, no pets. Refs. req. Rent nego. Call 964-4632. 961-9396, pref. betw. 5 & 9 pm.

□ **Aug. '83 to Jan. '84:** Fully furn Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg FR, W/D, pool, 1 mi. to Stanf. Nr. schls, park, com. ctr. Prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **Mar. 27 to Sept. 15, '83:** Fully furn 3BR/3BA, FR, hse in So. Palo Alto. Mbshp in nghbrhd pool ass'n, grdnr, 15 min. to Stanf. Walk to shops. Ideal for children. $1100/mo. Call Cornish & Carey, 325-6151 (day); Rita Benedict 327-7190 (eve)

□ **July, Aug.:** Very attrac summer rent. Dwntwn Palo Alto, fully furn. 1BR/2BA condo, suitable for cpl. Library w/spiral staircase, balc., pool, secure. 18th C. European style. $1500/mo. Call (415) 324-1624 (eve) 327-3505

□ **Beg. June 1:** Summer rental and/or 1 yr. High Portola Valley (Ladera). Beaut. 3BR/2BA fully furn. hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis. 7 min. to Stanf. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn campus hse. BR/3½BA, LR, DR, study, lib., frpl., pool, view, acre. $1600/mo. incl grdnr, pool serv., water. Call 327-5204, 497-4732 (day).

□ **Apr. 1 to June 30 (flex):** Spring Qtr. Fully furn. sunny studio cottage, Bryant nr. Embarcadero. Incl. kitchenware, dishes Nonsmoker. $300/mo. incl. util. Call 322-6055.

□ **Beg. Apr. 1:** Earlier if neces. Prof. woman seeks female rmmate to share lrg. unfurn. 2BR/2BA apt in Palo Alto. Good nghbrhd. Bike to campus. $337.50/mo. + ½ util., + dep. Call Nancy 321-4741 (eve).

□ **April 1 to June 1 (flex):** Los Altos. Fully furn. 2BR/2BA hse. Lrg. LR, FR, AEK, 2 frpl., 2TV. Park-like 1/3 acre. 1 queen, 1 dbl bed. Quiet, dead-end st. Car poss. $1050/mo. Call 967-2918.

□ **Beg. Mar. 18; beg. Apr. 1:** Two rms in old Victorian priv. hse. Fully furn, ktchn priv., laundry, walk to Stanf., dwntwn. Short term rent. pref. $400/mo. Call Peggy 327-2510.

□ **Apr. 11 to June 9, '83:** Wooded, wine cntry retreat, 5 mi. above Calistoga. 3BR/2BA, study, pool. $550/mo incl. caretaker. Call 497-3254, M-Th; 11-12, or after 3 (M-W). 854-3932 after 9 pm Sun-Wed.

□ **NOW:** Ski Northstar. Tahoe. 2BR/2BA condo, sleeps 8. W/D. Free shuttle to slopes. Ideal fam. ski resort. Day care avail. Call Rosemary (415) 564-5324.

□ **April thru June '83:** Fully furn hse in Los Altos. 2BR/2BA, LR, DR, den. 2250 sq. ft. 10 min. to Stanf. Adults only. $899/mo. incl. grdnr. Call 948-6370.

□ **Beg. Mar. 1, '83:** 7 to 10 mo. (flex): Fully furn 2BR/2BA condo, view, pool, tennis, W/D. 12 min. to Stanf 35 min. to SF. Nonsmoker, no pets $850/mo. Call (415) 853-5212, (415) 591-7085 (eve).

□ **Mar. 20 to July 15, '83:** Charming old Palo Alto furn. hse. 2BR/2BA, LR, DR, modern cntry ktchn, deck 2 mi. to Stanf. on bus rte $1000/mo. incl. cleaning, grdnr + dep. Call 321-5545 (day), 322-2051 (eve)

□ **July 1, '83 to July 1, '85 (flex):** 1 yr. rent. poss. Fully furn. Palo Alto fac. hse. 3BR/2BA, FR/den, LR, DR, W/D, frpl, AEK, pool w/deck, patio. $1200/mo. Call Anne Mellor, 323-5329, 497-2724 (day).

□ **Beg. end Mar. to end July (flex):** Los Altos fully furn hse on cul-de-sac. 4BR/3BA, walk to schl & dwntwn shops. 6 mi. to Stanf. $950/mo. incl grdnr & water. Call 948-0936.

□ **Beg. Mar. 1, '83:** Moreno Dr. in Palo Alto; partly furn. or unfurn. hse, 3BR/2BA, frpl, new carpets, W/D, detached studio, yd. w/fruit trees, hot tub. Nonsmokers. $1050/mo. Call 854-0591, or Elise, 324-2014 (day).

□ **July 1 to Dec. 31, '83:** Fully furn hse in Sharon Hgts, 4BR/3BA, study, FR, sep DR, 2 frpl, on 1/3 acre. $1500/mo incl. grdnr. Call 497-3785 (day), 854-7471 (eve).

□ **April 1 thru mid-Aug. '83:** Lovely furn. studio apt. in dwntwn Palo Alto. Sublet (end of July, nego.). Fully furn. incl linens, ktchnware. Laund. facil. 5 min. to Stanf. Call 321-6871.

□ **June thru Aug. '83:** Exec. fully furn. hse, 5BR/4BA, W/D, pool, panoramic view. Portola Valley. Rent incl grdnr, cleaning, pool serv. Call 851-2481.

□ **Beg. Apr. to beg. Aug. '83:** Los Altos fully furn hse on cul-de-sac. 6 mi. to Stanf., walk to sch & dwntwn shops. 4BR/3BA. $1200/mo. incl grdnr & water. Call (415) 948-0936.

□ **Beg. Mar. 5, '83:** Female to share 4BR/2BA hse, W/D, DW, frpl, patio, 10 min. to Stanf. Nonsmoker, no pets; over 30 pref. $260/mo. + 1/4 util. $125 dep. Call 494-3255 (eve) or Dorothy, 497-1078 (day).

□ **12 mo. rental:** To begin July 1, Aug. 1, or Sept. 1 (flex). Fully furn 4BR/3BA hse on Stanf. campus. 2FR, 2 studies, 2 decks, lrg. pool, spa, sauna; antique furn. $1800/mo. incl. clean. serv., grdnr, pool serv. Call 497-0627 (day), 321-4002.

□ **NOW:** 2BR/1BA hse. Excl westside Redwood City location. 12 min. to Stanf. New kitchn, fenced front & back yd. Gar. & wrkshp. Children & pets ok. Call Lynn, (415) 859-4292, (415) 361-1636.

□ **Spring Qtr:** For 3 mo. (flex): Furn. hse 1½ mi to Stanf. 3BR/2BA, frpl, piano, DW, children ok, no pets. $700/mo. Call Perkins, 497-2421 (day), 854-3225.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. hse, Ladera, 5 min. to Stanf. 4BR/3BA, lib., study, FR, frpl, lovely garden, decks. $1800/mo. incl. grdnr, swim/tennis priv. Call (415) 854-2509, 497-6169 (day).

□ **NOW:** Attrac. furn. 4BR/2½BA hse (2200 sq. ft.), study, DR, FR, 3-car gar., patio. Year lease. Incl. ktchn ware, linens, 2TV, lrg front & back yd, quiet, safe nghbrhd. $1400/mo. incl. gardener. Call (415) 965-1302 (eve).

□ **NOW:** Flat in London, 2BR/1½BA, new central heat, 1 min to Willesden Green Stn. undergrnd. $600/mo. Call Dr. Preger, (415) 661-4067 or (415) 387-7300.

□ **NOW:** Ski Cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501(day), (408) 739-3141 (eve).

□ **Regularly Avail.:** 1 & 2BR furn. & unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $525 to $1200/mo. Call Shirley, (415) 493-2321 or Jane, (415) 968-4957.

□ **Beg. Mar. 19:** Furn. 3BR/3BA hse. in Palo Alto nr. Stanf. Beaut. spac., new ktchn, W/D, piano, frpl. Fenced yd. No pets. Call COLLECT (602) 299-4499.

HOUSING NEEDED

□ **July, '83:** Seeking 4BR hse nr Stanf. EXCHANGE 5BR hse w/garden nr Lyons, France (10 min. to Lyons) + small flat in Paris. Write: G. Adam, 2 chemin du Trouillat, 69130 Ecully, France.

□ **June 15 to Sept. 15, '83 (flex):** Reliable missionary cpl seeks 1BR furn. apt, small hse, or hsesit position while on leave from Philippines. Call Monty or Lori, 324-5684 (day), 321-0237 (eve).

□ **Aug. 1, '83 to end July '84:** Visit. chem. engr. seeks furn. 2-3BR hse/twnhse for self, wife, 2 boys (13, 15) & small dog (Scottie). Assure excint care for yd, plants. Nonsmokers. Prefer within 15 min. to Stanf. Poss. exchange for 4BR furn. hse on wooded lot nr Wash DC. Call COLLECT (202) 696-4410 or 4409 or write Dr. K.J. Wynne, Off. Naval Research, Chem. Div., 800 North Quincy St., Arlington, VA 22217.

□ **June thru Sept. '83:** Visit French prof seeks 3-4BR hse for self & fam. Call Marilyn Yalom, 493-7083 or 497-1994 (day)

□ **Oct. 1 to Dec. 31, '83:** Autumn Qtr. Visit prof. CERAS, Sch. of Ed. seeks rm on or nr campus. Nonsmoker. Call 497-9532 (day), BEFORE Mar. 9.

□ **June 1 to Sept. 15, '83:** French academic fam. seeks 3-4BR hse. on campus. EXCHANGE for lrg. modern apt. in Paris 16th, or will rent. Stanf. refs. Call Lehman, (415) 857-0494, eves or wknds.

□ **Sept. '83 to June '84:** Prof. on sabbatical, U. of Iowa Med. Sch., wife & 2 children (4 & 7) seek hsng; pref. on campus. Call Betty Bray, Dept. of Bio. Chem., (415) 497-6161 (day).

□ **Beg. May 1, '83:** Classical violinist seeks 1BR guest cott. or small hse. Palo Alto to Burlingame. Call after 9 pm Mon-Fri. (408) 354-7549.

□ **Mid-Mar. to mid-July '83 (flex):** Woman prof. from London, w/o family, careful tenant, seeks to rent and/or hsesit 2BR hse. Prefer on campus. Call Himmelweit, 321-2052 (day) or 328-6040.

□ **June to Sept. (flex):** Visit scholar, family, seek EXCHANGE: 5BR/2BA apt in Paris & car for 4 or 5BR hse in Palo Alto or Stanf. Call Mrs. Flexer, 493-5088, 962-0100, X259; or write Mr. Paoletti, 84 rue Michel Ange, Paris, 75016, France.

□ **NOW:** Housesitting. Prof. cpl seeks home to caretake. Refs avail. Call Peggy or Bill (408) 977-1509 (eve)

□ **Sept. 1, '83 to June 15, '84:** Visit Prof, wife seek 2BR furn. apt. or hse nr. Stanf. Call Jean Lee, 497-3322 (day). Or write Robert Cohn, Dept. of History & Religions, Northwestern Univ., 1940 Sheridan Rd., Evanston, Ill. 60201.

□ **Sept. '83 to June '84:** Prof. on sabbatical (U. of Iowa Med. Sch.), wife, 2 children (4 & 7), seek hsng on or nr Stanf. Call Betty Bray, Dept. Biochem. 497-6161 (day).

□ **Apr. 9 thru Apr. 30, '83:** Fac. wife seeks small apt. on or nr campus. Call 857-0255 or 857-0201.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Check, a 1965 etching and drypoint, from the exhibition The Art of William Gropper

Art Gallery exhibits Gropper works

Art works by the social realist William Gropper are featured in an exhibition opening Tuesday, March 8, in the Stanford Art Gallery.

Included are 75 paintings, drawings, prints, and cartoons by an artist best known as a pictorial satirist.

Born on New York's Lower East Side in 1897, Gropper made social injustice the theme of his work throughout a long and productive career. He first came to national prominence as a painter in the 1930s with canvasses of bombastic senators and grim-faced lawyers, subjects that he continued to exploit during the McCarthy days of the 1950s.

Prolific as a figurative painter throughout the heyday of abstract expressionism, Gropper treated also such themes as the brutalities of war and the dignity of work. In murals commissioned by the Fine Arts Section of the U.S. Treasury Department during the late thirties, he depicted the heroic figures of American workers on the assembly lines of Detroit.

But Gropper's authority as an artist is best seen in the powerful draftsmanship of the graphic work he produced for the radical press during the twenties, thirties, and forties. The Stanford exhibition includes many of the original drawings for cartoons published in *Liberator*, *Revolutionary Age*, *The New Masses*, and the Yiddish daily, *Freiheit*.

Gropper got his first formal training by attending night classes at the libertarian Ferrer School in New York City from 1912-1915. There he drew from the live model in the company of such artists as Robert Henri and George Bellows. Subsequently, Gropper attended the New York School of Fine and Applied Arts for two years.

Hired in 1917 by the New York *Tribune* to draw cartoons for the Sunday section, Gropper was soon producing graphics for a wide range of publications, including *The Dial*, *Vanity Fair*, and *Smart Set*. The recipient of many awards and prizes—among them a Guggenheim Fellowship and the Carnegie International—Gropper, who died in 1977, had many one-man exhibitions in this country and abroad.

He spent 1967 at the Tamarind Lithographic Workshop, and the following year was elected to the National Institute of Arts and Letters. His work is to be seen in many public and private collections, among them the Metropolitan Museum of Art, the Museum of Modern Art, and the Chicago Art Institute.

For the exhibition at Stanford, Gropper's works have been lent by a private collector and by the Heritage Gallery in Los Angeles.

The Art Gallery, on the Stanford campus next to the Cummings Art Building, is open Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday, from 1 to 5 p.m., it is closed on Mondays. Admission is free.



Murray Perahia plays Beethoven, Schubert, and Lizst at 8 p.m. Friday, March 4, in Memorial Auditorium.



Kaye DeVries will sing the lead in Stravinsky's one-act opera, *Mavra*, at 2:30 p.m. Sat. and Sun. in Dinkelspiel

Kaplan tapestries shown at I-Center

Luz do Sol, architectural-scale tapestries by Annette Kaplan of Berkeley, will be on view at Stanford International Center March 3-30. A reception for the artist will be held there from 5-7 p.m. Friday, March 4.

The large works were all woven at a draw loom in the artist's Berkeley studio. Many tapestries are double-woven and finished on both sides. The artist's designs are bold and often geometricized. She frequently draws on urban architecture for subject matter.

Kaplan earned a bachelor's degree from the California College of Arts and Crafts in Oakland, where she studied with Trude Guermonprez. The artist also has studied in Mexico and Denmark, and has traveled widely in Central America and Europe. Kaplan was a National Endowment for the Arts grant recipient in 1975 and 1976, working in the U.S. Next year she plans to work with artists in Brazil.

Kaplan has had many solo and group exhibitions, beginning in 1972. Her work is included in a number of museum and business collections in the U.S.

Audition now for next two plays

The Stanford Drama Department will hold auditions for the Kaufman and Hart comedy *Once in a Lifetime* Monday and Tuesday, March 7-8, and for Marsha Norman's contemporary play *Getting Out* Thursday and Friday, March 10-11.

All are planned to start at 7 p.m. in Little Theater on campus.

Steven Vineberg, who will direct *Once in a Lifetime*, has requested those interested in auditions to sign up in the Drama Department Office, Room 144 in the back hall of Memorial Auditorium or call (415) 497-2576. Performance dates are May 11-14 and 18-21 in the Little Theater.

Johanna Dickey, second year doctoral student, will direct *Getting Out* performances May 25-28 at the Nitery. First produced in New York in 1978, the play concerns a woman who has spent most of her adolescence in prison, and begins on the day she is released.

Those interested in auditioning may sign out scripts at the department.

Alma Trio plays final concert

Stanford's ensemble-in-residence, the Alma Trio, will perform their last Music Department concert of the year at 8 p.m. Friday, March 11, in Dinkelspiel Auditorium. Trio members are Andor Toth, violin; Gabor Rejto, cello; and Adolph Baller, piano.

Their program will open with the Trio in C Major, op. 87 by Brahms and conclude with Schubert's Trio in B-flat Major, op. 99. Also on the program will be Debussy's cello sonata and the violin sonata in A minor, op. 105, by Schumann.

The Alma Trio celebrates its 40th anniversary this year. Tickets for their concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Nohema Fernandez to play March 9

Pianist Nohema Fernandez, particularly well-known for her interpretation of Spanish and Latin-American repertoire, will perform at 8 p.m. Wednesday, March 9, in Dinkelspiel Auditorium. Her free recital is presented by the Department of Music.

Fernandez will perform sonatas by Larranaga, Freixanet, Cantallos, and Chopin, as well as *A Prole do Bebe* by Villalobos and selections from *Goyescas* by Granados.

Fernandez received her Doctor of Musical Arts degree from Stanford and is presently coordinator of piano studies at UC-Santa Cruz. She will give recitals in Denmark and Sweden in April and tour the eastern U.S. in May. She has performed in her native Cuba, Mexico, France, and throughout the U.S.

Italian architect to speak Monday

Aldo Rossi, Italy's leading living architect, will present a free slide/lecture on his work at 8 p.m. Monday, Mar. 7, in Skilling Auditorium. A reception will follow in the Tresidder Union Small Lounge.

Born in Milan, Rossi has served as editor and frequent contributor to *Casabella-Continuita*, an architectural magazine. He has taught at the School of Architecture in Milan, the Universitario di Architectura in Venice, the Cooper Union in New York City and Yale University. The recipient of a number of awards, Rossi is well-known for his major written work: *The Architecture of the City*.

Rossi's work is intimately related to his writings. Among his principal works are the Unita di Abitazione for the Societa Monte Amiata complex in Varese, 1972-1977. In 1977, working with Carlo Aymonino, Gianni Braghieri, and Vittorio Savi, he won a competition for the design of the Centro Direzionale of Florence. His works and drawings have been described as forms which create "a dream-Italy unmatched since De Chirico's time."

The talk is sponsored by Stanford's Departments of Urban Studies and Italian, University Events and Services, Casa Italiana, and Tresidder Union's program committee, STARTS. It is part of the 20th anniversary celebration of Tresidder Union.

Lecture on Spain

Prof. Gabriel Jackson of the University of California, San Diego, will present a free public lecture on "Spain: From Dictatorship to Democracy" at noon Friday, March 11, in History Corner, Student Lounge, Room 301, at Stanford.

Jackson has been on the faculty of the department of history at UC-San Diego since 1965, where he teaches the history of Spain. He is the author of *The Spanish Republic and the Civil War*, published by Princeton University Press, and *Historians Quest*, published by A. A. Knopf.



Carol Lashof, Jodi Gandolfi, Nancy Beagle, Lila Stuart

"Moments of Being," inspired by Virginia Woolf, set for March 8

"Moments of Being," an evening of music and drama based on the writings of Virginia Woolf, will be presented by the Center for Research on Women (CROW) and the Lively Arts at Stanford, at 8 p.m. Tuesday, March 8, in Dinkelspiel Auditorium. This performance is the final event in the Jing Lyman Lecture Series, "Women in the Performing Arts."

Actress Nancy Beagle, soprano Lila Stuart, and pianist Jodi Gandolfi will be featured in "A Space Between Two Silences," a play by Beagle and Carol Lashof, and "From the Diary of Virginia Woolf," a song cycle by Dominick Argento.

Many accounts of Woolf's life have stressed her recurring struggle with madness and depression.

A Space Between Two Silences does not gloss over the writer's personal troubles, but the authors have also tried to do justice to her joy in artistic creation and her almost equal delight in the less exalted pleasures of routine, daily life.

Woolf was sharply aware of how easily death and meaninglessness can overtake all of us. She wrote in her diary that life is "like a little strip of pavement over an abyss" but found that words could restore her sense of wholeness, form a bridge over the abyss. "A short season between two silences" is the phrase she used to describe individual existence.

Beagle, a doctoral student in Early Music at Stanford, has been seen in Stanford productions of *Belle of Amherst* and *The Good Soul of Setzuan*, She has toured northern and southern California with her own one-woman show, *Musick's Handmayden*, based on prose, poetry, and music of Elizabethan England.

Gandolfi is a lecturer in piano at Stanford, where she received her D.M.A. She has performed extensively as chamber musician, vocal accompanist, and soloist in California, New York, and Europe. She recently made radio recordings for Sender Freies Berlin and Radio Bremen.

Stuart is a professor of music at Stanford, where she teaches voice. She has performed with symphonies and opera companies throughout the U.S., including the Cincinnati Opera, San Antonio Opera, and the Utah Symphony. She was a winner of both the San Francisco and Metropolitan Opera auditions.

Lashof is a doctoral candidate in modern thought and literature at Stanford, where she is studying the fiction of Virginia Woolf and D: H. Lawrence. Her play, *The Story*, was produced by San Francisco's Magic Theatre, and will soon be recorded for National Public Radio.

The performance is free of charge and open to the public. For more information, call 497-2551.

Award-winning Canadian films shown

The Other Cultures Film Series wraps up winter quarter with a showing of ten of Canada's finest award-winning animation shorts. The films, produced by the National Film Board of Canada, will be shown at 7:30 p.m. Thursday, March 3, at the International Center.

Each film extracts a scenario from common everyday experience and explores it with a creative, often humorous, perspective. The filmmakers animate anecdotes, allegories and stereotypes as they present cultural and moral themes at an adult level.

The program will include the following short animated films: "Hunger," "No Apple for Johnny," "Citizen Harold," "A Token Gesture," "Metamorphosis of Mr. Samsa," "My Financial Career," "The Street," "Bead Game," "A Chairy Tale," and "Boomsville."

Admission to the films is free though a 75 cent donation will be requested at the door to help defray costs of the series.

Tribus speaks Friday

Prof. Myron Tribus, director of the Center for Advanced Engineering Studies at MIT, will give a free lecture at 4 p.m. Friday, March 4, in Room 217, Terman Engineering Building.

Tribus, who is a member of the advisory council of the School of Engineering, will speak on "The Design and Management of Systems of People and Machines for Quality and Productivity."

The talk is sponsored by Engineering/Economic Systems.

Fritz Brun plays Don Juan in Drama Department production of Moliere work

The Stanford Drama Department's production of Moliere's *Don Juan* opens at 8 p.m. Wednesday, March 2, in the Nitery Theater on campus.

A presentation of the Graduate Directing Workshop, the play is directed by second-year student Laurence Maslon. Performances continue through Saturday, March 5.

Don Juan is played by Fritz Brun, well-known to Stanford audiences, and a former member of the Danish Royal Theatre and the Bristol Old Vic. He is, as well, a doctoral candidate in drama. The role of Sganarelle is played by Martin Robinson, a sophomore most recently seen in the Drama Department production of *Arms and the Man*. Original live music is composed by Tom Linblade, doctoral student in Drama.

Admission to the production is free. Beginning at 7:30 p.m. each evening programs which serve as the "ticket" of admission will be distributed on a first come basis. Seating is limited to 100 persons.

Moliere wrote his version of the Don Juan legend after suffering from the ill effects of his controversial play, *Tartuffe*. Despite two successful French versions on the same theme, his play was an immediate success and an immediate scandal.

The court objected to two central themes of the play—the heretical libertine (Don Juan) and the comic fool (Don Juan's valet, Sganarelle). Sganarelle is Don Juan's constant companion, forever chastising him for his scandalous actions, forever failing to convince his master of anything.

Since its rediscovery by the famed French actor-director Louis Jouvet in 1947, Don Juan has enjoyed a reputation as one of Moliere's three greatest plays.

Moliere's original setting of Sicily has been retained in the Stanford production, but updated to 1919. The production has a colorful quality reminiscent of some of Fellini's later movies. Director Maslon has served as assistant director for the department's productions of *King Lear* and *Good Soul of Setzuan*. *Chaos and Hard Times*, a play Maslon directed last summer in New York, was named one of the ten best plays of 1982 by *Other Stages* magazine.

Founders' Day observed March 6

Founder's Day 1983 will be observed next Sunday (March 6) in the 11 a.m. services at Memorial Church and by the traditional wreath-laying ceremony at the Stanford Family Mausoleum.

The procession linking the two programs promises to be the most colorful in the history of this annual event. It will include all of the University's academic flags, carried by students from all four undergraduate classes, and the Memorial Church choir in their cardinal red robes. The congregation is invited to join the procession.

The officers of the Senior Class—Joe Del Hierro, Katy Dore, Mary Ruckelshaus and Kevin O'Beirne—will each take part in the ceremonies. Associate Dean of the Chapel Wendy Smith will deliver the Church sermon. Other participants will be President Donald Kennedy; Ray Lyman Wilbur, Jr., president of the Stanford Historical Society; William Stone, director of the Alumni Association; and Chaplain Emeritus Robert M. Minto.

Founders' Day, which honors both Leland and Jane Stanford, is observed on the Sunday nearest to the Senator's birthday, March 9. When the traditional ceremonies are concluded, the Senior Class will add a postscript ceremony of their own—the sharing of a very large birthday cake ordered for the occasion.

Travel to Peru

"Incaland," a travel documentary produced and narrated in person by Stan LaRue, will be presented twice on Monday, March 7, by Stanford University Events and Services.

Part of the regular Discovery Film Series, the film will be shown at 2:30 p.m. in Kresge Auditorium and at 7:45 p.m. in Memorial Auditorium.

The film relates the story of the vast Inca Empire, which reached its apex in the early 16th century in South America.

Tickets are $3 for the matinee, and $4 for the evening showing.



John Zeigler

Zeigler and friends in varied program

The Department of Music presents Stanford clarinet teacher John Zeigler, visiting pianist William Cory, and four members of the San Francisco Symphony at 8 p.m. Monday, March 7, in Dinkelspiel Auditorium.

Zeigler, an acting member of the San Francisco Symphony and former principal clarinet with the Omaha Symphony, will perform *A Set for Clarinet* by Donald Martino.

Cory, who received his Doctor of Musical Arts degree from the University of Texas in Austin, will perform two solo works for piano: *Premiere Rhapsodie* by Debussy and *Sonata in E-flat, op. 120, No. 2* by Brahms.

Joining Zeigler for Prokofieff's *Quintet, opus 39* will be San Francisco Symphony members Keith Atkinson, oboe; Nadya Tichman, violin; Nanci Severance, viola; and Brian Marcus, bass.

Tickets are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Jean Miro sculpture added to Stanford's extensive gallery of outdoor art

Oiseau, a seven-foot high, 1,700-pound bronze bird sculpture by Joan Miro, one of the world's greatest living artists, was installed at Stanford Tuesday, March 1.

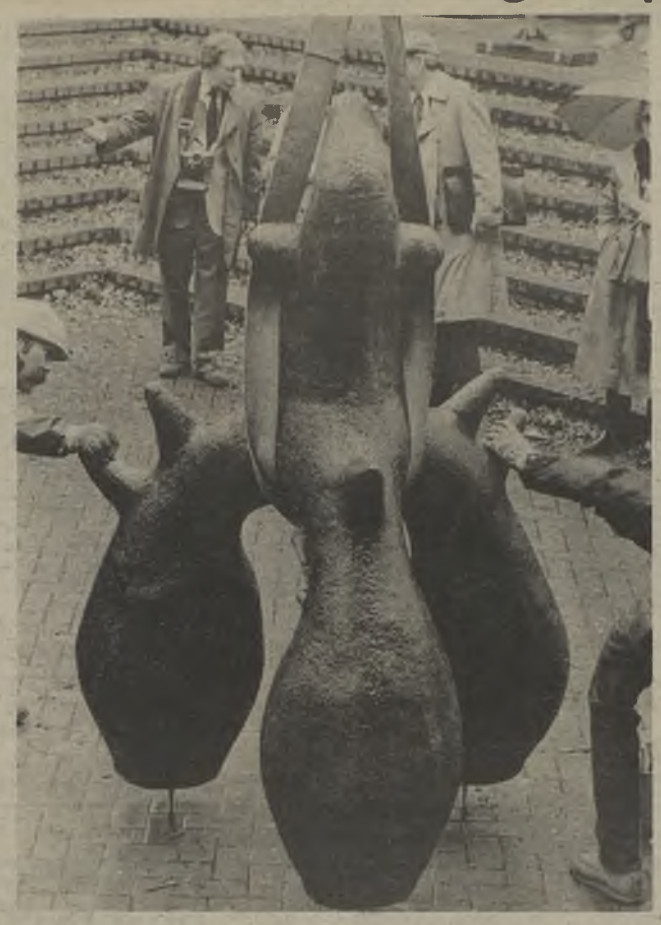
Cast in 1981, the sculpture is the gift of Mrs. Madeleine Haas Russell of San Francisco, who has been a generous benefactor of Stanford in the past. It will be placed in front of the Nathan R. Cummings Art Building in the sunken plaza leading to Annenberg Auditorium.

Miro, who is 90 years old and Spanish by birth, cast the first "Oiseau" in iron in 1973 and set it on a chimney of his house near Barcelona. This installation was indicative not only of the artist's playful attitude toward his art, but also of his dislike for sculpture on a conventional pedestal, according to Stanford Art History Prof. Albert Elsen.

Respecting the artist's intentions, the Stanford cast will be installed directly on the plaza pavement.

Miro was a pioneering modern artist who sought to remove art from the category of the previous object. With works such as "Oiseau," he wanted his art to directly confront what does exist with what the artist says can exist, the truth and reality that comes from his imagination, Elsen says.

Miro has been making sculpture intermittently for over 50 years. He has been painting for an even longer period of time.



Oiseau
by Jean Miro

Miro's most intense sculptural productivity has come in the past 15 years. Much of his fame as a sculptor has come from his joyful transforming manipulation of found objects which he assembles in visual nonsequiturs to thereby unhinge logic and open the mind of fantasy.

"Oiseau," however, descends from a smaller and rarer group of bird sculptures ("Lunar Bird, Solar Bird") that were modeled entirely by the artist on a small scale and then enlarged by assistants.

"Oiseau" is in the great historical tradition of imaginative animals already represented on the Stanford campus by sphinxes guarding the Stanford Mausoleum, and a pair of 19th century griffins that once flanked the drive to the Stanford family home, but now front the northern entrance to the Athletic Department.

Calder's "Faucon" in front of the Law School began the modern bestiary on campus that "Oiseau" now joins. Miro's new sculpture focuses on 70 years of making witty and provocative art into a form which testifies to the fact that his imagination is still capable of renewal, Elsen says. A master of visual puns and sculptural rhythm and rhyme, Miro has infused "Oiseau" with his exuberant and optimistic love of life.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., March 2 to cover the week of Mon., March 7, through Sun., March 13.

MONDAY, MARCH 7

Discovery Film Series: "Incaland". 2:30 p.m. Kresge Aud. $3.

Numerical Analysis Seminar: "Symmetric Approximations to Source Problems," by Garrett Birkhoff, Harvard Univ. 4:15 p.m. Room 380-C, Math Corner.

Biological Sciences Seminar: "Co-Evolution Among Competing Species Causes Extinction: An Example with Anolis Lizard Populations from the Eastern Caribbean," by Dr. Jon Roughgarden, Dept. of Biological Sciences, Stanford. 4:15 p.m. Room T-175, Herrin Hall, Dept. of Biological Sciences.

Film Society: "Nashville". 7:30 p.m. Kresge Aud. $2.00.

Discovery Film Series: "Incaland". 7:45 p.m. Memorial Aud. $4.

Music Dept. Concert: John Zeigler, clarinet. Classical and contemporary works for clarinet. 8 p.m. Dinkelspiel Aud. $4/$2.

TUESDAY, MARCH 8

Men's Tennis: vs. Foothill College. 1:30 p.m. Varsity Courts.

Women's Softball: vs De AnzaCollege.1:30 p.m. Roble Field.

Special Condensed Matter Physics Seminar: "Defect Studies in Semiconductors," Dr. P.D. Dobson, University of Birmingham (England) Dept. of Metallurgy & Materials. 2:15 p.m. McCullough Building, Rm. 240.

Communications Design Seminar: "Power and Frequency Performances of Modems for Satellite Data Communications," by Chin-Lin I of Stanford. 4:15 p.m. McCullough Bldg., Room 128.

Fluid Mechanics Seminar: "The Fluid Mechanics of Helicopter Impulsive Noise," with Fred H. Schmitz, NASA-Ames. 4:15 p.m. Skilling Aud.

CROW Women in the Performing Arts Series: "Moments of Being": a program of music and dramatic readings based on Virginia Woolf's diary. 8 p.m. Dinkelspiel Aud.

WEDNESDAY, MARCH 9

Men's Tennis: vs. Utah. 1:30 p.m. Varsity Courts.

Applied Mathamatics Lecture: "The Boss Model for Reflection from Rough Surfaces," by Professor V. Twersky, Stanford & Univ. of Illinois-Chicago Circle. 3:15 p.m. Room 380-C, Math Corner.

Electronics in Medicine Lecture Series: "Development of a Computer-Controlled Intensive Care Respirator," by Mr. Fritz Stawilcke, Dept. of Mech. Eng., Stanford & Hewlett-Packard Laboratory. 4:15 p.m. McCullough 134.

Music Dept. Concert: Nohema Fernandez, piano. Works by Chopin, Ginastera, and others. 8 p.m. Dinkelspiel Aud. Free.

THURSDAY, MARCH 10

Women's Tennis: vs. CSU Fullerton. 1:30 p.m. Varsity Courts.

EE-370 Information Systems Laboratory Seminar: "Speech Research," by John Turner, Stanford. 4:15 p.m. Skilling 191.

Condensed Matter Physics Seminar: "Sound Proofing with Soap: The Breakdown of Hydrodynamics in Smectics A Liquid Crystal," by J. Toner, Univ. of Chicago. 4:15 p.m. Applied Physics 200.

Industrial Engineering Symposium: "The Ethics of Risk," with Prof. Ronold Howard, Stanford. 4:15 p.m. Terman Aud.

Applied Mechanics Division: "Damping Mechanisms in Engine Blades," with Dr. A.V. Srinivasan, Manager, Applied Mechanics Research, United Technologies Research Center. 4:15 p.m. Skilling Auditorium.

Women's Basketball: vs. Long Beach State. 5:45 p.m. Maples Pavilion. $7, $6, $5, $4, Students $2.

Men's Basketball: vs.Oregon. 8 p.m. Maples Pavilion. $7, $6, $5, $4, Students $2.

Spirit of Japan Lecture Series: "Is Japan One Big Disneyland?," by Melinda Takeuchi, Professor of Japanese Art å Stanford. 8:15 p.m. Annenberg Aud. Non members $5, Comm. for Art members & students $4.

FRIDAY, MARCH 11

History Department Lecture: "Spain: From Dictatorship to Democracy," by Prof. Gabriel Jackson, UC San Diego. Noon. Bldg. 200, Student Lounge Room 301.

Music Dept. Concert: Alma Trio, featuring Andor Toth, violin; Gabor Rejto, cello; Adolph Baller, piano. Brahms - Trio in C Major, op. 87; Debussy - Sonata for cello and piano; Schumann Sonata in A minor, op. 105; Schubert - Trio in B-flat Major, op. 99. Dinkelspiel Aud. $4/$2.

Materials Science and Engineering Colloquium: "Stuctural Characterization of Process-Induced Defects in Integrated Circuits". 3:30 p.m. Peterson Lab., Room 550A.

Materials Science & Engineering Colloquium: "Structural Characterization of Process-Induced Defects in Integrated Circuits," by William T. Stacy, Phillips Res. Lab., Signetics, Sunnyvale. 3:30 p.m. Peterson Lab., Room 550A.

Lively Arts at Stanford/Stanford Music Guild: Guitar Master Class, Michael Lorimer. 7-10 p.m. Annenberg Aud. Open to residents of Greater Bay Area.

Stanford Society of the Archaelogical Institute of America: "Town and Country in the Greek World," by Michael Jameson, Stanford Univ. 8:15 p.m. Room 370, Quad.

SATURDAY, MARCH 12

Women's Lacrosse: Round Robin Tournament. 10 p.m. Roble Field.

Stanford Baseball: Alumni Game. 12:00 noon. Sunken Diamond. $2 general, Stanford students free.

Men's Basketball: vs. Oregon State. 8 p.m. Maples Pavilion. $7, $6, $5, $4, Students $2.

The Lively Arts at Stanford: Michael Lorimer, guitar. Works for Baroque and traditional guitar by de Murcia, Corbetta, Villa-Lobos, Bach, Albeniz, and others. 8 p.m. Dinkelspiel Aud. $9.50, $8.50, Students $3 off regular price.

SUNDAY, MARCH 13

Men's Lacrosse: vs. UOP. 1 p.m. Lacrosse Field.

International Center Concert: Irish Music Session. An open music session featuring Bay Area musicians playing traditional Irish music. Irish country supper will be served. 5:30-9:00 p.m. I-Center. Music free, but supper tickets must be purchased in advance.

ASSU Sunday Flicks: "Paper Chase". 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Inventions. An exhibition of books and manuscripts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"Photographs of Old Russia," by Jack Kollman. Faculty Club. Jan. 17 - March 26.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

" City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Paintings by Marina Goodier. Tresidder Union, Upper Lobby. March 1 - March 31.

Annette Kaplan, *Luz do Sol*, Tapestries. I-Center. March 3 - March 30.

The Art of William Gropper. Art Gallery. March 8 May 8.

CAMPUS REPORT

Volume XV, Number 23 | A publication for Stanford University faculty & staff | March 9, 1983

Operating budget balanced at $227 million for 1983-84

Stanford expects to achieve a balanced operating budget of $227 million in 1983-84, an increase of 7.9 percent, according to proposed budget guidelines approved by the Board of Trustees Tuesday, March 8.

The guidelines assume a 6 percent inflation rate in 1983-84 and 5 percent in 1984-85, with wage and salary increases averaging somewhat higher than this amount. *(Related story, page 22.)*

Two years ago, the University assumed 10 percent inflation in its long-range forecast. The sharply reduced and more stable inflationary expectation now "will be a major boon" to universities nationally, according to the 90-page guidelines document submitted to the trustees.

"As the economy moves gingerly along its current tightrope, alternately leaning toward recovery and then back again toward recession, we in higher education are at the forward end of the rope, urging it along and hoping the much heralded recovery will be strong enough to move the economy without spurring a dramatic increase in inflation."

The University continues to project budget growth at about 2 percent higher than inflation. This reflects two factors;

1) "We are a labor intensive organization, with about 60 percent of our costs going to salaries and benefits. Because salaries in the economy at large grow slightly faster than inflation due to productivity gains, ours too must keep up."

2) "The importance of budgetary provision to support new educational ideas and vital needs in both the academic and support areas."

Where these improvements averaged 3 to 4 percent in the 1970s, in the past three years they have dropped to 2.4 percent, 1.7 percent and 1.5 percent, a figure which may be reduced further in the future.

The current long-range forecast assumes both faculty and staff salaries will grow at the inflation rate plus 1.5 percent.

The University Provost will allocate 6 percent for faculty salary increases to each School except Business and Medicine, which operate on separate budget formulas. When a decision to go above 6 percent is warranted, funds will come from School resources and a small provostial reserve to accomodate special circumstances.

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THE WAITING MAY HAVE BEEN THE HARDEST PART...but turn to pages 27-31 for all the details about the Queen's visit to Stanford last Thursday.

Faculty says Mosher conduct in China basis for dismissal

Steven Westley Mosher was dismissed as a Ph.D. candidate for "illegal and seriously unethical conduct" while in China that "endangered his research subjects," the faculty of the Stanford Anthropology Department said Monday, March 7.

These acts "occurred before Mr. Mosher released information regarding the birth control program in China and were not related in any way to his publication of that material," the faculty said.

Mosher, 34, was dismissed by an 11-0 faculty vote Feb. 24. One of the first American anthropologists permitted to do extended field work on a rural Chinese commune, he blamed his expulsion on a popular Taiwan press article he wrote as "Steven Westley" documenting forced abortions in China and on "slanderous" allegations by his former wife, whom he described as "the scorned woman."

Responding to these claims, the anthropology faculty said March 7 that it concurred with an investigating committee report, given Mosher last fall, which said: "We feel that although the Chinese are clearly linking Mosher's article to the restrictions they are imposing on foreign scholars, we cannot hold Mosher responsible for the actions the Chinese are taking.

"Although we believe that Mosher was unwise to publish his article in a popular Taiwan weekly where it would be read as a political attack on the PRC, we cannot judge this act to be misconduct, both because we are not convinced that Mosher fully understood the implications of his choice of publishing medium and because we believe that Mosher's right to publish what he chooses is protected by the right to freedom of speech."

Two Stanford anthropologists specializing in China did not take part in the deliberation or vote which ended Mosher's doctoral candidacy.

The faculty said its finding that Mosher committed "illegal and seriously unethical

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Humanities faculty get more time before tenure verdict

New assistant professors in the Stanford School of Humanities and Sciences will ordinarily face "up or out" tenure decisions by the end of seven years, instead of six, Dean Norman Wessells and Provost Albert Hastorf told the Faculty Senate Thursday, March 3.

The professional schools of law, business and medicine have moved toward this practice in the past several years, Hastorf said. Those failing to receive tenure receive a final, one-year appointment.

In a Feb. 11 memo to department heads in humanities and sciences, Wessells said the school will have continue making initial appointments for a three-year period, but the second appointment will be for a four-year period.

Assistant professors reappointed to a second term beginning in September 1983 and all current second term assistant professors will automatically have their appointments extended to include a seventh year, he said.

Sentiment is very strong" among department heads in humanities and sciences to extend the trial period even further, to eight or even nine years, Wessells told the senate.

One possibility would be an initial three-year appointment as assistant professor, followed by five years as a non-tenured associate professor. A terminal year would be added for those denied tenure.

Such a change would require approval by the Faculty Senate and vote by the entire Academic Council, Hastorf noted.

Former dean of humanities and sciences, he emphasized that each school should be free to adopt whatever practice was deemed best by its dean and faculty within the present seven-year limit.

The School of Engineering tried a single five-year appointment standard for new faculty, but now has returned to its former practice of making three-year appointments, renewable once, before a final tenure decision.

Under the "3-3" system there is "some tendency to begin evaluating faculty in their fifth year, earlier than needs be," Hastorf said. "There is a strong feeling by the deans to permit evaluation by the

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People

World Affairs Report now on line

Through the 'Dialog' computer system, American scholars, editors, and policy analysts can gain instant access to the full text of *World Affairs Report*, a quarterly analysis of the Soviet press.

Edited by Emeritus Prof. Ronald Hilton of Stanford University, *World Affairs Report* is believed to be the first journal available on line.

As editor of a predecessor publication, *Hispanic American Report*, Hilton was the first person to publicly report the U.S. buildup for the 1961 Bay of Pigs invasion.

"The aim of *World Affairs Report* is not to impose any political outlook or to belittle the Soviet Union," Hilton says. "It is simply an attempt to document, country by country, the Soviet perception of the world and its implications for the West, particularly the U.S.

"Our failure to assess it accurately or take it seriously is not only an indictment of our scholarship but a danger to our security.

"Few American specialists know Russian sufficiently well or are willing to make the unremitting effort necessary to analyze the Soviet press."

Through 'Dialog,' the largest information retrieval system in the world, the full text of *World Affairs Report* will be available at some 15,000 terminals around the world.

Previously only indexes or abstracts of journals have been put on line.

The printed version of the magazine will continue to appear quarterly, Hilton says, although later it may go to monthly or even weekly publications.,

It will be considerably shorter since the text, which is heavily documented, does not lend itself to easy reading by people without specialized interest and knowledge, according to Hilton. The streamlined text should be of greater interest, with those wanting full text able to obtain it on line.

Cartoon and maps will be omitted from the on-line version, but expanded in the print format. Thus the two versions will complement each other.

All 12 volumes of *World Affairs Report* have been put on line. Charles Bourne and Karen Scarpelli of Dialog and Jon C. Sandelin, Virginia Siegman, and Rita Moore of the Stanford Center for Information Tedchnology were among those helping in the transition.

Further information can be obtained by contacting Hilton at Asian Languages Bldg., Stanford, Calif, 94305, (415) 497-4553.

Eight law schools quietly adopt policy on sexual orientation

At least eight law schools, including Stanford, have quietly adopted policies against discrimination in admissions based on sexual orientation, according to Jamie Henderson, president of the Stanford Gay Law Students Association.

The Stanford Law School *Bulletin* for 1982-83 states: "It is the policy of Stanford Law School not to discriminate on the basis of handicaps or sexual orientation in its educational program or in its admissions policy."

Columbia, Golden Gate, Harvard, Hastings, Pennsylvania, the University of Southern California and Wayne State have similar official policies, Henderson reports.

Columbia, Harvard, New York University, Wayne State, Yale, and UCLA also have public policies against discrimination based on sexual orientation in their placement programs. Disputes over Army recruitment have arisen at several of these schools because of Army policies against employment of homosexuals, he notes.

While many law schools have stated privately that they do not discriminate in admissions on the basis of sexual orientation, explicit public statements can assure applicants who might not otherwise mention affiliations or activities that could reveal their sexual orientation, Henderson believes.

"Gays will come here, with or without an official policy," he adds. But without an explicit statement, they could be at a slight disadvantage in gaining admission.

Besides the Gay and Lesbian Alliance at Stanford (GLAS) and the Gay Law Student Association, there now is a Gay Business Student Association, Gay Medical Student Association, Gay Faculty-Staff Association, and a gay counseling group at the Bridge, a peer counseling organization at the University.

About 600 Harvard alumni have organized a half dozen gay clubs across the country, according to Henderson. Similar networks are being formed by Yale, Princeton, Cornell, and Notre Dame alumni, as well as Stanford graduates, he adds.

It is in the best interest of universities to "deal carefully with issues" surrounding sexual orientation, Henderson says. Considerable progress can and has been made without major controversy.

He commented on the national changes during a meeting with University attorneys discussing a proposed scholarship offer from GLAS. Still under consideration, the proposed scholarship would go to a medical student committed to service in the gay and lesbian community. Recipients could be male or female, and would not be restricted on the basis of sexual orientation, according to GLAS.

Counseling experience with an organization helping a predominantly gay population, service on a venereal disease hotline or research in acquired immune deficiency syndrome (AIDS) were cited as hypothetical examples of individual activities which might be taken into account in such an award. None of these would necessarily be restricted only to gays.

GLAS representatives indicated they would seek financial support outside their members for the proposed offer. The GLAS Steering Committee already has collected $550 for this purpose.



Herbert Solomon

Herbert Solomon

Prof. Herbert Solomon, statistics, has been appointed Editor-in-Chief of the *Naval Research Logistics Quarterly*. Beginning with the March 1983 issue, the journal will be published by Wiley-Interscience Journals, John Wiley and Co., New York. For the past 30 years and through the December 1982 issue, it was published by the Government Printing Office.

Articles cover a wide range of topics including: scheduling, networks, linear programming, integer programming, non-linear programming, transportation, reliability, contract alternatives, manpower models, acquisition studies, maintainability models, readiness measurement. The scope is international in terms of readership, contributors, and problems studied.

Erich Striessler

Erich Striessler, professor of economics, econometrics, and economic history at the University of Vienna, is visiting Austrian professor for winter and spring quarters 1983.

Streissler has taught "Economic Theory in Historical Perspective: the Austrian School" this winter quarter and will teach "Postwar Economic Development and Contemporary Problems of Economic Policy in Austria" during spring quarter.

Streissler studied at the University of Vienna (law, history, mathematics, and psychology), as well as at Hamilton College (New York). After receiving a doctor of law degree at Vienna in 1955, he studied in Spain at the University of Valladolid and Vittoria, and in France at the University of Caen.

He also studied and did research during repeated stays at Oxford University in 1956, 1967-68, 1972-73, and 1978-79.

The Visiting Austrian Professorship was endowed by the government and people of Austria on the occasion of the U.S. Bicentennial in 1976. The visiting professors, selected by a committee at Stanford and a parallel committee in Austria, come from a broad range of disciplines.

The visiting professor for 1983-84 will be Prof. Paul Stefanek, who will have an appointment in drama and German studies.

Nominations for subsequent years may be addressed to Prof. Kurt Steiner, political science, who is chairman of the Stanford committee on the Visiting Austrian Professorship.

Gwen Adams

Gwen Adams, graduate admissions assistant in the Department of Electrical Engineering, will present a free recital of organ works by Mendelssohn, Brahms, Saint-Saens and other Romantic composers at 3 p.m. Sunday, March 13, at All Saints' Episcopal Church, Hamilton and Waverley St., Palo Alto, where she is director of music.

Adams began her organ training as an undergraduate at the University of Kansas. She was subsequently awarded a Fulbright Scholarship to Vienna, Austria, where she studied organ with the late Anton Heiller. Upon her return to the U.S. she entered the Yale University Institute of Sacred Music, from which she received the master of music degree.



Clarkson Oglesby

Clarkson Oglesby

Prof. Emeritus Clarkson Oglesby, civil engineering, recently received the S. S. Steinberg Award from the American Road and Transportation Builders Association.

The award recognized Oglesby for his outstanding contribution to transportation education.

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At long last the future of education seems to be hopeful, says Myron Atkin

BY DONALD STOKES

The future of education seems to be more rosy, after a decade of doom and gloom.

There's a new attitude perceptible among government and corporate leaders about means to educate our children better.

Prof. J. Myron Atkin, holder of these views, is dean of Stanford's School of Education, which is top-ranked in the nation in all polls.

"The climate is changing, I can sense it," said Atkin in a campus interview. "The situation is comparable in some ways to the post-Sputnik era—this time triggered, of course, by our economic position, especially our trade position with respect to the Japanese.

"The new attitude emerges in statements made recently by government and corporate leaders. President Reagan is recommending $78 million to help reduce shortages of high school math and science teachers.

"In various states where education has not been a popular subject for politicians during the last decade, the needs of education have now risen to the top. Several governors with national aspirations are urging more help to education. Until recently such stands would have brought politicians nothing but grief.

"Gov. James Hunt of North Carolina, for example, plans to contest Jesse Helms two years from now, and he is making education his top priority. Charles F. Robb, in Virginia, is speaking similarly, and Jerry Brown, before he left office in California, talked of a $30 million plan for technology education.

"Up till recently the outlook had been uniformly grim. Now a more positive attitude is becoming visible. The feeling I sense, that something has to be done, is not one of near panic, as it was after Sputnik, or finger pointing, as it was during the '70s, but rather, 'This is a serious situation, let's roll up our sleeves and get to work.'" That is a distinct change of attitude.

"There are many straws in the wind to show how the new winds are blowing. There are some 25 studies in progress centering on the high schools and how to improve them. These are serious studies, real attempts to see what can be done.

"A new factor, that we did not see at the time of Sputnik, is the interest of the business corporations. Business executives are turning their attention to the problems of education, with a frequency and in numbers we did not see 20 years ago."

Are these mostly high-tech companies?

"The ones I hear about are mostly high-tech, but I think there is growing concern about the quality of the younger work-force and so there is a natural association between this and the educational product.

"However, Henry Levin, one of my colleagues, has made the case recently that the high-tech companies don't seem to need to hire large numbers of highly-trained people. Most new jobs will not require sophisticated skills."



The climate (of education) is changing. I can sense it. In various states...the needs of education have now risen to the top.

—J. Myron Atkin

The changing national mood about education, from deep pessimism to one of hope, is bellwethered by Atkin himself. As recently as June 1980 Atkin said in a public speech: "It is conceivable to envision the dismantling of public education as it has been pioneered in America."

Nor was his gloom on that occasion unwarranted. Scholastic Aptitude Test (SAT) scores, the most frequently used index of high school students' education ability, have been dropping alarmingly.

The government-funded National Assessment of Education Progress found that in science, writing, social studies and math, the achievement of 17-year-olds has dropped regularly every year during the last decade.

"They were unable to come up with any sufficient reasons," said Atkin. "They listed nine. Scores have also gone down significantly for college-bound seniors. That situation is being addressed.

"What we don't often look at is the extraordinary levelling up that has gone on, as well, during the last 30 years. The high schools are serving a much higher percentage of the population now than they have ever done before.

"If you look at the National Assessment figures you find that basic literacy rates and reading scores have gone up dramatically in the last 15 years.

"At the same time we are seeing a levelling down, as the SAT scores seem to indicate. This is due to the fact that when we institute such innovations as minimum competency examinations in various states we have to redirect resources, the primary one being teacher-time.

"In order to lift youngsters who are below the minimum level up to the minimum level, without infusions of new money for more staff, the resources have to be taken from the time and attention given to the above-average students.

"Operationally, the way this pans out, we are facing budgetary constraints in our high schools, but now we have to focus on minimum competency—so what can we do? We have to close small classes. And these small classes are for advanced math, advanced biology, and the other kinds of courses which well served the college-bound youngsters in earlier generations."

Atkin takes great heart from the turn-around in administration policy in education. Last May President Reagan warned that the scarcity of science and math teachers had reached such a deplorable state that it threatened the nation's security. However, noted Atkin, at that time the administration gave little hope that funds could be provided to improve the situation.

"All that has changed. Reagan has just announced that a total of $200 million should be made available. This money will go to the states, largely in forgivable loans to those who will teach science and math.

"Among other things, the newly available funds will provide scholarships of up to $5,000 to college graduates who can be trained as math or science teachers within one year.

"Just hearing that jobs are available will attract some people to the schools. Initially, Reagan's plan will bring in the better-trained teachers, but simple arithmetic shows that this will not compensate them for what they might be earning in industry."

Atkin was asked whether the overall federal cuts in public spending would affect the schools very much—the funds for math and science clearly would benefit only a few.

"We go through cycles in our support for education, as we do in most things," replied Atkin. "During a period when our values tend to focus on egalitarianism, for example, we concentrate our attention on the youngster who seems to be excluded. If we are concerned about common purpose or common vision then our research shifts somewhat.

"Let me give you a specific example. A friend of mine did a study about eight years ago on the effects of mainstreaming (the term used for placing handicapped children in regular classes). He found that 92 percent of the studies were on the effects of mainstreaming on the handicapped. Only the remaining eight percent took even a passing look at the effects on the teachers or the majority of the children affected.

"So I think what happens is, our social preferences or our political values change over time, and this alters the way we conduct and interpret our research in certain areas.

"Also, experts often seem to change their minds after key political decisions are made. Example? The public is advised to desegregate schools in order to improve educational achievement. Years later, the public is told, often by the same experts, that desegregation has had unanticipated negative consequences, and that academic achievement has not improved to the degree anticipated."

Atkin's new optimism about the education scene is tempered by worries that school districts are having great trouble finding teachers with an intellectual orientation.

"I hope this will change. There are several problems in that area. One is in recruiting people with substantial ability to enter schools. Next is to create an atmosphere that will make them want to stay.

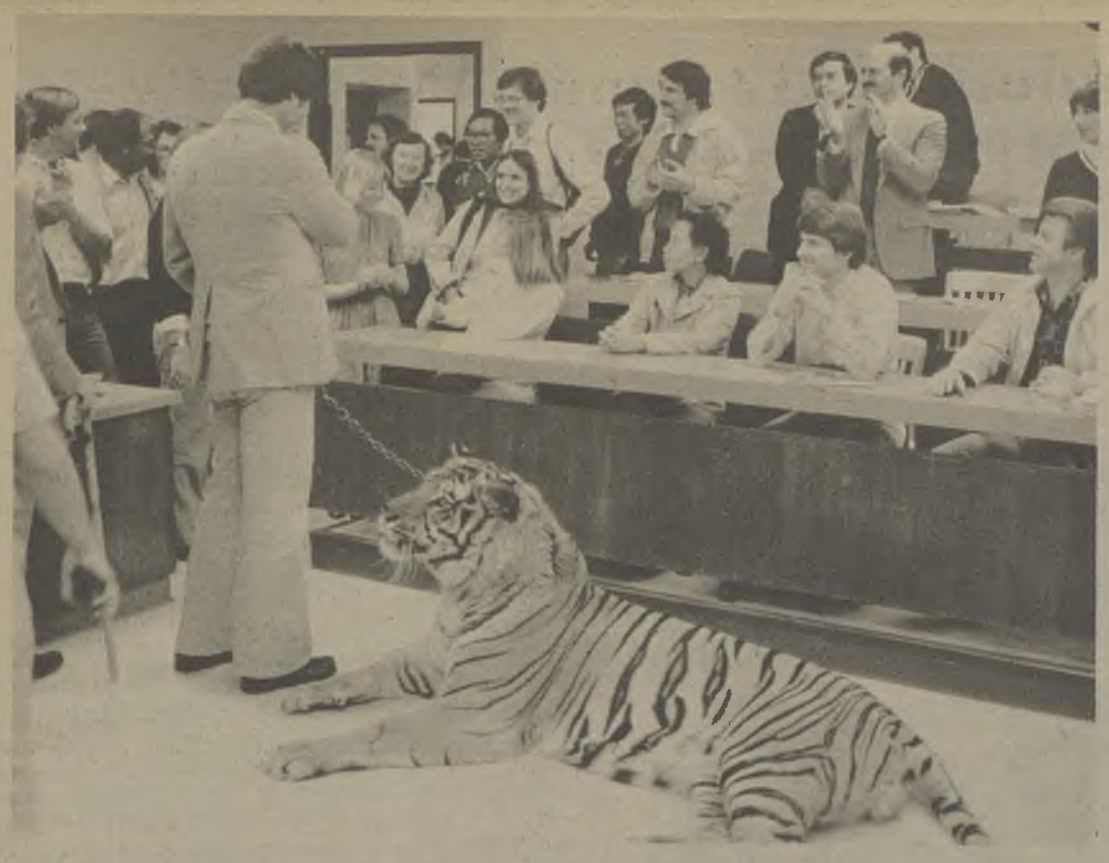
"To retain teachers with strong intellectual backgrounds we have to recognize the fact that schools are places that are meant not only to train children, but also teachers; this may not sound felicitous, but it is a fact. Stanford University, for example, nurtures its professors as well as its students. The best high schools pay explicit attention to teachers as well as to the students.

"On a practical level, it is imperative to take good care of teachers. For now that the formal qualifications for a teaching credential, in terms of the number of years of college-level preparation, is coming to approximate the requirements for other, more lucrative occupations, those who make the investment in additional education have greater choice.

"Beginning teachers now receive an average annual salary about 80 percent that of their nonteaching contemporaries with bachelor's degrees, and their starting salaries are lower than those for any other college graduates except social workers.

"Teachers are paid less on the average than service workers, farm workers, engineering technicians, sales workers, and nurses. Furthermore, their jobs are scarce and uncertain. In many high

continued on next page



Nadji the tiger takes the Graduate School of Business with a grain of salt.

Management practices lecture includes tiger

A 500-pound Bengal tiger named "Nadji" helped to illustrate a lecture on successful management techniques before a classroom of somewhat startled and gaping MBA students at the Stanford Business School on Friday, March 4.

The tiger accompanied Marine World-Africa USA owner and President Michael B. Demetrios, who was invited to lecture on the operation of the large entertainment complex in Redwood City. The MBA students are enrolled in a course entitled "Management Practices in Large, Top-Performing American Companies," which is taught by Business School Management Lecturer Thomas J. Peters. Peters is coauthor of the national best-selling book, *In Search of Excellence: Lessons from American's Best Run Companies*.

The tiger's trainer, Peter Gros, used a short, thick chain to guide the animal through the halls of the Business School building. Despite the dozens of people surrounding it, the tiger remained remarkably calm, issuing only a few muffled grunts and roars.

Atkin/ continued from page 3

schools all teachers with fewer than 10 years of employment within the system have been dismissed."

Is this the main reason for the low morale among teachers?

"It is the uncertainty and the pressures which loom very large. Schools are under pressure because of the condition of the economy and the popularity of tax-limitation initiatives. Funding is jeopardized both from local taxes and from the state treasury.

"Every spring school districts send layoff notices to thousands of teachers because of uncertain budget prospects for the following year. In many cases the teachers are 'rehired' during the summer when budget problems are at least temporarily resolved, but the lack of security is widely publicized, and the attractiveness of the profession is further diminished."

So teaching is no longer a "calling"?

"Colleges have always had a large complement of idealistic young people committed to fostering social justice and individual improvement through community service. Such motivation has led many a gifted person over the decades to the high school classroom.

"But it has become common now in many quarters to adopt a kind of fatalism about the enhancement of human potential, to express the belief that economic, political, demographic and other social factors overwhelm the effects of schooling or other forms of personal intervention.

"There is thus reduced opportunity for an individual teacher to have much effect. Catching the mood, and partly as a result, young people often seem more self-centered in making a career choice than in previous eras.

"Indeed, several occupations that have been as much 'calling' as 'profession' have similarly suffered a decline in quality. This phenomenon may in part be a result of successes of the women's movement. In earlier periods women were assumed to be predisposed to social services, to occupations in which they provided direct assistance to needy people on an individual basis.

"This 'predisposition' has been used to justify policies such as low pay and lack of promotion opportunities. This point of view is passionately rejected by most women and men today. A consequence is that young women tend to make occupational choices based on the same values that have influenced young men: competition, power, status, and wealth.

"The effect of the quality of people drawn to the service-oriented professions, at least in the short term, seems devastating."

You no longer think it possible that the public schools will decay to the point where they are used only by the handicapped, the poor, and the disadvantaged?

"In general, if people feel good about themselves and optimistic about the country, they are satisfied with the public schools. If there are doubts about the country, people look critically at the institutions that represent and are expected to strengthen the common heritage. Schools both sustain and reflect their communities.

"Therefore, the explanations for changes in the nature of the secondary school teaching force are as complex as explanations of America's loss of optimism, prestige, and sense of nationhood.

"Awareness of the criticisms contributes to a decline in the attractiveness of teaching as an occupation. When the prevalent pessimism about our national ability to modify peoples' personal circumstances lifts, or when we rediscover our sense of national unity, there probably will be a change in the attractiveness of teaching in the public schools for people of ability."

Atkin also points out that the schools have had to assume functions which in many cases they could not carry out adequately. They have also been forced by the courts and legistatures to carry out duties which result in a lowering of the overall quality of education.

He gave as an example how, acting out of concern for the civil rights of the individual, laws have been passed about the rights of handicapped children. "Only modest budget increases were made in order to make provision in a serious way for the schooling of the handicapped, whether handicapped physically, mentally, or psychologically.

"Take the Education of All Handicapped Childrens Act of 1975. It stipulates that such children shall be put in the 'least restrictive environment.' So the emphasis is on what is least restrictive for the individual, which is laudable. But when an affected youngster is placed in a class that is the least restrictive to him it turns out to be more restrictive for the other youngsters in the class.

"The regular class members are unable to secure as much of the teacher's time. So for the best of reasons the lawmakers want to improve the lot of handicapped children but end up penalizing the rest of the class.

"Moreover, the parents of handicapped children have a special say in the education of their children, under what is called the Individualized Education Plan that is negotiated between the teacher and the parents. This is laudable, but, again, its overall result is that less time and effort goes to the majority of the students.

"Another example is juvenile delinquents. In order to protect the rights of young people, it is far more difficult now to expel trouble-makers than it ever was. In many ways this is a good thing. But judges will often send offenders back to the classroom where frequently they are just as disruptive as they ever were.

"The 'rights' of the offender have been met, but in doing so they deprive the rest of the youngsters from a certain amount of the time needed to learn.

"These are only a few examples of how the schools have to handle the results of a general societal concern about civil rights."

The schools often end up as a dumping ground for society's human problems?

"What often happens is that many of those parents who can afford it, and perceive that their children are being penalized because of the way the public schools are being distorted in their objectives, simply send their kids to private schools.

"I am not so discouraged by this trend as I was a few years ago. But at one point it was possible to fear that the public school system would become dismantled.

"The percentage of children being sent to private schools has gone up only slightly in the last three years, from eight percent to 11 percent.

"The biggest growth in private schools is in the fundamentalist Christian schools. That is partly a reaction in the South to desegregation laws. Many such schools are racist institutions.

"So the real growth of private institutions has not been all that great. Maybe this is due to the poor state of the economy.

"The main change is that there are clear signs of an alteration of attitude toward education. To the extent that this country rediscovers a sense of common purpose, we shall remind ourselves of the vital role of the public schools, the common schools.

"So long as we regard ourselves, as we tended to do during the 1970s, as a fragmented society, with special interest politics flourishing, and each group doing all it can to get as much as possible from the taxpayers, without much regard for the common good, then I don't think we shall be able to progress as a unified society.

"If we determine to rediscover our national sense of purpose, what we share as a people, then we can be hopeful about the future of the public schools. After all, the public schools are the proven social institution for helping us understand what we have in common."

Tiro Project brings computers to 132 humanities faculty



CIT staff members instruct a small group of humanities faculty members in use of computers

CIT hopes to change people's work lives

Training has started in the Tiro project, which offers Stanford humanities faculty members an introduction to word processing and information handling, and aims at making the participants independent and self-sufficient microcomputer users.

Begun at the initiative of Dean Norman Wessells of the School of Humanities and Sciences, Tiro promises technologically creative support to faculty scholars in the humanities.

"Tiro will be an exciting innovation to Humanities and Sciences as it introduces computer technology into the process of scholarly research in the humanities," says Wessells.

The Tiro program began last summer with a three-month pilot project that offered Humanities faculty members the chance to use and evaluate three microcomputers: the Apple II Plus, the TRS-80 II, and the IBM PC. At the end of the pilot program, the IBM PC and the WordStar text-processing system were chosen for the Tiro project microcomputer package.

Computer and printer

Current plans provide for 132 humanities faculty members to receive instruction on IBM Personal Computers. Each will receive one of these computers and a small printer for scholarly work in the office or at home.

In addition, approximately a dozen departmental work stations, with letter-quality printers, will be installed, and staff personnel will be trained in their operation.

Initial instruction is focused on how to use the WordStar text-processing system; intermediate training will introduce more advanced techniques, including printing. Further development and instruction are planned in networked communications, which will provide users with access to library catalogs, other computer systems, and electronic mail. Special workshops may also be offered.

The first phase of training and equipment distribution will be completed by spring quarter.

Instruction is being provided in the Stanford Microcomputer Instructional Laboratory Experiment (S.M.I.L.E.) at CIT, with the technical assistance of CIT staff.

"CIT's primary interest in the Tiro project is to learn the ways in which personal computers will change people's work lives, so that we can anticipate and facilitate that change," says Michael Carter, director of the Instruction and Research Information Systems division.

"Secondarily, we expect that the enormous amount of intellectual energy brought to bear upon this phenomenon by the humanities faculty will help focus our attention on the limitations present in information technology today."

The Tiro project is named after a slave of the Roman statesman and orator, Cicero. Marcus Tullius Tiro served as Cicero's secretary, taking dictation and copying manuscripts, but he was also accomplished in his own right. He invented one of the first forms of Latin shorthand (called "notae Tironianae") and the Tironian shorthand symbol, "℈". Cicero eventually freed Tiro in return for his outstanding work. —**Jane Kingston**

Residences' phone numbers change

During the month of March, Pacific Telephone will begin changing certain pay phones located on campus. The changes will be in the form of new telephone numbers and conversion from rotary dial to touch-tone service.

Most of the phone changes involve student housing facilities which are identified in the campus directory by the pay phone telephone number. To minimize the inconvenience experienced by such a number change, the telephone company will refer calls for the old numbers to the new numbers. The target date for changeover is approximately March 14-18.

HOUSE NAME	ADDRESS	OLD NUMBER	NEW NUMBER
Alpha Delta Phi	375 Campus Dr	328-9700	853-8862
Alpha Sigma Phi	585 Cowell Ln	327-9730	853-9670
American Studies House	566 Mayfield	328-9154	853-9766
ATO House	702 Bowdoin	328-9862	853-8913
Beta Theta Pi	557 Lasuen	327-9771	853-9678
Columbae House	549 Lasuen	327-9412	853-9166
Delta Kappa Epsilon	592 Mayfield	327-9558	853-9623
Delta Tau Delta	650 San Juan	328-9180	853-9781
Delta Upsilon	553 Mayfield	328-9703	853-8865
Durand House	634 Mayfield (2nd flr)	327-9527	853-9616
558 Mayfield	558 Mayfield	328-9178	853-9779
Grove-Lasuen	574 Lasuen	327-9712	853-9665
Grove-Mayfield	584 Mayfield	328-9132	853-9755
Hammarskjold	592 Alvarado	327-9769	853-9677
Haus Mitteleuropa	620 Mayfield	328-9362	853-9856
Hurlburt House	650 Mayfield	327-9936	853-9704
Kairos House	586 Mayfield	328-9784	853-0174
Kappa Alpha	664 Lomita Ct	327-9538	853-9620
Kappa Sigma	535 Campus	328-9771	853-8891
La Casa Italiana	562 Mayfield	328-9175	853-9776
La Maison Française	610 Mayfield	327-9952	853-9708
Lambda Nu	658 Lomita Ct	328-9625	853-8830
Lathrop House	543 Lasuen	327-9687	853-9663
Phi Delta Theta	680 Lomita Ct	327-9989	853-9716
Phi Psi	550 San Juan	327-9934	853-9703
Roth House	713 Santa Ynez	327-9967	853-9711
Sigma Alpha Epsilon	521 Campus Dr	327-9917	853-9699
Storey House	544 Lasuen	328-9349	853-9850
Synergy	664 San Juan	327-9753	853-9674
Terra House	539 Cowell Ln	328-9694	853-8859
Theta Delta Chi	675 Lomita Ct	328-9629	853-8832
Whitman House	517 Cowell Ln	328-9797	853-8899
ZAP House	710 Bowdoin	327-9485	853-9599
Zeta Psi	353 Campus Dr	327-9461	853-9589

Terminals put in at Green Library

The Center for Information Technology, in cooperation with the Stanford University Libraries, has installed computer terminals in the Green Library typing rooms on the second and third floors of the Library's East Wing.

A third terminal will be installed in the typing room on the lower level at a later date. The terminals connect to all CIT systems and can be used by all library patrons who have CIT accounts.

Library users will now be able to use library materials in conjunction with computer-based systems with relative ease. CIT's text editing capacity may be particularly useful for students working on theses and dissertations. If the experiment proves successful, CIT and the libraries hope to expand the program.



Individual departments can experiment with ways to mitigate quarter system

continued from page 1

Stanford will stay on the academic quarter system, the Faculty Senate decided Thursday, May 3, without dissent.

But individual departments and faculty members should be encouraged to experiment with new arrangements that overcome its shortcomings, the Senate indicated.

Prof. Anne Mellor, English, suggested that students completing a course might be given the option of writing an additional paper, with three units credit, if faculty were allowed teaching time for appraising it in depth.

The Senate action followed the recommendation of an ad hoc committee headed by Prof. Edwin Good, religious studies. Its report, published Jan. 19, noted that "for many departments, courses lasting longer than one quarter might help to overcome the perceived faults of the quarter system. . . .

"A course might last, say, five weeks into a second quarter, after which it would be over. Nothing in the present regulations forbids doing this. . . .

"Such experiments must take great care to avoid impeding access to courses by students from outside the school or department" concerned.

Humanities and Sciences Dean Norman Wessells suggested that this experimentation might best be tried with graduate and advanced undergraduate level courses. He would be "happy" to work with departments to devise "equitable teaching loads."

But he said it was important for departments to be "very careful to keep in mind undergraduates with strict schedules," especially those in the natural sciences and engineering.

Prof. Gerald Gillespie, German, suggested that the period of experimentation not be too long, lest the trials "drift into fragmentation" and "make life miserable" for undergraduates.

Prof. Ronald Rebholz, English, a strong proponent of the semester system, said that the present calendar makes dead week "a mockery," especially in spring quarter.

When it comes to exams, students usually do "a fairly reckless job. . .they spout out what they can remember and then forget the subject for the rest of their lives."

He noted that MIT operates "very successfully" on the semester system, and that Berkeley has decided to switch from quarters to semesters.

President Donald Kennedy said he was "perplexed by the data base," noting that Berkeley was "strong in the humanities" even with the quarter system. (Berkeley outranked Stanford in perceived quality of its graduate faculty in all nine fields of the humanities covered in a recent national evaluation by faculty members.)

Prof. Marsh McCall, chairman of classics, was "appalled" at the growing tendency to move final exams into Dead Week.

Registrar Sally Mahoney said this problem was "particularly intense" last fall. "We're seeing faculty (and teaching assistants) who wish to be out the door in a hurry" before Christmas. As a resident fellow, she was surprised at the "substantial number" of freshmen who finished on the second day of exam week.

More courses now are being scheduled for Tuesday and Thursdays, she observed.

But the tendency to end the quarter early is "not nearly so intense" now as it was before the Christmas holidays, when airline flights may have been a contributing factor.

Apply for the Stanford Publishing Course by Wednesday, April 20

Applications are currently being accepted for the Stanford Publishing Course, to be held June 20 to July 1. Sponsored by the Stanford Alumni Association, the program is designed for those involved in any facet of publishing and offers extensive coverage of both book and magazine publishing.

The format of the 12-day program consists of general sessions attended by all participants followed by separate book/magazine sessions and workshops. The workshops include hands-on projects that allow students to develop their own special interests. The program will include editing, copywriting, design, advertising, marketing, and finance. Some 50 speakers and workshop leaders prominent in their fields will come from throughout the U.S. and will include experts from the Stanford faculty.

Della van Heyst, director of publications at the Alumni Association and course director, notes that the course is designed to give an in-depth overview of the publishing industry, increase participant's knowledge in his/her area of expertise, to establish professional contacts, to learn problem-solving techniques, and to exchange knowledge with other professionals.

Tuition for the course is $875 ($550 for members of the Stanford faculty and staff). Included are books, working receptions, two dinners, and all lunches. For those wishing to reside in Roble Hall, the rooms are $222 for a single room and $168 per person for a double room. Application deadline is April 20. Further information may be obtained by contacting William Peabody at Bowman Alumni House, (415) 497-2021.

Carpools

Carpoolers wanted, 8-5, M-F, from Pleasanton, Livermore, Union City, Fremont area to Stanford. Call Patty, ext. 7-2071.

One person to join existing carpool to Stanford. M-F, 8-5. We meet at Stevens Creek & Wolfe Road, Cupertino. Please contact Ana Errico at 7-0612.

Carpool wanted from Newark to Stanford, M-F, time flexible. Call Polly, 7-4281.

Carpool wanted to Santa Cruz from Palo Alto M, W, F. Call Mark, 856-2428.



Marina Timoshenko-Goodier

Nature-inspired art shown at Tresidder

Paintings by Marina Timoshenko-Goodier will be shown in Tresidder Union's upstairs lounge during the month of March.

The artist was born in St. Petersburg, Russia, and lived in Yugoslavia before coming to the U.S. She studied art at the Carnegie Institute of Technology, then at Pennsylvania Academy of the Fine Arts in Philadelphia, where she was awarded the Cresson Traveling Scholarship for two successive years.

Timoshenko-Goodier has exhibited in Peninsula libraries, hospitals, and banks as well as on the Stanford campus. She believes that art should have a worthy purpose—hers comes from the wholesomeness, harmony, and delight she finds in the beauty of nature.

She is the widow of Stanford Prof. J. N. Goodier, engineering mechanics.



Vicky Holt

Holt is president of S.F. arts center

Vicky Holt, director of Stanford University Events and Services, has been named the new president of the New Performance Gallery of San Francisco, a multi-disciplinary arts center.

The New Performance Gallery functions as an art sponsorship, training, and technical assistance organization which programs and manages the facility jointly owned by the Oberlin Dance Collective and the Margaret Jenkins Dance Company. Through its programs, the New Performance Gallery seeks to provide a lively environment in which artistic ideas can develop and thrive.

Recreation schedule

FACILITY	FINALS WEEK March 14-18	SPRING BREAK March 19-27	REGISTRATION DAY March 28
Encina Lockers & Showers	7:30 a.m.-9 p.m.	M-F: 7:30 a.m.-9 p.m. Sat/Sun: 9 a.m.-6 p.m.	7:30 a.m.-9 p.m.
Roble Complex (show ID) Lockers, Showers & Gym Floor, Dance Studio, Studios 42 and 33	8 a.m.-6 p.m.	M-F: 8 a.m.-5 p.m. Sat/Sun: Closed	Lockers: 8 a.m.-12 Mid. Recreation as posted
Encina Weight Room (show ID)	12 noon-8:30 p.m.	MWF: 12 noon-8:30 p.m. T/Th: 12 noon-5 p.m. Sat/Sun: 12 noon- 5 p.m.	12 noon-8:30 p.m.
Maples Pavilion (show ID)	12 noon-1 p.m. Mon/Tue/Wed only	Closed	Closed
deGuerre Pools	12 noon-2 p.m. 5:30 p.m.-7 p.m.	M-F: 12 noon-2 p.m. Sat/Sun: 12-4 p.m.	12 noon-2 p.m. 5:30 p.m.-7 p.m.
Roble Pool (show ID)	Closed	Closed	12 noon-1 p.m.
deGuerre Courts (show ID)	11 a.m.-11 p.m.	11 a.m.-7:15 p.m.	11 a.m.-7:15 p.m.
Golf Course (show ID)	T-F: First available starting time	T-F: First available starting time after 11 a.m.	Closed

Open for the entire period are the Olympic Gamefield, Perrier Parcourse, Angell Field, the tennis courts, and the golf course driving range (7 a.m. until one hour before dark).

Taylor Field and the IM Fields North and South must be reserved; call 497-0505.

Youth Opportunity Program benefits the University, too

While youth unemployment statistics climb higher than ever, Stanford offers high school students a learning and earning experience through the Youth Opportunity Program.

The employment program is designed to give high school students from disadvantaged backgrounds the opportunity to earn money while learning valuable job skills. Students also receive career, and if desired, college guidance.

"We're trying to teach them marketable skills as well as provide them with supplemental information about college," says program coordinator Michael Britt.

The program, which began in 1969, is administered through the Employment section of the University's Personnel department. It has two components. Most students initially join the program during the summer, working approximately six hours daily for seven to eight weeks.

Last summer 55 students participated. Y.O.P. sponsored training activities in addition to the jobs. Workshops focused on such skills as filing, typing and career opportunities.

Students were paid minimum wage, but most left with more than money. "I learned a lot, earned some money, and had some laughs," wrote one participant.

Exceptional students from the summer program are selected for after-school jobs, which are tailored to meet the individual training and education needs of each student. Currently there are 14 in this track.

Students are matched with supervisors, who in the past have included technicians, faculty, research assistants, clerical support staff and other University employees.

"We try to identify staff members who can serve as good teachers and role models," Britt says.

Since most of the students have no previous work experience, students usually learn skills from supervisors. Margie Garcia, one of the program's earliest participants, says that she learned her first office skills from Lenita Feddersen (now retired), her supervisor in News and Publications, where she was placed.

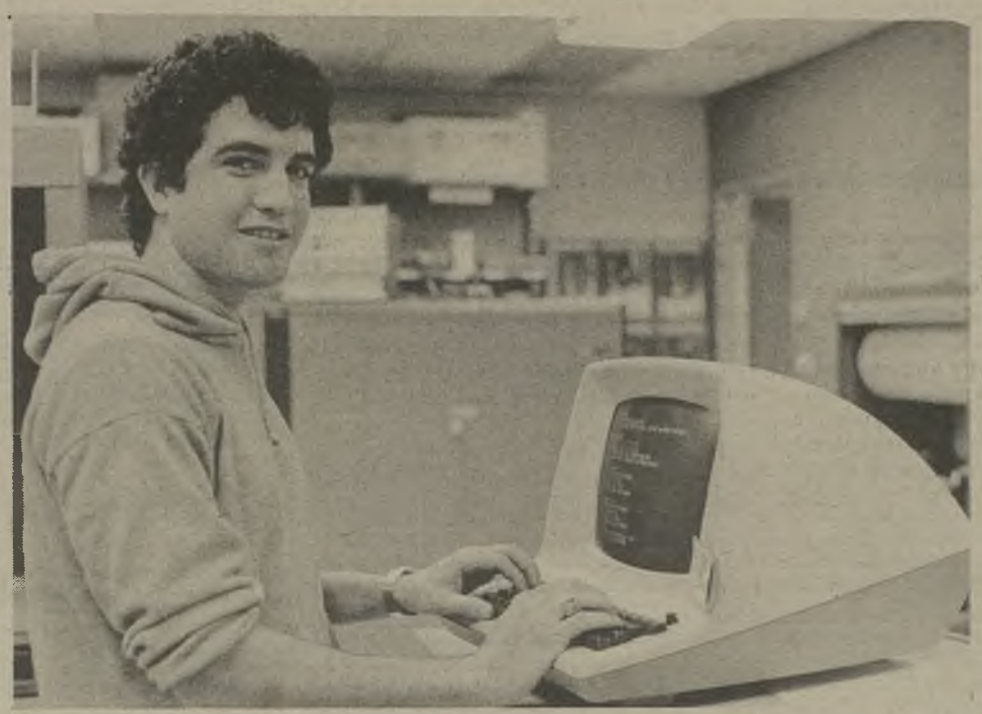
"I was matched with supervisors who were willing to teach," she says. "I did not have good typing skills and I was really nervous. But the coordinators kept in touch; they were always around when I needed them."

Now a compensation analyst and office supervisor in the University's Compensation Department, Garcia says that her career growth was guided by her supervisor's capacity to invest time and energy in her training.

"Exposure to the office setting gave me a better flavor for what an office job involved."



Margie Garcia (left), one of the first YOPs on campus, is now a compensation analyst and office supervisor.



John Skinner (below), assigned to C.I.T. two summers ago, currently works there full time while attending a community college.

The experience can be mutually valuable for student and supervisor. Wayne Duckworth, a Y.O.P. supervisor for student John Skinner, says his department has "recovered 10-fold the cost of investing staff and faculty time to train John."

Skinner was originally assigned to C.I.T. two summers ago to develop skills with computer laser printers. Currently he serves as a full-time dispatch operator at C.I.T. while continuing his education at a local community college.

"John continues to impress our staff with his ability to solve complex problems, identify potential problems, and efficiently handle a $500,000-plus piece of equipment," Duckworth says.

For students like Skinner who don't see office experience as an end in itself, Y.O.P. teaches marketable skills that can be used while attending college. Eltonia Thomas, a senior at Woodside High School, has worked in Nurse Recruitment for three years while planning to attend college.

"I think Y.O.P. is really good because it will give me experience that will help me to get a part-time job while I'm in college," she says.

All students are assigned to a Y.O.P. counselor, who provides information about and assistance with both college applications and careers.

"I needed help for my scholarship essays, and they helped with that," Thomas says.

However, Britt says that the program takes pride in its ability to serve both students who are college-bound and those students who have made no decision about higher education.

"We're not interested in convincing every high school student that he or she should attend college, nor do we hold to any firm belief that every disadvantaged student should become an engineer or a medical doctor," Britt says.

"I'd love to see the job market saturated with former Y.O.P. participants holding engineering, computer, or medical credentials, but I realize that many young people are not aware that making a living is only one phase of life."

Britt says that this broad appeal has earned Y.O.P. praise and support from the other Bay Area youth employment programs. It has also won loyalty from past supervisors.

"The program has been well monitored by the administrators," says Betty Miller, a supervisor for one of the Y.O.P. students at the Career Planning and Placement Center.

"Y.O.P. provided follow-up of the physical location of the worksite, the learning situation for the student, and the student's attendance record and work performance."

Y.O.P. statistics are impressive. According to Britt, during the past two years, 88 percent of the participants stated that Y.O.P. helped them to clarify career goals.

During the 1982 summer program, 84 percent of the students were placed in positions within their areas of career interest. Twenty-eight percent of these who had no plans to attend college are consequently planning a college career.

The program could become even more successful if it had additional funding sources, Britt says. "We could have matched at least 20 more students with positions if the funding for the positions had been available."

However, a few departments, like the Department of Psychiatry, have already submitted their requests for a Y.O.P. student for next year's summer program.

For questions about the program or if you can provide a valuable work experience for a Y.O.P. student, contact the program staff at 497-1144.

Amy Bernhard

Controlling alcohol use in dorms

Alcohol abuse in the student residences at Stanford is best controlled through alcohol education programs, not by rewriting the University's liquor policy, about 40 students in a forum sponsored by the Dean of Student Affairs Committee on Alcohol agreed Feb. 23.

Robin Cooper, student member of the committee and leader of the forum, said students must first help the University locate where and with whom alcohol problems exist on campus. "Only then can we take steps to help students avoid the trap of over-drinking," she said.

"Stanford's liquor policy is written on a piece of paper and doesn't make much sense really. If we're to be effective, we have to focus on a variety of things not policy-oriented."

Nonalcoholic alternatives to having fun at a student party are strongly encouraged by the committee because "it's the student who gets hurt in the long run if nothing is done to help him or her recognize when drinking is dangerous," said Cooper.

Alice Supton, assistant dean of residential education, agreed, saying "I think if you're smart enough and creative enough you can find really wonderful things to do that don't require alcohol."

Mike Boennighausen, a resident assistant at Roble Hall, said that students in his dormitory believe alcohol determines whether a party will be a success or failure. "Parties are judged by how many kegs it has," he said.

But fraternity and sorority representatives disagreed.

"Nobody is persuading you to drink. Everybody is free to do their own thing," said Sigma Alpha Epsilon president Mark Landsberg.

And according to Barbara Chen, Delta Gamma sorority member, "alcohol is only a problem with the individual abuser, not the result of group peer pressure. We are constantly reminding ourselves that we are legally liable for any accidents that happen."

In a *Stanford Daily* editorial, freshman student Mark Roble recently recognized the University's legal liability for alcohol abuse in certain cases. "When someone drives from a dorm function in a state of inebriation—and has an accident—the University is among the long chain of parties that can be sued," he wrote.

Stanford's current liquor policy stipulates that every student residence is required "to adopt and maintain regulations. . .(which) shall seriously take into account the age distribution of its members so that the legal status of those students who are not yet 21 years of age shall be accorded recognition and appropriate protection."

Supton explained that the committee is not interested in revising the current liquor policy but would rather spend time soliciting student opinions on how the existing policy could work better.

"We realized that we didn't even know what the definition of the problem was. But this time we're letting students help us recognize what it is and how to deal with it."

Letters to the editor

More questions about parking

Editor, *Campus Report*:

Like Mery Clausen (*Campus Report* March 2), I, too, have a complaint about parking.

In the process of researching the problem on my side of the campus I ran across some interesting information, as given to me by the Police Department.

The parking lots that serve Encina Hall, Encina Commons, Old Pavilion, the Eating Clubs, and those employees in the Hoover Buildings who choose to park there, have a **total** of 160 "A" spaces. Elementary common sense tells me that there are many more "A" stickers sold to the work force in these buildings than the available space can accommodate (even though I was told that the total number of "A" stickers is "unavailable").

This leads me to ask but one question: "Is the program being deliberately oversold to generate the higher revenue that $75 per car produces?"

I, for one, am tired of paying $75 per year to park in a "C" lot which is exactly what I must do if I arrive after 7:45 in the morning, or if I am foolish enough to vacate my parking space during the day and try to return.

I don't mind paying the parking fee—I resent not getting what I paid for.

Marjorie Caldwell
Controller's Office

Tides of expediency worry Ranahan

Editor, *Campus Report*:

Prof. Robert Cohn's letter in the *Campus Report* of 2/2/83 struck a chord for me. It was carefully nurtured, well-expressed, and, I'm sure, not word-processed.

All around me I hear the virtues of computers and word processors extolled for the way they expedite matters to a direct end. They eliminate so many steps, I'm told. Prof. Cohn made me think a little more about those lingering, searching, enriching steps. After all, what are steps?

Why stand and wait for the sun to rise when you can switch on a light? Why pull in sails at dusk when you can flip off a motorboat switch? Why plant a garden when you can buy artificial flowers?

If the question LIGHT/SEA/FLOWERS were put to an average, well-programmed computer, it could flash up LAMP/MOTORBOAT/DIMESTORE without blinking a video eye. And I would be pleased with my solutions. That is, as long as I had never stood at a sunrise; trimmed my sails to the wind; or selected, planted, and nurtured my own flowers from seed.

Like Prof. Cohn, I'm concerned about the time when the rising tides of expediency wash away the steps, and the generation arrives that isn't aware of what it's skipping when it jumps on rapid transit quests. That is the generation that may well begin to ask questions that neither the computer nor the programmer can answer. I have this recurrent nightmare wherein the operator punches, "WHY?" The computer answers, "WHY?" and this one word discourse continues with the fury of a heated tennis match until finally, admidst failing video energy and profuse human sweat, both organisms break down.

That's the darker side. The lighter side is that I don't think humanists like Prof. Cohn are going to let this happen.

Maggie Ranahan, R.N.

The way it was....

75 YEARS AGO (1908)

Cooper Medical College in San Francisco became part of Stanford University when Dr. Lane, its founder, deeded the property to Stanford on condition that the University should in perpetuity continue the study of the theory and practice of medicine. In 1912, when the last Cooper student would graduate the directors and faculty of Cooper were to resign and transfer the school, with its large five-story building and Lane Hospital and its endowment to the Stanford Board of Trustees.

* * * *

President Jordan, speaking in Spokane, said, "Within five years we expect to have only juniors and seniors at Stanford. It will be a place for only those who have a definite object in pursuing a university course and not for those who are merely gathering up the odds and ends of an education. We have just succeeded in developing a fine law school and made arrangements to acquire the Cooper Medical College."

In making his report to the Board of Trustees, Dr. Jordan explained, "Governor Stanford said in 1892 that he wanted the institution to be a university in the highest sense, beginning where the state university leaves off." Dr. Jordan expressed the belief that in the sixteen years since that time, the state university had expanded and had gone further in the realization of the ideals of Governor Stanford than Stanford University had gone.

50 YEARS AGO (1933)

President Ray Lyman Wilbur returned from Washington and was back at his desk in the Administration Building within four days after his duties as Secretary of the Interior were terminated by the inauguration of President Franklin Roosevelt. He praised the effective handling of the presidential duties by Dr. Robert Eccles Swain during his absence. He said that he would turn his attention immediately to the falling enrollment, down to 2,823, and to the dropping off of endowment increases. Acting President Swain announced plans to travel at the end of the quarter and to do research work in chemistry.

* * * *

A depression dance sponsored by the Glee Club was the last effort of the quarter to raise money for needy students. Fifty cents admitted one couple or a single rough and fifteen cents opened the door to any member of the "500." Checks were accepted because of the cash shortage caused by the nation-wide bank closure. The basketball pavilion had been picked as the scene of the hop to do away with the necessity of paying the Women's Gym $20 for a waxless floor and a tuneless piano.

* * * *

The Hoover War Library opened an interesting exhibit of German and Russian currency from the hectic inflation period of 1923-24. One ten-trillion-mark bill was worth $6,666 at the time it was issued. On the following day its value had declined to $31 and 18 days later it was worth $2.38.

* * * *

The Board of Trustees decided that Stanford professors and instructors whose income was already more than $1,000 a year would receive 10 percent less the next fall unless the University's income should exceed the amount expected.

* * * *

Four members of the Japanese College Good-Will Tour group that visited over 33 universities throughout the U.S. declared Stanford was the most attractive—intellectually, physically and culturally. The tourists found that American students were more interested in current problems than were most young people in Japan, due largely to the adverse economic conditions which made hard labor obligatory for most Japanese.

* * * *

Menlo Park soft drink proprietors sold 3.2 percent beer, with Stanford students composing the bulk of the trade, in spite of a state law prohibiting the sale of liquor, intoxicating or not, within 1½ miles of a university campus. A federal legislature ruling had declared that 3.2 percent beer was not intoxicating. One student passed the Palo Alto police sobriety test after he had consumed eight bottles (one gallon).

25 YEARS AGO (1958)

Spring quarter registration was at 7,649 students with 5,681 men and 1,968 women enrolled, 124 above the previous year.

* * * *

A crowd of 300 students protested against the nuclear tests planned by the U.S. The Soviet Union had just completed a series of tests and had announced that it was stopping testing. Krushchev had said he would agree to inspection.

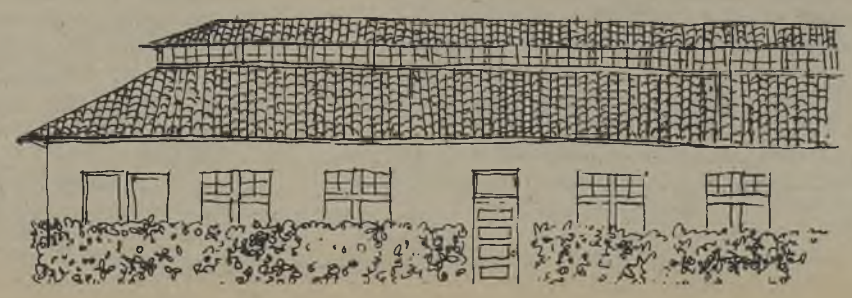
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Prof. L. I. Schiff, executive head of the Physics Department, disclosed that Stanford would soon be the site of the world's largest linear electron accelerator if the project should be approved by federal agencies. It would have a thousand times greater intensity than other contemplated accelerators.

* * * *

A plan for the ultimate housing of the 24 fraternity chapters in six groups, each consisting of four separate 50-man houses served by a central kitchen, was developed. The units were to be University-owned with the fraternities and the University sharing the cost, estimated at $300,000 per house. Eighteen of the houses at that time were in need of major structural and mechanical work merely to bring them up to modern code standards, the cost of which ranged up to $132,000 a house.

Compiled by Catherine Peck
The Stanford Historical Society



Defense Department classifies index returned by librarian

Hochschild seeks technical abstract bulletins

In November, Peter Hochschild, a Stanford graduate student in computer science, wanted to find out the military relevance of some Stanford research projects from an index of research published by the Department of Defense.

As soon as he asked for the index, the engineering library returned it to the DoD, which promptly classified the material. Now, three months later, a shuffle of DoD paperwork prevents Hochschild from seeing other similar documents, and he says one professor has accused him of "opening a can of worms."

The documents were the Technical Abstract Bulletins (TABs) from the DoD's Defense Advanced Research Projects Agency (DARPA). According to the library index, they were not classified.

But librarian Celine Walker mailed the TABs back to the DoD. She explained to Hochschild in a letter that because they were "for limited access and must not be generally disseminated," it was "inappropriate for the library to hold the TABs."

Walker says the documents have since been classified, but Hochschild isn't satisfied.

"These things should be available to anyone," he says.

Dependence on defense

Hochschild is part of a 15-member group that is trying to increase awareness of Stanford's growing dependence on DoD funding, and the military implications of DoD-funded research.

The group was formed last spring by computer science graduate student Jerry Plotnick, and includes Bernie Roth, professor of mechanical engineering, and Terry Winograd, professor of computer science.

Winograd, in a paper on military funding, said that the "great majority of academic researchers would rather not do weapons work, and go to some length to characterize their work as 'basic research.' "

Hochschild agrees. "Most professors want to believe that they're doing pure research, and the DoD is just being generous."

Hochschild tried to get the information from other unclassified documents, called Work Unit Summaries. The summaries contain technical objectives and the military relevance of each research project as well as the professor's research specifications. The forms are required to be filed by the contracting military agency.

The summaries are stored on computer files at the Defense Technical Information Center. The files themselves are under no access restrictions, but the computer accounts which make access possible are limited to DoD-approved users. Professors with research contracts may have accounts, and the library had one as well. However, the library canceled its account when it returned the TABs.

Hochschild says that he could have obtained access to the files by using a friend's or a professor's computer account, but he wanted to see them without resorting to "connections."

Hochschild filed a request Dec. 7 under the Freedom of Information Act. Lt. Col. Duane A. Adams, of DARPA, wrote on Jan. 6 that the forms Hochschild requested had not been filled out—even though they were required.

Instead, Hochschild was offered a choice, which he explained in a letter to the professors whose summaries he had tried to obtain: "either I could withdraw the request, or DARPA would ask you to fill in the Work Unit Summaries."

Additional paperwork

Adams says that this additional paperwork wasn't an attempt to keep Hochschild from seeing the documents, and that professors are often asked to fill them out when the DARPA staff is shorthanded.

"It is our option to get them filled out however we want," he says.

Hochschild dropped his request to spare the professors the additional paperwork. However, he says, the professors would have only filled out research information, which he already knew. Without the DARPA statement of military relevance, the forms contain no new information.

Three of the professors to whom Hochschild mailed his letter were not available for comment; another, James Meindl of electrical engineering, says that he has no knowledge that the TABs of the Work Unit Summaries were unavailable.

A report on DoD-sponsored research at Stanford, prepared in 1971 by students in a Stanford Workshop on Political and Social Issues (SWOPSI), reported that even though researchers were often unaware of, or were unwilling to admit to any military applications for their research, DoD funds did affect the kinds of projects undertaken.

"The influence of the military has skewed the direction of research at Stanford and it is the faculty's responsibility to restore the integrity of the process of discovering the truth," the report stated.

Hochschild agrees, saying that "fields heavily supported by the DoD may veer in directions not justified on scientific grounds." In addition, Hochschild says that because many graduate students naturally tend toward well-financed projects, DoD funding is also career channelling.

"This is, in fact, one of the reasons that the DoD does fund research," he says.

Reluctance to recognize the military relevance of DoD-funded research has not diminished since the SWOPSI report.

Lieberman comments

Prof. Gerald Lieberman, statistics and operations research, vice provost, and dean of graduate studies and research told the *Stanford Independent* on Nov. 17, 1982, that the results of his DoD-funded research are not directed toward a specific objective.

"As long as I can work on problems I'm interested in," he told the *Independent*, "I don't look down the line."

Lieberman said his research is in reliability and quality control, and their applications to the manufacturing process. The Work Unit Summaries state that his research is also "to better the Navy's weaponry by creating improved operations research methodology for designing, modeling, analyzing and evaluating complex weapons systems and the acquisition process."

Research like Lieberman's may have non-military applications, but it *must* have military relevance. According to the Mansfield Amendment, introduced in 1970, the DoD may appropriate research funds only if the intended project has "a direct and apparent relationship to a specific military function or operation."

Ironically, the amendment was introduced by two senators who were concerned that the military's substantial resources would make it too influential.

According to figures from the Sponsored Projects Office at Stanford, last year the Defense Department spent nearly $24 million on research contracts and grants for all University departments. This is an increase of $2 million from 1981.

The National Science Foundation spent slightly less than $25 million for all Stanford departments last year.

In the Computer Science Department alone, the DoD outspent the NSF by two to one, providing more than $3 million, a figure Hochschild and others say is two-thirds of the department research budget. In the School of Engineering, the DoD outspent the NSF by three to one, sending more than $12 million. Non-government funding in the School of Engineering amounted to just under $2 million in the same period.

I do not believe that it is realistic now to push for the Computer Science Department to stop taking all military funding. Given the national situation, that would be economic suicide for our research and educational programs.

—Terry Winograd

This year's Congress has approved a $5.32 billion (or 13.4 percent increase in DoD funding tagged for basic research.

Many professors rely on DoD support because of a lack of alternative funding.

"I do not believe that it is realistic now to push for the Computer Science Department to stop taking all military funding," Winograd wrote. "Given the national situation, it would be economic suicide for our research and educational programs."

Winograd avoids military contracts despite the loss of funding because he believes that "increased levels of military technology will not help the future of this country, and in fact will be counterproductive."

However, some professors favor military research.

"I think that we need a strong defense," Meindl says. "Military funding certainly doesn't have negative connotations to me."

Military funding for research is defensible on non-ideological grounds, too, he says. The benefits to society which have accrued directly from DoD-contracted research are reason enough to continue to accept support.

"Very high-speed integrated circuitry is critical to our defense, it's critical to our economy, and it's critical to our health care," he says.

Other examples include some of his work in techniques applied to health care which "without DoD research support we would never have had," he says.

"Electronics is very very good for mankind, and I want to participate in making those benefits better."

Although it is true, as Meindl says, that there is no classified research going on in Stanford labs, documents which are supposedly unclassified can be difficult or impossible to obtain.

Export restrictions also affect research. A 1980 DoD memorandum said that certain kinds of devices made under the very high speed integrated circuit program needed permission from the Department of Commerce to be shown outside the country.

The memo also said that "it is the preference of the Program Office that only U.S. citizens and immigrant aliens who have declared their intention of becoming citizens" participate in certain kinds of research.

This poses a problem, as Roth notes, "since approximately 50 percent of all (graduate) engineering students in the U.S. today are foreign nationals. These rules would prevent many faculty and students from continuing their education and research programs." (Roth's disclosure of proposed State Department restrictions on a Soviet scholar's visit to Stanford sparked national controversy last year.)

Hochschild believes "Universities that conduct large amounts of research will be in a poor position to argue against prevalent secrecy and 'export control' restrictions." (On Feb. 27, 1981, the presidents of Stanford, MIT, Cal Tech, Cornell, and the University of California jointly expressed "grave concern" at Federal efforts to apply export controls to academic teaching and research in a letter to the Secretaries of State, Defense and Commerce.)

In the meantime, Hochschild says he'll "probably take up the issue again," and continue to try to make people aware of questions concerning who will set priorities for academic research.

—Amy Bernhard

Health and safety report

Accidents and Injuries Occurring Feb. 28-Mar. 4

Cause of Accident	Number	Number of Days Off
Animal/insect contact	1	0
Contact with object:		
Impact with object	2	0.0
Pinched, squeezed, crushed	2	0.0
Fall from same level	2	0.0
Lifting improperly	2	0.0

Medical Center MEMO

Physician agreement reached. . .

Hospital Board ends dispute on laboratory access



Lawrence Crowley



Walter Arons



R. Hewlett Lee

An extended policy governing access of community physicians to Stanford University Hospital's sophisticated equipment and specialty laboratories was approved Friday by the Board of Hospital Directors.

The policy establishes:

- a method of deciding how community physicians would be granted access to both present and future hospital specialty laboratories;
- a permanent hospital board committee to advise the directors on access issues, and to monitor the implementation of policies;
- a mechanism for appealing decisions; and
- representation of community and faculty physicians on access committees at the departmental and board levels.

The new policy was recommended by a committee headed by hospital board member Dean Morton after deliberations of 15 months. The committee was made up of board members, and included faculty and community physicians.

Morton termed the recommendations "a significant improvement" in the policies and procedures adopted by the hospital board in August 1981. The policies in question were the result of negotiations between the university and community physicians, which reversed an earlier hospital policy limiting future use of the specialty laboratories to full-time faculty only. That agreement set up a formula through which local doctors who then had access to the laboratories could be replaced by community specialists when they resigned or retired.

But access to other equipment, including future technologies, remained still an issue. In addition, community doctors applying for access to the specialty laboratories complained that some clinical service chiefs were not acting promptly on their applications.

In his report to the hospital board, Morton said all clinical services of the hospital now had functioning access committees in accordance with hospital policy.

"The Anesthesia access committee has acted to replace several physicians," Morton said. "Access to the Cardiac Catheterization and Angiographic Lab has been available and utilized by two community physicians for the past 11 months, and formal affiliation agreements were recently signed." In addition, the Radiology Service has granted access to two physicians.

Morton said access arrangements for community physicians were being discussed by the Radiology Service with respect to CT scanning and Ultrasound laboratories.

Similarly, Morton added, a Neurology Service access committee was meeting to act on outstanding replacement positions for the Electromyography and Electroencephalography laboratories.

Dr. Lawrence Crowley, vice president for medical affairs, termed the agreement "a good compromise" that balances the desires of private practitioners against the needs of the Stanford Medical School to fulfill its role in patient care, teaching, and research.

"The policy," he said, "guarantees an opportunity and process for community physicians to make their case on access issues all the way to the hospital board, if necessary.

"It also assures the full-time faculty that access to the laboratories will be limited and that academic program quality will be recognized as of great importance along with the provision of optimal patient care."

Crowley noted the agreement recognizes that technology, financing mechanisms, utilization rates and staffing needs constantly change.

"The hospital board," he said, "with the advice of its access committee, will continuously review these changing circumstances and adjust its policies from time to time."

He said the agreement "places the access issue with other important policy issues within the jurisdiction of the hospital board where it belongs."

"It's the board," he said, "that has the authority and responsibility for the successful operation of the hospital."

Committee members at the Friday board meeting gave qualified support for the committee recommendations.

"The important aspect is that for the first time we have a document for dealing with future issues equitably," said Dr. Walter Arons, a community physician.

"There are faculty physicians and local doctors who are not particularly happy with the concept of limited access developed by the board in 1981," said Dr. Ronald Castellino, associate professor of radiology.

"But we all felt it was essential for the good of this institution to come up with the best we could do."

The document, Castellino added, establishes procedures to implement the board's 1981 policy on limited access, and in that respect it represents a reasonable report.

Dr. R. Hewlett Lee of the Palo Alto Medical Foundation said very divergent philosophies had been thoroughly explored and after one and a half years of meetings a "consensus document" had been agreed upon by the community and faculty physicians and board members of the access committee.

Lee termed the new policy as "a foundation for solutions to the access problems."

Dr. Robert Jamplis, president of the Palo Alto Medical Foundation, also echoed a cautiously optimistic view.

When vested interests are involved, he said, "there's no way you're going to get a document that satisfies everyone. This is as good a document as one could get. I'm certain it will work if reasonable people on both sides can come to some reasonable conclusions.

"I hope it works for the sake of the community and the Medical School. We're so interdependent that we've got to make it work."

"It's a consensus document," agreed Dr. Wilbur Mattison of the Menlo Medical Clinic. "It means there are still reservations and points of disagreement between the physicians on the committee. But we think it is a very reasonable and workable document that provides us with procedures to put into effect the 1981 board policy."

Last August the Palo Alto City Council became involved in the access issue when it gave conditional endorsement to Stanford University Hospital's modernization project. The Council reserved the right to rescind its endorsement if the Morton committee had not made what Council members deemed sufficient progress toward settling longstanding discussions about community physician access to the specialty laboratories.

Council endorsement is not required. However, the state and regional agencies which must approve all hospital construction projects, review local community support while assessing whether the requested improvements are needed in the local area.

The membership of the Morton committee included Drs. Ronald Castellino, Duncan Govan, Sharon Hunt, R. Hewlett Lee, Wilbur Mattison, Richard Popp; and Linda Meier and Geraldine Steinberg; with Drs. Walter Arons, Crowley, and Stanford University President Donald Kennedy serving as ex officio members.

—Spyros Andreopoulos

"The policy guarantees. . .a process for community physicians to make their case all the way to the hospital board. It also assures the full-time faculty that access to the laboratories will be limited."

—Lawrence G. Crowley, M.D.
Vice President for
Medical Affairs

"For the first time we have a document for dealing with future issues equitably. . ."

—Walter Arons, M.D.
Community physician
and member,
Board of Hospital Directors

Nobel laureate to deliver two Lane lectures

Dr. Aaron Klug, winner of the 1982 Nobel Prize for Chemistry, will deliver two lectures at Stanford University School of Medicine March 14 and 16.

Klug, of the British Medical Research Council Laboratory of Molecular Biology in Chemistry, is the 38th invited speaker since the Course of Lane Medical Lectures was established in 1896.

The talks, now held every two years, were established to draw outstanding scientists from around the world to speak to members of the medical profession, students, teachers, and research workers in medicine and allied sciences.

The series was founded by Dr. Levi Cooper Lane, and held at Cooper Medical



Aaron Klug

College in San Francisco until that institution became Stanford's medical school.

Klug, who received his Ph.D. from Cambridge University in England in 1952 after getting an M.Sc. earlier at the University of Cape Town in his native South Africa, was cited by the Nobel Prize committee primarily for his contributions toward understanding the structure and complexes of proteins and nucleic acids. He was also cited for his development of crystallographic electron microscopy.

In addition to his position at the molecular biology lab, Klug serves as joint head of the division of structural studies at Cambridge. He is the author of numerous publications in his field.

On March 14, Klug's talk will be "Structural Analysis of Macromolecular Assemblies by Electron Microscopy and Image Reconstruction." On March 16, he will discuss "From Viruses to Chromatin." Both lectures are to be held from 5 to 6:15 p.m. in Sherman Fairchild Auditorium.



Did you know that red bags get burned?

Dump your garbage with safety in mind!

Last week, a couple of incorrectly disposed aerosol cans exploded in the Hospital incinerator. Fortunately, the nearby operator was properly shielded from the blast.

An incident such as this, warned Ruben Perez, assistant director for safety, endangers the incinerator operator as well as the entire hospital with the possibility of ensuing fire and other hazards.

Perez displays the before-and-after evidence above, as Manuel Repancol operates the incinerator in the background.

The Health and Safety Offices of the hospital and campus remind everyone that the red garbage bags must be used for burnable, potentially infectious trash only—*not *aerosol cans and other non-combustible items. Any questions about proper disposal and use of red bags should be addressed to Infection Control, 497-5386.

Fire and chemical safety in the workplace are also of vital concern, Perez stressed. If you have questions, or are aware of a hazardous situation on the premises, please call the offices above at 497-7225 or 497-0448.

Kids invited to learn about health at upcoming faire

A children's health faire, aimed at teaching youngsters between the ages of three and 18 about good health, will be held from 10 a.m. till 5 p.m. Saturday, March 19, at the Stanford Shopping Center. The event is cosponsored by Children's Hospital at Stanford and the pediatrics department of SUH.

More than 35 booths on the mall, all with hands-on exhibits and demonstrations, will teach children about health-related topics ranging from sports injuries, good nutrition, and massage for kids, to first aid and paramedic rescue, communicable diseases, and poison control. The theme of the faire is "Up with Health."

As an example of the displays planned, a gastrointestinal booth run by Eileen Walsh, R.N., will feature the "chew-chew" express as it travels through a paper mache human digestive track. The owner of the Golden Spike restaurant donated a model train for the exhibit, in which nurse "conductors" will describe the various stops along the way.

Some booths will offer different types of health screening to children, and provide medical referral slips in the event that concerns arise. The cardiac booth, for instance, will offer blood pressure screening along with its exhibit of small anatomical models of the heart and electrocardiogram (EKG) simulation.

Some booths will offer information



about what children might expect if they are ever admitted to the hospital, or require ambulatory surgery.

A number of local physicians and community groups will also participate, including the Palo Alto Fire Department and Sheriff's Department, the Palo Alto Paramedics, Touchstone, and the Ronald McDonald House.

The event, free and open to the public, is being sponsored in connection with Children and Hospitals Week. It was organized mostly by nursing staff in conjunction with other interested professionals.

Participants from SUMC include dietary, the blood bank, respiratory therapy, audiology, pharmacy, community relations, pediatrics, the north intensive care unit (cardiovascular), the intensive care nursery, orthopedics, operating room, ambulatory surgery, infection control coordinator, and critical care transport.

For further information about the children's health faire, call the community affairs office at Children's Hospital, 327-4800, ext. 363, or SUH community relations, 497-7167.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Med Center boundaries extended: dialysis in the comfort of home

Alison Lindt has no kidneys. They were both surgically removed after a long bout with incurable kidney disease. Now she relies, like 60,000 other Americans, on lifesaving hemodialysis to do the job her own diseased kidneys couldn't—the vital task of cleansing impurities and extra fluid from her blood.

But for Alison and her husband John, being able to administer dialysis at home has meant a normal lifestyle, uninterrupted by trips three times a week to a special dialysis center.

Now settled in Michigan, the Lindts were graduate students living in Livermore, Calif., when they enrolled in a special home dialysis training program at Stanford University Hospital.

The four-hour procedure "doesn't really demand a lot of attention once you're used to it," said John. The machine in their living room is self-regulated and an alarm sounds if anything goes wrong.

"Patients who dialyze at home tend to feel better physically and more independent," said Pam Simmons, R.N., clinical nursing coordinator for the Stanford hemodialysis unit.

Training nurses visit each patient's home every few months to check that the machine (on loan from Stanford) is in good repair. Phone contact between the dialysis unit and the patients ensures that any problems are identified early.

"Reduced cost is another advantage of home dialysis," said Dr. Robert Swenson, associate professor of medicine and director of the dialysis units at Stanford and the Veterans Administration Medical Center in Palo Alto.

Karen Berman, social worker at the Palo Alto VA dialysis unit, cited an innovative program in which helpers are recruited and paid, for those patients who wish to home dialyze but don't have a relative or friend at hand.

Health career fair for students

Stanford is one of 10 hospitals participating in an upcoming Health Career Fair, to be held from 11 a.m. till 4 p.m. Saturday, March 19, in the Community Hall at Eastridge Shopping Mall, San Jose.

The Fair is designed for high school and college students, their parents and counselors, to provide information about the various health professions available and the education required to enter them. The public is invited to attend free of charge.

The Fair will feature display booths by local hospitals as well as medical and dental societies. The booths will offer hands-on exhibits, information and the opportunity to talk to practicing health professionals and representatives from the health care educational programs in Santa Clara County.

Stanford's will be the Fair's first booth, presented by management engineering. Kevin Volkman of that department will be on hand with a microcomputer display to offer students an overview of available health careers. They will also have a chance to see the types of equipment, reports, and graphic displays used in management engineering at SUH.

Other fields represented in the Fair by the various area participants will be: clinical laboratory services, dentistry, dietary, financial aid, health promotions, hospital administration, junior volunteers, medicine, nursing, pharmacy, physical therapy, radiology, respiratory therapy, and social services.

The Health Career Fair is cosponsored by the South Bay Area Health Education Center (AHEC), the Santa Clara County Hospital Conference, the Santa Clara County Dental Society, the Santa Clara Medical Society, and the Santa Clara County Office of Education.

Participating hospitals besides SUH include: Alexian Brothers Hospital, Community Hospital and Rehabilitation Center of Los Gatos-Saratoga, El Camino Hospital, Good Samaritan Hospital, Kaiser Foundation Hospital, O'Connor Hospital, San Jose Hospital, Santa Teresa Hospital, and Santa Clara Valley Medical Center.

The South Bay AHEC is affiliated with the Stanford University Regional AHEC, based in the division of family medicine since July, 1980. The AHECs are part of a federally funded state and nationwide program designed to improve the geographic distribution, supply and quality of health manpower in the nation's health care delivery system. The recruitment of minorities into the health professions is another AHEC goal.

The Stanford and South Bay AHECs have worked cooperatively in planning program activities that began last year. For further information on the Health Career Fair, call (408) 275-8981.

...News Notes...

A revised diet manual for the Hospital has been prepared and is available for professional personnel, announced Jane Woeckener, assistant director of dietetics/nutritional services.

* * * *

Dr. W. Warren Mills, assistant clinical professor of medicine, has been elected president of the division of allied health of the Board of Medical Quality Assurance. Mills is a Sunnyvale internal medicine specialist.

* * * *

Dr. Melvin Britton, a rheumatologist and associate clinical professor of medicine, has been certified in the specialty of quality assurance and utilization review.

* * * *

Stanford University Hospital is among 41 "magnet" hospitals selected by the American Nurses Association's American Academy of Nursing as "models of hospital nursing practice with demonstrated success" in attracting and retaining nurses.

Chosen from a list of 165 hospitals across the country that were cited by nurses as satisfying places to work, the magnet hospitals have three overall factors in common: knowledgeable leadership that provides for nursing input in policies affecting nursing practice; the opportunity to practice fine professional nursing in collaboration with high-quality colleagues; and provision for nurses' professional growth and involvement in programs to upgrade patient care.

* * * *

Hospital Forum, the Journal of the Association of Western Hospitals, *has named the publication* **Nursing at Stanford University Hospital** *winner of honorable mention (magazines, larger hospitals) in the* **Forum's** *1983 publications contest, "the Best of the West."*

The awards will be presented at the 1983 AWH Convention, April 24-27, in Anaheim, California, during which many educational opportunities will be presented to participants.

* * * *

During the week of March 14, the Marsh and McLennan and Kemper Fire Insurance representatives (the carriers for SUMC), as well as the Palo Alto City Fire Inspector, will conduct their annual week-long fire/safety inspection. The entire Medical Center complex is scheduled for inspection. Department heads and supervisors may be asked to accompany the inspectors through their areas of responsibility.

The Safety Office reminds all departments to remove corridor obstructions, such as tables, chairs, and file cabinets, and to clear access to fire alarm and suppression equipment. These are general guidelines which should be followed throughout the year.

Additionally, flammable liquids, when not being used, should be kept in either a flammable safety can or flammable safety cabinet. Any large items (like filing cabinets or refrigerators) that need to be discarded or moved, and require the assistance of the Operation and Maintenance Department, should be handled through a work order request.

For further information call the Safety Office at 497-7225.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MARCH 9

Dept. of Structural Biology Seminar: "X-Ray Diffraction Studies of the Structure of the Gap Junction Channel"—Dr. Lee Makowski (Columbia). Noon. D102.

Dept. of Nursing Grand Rounds: "The Confusing World of Food and Nutrition Fads"—Registered dietitians Beth Douglas, Diane Madgic, Diane West, and Janet Cecchino. Part of National Nutrition Month activities. 3:30 p.m., M114.

Div. of Orthopedic Surgery Grand Rounds: "Experimental Investigation in Acute Hematogenous Osteomyelitis and Their Implication and Treatment"—Dr. Raymond Morrissey. 8:30 a.m., M114.

Basic Science Research Colloquium: "Cyclic Nucleotide Cascade of Vision"—Dr. Lubert Stryer. 5 p.m., Fairchild Auditorium.

Progress in Medicine Lecture: "Newborn Intensive Care: Survival—What Price?"—Dr. David Stevenson. Part of public series on ethical dilemmas of intensive care. 7:30 p.m., Fairchild Auditorium.

Dept. of Electrical Engineering Seminar on Electronics in Medicine: "Development of a Computer-Controlled Intensive Care Respirator"—Fritz Stawlicke (Dept. of Mechanical Engineering and Hewlett-Packard Lab). 4:15 p.m., McCullough 134.

THURSDAY, MARCH 10

Nursing Educational Services: "The Legal Workshop." Emphasis on state and federal regulations and other standards, policies, and protocols of nursing practice. 8:30 a.m. to 4:30 p.m., Holiday Inn, Palo Alto. To register call Carole Kidder at 497-6366.

Dept. of Medicine Grand Rounds: "The Automatic Implantable Defibrillator"—Dr. Roger Winkle. 8:30 a.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "Inside-Out Thylakoid Membrane Vesicles and Their Use in Photosynthesis Research"—Prof. Per-Alce Albertsson (Univ. of Lund, Sweden). Noon, M316.

FRIDAY, MARCH 11

Dept. of Gynecology and Obstetrics Grand Rounds: "Endometrial Biopsy and Progesterone"—Dr. Christine Pillet (UER Des Medicine de Nantes, France). 8 a.m., A336.

Dept. of Pediatrics Grand Rounds: "Diarrhea and Methemaglobinemmia in an Infant"—Dr. Bertil Glader. Case presentation by Dr. Dana Rosenberg. 8 a.m., M106.

MONDAY, MARCH 14

Dept. of Gynecology and Obstetrics REI Conference: "Fertilization"—Dr. Alan Shapiro. 8 a.m., A336.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Audiological Assessment of Central Auditory Disorders"—Sally Johnson, M.A., Holly Hosford-Dunn, Ph.D. 7:30 a.m., R117.

Dept. of Medical Microbiology Seminar: "Permeability of Outer Membrane, or How *E. coli* Changes its Clothes According to Weather"—Dr. Hiroshi Nikaido (UC-Berkeley). Noon, M114.

Office of Postgraduate Medical Education 38th Course of Lane Medical Lecture: "Structural Analysis of Macromolecular Assemblies by Electron Microscopy and Imagery Construction"—Dr. Aaron Klug. 5 till 6:15 p.m., Fairchild Auditorium.

TUESDAY, MARCH 15

Dept. of Biochemistry Seminar: "Sex Change Operations in the Fruitfly: Implications for Regulatory Gene Functioning in Higher Eukaryotes"—Dr. Thomas Cline (Princeton). Noon, M316.

WEDNESDAY, MARCH 16

SUMC Auxiliary Volunteer Orientation. 9:45 a.m., W001. To register for the program, call 497-6636.

Office of Postgraduate Medical Education 38th Course of Lane Medical Lecture: "From Viruses to Chromatin"—Dr. Aaron Klug. 5 till 6:15 p.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "Molecular Analysis of the Antennapedia Complex of *Drosophila*"—Dr. Matthew Scott (Indiana University). Noon, M316.

SATURDAY, MARCH 19

Pediatric Health Faire at Stanford Shopping Center: sponsored by Children's Hospital at Stanford and Stanford University Hospital. 10 a.m. till 5 p.m. For information call 497-7167 or 327-4800, ext. 363.

MONDAY, MARCH 21

Nursing Educational Services Critical Care Course, Level I: "Selected Topics in Medical-Surgical Critical Care." 8 a.m. till 4:30 p.m., Faber Auditorium, Children's Hospital at Stanford. Call Carole Kidder for registration and other information at 497-6366.

MARCH 23, 24, and 25

Nursing Educational Services Symposium: "Advanced Perinatal Concepts." Intended for nurses working in a high risk care environment to broaden their understanding of physiological, ethical and legislative issues. Small group presentations each afternoon will offer a more in-depth exploration of specific questions raised. Continuing education credit available; fee to be charged. Registration on a first-come, first-served basis. 8 a.m. till 4:30 p.m. Wednesday and Thursday; 8 a.m. till 12:30 p.m. Friday; room 270, Tresidder Memorial Union. For further information, call Carole Kidder at 497-6366.

THURSDAY, MARCH 24

Nursing Educational Services registration deadline: for "Pediatric Critical Care Course, Level I" to be held March 31. Geared toward nurses caring for children who undergo cardiac surgery. Addresses physiological, surgical and social service considerations of care for these patients. Registration required, fee charged, and continuing education credit available. Room to be announced. For further information, call Carole Kidder at 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Perinatal nursing: high risk care

"Advanced Perinatal Concepts: A Nursing Symposium" will be held March 23-25, in room 270, Tresidder Memorial Union, on the Stanford University campus.

Cosponsored by Nursing Educational Services and the Perinatal Nursing Region of SUH, this symposium is designed primarily for the perinatal nurse practicing in a tertiary level center. It is offered to broaden the nurse's understanding of high risk care.

Selected disease states, ethical and legislative issues will be discussed, as they pertain to maternal/fetal/neonatal management and outcomes. In addition, innovations in management and health team communications will be presented. Small group presentations in the afternoon will encourage in-depth examination of specific problems particular to each patient group.

Faculty will include many professionals from Stanford University Medical Center, as well as several guest participants.

For more specific information on the program, registration, fees, lodging (if necessary), educational objectives, continuing education credit, faculty, and specialty topics, call 497-6366. Early registration is advised.



Speaker stresses civic education

Civic education should be the cornerstone of public support for America's schools, R. Freeman Butts, visiting scholar at Stanford's Hoover Institution, told educators in Detroit Thursday, Feb. 24.

In remarks prepared for a joint meeting of the Society of Professors of Education, the John Dewey Society, and the American Association of Colleges of Teacher Education, Butts said "the civic purpose of universal education in a democracy is its most fundamental purpose. . .

"Our public rhetoric and rationale for free universal education for nearly 200 years has been primarily to prepare citizens for a democratic republic."

Courses and schools for teacher training trace their origins to the need for "free universal, common schools. . . deemed necessary to prepare the young. . . as citizens," he added.

"The fundamental relationships between universal public education and teacher education is inescapable. When one falters, the other does."

The civic purposes of teacher education today have diminished to the point where they are "scarcely recognizable" compared with pressures for greater educational discipline, competency-based education, and many other competing goals.

Butts served 40 years, from 1935 to 1975, as a faculty member at Teacher's College of Columbia University.

The academic community and the educational professoriate "must convince the public that education is primarily a public good rather than primarily a means to private fulfillment or private preferment," he said. "Only then will funds again begin to flow to education. . . .

"It is no accident that the rise of privatism in educational discourse comes at a time when attitudes toward schools of education also are at a low ebb. . . . Poor faculty trying to train poor students cannot produce good teachers for the nation's classrooms.

"So, the argument goes, let's turn to the private schools which will attract better students and better teachers and greater parent choice and parent involvement."

In 1826, he noted, James G. Carter condemned the spread of private academies in Massachusetts as "hungry corporate beings" which would undermine the free public schools.

Besides similar pressure today, Butts observed, "there is the rising clamor to impose 'traditional values' of morality and religion and family upon the public schools.

"The New Right, the Moral Majority, the Creationists, the pro-family and free enterprise groups want the public schools to straighten up and teach the 'right' values that made our country great. . .

"I do not think the schools of education can ignore or dismiss this mood or simply counter-attack from a value-neutral position.

"I believe rather that educational professoriate is on sounder ground if it asserts that indeed teachers should not take sides on matters of personal or religious values, but that the civic values of a democratic polity are the historic business of the schools in preparing for citizenship—not simply the knowledge of government and civics as taught in history and social studies but careful, scholarly and deliberate study of the ideas and values that pervade a democratic polity."

Anthropology faculty responds to comments on Mosher case

continued from page 1

acts" is based on "persuasive evidence that cannot be revealed without endangering innocent persons.".

"The innocent persons in question are not Chinese officials or Mr. Mosher's former wife.

"Mr. Mosher is on record as stating that the crucial evidence against him would physically endanger innocent persons and appropriately he has not released that critical information."

"Mr. Mosher has in his possession all of the evidence against him and the 47-page page report drawn up by the (investigating) committee. He has had every opportunity to refute it.

"No findings were based on uncorroborated statements of interested parties, or on statements of persons unrevealed to Mr. Mosher. At the outset of the investigation, the committee agreed to consider only evidence whose source could be made known to Mr. Mosher and the full anthropology faculty.

"Mr. Mosher asked that any other allegations about his conduct, coming from sources whose identity could not be disclosed to him, be destroyed—and this was done. The information was never released to the faculty."

At a news conference immediately after the Feb. 24 decision, Mosher showed a copy of the report to journalists, but refused to make it public, saying this would "undermine" future legal action against the University. He said "the only innocent person harmed was myself."

Talking with reporters Feb. 24, Mosher said the faculty "never questioned the truth of (my) charges" about birth control. "What they have questioned is my right to say the truth at a time and place of my choosing."

"Perhaps I should have seen" that the popular article "would upset many" and "perhaps I should not have permitted the photo to be printed," he conceded. This showed a woman naked around the waist being prepared for an abortion.

The faculty noted that "the investigation and the decision resulting from it has been in the hands of the Department of Anthropology alone. University officials have not participated in the investigation, except to provide:

"Full graduate financial support for the entire 1981-82 academic year to Mr. Mosher;

"Partial financial support to the department so that Mr. Mosher could make two fully paid-for round-trips, from Taiwan to San Francisco, to meet with the (investigating) committee and to appear before the faculty; and

"Partial financial support to the department for costs related to the investigation.

"The committee also offered their assistance to Mr. Mosher to obtain any evidence he deemed relevant to the case.

"The University's grievance procedure is available to Mr. Mosher. This guarantees that all allegations of error or fault in the department investigation or decision that Mr. Mosher might allege would be reviewed by officials above the department. To date, Mr. Mosher has not filed a grievance with the University."

In a brief statement following the Feb. 24 decision, the anthropology faculty noted that "Mr. Mosher has a copy of the report and of all the documents that were utilized in drawing up the report.

"The cover of the report states that 'it contains information that may be injurious to innocent third parties. Mr. Mosher has remarked on the truth of that statement in a letter he wrote when he received a copy of the testimony contained in the report."

The faculty said its March 7 statement was "made in response to the many public statements made by Mr. Mosher and the incorrect conclusions reached by others in response to those statements."

Rural development requires long-term effort—Johnston

Global problems of rural poverty won't be solved by revolutionaries, master planners, or technological quick fixes.

Rural development remains essentially a long-term educational effort, involving lots of trial and error, focused on higher production, jobs, health and family planning.

These are some of the broad conclusions reached in a recent Johns Hopkins University Press book, *Redesigning Rural Development: A Strategic Perspective* by Prof. Bruce F. Johnston of the Food Research Institute at Stanford and William C. Clark, ecologist and policy analyst at the Institute for Energy Analysis at Oak Ridge, Tenn.

Given the many obstacles to rural well-being, "the odds are steep against *any* approach, ours included," they admit.

"Sustainable progress will be measured in decades, not years."

Political pressures all too often favor urban development and short-term results of little real help to the rural poor, they point out.

"Short-term tactical solutions emphasizing a relief-and-welfare approach are simply not equal to the task. . .

"Development is essentially a learning process. The growth of organizational competence and personal knowledge are as fundamental a requirement as the growth of capital. . . .

"The desire to by-pass the errors, to teach answers instead of encouraging learning, is as strong—and as disastrous a long-term strategy-in rural development as in child-rearing. . . ."

The policies and incentives of aid agencies and academic circles "continue to encourage elaborate but immature model-building exercises, costly but often meaningless experiments, and short but expensive appraisal visits which are uninformative because they focus on isolated projects independent of their strategic context," they declare.

But the evidence is "relatively unambiguous" on at least one point: "it argues strongly that broadly based efforts to achieve production gains are superior to efforts that concentrate on a few large, highly organized, and relatively capital intensive ventures."

"Ultimately, development is about neither numbers nor solutions; rather, it is about people. Our bias for hope derives from our inclination to see people not only as the ends of development programs but also as the means for those programs' effective implementation."

Professors charge Mosher 'endangered his research subjects' in China

The faculty of the Stanford Anthropology Department is issuing the following statement in response to the many public statements made by Mr. Steven Westley Mosher and the incorrect conclusions reached by others in response to those statements.

The principal reason for Mr. Mosher's dismissal from the Ph.D. program was that he abused his status as an anthropologist to engage in illegal and seriously unethical conduct while in the People's Republic of China, and in doing so he endangered his research subjects. Those acts occurred before Mr. Mosher released information regarding the birth control program in the PRC and were not related in any way to his publication of that material.

The unanimous finding reached by secret ballot, that he committed illegal and seriously unethical acts is based on persuasive evidence that cannot be revealed without endangering innocent persons. The innocent persons in question are not Chinese officials or Mr. Mosher's former wife.

Mr. Mosher is on record as stating that the crucial evidence against him would physically endanger innocent persons and appropriately he has not released that critical information.

Mr. Mosher has in his possession all of the evidence against him and the 47 page report drawn up by the Committee. He has had every opportunity to refute it. No findings were based on uncorroborated statements of interested parties, or on statements of persons unrevealed to Mr. Mosher.

At the outset of the investigation the Committee agreed to consider only evidence whose source could be made known both to Mr. Mosher and the full anthropology faculty. Mr. Mosher asked that any other allegations about his conduct, coming from sources whose identity could not be disclosed to him, be destroyed—and this was done. The information was never released to the faculty.

Mr. Mosher has charged publicly that the faculty dismissed him because the Chinese government allegedly restricted research opportunities for other scholars in retaliation for Mr. Mosher's publication of information on the excesses of the Chinese birth control program.

The Committee Report, endorsed by the faculty, is quite explicit on this point: "We feel that although the Chinese are clearly linking Mosher's article to the restrictions they are imposing on foreign scholars, we cannot hold Mosher responsible for actions the Chinese are taking. Although we believe that Mosher was unwise to publish his article in a popular Taiwanese weekly where it would be read as a political attack on the PRC, we cannot judge this act to be misconduct, both because we are not convinced that Mosher fully understood the implications of his choice of publishing medium and because we believe that Mosher's right to publish where he chooses is protected by the right to freedom of speech."

The investigation and the decision resulting from it has been in the hands of the Department of Anthropology alone. University officials have not participated in the investigation except to provide: full graduate financial support for the entire 1981-82 academic year to Mr. Mosher; partial financial support to the Department so that Mr. Mosher could make two fully paid-for round-trips, Taiwan-San Francisco, to meet with the Committee and to appear before the faculty; and partial financial support to the Department for costs related to the investigation. The Committee also offered their assistance to Mr. Mosher to obtain any evidence he deemed relevant to the case. The University's grievance procedure is available to Mr. Mosher. This guarantees that all allegations of error or fault in the department investigation or decision that Mr. Mosher might allege, would be reviewed by officials above the department. To date, Mr. Mosher has not filed a grievance with the University.

Kennedy comments on procedures in Mosher case

Following is a March 7 statement by President Donald Kennedy of Stanford:

A number of letters received by officers of Stanford University, as well as editorial comments in some newspapers, have been critical of the University's failure to release the details of the Department of Anthropology's decision to expel Stephen Mosher, and the text of the inquiry conducted by the Department's *ad hoc* committee. These criticisms have been especially difficult to confront because a number of senior University officials, including the President, are unable to comment substantively on the matter.

This is one of those unfortunate cases in which we find two important social values in collision. Persons concerned with what they perceive as possible infringements on academic freedom, or about the operation of "political influence," would like full information so they can reach their own conclusions. And we at Stanford, because we believe we would pass any tests based on these values, would like to divulge it. But an equally strong set of values attaches to the need for privacy. Some of the information contained in the *ad hoc* committee's report could be damaging to other individuals, including the subjects of research. Mr. Mosher has assumed this risk himself.

Furthermore, as a matter of general policy, individuals who are the subject of such proceedings are entitled to confidentiality. Even in the interest of wider public understanding—and, incidentally, of the University's reputation for fairness—these values must, in our judgment, be given the greater weight.

Accordingly, we have not made the committee's report public. Although we want to provide as much by way of substantive explanation as we can, there are limits here as well.

At Stanford an array of due process requirements apply to cases of this kind, including a route of appeal that extends right up to the President. While that possibility remains open, it would clearly compromise the process for any of us in the appeal route to delve into the facts, prejudge the matter and proceed to comment on the substance.

A good deal *can* be said about process, however. We think those inclined to be critical of the University may find some reassurance in the account given by the Department of Anthropology of the procedures it followed, by the description of the due process provided students by University policy and by the Department's most recent statement. I have attached copies of applicable documents; and I hope those who have questions about Stanford's actions in this case will take the trouble to read them carefully. *(Documents available from News Service.)*

Faculty salary curves, 1982-83

The accompanying graphs, with noted exceptions, display the 1982-83 salary distribution curves for full, associate, and assistant professors in the seven schools of the University. The exceptions, which have not been included, are associate and assistant professors in the Schools of Earth Science, Law, and Education, and associate professors in the School of Business. These categories are not included due to insufficient population (fewer than ten).

This information was prepared by Elizabeth Ball in the Provost's Office in collaboration with Vice Provost Gerald Lieberman. This is the fifth such report done in response to a June 1978 request for such data from the Academic Senate Ad Hoc Task Force on Faculty Salary Disclosure.

Each graph includes three curves which represent, respectively, the 75th percentile (top line), the median (middle line), and the 25th percentile (bottom line) of salaries based on various indices of years of experience as noted on the bottom of each graph. All salaries are on a nine-month base **except** for the School of Medicine, which is on an 11-month base.

Please keep the following points in mind when reviewing the curves:

1) The data shown on each cover the spread of years that encompasses at least 90 percent of the professors in that category.

2) If the actual salaries were plotted on the graphs, approximately 25 percent of the salaries would be above the 75th percentile band on each graph. 25 percent would fall between the 75th percentile and the median. 25 percent would be between the median and the 25 percent percentile band, and 25 percent would be below the 25th percentile band.

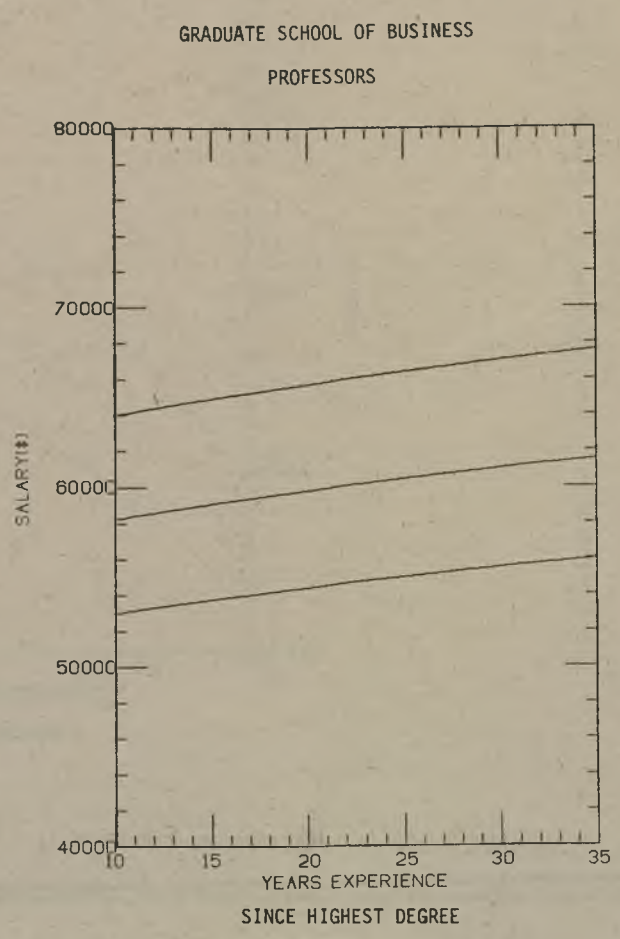
3) In interpreting the curves, it is important to note that a few unusually high or unusually low salaries can have impact upon both the slope of the curve and the width of the 25th and 75th percentile bands.

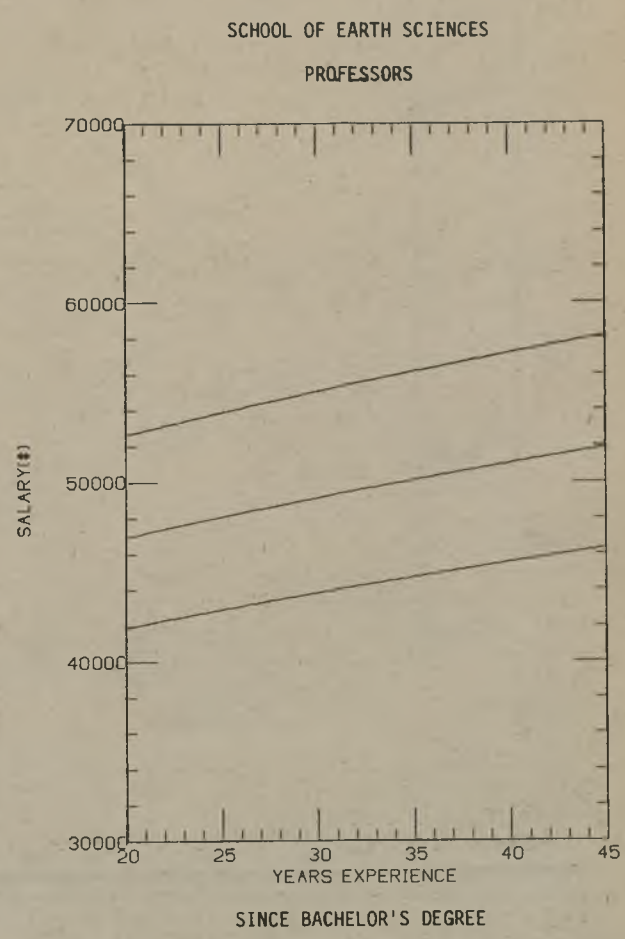
Each dean selected the particular index of experience which would be the most meaningful for his School: Humanities and Sciences, Education, and Medicine use the number of years in rank (elsewhere as well as at Stanford); Engineering and Earth Sciences use years since bachelor's degree; Law uses years since J.D. or LLB; and GSB uses years since highest degree.

The curves were constructed on the basis of a regression analysis, using the logarithm of salary versus the square root of years of experience. An assumption was made that a direct relationship exists between salary level and years of experience. As with any mathematical model, such an assumption represents an approximation to reality, and in several cases, results in curve fits where the data exhibit a large degree of variability.

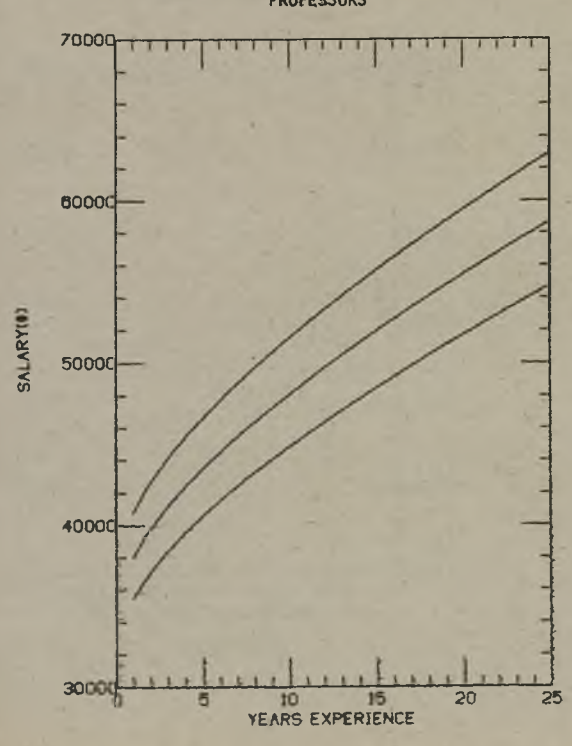
Professorial salaries at Stanford are based on merit, equity, and market considerations rather than on length of experience per se. (An exception is the salary levels of assistant professors in the School of Humanities and Sciences which are determined primarily on the basis of years in rank).

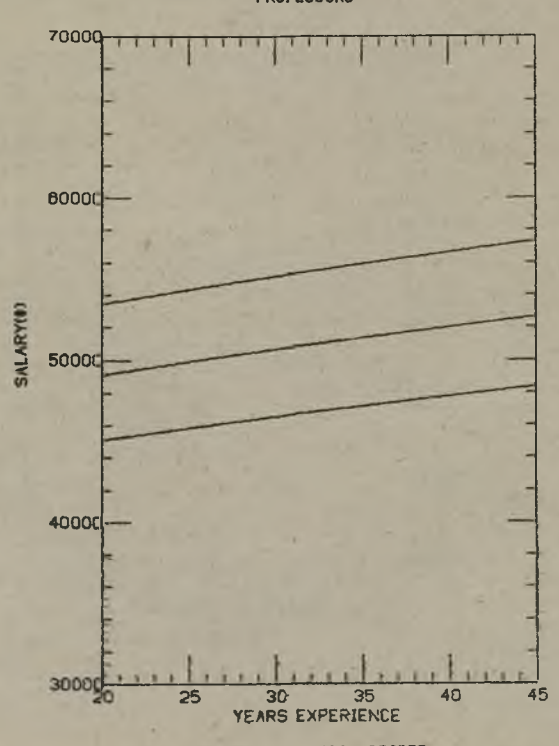
Salary curves, professors

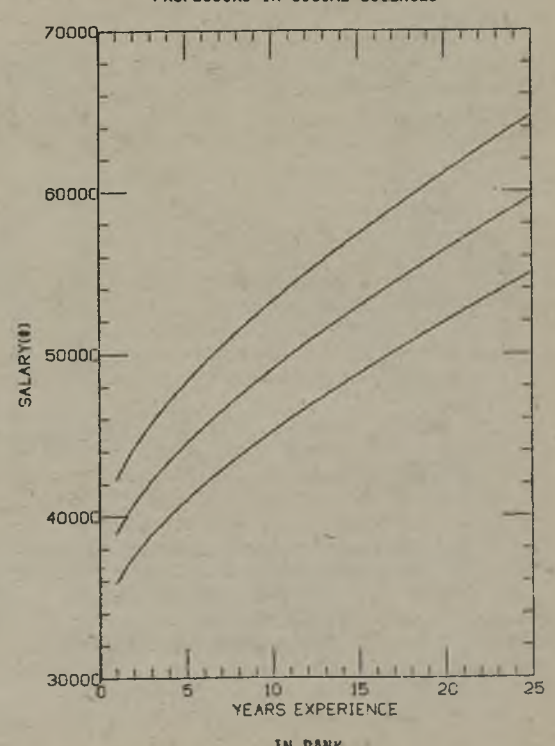




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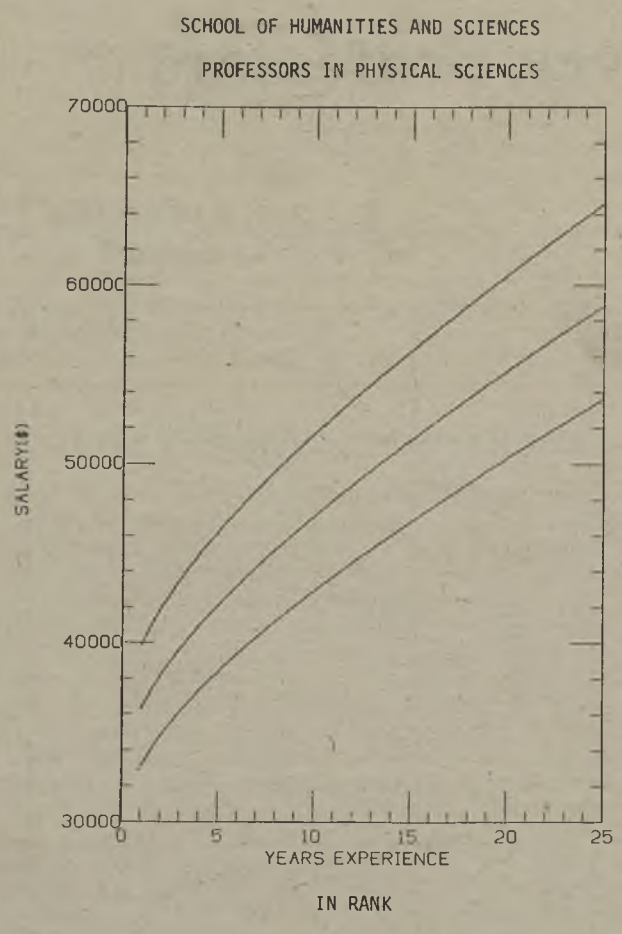


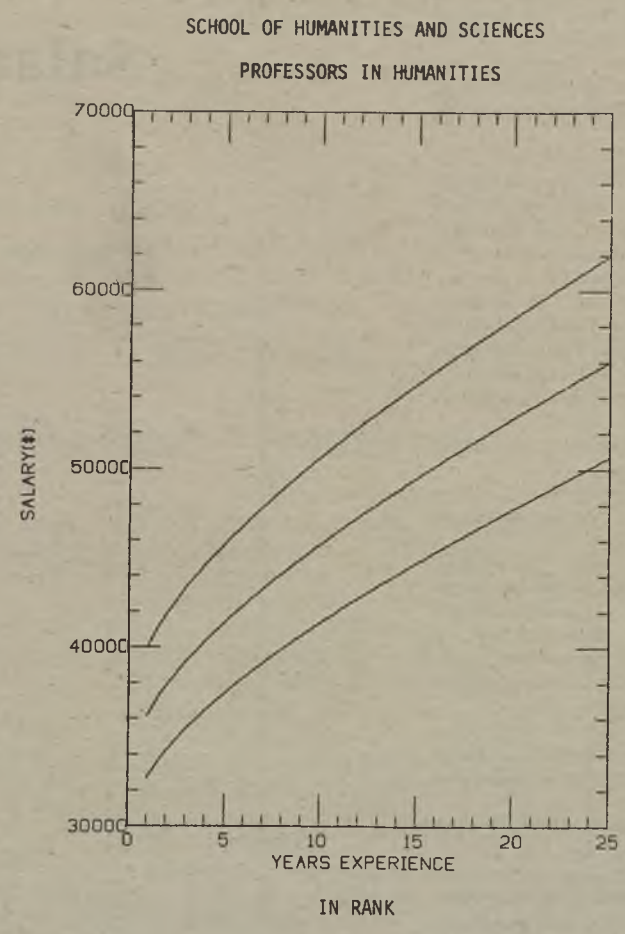


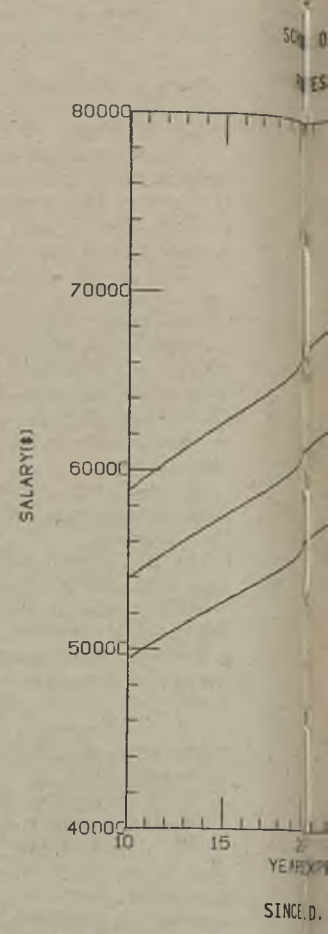


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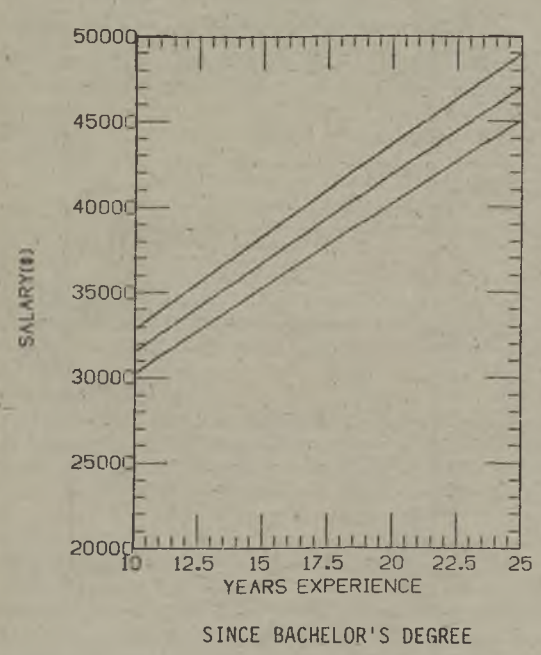
Salary curves

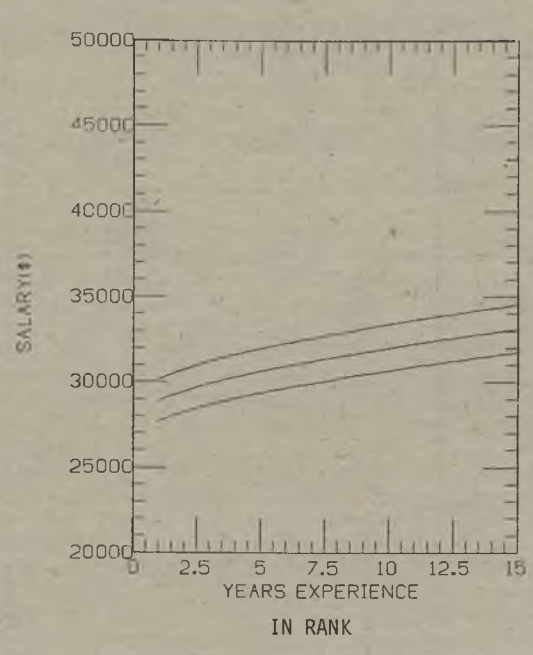


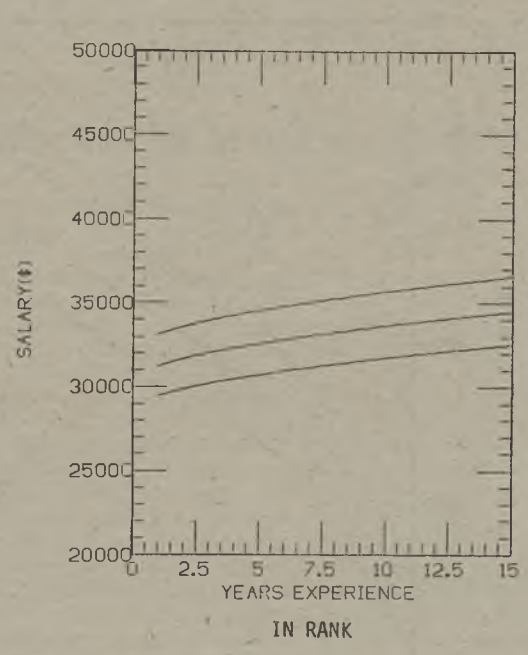




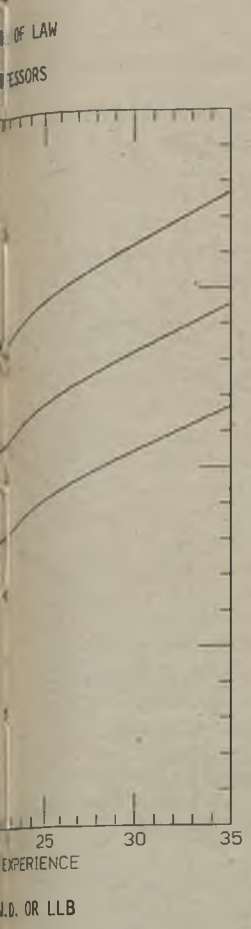
Salary curves, as

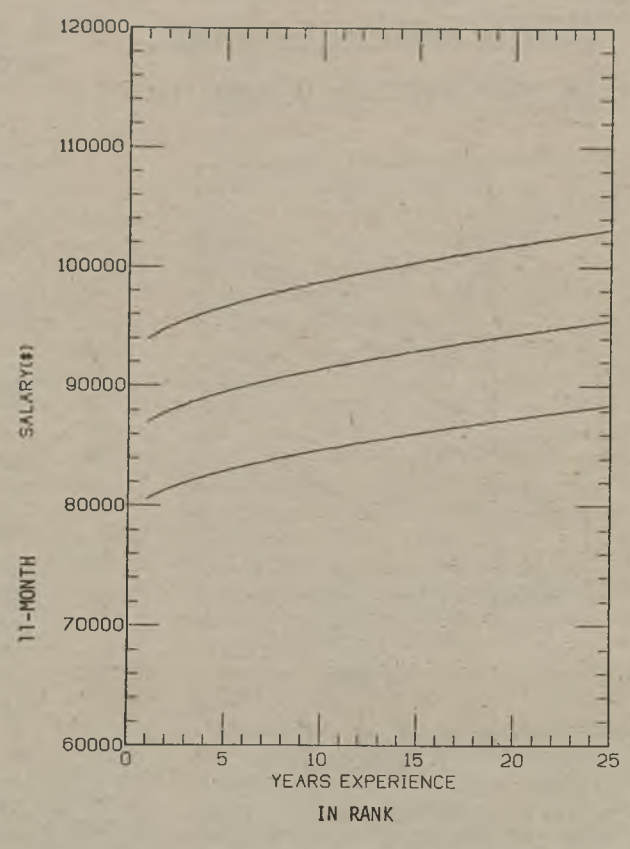


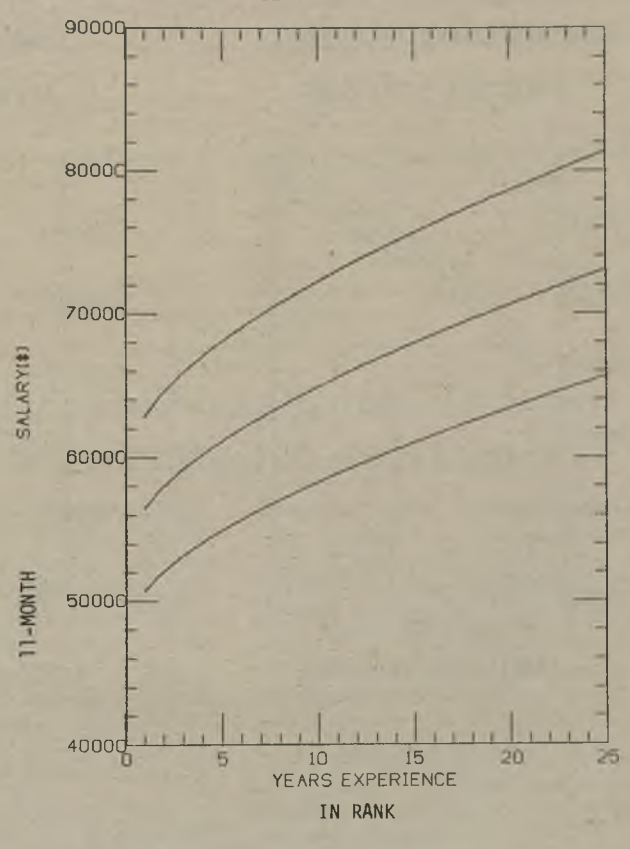




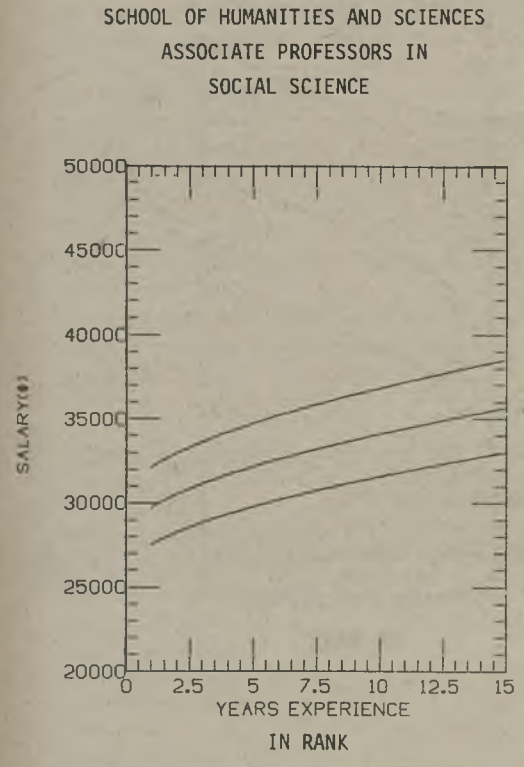
s, professors

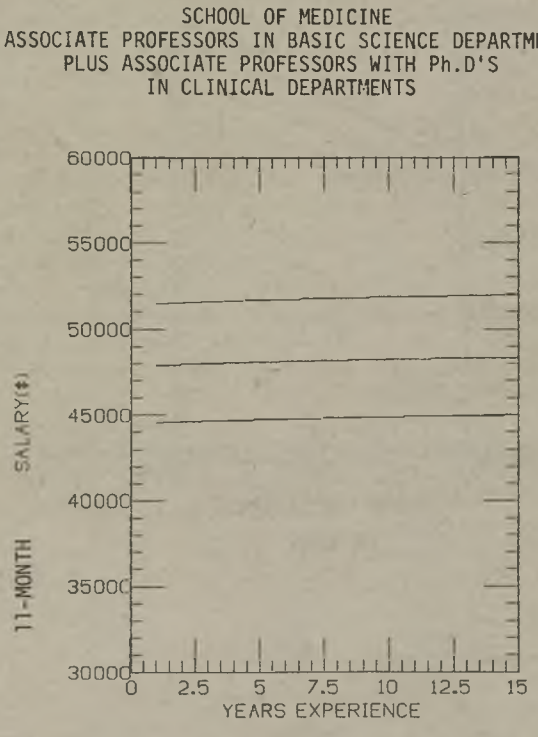


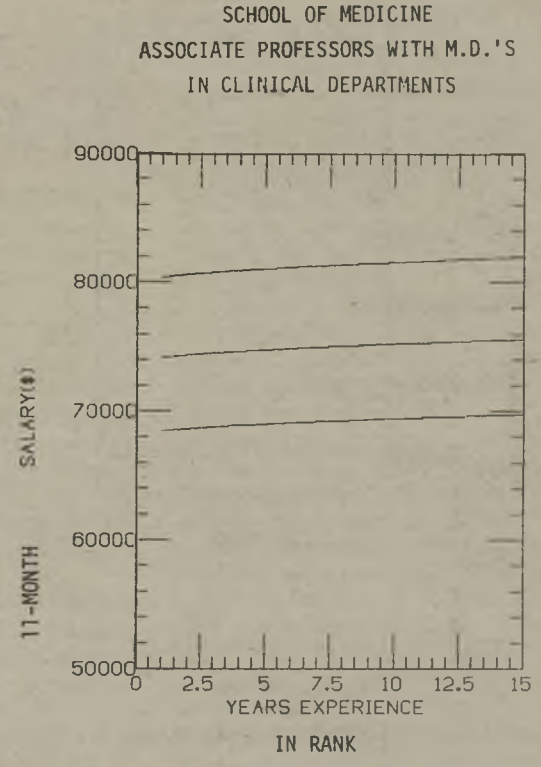




sociate professors





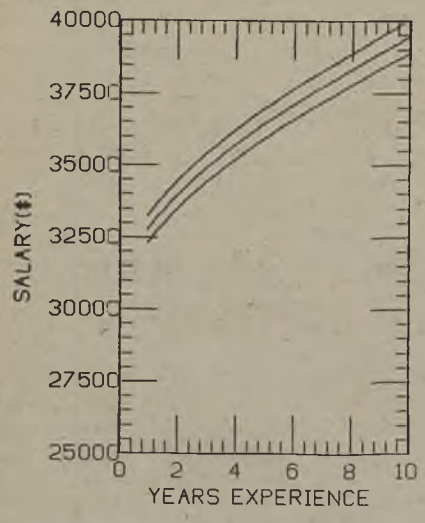


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Salary curves, assistant professors

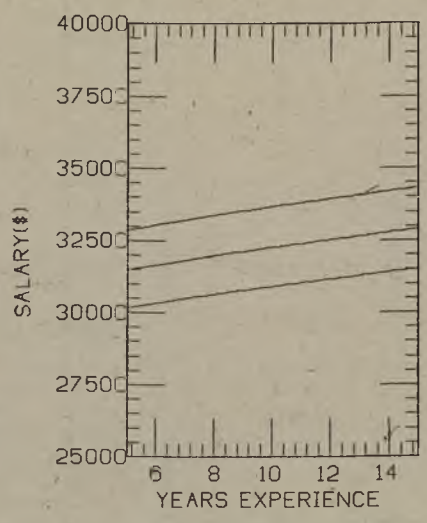
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GRADUATE SCHOOL OF BUSINESS
ASSISTANT PROFESSORS



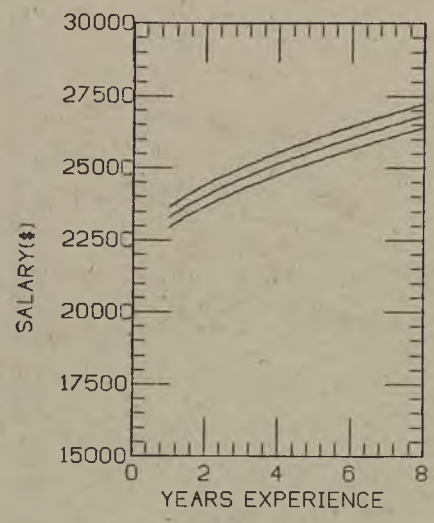
SINCE HIGHEST DEGREE

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ASSISTANT PROFESSORS



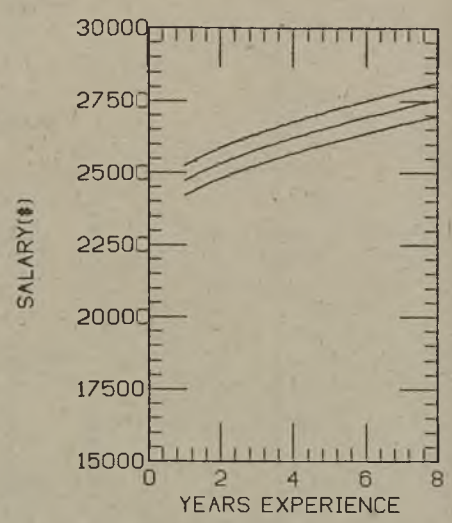
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SCHOOL OF HUMANITIES AND SCIENCES
ASSISTANT PROFESSORS IN HUMANITIES



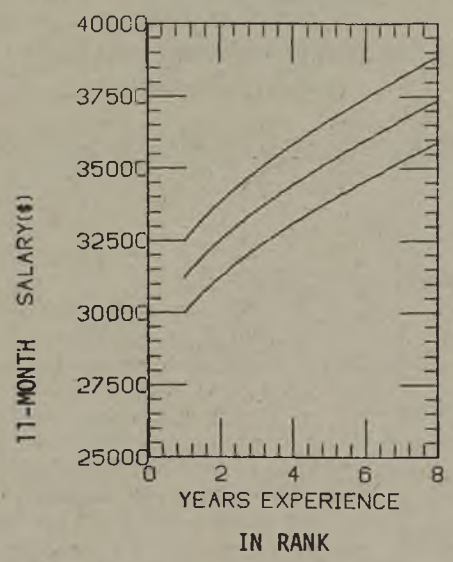
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ASSISTANT PROFESSORS IN
SOCIAL SCIENCES



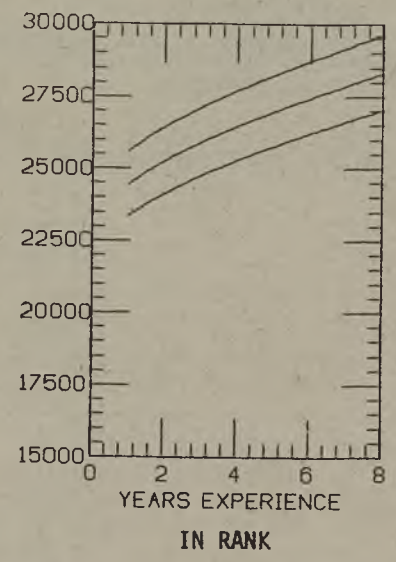
IN RANK

SCHOOL OF MEDICINE
ASSISTANT PROFESSORS
IN BASIC SCIENCE DEPARTMENTS
PLUS ASSISTANT PROFESSORS WITH Ph.D'S
IN CLINICAL DEPARTMENTS



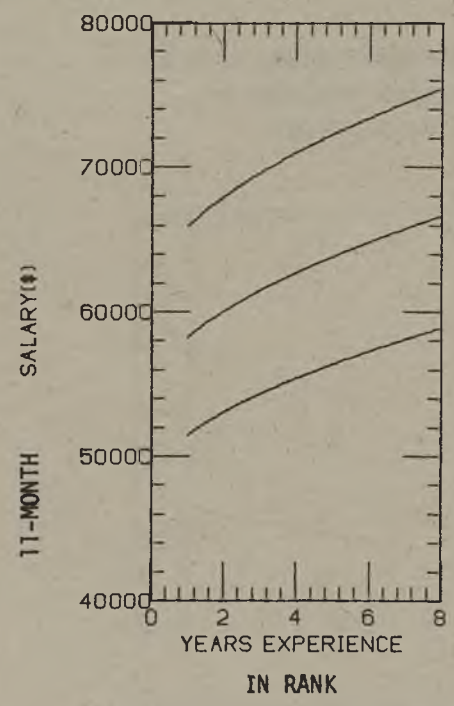
IN RANK

SCHOOL OF HUMANITIES AND SCIENCES
ASSISTANT PROFESSORS IN
PHYSICAL SCIENCES



IN RANK

SCHOOL OF MEDICINE
ASSISTANT PROFESSORS
WITH M.D.'S IN CLINICAL DEPARTMENTS



IN RANK

Budget guidelines: salary increases, gap closing, lowered service outlook

continued from page 1

Non-exempt staff members will receive a general range adjustment of 5 percent and normal increases for employees on the steps. Employees in the merit zone will receive increases subject to a 7 percent control (or average for the group).

Bargaining unit staff members will receive the negotiated range adjustment of 5 percent and normal step increases.

The salary program for exempt staff members includes merit increases averaging 6.3 percent of salary base, plus 0.2 percent for special adjustments.

The guidelines call for increases in graduate stipends as follows: course assistant, to $5,202 from $4,704; teaching assistant to $5,664 from $5,319; and teaching fellow to $6,321 from $5,853.

Due to frozen or reduced federal and state scholarship programs, the University estimates that $1.9 million additionally will be needed in undergraduate financial need to continue its "long held and high priority policy" of "assuring that no one is denied admission or is unable to enroll and continue for economic reasons."

Total scholarship and grant aid from all sources to undergraduates is expected to reach about $28.7 million this year—about 22 percent of the total costs incurred by undergraduates (tuition, $9,027; room and board $3,812; books and personal expenses, $1,200; and travel, average amount $646).

Self-help expectations for 1983-84 amount to about one fourth of the student budget, which is estimated at $14,039 for 1983-84. This expectation of $3,560 is about evenly divided between term-time work and loans. Hourly rates of pay are adjusted so most students can meet the requirement with about 10 hours work per week. Overall, Stanford's self-help expectations are about the same as those institutions with which it has the most candidates in common.

With continuation of the University's three-year $10 million belt-tightening effort, some encouraging signs are beginning to emerge in the long-range forecast. Besides slower inflation, these include a lowering in the expected growth rate of utility costs and a spectacular rise in the stock market. Even though the University "smooths" returns from endowment over a three-year period, payout has increased by 12 percent, becoming the fastest growing component in operating budget income except for unrestricted gifts.

Administrative and support services showed the greatest reductions in the continuing belt-tightening process. *(See Table below.)*

Discussing the need for lowered expectations in the provision of services, the guidelines include the following summaries of possible cuts and the decisions made for 1983-84:

Reduce campus mail delivery from twice to once daily.

Discussion: With sufficient advanced planning most departments can get along with once-a-day service. For those that cannot, we can make a second delivery available for a reasonable annual charge.

Decision: Make the reduction.

Reduce student loan collection staff as attrition occurs.

Discussion: Stanford has one of the lowest student loan default rates in the country. It is important to maintain the standard so that loan obligations are met and repayments made available for loans to later generations of students.

Decision: Don't make this cut.

Reduce litter pickup in classrooms, auditoriums, and commons areas.

Discussion: With increased care on the part of students and other members of the community, litter, cans, and other trash can be reduced. But classrooms are more easily policed by their users than the more public areas.

Decision: Reduce classroom pickup from five to three times per week, but keep auditorium and commons areas on a five times per week schedule.

Reduce staff in shop maintenance areas.

Discussion: Modest reductions in staff will cause a delay in responding to maintenance problems of non-emergency nature. Improved scheduling and attention to planned maintenance is now in place, however, and this should begin to reduce the number and seriousness of breakdowns.

Decision: Make small cuts so long as delayed response time does not unduly impair the ability of faculty/staff to use affected space.

Reduce special services with cash advances and reimbursements.

Discussion: Careful planning on the part of departments can often eliminate or sharply reduce the need for special processing of check requests. Moreover, use of various credit mechanisms, petty cash funds, and other local resources can reduce the need for very expensive special processing in the Controller's Office.

Decision: Experiment to see what reductions in central services can be achieved without impairing essential functions.

Overall, expenditure reductions of approximately $2.2 million and new income alternatives of $412,000 were incorporated in the 1983-84 guidelines.

Continued uncertainty over the funding outlook for federally sponsored research has been reflected in a projected shortfall of as much as $6 million in indirect cost recovery for 1983-84. The budget guidelines are based on the current indirect cost rate of 69 percent, but caution that "the final decision has not yet been made (on indirect recovery rate) and cannot be made until more is known about federal actions." Recent reports from Washington point to a possible increase in federal funding of basic research, if Congress approves the President's recommendations.

The recommended operating budget for the School of Medicine for 1983-84 is estimated at $28.9 million, an increase of approximately 7.6 percent. For the Business School, the recommended operating budget is $11.5 million, an increase of 12.5 percent.

The University's consolidated budget for 1983-84 is projected at $590.7 million. Besides the operating budget of $227 million, this includes $101.7 million in sponsored research, $75.9 million in other restricted budgets; $56 million in auxiliary enterprises, such as the residences and dining halls, athletics, and University Press; $38 million in the faculty practice program of the Medical School; and $92 million for the Stanford Linear Accelerator Center.

The operating budget guidelines were developed by the President, Provost, Vice President for Business and their respective staffs. Associate Provost Timothy R. Warner oversaw the preparation of this year's guidelines. Charlotte Hanna and Charles Upshaw, graduate students in education, aided in preparation of the document, as did many University staff members.

Gap closing...

Area	Approximate Percentage Reduction in the Adjusted 1982-83 Budget Base	Percentage of the Budget Base Supported with New Restricted Funds	Total Gap Closing
President and Provost's Office	5.0%		5.0%
Operations and Maintenance	5.0%		5.0%
Other Business and Finance	2.6%		2.6%
Student Services	1.6%	0.15%	1.75%
Other Administrative (Development, Public Affairs, University Counsel)	1.2%	0.15%	1.35%
Libraries	1.0%	0.45%	1.45%
Schools, Institutes, and Laboratories	0.9%	0.60%	1.50%
Financial Aid	0%	0%	0%
Total	**1.6%**	**0.3%**	**1.9%**

Electronic device implanted in lamb monitors six weeks prior to birth

A lamb born in Calgary, Canada, made scientific history by being the first animal to have its vital signs monitored continuously during the birth process. The monitoring was accomplished by a Stanford-designed radio transmitter in the lamb's chest.

Implanted like a pacemaker six weeks before birth, the device monitored the lamb's heart and lungs, and sent the measurements to researchers via radio signals.

Researchers say that the device could provide the basis for insights into disorders that afflict newborn children.

"We are trying to determine ways of finding out when the fetus is in distress or is having a problem," Andy Ford, a physiologist working on the project, says.

Sheep are often used in experiments involving the birth process because the female sheep's uterus is particularly strong, and spontaneous abortion rarely occurs. Successful experiments using sheep have led to such human medical breakthroughs as fetal surgery for hydrocephalus, commonly called water on the brain, respiratory distress syndrome, and blocked kidneys.

The feedback on vital physiological signs like heart action and movements in the muscles that control breathing provides previously unknown information about the factors that control how baby animals develop in the womb.

It is possible to "study the birth process and actually understand what happens to the cardiovascular and nervous systems when the fetus actually comes alive," Prof. James Meindl says.

He is the director of a team of researchers who designed the device, called a telemetry implant. It uses integrated circuits to take measurements and send those measurements to researchers without using wires that go through the skin; at the same time, it is small enough and consumes low enough levels of energy to be safely and comfortably implanted.

The project has been in development for about 15 years. Stanford is working in coordination with a group of Canadian researchers at the University of Calgary, where the lamb was born Nov. 11.

Stanford's part of the research is "mainly in designing and producing the telemetry units," Ford says. Similar experiments are also being conducted at the Stanford Medical School and SRI.

Before the telemetry implant was developed, other devices were used to monitor heart rate, blood pressure, and lungs. Because these used wires through the skin to relay measurements, they couldn't be used to monitor an animal during birth. The wires would be pulled out in the process. Also, the measurements transmitted were often inaccurate, Ford says, because the anesthetic necessarily

The telemetry implant provides what researchers say are more accurate measurements, and are "a lot easier on the animal," Ford says.

Newspaper insert on nuclear issues set by students

Although conservative newspapers are currently springing up on college campuses, right wing politics will not be the only voice to reach the student's ear—at least in California.

Two Stanford graduates and a medical student are piloting a project to bring issues concerning the prevention of nuclear war to campus readers. With the support of the *Bulletin of Atomic Scientists*, they have started a monthly magazine called *Taking Off*, which will be inserted in campus newspapers.

The first issue on March 30 will go to seven Bay Area colleges, including Stanford, Cal-Berkeley, and Santa Clara. Circulation for the second issue will be 125,000, reaching most major campuses in Northern California.

Editorially, *Taking Off* will take a centrist approach. The magazine aims to arouse the curiosity, hope, and awareness of those students who are now indifferent toward disarmament issues.

"We want to reach the average, apolitical college student through means that will capture the student's interest: humor, interviews, and, for example, articles connecting the arms race with financial aid cuts," said Mike Shuman, one of the founders of the new magazine. "We don't want to depress them with gore."

Shuman, a Stanford law graduate, along with Eric Horvitz, a medical student, and Hal Harvey, an engineering graduate, are the founders and directors of UCAM/West, a branch of the national organization United Campuses to Prevent Nuclear War. *Taking Off* is UCAM/West's most recent project.

Senate report

Kennedy comments on searches, Hastorf on tenure terms

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 9

Summary of Actions Taken by the Senate
March 3, 1983

At its meeting on March 3, 1983, the Senate took the following action:

The Senate, by unanimous voice vote with one abstention, accepted the report of the *Ad Hoc* Committee to Study the Question of the Length of Academic Terms.

Minutes of the Fifteenth Senate
of the Academic Council
March 3, 1983
(Draft subject to approval by the Senate)

A meeting of the Fifteenth Senate of the Academic Council was held on March 3, 1983, beginning at 3:18 p.m. in Room 180 of the School of Law. Present were 36 representatives, 6 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on February 3, 1983 were approved as submitted.

Report of the Steering Committee

A. L. Fetter, Chair, pointed out that *Guidelines for Preparation of Reports and Proposals for Senate Approval* had now been distributed to all Senate representatives. These Guidelines are intended to expedite Senate business, and suggestions for their improvement will be welcomed by the Steering Committee. He also called attention to an addition on the list of forthcoming Senate agenda items. The report on Alternatives to TIAA-CREF is expected to reach the Senate by late next quarter.

After welcoming two new members of the Senate: G. F. Franklin (Engineering) and T. H. Jackson (Law), he announced that the spring quarter meeting of the Academic Council would be held on Friday, April 1, 1983 beginning at 4:15 p.m. in the Physics Lecture Hall (ph100), and expressed the hope that all Senate representatives would be able to attend.

Finally, he thanked those responsible for distributing the *Operating Budget Guidelines* by hand late Tuesday in order that Senate representatives might have the opportunity to see them before the meeting.

Report of the President

The President commented first on faculty responsibilities under the Honor Code, recognizing that the Honor Code serves us all well even though it isn't perfect. The student initiative in developing and maintaining the code is its greatest strength, but faculty should be aware of their obligations and responsibilities under the Honor Code. Faculty who adhere to the code are expected to do the following:

1. Refrain from proctoring examinations.
2. Refrain from taking unusual or unreasonable precautions to prevent dishonesty.
3. Avoid creating temptation to violate the Honor Code.
4. Accept "third-party responsibility" (reporting) when suspected violations come to their attention. They will, not adjudicate informally; they will, instead, use the established system of due process (the Stanford Judicial System) to deal with suspected violations.

The full text of President Kennedy's remarks on faculty responsibility under the Honor Code appears elsewhere in this issue of *Campus Report*.

The second focus of President Kennedy's report was on the administrative searches currently in progress. He reported on the following searches:

Director of the Stanford University Press

This search is in its final stages. Several candidates have visited the campus; others will be coming in the near future. The committee report is expected soon.

Vice-President for Development

This search is in a similar stage, with several candidates having visited. The report of this committee is expected within the next two or three weeks.

Vice-President for Public Affairs

Robert Freelen is now serving as Acting Vice-President for Public Affairs, as he has done in a destinguished capacity before. During this period, a small consultative group, chaired by G. Lieberman, is evaluating candidates inside the University for this post, and is expected to advise the President shortly on whether or not the search should be extended outside Stanford.

Vice-President and General Counsel

The President noted in closing that, as reported in *Campus Report* on 2/23/83, John Schwartz's title has been changed from University Counsel to Vice-President and General Counsel, a change only in title, made to conform to current practice in other universities and institutions with which we deal.

At the conclusion of his report, President Kennedy was asked the inevitable question about lunch with the Queen of England. He responded: "Lunch was served and eaten. It was chicken. It was very good. It didn't rain. I think that our royal visitors had a good time. They had some stimulating exchanges with Stanford students and with your colleagues on Stanford's faculty. I thought everybody did themselves proud. I actually found myself enjoying the occasion after perhaps 20 minutes had gone by. For the first 20 minutes, I think I was scared out of my mind."

Asked then about the cost of the event and what was the motive in giving the lunch, he responded that there were several motives. Events "with a capital E", he said, even when they are only social events, often stimulate useful reflections on the culture we share, the culture we don't share, our intermingled futures, our own history. It was an unusual experience for a number of the young people who were able to participate. Even though, unfortunately, the number couldn't be larger, there is a ripple effect. It was an experience, he said, that he would have been reluctant to decline on behalf of Stanford.

Asked then about the recent SLAC employees' petition concerning weapons-related research at the Stanford Synchrontron Radiation Laboratory, the president responded that the situation is not clear enough at present for comment. Meetings are being held with the Dean of Research, the Director of SSRL, and the Director of SLAC, but a number of factors potentially affect the outcome and any prediction of resolution now would be premature.

Report of the Provost

After commenting briefly on the search for a new Director of the Stanford University Press, the Provost reported a memorandum he had recently sent to school deans regarding the University tenure policy as it pertains to the appointment of assistant professors. As indicated in the *Faculty Handbook*, assistant professors may be appointed for terms up to five years, and the system allows the flexibility of appointing assistant professors for four years plus three years, or three years plus four years, or three years plus three years.

Over the past few years, some consistent patterns have been emerging. The Graduate School of Business has been appointing assistant professors for four years plus three years, and the School of Law for three years plus four years. The School of Humanities and Sciences has recently chosen to move from its traditional 3 + 3 year pattern to a 3 + 4 year pattern in order to provide more time for junior faculty to prove themselves and to keep the tenure review from creeping into the fifth year.

The Provost's memo, which will appear in *Campus Report*, points out that the present system, without any legislative change, provides sufficient flexibility that schools may adopt the system most appropriate to school needs. Deans should make certain that school policy is made clear to all school faculty.

On the completion of his report, Provost Hastorf was asked who represents the humanities on the Press search committee, and if that committee had the firm objective that under its new director, the Stanford university press should move into the forefront of university presses with publications in the humanities. L. Bach, (GSB), who chairs that search committee, responded that the committee was aware of the problem and had received welcome letters from concerned faculty. Though the committee has had no formal instruction on this aspect of the search, all committee members have been aware of its importance. He commented that all of the likeliest candidates have strong interest in the humanities and social sciences. The search committee membership also includes G. Lieberman (Operations Research), W. Chace (English), J. Gibbs (Anthropology), P. Suppes (Philosophy), W. Falcon (Food Research), and T. Grey (Law).

A number of questions were asked for clarification on the term appointment policies for assistant professors at Stanford, primarily from faculty who had believed the 3 + 3 pattern mandatory. Provost Hastorf responded that the overall system does permit various options, and different ones have been elected, but not in as orderly a procedure as is being recommended at this time. Policies need not, however, be identical across schools.

Dean Lieberman added that the School of Engineering once used a 3 + 3 pattern, changed to a 5-year pattern, and then changed back again to the 3 + 3 pattern, which it intends now to retain. The Advisory Board operates in full knowledge of the relevant school pattern.

The School of Humanities and Sciences has traditionally operated under the 3 + 3 plan. Dean Wessells' statement on this change in school policy appears in the 3/9/83 issue of *Campus Report*. He also reported that the H & S change within the system was made only after talking to 28 department heads, and, that the sentiment is very strong that the period should be even longer than seven years. There is a trend toward favoring eight or nine years before tenure, e.g., three years as an assistant professor followed by five or six as an untenured associate professor, more like Yale's current system than our own. He intends to say more about this matter in his report to the Senate in spring quarter.

The Provost added that such a proposal on tenure policy change would not only require discussion in the Senate but also a vote of the full Academic Council.

In clariflying the range of flexibility already available within the present system, Provost Hastorf pointed out that the rules prescribe that notice of non-renewal of a term contract be given by July 1 of the penultimate year. If it is not, the faculty member is entitled to a terminal year which does not count toward the accrual of tenure by length of service. Whether this is a seventh or an eighth year of appointment for a given individual depends on the appointment pattern adopted by that particular school. This is the limit of the flexibility possible within the present system. The 3 + 5 possibility mentioned by Dean Wessells would necessitate a legislative change in university policy.

In response to questions about why the H & S policy change had not been discussed in the Senate, Dean Wessells responded that it hadn't been considered Senate business. The school's policy had been developed and reaffirmed by a series of successive deans, and the new policy was determined after two years of consultation with department heads and H & S policy groups. The nearly unanimous sentiment was for the lengthened term.

There were some expressions of strong dismay that the availability of the seven year option was unknown over the years to some individuals and departments within Humanities and Sciences. There were also some expressions of surprise that the options for alternatives to the 3 + 3 pattern were, in fact, unknown to some individuals and departments. Historically, within H & S, both individual and department patterns have deviated from the 3 + 3 standard from time to time on good grounds.

To continued assertions that discussion of this matter was, in fact, appropriately Senate business, Provost Hastorf reiterated that no change in University policy was being currently proposed. If and when it is proposed, it will be both Senate and Academic Council business. In the exercising of options within present University policy, however, the appointment system chosen is properly a matter of school choice, providing only that the faculty of the school both understand and agree to it.

Report of the *Ad Hoc* Committee
to Study the Question of the
Length of Academic Terms

As the discussion reopened on the report from the *Ad Hoc* Committee to Study the Question of the Length of Academic Terms, there were no further remarks to be made by E. Good, *Ad Hoc* Committee chair.

A. L. Fetter, Senate chair, pointed out that the report had come to the Senate with a recommendation moved and seconded from the committee that the report be accepted. Since this discussion would be the third held on this subject by this Senate, he proposed that the Senate vote on that motion at the close of the discussion.

R. Rebholz spoke in defense of the semester system,

continued on next page

Senate report

Quarter System to continue: Budget guidelines discussed

continued from page 20

summarizing many of the points he made in his written statement in the 2/9/83 issue of *Campus Report*. He concluded by saying that a canvass of his Senate colleagues had convinced him that there would be an insufficient number of votes for a substitute motion to the acceptance of the report. Therefore, he closed by recommending that the dean and department chairs take very seriously the *Ad Hoc* Committee's recommendation to explore alternative course scheduling plans within the quarter system.

Dean Wessells also endorsed the recommendation for experimentation with scheduling courses. His office will cooperate with faculty and departments in working out equity in teaching loads. He advices that such experiments be tried first at undergraduate and advanced graduate levels.

He urged departmental curriculum committees to address the problem, and department heads to be flexible and understanding if faculty want to experiment with course scheduling. He warned potential experimenters, however, not to shortchange possible enrollees from engineering and the sciences by precluding their enrollments because of incompatible scheduling for humanities courses.

A concern was expressed that too much experimentation for too long a period would disrupt student schedules. It was pointed out that the new H & S Curriculum Committee should be concerned with this question, as it is with the question raised in the 2/3/83 Senate of unilateral changes in scheduled courses once they have been arranged in the Time Schedule.

To the question of whether the *Ad Hoc* Committee had examined the patterns of incompletes in the quarter system for the information that might yield on the amount of time needed for good writing, Professor Good responded that there were some figures on incompletes but they were not definitive on this question. No comparisons of incompletes for graduate/undergraduate or Stanford/other university had been done.

The comment was made that even the ten-week quarter is being infringed upon by exams moved into the Dead Week period. Registrar Mahoney pointed out that any non-scheduled exam time is only an alternative, and the exam must be made available to the student at the exam time originally scheduled. One rescheduling into Dead Week, however, has traditionally been specifically allowed in the Time Schedule, and with the wider use being made now of that particular teaching time, these exam infringements on Dead Week have become more common. Autumn Quarter 1982-83 was one of the worst for both faculty and students trying to finish early. This Winter Quarter seems not nearly that bad. We need more data on how many examinations are actually given and when, however, before we can address the problem.

A. Mellor, after citing some effects on student writing and faculty productivity which were attributed to the quarter system, recommended that certain humanities courses be offered for the usual quarter and number of units with an examination, and that students who wished to do so could enroll for another 3 or 4 units the next quarter to write an extended paper based on that course. An instructor who graded a number of such papers could be given an appropriate amount of course relief. This could improve both student writing and faculty productivity.

President Kennedy reported that the quarter/semester split at UCB was fairly even within disciplines and not a split along disciplinary lines as is being argued here. Since many institutions with distinguished faculties in the humanities operate on the quarter system, we need better data before we accept the notion that the quarter system is a selective disadvantage to the humanities.

There being no further discussion, the question was put to a vote and the report of the *Ad Hoc* Committee to Study the Question of the Length of Academic Terms was accepted by unanimous voice vote with one abstention.

Report on the Operating Budget Guidelines

Provost Hastorf opened the report on the *Operating Budget Guidelines* by acknowledging the tremendous effort made by R. Bacchetti and T. Warner to get the *Guidelines* prepared under severe time pressure, and the help of the staff who hand delivered it to Senate representatives before the meeting.

In presenting an overview and highlighting some portions of the printed report, he began by remarking that if the economic conditions stay as they are, the gap predicted in the Long Range Forecast for 1985-86 will be substantially smaller than the gaps we are struggling with now.

Considering this as a four-year cycle, we are now talking about the budget for the second year of that cycle, 1983-84. This institution is, of necessity, tightening its belt some and taking a hard look at its costs. In doing so, it is disrupting its academic programs as little as possible.

Last year, all departments and units were asked to cut their budgets by 1%. For 1983-84 and 1984-85, we will have to cut by 4-5%, by 1985-86, the remaining gap, we hope, will be relatively small, but that depends on federal policies regarding indirect cost recovery, research funding, and student support.

A major feature of the *Operating Budget Guidelines* for 1983-84 is that the proposed growth in the University's operating budget goes to 7.9% from the 14.5% that it had been from last year to this year. That is a substantial change in real growth, even granting some reduction in inflation, and it has been a result of all of our efforts to contain costs.

We have made budget cuts in these *Guidelines* of $2.2 million. We have generated new income of $.4 million. We have shifted sabbatical funding to the staff benefits pool, netting the operating budget close to a million dollars.

In addition, we have cut back on our planned real growth. We have cut back 1983-84 plans for Consolidations and Improvements by $400,000. Finally, we have limited increases in faculty and staff salaries.

A unit of the University can contribute to budget control in two ways: 1) by cutting budget items, and 2) by generating or reassigning restricted income to support the operating budget. The 1983-84 *Guidelines* show examples of both kinds of contribution.

In the schools of Humanities and Sciences, Engineering, Earth Sciences, Law, and Education, no faculty billets have been removed in this budget cutting. There has been pressure to freeze some billets, however, and some may have to be given up to close the gap in a future year.

There are no Consolidation and Improvement commitments in this year's budget because of our continuing commitments to Western Culture, to LOTS, and to the Humanities Center. There will be $400,000 for Consolidations and Improvements in 1983-84, not yet committed. School deans will be asked in April for their proposals for possible allotments from this fund.

The Provost then turned to some highlights in regard to income aspects.

The 1983-84 tuition increase is projected at 9.8%. This would appear to put Stanford near the lower middle of the group among our peer institutions. When all student cost increases are considered together (tuition, fees, room, and board) the Stanford increase (10.3%) puts us somewhat above the middle of the group, but not at the top. If inflation remains down, a tuition increase of around 9% may be more than we will want to charge.

Concerning indirect cost recovery, the Provost reported that Stanford's research volume at present is about as predicted. Budget officers are now taking a very hard look at the cost pools for our indirect cost rate, and the Budget Advisory Committee, chaired by R. Cannon, is also focusing on that problem. This is an effort to get closer to full recovery of indirect costs without having to raise the rate.

The operating budget shows an increased contribution to undergraduate aid. Approximately one quarter of the overall cost increase to students, i.e., one dollar out of four, has to be contributed to undergraduate aid. This has been necessary because of state and federal cutbacks to student aid for undergraduates. Graduate fellowships for 1983-84 will go up by about 12%.

Of the two schools that do not appear in the operating budget, the School of Medicine is also cutting its budget and the Graduate School of Business is not. With a new dean and substantial sources for funding, GSB plans to increase the size of its faculty, especially in its international activities. It is projecting a 12% growth for 1983-84, as contrasted with the University figure of 7.9%.

As to faculty salaries, increases in 1983-84 will be less than the 7.5% initially projected. School deans will receive 6% of their faculty salary base to be available to them for allocation. There will be a small provostial reserve to be used in discretionary allotments. Two schools, Law and Earth Sciences, are adding restricted funds to the amounts the University can provide for faculty salary increases.

Vice-President W. Massy added a few words about income and expenses before presenting a Table of Financial Highlights from 1952-1982.

He pointed out two pieces of good news: 1) a 12% increase is being realized from the endowment, and 2) we did better than we expected to do on energy expenses. Energy costs are down about $1 million, largely due to the drop in oil prices and the rain which cuts hydroelectric costs.

Non-exempt staff salaries will generally go up 5% plus the normal step increases, with an additional 2% possible on performance for those at the end of a step.

Exempt staff salaries will increase by about 6.3% with a possible small reserve to adjust to special market conditions in certain cases. Units may choose to hold back a portion of the total 6.3% allotment to provide for other special problems.

With respect to budget reductions (see Table, page 8, *Operating Budget Guidelines*), he detailed the cuts which had been planned to effect the necessary reductions in the area of Business and Finance.

He then called attention to the Table of Financial Highlights, 1952-1982, noting a few corrections. This Table appears in corrected form in the 3/9/83 issue of *Campus Report*.

He pointed out the changes over time in the organized research percentages as a result of changes in government and University policies in the late 1960s.

Increases in institutional support in recent years are largely attributable to utility costs, to the addition of a great deal more academic space much of which is high technology space and considerably more expensive to maintain, and to the renovations made during that period (e.g., to the McCullough Building).

He pointed out that administrative expenses have increased over this period. His office is aware of faculty concern over this administrative growth, and he indicated that the administration itself is concerned about it. It is not uncontrolled growth but it does merit close scrutiny, he believes.

The higher percentage of Auxiliary Activities in the earlier years is due to the fact that housing and food costs represented a higher percentage of the total when the University was primarily an undergraduate institution. This percentage has risen somewhat in more recent years largely because of the clinical operation, the Faculty Practice Plan.

He called attention especially to the change in the percentage of federally sponsored grants and contracts over time. Even excluding SLAC, this source of funds represented a peak of nearly half of all sources of funding in 1967, and has declined to around one-third at the present time.

Provost Hastorf added, on the matter of faculty salaries, that Stanford is in remarkably good shape in comparison to its peer institutions, and that the increases projected should hold us even. Graphs on faculty salaries for 1981-1982 will appear in a future issue of *Campus Report*.

He pointed out, in summary, that the Long Range Forecast projects a $4 million gap and that the administration proposes to close that gap by generating new income (the more the better) and by budget cutting (the less the better). Two important external factors will affect the process: 1) possible arbitrary reductions in the federal allowable indirect cost recovery, and 2) uncertainties in the outlook for undergraduate financial aid.

He emphasized again the importance of the inflation rate in computing estimates for faculty/staff salary increases and the importance of the scrutiny presently being given all the indirect cost recovery pools. He closed by commending the remarkable effective work done by R. Bacchetti and T. Warner in putting the budget together and communicating it. He especially recognized Warner for his first-authorship of the 1983-84 budget, K. Creighton, F. Ratts, and F. Riddle for their contributions, and T. Keenan for his skillful final coordination work.

In the discussion period following these reports, the question was asked why the staff figures have increased so markedly over time while the faculty figures have remained relatively steady.

W. Massy responded that there are two large jumps in staff figures. The one between 1962 and 1967 is largely due to the staff hired to implement the huge increase in sponsored research grants during that period. The latest increase is attributable to several factors: to increases in plant operations, in administration, and especially to increases in auxiliary services. Smaller numbers for these categories should appear in the 1983-84 figures. He acknowledged that this disproportionate growth needs to be controlled and the administration is currently working in that direction.

Asked if the terms "gap" and "deficit" are here used synonomously, Provost Hastorf replied that a gap represents a potential deficit and will become one unless

continued on next page

Industry ties exciting, but government must back basic research—Kennedy

While new university-industry ties are "exciting and full of promise," Stanford President Donald Kennedy said Wednesday, March 9, that "the federal government must reaffirm its role as the dominant. . .source of funding for fundamental science."

Former commissioner of the Food and Drug Administration, he testified before the U.S. Senate Subcommittee on Science, Technology, and Space in Washington, D.C.

Even if the President's budget for fiscal 1984 is approved, he noted, "federal funds for non-defense research (have been) reduced by about 43.7 percent in real dollar value since 1967, and a significant decline has taken place in the first two years of the 1980s."

Kennedy cited the new Center for Integrated Systems at Stanford and the new Center for Biotechnology Research as promising examples of new industry ties that leave university research intact.

Industry support level

But business still funds only 4 percent of the basic research done at universities nationally, he noted. Even at Stanford, a 25-percent gain in industry funding would be required to offset a 1 percent drop in federal research support.

"It is of paramount importance that the federal government, pressed by tight budgets not try to purchase science at bargain rates by forcing universities to assume a greater proportion of the costs of government-sponsored research than they can reasonably be expected to bear," he added.

"Specifically, the federal agencies should continue to reimburse full indirect costs" as properly accounted for under circular A-21 of the Office of Management and the Budget.

In addition, "the federal government should move rapidly to repair the long neglect in (research) instrumentation and facilities, he said.

The link between research and training has contributed greatly to American excellence in science and "should be supported through adequate scholarship and fellowship programs" for graduate students.

Kennedy, who convened the Pajaro Dunes conference on university-industry ties, expressed confidence that "new and creative" links can significantly improve the rate at which new technologies can be transferred into human service "without sacrificing the extraordinary character of American basic research."

He cited the Center for Integrated Systems as a "stimulating and productive example." The center will pull together scholars in computer science, electrical engineering, materials science, and related fields in microelectronic chip development.

Backed by $750,000 from each of 18 industrial sponsors, "its purpose is not to get a jump on the market by developing the next generation of integrated systems but to advance the state of knowledge by orders of magnitude."

The industrial support will pay for a new building, scheduled for groundbreaking later this spring. "Federal funds for science facilities construction all but dried up in the late 1960s," he noted, "and raising private money for bricks and mortar is increasingly difficult."

Once the building is completed, sponsoring firms will contribute annual dues to the Center. In return, the companies may send one visiting scholar, approved by the University, to work with the CIS faculty on fundamental research.

"We think this contact between CIS faculty and students and industry scientists will be stimulating and productive," Kennedy said.

"The rules under which research is conducted at CIS are quite clear: all work is subject to the same canons as all other university work. Thus a free and open flow of ideas and swift publication of results are its operating conditions.

"Industry in general gains from such ventures by assuring that fundamental work in this area will be undertaken. The particular affiliated firms gain through their expose to new ideas in these fields and to the faculty leaders who are asking the new questions.

"Perhaps most important, the sponsors have a chance to become acquainted with bright students, whose education we also hope to enrich through the Center."

The new non-profit Center for Biotechnology Research provides a different model. It will fund research in genetic engineering, and is affiliated with a for-profit firm, Engenics Inc., which will seek to develop commercial opportunities in the same field.

Biotechnology Center

Six major companies funded both Engencis and the Center, which owns a 30 percent share of Engenics. Any capital appreciation and dividends realized by the Center will be devoted to further support of basic university research.

"Stanford is fortunate enough to be one of three universities awarded research agreements by the Center, but the conditions for the conduct of the research are the same as for any other industry-sponsored research programs," Kennedy said.

"Stanford owns no equity in Engenics, nor will Stanford lay any special claims to research funds available from the Center.

"The six sponsoring firms of the Center and Engenics will have licenses to any patents developed in the Center's funded projects, but these licenses will be offered at commercial rates and in accord with existing policies at the universities. This is something open to any sponsor of research; it is a perfectly normal arrangement.

"The novelty of the research agreements with the Center comes not from any special conditions developed by the universities, but from industry's willingness to form a new funding consortium for university-based research. The participation by the universities is unexceptional.

"These new forms of industry involvement. . .did not emerge easily; they evolved out of a process of hard negotiation.

"The condition under which university research flourishes—open and free exchange of ideas—is really quite different from the proper and necessary secrecy that shrouds end-product development. . . .

"Sponsoring research is not the same as making a charitable contribution, and the same firms that make charitable contributions for philanthropic reasons rightly insist on getting some return, even if it is long-term, from sponsored research."

However interesting and promising these developments may be, he cautioned, the funds involved are not large compared to the total resource needs of fundamental science across a broad spectrum of fields.

For Stanford alone to support its present level of research without any government support would require an endowment of $3.75 billion, roughly six times its current endowment, "with every dollar of its income devoted to research at the expense of instruction," he noted.

"It is, in short, difficult to exaggerate the importance of public-sector support to this beginning segment of the innovation process."

Hastorf sees bright spots in long-term economic outlook

Some bright spots are beginning to appear on the long-term economic horizon for Stanford, but the Washington outlook remains clouded, Provost Albert Hastorf told the Faculty Senate Thursday, March 3.

Federal proposals to arbitrarily cut indirect research cost reimbursement to universities by 10 percent "may well reappear," he noted.

The prospect for undergraduate financial aid remains one of "clear ambiguity," he quipped.

And the University still faces hard decisions in its three-year $10 million belt-tightening program, he noted.

While no faculty positions have been lost so far, there has been "genteel but firm pressure. . .to put some (vacancies) in the freezer. It would be lovely if they could be defrosted." But some may have to be given up.

A "major feature" of the proposed operating budget guidelines for 1983-84 is that the University's projected fiscal growth rate would drop to 7.9 percent from 14.5 percent this year.

"This is a substantial change even after inflation is taken into account," he observed.

As indicated to the Senate earlier, when projected tuition increases were trimmed, faculty and staff salaries "are not going up at the rates we'd like to see them go up," Hastorf observed. Funding for program improvements also has been curtailed.

Stanford's 10.3 percent increase in tuition, room and board rates for 1983-84 compares with 8.5 percent at Wesleyan, 8.7 percent at Harvard, 8.9 percent at Dartmouth, 10.1 percent at Yale, and 12 percent at Princeton, he noted. Completion of the new 800-unit Governor's Corner housing project for undergraduates contributed to a much larger than normal increase in room rates for 1983-84.

About $1 of every $4 increase in the tuition rate now goes toward financial aid, he noted. Stanford is strongly committed to "need-blind" admissions and has attracted an economically and racially more diverse student body than most comparable private universities.

The University currently projects that tuition may grow about 8 percent in 1984-85, or 3 percent above an anticipated 5 percent inflation rate. The long-range forecast assumes salary increases about 1.5 percent above inflation. These assumptions are subject to periodic review in the University's budget process.

Graduate scholarship stipends have been boosted 12 percent in 1983-84 "to try and catch up with the ravages of inflation," Hastorf noted.

William F. Massy, vice president for business and finance, noted that slower than expected growth in utility prices might trim about $1 million from previously forecast increases in next year's expenditures. The strong stock market performance also is a bright spot.

Massy's operations generally took the largest percentage cuts of any sector in this year's belt-tightening efforts.

Prof. Marsh McCall, classics chairman, noted that data presented by Massy showed a sharp gain in staff members in recent years.

Massy replied that some of the biggest increases came in the auxiliary enterprises. Large increases in staff also followed the sharp increase in federally funded research at Stanford in the mid-1960s, his data suggested.

Hastorf described the proposed guidelines as "a safe and sane budget." There is "no clear, obvious exposure. . . ."

"Things can occur, especially in Washington. . .but never fear, we can put (President) Don (Kennedy) on a plane and disaster can be avoided," he said with a smile.

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action is taken.

Asked what happens to the gap if inflation is much larger or smaller than projected, W. Massy responded that if there is unanticipated inflation that is much higher, things get somewhat better in the short run but you have to pay the piper in the longer run, e.g., on salaries. However, if interest rates go up, that is reflected immediately in our investment income.

The advantage of projecting salary increases on the model of inflation-plus- —% becomes apparent in comparing the short term and long term effects of unanticipated inflation on budget planning.

The assumption that research funds and staff figures should increase proportionally was questioned, and the suggestion made that it might be useful to designate the proportion of staff directly involved in research.

As the Senate prepared to adjourn, Provost Hastorf commented that he thought President Kennedy had been exceptionally low-key in his earlier Senate comments about luncheon with the Queen. It was an extraordinarily fine affair, he said, with the English being, as usual, remarkably great conversationalists. He speculated about how the luncheon might have gone with, for example, the German royal family.

Vice-President Massy added that one of the high points for him was hearing Sandy Fetter explain to the Duke of Edinburgh just exactly what is the faculty Senate. Then Fetter said that we also had a student Senate and the Duke said, "Wow!"

As the meeting broke up, G. Gillespie reminded the Provost that the English royal family changed their name during the first World War. . . .

"Right! Hanover to Windsor," said the Provost.

. . . because they were German.

On this note, the Senate adjourned by consensus at approximately 5:35 p.m.

Clara N. Bush
Academic Secretary

Stanford budgets: a 30-year comparison of expenditures

TABLE 1. FINANCIAL HIGHLIGHTS: 1952-1982
(dollars in thousands; excluding SLAC and the Hospital)

STANFORD UNIVERSITY

	1952	1957	1962	1967	1972	1977	1982	1984 (est)	Growthrate from 1952	Growthrate from 1962	Growthrate from 1972
OPERATING EXPENDITURES											
Current dollars	15121	24937	55902	107566	142809	215257	412970	498700	11.5	10.5	11
Constant dollars	26115	38423	79181	135987	142809	153974	199502	214402	6.8	4.6	3.4
PERCENTAGE OF OPERATING EXPENDITURES <*> (growthrates on nominal dollars)											
Expenditures by function											
Academic program	52.3	55.2	63.4	65.2	60.5	57.1	52.8	50.9	11.4	9.4	9.4
Instruction & dept'l research	28.7	27.7	29.8	29.1	30.7	32.1	29.9	30.5	11.7	10.6	10.9
Organized research	23.6	27.5	33.6	36.1	29.8	25	22.9	20.4	11	8	7.6
Academic support	8.2	7.7	5.7	6.7	7.6	8.4	7.5	7.6	11.3	11.9	11
Libraries	3.6	3.9	3.2	3.7	4.5	5.3	4.6	4.8	12.6	12.6	11.7
Student services	4.6	3.8	2.5	3	3.1	3.1	2.9	2.8	9.8	10.9	10
Institutional support	8.6	9.7	11.2	10.1	12.8	14.9	16.8	16.2	13.8	12.3	13.2
Plant operations	4.8	4.6	4.1	4.2	5.1	7.2	8.9	8.1	13.4	13.9	15.3
Administration	2	2	4.1	4.5	4.7	4.8	5.1	5.2	15	11.7	11.9
Development & general	1.8	3.1	3	1.4	3	2.9	2.8	2.9	13.2	10.3	10.7
Auxiliary activities	27.4	19.6	11.6	12.5	11.6	14.1	17.1	18.8	10.3	12.9	15.5
Student aid	3	3.9	5.7	6.2	7.5	6.1	5.8	6	13.9	10.6	8.8
Sources of funds											
Student tuition and fees	31.9	25.2	21.2	16.9	21.3	22.9	20.7		10.1	10.4	10.9
Gifts and non-govt grants	9.1	18	11	10	9.4	9.5	10.1		12	10	12
Endowment payout	12.2	18	8.7	7.7	9.8	7.7	7.7		10	9.9	8.6
Government grants & contracts	21.7	28.2	41.2	49.8	43.2	39.3	32.6		13.2	9.2	11
Auxiliary activities	n.a.	n.a.	11.6	12.5	12.9	17.1	18		n.a.	13	15
GIFTS AND GRANTS DETAIL											
Current dollars	2998	20497	21293	21602	32660	56052	76967		11.4	6.6	9
Constant dollars	5178	31582	30160	27310	32660	40094	37182		6.8	1.1	1.3
Percent restricted to endowment	47	60.8	27.3	41.8	29.8	42.7	23.6				
Percent restricted to plant	8.3	19.9	8.9	12.3	9.3	18.4	11.1				
ADDITIONS TO PLANT											
Current dollars	560	2693	7715	15991	16749	35132	58459		16.8	10.7	13.3
Constant dollars	967	4149	10928	20216	16749	25130	28241		11.9	4.9	5.4
As a percent of operating expense	3.7	10.8	13.8	14.9	11.7	16.1	14.2				
GNP deflator (ave for year)	57.9	64.9	70.6	79.1	100	139.8	207	232.6	4.4	5.6	7.3

<*> Totals do not add to 100 percent because of transfers to and from the operating fund division and/or reserves.

Growth in enrollment, faculty, staff, and endowment traced since 1952

TABLE 2. FINANCIAL HIGHLIGHTS (CONTINUED)
(dollars in thousands; excluding SLAC and the Hospital)

STANFORD UNIVERSITY

	1952	1957	1962	1967	1972	1977	1982	Growthrate from 1952	Growthrate from 1962	Growthrate from 1972
STUDENT ENROLLMENT										
Total	7588	8288	9536	11308	11626	11710	12092	1.6	1.2	.4
Undergraduate	4833	5415	5665	5922	6444	6511	6590	1	.8	.2
Graduate	2755	2873	3871	5386	5182	5199	5502	2.3	1.8	.6
Grad as percent of total	36.3	34.7	40.6	47.6	44.6	44.4	45.5			
FACULTY AND STAFF										
Total	1635	2122	2877	6384	6522	6778	7645	5.3	5	1.6
Faculty	395	458	691	885	1026	1069	1155	3.6	2.6	1.2
Staff	1240	1662	2182	5493	5439	5405	6490	5.7	5.6	1.8
Faculty as percent of total	24.2	21.6	24	13.9	15.7	15.8	15.1			
Govt grants & contracts										
Constant dollars	5677	10823	32657	67752	61659	61214	65068	8.5	3.5	.5
ENDOWMENT										
Market value (end of yr)										
Current dollars	51055	95104	160301	242870	345942	455713	770319	9.5	8.2	8.3
Constant dollars	88178	146539	227055	307042	345942	325975	372135	4.9	2.5	.7
Endowment per student										
Current dollars	6.7	11.5	16.8	21.5	29.8	38.9	63.7	7.8	6.9	7.9
Constant dollars	11.6	17.7	23.8	27.2	29.8	27.8	30.8	3.3	1.3	.3
Endowment per faculty										
Current dollars	129.3	207.7	232	274.4	337.2	426.3	666.9	5.6	5.4	7.1
Constant dollars	223.2	320	328.6	346.9	337.2	304.9	322.2	1.2	0	-.4
Payout rate (approx) <*>	3.61	4.71	3.03	3.43	4.03	3.68	4.14			

<*> Actual payout rate is higher due to use of ending market value and exclusion of income from living trusts.

President Kennedy reminds faculty of Honor Code obligations in Senate talk

Following are comments on the Honor Code, delivered to the Faculty Senate by President Donald Kennedy March 3, 1983.

The past two years have seen a welcome revitalization of student interest in the Honor Code and its various provisions. During this past year, the Honor Code Commission has been especially active in trying to remind undergraduates of the responsibilities they assume under its provisions.

We all recognize, I think, that the Code is not without imperfections. Nevertheless, it has, in my judgment, served Stanford well; and repeated surveys over the past two decades have indicated a continuing respect for the Code and its provisions and a constant and, on the whole, rather encouraging constancy in the rate of student adherence to it.

I promised the Associated Students that I would try in every possible way to reinforce the belief we all have in the Code as the essential principle governing the conduct of academic work in the University.

It is a principle for which students assert primary responsibility, and that is good. But it is also one to which faculty members owe significant duties, and I want to take this opportunity to remind my colleagues of them.

The faculty has three major obligations:

1) "Refraining from proctoring examinations" (see (2) att. for fuller explanation).

2) "Refraining from. . . taking unusual and unreasonable precautions to prevent" dishonesty.

"An instructor should not require students to identify themselves before being admitted to an examination room or require students to submit in advance to being searched for notes or other materials or maintain surveillance upon students who leave the examination room. Nor should the instructor take deliberate steps to invite dishonesty to entrap students."

3) "The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code."

"Examples of undesirable procedures include the following: failure to give clear directions and instructions concerning course requirements; treating required work casually as if it were unimportant; carelessness or inconsistency in maintaining security of examinations or tests; **reusing an examination which is neither kept secure from public exposure nor made available to all students.**"

Take-home examinations should not be closed-book exams.

Provided that alternate seats are available, tests will be taken from the classroom only with the consent of the instructor.

One additional responsibility, and a very important one: in terms of third-party responsibility, "faculty members have like responsibilities when suspected violations come to their attention." That is, the faculty member should not necessarily depend on students to pursue suspected violations.

There is a system of due process.

Current financial aid policy will apply to those not registered for draft

Stanford current financial aid policies will be applied to those not registering for the draft, President Donald Kennedy has announced.

Students who decline or fail to apply for government aid are considered on an individual basis for long-term loans and jobs through the University. These loans are more costly to students and must be repaid within five years after graduation.

About a dozen individual cases already are handled in this fashion every year, according to Financial Aids Director Robert Huff.

The University plans no addition to existing job and loan resources to meet possible needs arising from students who do not register with Selective Service by July 1.

No decision has been made how these resources will be allocated if they prove insufficient.

About 4,200 Stanford students currently receive assistance under one or more federal programs funded under Title IV of the Higher Education Act. These include Pell grants, supplemental educational opportunity grants, state direct incentive grants, national direct student loans, guaranteed student loans, auxiliary loans to assist students (called CLAS in California), and college work-study jobs.

Among the Stanford recipients, close to 2,000 are male students born after Dec. 31, 1959, required to register for the draft.

Stanford is committed to undergraduate admissions on a "need blind" basis. It makes admissions decisions without regard to financial need, and meets the calculated need of those enrolling through a combination of student self-help, loans and jobs.

Approximately 46 percent of all Stanford undergraduates now receive scholarships and grants-in-aid. When loans are included, the proportion rises to 71 percent.

The University awards its own financial aid with the expectation that students will apply for and obtain government assistance for which their financial situation makes them eligible.

When students fail to do so, decisions are made on an individual basis after consultation by the student with a member of the advising or senior staff of the Financial Aids Office.

Government Student Aid and Selective Service Registration

It has been University policy to award its own financial aid with the expectation that students will apply for and obtain any governmental assistance for which their financial situations make them eligible.

When students have declined or failed to apply for such governmental assistance, the University has been willing to consider replacing it with its own long-term loan and job resources. Decisions in such cases are made on an individual basis after consultation by the student with a member of the advising or senior staff of the Financial Aids Office.

It should be noted that the terms and conditions of University loans are less favorable—that is, more costly to the student—than aid from governmental programs: Most University long-term loans bear an in-school interest charge and must be repaid within five years of graduation.

The University plans no change in this policy.

The reason for restating it at the present time is that, effective July 1, 1983, all men who are required by law to register with Selective Service and have not done so are ineligible for federal student aid under Title IV of the Higher Education Act. The specific programs included are Pell Grants, Supplemental Educational Opportunity Grants, State Student Incentive Grants, National Direct Student Loans, Guaranteed Student Loans, Auxiliary Loans to Assist Students (called CLAS in California) and College Work-Study jobs. It is estimated that 4,200 Stanford students are currently receiving assistance under one or more of these programs. Of this number, close to 2,000 are male students born after December 31, 1959.

The University does not plan any addition to existing loan and job sources; no decision has been made about how these resources will be allocated should they prove insufficient.

Tenure/ continued from page 1

early part of the seventh year," which would be possible with a "3-4" or a "4-3" system.

Each dean should make the school's practices "very clear" to faculty, he said. "This doesn't mean that someone can't be evaluated earlier."

History Prof. Carl Degler was "surprised" to hear of the change and English Prof. Ronald Rebholz was "appalled."

"I'm put in an odd position with my colleagues," he said. "I've been here 22 years and always thought the whole University operated on sixth year evaluation" for tenure.

Hastorf said the changes became "visible" only in the last two or three years, by "slow accretion." Vice Provost Gerald Lieberman, dean of graduate studies and research, said there had been several examples of "good, extenuating reasons" for individual exceptions within humanities and sciences.

Prof. Bernard Roth, mechanical engineering, said it was "appalling" for Wessells not to think his school's practices were any business of the Faculty Senate.

Lieberman said each school "decides what it wants to do" and the Advisory Board reviews individual tenure decisions according to the school's policy. An elected group of seven professors chosen by their colleagues on the Academic Council, the Advisory Board reviews all tenure decisions.

Degler said the History Department "assumed there was no choice" other than the "3-3" system.

Wessells replied that this "3-3" practice was endorsed by Hastorf as dean in 1972 and reaffirmed three years later by Dean Halsey Royden. Now there is "nearly unanimous sentiment" for a basic "3-4" pattern.

Prof. Gerald Gillespie, German, said the additional year should be viewed as a qualitative as well as a quantitative change. "It's a lot more difficult to qualify (for tenure) in six years," he said. To earn tenure, Stanford faculty must be judged at or very close to the top in their specialty nationally.



New appointment policy for H&S given

Following is a Feb. 11 memo to department chairpersons in Humanities and Sciences from Dean Norman K. Wessells concerning appointments as assistant professor:

This letter establishes a new appointments policy for assistant professors in Humanities and Sciences.

The initial appointment will be for a three-year period, just as in the past.

The second appointment will be for a four-year period.

Persons worthy of being considered for tenure will be evaluated at the beginning of the seventh year of employment. If promoted, they will become tenured associate professors in the eighth year. If denied tenure, individuals that so desire may be reappointed for an eighth terminal year. Such persons will not gain tenure by length of service.

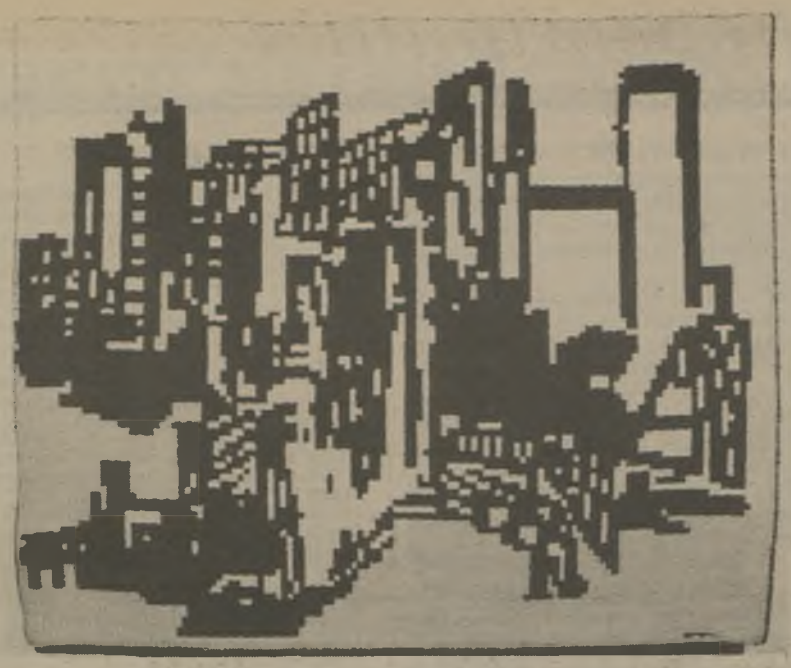
Exceptionally talented assistant professors may be reviewed for tenure prior to the seventh year. Arguments in favor of such a procedure for a given individual should be presented to our office prior to initiating the early review.

Assistant professors currently on their first three-year appointment will be considered at the normal time for reappointment to a four-year term. Assistant professors reappointed to a second term beginning in September of 1983, and all current second term assistant professors, will automatically have their appointments extended to include a seventh year. The tenure review will be delayed to that year unless departments make argument to the contrary and we agree. These general rules do not apply to any special cases of persons already in the seventh year, such that tenure by length of service might be obtained.

The new policy on assistant professor appointments does not affect policy on maternity leaves or sabbaticals. It will remain the case that sabbaticals cannot be given for the terminal year of employment at Stanford; hence, persons reappointed for a terminal eighth year may not take sabbatical leave during that year (assistant professors may take sabbatical leave during the seventh year, if recommended by the department, and if the person will commit to returning to Stanford for an eighth year if tenure is denied).

Our objective in this change in policy is to provide longer time to assistant professors prior to the tenure judgment. We trust that the extra year will improve the opportunites for young scholars in certain fields to complete and publish work that may be used in the evaluation process for tenure.

We expect that even this modest increase in time will permit departmental faculties and our office to make better judgments in promotion cases. No more important task than that faces the faculty of this school; if you have ideas about our appointment and promotion procedures that might improve policy even further, the associate deans and I would welcome hearing about them.



Tapestries by Annette Kaplan are at the I-Center through March

Sign up now for YMCA Half Marathon

The second annual King Games/YMCA Half Marathon will begin at 8 a.m. Sunday, March 27, at Stanford Stadium.

The race, sponsored by the University and the Palo Alto Area YMCA, is the kick-off event for the Martin Luther King Games scheduled for the week of March 29-April 2 at the Stadium.

Registration is $10 before March 15, then $12 through race morning (YMCA members $8 before March 15). The price includes long-sleeved green-on-white tee shirts.

Running again this year will be Stanford anesthesiology resident Duncan McDonald, 34, who placed first among 850 registered runners last year.

There will be 10 age-group categories, with trophies for first-place winners and medals for second- and third-place winners. The course is reputed to be scenic and pleasant, with some "fairly decent" hills in the Frenchman's Hill area of the campus.

Applications are available in sports and running shops and at the YMCA Fitness Center, 755 Page Mill Road. For more information call 858-0661.

Vlastos speaks on Socratic problem

Prof. Gregory Vlastos, the distinguished classicist and philosopher currently associated with the Institute of Society, Ethics, and the Life Sciences at the Hastings Center in Hastings-on-Hudson, New York, will speak on "A Crack at the Socratic Problem" at 4:15 p.m., Friday, March 11, in Building 300, Room 303.

Vlastos, who serves as a member of the Stanford Humanities Center's Advisory Board, will speak under the sponsorship of the Humanities Center. The public is welcome.

Rental housing

HOUSING AVAILABLE

□ **April 10 to July 15, '83:** London Hampstead nr Heath Regency Hse; beaut. furn. 3BR/2BA, study, dshwsher, W/D, garden. Details, photos avail. from owner. Avil. for future occasions. Call Himmelweit, 321-2052 (day).

□ **April 15 to June 15, '83:** Palo Alto nr Stanf. 2BR/2BA, study, lrg. LR w/frpl, DR, pool w/spa. Adults only, nonsmokers, no pets. Sec. dep. req. $1200 (8 wks) incl. hseclean., pool serv. Call 856-9696.

□ **Beg. Mar. 19:** Fully furn. 3BR/3BA hse, beaut., spacious, Palo Alto nr. Stanf. New kitchn, W/D, piano, frpl. Fenced yd. No pets. (Flex. time per.) $1550/mo. incl. grdnr, water. Call COLLECT (602) 299-4499.

□ **Aug. 1, '83 to summer '84:** Fully furn. campus hse, 5BR/4½BA, lrg. study, DR, decks, 1+ acre. 1 yr. lease. $1600/mo. Call 497-4547 (day), 327-4277.

□ **June 16 to Sept. 5, '83:** Spanish style hse, central Palo Alto, fully furn., 5BR/5BA, balconies, spiral staircase, new kitchn, enclosed crtyd, pool, jacuzzi w/dress. rms. Acre, creek on prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Beg. June 1:** Summer rental and/or 1 yr. High Portola Valley (Ladera). Beaut. 3BR/2BA fully furn. hse. Atrium, lrg. self-maint. grdn; oaks, pool, tennis. 7 min. to Stanf. $1500/mo. Call Pat Mueller-Vollmer, 324-1624 (eve), 327-3505.

□ **NOW:** No. Tahoe/Incline village. Furn. 2BR condo, long term rent; 6 mo. or more. $350/mo. Call (415) 361-1859 (eve. & wknd).

□ **Beg. June 10, '83:** Sunny, attrac. lrg. modrn priv. apt. 1BR, in Frenchman's Hill hse. Fully furn. w/self-def. frig, self-clean oven, cov. priv. patio, sunbath patio. Summer only $900/mo. $850/mo. incl. util. & furn. Call Shirley 856-6049.

□ **Regularly avail:** 1, 2, & 3BR furn. & unfurn. apts. & twnhses & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, (415) 856-6049 or Jane, (415) 968-4957.

□ **April 9 to June 5, '83 (flex):** Fully furn. hse., 2BR/1BA, W/D, gar., yd. Great loc. in Palo Alto nr Stanf. $650/mo. Call 324-1509 (eve).

□ **April 5 to July 12, '83 (flex):** College Terr., walk to campus. Lovely furn. 1BR/apt. Patio, TV, gar. $525/mo. Call 494-4917 or 857-0585.

□ **March thru June:** Oak Creek apt. 2BR/1-1/3BA, furn. Built-in bar, gar. space avail. Util. furn. Call Alice, 321-2625.

□ **July 1 to Dec. 31, '83:** Fully furn. & equipped hse in Sharon Hgts. 4BR/3BA, study, FR, DR, 2 frpl, 1/3 acre. 1 mi. to Stanf. $1500/mo. incl. grdner. Call 497-3785 (day), 854-7471 (eve).

□ **NOW:** London flat, fully equipped. 1 min. Willesden Green Stn. undergrnd. 2BR/1½BA, central heat. $600/mo. Call (415) 661-4067, (415) 387-7300.

□ **NOW:** Attrac. furn. 2200 sq. ft. hse. 4BR/2½BA, study, DR, FR, patio, 3 car gar. W/yr lease incl. ktchnware, linens, 2 TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1400/mo. Call (415) 965-1302 (eve).

□ **NOW:** Ski cabin—So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. natl forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501 (day), or (408) 739-3141 (eve).

□ **NOW:** Spacious 2BR apt in Barron Pk. Share w/female. Balcony, piano, W/D. $300/mo. + ½ util. + dep. Call 325-0566, 365-6961.

□ **April 10 to Oct. 15, '83:** 2BR/2BA hse, 4¼ mi. to campus, wooded setting, suitable for 2-3 adults. Furn. or partially furn. W/D. $1100/mo. Call 941-6444 (eve).

□ **July '83 1 yr lease:** Renewable lease, 4BR/2BA ranch-style hse. nr Rinconada Pk. Unfurn. or partially furn. $1250/mo. Call Sue Sherman, 328-2864, 328-7477.

□ **April 1 to Nov. 15, '83:** Fully furn. hse. 4BR/2BA, LR, FR, lrg. cov. patio, easy upkeep, auto. sprinkl. Palo Alto. Adults. No pets. $1200/mo. incl. water. Call 858-0880 (eve).

□ **Aug. '83 to Jan. '84:** Fully furn Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, park, com. ctr. Prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **Mar. 27 to Sept. 15, '83:** Fully furn 3BR/3BA, FR, hse in So. Palo Alto. Mbshp in nghbrhd pool ass'n, grdnr, 15 min. to Stanf. Walk to shops. Ideal for children. $1100/mo. Call Cornish & Carey, 325-6161 (day); Rita Benedict 327-7190 (eve).

□ **July, Aug.:** Very attrac summer rent. Dwntwn Palo Alto, fully furn. 1BR/2BA condo, suitable for cpl. Library, w/spiral staircase, balc., pool, secure. 18th C. European style. $1500/mo. Call (415) 324-1624 (eve), 327-3505.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn campus hse, BR/3½BA, LR, DR, study, lib., frpl., pool, view, acre. $1600/mo. incl grdnr, pool serv., water. Call 327-5204, 497-4732 (day).

□ **July & Aug. '83:** Dutch cpl seeks hse in or nr. Los Altos for vacation period (4 to 6 wks). EXCHANGE for hse in Oegstgeest (nr Leydon) Netherlands; 8 mi to beach, 8 mi. no. of The Hague, 25 mi. so. of Amsterdam. Call 969-1924.

□ **June 19 to Aug. 26, '83:** Furn. campus hse, 4BR/2½BA, FR, piano. Will EXCHANGE for London hse/flat, or RENT for $1500/mo, incl water, cleaning, grdnr. Nonsmokers, no pets. Call 493-8874.

□ **Beg. Apr. 1:** Earlier if neces. Prof. woman seeks female rmmate to share lrg. unfurn. 2BR/2BA apt in Palo Alto. Good nghbrhd. Bike to campus. $337.50/mo. + ½ util., + dep. Call Nancy 321-4741 (eve).

□ **April 1 to June 1 (flex):** Los Altos. Fully furn. 2BR/2BA hse. Lrg. LR, FR, AEK, 2 frpl., 2TV. Park-like 1/3 acre. 1 queen, 1 dbl bed. Quiet, dead-end st. Car poss. $1050/mo. Call 967-2918.

□ **Beg. Mar. 18; beg. Apr. 1:** Two rms in old Victorian priv. hse. Fully furn, ktchn priv., laundry, walk to Stanf., dwntwn. Short term rent. pref. $400/mo. Call Peggy 327-2510.

□ **Apr. 11 to June 9, '83:** Wooded, wine cntry retreat, 5 mi. above Calistoga. 3BR/2BA, study, pool. $550/mo incl. caretaker. Call 497-3254, M-Th; 11-12, or after 3 (M-W). 854-3932 after 9 pm Sun-Wed.

□ **NOW:** Ski Northstar. Tahoe. 2BR/2BA condo, sleeps 8. W/D. Free shuttle to slopes. Ideal fam. ski resort. Day care avail. Call Rosemary (415) 564-5324.

□ **April thru June '83:** Fully furn hse in Los Altos. 2BR/2BA, LR, DR, den. 2250 sq. ft. 10 min. to Stanf. Adults only. $899/mo. incl. grdnr. Call 948-6370.

□ **Beg. Mar. 1, '83:** 7 to 10 mo. (flex): Fully furn 2BR/2BA condo, view, pool, tennis, W/D. 12 min. to Stanf. 35 min. to SF. Nonsmoker, no pets. $850/mo. Call (415) 853-5212, (415) 591-7085 (eve).

□ **Mar. 20 to July 15, '83:** Charming old Palo Alto furn. hse, 2BR/2BA, LR, DR, modern cntry ktchn, deck. 2 mi. to Stanf. on bus rte. $1000/mo. incl. cleaning, grdnr + dep. Call 321-5545 (day), 322-2051 (eve).

□ **July 1, '83 to July 1, '85 (flex):** 1 yr. rent. poss. Fully furn. Palo Alto fac. hse. 3BR/2BA, FR/den, LR, DR, W/D, frpl, AEK, pool w/deck, patio. $1200/mo. Call Anne Mellor, 323-5329, 497-2724 (day).

□ **July 1 to Dec. 31, '83:** Fully furn hse in Sharon Hgts, 4BR/3BA, study, FR, sep DR, 2 frpl, on 1/3 acre. $1500/mo incl. grdnr. Call 497-3785 (day), 854-7471 (eve).

□ **Beg. end Mar. to end July (flex):** Los Altos fully furn hse on cul-de-sac. 4BR/3BA, walk to schl & dwntwn shops. 6 mi. to Stanf. $950/mo. incl grdnr & water. Call 948-0936.

□ **Beg. Mar. 1, '83:** Moreno Dr. in Palo Alto; partly furn. or unfurn. hse, 3BR/2BA, frpl, new carpets, W/D, detached studio, yd. w/fruit trees, hot tub. Nonsmokers. $1050/mo. Call 854-0591, or Elise, 324-2014 (day).

HOUSING NEEDED

□ **NOW:** Stanf. staffer, resp, quiet, no pets, age 35, a musical writer; seeks own unfurn. 1BR cottage or apt nr campus. Excel. loc. refs. Call Julia, 497-3811 (day), (415) 648-4835 (eve).

□ **Beg. April/May:** Prof. female, nonsmoker, seeks long term rental, 1-2BR hse or cottage. Palo Alto, Menlo Pk, Stanf. area. Call 497-7921 (day).

□ **NOW:** Extremely resp., conscientious cpl seeks hsesit/caretak. arrang. or rental of cottage/gar. apt. on lrg. estate. All situations considered. Refs. avail. Call Mark or Ginny, (415) 941-5713 before 9 a.m. or eves.

□ **Sept. '83:** French visit. scholar seeks Stanf. hsng in EXCHANGE for 2BR apt. on Mediterranean shore (nr Montpellier). Please contact J. Schmidt, 28 Montee Saint-Laurent, 69005 Lyon, France. Tel. (7) 837-6280.

□ **July or Aug. thru Dec. '83 (flex):** Humanities Ctr fellow & fam. seek 3 or 4BR fully furn. hse or apt in Palo Alto or Stanf. area, poss. in EXCHANGE for our Ann Arbor, Mich. 4BR hse. Call 493-1359.

□ **July '83 to June 30, '84 (flex):** Carnegie Inst. Fellow, spouse, 2 children, seek hsng Palo Alto-Stanf. Area. Will rent or EXCHANGE our Berkeley hse: 5BR/3BA hse, LR, DR, library, frpl w/yr of wood, piano. 1 acre, lush grdn, auto. water. Incl. maid, grdnr, sec. system. Call (415) 483-8484 (day), (415) 548-1735, eve & wknds.

□ **June to Sept. (flex):** Visit scholar, family, seek EXCHANGE: 5BR/2BA apt in Paris & car for 4 or 5BR hse in Palo Alto or STanf. Call Mrs. Flexer, 493-5088, 962-0100, X259; or write Mr. Paoletti, 84 rue Michel Ange, Paris, 75016, France.

□ **NOW:** Housesitting. Prof. cpl seeks home to caretake. Refs avail. Call Peggy or Bill (408) 977-1509 (eve).

□ **Sept. 1, '83 to June 15, '84:** Visit Prof, wife seek 2BR furn. apt. or hse nr. Stanf. Call Jean Lee, 497-3322 (day). Or write Robert Cohn, Dept. of History & Religions, Northwestern Univ., 1940 Sheridan Rd., Evanston, Ill. 60201.

□ **Sept. '83 to June '84:** Prof. on sabbatical (U. of Iowa Med. Sch.), wife, 2 children (4 & 7), seek hsng on or nr Stanf. Call Betty Bray, Dept. Biochem. 497-6161 (day).

□ **Apr. 9 thru Apr. 30, '83:** Fac. wife seeks small apt. on or nr campus. Call 857-0255 or 857-0201.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

94111-JM (JCC:2070) ADMIN ASST II: Prov admin assistance to Plant Officer & professional staff, e.g., prepare repts, assemble audits & appraisals; schedule mtgs; review budgets; supv clerical staff; Qualifications: sevl yrs of applicable exp & educaiton in admin, policies & proceds; good interactive skills; supvry exp or ability; contracts admin exp desir; C05; $1670-1890; APPLY AT SLAC (854-3300 ext. 2353)

32593-JB (JCC:2168) ACCOUNTANT III: Analyze complex & detailed regulations; propose changes; prepare repts for mgmt; solve wide range of problems concerning Govt & Institutional policies & proceds; requies an exp'd, service-oriented person who is analytically inclined & has ability to initiate, respond to & coord both policies & people; study feasibility of computerizing repts; support mgr & staff; supv an exempt acctg staff & other duties as assigned; Qualifications: BA/BS in Acctg/Bueiness Admin and/or 4-8 yrs related work exp; requires skills in acctg, mgmt, & computer sys operations; C07; $2113-2724

30505-AW (JCC:2270) FIN/MGMT ANALYST III: Imparts broad & specific tech aspects of informa sys to user community in Facilities & Svcs; coord indiv & group training sessions for users; prov staff assistance in identifying potential D.P. applications & in preparation of annual plan; prov staff assistance in D.P. production & maint activs; represents organization w/other organizations on campus; may act as mgr of D.P. projs; aids in preparing, conducting & interpreting statistical mgmt studies; supv Admin Asst; Qualifications: combination of edu &e xp equiv to Masters Degree in Business Admin, Computer Sci, Statistics or related field & min of 4 yrs work exp; excel knowl of Business Sys; ability to teach applied data processing concepts; excel oral & written commu skills; C08; $2464-3139

9297-TC (JCC:5588) LIFE SCI RES ASST I: Perform radioisotope labeling of lipoproteins; study interaction of 125I-lipoprotein w/ hepatocytes & steroidogenic cells; study specificity of 125I-HDL binding to cellular membranes prepared fr livers 7 ovaries; isolation of lipoproteins as well as apoproteins fr human & rat plasma using prepative columns & high pressure liquid chromatography; confirm purity of isolated lipoproteins & apoproteins w/ agarose & polyacrylamide gel electrophoresis; supv lab technician; organize students' & other lab workers' scheds & work load; orer lab supplies; perform theory-related work of limited scope requiring initiative & judgmt based on knowl & understanding of scientific theory; plan scientific work, interpret results; change procedures & participate in write-up of matls used for publication; Qualifications: prev exp in biochemical lab proceds; BS & 6 mos lab exp or equiv combination; C05; $1670-2086

22828-DS (JCC:7384) FOOD SERVICE SUPVR I: Respon to Unit Mgr for mtg objectives of dept in production of quality food & serv for hall residents; supv & schedule full time & student employees in various work duties in food preparation, serving & sanitation; keep records of food & eqpt inventories, wkly & mthly food cost repts, etc; assume full respon in absence of Unit Mgr; asst Mgr in scheduling & training of employees; asst in purchasing of designated food items & supplies, etc; Qualifications: Bachelor of Sci degree in Institutional Mgmt or Dietetics; knowl in basic food production, employee training & sanitation principles; C05; $1670-2086

22827-DS (JCC:7392) FOOD SERVICE SUPVR II: Respon for operation of a 350 person new student residence food serv under directio fo Mgr of Univ Food Srvc; respon for mtg objectives of Food Svc Dept in produciton & quality of food & svc; Qualifications: Bachelor of Sci degree in Institutional Mgmt or Hotel & Restaurant Mgmt or Dietetics; 3-5 yrs exp as Food Serv Mgr; expd in food production, ordering, quality & control, employee scheduling & raining; C06; $1854-2312

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, March. 15, in Room 270, Tresidder Union.

The sessions are open to all new employees without preregistration.

SLAC

94245-JM (JCC:8880) ENGRG PHYSICIST: Participate in advanced dvlpmt of accelerator sys for very high gradient high energy lectron accelerators, incl superconducting accelerators & dvlpmt of novel accelerating structures at non cryogenic temperatures; high power rf switching devices & laser & plasma devices; Qualifications: PhD in Applied Physics or EE w/ trianing in microwave theory & techniques; sevl yrs exp in microwave physics & applied superconductivity essential; supvy ability for inception to final completion & technical support staff; ability to commu tech informa both/orally & in writing; C99; $2700-3500; APPLY AT SLAC (854-3300 ext 2353)

94322-JM (JCC:6406) SCI & ENGR ASSOC I: Review designs of microwave tubes & related components; coord production; formulate plans to keep parts manufacture flowing; formulate planning charts for inventory & cost control; respon for assurance of timely completion of prototype & production requiremts; Qualifications: AS degree in Mechanical Engrg sciences or equiv; must be familiar w/ machine shop & drafting practices; exp in scheduling for production & coordination of shpo activs; must be familiar w/ planning charts for inventory & cost control; exp in matls selection & processing of special metals & ceramics desir; C99; $2300-2700; APPLY AT SLAC (854-3300 ext 2353)

94429-JM (JCC:6492) LAB MECHANICIAN III: TMS unit; day & swing shift; perform variety of unusually complicated tasks in fabrication of precision instruments & microwave components; Qualifications: requires full model maker skills; ability to work fr blueprints & sketches; be familiar w/ copper machining techniques; ability to operate all machine shop tools; familiar w/ standard shop practices; NC exp desir; A41; $2250; APPLY AT SLAC (854-3300 ext. 2353)

94623-JM (JCC:6492) LAB MECHANICIAN III: TMS unit; day & swing shift; perform variety of unusually complicated tasks in fabrication of precision instruments & microwave components; Qualifications: requires full model maker skills; ability to work fr blueprints & sketches; be familiar w/ copper machining techniques; ability to operate all machine shop tools; familiar w/ standard shop practices; NC exp desir; A41; $2250; APPLY AT SLAC (854-3300 ext. 2353)

91596-JM (JCC:6646) SR S&E TECH—ELECTRON: TMS unit; all shifts; perform diagnostic, corrective, scheduled & preventive maint on wide variety of simple to highly complex accelerator electronic sys, sub-sys & eqpt; reqd tech knowl & skills acquired thru college courses & related exp or equiv; Qualifications: ability to troubleshoot eqpt down to component level using schematics & diagrams; sevl yrs exp maintaining high power modulators & fmiliarity w/ thyratrons, thyristors & klystrons desir; working knowl of conventional solid state circuits & associated hardware; able to climb ladders & asst in heavy lifting; familiarity w/ CAMAC desir; A34; $1901; APPLY AT SLAC (854-3300 ext 2353)

91594-JM (JCC:6774) ELEC PHOTOTYPE FAB: TMS unit; perform work such as printed circuit board high-speed stack drilling, setup, operate & maint p/c photofabrication processing machines i.e. high speed drill incl computer numerically controlled, routers, photoresist laminator p/c laminating press, photopolymer developer, precision cameras, film exposing, etc; perform p/c solder-reflow, solder-masking, silkscreening & wave-soldering processing; Qualifications: ability to demonstrate proficiency in all aspects of p/c photofabrication processing & proceds incl chemical mixing & safety standards; ability to work w/ fractions, decimals, metric sys, precision calipers & micrometers w/ sevl yrs related exp; A28; $1647; APPLY AT SLAC (854-3300 ext. 2353)

91595-JM (JCC:6774) ELEC PHOTOTYPE FAB: TMS unit; perform work such as printed circuit board high-speed stack drilling, setup, operate & maint p/c photofabrication processing machines i.e. high speed drill incl computer numerically controlled, routers, photoresist laminator p/c laminating press, photopolymer developer, precision cameras, film exposing, etc; perform p/c solder-reflow, solder-masking, silkscreening & wave-soldering processing; Qualifications: ability to demonstrate proficiency in all aspects of p/c photofabrication processing & proceds incl chemical mixing & safety standards; ability to work w/ fractions, decimals, metric sys, precision calipers & micrometers w/ sevl yrs related exp; A28; $1647; APPLY AT SLAC (854-3300 ext. 2353)

Bargaining Unit

30393-TC (JCC:5638): LIFE SCI TECH I: TMS unit; 50%; Tue & Thu, 7-11; Mon, Wed & Fri, 8-12; work as member of team conducting intl clinical trial concerning cholesterol & prevention of heart disease; duties incl phlebotomy, blood prssure & weight measuremts, admin of med interview according to specific protocol, centrifugation & separation of blood samples, & completion of pertinent forms, filing, xeroxing, etc; Qualifications: trained in venipuncture on humans, use of lab eqpt such as flame photometer, AutoAnalyzer II, centrifuge; prep of reagents; prep & use of quality control samples; ability to deal comfortably w/ human subjs; A18; $7.50

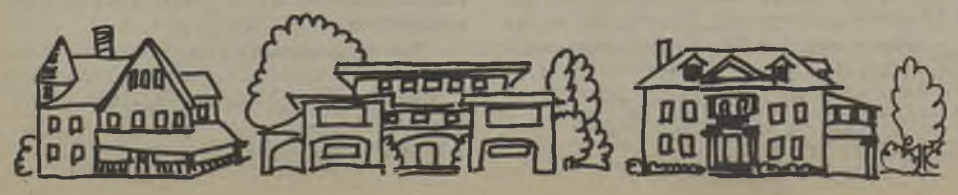
16283-TC (JCC:5644) LIFE SCI TECH II: TMS unit; fixed term 5/1/83-5/1/84; surgical operations on Xenopus involving genl anesthesia & removal of oocytes; prep of oocytes for micro injection; learn to do microinjection & other micromanipulation; biochemical analysis of oocytes, incl extraction of proteins & nucleic acids; polyacrylamide & agarose electrophoresis of RNA & DNA molecules; feeding & maint of Xenopus colony; recombinant DNA cloning tech; nick translation of DNA probes; in vitro translation sys; knowl & exp of experimental tech for recombinant DNA experimts; Qualifications: 2 yrs college sci or equiv work exp; 2-3 yrs of lab exp in use of recombinant DNA technology & handling & manipulation of Xenopus & Xenops oocytes; extensive biochemical & molecular bkgrd w/ practical exp for processing of injected oocytes; A24; $8.65

32394-PB (JCC: 5835) ANIMAL CARE ASST I: TMS unit; 50%, Mon/6 hrs, Wed/8 hrs & Fri/6 hrs; respon incl custodial care for animals (rats, mice) housed in animal care facilities; clean cages; feed & water; perform genl cleaning of areas; sterilized cage eqpt, bottles, & sawdust; Qualifications: ability to follow very detailed verbal & written instructions; habits of cleanliness & neatness; willingness to handle animals; familiar w/ animal facility & use of autoclave; handle 25-30 lb bags of feed; able to work where there is sawdust; A12; $6.54

15006-TC (JCC:7074) STOREKEEPER I: TMS unit; 80%, 9:30-12 & 1-5; receives & distributes lab shipmts; checks shipmt against original order & against shipping documents; contacts Purchasing or Stores about any discrepancy in orders; respon for all ordering for Lab Storerm fr Univ Stores or fr certain outside vendors; respon for maintaining Storerm in clean & orderly condition; will transport Lab supplies as needed; involve use of Lab van; Qualifications: must have current, valid Ca driver's lic & good driving record; must be systematic & orderly; ability to keep current inventory records & to work constructively w/ Lab personnel; A17; $7.33

Hospital

TELECOMMUNICATIONS SUPVR—Telecommunications — #4577 (C-5): Responsibilities: Under genl supvn of Telecommunications Mgr, Supvr is respon for implementation of deptl policies & proceds applicable to all Med Ctr cost centers. Plans, directs & supervises operational functions for assigned shifts. Maintains personnel & payroll records, estab work schedules & provides overall training instruction. Assists w/ deptl planning related to systems, analysis, computerization, radio-paging, overhead paging, emergency/disaster usage, customer satisfaction, budgeting & related projects. Qualifications: High Schl grad or equiv; high interest in Telecommunications field. Prior exper in computer terminal usage w/ knowl of Wylbur/Spires languages helpful; must be good trainer; previous supvy/Sr. Operator or related "directing" exper necessary; should have personality to deal w/ wide variety of people within very busy office; prior Telecommunications exper not necessary, tho helpful; Permanent Full-Time, M-F, 8-5pm (occasional evening work may be reqd); $9.23-$12.92 hrly



Nonexempt

30045-BP (JCC:2630) SPECIALIST TYPIST: NBI & Lexitron word processing operator; hands on appl/input of variety of data; on-line formatting; keyboarding & setup tabs & line-endings simultaneously; off-line formatting; compute setup to horizontal/vertical scale; determine tabs, headings, & line endings; text editing applications are used each time matl is revised; print documents on variety of paper style & pre-printed forms; analyze how matl should be glossaried; proof document upon completion of assignmt; Qualifications: typ 75; prev secl exp & knowl of standard offc proceds; knowl of word processing eqpt; ability to set prior & to meet deadlines when under pressure; accuracy extremely important; good grammar/editing skills; send appl/resume to Susan Sterner, Old Pavilion; B12; $1310-1373

17035-TC (JCC:6188) PATIENT TEST TECH II: Primary respon involves monitoring of physiological parameters during sleep; parameters incl electroencephalogram, electro-oculogram, electromyogram, respiratory & heart rate, arterial oxygen saturation, endoesophageal pressure & pH; familiar w/ sleep disorders at tech level; routine maint & minor repqir of eqpt; Qualifications: prior patient contact; exp w/ operation of polygraph; data entry exp desir; CPR certificate; bkgrd in social or biological sciences desir; B13; $1373-1440

42656-PM (JCC: 1747) LIBRARY SPEC I: 50%, flexible as needed (nights/wkends); subj to temporary layoff during summer qtrs; charges out reserve books & other circulating matl; prov genl informa to lib users; issues lib cards; registers patrons; monitors eligibility of public for access to lib and for borrowing; interprets & carries out lib policies & proceds; files & maints records; answers genl phone inquiries; search for matls for Public Svcs use; collect fees & fines & maint cash records; opens & closes lib, insuring security of facility; may assist w/ simple computer files & machine memory sys, etc; Qualifications: demonstrated ability to work w/ public; ability to follow specific proceds & carry out instructions; exp in interpreting & carrying out detailed, written policies; phone answering skills needed; able to remain on feet for better part of day; lib exp is major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib-GSB, Rm 119, 497-2162; B10; $595-623

36305-BP (JCC:2454) OFFICE ASST II: File Coordinator for Sponsored Projcs Qffc; respon for maint of grant/contract & other files as assigned; prepares files, types labels, pulls & refiles folders as appropriate; asst in retiremt of completed files; asst w/ maint of security files; sorts & distributes daily incoming mail for SPO, etc; Qualifications: type 40-50; knowl of alpha, numerical & subj filing essential; knowl of grant/contract proposals & awards helpful; organizational skills, detail oriented very important; must enjoy working w/ people in cooperative atmosphere; ability to qualify for security clearance; send appl/resume to Fred Gustafson, SPO, Encina Hall, Rm 40; B09; $1130-1189

36364-BP (JCC:2454): OFFICE ASST II: Answer phone & dir questions to proper payroll desk; type statemt of earnings for aliens; type spec checks for salary paymt; type W-2 forms; typ misc letters, forms, & journals; asst in opening & closing offc; stamp (date) & disburse mail to appropr payroll desks; order supplies; asst counter traffic; inventory supplies; some filing; Qualifications: prev offc work; accurate typing ability to reason & work under pressure; ability to use calculator & electric typewriter; excel interpers skills needed to deal w/ customers; send appl/resume to M. Willis, 20 Encina Hall; B09; $1130-1189

22439-PM (JCC:2570) SECRETARY III: Sec to Stanford Intl Dvlpmt Education Program & 2 busy profs; full range of secl duties, incl typing, dictation, & transcription; maint student records; monitor budgets; administer SIDEC recruitmt program; prep budget & expense repts; make travel arrangemts; compose corresp; heavy student & fac contact; counsel students regarding progress thru their degree programs; Qualifications: typ 60-75; work independently w/ constant interruptions; compose own corresp; fast accu typing; knowl of word processing or willingness to learn; cross-cultural sensitivity nec; good counseling skills; send appl/resume to Diane Gunderson, Education 105, 497-2119; B14; $1440-1514

29961-PM (JCC:2562) SECRETARY III: Prov secl svcs to 2 Chem profs, incl prep of manusripts, proposals, corresp; maint scheds; arrange travel; monitor budgets; prep reqs, forms, etc; extensive use of word processor for manuscripts & grad student admissions; prep grant proposals; develop proposal budgets; admin research expenditures w/in guidelines estab by Univ & funding agencies; Qualifications: typ 75; solid secl exp usually 3-5 yrs actual exp; good English skills; prev word processing exp highly desir, or willingness to learn; no smoking in offc; send appl/resume to Janet Shaw, 121 Seeley Mudd; B14; $1440-1514

18669-PM (JCC:2596) SECY II-SPEC: 75%, 8-3; could also be 100% time position w/ added duties such as operating word processor (either NBI or Xerox 860); prov secl svcs for sevl consulting faculty in outlying offc of Petroleum Engrg dept; asst mainly the professor & TA's respon & for large-enrollmt energy industries survey courses; type, edit, & copy repts & class matls; make arrangemts for visitors to campus & rental of buses, vans for field trips; maint complex filing sys for class notes, tapes of lectures, & matls regarding energy resources; asst in typing tech papers (incl Greek letters & Symbols); Qualifications: type 60; s/h 60; ability to work under pressure w/ lmited supvn; ability to set prior & establ an atmosphere of efficient cooperation; send appl/resume to Jean Cook, Petroleum Engrg Dept; Mitchell 360; B12; $983-1030

Queen's visit leaves Stanford beaming

When Queen Elizabeth II visited Stanford Thursday, March 3, the sun broke through for the first time since the royal visit to California began five days earlier.

And the Queen left her hosts and their guests beaming.

"Everybody did themselves proud," President Donald Kennedy said. "I actually found myself enjoying the occasion after perhaps 20 minutes. Eor the first 20 minutes I was scared out of my mind."

Leaving scores of clicking and whirring cameras outside Lou Henry Hoover House, the Queen and the Duke of Edinburgh quickly made the event what Jeanne Kennedy had always planned, an exhilarating occasion.

"Respect, tradition, stability, discipline and elegance—all these are embodied in her," commented Kim Schnurpfeil, one of 18 student guests. "The Queen's composure is fantastic. . . . What I will most remember is the ideal of civilization which her every action represents. She inspires excellence in spirit and character."

The overwhelming impression of nearly all guests as they emerged was summed up by Elizabeth Eilart, another student. "The Queen was so human and so *interested* in what was being done at Stanford." Fellow students Raga Elim and Vladimir Bukovsky nodded agreement.

Frank Hack, a gardener for 24 years at Stanford, said "It exceeded my wildest expectations. It was formal, yet delightfully informal. It was quite the best occasion my wife and I have ever attended." Mrs. Hack curtsied as the Queen approached.

The Duke noticed that John Gardner, manager of student aid accounting in the Controller's Office, was wearing a Royal Air Force tie and came to talk with him. Doris Gardner, John's wife, said "It was marvelous. The Queen is very, very charming."

The Queen drew a cheer when she waved at the 80 members of the Leland Stanford Junior Marching Band and 100 spectators clustered behind police lines at the foot of the large lawn behind the President's House.

The band played a special arrangement of "Rule Brittania" by Prof. Arthur Barnes. Under Drum Major Simon Streets, it played "Come Join the Band," "William Tell Overture," "Sultans of Swing" and "Everybody's Everything," selections chosen by manager Gary Robinson.

Tight security was imposed before and during the Queen's visit. On Thursday, the Secret Service turned away Joe Frassetti, a University carpenter leader who had been asked to fix a potential leak in the living room ceiling at Hoover House.

Jeanne Kennedy was briefly barred from entering her own home after she stepped outside to take a quick picture of the news media.

About 20 minutes before the Queen's scheduled arrival at 12:30 p.m. Friday, all the assembled guests, the Kennedys, and their staff were asked to stand in the roadway while the Secret Service did an electronic sweep of the house. Police used a specially trained German shepherd dog to check shrubbery around the house.

About 70 officers were stationed on the grounds and surrounding area, while a helicopter patrolled overhead throughout the Queen's hour and 40 minute stay. One plane flew over the campus trailing a streamer that read "Brits Out—Victory to the IRA."



President Donald Kennedy greeting the Queen: ***For the first 20 minutes I was scared out of my mind. After that I found myself enjoying the occasion.***

Police did not disclose the Queen's route to campus, but hundreds of people, including lunch-time joggers and a small contingent of protesters, gathered at various intersections off Junipero Serra Blvd. to catch a glimpse of the motorcade.

A roar of cheers and applause went up from about 250 at Santa Maria and Gerona Streets as the Queen's car sped by. Several waved Union Jacks and Canadian flags exuberantly, while others took pictures.

Protesters from Irish Northern Aid, yelling "Queen of Torture, Go Home!" were drowned out by the crowd's cheers.

About a half dozen protesters held signs saying "Free Ireland Now." Largely ignored by the crowd, one demonstrator was overhead to say, "She (the Queen) had a good-looking bonnet on, anyway."

On the opposite side of the President's House, at the intersection of Mayfield and Santa Ynez, about 20 Club of Life supporters, protesting international monetary policy, used a large megaphone beside their big banner to exchange views with students holding a large Union Jack on the deck of a nearby residence.

Inside Hoover House, the luncheon proceeded. Chancellor Wallace Sterling sat next to the Queen, who a decade earlier had bestowed on him an honorary knighthood for his services to Britain as head of the Marshall Scholarship Committee in the western U.S. for two separate terms.

Sterling spoke to the Queen "about her cousin, Prince William of Gloucester, who was a graduate student here years ago, and she spoke fondly of him." The first member of the royal family to study at an American university, Prince William studied at Stanford in 1963-64. He died in a plane crash in 1972.

There were eight tables for the 92 people. Two students, Elizabeth ('Buffy') Eilert and Vladimir Bukovsky were among those at the main table, with the royal couple, Chancellor Sterling and the Kennedys, besides several of the royal entourage.

One of the features of the residence admired by the Queen was the Victorian doll's house, made in 1907, which has come down to Mrs. Kennedy from her grandmother.

Various arrangements of flowers brought color to all the rooms and were massed at the entrance to the house. The flowers included roses, Dutch iris, tulips, gerbera, with many branches of flowering quince and peach blossoms.

The Queen received two gifts—a copy of the Stanford Alumni Association book, *From the Foothills to the Bay* and a Stanford T-shirt from Yolanda Townsend, a member of the Associated Students Council of Presidents. "The Duke said 'I can't wait to see her in it,' " Townsend told *The Stanford Daily*.

The sun broke through just as the Queen emerged for the next stage of her journey, a visit to the Hewlett-Packard plant in Cupertino. As photographers scrambled to adjust, the Queen stopped to chat for a minute with student helpers for the luncheon, gathered all in a row to bid her farewell.

Those from Stanford assisting caterer Victoria Emmons and chef Janet Mace included John Dean, Britta Jaffe, Valeria Matsumoto, Thomas Mosher, Penny Ann Russell, Linda Schott, Frances Taylor, Katherine Weinert, Ann Walecka, Denise Albanese, Sylvia Applegate, Wendy Bracewell, and James Campbell Dean.

After the Queen's limousine departed, Hack's colleagues in Operations and Maintenance came by in a car to escort him and his wife home.

After the Kennedys and interested guests gave their impressions of the Queen to the media, President Kennedy hopped on his 10-speed bike in time to catch the regular Faculty Senate meeting.

The big Event was over.

(Harry Press, Karen Bartholomew, Donald Stokes, and Bob Beyers contributed to this story.)



Queen Elizabeth chatted with faculty and students before last Thursday's luncheon

Mrs. Kennedy tells what is involved in a visit by royalty. . .

"It was a particular pleasure to lunch with the faculty and students at Stanford. . ."

—Queen Elizabeth II, in an address at the Capitol in Sacramento.

"We were absolutely delighted with Stanford. We were sorry to leave."

—Duke of Edinburgh, to a Stanford staff member at a San Francisco reception.

It all began on a note of paradox.

When Jeanne Kennedy, wife of Stanford President Donald Kennedy, heard late one evening last December that she would be hostess to the Queen, her very first reaction was disappointment.

For she had been hoping that the original idea, for the Queen to tour Stanford University Hospital would be approved—and Mrs. Kennedy is director of community relations at the Hospital.

"In the next moment I mentally put on my other hat, that of the wife of President Kennedy," she said in a campus interview. "I was delighted at the idea of having the Queen at our residence, Hoover House, and of being hostess to the Queen."

The first contact came in November last year when the British Consul General in San Francisco, John Beaven, called Sheldon King, director of the Hospital, to inquire about the possibilities of a royal visit to Stanford University Hospital.

In her role of Director of Community Relations for the Hospital, Mrs. Kennedy handled that inquiry, and arranged for a visit to the Hospital by a group that represented the British and American governments.

Among those who came to look over the Hospital were Ambassador Selwa Roosevelt, chief of protocol of the U.S., the British Ambassador, Sir Oliver Wright, and Robert Fellowes, assistant private secretary to the Queen.

Late that evening Consul General Beaven phoned the Kennedys and said that the idea of including the Hospital had had to be abandoned, because the Queen had visited so many hospitals. However, would the Kennedys by prepared to have the royal party to tea, as part of a proposed visit to Silicon Valley?

Mrs. Kennedy expressed her delight at the idea. For several weeks after that there was near silence, except that the proposal changed from tea to lunch. The Kennedys kept strictly to the protocol that nothing should be said to anybody about the proposed visit until it was finalized.

They remained silent until just after Christmas, when it was officially announced that the lunch had been approved.

The Kennedys are accustomed to very large-scale entertaining, for the number of distinguished visitors to Stanford is considerable, and often it is appropriate to have a considerable number of guests.

On the evening when the Kennedys heard that the lunch for royalty was fixed, they had just finished their plans for a dinner for 92 people (exactly the number who were later to come to the royal lunch). The dinner was in honor of Parmer Fuller III, who was retiring after 25 years of service on the Board of Trustees.

When necessary, in order to accommodate as many guests as possible, Mrs. Kennedy has experimented with various configurations of tables and seating. A particular problem has always been the main table where the guests of honor are seated. For the royal lunch she decided to have 16 guests; it worked well.

At no time did the logistics of the operation ever trouble Mrs. Kennedy. "We have held so many large functions, of so many varieties, that we knew our team, with all the experience we have built up, would be able to cope.

"I suppose the largest function we have ever given was the Commencement reception we gave for 5,000 students, their families and the faculty."

Mrs. Kennedy has been able to rely on a team of people who have each grown seasoned in their respective areas of responsibility. There is house manager David Voss; housekeeper Billie Bell; caterer Victoria Emmons (who is married to History Professor Terence Emmons) and flower arranger Katsy Swan.

A three-woman team which has worked before on large-scale functions took charge of the tactical planning, each of them dealing with a specific area.

The team consisted of Patricia Boesch, director of donor relations in the Office of Development; Marlene Wine, special assistant to President Kennedy; and Elizabeth Marincola, assistant to Mrs. Kennedy.

Beyond these, many of the departments of the university were called on to help with their particular specialities.

The picking of the guests was the most difficult problem tackled by the Kennedys. "The royal party had indicated from the start that they would like to meet as many students as were convenient. This pleased us very much," said Mrs. Kennedy, "for it fitted in with our own ideas. We decided to invite 18 students.

The exact size of the royal party was not known, but it was thought at that time it would be about 25 (it proved to be somewhat less). This meant that, allowing for the Kennedy family, about 44 seats

continued on next page



President Donald Kennedy, Queen Elizabeth, and Rhodes Scholar William Halter



Mrs. Jeanne Kennedy with the Duke of Edinburgh

. . .knottiest problem of Queen's visit was picking guests

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were left to represent all the various sides of Stanford life.

The question arose as to whether spouses should be invited. Not to invite them would double the number of seats available. "I was absolutely adamant that we would have spouses," said Mrs. Kennedy. "This meant in effect that we could invite only 22 more people and their spouses."

Picking those 22 proved to be a worrying task that occupied the attention of the Kennedys for a considerable time. A number of eminent members of the Stanford community qualified automatically, and this further reduced the number of seats with which to recognize all the other important areas of university life.

Wrenching decisions had to be made. How, for example, could the tens of thousands of supportive alumni be represented? The final solution was to invite the past president of the Trustees, Dr. Peter Bing, and Mrs. Bing, to represent them and also the past trustees.

William Kimball, chairman of the Board of Trustees, was chosen to represent the board. How to represent the other trustees? A draw was held and the winners were Edward L. Ginzton and Thomas W. Ford.

In all cases of those named for invitations, alternates were also drawn for, in case the invitations could not be accepted.

Draws were also held to find representatives for the vice-presidents, the deans of the various schools, and the faculty (this draw comprises members of the Advisory Board).

When it came to choosing staff it was decided not to hold a draw. "Instead, we have been impressed by the number of letters we had received from the staff suggesting colleagues who should be invited. Out of those suggestions we picked John Gardner, Frank Hack, and their wives.

"Picking the students was very difficult because so many wanted to come. What we did was to announce that all those hoping for invitations should write letters to us explaining their reasons. We received about 250 letters, and these helped us decide. However, we also wanted the diversity of the students represented.

"Some of the students were ingenious in their attempts to draw attention to their claims. Two students delivered an English breakfast to Don, with a copy of the London *Times*, and also baked him a large cake.

"These two students got on the alternate list, but there were so many others whose claims were greater, such as Rhodes Scholars. We tried to make sure our students' wide range of achievement in scholarship, athletics, and the arts was represented."

Picking the guest list was the hardest part of all the work of organization, said Mrs. Kennedy.

I am sure that a number of people who had every reason to expect they might receive an invitation were disappointed. However, when it became clear to everybody how difficult the choices were, there was understanding and good sportsmanship.

"Don and I have heard of no cases of people failing to accept the circumstances and our most difficult problem. For this we are most grateful."

Mrs. Kennedy had decided from the start that the menu should be simple and light, with California fruits and vegetables well represented. "I was very pleased that we were able to include California raspberries, which were found at the last minute, and also chanterelles, wild mushrooms."

Mrs. Kennedy was asked to tell her outstanding impression of the preparations for the lunch.

"It was the multiplicity of details," she replied. "Any large function means a mass of details, but the royal lunch, with the added problems of protocol and security, was extremely detailed.

"We had a very good team working on them, and every single person involved was exceedingly conscientious in carrying out the details."

Mrs. Kennedy was back at her office desk at eight o'clock the next morning, after having been a guest, with her husband, at the State dinner for the royal party in San Francisco.

She summed it all up: "Ever since I was a little girl I had always looked up to Princess Elizabeth, as she then was, and her sister Margaret Rose. I remember reading about how the princesses were growing up. They were a part of my life for as long as I can remember.

"Once or twice that flashed into my mind as we did our planning. The princess whom I had watched grow up, who was older than I and so glamorous, whom I had looked up to, was coming to our home. It brought back so many memories. It was all so marvellous because it tied up with my childhood. I never dreamed it would happen.

"Above all, it was so wonderful for Stanford."

—Donald Stokes

Queen's luncheon guest list

Donald Kennedy, Stanford University President
Jeanne Kennedy, Stanford Hospital community relations director
William Kimball, president, Stanford University board of trustees
Collie Kimball
Dr. Peter Bing, past president, board of trustees
Helen Bing
Edward Ginzton, trustee
Artemas Ginzton
Tom Ford, trustee
Joan Ford
J. E. Wallace Sterling, Stanford chancellor
Albert Hastorf, vice president and provost
Barbara Hastorf
John Gardner, university staff
Doris Gardner, university staff
Frank Hack, university staff
Marie Hack
Sheldon King, executive director, Stanford Hospital
Arden King
Dr. Glenn Campbell, director, Hoover Institution
Dr. Rita Ricardo Campbell, senior fellow, Hoover Institution
Peter Stansky, professor of history
Norman Wessells, dean, School of Humanities and Sciences
Dr. Lawrence Crowley, vice-president for medical affairs
Madeline Crowley
Dr. Robert Chase, professor of surgery
Ann Chase
James Adams, professor of engineering
Marian Player Adams
Dr. Alexander Fetter, professor of physics and chairman of academic senate
Kenneth Arrow, professor of economics
Selma Arrow
J. Myron Atkin, dean, School of Education
George Dekker, professor of English
Linda Jo Bartholomew
William Massy, vice-president for business and finance
Robert Jaedicke, dean of Graduate School of Business
Marilyn Jaedicke
Dominick Purpura, dean, School of Medicine
Penny Purpura
Thomas Stamey, professor of surgery
Kathryn Stamey
Joseph Oliphant, professor of biological sciences
Lucy Oliphant
Robert Freelen, acting vice-president for public affairs
Sally Freelen
Wolfgang Panofsky, professor and director of Stanford Linear Accelerator Center
Adele Panofsky
Don Knuth, professor of computer science
Jill Knuth
Eugene Webb, professor of business administration
Mimi Webb
John Ely, dean, School of Law
Carolyn Gunn

Students

Buffie Eilert
Ronald Wilson
Deborah Chen
Raga Elim
Yolanda Townsend
Magdalena Rosales
Richard Klingler, Rhodes Scholar-designate
Kristina Johnston
Garin Veris
Doris Wilson
John Parkey
Roger Lewis
Julie Petro
Kim Schnurpfeil
Andrew Messing
Mark Epstein
Vladimir Bukovsky
William Halter, Rhodes Scholar-designate

Julia Kennedy, President Kennedy's daughter
Jeffrey Pinsker, guest of Julia Kennedy
Miriam Gooch, guest of President and Mrs. Kennedy

The queen's party included:

Queen Elizabeth
Prince Philip
The Duchess of Grafton, mistress of the robes
The Right Honorable Philip Moore, private secretary to the queen
Squadron Leader Adam Wise, equerry-in-waiting to the queen
James Beaton, superintendent
Lt. Cmdr. Andrew Wynn, equerry-in-waiting to Prince Philip
Lady Susan Hussey, lady-in-waiting
John Beaven, Her Majesty's consul-general
Mrs. John Beaven
Surgeon Capt. Norman Blacklock, medical officer to the queen
Robert Fellowes, assistant private secretary to the queen
Michael Shea, press secretary to the queen
Michael Deaver, deputy chief of staff and assistant to President Reagan
Ambassador Selwa Roosevelt, chief of protocol of the United States
Josephine Louis, wife of U.S. ambassador to the United Kingdom
Colin Smith, deputy assistant commissioner

Most of the Stanford guests at the lunch for Queen Elizabeth II and the Duke of Edinburgh were picked either by draw or because of their representative status. However, four of the guests were chosen at the urging of their own colleagues, because of their strong claims and their popularity. They were...



...John Gardner, a Briton who works in the Controller's Office, and his wife Doris, who is on the Food Research Institute staff. The Duke spotted Gardner's Royal Air Force tie and asked him about his wartime experiences.



...William Hack, another Briton, is a member of the University staff. With him is his wife Marie. The Hacks were ceremonially picked up after the lunch by Hack's colleagues and driven back to work.



The table setting at the lunch, as seen by the Queen. The flowers before her included Dutch tulips and sprays of spring blossoms from peach and quince trees. President Donald Kennedy sat on the Queen's left, and Chancellor Wallace Sterling on her right.

Queen's visit...

The Menu

Mousse of Smoked Pacific Salmon
Robert Mondavi 1978 Fume Blanc Reserve

Supreme of Chicken Florentine
Potatoes Anna
Sacramento Valley Asparagus
Mushrooms (Chanterelles) in Butter
Grgich Hills 1978 Napa Valley Chardonnay

Reine de Saba with Fresh Raspberries

The President's Toast

Ladies and Gentlemen:

May I beg your attention for just a moment.

My Stanford colleagues and I are honored to welcome our Royal visitors to the University. Your presence here not only does us honor; it climaxes a period of reflection on our own historical origins, the culture we share, and our intermingled futures. That kind of reflection is a central purpose for a great University. So we are thankful for the stimulus to thought, as well as for your welcome presence among us.

Now will you please rise, and join me in a toast.

To Her Majesty
and
His Royal Highness



The royal couple say goodbye to some of the 14 helpers, clad all in white, who worked in the kitchen or in serving. L. to R.: Mrs. Jeanne Kennedy; the Duke of Edinburgh; President Kennedy; Queen Elizabeth; a Secret Service agent.

Guitarist Lorimer plays March 12

The Lively Arts at Stanford will present the American guitarist Michael Lorimer at 8 p.m., Saturday, March 12 in Dinkelspiel Auditorium.



Michael Lorimer

Lorimer will play works by de Murcia and Corbetta on an original Baroque guitar, In addition, the program includes pieces by Villa-Lobos, Leslie Bassett, Bach, Turina, Ponce and Albeniz.

Lorimer, a protege of Andres Segovia, came to the attention of American audiences in the early 1970's, through tours arranged by the late Sol Hurok. He was the first American guitarist invited to perform in the USSR, where he toured the major cities in 1975 and 1977.

Known for his command of the Baroque guitar, he has given numerous American premieres of guitar concerti and solo works for the modern guitar, including a number written especially for him.

Lorimer regularly gives master classes at universities and conservatories all over the U.S., and was a visiting professor at the University of North Carolina for the academic years 1980-82.

Seen on the PBS special "The Art of Michael Lorimer," he also writes a monthly classical guitar column for *Guitar Player* magazine.

For ticket information, call Tresidder Ticket Office, (415) 497-4317.

Lorimer to conduct master class

Classical guitarist Michael Lorimer will conduct a master class from 7-10 p.m. Friday, March 11, in Annenberg Auditorium.

Lorimer is a protege of Andres Segovia and has a broad repertoire ranging from new works written especially for him to Baroque guitar music performed on an original instrument.

Students for the class were chosen by auditions which were open to residents of the greater Bay Area. They are:

Michael Goldberg of San Francisco, playing the first movement of Bach's sixth Cello Suite and Lauro's four Venezuelan Waltzes; Philip Johnson of Kensington playing Brouwer's De el Homenaje a Falla and De un Fragmento Instrumental, and Villa-Lobos' sixth study; Mark Limber of Santa Cruz playing the first movement of Berkeley's Sonatina; William Russell of Berkeley playing Villa-Lobos' Mazurka-Choro and Brindle's El Polifemo de Oro; and Sam Shaio of Stanford playing Ruiz-Pipo's Estancias and Lauro's Variations on a Venezuelan Children's Song. In addition, Augustin Wiedemann of San Leandro is the alternate and will be prepared to play Villa-Lobos' Schottisch Choro (Suite No. 2.)

The class is sponsored by the Lively Arts at Stanford, the Stanford Music Department, and the Stanford Music Guild. Proceeds will go to the Music Scholarship Program of the Stanford Music Guild.

Tickets are available at Tresidder ticket office and at the door. Tickets for observers are $5. Tickets for other students and senior citizens are $3. Stanford students may attend free.



Sheep are the backbone of New Zealand's economy

Producer narrates New Zealand film

"Incomparable New Zealand," a travel documentary, will be narrated by its producer, Ken Armstrong, in two screenings on Monday, March 21.

Presented by Stanford University Events and Services as part of the Discovery Film Series, the Film will be shown at 2:30 p.m. in Kresge Auditorium and at 7:45 p.m. in Memorial Auditorium.

Armstrong has filmed New Zealand's major cities and industries, the native Maoris, and the dramatic countryside of the both North and South Islands: fjords, peaks geysers, glaciers, and highlands.

Tickets are $3 for the matinee, and $4 for the evening showing.

Children's Dance class schedule given

Children's Dance at Stanford announces the Spring Session class schedule as follows:

Classes in rhythms and movement, movement and music, dance for boys, and modern dance will meet once a week on weekday afternoons or Saturday mornings.

The classes are open to children ages three to 13. Additional classes for nine to 13 years olds include ballet and a modern dance performance workshop.

The spring session extends from March 22 through June 4. Tuition is $31.50 for nine weeks of classes. All classes meet in Roble Dance Studios on the Stanford campus.

For registration information and a brochure, call instructors Elizabeth Larkam and Joy Weston at 497-4254.

Children's Dance at Stanford is sponsored by the Stanford Dance Division within the Department of Athletics.

Irish come to I-Center

Ireland comes to the International Center beginning at 5:30 p.m. on Sunday, March 13.

Bay area musicians will gather then for several hours of informal music. Dancers will be on hand to demonstrate various forms of traditional Irish dance.

An Irish supper will be served for those who have purchased supper tickets in advance. The tickets will go on sale at the I-Center on March 9 for $3.25.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., March 9, to cover the week of Mon., March 21, through Sun., March 27.

MONDAY, MARCH 14

Medical Microbiology Seminar: "Permeability of Outer Membrane, or How E. coli Changes Its Clothes According to Weather". 12 p.m. M114, Medical Center.

TUESDAY, MARCH 15

Applied Physics Colloquium: "Diagnostic Capabilities of NMR Imaging with Superconducting Magnets," by Prof. Leon Kaufman, UC San Francisco. 4:15 p.m. Applied Physics 200.

PANIC/ U.S. Peace Council Lecture: "The Path to World Peace," by Linus Pauling, Nobel Laureate. 7:30 p.m. Memorial Aud.

WEDNESDAY, MARCH 16

Condensed Matter Physics Seminar: "A Solvable Model for Hindered Rotors with Implications to Molecular Scattering and Desorption from Surfaces," by J.W. Gadzuk of the National Bureau of Standards Center for Chemical Physics. 2:30 p.m. Applied Physics 200.

Biological Sciences Seminar: Dr. Allan Spradling, Dept. of Embryology, Carnegie Institution of Washington. 4:15 p.m. Room T-175, Herrin Hall.

THURSDAY, MARCH 17

Condensed Matter Physics Seminar: "Dynamical Properties of Granular Superconductors," B. Muhlschlegel, Univ. of California, Irvine & Univ. of Cologne, Germany. 4:15 p.m. Applied Physics 200.

The Winter Nuclear Weapons Film Series: "The War Game". 7:30 p.m. Meyer Forum Room.

FRIDAY, MARCH 18

Men's Gymnastics: PAC-10 Invitational. 7:30 p.m. Maples Pavilion. $5 Adult, $3 Child.

SATURDAY, MARCH 19

Men's Gymnastics: PAC-10 Invitational. 1 p.m. Maples Pavilion. $5 Adult, $3 Child.

Baseball: vs. USC. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Men's and Women's Track & Field: Army/ Yale/ Iowa/ Bakersfield. 11 a.m. Stanford Stadium. $3 Adults; $2 Child.

SUNDAY, MARCH 20

Baseball: vs. USC. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Associates of Stanford Libraries Lecture: "Introducing Sir William: William Nicholson 1872-1949," by Stephen Gale Herrick. 3 p.m. Braun Auditorium.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"Photographs of Old Russia," by Jack Kollman. Faculty Club. Jan. 17 - March 26.

Ski Experience. Rare photographs of Yosemite by Ansel Adams. Stanford Museum, Miedel Rm. Jan. 18 - March 20.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Paintings by Marina Goodier. Tresidder Union, Upper Lobby. March 1 - March 31.

Annette Kaplan, *Luz do Sol*, Tapestries. I-Center. March 3 - March 30.

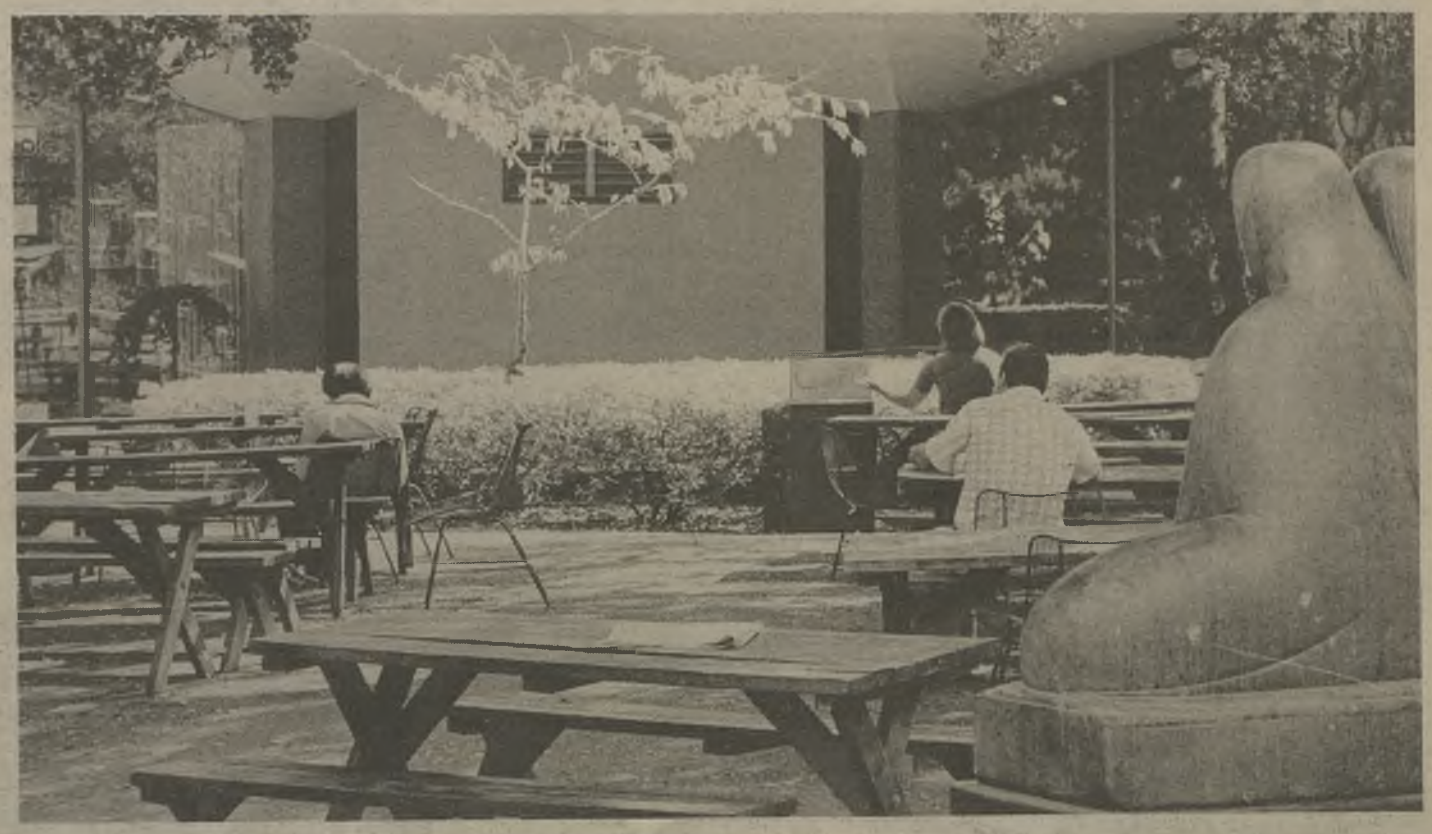
The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

CAMPUS REPORT

Volume XV, Number 24 | A publication for Stanford University faculty & staff | March 16, 1983

Dick Lyman, Wally Sterling hung together



"There were a few moments back in 1968, when I wasn't sure we might not be hanged together, Wally—not hung," Stanford President Emeritus Richard W. Lyman recalled March 9 at the unveiling of his portrait in Green Library.

"I remember, too, Dick," responded Chancellor J.E. Wallace Sterling, who headed the University then.

More than 100 faculty and staff veterans of that era attended the unveiling at the Lurie Rotunda.

"A university is the result of people's aspirations—presidents, yes, and faculty members, staff members, students, friends and supporters," Lyman said. "Or rather it is the result of the impact of those aspirations, and the hard work individuals put into trying to realize them, on a complex reality. For often what emerges is not quite what anyone envisaged—and sometimes even greater than everyone's aspirations combined."

Described as "mysterious" by portrait artist Arthur DeCosta, Lyman noted that "Gertrude Stein is said to have sat 80 times for Picasso while he worked on her portrait. Finally, complaining that he couldn't 'see' her any more, he packed up his things and went off to Spain to paint the portrait without her.

"When people subsequently complained that the finished picture didn't resemble Stein, the artist replied that someday she would look like the portrait.

"Thus does vision help to mould reality. We can all be thankful for the many people of vision, and patience, and determination who have made this the wonderful place that it is."

Lyman was described as "a likeable but serious, no-nonsense leader" by Cecil Green, who with his wife, Ida, capped the Campaign for Stanford with the lead gift for Green Library.

"You have always stood for nothing less than excellence, a tradition passed on to you by two other good friends, Wally Sterling and Fred Terman," Green told Lyman. "The fact that Stanford stands so high in recently announced ratings of graduate programs speaks well for the strength and capability of your leadership

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Investment banking 'hot' on job grapevine

Investment banking and consulting have become "hot items" for liberal arts students seeking jobs through the Career Planning and Placement Center at Stanford, Director Christopher Shinkman reports.

"There's a lot of talk on the student grapevine about Morgan Stanley, Merrill Lynch, and similar opportunities," he notes. These firms rank at the top of student preferences expressed in a new point "bidding" system used to eliminate long lines and overnight waits for student job seekers.

Such "old faithfuls" as IBM and Procter and Gamble also rate high among undergraduates, Shinkman says.

While more than 100 companies have conducted campus interviews for liberal arts seniors, about 10 to 15 percent of those firms planning to come this year cancelled, citing job freezes or layoffs.

This will change when the economy improves, Shinkman says. "The only question is when that will be."

Whether campus interviews are up or down, he adds, they represent only one segment of the job market. Companies doing campus recruiting tend to be large national or multinational firms, particularly in manufacturing and technology.

"It's wrong for students to think that's what's available," he says. Even in good times, relatively few small firms, government agencies, non-profit organizations and social service agencies recruit on campus.

"Some students think the campus interview is their only chance—that if they don't get an offer it's all over. Students need to be active and aggressive on their own, checking out local opportunities when they're home between quarters, for example."

The Career Planning and Placement Center offers a wide variety of programs to help students, including peer counseling, panel discussions, alumn, contacts,

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Civil rights class dropped after black students object

Black student protests have led to cancellation of a proposed civil rights class at Stanford this spring, similar to one that stirred national controversy at Harvard in recent months.

The proposed undergraduate course on "Racial Discrimination and Civil Rights" would have been taught by Jack Greenberg, executive director of the National Association for the Advancement of Colored People's Legal Defense Fund, and Julius Chambers, its president-counsel.

They withdrew as teachers after learning of the protests. "They don't want to be at the center of controversy again," said Seth Linfield, head of the Associated Students Guest Professorship Board (GPB), which would have funded the course with $9,800 from student fee assessments. It had been approved for credit through the Department of Anthropology.

President Donald Kennedy said it was "singularly unfortunate that the threat of controversy resulted in a worthwhile experience not being made available to Stanford students."

The Black Student Union (BSU) at Stanford officially opposed the course because "we are in solidarity with the national boycott of the course sponsored by the Black American Law Student Association (BALSA)." The BSU sharply criticized the GPB's selection methods and said "the course is not cost-effective."

Leaders of the Stanford BALSA chapter chose not to endorse the course, noting it would be identical to the one offered at Harvard.

"The symbolism of the course transcends the identities of the individuals involved," Rosalind Wiggins, Jude Kearney and Cynthia Robbins said.

"The problem is not Jack Greenberg or Julius Chambers. The problem is the wave of reactionary cutbacks and affirmative action rollbacks that are afflicting Third World people."

BALSA noted there is only one tenured black professor in the Stanford Law School and "only one other Third World person, who is not tenured.

"Because tenure decisions are presently being made, it is especially appropriate

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Senora de Allende can't come here, but State Department won't say why

The U.S. State Department has denied a visa to Hortensia Bussi de Allende, widow of Chilean President Salvador Allende. The Bay Area Ecumenical Council for Chile reported Thursday afternoon, March 3.

She had been scheduled to speak at Stanford at 7:30 p.m. Monday, March 7, under the sponsorship of the Feminist Studies Program as part of a 10-day trip to the U.S. May 4-13.

President Donald Kennedy called the visa denial "absolutely incomprehensible."

Mrs. Allende has visited the U.S. several times. The official denial was communicated from the office of Thomas Enders, assistant secretary of state, to Congressman Pete Stark. The Ecumenical Council said Stark was told her visit "is prejudicial to the U.S. interest because she is a highly placed official in the World Peace Council, and the Peace Council is affiliated with the Soviet Union, both ideologically and financially."

Prof. Fernando Alegria, internationally known Chilean scholar at Stanford said he was "appalled" by the "unfair" decision, which has no appeal.

Elizabeth Fitting of feminist studies said it was "shocking" for the government to "fear freedom of speech." She plans to visit Allende in Mexico soon.

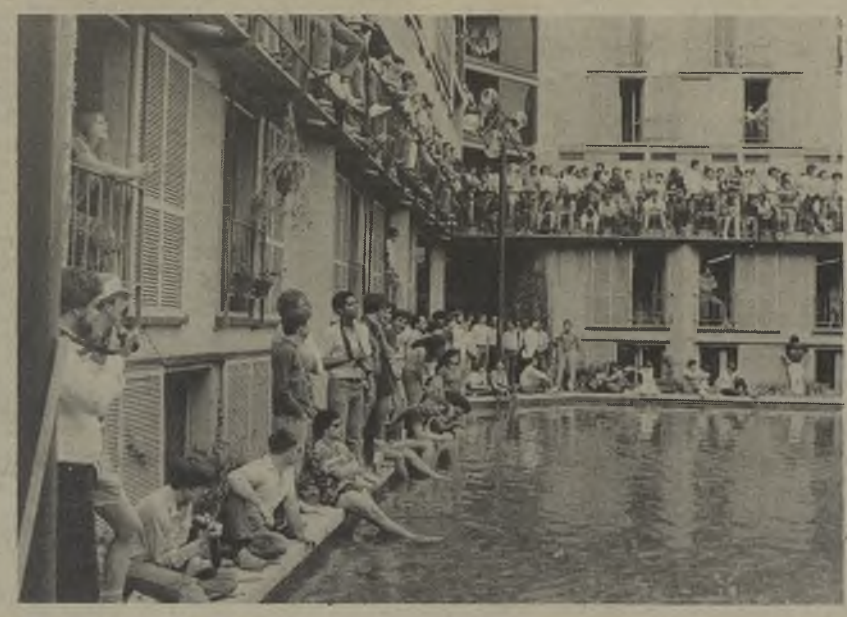
Cecilia Burciaga, assistant provost at the University, said "not allowing her to come is unconscionable. I'm very disappointed that a woman at age 71, a leading proponent for women's rights, is denied entry" for an occasion marking women's contributions to society.

Dianne Rennack of the Ecumenical Council said "Mrs. Allende is an international spokeswoman for human rights, the first lady of democratic Chile, and a symbol of the struggle for democracy and self-determination.

"If the State Department finds her threatening or subversive, we'd like a further explanation. Where's the offense? Where's the threat?"



Prof. Bernard Roth, (left,) mechanical engineering, watches student Allen Fox trail a device designed to proceed down the path beside the Terman pool, stop, and pick up a $20, $50 or $100 bill. Fox's device literally worked off the wall, but failed to collect. Julie Kuark and David Baszuki got $50 each.



Hoover receives Deukmejian papers

Governor George Deukmejian has selected the Hoover Institution at Stanford University as the repository for his papers as State Assemblyman, 1963-1967, State Senator, 1967-1979, and Attorney General of California, 1979-1983, Institution Director W. Glenn Campbell announced Friday, March 11.

The papers totaling some 112,000 documents, have already been transferred to the Hoover Institution where they join the archives of other distinguished Californians who have been in government service. His papers will provide future scholars with primary source material on many public issues during a critical period in California history.

Campbell commented: "I am particularly gratified that the new Governor of California has decided to deposit the papers from his distinguished career in the State Legislature and as Attorney General at the Hoover Institution. We are looking forward to a long and cordial relationship."

The Hoover Institution Archives is one of the largest private archives in the United States and holds over 27 million documents on social, political, and economic change in the twentieth century.

Faculty openings

VTS needs two new lecturers

The Program in Values, Technology, and Society, Stanford University, announces two openings for 1983-84 as Lecturer, to teach in "Western Culture and Technology," one of the courses designed to fulfill the undergraduate requirement in Western Culture. Appointment is for one year, renewable to a maximum of three years.

Duties: leading four discussion seminars weekly in autumn quarter, three in winter and spring quarters, averaging 17-18 students each; reading and grading written work for those students; consultation in planning the course for the three quarters; occasional lectures; some light administrative work in the course.

"Western Culture and Technology" examines the history of Western culture from prehistoric times to the present, focusing on the ways in which intellectual currents, social orders, and material culture are related to one another at various times. Seminars are devoted mainly to discussion of major primary works, such as the Iliad, Plato, Aristotle, Augustine, Thomas Aquinas, Machiavelli, Thomas More, Shakespeare, Descartes, the **Encyclopedia**, Goethe's **Faust**, Darwin, Marx, Nietzsche, and others.

Qualifications: Ph.D. completed by August 31, 1983; good record of teaching, willingness to work on material outside one's specialization. No particular specialty prescribed; ability to handle historical, literary, philosophical, scientific, and technological materials and their interrelationships at the appropriate level over the whole span of Western culture.

Salary: approximatey $18,000 full-time. The position as described above is just over half-time. The program offers the opportunity to teach an additional one-quarter course in VTS, bringing the position to 75 percent. Such a course, subject to approval by the VTS Program's Administrative Committee, ought to deal, for undergraduate nonspecialists, with some aspect of the relation between technology or science and social structures or aspects of the humanities.

Please send dossier, including letters of reference, and a letter of application, indicating interest in the position and stating qualifications, together with a proposal of an independent course, by April 15 to: Professor Edwin M. Good, Values, Technology, and Society, Building 370, Room 372, Stanford University, Stanford, CA 94305.

Inquiries and questions may be addressed to Professor Good at the above address or by phone at (415) 497-0473.

Stanford University is an Equal Opportunity Employer. Women and members of minorities are especially encouraged to apply.

Annelise Anderson senior research fellow at Hoover

Hoover Institution Director W. Glenn Campbell has announced the appointment of Annelise Graebner Anderson as senior research fellow, effective immediately.

Until recently associate director for economics and government in the Office of Management and Budget, Anderson has been a research fellow since 1978 and has been on leave since 1980.

While on leave, she was a senior policy adviser in the 1980 Reagan Presidential Campaign and associate director for economic affairs in the Office of the President-Elect.

Anderson was the first project manager at the Law Enforcement Assistance Administration in the U.S. Department of Justice and wrote *The Business of Organized Crime, a Cosa Nostra Family* (Hoover Institution Press, 1979).

Anderson graduated from Wellesley College in 1960, received her M.A. from Columbia University in 1965, and her Ph.D. in Business Administration there in 1974.

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Education will face a teacher shortage, says Myron Atkin

The answer is schools where year 30 on the job is not like year three

BY DONALD STOKES

A crucial problem looms over the fact that at long last more funds and support seem to be coming to help pull the public schools out of their dumps.

It is: Where are we going to get the teachers to put the schools on their feet?

For more than a decade the quality of people going into teaching has been dropping. Not entirely coincidentally, the SAT scores of pupils have skidded drastically.

There is a man who is in a key position to hazard some answers. He is Prof. J. Myron Atkin, dean of Stanford's School of Education, which is generally ranked as the best such institution in the U.S.

I sense a new atmosphere," he says. " The government and business corporations are getting behind education. Funds are promised, many studies are being made. The outlook is promising for the first time in a decade. But the problems are legion."

With teacher morale at a new low, and with many of the most suitable people avoiding the profession, how does one recruit and train a new generation of efficient and self-confident teachers?

"We have to create a non-threatening atmosphere," says Atkin, "a place where teachers can reflect about their own work and how to improve it. A place that is not so high-pressured as is common today.

"Above all, we need schools where year 30 on the job does not look quite as much like year three. In other words, where there are opportunities to acquire more responsibility and intellectual satisfaction without necessarily leaving the classroom and moving into administration.

"We need schools where experience and talent can be recognized. This is in addition to all the obvious things such as smaller classes and higher pay, and a curtailment of the tendency to dump onto the schools many of society's problems that the schools are ill-equipped to handle. All this is a tall order.

An interviewer suggested that it needed a very special type of person even to attempt teaching in some of the urban schools, in view of the high level of violence, drugs, and teacher harassment.

"I think that is no longer the case," Atkin replied. "The situation may be bad in some cases, but the Sunday supplement horror stories are five years out of date.

"When I go to the schools, which I do very frequently, including schools in rough districts, I see that they have their problems, particularly with drugs and security, but they are much more serious educational institutions than you would infer from some of the media articles.

"The students are serious. Perhaps that is because of hard economic times. The students have a purpose, they want to get as much as they can out of their schooling. The teachers are serious in their methods and aims. I have been impressed by what I have seen.

If events go as I foresee, we shall find ourselves in a situation roughly comparable to what happened after Sputnik, when the nation put enormous efforts and funds into training people in math, science, and foreign language teaching.

"If our attitude to the schools changes that may spill over into more general support. We shall perhaps see the demand for teachers exceeding the supply. In any case a major problem will be to upgrade the type of person going into teaching.

"I was talking today with a school principal in San Mateo, and he told me that he sees the need for massive hiring of teachers before the end of this decade.



Prof. J. Myron Atkin

"Already we have shortages of math and science teachers. We shall be hearing of other shortages before long. Does the supply of teachers go in cycles? Well, we had shortages in the 1960s, a surplus in the 1970s, and now we are heading toward more shortages.

"It is very hard to keep supply and demand in balance. Twelve years ago the nation was worried about a shortage of engineers. Today there is a surplus of lawyers.

"However, the task of rebuilding our teaching force will be a truly immense one. Many secondary schools now have no teachers who have been on the job for more than 14 years. The rest have been dismissed for economy reasons, or else have quit for better-paying jobs outside the profession.

There is powerful evidence that the academic ability of those entering teaching today is distressingly low, lower than at any time in the last 50 years. In 1979, college-bound high school seniors who intended to teach scored an average of 392 on their SAT verbal exams. They were the worst group of all, with the single exception of those planning to go into ethnic studies.

"There are many reasons beyond the obvious one of low pay to explain why entrants into teaching today rank low in ability. One can list violence in the schools, limited opportunities for advancement and increasing government dominion over teaching.

"More fundamentally, perhaps, there has been a loss of optimism about America's potential to alter individual opportunity through social programs, and therefore able young people who want to improve the general welfare choose other occupations.

"It is all the more remarkable that there still remains an able and dedicated group of teachers in the high schools today. We find them up and down the Peninsula, but also at some of America's most difficult schools, places in decrepit neighborhoods where many of us would hesitate to walk.

"One of the most moving experiences for me personally is to visit such schools and observe the dedication and ability of an extraordinary number of teachers.

"They care about the children. They know their subject. They keep trying, heroically sometimes, in the face of all odds. Also, the students in our own master's level program that prepares secondary school teachers are quite able; they compare very favorably with other graduate students at Stanford in all intellectual dimensions.

"So there is a core of people with which to build in our attempt to enhance quality.

"One of our major problems is that during the 1970s each of the special-interest groups in America tried to advance its own cause with little regard for the general welfare. Special-interest groups for minority ethnics, for the handicapped, women, homosexuals, and the aged were just a few of those that moved to new, aggressive activity.

"The new power was used to influence the schools. Paradoxically, while governmental initiatives were falling under a cloud and people were resisting government programs because they felt such programs were ineffective or unnecessarily intrusive, the same people often were trying to use government to advance their own causes.

"The loss of national consensus was reflected by increased fragmentation within the education community. Policy came to be formulated less by those empowered to advance the welfare of the entire education system—school boards, for example—and more by groups representing various segments of the community, depending on their political power.

As confidence in the schools seemed to diminish during the 1970s, and as public expenditure for welfare and health programs began to increase markedly while the school population started to decline, state legislators interested themselves more in education affairs. Their aim was to exert greater control over the schools, to bring them to account. Political figures, reflecting the public mood, showed concern about falling test scores, teacher competency, and efficient use of the dollar.

"There were experiments with performance contracting, competency-based teacher education, legislatively-mandated program evaluation, education vouchers, and, most recently; minimum competency testing.

"In addition the state legislatures as well as Congress began to respond to the pressures exerted by special interest groups. Efforts were pressed to strengthen programs in vocational education, alcohol-abuse education, special education for handicapped children, education for the gifted, bilingual education, and education in the history of the various ethnic groups.

"Just as Congress began to require special attention to various subpopulations, so, too, state legislatures began to do the same thing."

How can Stanford, as a pilot in education, help the national situation?

"Our special obligation, as a university, is to monitor and help improve the intellectual activity one finds in elementary and secondary schools. A primary method of meeting this obligation is to focus on teacher education and curriculum questions.

"What we do here has a significant influence on those we touch directly but there is also an indirect impact because of our reputation. We shall do well to capitalize on both opportunities.

I think that Stanford can be an influential force for improving high schools. I think it is possible and desirable for scholars in English, foreign languages, sciences, social sciences, and in other fields that constitute the high school subjects, to take steps to reinvigorate the high school curriculum.

"The American dream has been to educate virtually everyone. Unfortunately, we seem to forget

continued on next page

Filing state, federal reports a growing function in California schools

Federal and state education agencies required a typical California school district with 30,000 students to file 153 reports in 1979-80, a new Stanford study shows.

The study was conducted in an unnamed district by Mary Bankston, doctoral candidate in sociology and reported in a recent issue of *Policy Perspectives*, published by the Institute for Research in Educational Finance and Governance at the University.

"The inordinate demands of report preparation shift administrative attention up toward the regulatory agencies, rather than down toward instructional activities," Bankston said.

Categorical programs

More than 100 reports were required for categorical programs administered by the district. Seventeen of the 53 central district administrators were retained and funded through these programs.

"Discussions with 25 district administrators in all revealed that no single administrator was able to describe what happened in other departments," she said. "Some of the administrators, particularly those supervising categorical programs, were hard-pressed even to know all of the facets of the programs for which they were directly responsible."

Seventy percent of the reports were for various California Department of Education offices, with the rest for the U.S. Department of Education.

The self-perpetuating momentum of the bureaucratic phenomenon is hard to stem.

Although it provided only eight percent of the district's income—or $6 million—the U.S. Department of Education required 30 percent of the reports.

In contrast, local government, which supplied 23 percent of the total income, only required copies of certain fiscal reports sent to the state.

Bankston's tally did not include many short forms prepared due to special circumstances or on an "as required" basis for federal and state agencies.

Most reports tended to be lengthy, with many more than 50 pages long, she found.

"Report writing. . .was spread throughout the district. Twenty departments within five district divisions were occupied with writing reports. . . . Indeed, this activity appeared to be the primary activity of many departments.

"Each unit prepared and submitted reports on an individual basis, and little integration or coordination could be discerned at the district level."

Consolidated reporting

While the California Department of Education has developed two separate "consolidated reporting systems" for some of its categorical programs, "the resulting reports were longer and did little more than change the manner in which (the reports) were delivered to the state.

"In fact, as soon as these consolidated reports were sent to the state, they were separated by section and sent to staff personnel handling specific programs," she said.

To meet reporting demands imposed by outside agencies, the district's administrative structure became larger, more differentiated, and increasingly complex.

"As new programs were implemented and expanded, the school district found it necessary to expand its facilities for administrative operations," she added. "This has resulted in a scattered and disjointed physical plant. . .(and) make(s) it increasingly difficult to maintain an overarching framework within which to conduct the overall educational enterprise. . . .

"Advocates of deregulation anticipate that new laws may make it feasible and attractive for districts to reduce the size of their administrative units. . .which have grown due to burdensome reporting requirements.

"Given California's record in consolidating its reporting, and given the fact that so many school district administrators are currently supported by categorical program funds, the task might be a most difficult one.

"The self-perpetuating momentum of the bureaucratic phenomenon is hard to stem, even at the local school district level."

Copies available

Copies of Bankston's report, "Organizational Reporting in a School District: State and Federal Programs" may be obtained for $2 by writing IFG, School of Education, CERAS Building, Stanford, Ca. 94305. Phone (415) 497-2754.

Atkin. . .

continued from page 3

or ignore the extraordinary degree to which we have achieved that goal. However, many educational tasks have become progressively more difficult. For example, school districts find it harder for financial reasons to support special classes for bright youngsters. In contrast, the schools are obliged to support a considerable range of other types of children with particular problems.

Fortunately, the university community is beginning to stir itself about these problems. It is beginning to recognize that its own well-being depends on the quality of the high schools. A harbinger of this was, I think, the report of the Commission on the Humanities, titled 'The Humanities in American Life,' that identified the improvement of elementary and secondary education as the prime strategy for improving the state of the humanities in the United States.

"The commission was chaired by Richard Lyman, Stanford's former president. Donald Kennedy, our present one, helped launch the report at a press conference.

"It is not easy for professors and school teachers to work together. For 100 years professors have not hidden their low regard for school teachers. On returning from a brief World War II stint in the Navy and telling my college chemistry professor that I had decided to become a high school science teacher he did not conceal his disappointment.

"Schools in almost all ways are reflections of the communities that support them. The time seems to be ripe to emphasize the academic side of a high school education. Regardless of the debates about the schools as instruments for social change, there is full agreement by all parties that one unquestioned purpose of these institutions is to produce educated people.

"We have fallen into the habit in recent decades of examining questions of educational policy almost entirely in sociological and economic terms. In that process we have focused less on what we teach.

"We need a period during which we examine education as an end in itself. What inherent value does it have? What does it mean to be an educated person? What knowledge is of most worth?

"There is disarray in curricula both in high schools and in colleges. It seems to me that in this very area universities have much to contribute, though it would be an error to be sanguine about the prospects."

In 1979 Atkin visited China at the invitation of its Ministry of Education to study Chinese pre-college science education. Asked what contrasts he had found between the two societies, and whether the U.S. could learn anything, he replied: "We are probably not able to learn anything from them in an imitative sense, but the Chinese methods remind us of the powerful roles played by supporting institutions in a society.

"If the family, as well as the teacher, regard education as a prime function in society, then the child is much more likely to take education seriously. In China, homework is frequently supervised by the parents.

"In other cases, very often it is supervised by the grandparents, who tend to play a considerable role in China; they retire early on fairly generous pensions, and play a useful role in the family while the parents are working.

"One remarkable fact occurred to me. A good many of the grandparents aged over 55 who were supervising the children were probably illiterate! I asked the guide how they could perform as supervisors. 'That is easy,' said the guide. 'They simply keep saying, "Do your homework!" and make sure that the children do.'

"The whole family structure in China forms an environment favorable to a child's learning. This occurs also among many Americans of Chinese descent. My daughter has a Chinese-American friend who has been explicitly told by her parents that her role in the family is not to help with the dishes or in cleaning the house; she is expected to do her homework or to practice on the piano; that is her work.

"I was sternly reminded that my daughter is expected to help with the household chores."

On the other hand, Atkin found aspects of Chinese education distressing: "All too often there was mindless repetition, a sing-song in chorus. There was very unimaginative use of the time of talented children. In special science classes I saw youngsters winding motors, or wiring up electronic devices which were the equivalent of a Heath kit here, without much understanding of the basic principles that made the devices work.

"I was looking for what the Chinese did for their bright youngsters, and found it distressing. They asked me what I thought and I told them frankly."

The most important educational institution that Atkin himself attended, he says, was Stuyvesant High School in New York City.

"This was a science-oriented high school, and youngsters who passed the exam could go to it, from all over the city. It was a stimulating place to be. I went to it from a Brooklyn elementary school that had a depressing homogeneity, and it was great to find myself, at Stuyvesant, among kids from all over the world, of every conceivable race, religion, and color."

Atkin moved rapidly through the public school system, and at the age of 16 went to City College of New York, where he got his B.S. in chemistry at the age of 20.

"By the time I had been drafted at 18 I already had close to three years of college. I went into the Navy and my experience there convinced me that I didn't want to be a chemist, that war was horrible. I wanted to help ameliorate some of the world's problems and the best way, I thought, would be to go into education.

"I decided that since I had a science background, I would become a high school science teacher. I gained my M.A. in science education at the age of 21."

After teaching chemistry and biology at a small school in Manhattan for two years he spent five years as an elementary science teacher at Long Island schools. During this time he was a summer session instructor at Lehigh University and New York University.

In 1955 he joined the College of Education at the University of Illinois as assistant professor of science education. He rose steadily and became dean in 1970, a post he held for nine years before coming to Stanford in 1979 as dean of its School of Education.

He has published some 15 books and monographs on various aspects of education, and 39 articles.

As dean of the leading school of education in the country his views have been widely sought, and he has been given many grants or awards to study various aspects of education.

In addition to his travels in China, he has studied first-hand the educational systems in France and Great Britain.

"Education faces problems everywhere," he says, "and America's are as serious as anywhere. They require serious attention, but I sense that we are going to get more support in meeting them."

Lila Stuart: opera singer, voice teacher, mother of five

BY JULIA SOMMER

Being an opera singer, voice teacher, and mother of five can get hectic, but Lila Stuart seems to have gotten the best out of all three.

Appointed professor of music (performance) at Stanford this year, Stuart has fascinating tales to tell.

She was reared in Boise, Idaho, the sixth of seven children in a musical family. "I decided I wanted to be a singer when I saw my older sister in high school plays. I was enthralled by her performing."

Stuart studied piano and violin, but didn't take voice lessons until a senior in high school. "Starting voice lessons at 17 is early enough; before that, it's more important to develop your musical background," she explains.

Shortly after high school graduation, Stuart married tenor Val Stuart and promptly had three children in four years. "I got married before I knew there were such things as not getting married," she says. "My mother did the same thing."

But Stuart knew she wanted to go to college and knew she wanted to be a singer. With children aged five months, one-and-a-half, and three, she entered the University of Utah, graduating in voice three years later. She then taught voice at Utah for one year, having her fourth child during Christmas break. "I had Valerie New Year's Eve, and was back teaching Jan. 4," she recalls. "Four weeks later I did *La Boheme*!"

Asked how she managed school, career, and family, Stuart laughs and says: "You just *do* it."

In 1962, Stuart was Rocky Mountain regional winner of the Metropolitan Opera auditions, thereby winning a place in the Merola summer training program at the San Francisco Opera. "I farmed my babies out to relatives," she recalls.

When their fourth child was six months old, both Stuart and her husband received generous graduate assistantships at Indiana University's School of Music. They spent the first two years earning their M.M. degrees, and in their third year were made artists-in-residence.

"We performed a great deal—60 or 70 performances. It was marvelous training. In fact, when we moved to Southern California, we were amazed at how inferior the opera companies were compared to Indiana's."

Indiana could not hire both husband and wife, so the Stuarts decided to move to one coast or the other to pursue their singing careers. They felt New York was not a good place to raise children, and opted for Southern California.

There, Lila Stuart was hired by the University of Redlands, where she taught for 13 years before coming to Stanford. She replaced Marie Gibson, who had been hired by Stanford and now, coincidentally, replaces her again.

"Ideally, my singing career should have come before the children or teaching," says Stuart. "It's difficult to perform, teach, and be a mother and wife all at the same time. And since my husband preferred me at home, I slowed down my performing career and zeroed in on teaching." (Stuart is now divorced.)

"In any case, it's impossible for singers to make a living in this country, except for the super-stars. There aren't enough opera companies in the U.S., most of them don't pay their singers a living wage, and there aren't enough performances to support all the very talented singers we have. I knew from the beginning that I would have to do what I'm doing now, so I worked at becoming the very best teacher possible."

Germany is the best place for an American opera singer to go because there are so many opera companies and they hire American singers. But I really couldn't drag all my kids over there. They needed stability, and I knew I would, too, eventually."

While living in Redlands, Stuart's husband started a road construction business, which she helped run. One of her sons now has his own road construction business, another is in the army in Germany, and her eldest daughter lives in Salt Lake City.



If you can get through an opera, you can get through anything. There's always the unexpected—stage hands listening to baseball games backstage while you're performing, scenery falling over, costumes falling off. And any time you have children or animals on stage, you know you're in trouble. ***—Lila Stuart***

Recalling some of the dramatic moments in her performing career, Stuart describes a notable performance of the Masked Ball (*Un Ballo in Maschera*) in which she sang Amelia. "I was singing an aria bewailing the fact that my lover was dying, when all of a sudden I thought a spider was crawling down my face! Actually, it was a false eyelash falling off. So, in the middle of my aria, I made a dramatic gesture upstage, pulled it off and stuffed it down my front. Then I became so distracted by the remaining lash that I had to repeat the gesture, but I made certain my acting covered it.

"If you can get through an opera, you can get through anything. There's always the unexpected—stage hands listening to baseball games backstage while you're performing, scenery falling over, costumes falling off. And any time you have children or animals on stage, you *know* you're in trouble."

Stuart recalls a performance of *Aida* with Grace Bumbry. Traditionally, various exotic animals are brought in for the Triumphal scene.

For this performance an elephant, a cougar, and a pregnant camel were hired.

(The cougar's trainer was disguised as one of the crowd). The camel went to the bathroom on stage. "There was no chance to clean it up," says Stuart. "Aida had to practically jump over the mess to get on stage and sing her aria! The audience was cracking up, and so were we backstage. It wrecked the opera."

A similar misfortune happened when Stuart sang the Marschallin in *Der Rosenkavalier*. Traditionally, the "lave" scene in the opera uses an afghan and a lap dog. The very first night the afghan, in a fit of nerves, did the inevitable. But this time a "super" had the presence of mind to hurry off stage, returning with a broom and pan to clean up the offending pile.

"We made much of it, holding hankies to our noses, incorporating the commotion into the scene," laughs Stuart. "But the next day the SPCA called, complaining of cruelty to animals. So, to avoid any fuss, we made do with just the lap dog from then on."

Stuart has also sung with Schwarzkopf in *Der Rosenkavalier*—"a marvelous woman, both on and off stage. . . a real lady"; Otto Edelmann and Ann Moffo—"what I would say about her you couldn't print"—among other big names.

Stuart's 18-year-old daughter and eight-year-old son live with her at the Peter Coutts housing project on campus. "I may never do professional opera again because of my son," says Stuart. "He's just too young to leave for periods of time and I feel strongly about raising this child well. Once Valerie goes away to college, I'm totally responsible for him. I couldn't leave him for six weeks."

Other memorable tales from Stuart's opera days include a tree falling over while she was singing *Donna Anna* with the Kentucky Opera and an excruciating 16 minutes singing in a potato sack in *Rigoletto*. "As Rigoletto's daughter, I was stuffed into a brand new burlap potato sack back stage for my long dying aria. By the time Rigoletto opened it, I could barely breathe, let alone sing!"

Another notoriously scary maneuver for sopranos is the final scene in *Tosca*, when Tosca jumps off a parapet to her death. "It's worse than death itself," says Stuart. "The stage director usually arranges the type of landing pad pole vaulters fall on, and you just pray the stage hands have put it in the right

continued on next page

Letters to the editor

As faculty learn computers, Cohn worries 'a tad more' about humanities

Editor, **Campus Report**:

Granting that computers and word processors have their point in terms of efficiency for routine work, what interests me here is their use for humanistic purposes which involve original thinking or creativity.

A major characteristic of creative writing is the freedom or gratuitousness assigned to it by Kant. It is holistic, nondirected (autotelic) and nonlinear in that sense. This implies an organic continuity with overall reality to the extent that the "inspired" writer sees himself ideally as a voice of the world, of life as a whole, or nature, with inevitably some implication of divinity or the sacred. Producing art of this kind can be a solemn, sacrificial affair with ritual invocations of a muse and a serious attempt to get the ego out of the way through self-effacement and humility, even into our time.

Mallarme saw his task as "yielding the inititative to the words" in this way; T. S. Eliot intoned that the cost was "not less than everything"; Thomas Mann begins his final novel with a moving prayer out of Dante; Northop Frye alludes to the attempt at anonymity on the part of the ambitious symbolists, and so on.

This humble homage to what surpasses us all around, as opposed to the blinkered manipulations of "Faustian" technology, is the main reason why monuments are raised to and sites are named after leading artists and seldom to professors or technicians; the best books or canvases are freely open to the world at large and the world reciprocates in this way, through a mutual "affair."

Now, art of any sort involves a process of conversion from a whole (conception in the artist) through a serial, linear or "metonymic" **articulation**, to end in another whole, the conception in the receiver. This is analogous to the processes of physical procreation whether the "dumbbell" shape of the relation between sexual partners or the deeper structure whereby a whole human moves through a genetic serial code (DNA) to a new whole human, the heir.

In artistic creation as opposed to procreation, the instrument is the hand rather than the sexual device, and it articulates the code with pen marks or brush-strokes, and the like. The mouth can also serve in this way (as well as body-gestures), but its articulations are more ephemeral. The characteristic device of the writer-as-artist remains the pen or pencil, which is clearly the spontaneous way of going about this deep organic business, based on the obvious analogies (which have often been acknowledged).

The question arises now: why not use ten fingers on a keyboard, a word processor's, and enjoy the added efficiency of being able to see it all on a screen, automatically erase, etc. Pianists use those fingers and artistically, so?

It would be hard to rule out this happening: one **can** imagine an Emily Dickenson or a Keats emerging from the "shipwreck" which Sartre sees as indispensable to poetic conception—in this sense the pen can be a spar, the scrawl a lifeline—subsiding into the hushed, prayerful mood propitious to authentic expression, perhaps falling on their knees, and then seating themselves in front of an Atari or IBM computer, turning on the switch and pushing the keys.

But surely this is problematic. In the first place, seeing one's utterances displayed as perfect letters on a luminous glassy screen is not conducive to humility.

This is what glibness means: an outstripping in space and time (e.g., perfection of the letters, premature rendering) of form over substance. It is far closer to unpretentious organic evolution if one first sketches on scraps of paper, backs of menus, matchbooks, etc. whatever is beginning to take shape in that authentic and holistic "computer," the psyche; or scribble on pads and see those early drafts for what they are, abortive, incomplete.

The job of getting wholes into linear sequential equivalents is devilishly demanding; one knits one's brows, sweats, frets, **concentrates**. The resistance of the medium helps in this respect, just as hard marble helps the sculptor, says Rodin, or intricate verse-patterns supported the efforts of poets like Valery. Conversely, the efficiency of the machine (or dictating) tends to induce you to run on too fast for deep innovation and rounded complexity, which is a "looping" affair, involving all sorts of concerns of the past and surrounding the project.

Precisely, one **loops**, with the pen. It is more **painstaking** in this sense, as a top-drawer engineer said to some of us, explaining why he used a pen for serious composing. One occasionally sees earnest scriveners imitating that looping with their mouths or even, in a way, the whole body behind the effort, which is as it should be: "One must think with one's whole body" (Marllarme). And even beyond, you draw on the entire past and the environment for the enterprise, so that the ritual trimmings, the paper with its pure innocence daring you to violate it, the good smell of the eraser, the affectionate aggression of the Act, all that is part and parcel of the creation, members of the wedding.

The other way, with the glossy gadget, is at least a little bit like procreating with a bionic instrument, or say, a priest's dispensing the ritual Host from a streetcar conductor's change-dingus. Again, it is conceivable. . . . But this leads me to a nagging query.

Knowing that glorious masterpieces have emerged from pens, what is the cottonpicking hurry and why take such a risk? I mean, of course, for serious work, those "moments of truth" when you are going to make it or not in an important way and you feel some awesome figures staring over your shoulder (I'd die of embarrassment to see one of them reflected in the glass screen). The tiniest deflection or defection in instants like that is likely to be fateful. . . .

By the same token, I don't understand humanistic colleagues in a time and place which is so distorted toward quantity, technology, material success, and other illiberal values not feeling an instinctive revulsion from that mass program, urged on them by businessmen. I know that some of them do feel revulsion because they have told me so. But what of the others, the 132 who signed up for the "Tiro Project" (named fittingly after Cicero's slave-amanuensis)?

Well, it depends on what they intend to do with the machines. If some of them plan to write meaningful books or articles on them, we should start worrying at least a tad more about the future of the humanities at Stanford. I'm afraid there are signs here of an all-too-familiar drift. . . .

Robert Greer Cohn
Prof. of French

Lack of 'A' parking space riles staffer

Editor, **Campus Report**:

I, too, am confident the University has sold something they do not have, namely, "A" parking places. Like the others in their letters to **Campus Report** (Caldwell 3/9 and Clausen 3/1) I do not object to paid parking, but I would like to know that for my $75 I don't have to hike two or three blocks after I park.

At the Medical Center cars are parked in the red zones, in the dirt, on the side of the roads, etc., so why buy any sticker? I also arrive at 7:45 a.m. to be assured of good parking. However, if I take my car out during the work day, I cannot be assured of finding a parking place in any lot at all when I return to work.

I would like to see the **Campus Report** publish an article giving the number of A and C stickers that have been sold and the actual number of A and C parking places that are in existence.

It would not surprise me a bit if there were more stickers sold than there are parking places. Sounds a bit illegal.

Louve McCabe
Dept. of Medicine

Health and safety report

Accidents and Injuries Occurring During Week of Mar. 7-11

Cause of Accident	Number	Number of Days Off
Animal/insect contact	2	(0, 0)
Chemical inhalation	1	0
Impact with object	1	0
Cut by sharp object	3	(0, 0, 0)
Fall from height (incl. stairs)	2	(0, 0)

Lila Stuart...

continued from page 5

place, and that they will be there to catch you if you bounce off!"

The same type of blind faith helped Stuart in *Norma*, when, in the last scene, Norma walks into a fire with her lover. "There was lots of smoke and I had to climb down 12 feet without being able to see a thing. I just prayed I would hit the steps and not fall 12 feet to the ground."

And then there are the funny moments. "When I sang *Abduction from the Seraglio* a coconut was left on stage, so I kicked it into the orchestra pit to get it out of the way. I was told later that it landed in one of the horns.

"Opera is extremely demanding and unforgiving. Besides the singing, you have to get the drama across. But after you've sung a role many times, especially a comic role, you can start having fun with it and even play tricks on each other. In Britten's opera *Albert Herring*, the lead has to guzzle quantities of alcohol. We surprised him one night by substituting the real thing. Of course, he had to drink it."

Opera is not only singing, but acting, memorizing, make-up, and stage savvy. Stuart has never taken formal acting lessons, but acting has come easily to her. "You pick it up fast. It's a matter of observing, reading, feeling out what works best. I insist my students learn the basics about their bodies. Singing prettily just isn't enough."

Stuart has all her students watch themselves in her studio mirrors so they don't pick up weird tricks. "You can't be singing 'I love you' when your hands look like you're going to sock him in the jaw!

"You have to learn how to do you own make-up, too. Most singers know better than make-up artists how to make themselves look good."

As for memorizing everything, Stuart says, "you simply have to become a quick memorizer. I've had to memorize many operas in two-and-a-half weeks, and I've often worked on three or four operas simultaneously. But the memorization gets more difficult as I get older.

"The longer you keep your body healthy, the longer you keep the voice healthy. You have to eat well, sleep well. Unfortunately, I have a fetish for chocolate, but I go as long as I can without it. And I'm an excellent candy-maker." Regarding exercise: "I love to dance. Inside me is a 100-pound ballerina."

Stanford's voice students are enthusiastic about Stuart's arrival: "Not only does she have an excellent knowledge of the voice and vocal literature," says DMA candidate Sharon Paul, "but her enthusiasm for teaching is inspiring and motivating."

Stuart is pleased with her move to Stanford, too. "I am delighted with the intellect of my students," she says. . . "not only my music majors, but I particularly enjoy my students from across campus. Most of my students already have a second language, so I don't have to spend valuable lesson time teaching diction."

Stuart will give her first Stanford recital at 8 p.m. Tuesday, April 5, in Dinkelspiel Auditorium with pianist Jodi Gandolfi. She will sing lieder by Schubert, Strauss, and Schoenberg; the aria "To This We've Come" from Menotti's opera *The Consul*, melodie by Debussy, and *La Bonne Cuisine* by Leonard Bernstein—four songs based on outlandish recipes (a subject close to Stuart's heart).

On Tuesday, April 26, Stuart will give a joint recital with baritone William Ramsey, tenor Gregory Wait, and mezzo Wendy Hillhouse. The highlight of their concert will be the *Liebeslieder Waltzer* by Brahms, accompanied by pianists Naomi Sparrow and Jodi Gandolfi.

Hear musical notes on your shoulder? Could be a computer!

BY JOEL SHURKIN

The clear sound of the flute, strong and breathy. The sound changes, it is a soprano singing one clear, lovely note. Now there are many women singing in harmony. Now they are gone.

A bell tinkles to your right. It moves into a position behind you. A larger bell chimes in the corner, then both bells seem to fly across the room, meeting and passing over your shoulder, exchanging places. A drum-like sound from everywhere announces the transposition.

Blue grass guitars, a solid foot-stomping rhythm. As soon as you catch the rhythm, it shatters. The plucked strings rise in crescendo, going higher than any guitar can go, faster than any fingers can pluck. The sound becomes organ-like. Now it sounds unlike anything you have heard before.

Computer music.

All of the impossible sounds were generated by a computer. The composer-player has done the work, not with the pen on lined composition paper, but at a keyboard hooked to a video display terminal and a digital computer. The computer not only produces the sounds but contains the software that enables the composer to produce the musical form desired.

Stanford is one of the world's leading centers for research in the use of computers to make music, and to analyze sound.

Computer music may be the music of the future. That computers should be used for musical composition is only logical; music is almost always mathematical (that's why Einstein so loved Mozart), and what instrument is better able to process the mathematics better than a computer?

The scope of the music produced by computers ranges from "Silicon Valley Breakdown," written by graduate student David Jaffee, a gentle satire on bluegrass, to Michael McNabb's "Dream Song" which makes use of some recorded natural sounds, such as people talking, or Dylan Thomas reading poetry, along with the artificial sounds made by the computer.

Another variant is "Turenus," an early work by Stanford Prof. John Chowning, full of bells, chirps, and flying whistles, what might be expected from a former percussionist.

To a large extent the history of Stanford's computer music program began with John Chowning.

Chowning came to Stanford in 1962 with a degree in composition, and after three years in Paris with Nadia Boulanger, the grande dame of modern composition teachers.

Contemporary music at the time was heavily into electronics, but made use of analog devices, electronic gadgets which produced sound by measuring the relationship between objects and transmitted electromagnetic waves. Chowning was interested in electronic music but he found that Stanford had no studios or synthesizers.

He read an article by Max Mathews of Bell Laboratories who had written a computer program to generate accoustical signals. Mathews' work involved digital computers, computers which count discrete objects, usually binary numbers.

"I thought, well, that sounds interesting, and looked around campus and found that the Artificial Intelligence project had acquired the first DEC (Digital Equipment Corp.) machine, a PDP-1," Chowning said. "They had this connected to an IBM 7090, (the main campus computer) through a shared disk drive."

Since Mathews' program was written for a 7090, Chowning acquired a copy and got it to work through the PDP-1.

"It was all very primitive; not much was known about acoustics or psycho-acoustics," he says.

(Psycho-acoustics is the study of what happens to sound once it is perceived by the ears, how it is transmitted to the brain, and what the brain does with it.)

All of this is important because it has to do with the efficient way one uses this machine, the richness of sound and all that. It became overwhelmingly important because the sounds)from the computer) were so dull, and one didn't know how to improve them.

"One of the things I got interested in right away was localization of sounds. Here you have these two speakers. The sound was dry and seemed to be always located at these two loudspeakers. I thought, well, our natural listening environment is much richer than that, we might be able to use computers to simulate this."

Modern recordings of concerts or in studios were in stereo and could simulate depth, but that was "free" stereo—the engineers did not have to produce it. All they had to do was accurately record the sound as it existed in the concert hall.

"There wasn't much known about how distances were perceived."

Chowning wanted to be able to place sounds, move them around, have the listener locate them in space. He experimented with writing his own programs in FORTRAN with the help of an undergraduate, David Poole. The programs enabled him to move the sounds about using either two or four speakers.

"It was reasonably successful; the illusions were compelling enough. . . . I was able to do this myself without having any technical background, and in a relatively short time."

But, the process yielded more than he asked for. It was clear to him that computer languages held the secret; there was no necessity to alter the hardware, to solder, connect, move, rewire machinery.

Programming languages allow conceptual contact with a whole world that I thought was denied me; namely this world of system design and processing. . . . All I had to do was learn to program. If a composer can write counterpoint. . . . that's a lot harder than learning programming."

"All this was eye-opening," he says.

Chowning's enthusiasm lapped over to his adviser, Leland Smith, now professor of music. Smith wrote a program to aid in composition. The two programs—Smith's composition program and Chowning's systems program—enabled the two and their students to actually produce music on the computers. "Quite a bit of music—and good!" he adds.

"I think it was notable elsewhere because of the quality of the sound, the spatial aspects, plus the

continued on page 22



IN THE COMPUTER ROOM AT CCRMA: from left, music grad students David Jaffe and John Gordon, director John Chowning, and Music Department alumnus Bill Schottstaedt.



John Chowning

The computer not only produces the sounds but contains the software that enables the composer to produce the musical form desired.

Personnel update

Hire retirees for temporary work

Both retirees and campus departments have been happy with a program started in July 1982 by the Employment section of the Personnel Department.

The program serves departments interested in hiring Stanford retirees to do temporary or part-time work on campus by providing (on request) lists of available retirees and summaries of their experience and qualifications.

While Employment cannot guarantee that qualified retirees will be available to meet all departmental needs, departments which have taken advantage of the program indicate that it has been very helpful to them. Those who would like a copy of the list summarizing information regarding the retirees available for work should contact Janelle Sumida at 7-1888.

Also, retirees, interested in the program should call Sumida for more information or to request a retiree form.

Updated lists will be available by March 16.

Graduate awards to handle fellowships

Beginning March 31, Graduate Awards will assume responsibility for the review, approval and preaward administration of individual graduate and postdoctoral fellowships now being submitted through the Sponsored Projects Office.

Graduate Awards will stock the individual fellowship application kits now available through SPO, maintain the current pending and active application files being transferred from SPO at the end of the month, and take responsibility for signing any necessary activation notices.

Termination notices requiring institutional approval will be handled by Lloyd Randall in PBR.

SPO will continue to handle training grants and other similar "institutional" awards to Stanford (e.g., NSF Doctoral Dissertation grants, NASA Graduate Student Researcher grants, and the OE and NSF block grant fellowships).

The change is expected to result in more effective support to Stanford graduate students and postdoctoral fellows by providing a single focal point for administration.

Mary Lou Scott, assistant to the dean of graduate studies, will be responsible for the proposals and awards being transferred. Proposals and requests for application kits should be sent to her attention at the Graduate Awards Office, Building 590, Room 209; ext. 7-2644.

Stanford to host Child Language Forum

The Stanford Linguistics Department will host the 15th annual Child Language Research Forum Friday through Monday, March 25-27, in Terman Auditorium.

Annette Karmiloff-Smith, a former student of Jean Piaget currently affiliated with the MRC Cognitive Development Unit, London, will present the keynote address. "Beyond Successful Output: Children's Processing of Linguistic Input."

In addition to presentations of papers, the conference will include three workshops on topics of special interest.

Lois Bloom of Columbia University will discuss "Acquisition of Complex Language for Complex Ideas," focusing on the acquisition of means for expressing causality.

Kenji Hakuta of Yale will address the question: "Do Children and Adults Learn a Language in the Same Way?"

Dan Slobin of UC-Berkeley will lead a workshop of "Studying Language Acquisition Cross-Linguistically."

There will also be a session on the use of the Apple II Computer in the analysis of free speech samples.

The Forum will be of particular interest to people in anthropology, computer science and cognitive studies, education, linguistics, and psychology. Registration fees are $15 for students and $20 for nonstudents, payable either in advance or at the door. Checks should be made out to SCLRF '83, and may be sent to the Department of Linguistics.

For further information contact Kurt Queller or Eve Clark, SCLRF Coordinators, Department of Linguistics (Building 100, 497-4284).



No more Ticketron at Tresidder

The Tresidder Ticket Office is no longer the only ticket center in the Bay Area to have both Ticketron and BASS systems.

Effective February 14, the Ticketron system was removed from the Ticket Office, which is located on the second floor of Tresidder Union. The BASS system, which the Ticket Office will continue to have, offers all of the Bay Area special events.

The Ticketron exclusives that the Tresidder Ticket Office will no longer be able to offer are Hearst Castle Tour tickets and campsite reservations. The nearest Ticketron outlets are at the Stanford Barn and the Record Factory.

For information about tickets and upcoming events call 497-4317. The Ticket Office's hours are Monday-Friday 10 a.m.-5:30 p.m. and Saturday 12 noon-4 p.m.

United Way sets record: $92,888

Long after the United Way Campaign is over for everybody else in Santa Clara County, it keeps on going at Stanford. Even after the deadline for payroll deduction pledges was passed in January, checks continued to come into the Cashier's Office.

The United Way solicitation last fall that was headed by Lois Fariello, the Manager of Conferences, was presumably over when the campaign went past its $90,000 goal in January, but the final count was a record $92,888, at the end of February. That is $5,356 more than the previous record set in the 1981 campaign.

The same thing happened after the CHAD (Combined Health Agencies Drive) campaign was over last spring. The report in June gave a total of $39,234, but checks continued to drift in until after Christmas and the final accounting was $45,234!

Given the number of solicitations by other means that the people who are employed in the Hospital, at SLAC and on the central campus encounter, a combined total of $138,122 in gifts to the United Way and CHAD is unheralded evidence of their generosity and good will toward good causes.

When either the United Way or CHAD campaign begins, questions start coming to Jan Skrove in the Public Affairs Office, mostly from newer employes: "What's this? Didn't I get a letter like this one a few months ago?" The answer is yes, something like it, but from a very different source.

CHAD and United Way are two large umbrella organizations that serve different, yet highly worthy, causes. They are different in organization and methods of operating. Still, they are each dependent on solicitations of people where they work and the means of obtaining gifts pledged through payroll deductions.

United Way is geared heavily to volunteer worker support and to making its allocations through local boards of volunteers who are familiar with their community's human service needs. The United Way does not encourage, although it permits, donors to designate which agencies they wish to support.

On the other hand, CHAD encourages designation by donor, although it allocates funds by formula for those donors who do not wish to pick and choose among its agencies. In contrast to the majority of the United Way's smaller local agencies, CHAD's are prominent among the large national medical research support organizations.

Stanford is assigned to the United Way of Santa Clara County, although part of the University's operations are located in San Mateo County, and about one-third of our employees live outside Santa Clara County. Funds collected where people work are distributed according to where they live. That is the long-standing policy of the United Way.

Officially CHAD is known as the Bay Area Combined Health Agencies Drive, part of the parent statewide organization. Questions about specific agenices and their operations should be directed to:

CHAD, Bay Area Combined Health Agencies Drive, 560 San Antonio Rd., Palo Alto, Calif. 94306; 494-2640.

United Way, United Way of Santa Clara County, 2323 Homestead Rd., Santa Clara, Calif. 95052; 247-1200.

CIT forms a SPIRES consortium

Invitations were recently extended to 30 universities by Stanford's Center for Information Technology (CIT) to join a SPIRES Consortium.

SPIRES (Stanford Public Information Retrieval System) is the data base management system (DBMS) that has been selected for Stanford's administrative systems development. (Some major development efforts using SPIRES include the Office of Development's alumni records system, the new core accounting system of the Controller's Office, and the Registrar's online student records system.)

The 30 invited universities already have licenses from Stanford to use SPIRES, but the degree of their typical use is significantly less than that at Stanford.

According to Jon Sandelin, CIT associate director and Consortium general manager, the Consortium will function to increase the sharing of applications developed with SPIRES and to provide better underlying support to installations using SPIRES. Membership in the Consortium will entitle the institution to special SPIRES consulting assistance, which may be used when installing or using SPIRES.

"Software products like SPIRES require effective training aids, good documentation, and the availability of knowledgeable consulting assistance, before computer center directors will (or should) commit to the product as a production service," Sandelin notes. "The Consortium will provide support in these areas."

Each member institution will have one representative on the Consortium Advisory Board, which will give direction in formulating governing policies and provide a forum for overseeing the proposed evolution of SPIRES.

An online catalog of SPIRES applications will assist member institutions in comparing and perhaps matching their data base system needs with already existing SPIRES-based systems at other places. A quarterly newsletter will serve to alert Consortium members about applications development activities and other items of general interest.

An example of a sharable SPIRES application is the CONCTACT/EMS electronic messaging and retrieval system developed at Stanford. EMS is transportable to other universities that have adopted SPIRES. These SPIRES-based electronic mail systems will be connectable in the future, and will thus provide an alternative method for faculty and university administrators to exchange information with colleagues at other places.

Cold sores? Call now!

Persons suffering from recurrent cold sores, fever blisters or "herpes" of the lips and mouth are urgently needed to assist in research aimed at determing the reasons for these recurrences.

For further information please contact Tony Cunningham M.D., Postdoctoral Fellow, Division of Infectious Diseases, Stanford University Medical Center, 497-5908.

To Ellen Noddings, *Caring* is a book and a way of life

Twice voted an outstanding teacher, she's also the mother of 10 children

The petite, light brown-haired woman sits in the chair behind her desk comfortably, almost casually, but her dark brown eyes command attention without asking for it. They draw the listener in imperceptibly, with an insistent directness as she quietly says, "There's a difference between asking, 'How can I get a share of that pie?' and asking, 'How can I make that a better pie?'."

Nel Noddings, assistant professor in the School of Education, explains this and other theories about education in her forthcoming book, currently in press, titled *Caring: A Feminine Approach to Ethics and Novel Education*.

Noddings analyzes caring by exploring what it means to care and to be cared for, how the caring ethic relates to a larger moral picture, and how caring ultimately functions in an educational context.

The book is a culmination of Noddings' lifetime teaching career, of which the last six years have been spent at Stanford. Here she has twice been voted outstanding teacher by her students, more than 20 of whom call her adviser as well.

"Nel is very unusual. She has the most incredible capacity for personal togetherness of anyone I know," says colleague Prof. Elizabeth Cohen.

Noddings has 10 children, and because of her family commitments, she came to her scholarly career later in life than most academics. At age 53, her Stanford Ph.D. is not quite 10 years old. Nevertheless, her prior years of teaching are rich background for her current work.

"She has a knowledge of the real world as well as a great analytic capacity," says Prof. David Tyack. The fact that she comes to an academic career later in life than many only adds to the maturity of her perspective, he continues.

Adds colleague Prof. Denis Phillips: "It helps to have something to 'philosophize' about."

Many of her observations and experiences about teaching are encapsulated in *Caring*. "What she's doing is all of a piece," Tyack says in reference to her twin responsibilities of family and career, "and it comes together in her book."

Practical ethics

An "essay in practical ethics from the feminine view," the book explores a distinction between masculine and feminine ways of relating. Although Noddings is quick to point out that characteristics are not exclusively confined to one sex or the other, men more often display the traits designated "masculine," and women more often display "feminine" traits.

For example, Noddings says that competition is a masculine trait, and cooperation is feminine. Similarly, using broad principles or formulas to solve problems is masculine, and looking at the related parts of a specific situation to solve problems is feminine.

Noddings calls the feminine problem-solving attitude "relatedness." It is an attitude that allows an individual to perceive a situation not merely by observing it (as one would through "masculine," principle-oriented thinking), but by "receiving" it—by putting oneself into the situation mentally and emotionally in order to experience and truly understand it.

This receptive, attentive attitude creates successful teaching, Noddings says.

"What it tends to do is to so enliven the situation that it tends to enhance skills and concepts," she says. "I guess I believe that what education needs now is a spiritual and intellectual revival.

"Do we want people who are going to be mindlessly obedient, or do we want people who will be autonomous, self-disciplined, and raise questions? If the answer is the latter, then we have to find a way to find means that are compatible with ends of that sort."

She has high hopes for *Caring*, which has received good preliminary reviews. She expects it to be "very much hated by some, and very much liked by others." Tyack, who has read the book, gushes: "It's sort of like Picasso talking about beauty."

Early interest in education

Noddings' interest in education started when she was young. "I guess I always wanted to teach; from a little girl on, I wanted to teach."

After graduating in 1949 from Montclair State College in New Jersey with a degree in mathematics and physical science, Noddings remained in New Jersey to teach grades six through nine, and later, to head a high school mathematics department.

In 1962 she took two years off from teaching to get her master's degree in mathematics at Rutgers. She returned to teaching in New Jersey until 1972, also acting as a department chairperson, assistant principal, and curriculum superviser.

Her only "time off" occurred from 1952 to 1958, during which time Noddings had four children. When the youngest was five months, she returned to her career.

After her fifth child was born, the Noddings decided not to have any more children—as Noddings shyly explains, they were too embarrassed by Paul Ehrlich's announcement of a population explosion to further add to the world population.

However, they had planned a large family, so they eventually adopted five children.

Noddings admits that teaching while taking care of a family of 10 required a supportive husband and children, as well as a lot of energy.

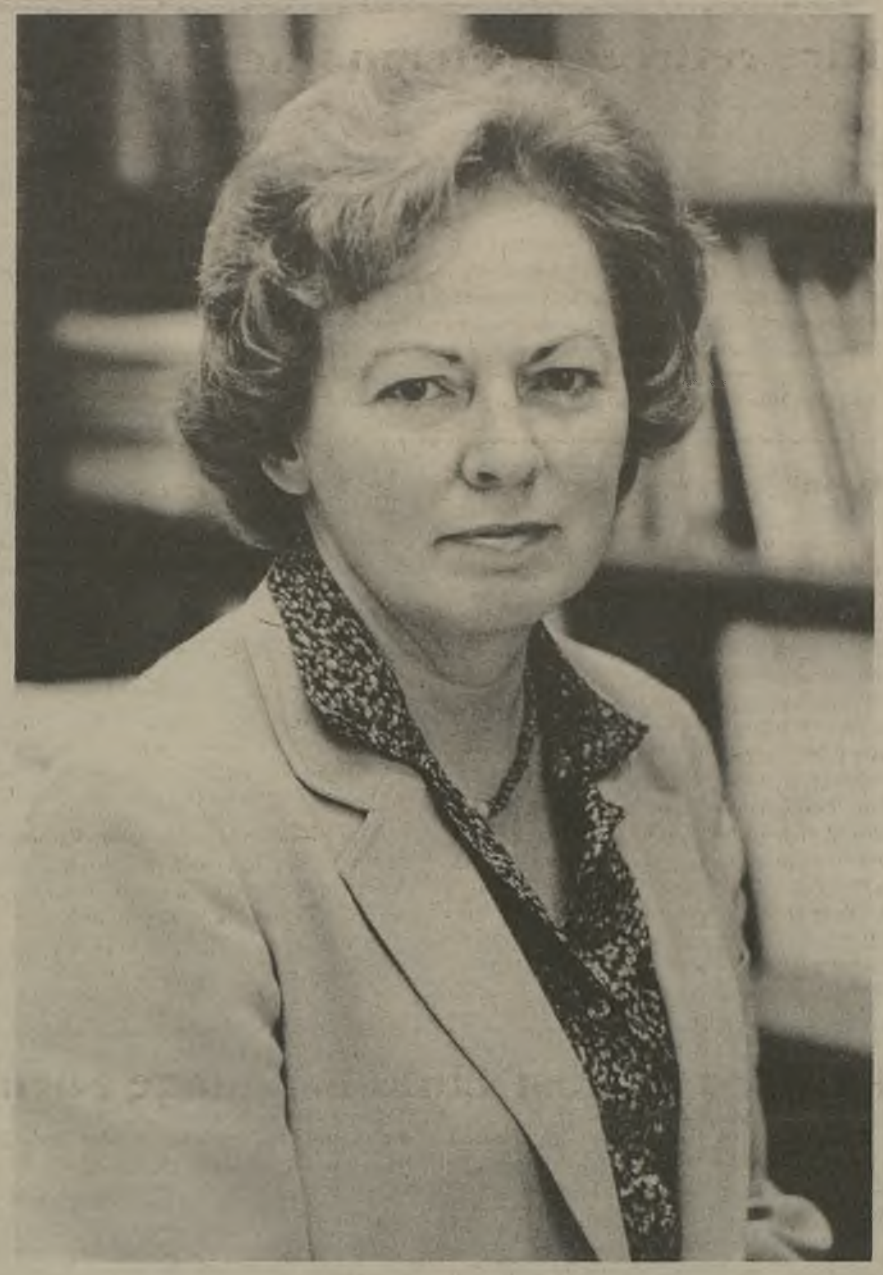
"For me, it was fortuitous that I had a high energy level, and I loved teaching."

High energy level

It's a sign of her high energy level that she finds gardening a "restful activity." Similarly, the family "vacations" are weekend camping trips with "dozens of people," one friend says.

"I don't know when she gets time to eat or sleep," Phillips says, echoing the sentiments of other faculty members.

Noddings' youngest child is now 16 (the oldest is 30), leaving more time for academia. Her colleagues and advisees unanimously agree that she is a superb teacher.



Ellen Noddings

What education needs now is a spiritual and intellectual revival. Do we want people who are going to be mindlessly obedient or do we want people who will be autonomous, self-disciplined, and raise questions? If the answer is the latter, then we have to find a way to find means that are compatible with ends of that sort.

—Ellen Noddings

"Professor Noddings is really a terrific educator: receptive, respectful, and stimulating," student Leslie Swetnam says. "She places a lot of responsibility on the student for learning and a lot of responsibility on the teacher for providing a stimulating environment."

Another student, Kathleen Gilbert, agrees that Noddings lives up to such praise. "She's very concerned about stimulating her students in academic work, helping them reach high goals. She always has time for her students; and she takes time, from reading their papers to discussing things."

Noddings says that helping her advisees is one of the most satisfying aspects of her work. "What is absolutely delightful is to have someone come in with a vague idea which he or she is excited about, and turn that idea into a research project."

When asked about her future plans, Noddings simply comments, "I just want to go on the way I am."

In her work and in her personal life, Noddings is an example to the young women who ask for advice about having a career and a family.

To these students she says, "I tell them to try to have it all. You can have it all, but you need to have super energy, super vitality. The myth of the superwoman is not dead."—**Amy Bernhard**

In the intensive care nursery. . .

Raising quality of life as important as survival rates

Dr. David Stevenson presented a picture of a healthy, smiling five-year-old in bobby socks and pig tails as a symbol of the major contribution of intensive care units to premature infants in the past 25 years.

"Our major contribution really is in the survival of normal people," said Stevenson, assistant professor of pediatrics and associate director of Stanford University Hospital's intensive care nursery.

Just as important as raising the survival rate of infants born too soon, is raising the quality of life for those infants saved, the physician said in a public lecture at the Stanford Medical Center last Wednesday evening.

"If we stopped intensive care (for premature infants) right now, there would be a lot of deaths," he said. "But there would also be a great increase in the number of people surviving who would be severely injured."

The pig-tailed child in the slide on the screen was "Jamie," one of Stevenson's tiny patients five years ago. Born three months prematurely to a teen-age mother, Jamie weighed only 1.5 pounds.

When physicians performed surgery a week after her birth to remove dead and dying portions of her intestine, Jamie's bloated abdomen was scarcely wider than three of the surgeon's fingers.

The surgery was risky. The infant girl faced a 60-70 percent chance of dying and, even with successful surgery, would need months of hospitalization, round-the-clock care, and intravenous feeding. Stunted growth and malnutrition were possible if the salvaged intestine was unable to absorb food adequately.

But after consulting with surgeons and other members of the health care team, Jamie's mother consented to the surgery. Five years and $100,000 later, Jamie shows no signs of illness, Stevenson said. The cost of care for her first months of life were shared by family, the hospital, and, indirectly, the public, through increased insurance premiums.

Most patients in the intensive care nursery stay only a few days or weeks, with a much reduced hospital bill, but Jamie's case demonstrates an extreme example of both the costs and therapeutic capability of such a nursery, said Stevenson.

A child Jamie's size born today has an 80-85 percent chance of surviving, with the help of intensive care, he said. These children virtually all go on to lead normal lives, he added.

Modern obstetrical advances are major contributors to the improved survival rate, said the physician. Such advances include the development of drugs that halt premature labor long enough for other drugs to be administered that speed the maturation of fetal lungs. But the modern techniques have limits.

A critical time in the development of the fetus occurs around the fifth month after conception, when blood vessels develop close enough to the lungs' tiny air sacs to permit a healthy exchange of oxygen and carbon dioxide.

"If that has not happened (by the time the baby is born), the best of ventilators will be of no use," Stevenson said. "No matter how much gas you move in and out of someone's air saccules, no gas will be exchanged, and the child will die.

"Therefore, there are children who are born alive, who move spontaneously, who respond to stimulation, who cry out for help, who cry out for someone to attend to them, that you may not be able to avoid letting die."

In such dilemmas, "compassion wrestles with duty" in the intensive care nursery, Stevenson said. "We have a dual charge in medicine, not only to save lives, but to alleviate suffering.

"A physician should still act in concert with his oath, which is to avoid doing any harm—not to start technologies which are senseless in view of someone's developmental state, and to assist in any way possible to make sure that this person does not suffer."



"We have a dual charge in medicine, not only to save lives, but to alleviate suffering."

—David Stevenson

Stevenson described a child whose intestine, somehow twisted and crushed in the uterus, is completely nonfunctional at birth. Although normal in every other way, that baby will die within two weeks, Stevenson said. Life-long intravenous feeding is not an option because it would result in infections and other complications that would also kill the child. "There is nothing anyone can do.

"If I can't save that baby's life, I'll do everthing in my power to make the baby as comfortable as possible for as long as that baby is alive," Stevenson said.

"We don't withdraw support, we simply shift the emphasis of support to something that is more appropriate for this person. That shift of emphasis would be to nurturance—to love, to warmth, to those things which any human being deserves to have."

Advances made in neonatal nurseries in the next decade will continue to improve the quality of life for survivors, Stevenson predicted. But the secret to preventing prematurity may come instead from improving education and nutrition of high risk mothers.

"There are other things which we may perfect as we work on drugs to stop labor and drugs to mature the baby's lungs functionally. But those drugs are not without risk.

"I would say that prevention (of prematurity) is going to come through other means beside pharmacological means, ultimately," he said.

Stevenson spoke at the fourth in a series of "Progress in Medicine" lectures, held this season on subsequent Wednesday evenings to acquaint community members with the technical and ethical issues encountered in intensive care units.

Tonight's (March 16) session will feature a panel discussion of health care professionals on "Who Suffers More—the Health Care Team or the Family?" while the last lecture on March 23 will be given by Ernle Young, medical center chaplain, on "Ethical and Emotional Issues in the Care of the Dying Patient and Family."

Both lectures will begin at 7:30 pm in the Sherman Fairchild Auditorium at the medical center.

—Deborah Franklin

Johns Hopkins scholar to deliver 1983 Pfizer Lecture

Dr. Paul Leitman, director of the division of clinical pharmacology at Johns Hopkins University, will present the fifth Pfizer Lecture in Clinical Pharmacology Monday, March 21, at the School of Medicine.

In his lecture, entitled "Aminoglycoside Nephrotoxicity—Clinical and Biochemical Aspects," Leitman will summarize his research findings, which have both immediate and future implications in the use of aminoglycoside agents.

Leitman, who has both M.D. and Ph.D. degrees, holds the Burroughs Wellcome Chair in Clinical Pharmacology at Johns Hopkins. He is a leading authority in the area of aminoglycoside nephrotoxicity, a significant complication of therapy in many patients requiring these important antimicrobial agents.

Leitman and his colleagues have performed careful clinical studies examining the incidence of this complication and comparing the incidence with various aminoglycosides and combinations of antimicrobial agents. They have identified a number of clinical and laboratory variables which are useful in predicting the likelihood of aminoglycoside toxicity in the clinical setting.

At the biochemical level, Leitman and his colleagues have studied some of the biochemical changes induced in kidney cells by the aminoglycoside antibiotics which may be important in mediating their nephrotoxic effect.

The Pfizer Lectureship, ,started in 1978, is sponsored by Stanford's division of clinical pharmacology, and funded by Pfizer Pharmaceutical, Pfizer Inc. of New York City. Previous speakers have included Drs. Robert Lefkowitz, Ferid Murad, Daniel Nebert, and Peter Goldman.

This year's lecture, open to members of the medical community and the public, is jointly sponsored by the divisions of clinical pharmacology and nephrology. It will begin at 4:30 p.m. in room M114 of the Medical Center.

New association proposed to market biotechnology tools

Companies would be able to "one-stop-shop" for biotechnological patents at U.S. universities if a concept unveiled at an industry association meeting is adopted.

The proposal calls for creating a nonprofit corporation—tentatively called University Licensing Association for Biotechnology (ULAB)—which would market certain biotechnology tools patented by participating universities.

The institutions would share the licensing revenues based on the volume of their patents used by industrial customers.

The proposal, based on a preliminary feasibility study, was presented in San Diego March 3 at the meeting of the Industrial Biotechnology Association (IBA) by Roger Ditzel, director of patent, trademark and copyright matters for the University of California system, and Niels Reimers, director of Stanford's office of technology licensing.

IBA is a high technology industry group. Most of its approximately 25 members are among the 73 firms which have licensed Stanford and UC's basic gene cloning patent.

Stanford and UC's patent covering basic gene splicing techniques was issued in December 1980. The discoveries were made by Drs. Stanley Cohen, professor of genetics at Stanford, and Herbert Boyer, professor of biochemistry at UCSF.

"That patent, broadly covering gene cloning techniques, would not be affected by this potential association," said Reimers. "The technology handled by ULAB would be specific biological tools, rather than the entire gene cloning process."

A biotechnology tool is defined essentially as a technique used by a scientist in the making of genetically engineered microorganisms, which in turn make possible the production of industrial or consumer products.

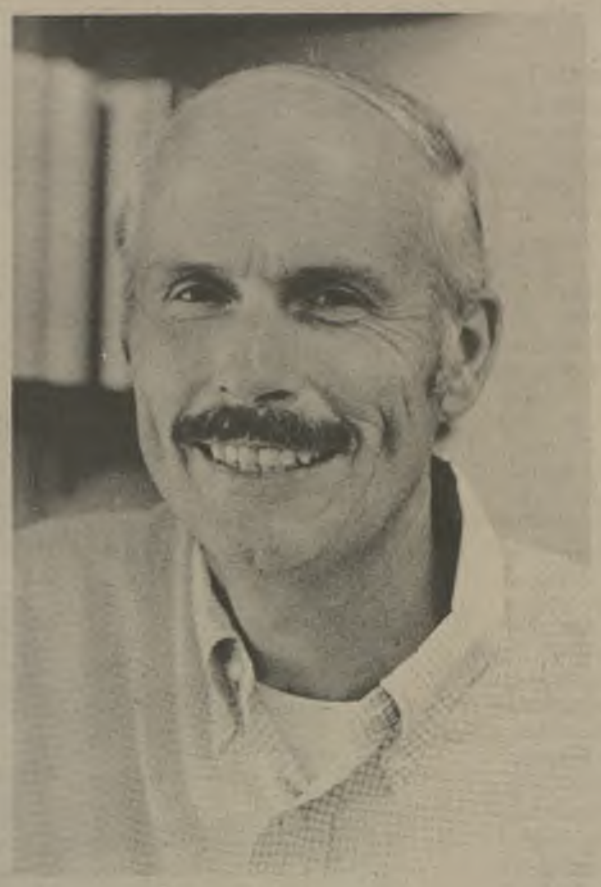
It has been estimated that 200 patent applications for biotechnology tools have been filed by U.S. universities which might be potential members of ULAB.

"We are at a unique stage in the transition from academic discovery to industrial application, characterized by a relatively rapid path from a scientific finding to commercial development," said Reimers.

"And large numbers of patent applications are being filed and granted for what amount to the basic tools used by the scientist.

"We are at a unique stage in the transition from academic discovery to industrial application, characterized by a relatively rapid path from a scientific finding to commercial development."

—Neils Reimers, director of Stanford's office of technology licensing



"There is great potential for significant and possibly unnecessary transaction costs when license rights to these patents are negotiated."

Ditzel continued, "It is conceivable a company would need a dozen licenses from a dozen universities for any particular genetically engineered product. Many biotechnology tools might be used only once in making the microorganism needed in a process."

Reimers and Ditzel contacted colleagues at other universities and in industry who were similarly concerned. With gift support of $3,000 each from seven companies, a study of the concept was conducted by Mark Edwards, a student at the Stanford Graduate School of Business.

"To better focus the concept, it was prepared in a business plan format," Ditzel added.

Reimers said the ULAB concept currently has received the support of many researchers and administrators at universities but has not been officially endorsed by any institution, including UC and Stanford.

Under the proposal, potential users would be able either to license patents individually, or they could secure blanket rights to all patents in ULAB's portfolio.

Edwards' plan hypothesized a fee of $25,000 per year or one percent of net sales—whichever is greater—to enable a company to secure blanket rights to all patents offered by the association. Projections of the business plan indicate that if ULAB were chartered by 10-12 businesses and/or universities, each contributing about $50,000 in start up money, total gross revenues through ULAB during the next five years might amount to about $12 million, Edwards said.

However, Ditzel emphasized that while any eventual plan might have different terms or even a different structure, such an association appears to offer some substantial benefits to a rapidly growing industry.

In presenting the concept, Reimers wrote:

"In university laboratories there has been a growing concern that desire for proprietary knowhow or rights may stifle the open communication of scientists, particularly between scientists who have involvement with different companies.

"The (ULAB) concept would seek to reduce this secrecy and/or delay of publication and competition by making all biotechnology tools available to all scientists.

"Selection of a tool would be made by the industry scientist based on what was the best process rather than simply the single process which might have been selected by his company's management."

Reimers said the ULAB concept has been under study for about a year.

Income to universities would be expected to be used for research and education, and researchers and administrators at each university would have to endorse ULAB before their university could join the association, Reimers suggested.

ULAB could be set up as an independent nonprofit association. Alternatively, a high technology company or existing association could administer ULAB's business, Ditzel said.

Currently, revenues from the Cohen-Boyer patent have brought in more than $2 million in license fees, although so far insulin has been the sole product to be marketed in significant commercial quantities from bioengineering techniques based on the Stanford-UC patent.

"We are looking ahead about a decade to see the most significant end product developments from the patent," said Reimers. "That is why the next five to seven years is the period we would expect to see the most activity from ULAB as research is continued at universities and industrial uses expanded."

Stanford currently is responding to the tentative rejection last year by the U.S. Patent Office of a second Stanford-UC bioengineering patent.

Reimers said that Stanford membership in a future ULAB-type association would not hinge on the outcome of the current patent application, particularly since the university owns a variety of patents not related to the one currently pending.

—Mike Goodkind

Perlroth made full professor, Myers granted tenure by Board of Trustees



Mark Perlroth

Dr. Mark Perlroth has been promoted to professor of medicine (clinical), and Dr. Bryan Myers has been granted tenure in action last week of the Board of Trustees.

Perlroth, who received his M.D. degree from Harvard in 1960, came to Stanford as a resident in 1965. He joined the faculty as an instructor two years later, and was promoted to associate professor of clinical medicine in 1977.

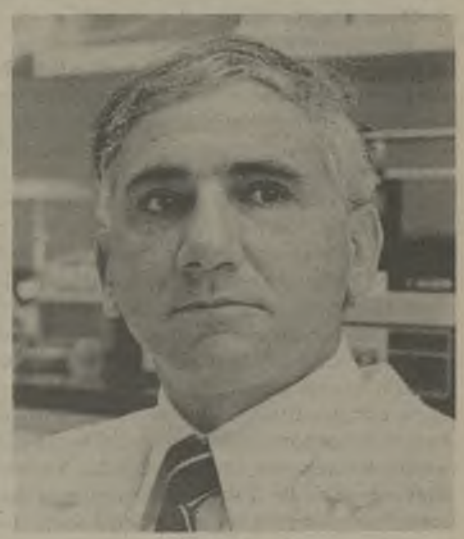
He is the author of a textbook *Fifty Diseases: Fifty Diagnoses*, and is widely recognized as a clinical scholar. His research has included studies of kidney toxicity from drugs administered to transplant patients.

A faculty member in general internal medicine, he is the recipient of numerous honors, including the Arthur L. Bloomfield Award for Excellence in Teaching, and the Henry J. Kaiser Award for Teaching.

Myers, who serves as director of clinical nephrology, is an associate professor of medicine (nephrology).

He is credited for innovative contributions to the study of kidney diseases. Specialized research includes the mechanism of the acute kidney failure which frequently complicates cardiovascular surgery. A second area is the mechanism of protein leak into the urine that complicates a variety of chronic kidney diseases.

Myers received his medical training at the University of Cape Town, South Africa in 1959. He came to Stanford as an assistant professor in 1976 from a post as chief of nephrology at Meir Hospital, University of Tel Aviv, Israel. He became an associate professor in 1981.



Bryan Myers

The emotional side of medicine deserves a closer look...

BY SHIRLEY KRAUS

The desire to be a good doctor—warm, sensitive, caring—is part of every medical student's dream. Yet students at Stanford University School of Medicine say most medical schools do not encourage the development of these very qualities. In fact, many students learn to suppress, and even eliminate them during their medical education.

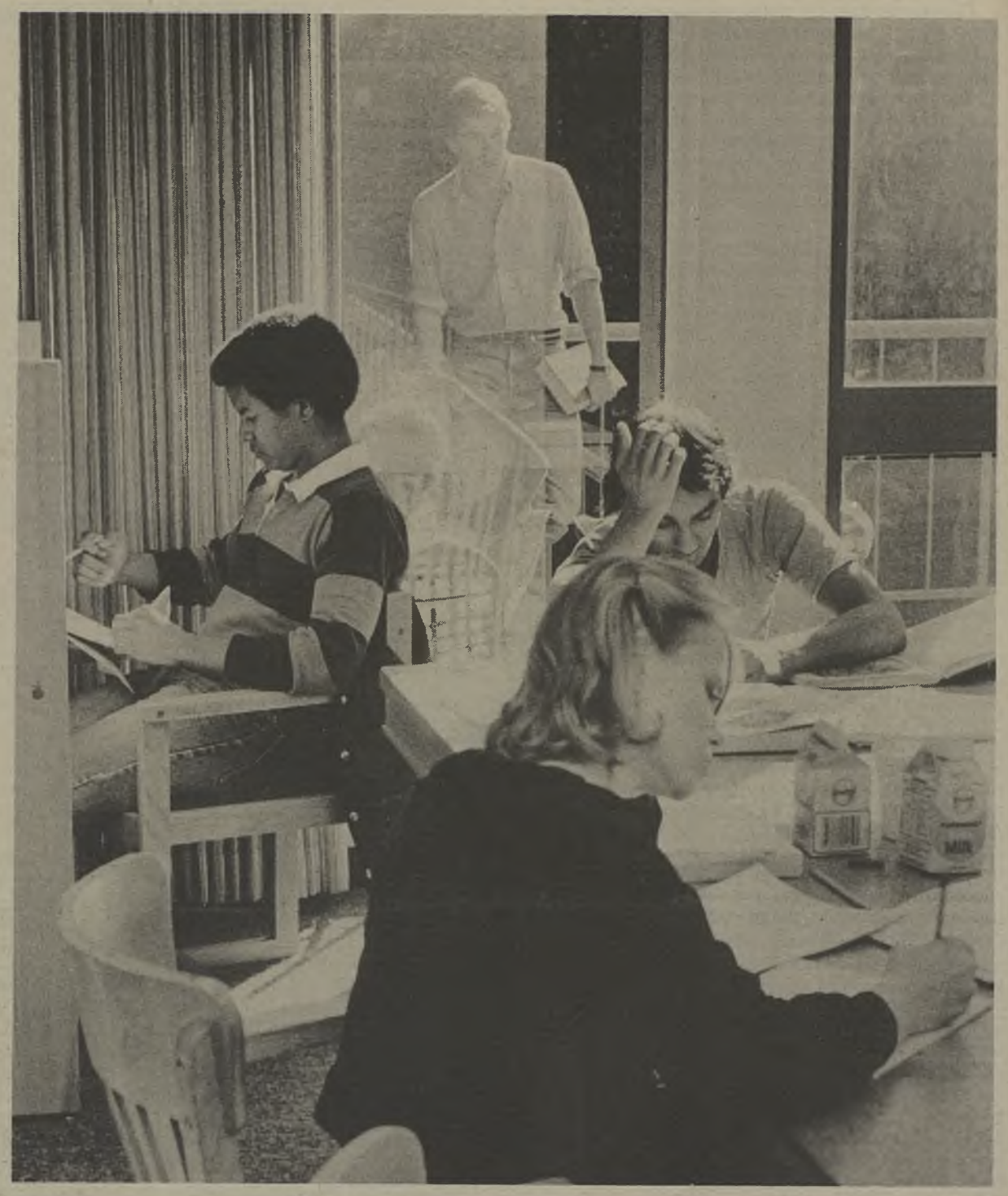
Now, for the first time since the Abraham Flexner report on medical education in 1910, medical educators nationwide are questioning the process that leads to the denial of the emotional side of medicine by its practitioners.

The trend starts early on, according to Dr. Saul Rosenberg, professor of medicine. During a year-long sabbatical researching the effects of the "pre-med syndrome," he found that in their competitive quest to get accepted to medical school, high school and college students often sacrifice liberal arts courses for more science courses, and extra-curricular activities for more hospital or research laboratory work.

And it continues on into internships and residencies, said Dr. Harvey Weinstein, assistant clinical professor of psychiatry, a time when physicians-in-training—no longer students but not yet fully accepted as doctors by the medical community—have no group support but more than their share of responsibility for patient care. With strenuous work schedules, often forcing them to stay up for days on end, controlling their lives, studies show interns and residents are the most susceptible for impairment.

It's the time in between however, Weinstein continued, the average of four years spent in medical school, that the qualities that will last through the students' medical careers are planted and developed.

They come to medical school, considered the cream of the crop and used to excelling in all they take on, and suddenly find themselves at the bottom of medicine's hierarchical ladder. Faculty treat them as if they know nothing, and the relationship, many say, is like that of a parent and child.



The academics, students agree, are the easier part of medical education. It's learning how to be a doctor—the socialization process—that makes medicine one of the most difficult careers.

Medical school and training is regressive. It pushes people backwards in time in a sense, into a situation where they're constantly told they don't know enough and have to be taught," Weinstein said.

"There's a terrible fear of not being a good doctor. Everyone wants to be one but no one knows what it is exactly," said Nancy Harris, fourth-year student.

And so, to ensure their chances of being a "good doctor," students give up just about all extra-curricular activities, substantially limit relationships, delay having children, and submit themselves to the stresses of too much to do and learn in not enough time. Faculty encourage them to "eat, sleep, and breathe medicine."

The academics, students agree, are the easier part of medical education. It's learning how to be a doctor—the socialization process—that makes medicine one of the most difficult careers.

"Medicine is taught as a left-brain, scientific, factual profession," said Dr. Peter Finkelstein, who completed his psychiatry training at Stanford. "The quality of individuals' outside lives, and their internal thinking doesn't hold much value. In medicine you get credit for knowing and doing everything, and not for feeling."

"Most physicians learn to shut down their feelings," said Michael McGee, fourth-year student. "Their emotions are in a little box in a corner of their minds, unavailable to them. They lead their lives mechanized, they know the techniques of their profession, they're consumed by the amount of time they spend at it. They haven't integrated the meaning of their profession with their work.

"Here we are, learning to deal intimately with peoples' lives. So, we should be humane, caring and sensitive. But when do you learn to start caring? From a few lectures in a course? You learn how to be sensitive and caring from the environment. Here you see very uncaring, status and hierarchy-oriented doctors. It's the whole medical machismo syndrome of being the superhuman, all-knowing, tough doctor. If you're going to care for other people, the reasoning goes, you can't be weak. And feeling is considered weak."

Students begin to pick up on the machismo from day one.

"The first thing you do in medical school is walk into the anatomy lab," described Sally Rubenstone, fourth-year student. "No one ever tells you there are going to be 40 dead bodies in there. It's shocking. But no one says that, so you think you can't show that it bothers you. Then you just start slicing these bodies open. Never once during the entire course does someone say anything. You learn from early on you're not supposed to react."

"Students pick up a lot of norms right away: a preoccupation to master cognitive material, cooperation, teamwork, good spirits," said Finkelstein, who has been observing students' responses for four years as part of a research project.

"Superficially, someone looking in on an anatomy laboratory may think things are okay. There are a lot of things going on they don't feel comfortable with, but they hesitate to express these feelings," he said. "It may be that the process of medical training promotes 'psychic numbing,' so to speak."

This psychic numbing—not connecting what students see with what they feel—is propagated by not giving students the opportunity or the time to assimilate their experiences, Finkelstein added.

"To truly produce a reflective, deep physician, the level of assimilation needs to be much greater. There is no opportunity to do that," he explained.

"The enemy of emotion is lack of time," said Bruce Bowman, a resident at Stanford University Hospital.

continued on next page

Med students' stress...

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After two years of being overwhelmed with facts, students switch course and are thrust on the hospital's units where for the first time, they deal directly with patients. This, they say, is a whole new ballgame.

On one hand, many patients look up to the students as doctors, responsible for their care. But again, as prescribed by the hierarchy, the students are repeatedly told by the powers above they know nothing, Harris explained. They are grilled on facts in front of patients, other students, interns, residents, and attending physicians, often humiliated and intimidated if they do not know the answers to questions they're asked.

"Learning how to assume that doctor role—when to enter a room, where to stand, how to present a case—no one helps you at all," she said.

Adding to their dilemma is justifying patient care, when they may not agree with the prescribed treatment.

"The hardest thing was to deal with my emotions about moral and ethical issues," Harris said. For example, she recalls, she once helped care for a 94-year-old man with terminal pneumonia. "He came in at 5 p.m. one day and was dead by noon the next. The doctors decided to give him round-the-clock enemas to lower his potassium levels. I was the only doctor who stayed with him practically around the clock.

"He was moaning, wimpering, pleading with us to stop and let him die. Every time you touched him he shrieked in pain from the pneumonia. I had to get an IV in him. I was sickened by the whole thing."

"Is it right to have 15 people in white coats tear open a patient's curtain, tell him to undress and do all sorts of dehumanizing things?" Harris asks. "Is it right to tell someone he's dying of cancer, with everyone standing around taking notes?

"As a medical student you see things you don't necessarily like. Suddenly you don this white coat and you see the same things and you're caught in between. You don't know whether you should join the club and start treating patients this way—whether it's right or wrong. If you back away you're told you aren't being aggressive. To be aggressive—to be willing to try any and every procedure—is the ultimate compliment."

These types of emotional dilemmas may be verbally suppressed by most students, but they surface in many other ways, such as depression, insomnia, loss of appetite, and anxiety, Weinstein said.

"Feeling bad about some things is normal, but there's no provision throughout medical school to deal with those feelings. Students are expected to treat the remarkable in a casual way. It's okay to feel anxious about an exam, but not about illness or death," Finkelstein added.

To work these emotions out, students say, they have to go to outside resources such as friends and family. Up to one-fourth of each class seeks professional help at some point during medical school, Weinstein said. Within the school, there is little help.

"I have been in a number of traumatic situations. I have told young people and old people they have a disease from which they'll probably die. I've gone through the grieving process with hundreds of people. Yet I can think of only two times in almost four years that someone has asked me how I feel," Rubenstone said.

"I've asked other students and doctors who I know have to go tell someone they're going to die, for example, how they are. They always reply they're just fine, when they're obviously not fine. But if you ever wince in any way, if you come out of a patient's room and say it was heavy, the response is that you'd better get used to it.

"I don't want to get used to it. I want to be able to deal with it effectively. If you shut down your feelings, that's it. But that is what is demanded in medicine. It's an occupational hazard. This profession promotes, sustains, and supports shutting down your feelings, and that leads to impairment," she concluded.

Some efforts are being made to help students deal with the emotional side of being a physician. On a national scale, the Association of American Medical Colleges is conducting a three-year study on medical education. Preliminary reports, and regional hearings and symposia held by medical educators in response to the study, have discussed ways that medical education could be humanized.

At Stanford, a Committee on Well-being for Medical Students and Housestaff (CWBMS) was established in 1978 to address some of the socioemotional aspects of medical education and training. The goal, Weinstein said, is to positively influence the learning climate.

To help students with the massive amount of resource information on medical school topics, such as clerkships, internships, and national boards, a room called Broca's Area was established. All such information is available there.

Students have formed support groups that meet once a month. The meetings are "intense," students say, giving them a chance to discuss their feelings about what they're experiencing. Unfortunately, only about 45 out of about 340 students participate.

In response to a need established by the CWBMS, a course titled "The Human Costs of Medical Education" was offered for the first time in 1982. It was designed to let students know they are not the only ones experiencing rough times, it's all right to feel what they may be feeling, what they may go through farther along in their training, and ways to cope with potential problems, Weinstein described. Despite overwhelming effort and enthusiasm from faculty and community physicians, the course was cancelled during 1983 because only a few students came.

Weinstein, who headed up the faculty for the course, speculated that it failed because many students may not admit the need to attend such a course. "You have to feel okay about not feeling okay to find a place to go for help," Rubenstone said. Others, Weinstein continued, may not have wanted to spend what may have been their only free afternoon in yet another course. Other faculty say the course simply "got the shaft" by the curriculum committee because of the time slot it designated for the course.

The faculty as a whole has just not committed itself to dealing with the emotional side of medical education," Weinstein said.

And while faculty and other physicians sympathetically listen to concerns with which students find themselves struggling, their response often begins with "When I was in medical school. . .," followed by a fond recollection of what at the time was a horror situation.

This attitude may be due in part to the fact that many physicians view the socialization process as somewhat of a hazing. The underlying thought seems to be if they could get through it and survive, so can today's students.

But is this the best way to experience medical education? Should students be taught to deny their feelings and be "tough"? The mere fact that physicians are now publically vocalizing their doubts about the process, which has never happened before, is a big step forward, said Dr. John Steward, associate dean of student affairs.

"Figuring out what to do to change the situation is not nearly as difficult as understanding the problem completely," Finkelstein added.

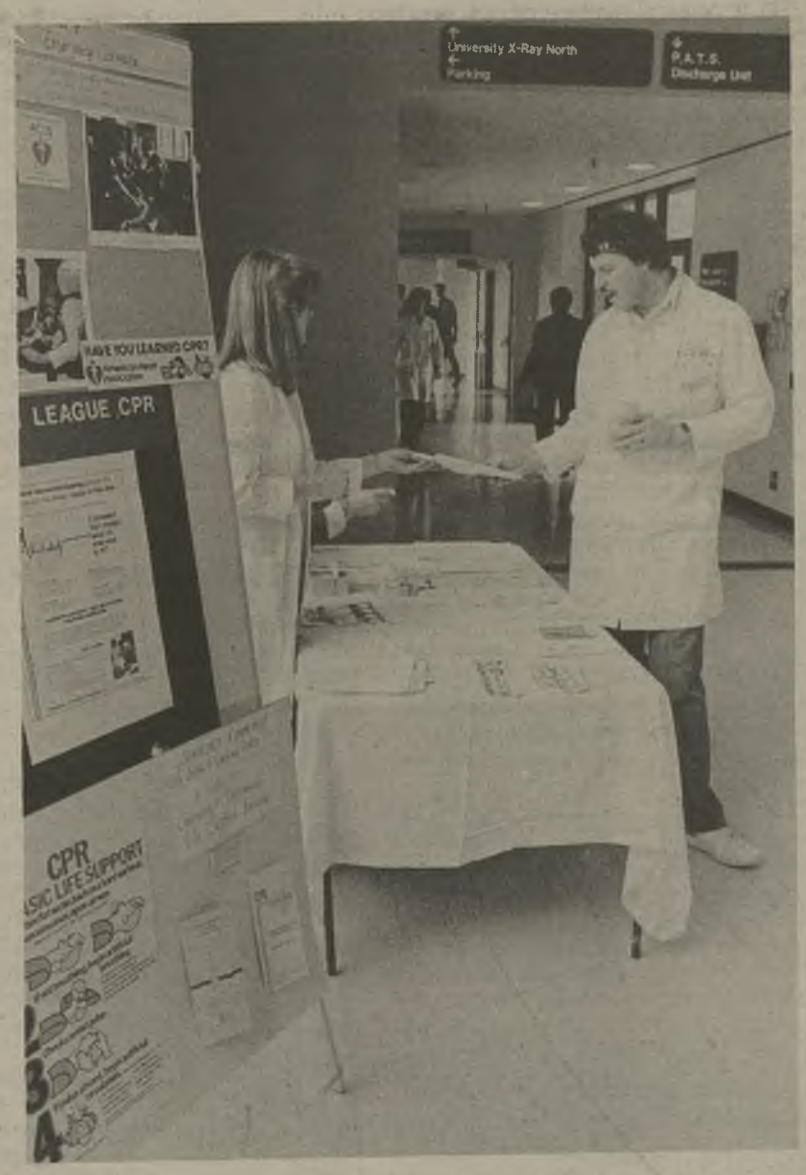
"If you learn to deal with your emotions and take care of yourself," McGee summed up, "you have a lot more to give to your patients and other people. And that is what being a doctor is all about."

Monday's lunchtime passersby were greeted outside the main cafeteria by a display courtesy of the Life Support Training Center.

Here, phlebotomy lab assistant Calvin Brodbeck pauses to chat and pick up some informational materials.

The center, which serves as a community and inhouse teaching ground for the basic techniques, cardiopulmonary resuscitation (CPR) and advanced cardiac life support (ACLS), is part of Stanford's department of emergency services.

This week's "promotional day" was staffed by Madolyn Kaminski of the center (left) and Ginger Beaman, chairman of the CPR project for the Junior League of Palo Alto. They handed out applications for upcoming classes and wallet cards on emergency CPR information. Posters and photos helped them explain what the training center is all about.



A dietitian's day: from teaching to taking complaints in stride

"Can I have Brie on my diet?" the patient asks. "I love Brie."

"Cheese is high in fat and calories," is the reply. "But if you want to reduce the number of eggs you eat, you could replace them with the cheese."

"How about more vegetables?"

"Vegetables are good, even though the cooked ones may have more calories than raw. You can have all the raw vegetables you want."

So goes a typical conversation that a patient on a low cholesterol or weight loss diet might have with Lillian Tanabe, one of 10 dietitians at Stanford University Hospital. Her day includes making nutritional assessments of patients, patient education, attending rounds with physicians, communicating orders with nursing staff, assisting patients with menus, and charting patient progress in medical records—to name a few activities.

Tanabe is responsible for the nutritional care of patients on West 1A, West 1B and the coronary care unit. About half are general surgery patients, and half are cardiology patients. She not only answers their questions about nutrition and any special diet their physician has ordered, but also helps them make that diet work.

"Many of our patients have acute medical and surgical problems. When we interview the patient, we may find even though the person is extremely overweight, this may not be the time to start a strict diet, particularly if there's lots of stress already. But we want patients to have as much knowledge as possible before leaving, about ways to meet their nutritional needs at home," Tanabe said.

"A person recovering from a heart attack, for example, needs to know how to decrease animal fats—cholesterol—how to decrease salt, and if overweight, to decrease calories," she said.

Tanabe has seen patients' attitudes about nutrition change during her 16 years at Stanford. "I think the media has increased people's understanding about nutrition. They know a little now; but many have lots of burning questions.

"They ask which are the better fats to use in cooking. We advise them to use a polyunsaturated oil, and to read the label when selecting margarines. The first ingredient listed should be a high polyunsaturated oil, and the margarine should not contain palm or coconut oil.

"They ask what foods to eliminate that are high in cholesterol. I advise using less fatty cuts of meat, and smaller portions. Three-to-four ounce servings of meat, less than half a pound, are sufficient," she said.

Tanabe's friendly and helpful manner is well known on the units. Jane Woeckener, assistant director of Dietetics, said the dietitian is "extremely dedicated to her patients and their individual care." Patient education, said Tanabe, is the best part of her job.

"I like to get the whole family involved," she said. "The husband and wife team is important. Many heart conditions, for example, can be inherited. And it's easier to get on a healthy diet if you start adjusting to it at a young age."

While Tanabe encourages patients to ask their nutrition questions, she takes the complaints in stride. "You have to understand that a patient may complain about the food or diet if he's under a lot of stress, or has just had some bad news. Sometimes, the medical news is just hard to take and that affects how a person feels about things like food."

"Sometimes, the medical news is hard to take and that affects how a person feels about things like food."

—Lillian Tanabe



Tanabe, right, chats with patient Susan Chapman about her diet plan.

If a patient complained about the taste of a new salt-free diet, would she just say, "You'll get used to it"?

"Oh, I wouldn't say that at all. There are seasonings available to spark up the taste. Or we could order more lemons for flavor. Also, there are products like unsalted ketchup, mustard and mayonnaise that can enhance flavors of food," she said.

Tanabe turns patients' complaints into opportunities to try new things. For a patient who loves cheese, she offers, "most cheese is made of whole milk, which makes it fatty. But you could look for those made partially of skim milk. Also, you could exchange one serving of egg for two more ounces of cheese each week."

Occasionally, Tanabe is willing to share her own experience if she feels it might benefit a patient who is apprehensive about surgery. She underwent a coronary bypass operation at Stanford a few years ago. "See," she says cheerfully, "I'm OK!"

Tanabe sets a good example for her patients in other ways too. Though she admits jogging isn't her thing, she does daily exercises to keep in shape, and is particularly interested now in aerobic dancing.

Another interest is in her Japanese heritage. "After my first visit to relatives in Japan, I promised I wouldn't be back until I learned the language," she said. Last October she made the second trip, with a fair command of the language.

Born and raised in Hawaii, Tanabe did undergraduate work in institutional management of dietetics at the University of Hawaii. She left the island to serve a dietetics internship at Ancker Hospital in St. Paul, Minn., where her sister was a nursing student.

She returned to California ("it's closer to Hawaii") to become a therapeutic dietitian at Sonoma County Hospital in Santa Rosa and then chief dietitian at Kaiser Foundation Hospital in Walnut Creek. She joined Stanford in 1966.

Tanabe likes Stanford for its variety and quality. "You can't get stale here; there are always new challenges as part of a team with some of the best physicians, professors, nurses and staff."

What would she like to see changed? Space! "Like everyone, we need more room, especially for teaching," she said. "We'd like to do group teaching of patients, but that's not possible now. And we'd also like to expand teaching into the community."

—Barbara Battino

Health care workshop to explore cultural diversities

A multicultural health care workshop will be presented Saturday, March 26, by Stanford's division of family medicine and the South Bay Area Health Education Center (AHEC).

The workshop, developed by medical anthropologist and lecturer Elois Ann Berlin, Ph.D., is designed to enhance the skills of primary health care providers in the delivery of culturally sensitive health care.

The morning session will focus on the ways in which the health beliefs and practices of Southeast Asian refugees are relevant to health care delivery. The session will be followed by a catered Vietnamese luncheon.

In the afternoon, discussion will center around the influence of the Hispanic population's health behavior and belief systems on health care. The workshop, which will run from 8:30 a.m. till 5:30 p.m. in room 204, CERAS Hall, main campus, concludes with a Fiesta and live Latin music.

The workshop is an extension of the multicultural clinical teaching program initiated in the fall of 1982. It will accent an appreciation of the refugee and migrant experience, the transition to U.S. lifestyle, and the ways in which minorities are perceived.

Faculty include Dr. William Fowkes, Jr., chief and associate professor in family medicine; Dr. Thuan Duong, a resident at the San Jose Health Center; Virginia Fowkes, F.N.P., M.H.S., director of the Primary Care Associate Program; Berlin; Dr. Count Gibson, professor and chairman of the Department of Family, Community, and Preventive Medicine; Marita Grudzen, preceptorship coordinator in family medicine; Dr. Carlos Inocencio, a resident at the San Jose Health Center; and Dr. Gene Levitz, community physician.

Also Leona McGann, M.S.W., M.P.H., assistant professor in family medicine; Dr. John Radebaugh, clinical associate professor in family medicine; Dr. Eleanor Segal, lecturer in family medicine; Ruth Stark, F.N.P., M.H.S., director of the Women's Health Care Training Project; and Esperanza Garcia Walters, R.N., M.P.H., director of the South Bay AHEC. The musicians and caterers will also share their experiences with participants.

The workshop is approved for continuing medical education credit through Stanford's office of postgraduate medical education. A registration fee includes educational materials and lunch.

Pre-registration is required. For further information and to register, call 497-7284.

Construction Corner

C.T. Scanner: Renovation of rooms P1029 and P1031 is now in progress in order to accommodate a new C.T. scanner for the Department of Radiology. The new model, which will replace an existing older model, will provide improved imaging for head scans. The area under construction should be completed by April 27.

Gordon MacLachlan and Erik Lund of the SUMC facilities/projects office are coordinating the work.

Edwards Renovation: Twenty-six hundred square feet of office space on the second floor of the Edwards Building are now being renovated for the Department of Surgery. Upon completion of construction May 30, the area will contain two laboratories, a tissue culture room, and the main departmental offices.

Wells Hoeltje is project manager and Gordon MacLachlan is construction coordinator.

O.R. Office Area: Phase I offices of the Operating Room Services Department are in the process of being expanded and remodeled. Upon completion May 1, the project will provide additional administrative offices, a computer terminal room, and a conference room. The office areas will be occupied by the director, the assistant clinical nursing coordinators, the business manager, the schedulers, secretary and receptionist.

Phillip Eubanks and Norm Berge are the SUMC facilities team assigned to the project.

Sycamore Trees Relocation: Sycamore trees in the parking lot south of the Sherman Fairchild Auditorium will be relocated soon to a designated area in the medium of Campus Drive. According to Gene Kershner of the University facilities office, the trees will have a better chance of survival if moved now while in their dormant stage. The trees are being displaced by the Research Animal Facility building which is scheduled for construction this summer.

Boswell Clinics Renovation Update: The contractor has completed placement of the steel columns and decking for the project and has removed the crane from the site. According to project manager Erik Lund, the impact of the crane at the entrance to the Medical Center was minimized by the planning and cooperation of the staff of the SUH facilities protection/security department.

While welding activities and placement of the metal decking continue on the exterior of the building, the demolition phase is under way on the interior south side of the first floor. Completion of the new exterior balconies is scheduled for mid-June of this year.

South Parking Lot Improvement: According to Kershner, the project to improve the medical center's south parking lot (at the corner of Campus Drive and Panama Street) is scheduled to begin around April 1 and be completed by July 1.

Kershner reported, "The south parking lot job will eliminate the current shortfall of approximately 100 spaces in the area, provide replacement for those spaces lost to the Research Animal Facility phase I construction yard, and provide a modest 'overage' of approximately 100 spaces."

Temporary Redesignation of Lot "R" Parking: Due to construction needs of the Cardiovascular Building project, a temporary loss of approximately 33 parking slots will occur in that area. On a temporary basis, therefore, the "A" parking slots adjacent to the Phase I building have been designated as evening shift "C" parking. Additional parking slots have been designated from the visitor pay parking lot as replacement "A" parking.

When the parking slots have been returned to the Hospital's control, they will revert to their previous designations.

Editor's Note: Watch future *Construction Corners* for updates on the plans and progress of projects affecting the physical facilities of the medical center.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MARCH 16

Hematology Patient and Family Support Group: First session 10:30 a.m. till noon, TF122c. To be held again on subsequent Wednesdays. Facilitators will be Phyllis Burton, R.N., B.S.N., and Dr. John Ruarke. For further information or referrals, call the Hematology Clinic at 497-6961.

Progress in Medicine Lecture: "Who Suffers More—The Health Care Team or the Family?" Panel discussion by Dr. James Silverman, Dr. Thomas Raffin, Jean Bronstein, R.N., and Aaron Smith, M.P.H., L.C.S.W. Fifth of a six-part public series on the progress and ethical dilemmas of intensive care. 7:30 p.m., Fairchild Auditorium.

Dept. of Medical Microbiology Seminar: "A New Mechanism for Sensitivity in Biological Regulation"—Dr. Daniel Koshland, Jr. (UC Berkeley). 1:15 p.m., M114.

Office of Postgraduate Medical Education 38th Course of Lane Medical Lectures: "From Viruses to Chromatin"—Dr. Aaron Klug. 5 till 6:15 p.m., Fairchild Auditorium.

Dept. of Biochemistry Seminar: "Molecular Analysis of the Antennapedia Complex of *Drosophila*"—Dr. Matthew Scott (Indiana University). Noon, M316.

THURSDAY, MARCH 17

Dept. of Biochemistry Seminar: "Expression, Mutagenesis, and Transport of Viral Membrane Proteins"—Dr. John Rose (Salk Institute). Noon, M114.

Dept. of Surgical Pathology Conference: "Diagnosis and Immunochemical Analysis of Endocrine Tumors"—Dr. P. Heitz (Basel Univ., Switzerland). 8 a.m., L201.

Dept. of Medicine Grand Rounds: "Autoimmunity and the State of Medical Theory"—Dr. Halsted Holman. 8:30 a.m., Fairchild Auditorium.

FRIDAY, MARCH 18

Dept. of Pediatrics Grand Rounds: "Hyperviscosity Syndrome of Newborns"—Dr. David Stevenson. 8 a.m., M106.

Dept. of Gynecology and Obstetrics Grand Rounds: "Modern Approaches to Prenatal Diagnosis of Hemoglobinopathies"—Dr. Stephen Embury (UCSF). 8 a.m., A336.

SATURDAY, MARCH 19

Children's Health Faire at Stanford Shopping Center: Stations will be set up to represent and introduce specialty health services at SUH, Children's Hospital at Stanford, and within the community. 10 a.m. till 5 p.m.

MONDAY, MARCH 21

Nursing Educational Services Critical Care Course, Level I: "Selected Topics in Medical-Surgical Critical Care." 8 a.m. till 4:30 p.m., Faber Auditorium, Children's Hospital at Stanford. Call Carole Kidder for further information at 497-6366.

Dept. of Gynecology and Obstetrics REI Conference: "Amenorrhea and the Hypothalamus"—Dr. Rifaat Salem. 8 a.m., A336.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Hearing Aid and Earmold Technology"—Earl Schubert, Ph.D. 7:30 a.m., R117.

WEDNESDAY, MARCH 23

Div. of Orthopedic Surgery Grand Rounds: "Paget's Disease"—Dr. Marjorie Oda. 8:30 a.m., M114.

Dept. of Genetics Seminar: "Immunoglobulin Transcription is Activated by Downstream Sequence Elements"—Dr. Cary Queen (National Cancer Institute). 4 p.m., M114.

MARCH 23-25

Nursing Educational Services and Perinatal Nursing Region of Stanford Hospital Symposium: "Advanced Perinatal Concepts." Room 270, Tresidder Union. Registration limited. For further information, call Carole Kidder at 497-6366.

Dept. of Surgical Pathology Conference: "Current Concepts in Surgical Pathology." 6 a.m. till 6 p.m., Fairchild Auditorium. For further information, call 497-7211.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Study on effects of space travel seeks healthy earthling volunteers

Healthy men and women aged 30 to 50 are needed to participate in a study relating to space travel and blood pressure regulation in Stanford's department of endocrinology.

According to postdoctoral fellow Michael Ash, astronauts, upon returning to the earth's gravity after a period of weightlessness, may experience a fall in blood pressure when they stand upright.

"We are conducting studies in which volunteers sit in a warm pool, followed by a day of bed rest, to simulate the effect of weightlessness," he said. When participants arise, researchers will monitor pulse, blood pressure and blood chemistry, while testing ways to anticipate and prevent low blood pressure.

Volunteers will spend 48 hours in the study, conducted at SUH and affiliated facilities. They will receive, free of charge, a complete physical examination and laboratory test screenings.

Subjects are needed beginning March 21. For further information or to volunteer, call 497-6675 between 8:30 a.m. and 5 p.m.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

...News Notes...

The Medical Center's office of public events reports that community and in-house use of the SUMC tour program has shown increase over the past two years since its inception.

"Indicative of the varied audiences that the center attracts is the expectant mother population," stated Michael Cowan, office director. "We are scheduling 144 couples per month for tours of the delivery suite."

Other groups which have participated in tours in significant numbers include patients and their families, SUMC employees, medical and other students, American and foreign physicians, Bay Area hospital groups, Stanford University groups, donors, administrators, Auxiliary members, Hospital Board members, adult education classes, and many more.

In the first year ending February 1982 there were a total of 136 tours with 967 visitors. For the second year there were 188 tours accommodating 1,748 visitors.

For information regarding the SUMC tour program, call the office of public events at 497-6389.

* * * *

In last week's **Memo**, *we neglected to mention that the department of emergency services will be among the several SUH display participants in the March 19 children's health faire at Stanford shopping center. Everyone is invited to attend; bring the kids!*

SOVIET VISITORS TO THE U.S.

Taksar tells how Soviets control profs visiting U.S.

The author of the following article was born in Moscow, graduated from Moscow University in mathematics in 1971, then worked as a junior researcher in mathematics with the Soviet Academy of Science for six years. Fired from this position because of his desire to emigrate, he then worked for a year with the Institute of Emergency Aid. After immigration, he obtained his Ph.D. at Cornell in 1979, when he joined the Stanford faculty as an assistant professor of operations research.

By Michael Taksar

Last year the Stanford administration informed the U.S. National Academy of Sciences the University would not enforce State Department restrictions on a proposed visit to the U.S. by Nickolay Umnov, a Soviet expert on robotics. Ultimately Umnov did not come to the U.S.

While the State Department is attempting to protect national interests, the Stanford administration claims to protect the free and open exchange of scientific information, a benefit not only to the scientific community but the country as a whole.

However good these principles are, they will not much help the true reciprocity of scientific exchange. Before deciding the principles of free scientific exchange, a prior question should be asked: "Whom should the University fight for?"

The selection process in the Soviet Union for visiting abroad is completely different from that of the U.S. In most cases the Soviet scholars visiting the U.S. are chosen on the basis of anything but their scientific credentials. One cannot deal with the Soviet visitors on the same basis as with visitors from Sweden or Italy.

Before applying good principles the University must be sure that they are applied to a true scientist. During the Umnov dispute, nobody on either side asked the questions: "What kind of scientist is Dr. Umnov, how can his visit benefit scientific exchange?"

Previous discussions reveal a lack of basic information about the way the Soviets[1] select scientists going abroad.

In contrast to the U.S., science in the USSR is not concentrated at the universities and colleges but mainly at Research Institutes. These institutes employ the major part of scientific equipment and scientists of the country.

Many research institutes have councils endowed with the right to approve dissertations for doctoral degrees the same way as in the universities.[2] Research Institutes are the arm of the USSR Academy of Sciences, and there are hundreds of them under different ministries and State Committees.

Educational[3] and research institutions in the USSR have two very significant nonscientific departments: the local Communist Party Committee, called the Party Bureau, and the First Department. The primary responsibility of the local Party Committee is to carry out the politics of the Party inside the institute, to control the ideological level of the staff, to maintain the required level of political propaganda, etc.

The First Department is a watchdog for the KGB. The primary goal of the First Department is to maintain and control the use of classified documentation, but it also has different responsibilities such as monitoring personnel related to classified projects. They ensure that these researchers have no contacts with foreigners, whether orally or in writing.

Scholars who go abroad are considered to be fulfilling a Party and government assignment; they are on missions as representatives of the socialist state. To be considered for the mission, a scholar must describe the applicant's political, business and social qualities and must necessarily contain a sacramental phrase: "The applicant is politically literate and morally stable." This is a euphemism meaning that the applicant will not be likely to defect, knows how to answer "slippery" political questions, and is not prone to having an affair during a visit abroad.

Before obtaining such a character review one is interviewed by the Party Bureau. The character review should be endorsed by the head of the First Department, which indicates that the KGB does not have obvious grudges against the applicant. After that the applicant may appear before the District Party Committee for additional interviews and endorsement.

An additional interview at the level of the Central Committee of a Republic is required for scholars visiting capitalist countries for the first time. Together with the application for going abroad and a bundle of other documents (e.g., a copy of marriage license, records from the place of living, and medical records[4], etc.), the character review goes to the Department of External Relations[5] (UVS) of the USSR Academy of Sciences, where the initial screening is conducted.

UVS handles all contacts of the USSR Academy of Sciences with foreign scientists, whether inside or outside the Soviet Union. The department is a branch of the KGB. It has several hundred employees, most of whom are active or retired KGB officers. The chief of the department, Stepan Korneyev, is a KGB general (not a colonel as reported in the **Stanford Daily**), a colorful figure well known in academic circles. UVS has the right to ban any scientist from participation at any conference abroad and even from a domestic conference attended by foreigners.

The application for going abroad along with the other documents are subject to several screening stages. The lower stages are done by UVS but the subsequent stages are done by superior levels of the KGB. The final decision is made by a special top secret Exit Commission, which consists of representatives of the KGB, the Central Committee of Communist Party, State Ministries, etc.

There are many criteria for screening. The first is ideological reliability. Next, all close relatives and in-laws are checked to see whether any are abroad, were repressed by the regime, have Jewish blood and so on. Should there be Jewish blood in the veins of the applicant or his relatives, or should other negative factors be revealed, these are offset against positive factors like being a member of a Party Bureau, writing denunciations of his colleagues, etc. *[Taksar is Jewish.—Editor]*

Everybody who is granted permission to leave the USSR is given instructions to beware of provocations, not to speak with strangers in the streets, not to sit with strangers at a table in restaurants, to change compartments of a train rather than to share it with a member of the opposite sex,[6] and so on. Those who go on a mission (i.e., to a Congress or a conference) sign in addition the form[7] reproduced here without abbreviation. *(See below.)*

Given the knowledge of the selection process in the USSR, it is no surprise that nine out of every 10 visitors to foreign conferences are Party members, and that most of these visitors are colorless figures unknown to the scientific community.

As for capitalist countries, I do not doubt that barely two or three percent visiting them are noncommunists. Therefore 50 to one is just a fair bet that Dr. Umnov is a communist, as well as any other Soviet visitor whom Stanford hosts or hosted in the past.

Two years ago a group of six scientists came to Stanford from my former institute. I knew all of them either directly or by names. All were communists and at least two out of six were members of the Party Bureau.[9] And all of them but one person were absolutely unknown to anybody whom they visited here.

If a real scientist receives an invitation to a foreign conference, his chances to attend it are almost negligible. UVS cuts nine out of every 10 requests even before a thorough screening. It is not a private matter for a Soviet citizen to participate in a foreign conference.

The best a real scientist can expect is that in a very exceptional case the administration at his place of work decides to support his request and solicit on his behalf in front of the higher authorities, trying to persuade them that the visit abroad of the scientist in question will benefit the institution and the Soviet State.

Visits abroad are so rare in the Soviet community that they are considered a very high privilege which is awarded by communist authorities for distinguished loyal and faithful services.[10] In most cases these services have nothing to do with scientific achievements and that is one more reason why one sees so few real scientists visit the U.S.

At the latest International Congress of Mathematicians in Helsinki, Dr. Margulis from the USSR was to be awarded a Fields Medal, the award often called the Nobel Prize for mathematicians. He was only the second in the USSR to receive this prize. He requested permission to go to the congress and it was denied.

Being a noncommunist, and a Jew in addition, made him an unacceptable figure in a delegation to a capitalist country. And last but not least: he obviously had no merits in the eyes of the communist authorities to award him a trip to a capitalist country. Recently Dr. Arnold from Moscow was awarded the Crawford prize, but he was not allowed to go to Sweden to receive this prize, presumably for the same reasons as Dr. Margulis.

Leakage of information and universities

A natural question arises: why do Soviets want to maintain scientific contacts if they are not eager to send abroad the most qualified persons? It would be much simpler to reward faithful servants by sending them abroad on a tourist trip.

One benefit is certainly propaganda, which the Communist Party has always valued very highly. It is very important that political propaganda be conducted in a private and unofficial atmosphere.

The second is technological espionage. The latter is not very secret in the USSR. A prominent Soviet journalist, Mark Popovsky, who had worked for more than 30 years covering scientific issues in magazines and who had published dozens of books about scientists, wrote a book titled **Why a Scientist Needs Conscience**.

There he, in particular, advocated free scientific contacts with foreign scholars. After he submitted his book to Znanie publishing house, which specializes in popular scientific literature, he was summoned by the director, Colonel Marinov. Marinov demanded all mention of free contacts to be excluded from the book, adding:

"The Central Committee held a conference for propagandists and told us straight out: the whole purpose of scientific contacts with the West is to get as much from them and give them as little us we can.

"Of course we need some Western discoveries and technology, but we have no intention of cooperation fair and square with them. Do you understand? No rose-colored spectacles, they told us: don't let the wool be pulled over your eyes. And here you go writing about the necessity and inevitability of free contacts."[11]

continued on next page

Instructions for scientists traveling abroad

"APPROVED"

Academician-Secretary of the Department of Biochemistry, Biophysics and the Chemistry of Physiologically Active Combinations of the Academy of Sciences of the USSR,
Academician

_____ A. A. Bayev

_____ 1978

Scientific-Technical Assignment

To the scientific employee of laboratory.....of the Institute.....of the Academy of Sciences of the USSR, /grade-rank/ /position/ /Name: Last, First, Patronymic/ departing for /country/

1. To participate in the work of /Name of Symposium, Colloquium/ in the city of _____ from /date/ to /date/
2. In conversations with foreign scientists propagate widely the achievements of Soviet science and the successes of socialist construction in the USSR, the peaceable policy of our government, and the resolutions of the XXV Congress of the CPSU.
3. Explain and popularize the ideas of the new Constitution of the USSR, and should the question of "human rights" be brought up, adhere to our principal policies as these are set forth in our central press organs.
4. In speeches and conversations abide only by those facts which have been published in our open press and have been authorized for publication abroad.
5. Inform the Soviet Embassy about your arrival in /country/ and about all subsequent movements within that country.
6. Should you be asked to appear on radio or television, or to write an article in the local press, you must coordinate with the Soviet Embassy.
7. Upon return home, within two weeks submit a report on your mission to the UNSS[8] of the Academy of Sciences of the USSR.

Acting Director of the Institute of
the Academy of Sciences of the USSR: /signature/

Taksar...

continued from page 16

Similar, though slightly different in form, are revelations I occasionally heard myself from Party propagandists, who regularly visited the Academic Institutes to disseminate and advocate the politics of the Central Committee of CPSU. Usually they added Lenin's well known and most commonly cited phrase: "Capitalists are useful idiots. They will sell us the rope on which we will hang them," thus emphasizing once more that the politics of the party is in full accordance with the legacy of the Great Proletarian Helmsman.

It comes as no surprise that American scholars admitted to the USSR by exchange programs study Pushkin's poetry and Church-Slavonic language, while Soviets send in exchange specialists in high technology. Not the specialists with whom Americans can cooperate and engage in scientific exchange, but the ones who only have enough knowledge to find out what deserves stealing.

The amount of stolen Western technology in the USSR is immense. The most popular series of Soviet computers, RYAD, and the latest series ELBRUS are the versions of stolen IBM 360s and British Burroughs. A large army of researchers works trying to digest the stolen technology. For example, a huge Moscow institute, NIICEEVT (acronym for Scientific Research Institute for Digital Electronic Technology), is engaged entirely in digesting stolen Western software and accommodating it to Soviet computers, and not without successes.

But NIICEEVT is only the tip of an iceberg, the main part of which is the series of highly classified institutions dealing with stolen software and hardware. The largest achievement in this area is the recent construction of a computer chip factory, which is working on stolen technology. For four years the USSR has been stealing and illegally buying through dummy faces and companies the technological machinery for completely equipping the factory.

It is not hard for Soviets to steal technological secrets and equipment, and with American carelessness, stealing technology is a simple exercise for novices. The real problem is to find out what deserves attention. With this respect the American universities are really a bonanza for Soviet agents. This is what should be kept in mind while speaking about leakage of information through universities. Concentration of research combined with open atmosphere and willingness to cooperate makes the work of Soviet agents relatively simple.

What can be done?

The position of Stanford's administration in Dr. Umnov's case can be summarized as follows:[12] the reciprocity of scientific exchange in Umnov's case is guaranteed by

a) the desire of a professor from the School of Engineering to host Dr. Umnov because this faculty member had met Dr. Umnov occasionally at conferences.

b) the National Academy of Sciences recommended Dr. Umnov for the visit.

[In his talk at Bechtel International Center Feb. 12, 1982, Vice Provost Gerald Lieberman said, in part: "We believe that the best interests of U.S. science and technology, and therefore, the national security, are met through open and free scientific exchanges.

"We assume that any scientific exchange is based on a reciprocity of scientific information. If all the information is flowing in one direction this is not a genuine exchange, and such programs should be called into question.

"Further, if visiting scholars are "agents" in disguise, it is the responsibility of the State Department to prohibit their entry into this country rather than ask universities to restrict the flow of information."—Editor]

In order to assess Umnov's contribution to science, I looked through the review journal **Mekhanika** for the last five years. This Soviet journal reviews all Russian publications in Mechanics, as well as the publications of Soviet authors abroad.

I could find only one paper of about 10 pages by Dr. Umnov written without coauthors,[13] and nothing, even the papers with coauthors, was published in refereed magazines. A half-hour computerized literature search revealed that all of Dr. Umnov's presentations at the conferences were made with coauthors, but what is more: there were no citations in the literature of Dr. Umnov's works for the last 12 years. *[Prof. Bernard Roth, Umnov's prospective host, told Northern California science writers March 10, 1982, that Umnov was "not a big player in the world of robotics."—Editor]*

Judging by all this, I can assume that there is no scholar at Stanford who would have been interested in exchange with the proposed Soviet visitor except maybe for one person from the School of Engineering.

I contacted the department in the NAS responsible for USSR-U.S. scientific exchange. According to Lawrence Mitchell, the staff director of USA-Eastern European exchange program, the NAS has nothing to do with verifications of scientific credentials of the proposed visitors. NAS accepts all the names selected by the Soviet Academy of Science (or to be more precise—by KGB) and forwards them to the universities.

Mitchell said that the NAS does not customarily verify the scientific value of the proposed visitors and relies completely on the authority of universities. Being asked if he remembered at least one "non-customary" occasion on which the NAS verified the scientific credentials of a Soviet scholar, Mitchell answered no. So, NAS recommendation does nothing to guarantee reciprocity.

NAS blindly accepts whoever is sent to them by the Soviet Union. The University blindly accepts whoever is proposed by NAS. Each one points to the authority of the other, thinking that the other guy does the job. Nothing but disgrace results for both the NAS and the University, but definitely more for the latter because nobody else but the University eventually swallows the Soviet garbage shipped under the label "Scientific Exchange."

In Umnov's case we have at least one faculty member who presumably visited Umnov in Moscow and is eager now to host him at Stanford. But let me point to another example which clearly illustrates the University's approach to reciprocity and true scientific exchange.

A year or two ago, a Soviet scholar from Kiev, Mikhail Moklyachuk, visited via an exchange program the Department of Statistics. Nobody knew either his name or his work and I was even asked once if I had ever heard of him in the USSR.

Moklyachuk wrote in his application that he would like to work with Prof. (Rudy) Kalman, however after arrival he did not make an attempt to do so. He became famous for his parties with a lot of vodka and caviar; that did not make his research of more value and interest to Stanford faculty.

Presumably Moklyachuk made a faux pas because all of a sudden, in the middle of his visit, the Soviets demanded that he return home in 24 hours. He abruptly left Stanford, not being able to even pick up all of his belongings or say good-bye. He told one member of the faculty that his mother was ill, another was told that his wife was ill; later in his letters Moklyachuk adhered to the version of a sick mother.

I still cannot conceive what kind of idea guided one of the best Statistics Departments in the nation to accept a visitor whom nobody was familiar with and whose works nobody had heard of. Did anybody from the University (and the Statistics Department in particular) check on what basis the International Research Exchange Board, by which Moklyachuk was proposed, selected applicants from the Soviet Union? *[According to Prof. Bradley Efron, the Statistics Department has an "open door" policy to visitors from all countries. Moklyachuk received no financial support from the department.—Editor]*

It appears that IREX has the same guiding "principles" as the NAS. It is remarkable how the University, which is concerned about its prestige and reputation in all aspects of its life, becomes so insensitive when it comes to the quality of Soviet visitors.

Let me remind everybody that the campaign by the University for free access by Soviet visitors to American research is conducted at a time when the Soviet Union has started a new wave of crackdowns on dissident scientists whose only guilt is fighting for human rights. A physicist, Yuri Orlov, is still detained in a concentration camp on charges of anti-Soviet propaganda. A computer scientist, Anatoly Shcharansky, is now dying in jail. The Nobel prize winner academician Andrei Sakharov was banished into internal exile without any judicial procedure. Recently, he was subjected to a brutal attack of KGB agents. Most of his documents were stolen, including an almost completed 500 page work on the origin of the universe.

To list all the persecutions of dissident scientists by the communist regime would require dozens of pages. Many conscientious scientists in the U.S. and in Western Europe, being concerned about the fate of their persecuted colleagues, organized a group called Scientists for Sakharov, Orlov, and Shcharansky (SOS). They realized the impossibility of having a meaningful scientific exchange program without guaranteeing the rights of the scientists both as scientists and as human beings. The SOS committee pleaded to all scientists to sign a moratorium pledge on contacts with the Soviet Union unless it stops persecuting their colleagues.

Unfortunately, whether to make scientific contacts conditional upon the brutality of an oppressive regime somewhere on the other side of the globe is a matter of conscience and therefore is a very subjective thing. Everybody has different opinions on this.

But the **quality** of such contacts is something that everyone at Stanford—from those who actively participate in the SOS committee to those who have never heard about it—values. If Stanford **really cares** about scientific exchange and cooperation it must follow a simple and rigid policy: no Soviet visitor is invited to Stanford unless he is a proven scholar in his field, whose contribution to science is undoubtful, and whose work Stanford researchers are familiar with and interested in.

Otherwise any proposed visitor, whether sent alone or as a member of a delegation, should be rejected without hesitation and with clear explanation that this is done on the basis of the low scientific quality of the applicant. No official delegations of scientific nonentities should be tolerated, whether forwarded by NAS or IREX.

And each case when a scientific nonentity is sent to Stanford by an exchange program should be made public as should the names of those scientists whom Stanford would like to see as guests and who were not allowed to come.

If our statisticians had expressed publicly how they were satisfied with their Soviet visitor, no doubt the next time the Soviets would think twice before sending Stanford a visitor of similar quality. There is one thing that the Soviets are very sensitive to: publicity.

For instance, when the case of Dr. Margulis was widely publicized by the international mathematical community, the Soviets backed off. They later allowed him to go to Bonn alone for two months by invitation of his German colleagues, a privilege otherwise reserved for a very distinguished member of the Communist Party.

The policy of inviting and accepting only real scholars not only will benefit the true reciprocity of scientific exchange, but it will help national security **more** than any government-university cooperative programs. And this is the **main message** to the Stanford community.

Stanford cannot and should not police every step of its visitors. But it can and should see to it that in each **particular** case the quality of those whom it accepts corresponds to the high standards of one of America's finest universities.

Here is where the solution to all the problems lie, including national security. The problem lies in that most of the real scientists are not ideologically reliable from the Soviet point of view, and they do not want to cooperate with the KGB in stealing Western technology. That is why one sees so few of them visiting America.[14] A firm and widely publicized policy of accepting only proven scholars will eventually open the doors for those like Dr. Margulis. Moreover, it will virtually eliminate the leakage of information through universities.

I do not want to mislead anyone, by claiming that there are no corrupt men even among the best Soviet scientists. Certainly there are, but the percentage is very small, it is almost negligible. By the same token there were few real scientists in the Third Reich corrupted by the Nazi regime.

No doubt everybody from the Soviet Union, even a true scholar, if he gets permission to visit the U.S., will sign first the assignment such as the one presented above; and nobody would ever dare to break such a contract unless he is eager to ruin his career in one day.

But in the case of a real scientist there will be at least a hope for a sort of scientific exchange and cooperation. Otherwise, if Stanford follows its present shameful policy of swallowing whatever the KGB selects, there will be no hope. I can guarantee that any colorless and scientifically unknown figure in a Soviet delegation is either an agent or a Party bureaucrat in science rewarded for his loyal services by the trip to America.

The proposed policy of accepting only proven scholars is not something new to the American scientific community. In April of 1981 the chairman of the SOS committee, Morris Prepstein, a physicist from Berkeley, visited Stanford and participated in public debates over Soviet policy. He told us that long before the organized boycott was suggested, a policy of dealing only with recognized Soviet scientists had been proposed in a letter of British and American physicists to **Nature** magazine.

Infuriated by the absence of all invited speakers to international conferences and by the fact that all Soviet delegations consisted of unknown colorless people, many of whom were even ignorant of physics, the British and American scientists protested and asked everyone not to deal with official Soviet representatives unless they are known specialists in their field.

Unfortunately, this letter never found resonance among American scientists. If it had, the question of information leakage **through universities** never would have arisen.

Notes

[1] Not Russians. To call the Soviet Union "Russia" and the citizens of the USSR "Russians" is no more legitimate than calling the U.S. "the Royal American Colonies" and Americans "Anglo-Saxons." Russians constitute barely 50 percent of the total population of the USSR.

[2] The final award of scientific degrees is centralized and done by a specially created and very rigidly controlled government institution: Superior Certification Commission.

[3] What is called "academic" in the U.S. is called "educational" in the USSR, while "academic" is used in relation to the Academy of Sciences.

[4] Before the middle of the 1970s, the applicant needed also to present the statement from the psychiatrist that he was not mentally ill and was not under psychiatric treatment of any sort.

[5] The word-for-word translation of this department's name is "The Management for External Affairs."

[6] The official Soviet ideology cannot admit that a Soviet citizen can be "morally unstable" with a member of the same sex. As a matter of fact, homosexuality is a criminal offense subject to up to 10 years imprisonment.

continued on next page

Black students voice concerns on curriculum, professorship board, ASSU

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that we raise our concerns now," they added. The School has 31 tenured and seven nontenured faculty.

At a news conference Wednesday, March 9, BSU Chairperson Rhonda Trotter said "we do not have anything personally against Greenberg and Chambers" and "no problems with the content of the course."

Other BSU speakers said the GPB should have helped fund a series of African history courses jointly sponsored by the African and Afro-American studies program and the Stanford Workshops on Social and Political Issues (SWOPSI).

European and American universities "have institutionalized a false history and are now becoming further entrenched in that falsehood with Western culture requirements," Granville Simmons of the BSU said.

Enrollment in the course started at 20 and has diminished, partly because of the pressure resulting from the 15-unit Western culture sequences and other course requirements, he said. It is taught by Irvin Brown.

Vincent Johnson of the BSU said that the School of Humanities and Sciences had given an "arrogant response" to a request for helping fund the course, and shown a "total disregard" for the academic concerns of black students.

BALSA's leaders said the Guest Professorship Board had avoided consideration of funding the BSU proposal for eight months "with no adequate explanation for the delay." Linfield replied that the course had been funded through SWOPSI and the Academic Organization Board.

He noted that four of the nine guest professorships sponsored by GPB in the past have come from minority backgrounds, as did two of the four proposed this year—Chambers and Elaine Jones, the NAACP Legal Defense Fund's chief lobbyist. "Serious negotiations" are in progress for Alex Haley to teach under GPB auspices next year, he added.

According to Linfield, the GPB standards for selection of guest professors must be "an adequate scholar" as judged by other scholars in the field; "widely recognized for her achievements"; and "possessed of sufficient pedagogic ability to convey her expertise to her students." The course must receive departmental accreditation, be "academically rigorous. . . commensurate in benefit and burden with a typical University course," and be likely to attract 150 or more students.

Linfield said Greenberg first came to the GPB's attention when students scanned lists of award winners and noted he had received the Granville Clark prize in 1978. No students expressed opposition to Greenberg and Chambers when their names were included in a list of proposed guest professors last fall, and one black was among those voting 10-2 in favor of funding the course Feb. 22.

The controversy is the second to erupt this year over guest professorship selection. The Student Senate voted approval of former Rep. Pete McCloskey's proposed course on Congressional politics 11-5, despite concerns expressed by some students over his views. The margin was one more than the required two-thirds majority for GPB funding.

As many as 800 may seek to enroll in McCloskey's course, which will be limited to 250, Linfield said. The GPB feels strongly that student groups should not have "censorship rights" in selecting professors.

At the BSU news conference, David Porter, BSU treasurer and a member of the Student Senate, criticized the Senate's failure to authorize BSU's inclusion among fee assessments authorized for a student ballot later this year. While backed by a 10-3 margin, the measure fell one vote short of the total needed under ASSU rules.

Individuals at the news conference expressed confidence that the fee assessment would be placed on the ballot as a result of petitions signed by 2300 students, or 20 per cent of those enrolled, as provided by ASSU.

Asked if she felt the campus climate toward blacks was becoming "hostile," BSU Chairperson Trotter replied "yes." She cited improvements needed in the black theme house, Ujamaa; the African course controversy; minority student and faculty concerns; and non-recognition of black fraternities as specific concerns.

The University "has not come to the position where it should be," she said.

Asked if she could foresee any conditions under which Greenberg and Chambers might teach at Stanford, she said she personally felt this might happen when there was "drastic improvement in faculty tenure for minorities."

An underlying theme in many black comments was concern for greater consultation and involvement of blacks in curricular concerns affecting their interests.

—Bob Beyers

Soviet scholars...

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[7] *Published in* **Russkaya Mysl'** *(Russian Thought), Paris, France, issue of 17 January 1980. The Xerox of the original transcript and its English translation can also be found in* **The Samizdat Bulletin**, *No. 91, November 1980, available at the Stanford Library.*

[8] *Presumably an acronym for one of the divisions of the Department of External Relations.*

[9] *In 1977 the number of employees in the institute I worked in was about a thousand. The number of Communists was less than a hundred. The Party Bureau consists of about ten members. Today's figures should not be much different.*

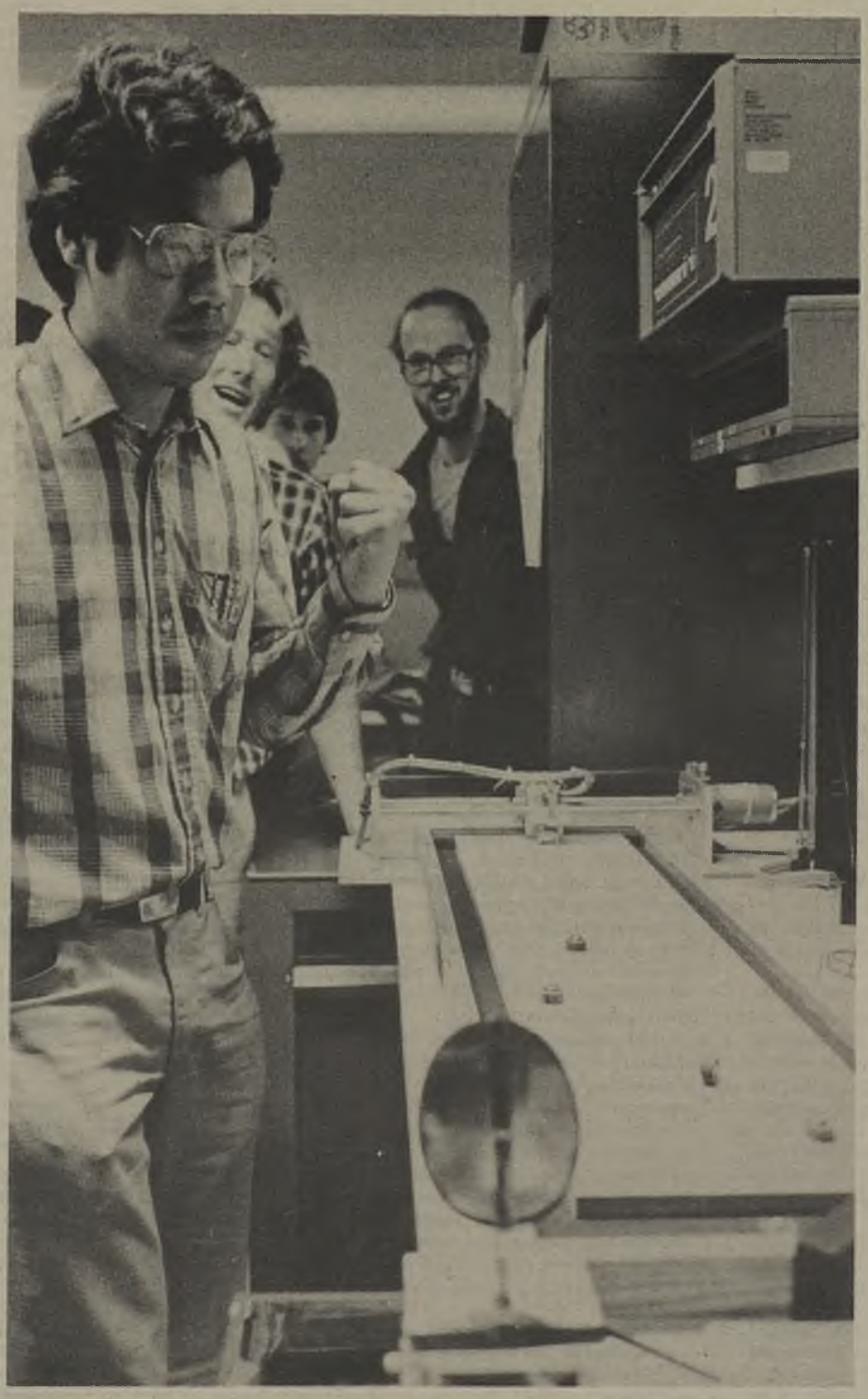
[10] *Besides enormous financial advantages which even a short visit can bring (e.g., a black market value of a pair of Western jeans is 1.5 average monthly salary), such visits are very prestigious. The difference in prestige between two division heads, one of whom can travel abroad and one whom cannot, is the same as the difference between an ordinary supervisor and a vice-president of a company in the U.S.*

[11] *Mark Popovsky;* **Manipulated Science**, *Doubleday & Company, Inc., New York, 1979, see also* **Der Spiegel**, *No. 29 of July 17, 1978.*

[12] *Presented by the vice-provost at a public discussion at the Bechtel International Center.*

[13] *There is a widespread form of scientific bribery in the USSR: the subordinate includes his boss as coauthor of the article. In most places this is even a form of compulsory "taxation." That is why, when a Soviet head of a division has many coauthored publications, this raises a lot of suspicions in their authenticity.*

[14] *Everyone can conduct a simple experiment: Look for 15-20 Soviet scholars you consider to be the major contributors in your own field and then see how many of them have been seen at the international conferences, especially those held in the West, or coming to the West by exchange programs.*



Space age shuffleboard at Stanford

Hy Tran, Stanford graduate student in mechanical engineering, watches a test run of a scaled down, computerized version of shuffleboard. Developed for Prof. Larry Leifer's class in smart product design, computers use lasers and other devices to calculate where shuffleboard pucks should be targeted, and then physically launch them.

STANFORD NEWS SERVICE PHOTO BY ED SOUZA



Richard Lyman: the portrait and the original

Lyman portrait unveiled at Library

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during the difficult 'Seventies."

Peter Bing, former president of the Stanford Board of Trustees said Lyman "was a hero when very little was heroic. Not a popular hero, to be sure. Not a Mr. Chips, who was beloved for his benign and grandfatherly ways. But rather a steadfast and uncompromising defender of liberty in an educational institution, where constitutional freedoms were applauded in principle, but sometimes forgotten in the general abandonment of civility that characterized the late 1960s and early 1970s. . . .

"His legacy is an institution that emerged from its ordeal stronger by every measure than when he entered it."

Provost Albert Hastorf served as master of ceremonies for the brief event in the absence of President Donald Kennedy, who was testifying in Washington. In a note read by Hastorf, Kennedy expressed hope that "neither Richard nor his image (in the painting) bears an expression of disapproval.

"But if it has to be *one* of them, for God's sake let it be the real one."

Dick and Jing Lyman appeared quite happy, even though the president emeritus noted that "being unveiled is a disconcerting notion."

To most of those attending, the events of the late 1960s and early 1970s were far more disconcerting.

Lyman left Stanford in 1980 to become president of the Rockefeller Foundation. His mother, a Palo Alto resident, attended the ceremony.

Regular weapons, electronics nearly match nukes vs. tanks

New electronic technology can make conventional weapons almost as effective as tactical nuclear devices against armored divisions, according to William Perry, former head of defense research and development programs for the U.S.

Now a fellow in Stanford's Northeast Asia-U.S. Forum on International Policy, Perry told an unofficial group of Chinese academic researchers that "new technology which has been developed to improve the efficiency of conventional weapons approaches the same efficiency as nuclear weapons."

The technology includes both precision-guided munitions and multiple independent conventional warheads.

"We are moving only slowly toward achieving this military capability for reasons that have to do with political hesitation rather than technical limitations," he said.

NATO has been "very comfortable living under the nuclear umbrella over the last few decades," he explained. "This has been seen as cheaper and easier than building conventional military capability. In the last few years, Europeans have become less and less comfortable living under this umbrella, which they now perceive as leaky." But whether this discomfort will result in strengthening conventional forces remains to be seen.

One detailed study estimated that 10,000 air sorties would be required to destroy an armored division with conventional iron bombs, compared to only 100 with tactical nuclear weapons, Perry said. But the same result could be achieved with only a few hundred flights using multiple warhead, precision guided conventional weapons.

In a 1980 visit to China as undersecretary of defense for research and development during the Carter Administration, Perry concluded that "technology could play a key role in the modernization of the Chinese forces, that anti-armor capability was the most important requirement, and that the development of microelectronics in China was the key to success," he said.

Since the change in administrations, his efforts to bring U.S. electronics firms together with the Chinese Ministry of Electronics for cooperation on civilian projects have been unsuccessful.

U.S. firms were "very reluctant" to become involved with the Chinese so long as both governments were unwilling to cooperate. Since September 1980 "there has not been an inch of progress," he observed.

John W. Lewis, Stanford professor of political science and director of the forum, noted that "stalemate" remains the most likely outlook for U.S.-China relations.

"The dramatic beginnings of the decade of normalization between our countries (started by President Nixon in 1972) provided only a superficial basis for cooperation.

"It provided neither the understanding nor the necessity to resolve the Taiwan issue, but left a residue of distrust that injected (Taiwan) into all other issues.

"The impasse in official relations rendered almost meaningless any real coalition strategy to meet the Soviet challenge in Asia."

But "the way the U.S.-China stalemate is shaping up limits further deterioration or at least a complete rupture," he added. Major joint ventures for developing China's resources, trade, and flourishing tourism appear to provide a floor for U.S.-China ties.

To make progress, not impasse, the norm, he suggested creating a small, binational working group of security and political specialists from both countries to develop informal policy recommendations for the two governments to consider.

Lewis and Perry are among the contributors to a new Northeast Asia-U.S.Forum report on *The Security Challenge in Northeast Asia: Report of a Conference*, resulting from a visit to Stanford from scholars at the Beijing Institute for International Strategic Studies (BIISS).

At the June 1982 conference, BIISS Director Zhao Rui noted that the past decade has been marked by "continuous expansion" of Soviet arms "in an attempt to gain overall superiority over the U.S." Where the Soviets had no overseas bases a decade ago, now they have obtained rights to use more than 50 air and naval bases in 26 Third World countries.

Liu Shiliang, another BIISS director, said "the Soviets will attempt to use only conventional arms to win a war. . .nuclear arms would be the last resort.

"Soviet nuclear weapons are directed mainly against American forces. It is not likely the Soviet Union would first use nuclear weapons against China."

Superior equipment would give the Soviets an initial advantage in a ground attack against China, he said. But "China is like a sponge or a vast desert and the Soviet Union is like water—China can absorb as much as the Soviets throw at it."

Copies of the conference report may be purchased at $7 each, including postage, from the Northeast Asia-U.S. Forum on International Policy, Stanford University, 320 Galvez St., Stanford, Ca. 94305. Phone (415) 497-9741. California residents should add 40 cents sales tax.

New technology which has been developed to improve the efficiency of conventional weapons approaches the same efficiency (against armored divisions) as nuclear weapons...

Europeans have become less and less comfortable living under this (nuclear) umbrella, which they now perceive as leaky.

—William Perry

Students seek summer internships. . .

videotapes and workshops on such topics as resume writing, job interviewing, and researching prospective employers.

While many students would like to work for large firms, Shinkman notes that "Stanford has an unusual number of bright, ambitious, aggressive students, who would prefer working for themselves rather than for others."

Last spring, more than 500 from Stanford attended a student-organized conference on entrepreneuring, for example.

Looking ahead, students are extremely interested in obtaining internships and other experience that may give them an edge in finding full-time jobs later, he adds. "Our three professional staffers are swamped" by students seeking internships and summer jobs.

Former placement director at Trinity College in Hartford, Connecticut, Shinkman is impressed by the diverse activities of Stanford students. More than a third study overseas; scores of undergraduates do independent research with individual faculty members; and about a fourth "stop out" for a while before graduating.

"The University is very good about letting students come and go without a lot of red tape," he observes.

"There's no question that these activities have important career implications for many students. It gives them a better sense of who they are and what they're looking for."(Prior to a news interview, he'd counseled a student who plans to "stop out" for six months to train for the Olympics.)

Shinkman cited the development of alumni and parent "networks" to help provide career advice and internships as other ways in which Stanford assists job-seeking undergraduates.

Audrey Bernfield, director of advising and career counseling for human biology, currently is working with several other departments to document individual examples and further suggestions of how liberal arts education can lead to interesting careers.

While nine out of 10 graduating seniors at Stanford still plan to attend graduate or professional school at some point in their life, the proportion seeking full-time work soon after commencement has doubled since the mid-1970s, to more than 50 percent. This change, concurrent with persistent tightening in the national job market, has resulted in a sustained increase in undergraduates using the services provided through the Career Planning and Placement Center.

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the month of January:

FEDERAL

Contracts—Amendments

Stephen E. Harris and James F. Young, W. W. Hansen Laboratories, "Research Studies on Radioactive Collisional and Ultraviolet Lasers," $983,425 from the Department of the Air Force for 3 years.

Robert Hofstadter, W. W. Hansen Laboratories, "Design Phase of TASC for Energetic Gamma Ray Experiment Telescope to be Flown on GRO," $518,061 from NASA for 1 year.

Joseph B. Keller, mathematics, "Research in Theoretical Acoustics," $212,353 from the Department of the Navy for 2 years.

William E. Spicer and Ingolf Lindau, Stanford Electronics Laboratories, "Studies of the Electronic Surface States of III-V Compounds and Silicon," $1,424,301 from the Department of the Navy for 3 years.

Richard N. Zare, chemistry, "State Identification of Reaction Products," $200,000 from the Department of the Air Force for 1 year.

Charles H. Kruger, Robert H. Eustis, Morton Mitchner, and Sidney A. Self, mechanical engineering, "A High Magnetic Field MHD Generator Program," $490,287 from the Department of Energy for 1 year.

New Grants

Samuel Strober, Edgar Engleman, C. Garrison Fathman, F. Carl Grumet, and Ronald Levy, School of Medicine, "Use of Hybridomas and T Cell Clones in Transplantation," $432,577 from the Alcohol, Drug Abuse, and Mental Health Administration for 1 year.

Grants—Amendments

W. Stewart Agras, psychiatry, "Behavioral Factors Influencing Infant Weight Control," $210,912 from NIH for 1 year.

Jack D. Barchas, psychiatry, "Neuroregulators and Behavior," $463,069 from NIH for 1 year.

Daniel Bershader and Jean Mayers, aeronautics and astronautics, "A Summer Program of NASA Summer Faculty Fellowships," $319,637 from NASA for 1 year.

William C. Dement, psychiatry, "Sleep and Its Disorders in the Elderly," $610,799 from NIH for 1 year.

Leonard A. Herzenberg, genetics, "Clinical and Biological Uses of Automated Cell Sorting," $412,803 from NIH for 1 year.

Leonard A. Herzenberg, genetics, "Genetic Study with Mammalian Cells," $220,657 from NIH for 1 year.

NON-FEDERAL

New Grants

Ruth T. Gross, pediatrics, "Project for Risk Infant Development," $309,283 from the Robert Wood Johnson Foundation for 1 year.

Clark W. Reynolds, Food Research Institute, "Project on U.S./Mexico Relations," $300,000 from the Hewlett Foundation for 2 years.

Grants—Amendments

Halsted R. Holman, School of Medicine, "Clinical Scholar Training Program," $538,325 from the Robert Wood Johnson Foundation for 3 years.

Richard M. Swanson, Stanford Electronics Laboratories, "High Efficiency Silicon Concentrator Cells," $349,000 from the Electric Power Research Institute for 1 year.

Carpools

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

One person to join existing carpool to Stanford. M-F, 8-5. We meet at Stevens Creek & Wolfe Road, Cupertino. Please contact Ana Errico at 7-0612.

Carpoolers wanted, 8-5, M-F, from Pleasanton, Livermore, Union City, Fremont area to Stanford. Call Patty, ext. 7-2071.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

39476-TC (JCC:5588) LIFE SCI RES ASST I: Work on a research proj to determine the effects of interferon on chronic hepatitis B virus infection in patients; respon for lab testing of viral DNA polymerase, viral antigens & antibodies, & viral DNA in serum & immunofluorescent staining of liver biopsies; involves handling a virus which is pathogenic of liver biopsies; involves handling a virus which is pathogenic for man & special procedures to adequately contain virus, such as wearing gloves, decontaminating eqpt, & geographic isolation of the virus to prevent infection of lab personnel; must understand the biological implications of the work & the theoretical basis of methods in order to interpret results & design new methods to solve specific problems; QUALIFICATIONS: prefer BS in microbiology or equiv combination of edu & exp w/ prev lab exp using above listed techniques.; C05; $1670-2086.

33698-TC (JCC:5588) LIFE SCI RES ASST I: 60%; plans & carries out details of experiments for researchers investigating Respiratory Diseases utilizing basic biochemical, immunological, & molecular biological procedures & experiments; routine analysis & procedures; prep of monoclonal antibodies incl animal injections, removal of spleens, cell fusions, cell maintenance & cloning; adapts or works out details of new, nonstandard methods outlined by supvr or taken fr literature; interprets results of clinical tests, instrumental analyses, etc; respon for ordering & maintaining lab supplie eqpt, & chemicals; QUALIFICATIONS: requires knowl of scientific theory generally assoc'd w/ completion of BS or equiv edu & exp in an applicable sci; at least 6 mos lab work exp during or after college.; C05; $1002-1252.

33243-LL (JCC:5986) NURSE EDUC/CLINICAL NURSE SPEC: Receives initial referral fr M.D.'s, P.H.N.'s, etc. in relation to services to be provided for all potential patients & families by Birth Defects Ctr staff; attends 3 clinics together w/ clinic nurses; evaluation of nursing needs & prov for nursing serv needed by patients & families; plans for discharge of B.D. patients; advises parents; maintains liaison w/ community agencies; serv as consultant to agency staff, under supvn of B.D. Dir, for screening patients w/in those facilities who have as yet unrecognized genetic syndrome & stimulates referral to approp med facility; QUALIFICATIONS: Masters degree desirable, but not required; bkground & exp w/ children w/ develop'mtl disabilities; knowl of community agencies providing care for children; knowl of genetics & genl pediatrics is valuable.; K06; $2358-2549.

SLAC

91726-JM (JCC:8890) MISC TECHNICIAN: TMS Unit; temporary till 9/30/83; assembly of prototype electronics, loading components on PCB, soldering components; testing prototype electronics, measurement of circuit performance using simple test eqpt, oscilloscopes, pulse generators, DMV's logic analyzers; QUALIFICATIONS: 1 yr exp in electronic testing & repair; circuit design exp in analog & digital preferred; some exp in mechanical design to support electronics.; A99; $7.50/HR.. APPLY AT SLAC

Bargaining Unit

29333-JB (JCC:7158) DELIVERER I: 50%, fixed term 3/28/83-6/30/84; 1-5pm; delivering & retrieving class mat'ls (homework, course notes, exams) to & fr 10-15 companies covering a route of 45 miles each day fr Palo Alto to Mt. View; distributing & retrieving mat'ls to & fr faculty & their secretaries mainly w/in Sch'l of Engrg by bicycle; helping out in offc by filing, typing & running errands; QUALIFICATIONS: Calif. drivers license; good driving record; good sense of direction; reliable & dependable; some clerical exp.; A16; $ 7.16.

7005-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; 7-3:30; full respon of recieving, storing, rotating & despensing all deliveries; respon of maintaining a kardex file for all commodities fr the commissary & take inventory each quarter on all items incl glassware, dishes, & flatware; also kitchen eqpt & supplies inventoried every spring quarter; maintain & repair eqpt in kitchen & repair tables & chairs; capable of operating all eqpt & supv dishroom at noon & maintain sanitary work areas; occasionally do the cooking, pantry work, pots/pans & custodial duties; QUALIFICATIONS: able to lift heavy loads; able to read, write & understand English.; A20; $ 7.91.

29758-DS (JCC:7654) CUSTODIAN TMS: Unit; 7:30-4; works under direct supvn; performs custodial duties; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot cleans, shampoos, waxes, dusts, & oils furniture; supvr schedules work & provides detailed instructions; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift moderately heavy items, 25-75 lbs; ability to withstand extensive walking, pushing, pulling, stooping, & squatting.; A13; $ 6.68.

Nonexempt

30398-PM (JCC:2470) OFFICE ASST IV: Prov offc & sec'l support for key personnel in large health edu proj using mass media; typ draft mat'ls & forms; finalize & format complex reports; respon for coord of part-time employees; execute & follow-up on financial commitments, keep up internal budget sys; work w/ graphics, graphic design, or print production (phoning for cost estimates, etc); answer phones, screen inquiries; maintain offc records; make appts & travel arrangements, etc; QUALIFICATIONS: typ 70, s/h preferred; highly superior sec'l skills; excel spelling; ability to use or learn abstracting & bibliographic tech, word processing, SCRIPT, EDS, & audio & audio-visual eqpt for playback; able to manage several projs simultaneously; send appl/resume to Dr. June Flora, HRP Bldg.; B14; $1440-1514.

33286-PM (JCC:2512) OFFICE ASST III-SPEC: Working directly w/ administrator of Epidemiology Lab, who is concerned w/ epidemiological research, computer data processing, & publication of the INTERNATIONAL PSORIASIS BULLETIN & the PSORIASIS NEWSLETTER; code & transcribe data; type corresp & reports; file corresp & reports; order & maintain supplies; answer phone & handle inquiries; QUALIFICATIONS: typ 60; knowl of offc routne; genl knowl of med lang; ability to interact w/ administrator & offc personnel efficiently; work independently; ability to set up & maintain corresp & report files; have desire to learn new skills & tools (e.g. word processor or computer terminal text entry); send appl/resume to Lexie Nall, Edwards Bldg., R-156.; B12; $1310-1373.

33616-PM (JCC:2562) SECRETARY III: Plan, organize, maintain complex appt calendar; arrange mtgs involving VP, other Univ VPs, faculty, sr. mgmt staff, sr. officials at external affiliated institutions, community physicians, major donors; screen, prior, route & monitor large volume of incoming & outgoing mail; draft corresp for VP; prep confidential mat'ls; allocate other typing to spec typist; proofread; oversee distribution; respon for VP filing; prov bkground info & files for mtgs & to accompany mail; screen & route heavy volume of phone calls; prep, process, reconcile expense reports,etc; QUALIFICATIONS: typ 60; s/h helpful; requires excel knowl of offc procedures & univ practices & policies; ability to handle wide variety & heavy volume of tasks in confidential & highly sensitive situations w/ good judgment & discretion; excel oral & written commu skills; exp in a team setting; 3 yrs exp in sec'l field; exp in Med Ctr/univ/health care or comparable environ preferred; send app/resume to Pam Washburn, SUMC, M-121.; B14; $1440-1514.

19964-PM (JCC:2562) SECRETARY III: 50% Univ position & 50% Vet Admin Med Ctr posiiton; sec to the Chief of Ophthalmology at Vet Admin Med Ctr in Palo Alto; able to prov full range of sec'l duties; able to work w/ grant/contract budgets & speak for the Chief of the Section; entail letter/memo composition; dealing w/ internal as well as external admin & funding agencies; med terminology; edit manuscripts & papers; QUALIFICATIONS: typ 70-75; good sec'l skills & med terminology; able to edit manuscripts & papers; requires a CIVIL SERV RATING for VAH portion; send appl/resume to Mariann M. Crane, Div of Ophthalmology A227, SU Med Ctr.; B14; $1440-1514.

33244-PM (JCC:2570) SECRETARY III: Coord of commu betw patients, commun physicians & agencies, SUH clinics & physicians & personnel in Birth Defects Clinic, Spina Bifida Clinic, Craniofacia Animal Clinic; commu incl coord in appts & conferences, arrangements for finan asst thru outside agencies; soliciting of med info fr referring physicians, institutions & agencies; answering questions; admin of offc & companion clinics; ordering charts, X-rays, sched appts; posting & distri of schedules to consultants for clinics; maintaining files of patients; some typing of dictation & reports fr clinics; supvn of work of transcriptionist/secty, etc; QUALIFICATIONS: typ 65; efficient & accurate typing; genl sec'l exp; able to cope w/ varied pressures, deadlines & numerous demands; good interpersonal skills; requires confidence & patience; good commu skills essential; med terminology desirable; contact: Ann Johnson, Med Ctr S332, 497-5344.; 1 B14; $1440-1514.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, March. 22, in Room 270, Tresidder Union.

The sessions are open to all new employees without preregistration.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

SECRETARY II—Blood Bank—#8103—C-10: Responsibilities: Transcribes and types correspondence, memoranda, minutes; types transcripts, manuals, newsletters and other materials for publication. Produces and distributes copies of above materials. Takes dictation of letters, meeting minutes and other events which require a formal record. Prepares reference materials. Coordinates Blood Bank mail and postage. Schedules meetings, conferences and other appointments as necessary. Orders routine office supplies. Receives and screens phone calls and visitors, referring as appropriate. Maintains and/or assists in the maintenance of various departmental files. Some computer data entry and retrieval. Qualifications: Two years of secretarial experience, and/or successful completion of a formal secretarial course or two years of college required. Minimum corrected typing rate of 60wpm, and proviciency with a system of dictation/transcription required. Permanent Full-Time M-F 8-5pm $7.19-$9.85 hourly.



Rental housing

HOUSING AVAILABLE

□ **June 25 to Jan 1, '84:** Fully furn 3BR/2BA hse. nr San Jose State, 1 mi. to #680/280. LR, DR, patio w/vines & citrus, in family nghbrhd. Ideal for children. $900/mo. Call Dr. Otten (408) 288-6331.

□ **Late June thru Aug. '83:** Fully furn 5BR/3BA hse., LR, DR, AEK, FR, W/D, enclosed yd. No pets. 20 min. to Stanf. $1000/mo. incl grdnr. + sec. dep. + util. + phone. Call Wendy Waldie (408) 736-8368 (day), (408) 732-7799 (eve).

□ **Apr. thru Dec. '83:** Cozy 1BR bungalow, 15 min. walk to Stanf. & dwntwn P.A. Fully furn. w/study, office, or child's BR area, patios, easy upkeep yd. Ideal for cpl. $800/mo. Call 326-3450.

□ **Aug. '83 to Aug. '84 (flex):** Fully furn. campus hse. 4BR (1 converts to study), DR. Children, pets OK. $1300/mo. Call 856-4038 before 8 pm.

□ **Beg. Apr. 3:** Prof. woman w/beaut. 2BR/2BA apt. in Sharon Hgts to SHARE. Incl. piano, pool, tennis, W/D. 5 min. to Stanf. No pets, nonsmoker, female. $400/mo. + ½ util. Call Sunny (415) 858-3933 (day), 854-8621 (eve).

□ **June 1 to Aug. 31, '83:** Summer Sublet. 2 or 3BR/1½BA, LR, DR, encl. patio. 1 mi. to Stanf, dwntwn Palo Alto, Menlo Pk. $825/mo. Call 322-0234 (eve).

□ **Beg. Apr. 1:** Lrge furn. hse, 6BR/2BA, W/D. nr. shops., fenced yd, off-st. prking. Berkeley, 1 blck no. of U.C.B., Walnut/Vga area, in "gourmet ghetto." Mo. to mo. terms. $1500/mo. or nego. terms to right tenant for lease w/maintenance. Call Lucien (415) 548-6288 (day or eve), Diana (415) 329-1298 (eve).

□ **June to Aug. '83:** Approx 10 wks. Charming Los Altos Cape Cod hse 3BR/2BA w/hot tub & lovely yd. Tennis, etc. nrby. Call (415) 961-4218 (eve).

□ **June 41 thru Aug. 29:** Fully furn. west Atherton estate. 5BR/3½BA, pool, maid service, grdnr, util. incl. No pets. $9750 total. Call 321-4100.

□ **July & Aug. '83 (flex):** Fully furn apt. Wash. DC, nr embassies. 1BR, DR, air-cond., AEK, DW, new, fireproof bldg, pool. EXCHANGE for furn. apt., hse in Palo Alto area. Call Whitney (202) 296-8863.

□ **June, July, Aug. '83:** Exec. fully furn. 5BR/4BR hse., pool, W/D, panoramic view, Portola Valley. Rent incl. grdnr, clean., pool serv. Call 851-2481.

□ **Beg. Mar. 18; beg. Apr. 1:** Two rms in old Victorian priv. hse on each of given dates. Fully furn, ktchn priv, lndry. Walk to dwntwn, Stanf. Short term rental pref. $400/mo. Call Peggy (415) 327-2510.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, Com. Ctr. Prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **Apr. 1 to June 1 (flex):** Fully furn hse, 2BR/2BA, FR, lrg LR, AEK, 2 frpl, 2TV, park-like 1/3 acre. 1 queen, 1 dbl bed. Quiet dead-end st. Car poss. $1050/mo. Call (415) 967-2918.

□ **July & Aug.:** Very attrac. summer rent, dwntwn Palo Alto. 1BR/2BA condo, fully furn. Suit. cpl. Libr. w/spiral strcse, balc, pool, secure. 18th C. Europ. style. $1500/mo. Call Pat Mueller-Vollmer 324-1624 (eve), 327-3505.

□ **Beg. June 1:** Summer rent, and/or 1 yr. High Portola Val. (Ladera). Beaut. 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis. 7 min. to Stanf. $1500/mo. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **NOW:** Fully furn hse, 2BR/1BA, W/D, piano, grdnr. Nr. Stanf. lrg. encl. grdn. $850/mo. incl. grdrn. Call Jenny, 497-6017 (day), 321-9760.

□ **Aug. '83 to Aug. '84:** New 1600 sq. ft. hse on Maui on slopes of Haleakala. Energy effic., 3-4BR, sleep loft, sep. liv. areas con. by porch, shoji drs, W/D, microwv, DW, w/w carpet, on 4 acres incl mtn. stream, 2 min. to store, 7 min. to surf beach, 12 mi. to Kahului ctr. Contact Laurie or Sam Friedman, 3728 Redwood Circle, Palo Alto 94306 or call (808) 572-1481 for info. EXCHANGE for home in Palo Alto.

□ **Late Aug. '83 to late Mar. '84:** Campus hse, fully equipped, 3BR/3½BA + guest/FR, study, DR. $1400/mo. incl. grdnr. Call 497-1941 (day), 493-0777.

□ **Beg. April 13 (approx):** Indef. Oak Creek studio sublease. Fully furn. 5 pools, jacuzzi, sauna, steam bath, gym, tennis, cov. prkng, view. Conv. to Stanf. Call 857-1885, eves & wknds.

□ **Academic Yr. '83-'84:** Twnhse, heart of London. 3-4BR/2BA, mod. ktchn, DW, W/D, TV, VCR, gar. new Barbican complex, access to grdns, playgrnd, schls, London U. EXCHANGE for similar home in Palo Alto. Call Ian Benson c/o Desi Glassel, (415) 859-6487.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse, 4BR/3½BA, LR, DR, study, library, frpl, pool, view, acre. $1600/mo. incl. grdnr, pool serv., water. Call (45) 327-5204 or 497-4732 (day).

□ **Beg. April thru June, Aug. longer:** Peter Coutts Hill, 2BR/2BA, LR, DR, + study, fully furn. $1100/mo. Or will rent portion of unit: 1BR/1BA, LR, DR + study for $850/mo. Call Frances Duignan, 321-2052, or (415) 435-3044.

□ **June 18 thru Aug. '83:** Fully furn. campus hse, 4BR/2½BA, FR, piano. Will EXCHANGE for London hse/flat, or RENT for $1500/mo. incl. water, util., cleaning, grdnr. Nonsmokers, no pets. Call 493-8874.

□ **April 10 to July 15, '83:** London Hampstead nr Heath Regency Hse; beaut. furn. 3BR/2BA, study, dshwsher, W/D, garden. Details, photos avail. from owner. Avil. for future occasions. Call Himmelweit, 321-2052 (day).

□ **April 15 to June 15, '83:** Palo Alto nr Stanf. 2BR/2BA, study, lrg. LR w/frpl, DR, pool w/spa. Adults only, nonsmokers, no pets. Sec. dep. req. $1200 (8 wks) incl. hseclean., pool serv. Call 856-9696.

□ **Beg. Mar. 19:** Fully furn. 3BR/3BA hse, beaut., spacious, Palo Alto nr. Stanf. New kitchn, W/D, piano, frpl. Fenced yd. No pets. (Flex. time per.) $1550/mo. incl. grdnr, water. Call COLLECT (602) 299-4499.

□ **Aug. 1, '83 to summer '84:** Fully furn. campus hse, 5BR/4½BA, lrg. study, DR, decks, 1+ acre. 1 yr. lease. $1600/mo. Call 497-4547 (day), 327-4277.

□ **June 16 to Sept. 5, '83:** Spanish style hse, central Palo Alto, fully furn., 5BR/5BA, balconies, spiral staircase, new kitchn, enclosed crtyd, pool, jacuzzi w/dress. rms. Acre, creek on prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Beg. June 1:** Summer rental and/or 1 yr. High Portola Valley (Ladera). Beaut. 3BR/2BA fully furn. hse. Atrium, lrg. self-maint. grdn; oaks, pool, tennis. 7 min. to Stanf. $1500/mo. Call Pat Mueller-Vollmer, 324-1624 (eve), 327-3505.

□ **NOW:** No. Tahoe/Incline village. Furn. 2BR condo, long term rent; 6 mo. or more. $350/mo. Call (415) 361-1859 (eve. & wknd).

□ **Beg. June 10, '83:** Sunny, attrac. lrg. modrn priv. apt. 1BR, in Frenchman's Hill hse. Fully furn. w/self-def. frig, self-clean oven, cov. priv. patio, sunbath patio. Summer only $900/mo. $850/mo. incl. util. & furn. Call Shirley 856-6049.

□ **Regularly avail:** 1, 2, & 3BR furn. & unfurn. apts. & twnhses & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, (415) 856-6049 or Jane, (415) 968-4957.

□ **April 9 to June 5, '83 (flex):** Fully furn. hse., 2BR/1BA, W/D, gar., yd. Great loc. in Palo Alto nr Stanf. $650/mo. Call 324-1509 (eve).

□ **April 5 to July 12, '83 (flex):** College Terr., walk to campus. Lovely furn. 1BR/apt. Patio, TV, gar. $525/mo. Call 494-4917 or 857-0585.

□ **March thru June:** Oak Creek apt. 2BR/1-1/3BA, furn. Built-in bar, gar. space avail. Util. furn. Call Alice, 321-2625.

□ **July 1 to Dec. 31, '83:** Fully furn. & equipped hse in Sharon Hgts. 4BR/3BA, study, FR, DR, 2 frpl, 1/3 acre. 1 mi. to Stanf. $1500/mo. incl. grdner. Call 497-3785 (day), 854-7471 (eve).

□ **NOW:** London flat, fully equipped. 1 min. Willesden Green Stn. undergrnd. 2BR/1½BA, central heat. $600/mo. Call (415) 661-4067, (415) 387-7300.

□ **NOW:** Attrac. furn. 2200 sq. ft. hse. 4BR/2½BA, study, DR, FR, patio, 3 car gar. W/yr lease incl. ktchnware, linens, 2 TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1400/mo. Call (415) 965-1302 (eve).

□ **NOW:** Ski cabin—So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. natl forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501 (day), or (408) 739-3141 (eve).

□ **NOW:** Spacious 2BR apt in Barron Pk. Share w/female. Balcony, piano, W/D. $300/mo. + ½ util. + dep. Call 325-0566, 365-6961.

□ **April 10 to Oct. 15, '83:** 2BR/2BA hse, 4¼ mi. to campus, wooded setting, suitable for 2-3 adults. Furn. or partially furn. W/D. $1100/mo. Call 941-6444 (eve).

□ **July '83 1 yr lease:** Renewable lease, 4BR/2BA ranch-style hse. nr Rinconada Pk. Unfurn. or partially furn. $1250/mo. Call Sue Sherman, 328-2864, 328-7477.

□ **April 1 to Nov. 15, '83:** Fully furn. hse. 4BR/2BA, LR, FR, lrg. cov. patio, easy upkeep, auto. sprinkl. Palo Alto. Adults. No pets. $1200/mo. incl. water. Call 858-0880 (eve).

HOUSING NEEDED

□ **Beg. Aug. 21 for 3 to 6 wks:** Prof. cpl. w/daughter wish to hsesit in Stanf. area. Local refs. Write D.K. Nordstrom c/o Oster, Gyllenstiernsgatan 18, 11526 Stockholm, Sweden, or call (415) 857-1641.

□ **Beg. Summer '83 for 1 yr:** Visit. scholar & fam. need 3 to 4 BR furn. or unfurn. hse. Can furnish loc. refs. Call 493-6401 anytime before 10 p.m.

□ **Beg. May 15 for 1 mo:** Polish Prof, former Stanf. Prof. Journalism Fellow, a visit. tchr. at Antioch's San Francisco campus would like to hsesit or rent at Stanf. Accompanied by wife and 2 dghtrs, 5¼ & 11. Call Harry Press, 497-2558 or 497-4937 (day).

□ **April 10 to May 10:** Visit. Scholar at Hoover Inst. seeks 1 rm or 1BR apt. nr. Hoover. Call COLLECT United Kingdom 865-512872 before Mar. 27.

□ **Beg. April-May, or May-June, 6-8 wks:** British Visit. Scholar at Hoover Inst. seeks rm on or nr campus. On leave from Manchester Univ. Stanf. refs avail. Call George Duca, 323-7680, noon or eve. before 10:30 p.m.

□ **Beg. Oct/Nov '83 for 1-2 yrs:** Visit. Australian M.D., wife & 2 children (5 & 2) seek 3 or 4 BR furn. hse on or nr campus. Refs. avail. Call B. B. Barnett 497-5913 (day).

□ **Sept. '83 to Aug. '84:** Visit. French M.D. and wife seek 1BR furn. apt. on or nr. campus. Call B. Barnett, 497-5913 (day). Local refs.

□ **Aug. '83 to June '84:** BETHESDA, MARYLAND area. Stanf. fac. family, nonsmokers, 2 boys, 11 & 14, seek furn. hse, apt. or condo while on sabbatical at the NIH. Call Paul Basch, Sch. of Med., 497-6698 (day), 493-4590 (eve).

□ **Summer '83 to summer '84 (flex):** Visit. Prof. (cpl & 2 children) need furn. 3+BR home, Palo Alto, or campus. Call 321-0250.

□ **April 1 to May 31 (flex):** Visit. scholar, female, seeks rm w/kitchn priv. or shared apt to rent. Smoker. Call COLLECT (916) 756-6220 (eve).

□ **NOW:** 3rd yr. med. student seeks studio or 1BR apt. within bike dist. to Stanf. Call Steve Freedman, 857-9357.

□ **April to July:** Single female prof. Sabbatical at Stanf. seeks hsng. or hsesit. To $440/mo. Call COLLECT (213) 206-6121.

□ **Sept. 1, '83 to June '84:** Prof. from Stanford-Florence seeks 3-4BR furn. hse on campus. Call Sandy Cover, 497-4865 (a.m.) or 328-3023 (p.m.)

□ **Beg. April or May:** SLAC physicist, wife, baby wish to *trade* Swiss country villa for all or part of 2 yr stay here. Call SLAC Hsng. Off. 854-330, X3111.

□ **NOW:** Stanf. staffer, resp, quiet, no pets, age 35, a musical writer; seeks own unfurn. 1BR cottage or apt nr campus. Excel. loc. refs. Call Julia, 497-3811 (day), (415) 648-4835 (eve).

□ **Beg. April/May:** Prof. female, nonsmoker, seeks long term rental, 1-2BR hse or cottage. Palo Alto, Menlo Pk, Stanf. area. Call 497-7921 (day).

□ **NOW:** Extremely resp., conscientious cpl seeks hsesit/caretak. arrang. or rental of cottage/gar. apt. on lrg. estate. All situations considered. Refs. avail. Call Mark or Ginny, (415) 941-5713 before 9 a.m. or eves.

□ **Sept. '83:** French visit. scholar seeks Stanf. hsng in EXCHANGE for 2BR apt. on Mediterranean shore (nr Montpellier). Please contact J. Schmidt, 28 Montee Saint-Laurent, 69005 Lyon, France. Tel. (7) 837-6280.

□ **July or Aug. thru Dec. '83 (flex):** Humanities Ctr fellow & fam. seek 3 or 4BR fully furn. hse or apt in Palo Alto or Stanf. area, poss. in EXCHANGE for our Ann Arbor, Mich. 4BR hse. Call 493-1359.

□ **July '83 to June 30, '84 (flex):** Carnegie Inst. Fellow, spouse, 2 children, seek hsng Palo Alto-Stanf. Area. Will rent or EXCHANGE our Berkeley hse: 5BR/3BA hse, LR, DR, library, frpl w/yr of wood, piano. 1 acre, lush grdn, auto. water. Incl. maid, grdnr, sec. system. Call (415) 483-8484 (day), (415) 548-1735, eve & wknds.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Computer music...

continued from page 7

ease with which one could compose using the programs."

(Smith has since become involved in using computers to produce musical manuscripts.)

Chowning then turned to the nature of that computer-generated sound, the synthesis and modulation. He invented a synthesis technique which the University licenses. Originally it was just a program, but now there are hardware aspects to it.

Chowning earned his doctorate. The computer music project moved into the D.C. Power Lab, which then housed the Artificial Intelligence project. The lab was built by General Telephone and Electronics, but never completed. It is drafty, sometimes gloomy, but sits on a hill behind the campus with a lovely view.

Artificial Intelligence moved out, eventually, and the computer music people, all part of the Music Department, now use the building in isolated splendor.

Their project is now called the Center for Computer Research in Music and Acoustics, CCRMA, pronounced "Karma."

Along with the Institut de Recherche et de Coordination Acoustique-Musique (IRCAM), headed by Pierre Boulez, CCRMA is one of the world's leading centers in this field. There are also computer music centers at MIT, UC-San Diego, the University of Illinois and Colgate, most of them seeded by Stanford graduates.

CCRMA stays small deliberately, Chowning says.

"There's a critical size. If one gets beyond that, one loses contact with the people and the work that's being done. One of the most wonderful things about CCRMA is that we have this kind of natural interdisciplinary environment.

Half of the people who work here produce music, most of them composers; but the other half are electrical engineers, (or are in) speech and hearing, psychology, and computer sciences—mostly electrical engineering and speech and hearing sciences."

There are three engineers doing their Ph.D. work at CCRMA.

Chowning loves the environment.

"When I compose, that's all I do. I typically get up at one o'clock in the morning. I work up here until eight or nine in the morning. Then I take care of business nine to twelve and then I go home. That's the only way I can do it."

He does not work at home, he does not want a computer in his house. He only recently allowed a stereo, and then only because his children insisted.

"The last piece I did, I finished about a year and a half ago. I did that for six months, the only break was Thanksgiving and Christmas."

His music does not fall into classical forms. On the other hand, it is not the kind of minimalistic, or indeterminate music now popular among many modern composers and almost universally ignored by audiences. "The idea behind much of that music is more interesting than the music," he says.

The computer can be made to sound like an instrument. This proved to be more complicated than it was first thought because there was more to the sound than was apparent. A pure, computer-generated sound did not sound natural; a certain random fuzziness was required to emulate nature, a very fine "random frequency fluctuation."

One instrument can be made to blend into another, the change almost inperceptible. A flute suddenly becomes a violin, which can, in turn, become a human soprano.

"It is also possible, of course, to produce a sound that has no counterpart in nature, but even here the sound requires something more than purity.

"We know how perfectly dull a sound is if it's perfectly periodic, it never sounds real," says Chowning.

"That's quantifying something which has never been quantified before, or even noticed as an important contribution in the perception of the timbre (tone color). If one wants to produce a sound that has no likeness to nature, there must be small changes in the sound in order to lead the ear.

"We've reached a fair degree of elegance in the kinds of sounds we can construct now that aren't necessarily like natural tones, but they all have a kind of liveliness because of having tried to model nature. It's not very easy to discover this sort of attribute to sound if one is working on some abstract notion."

"This little bit of randomness is like soy sauce in a Chinese restaurant; one wants to sprinkle a little bit everywhere."

The best test of a sound remains the human ear, Chowning says, and a musician's ear is the best of all.

Most computer musicians are now using high-level computer programs in their work as aids to composition. Many of the languages were developed by the artificial intelligence people, including the Stanford Artificial Intelligence Language (SAIL), and LISP, the seminal language of AI.

The languages are being used both for the overall composition and for the interior composition. Computers are helpful because they can remember rules and order, and much of music consists of rules and order.

"A canon is a rule, and to some extent, a fugue is a rule too," Chowning says.

No one is trying to produce Beethoven's Tenth Symphony (he only wrote nine), although artificial intelligence languages might be able to simulate one.

Programming musical structure, on the other hand, is quite useful, particularly complexes of notes or chords. The computer gives composers a great deal of power in this.

It would be theoretically possible to synthesize an entire symphony orchestra, Chowning says, but he does not see any point to doing it.

"People play because they want to play. We don't see here the computer as supplanting or replacing musicians. . . it's rather additive," he says.

Some of this music is finding its way into concert halls. A Loren Rush composition, "Song and Dance" for symphony orchestra and quadrophonic tape, was played by Seiji Ozawa when he was conductor of the San Francisco Orhcestra. A few recordings have been made.

Mostly, however, this music can be heard at computer music concerts, including the ones at Stanford.

Last summer some 2,000 people came to a set of two concerts held at Frost Amphitheater on campus.

CCRMA has received a large grant from the System Development Foundation of Palo Alto to continue its work. The money will go to buy new equipment, including a special computer built by David Poole's company, and the SUN (Stanford University Network) work station. CCRMA has also received support from Systems Concepts of San Francisco, which built CCRMA's digital synthesizer.

Board of Trustees report

Trustees consider finances, gifts, hear about heuristic programming

The Board of Trustees took the following actions at its meeting on March 8, 1983:

1. Approved actions already taken by the Office of the Vice-Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of January, 1983, totaling $10,737,263. The monthly average of such awards for the 12-month period ending January 31, 1983, was $14,615,353 compared with $12,281,801 for the corresponding period the year before.
2. Accepted gifts received during the month of February, 1983, totaling $7,228,573.
3. Approved a revised Statement of Investment Goals and Objectives.
4. Approved an expansion of the Investment Board of the Department of Athletics, Physical Education, and Recreation from a maximum of 17 members to a maximum of 22.
5. Authorized an investment of $2,000,000 in Advent V, a venture-capital limited partnership.
6. Authorized an investment of $1,000,000 in CH Partners III, a venture-capital limited partnership.
7. Heard a report from G.T. Management, the managers of Stanford's international portfolio.
8. Heard a report on the Charles R. Rittenberry Fund.
9. Approved the concept of the Hoover Tower Fire Safety Project.
10. Heard a report on the financial status of the Research Libraries Group (RLG).
11. Heard a report on financial profiles and trends over the last 10 years.
12. Heard a report on the status of the Edgar F. Kaiser, Sr., Professorship.
13. Approved the University's Operating Budget Guidelines for 1983-84.
14. Heard a report from Professor Edward Feigenbaum on "Knowledge Technology: The Research of Stanford's Heuristic Programming Projects."
15. Welcomed W. James Ware, newly elected Trustee, to his first meeting.

Promotions, appointments, reports

On March 8, 1983, the Board of Trustees approved the following actions, effective September 1, 1983, unless indicated otherwise:

Promotions:

Mark G. Perlroth, professor of medicine; Lawrence L. Stahlberger, professor of Slavic Languages and Literatures; David E. Wellbery, associate professor of German Studies.

Reappointments:

Carl W. Bielefeldt, assistant professor of religious studies; Carol Conell, assistant professor of sociology; Sandra E. Drake, assistant professor of English; Edmundo Fuenzalida, associate professor of education; Bryan David Myers, associate professor of medicine; Brian D. Serot, assistant professor of physics; Henry A. Walker, assistant professor of sociology.

Appointments:

W. Brian Arthur, professor at the Food Research Institute; Richard P. Bagozzi, 7/1/83, associate professor of marketing, GSB; Michael R. Bristow, 4/1/83, assistant professor of medicine; C. Allin Cornell, 7/1/83, professor of civil engineering; John A. Ferejohn, 3/1/83, professor of political science; Thomas M. Himel, assistant professor at the Stanford Linear Accelerator Center; Denise Levertov, professor of English; Charles Martoff, 1/1/83, assistant professor of physics; Christos H. Papadimitriou, 4/1/83; professor of computer science and operations research; Clyde B. Tatum, assistant professor of civil engineering.

Report Matters:

Albert Cohen, William H. Bonsall professor of music, reappointed Chairman of the Department of Music, 9/1/83 to 8/31/84.

W. Brian Arthur, professor in the Food Research Institute, appointed the Dean and Virginia Morrison professor of Population Studies, effective 9/1/83.

Julius Moravcsik, Professor of Philosophy, appointed Professor, by courtesy, of classics, 3/1/83 to 8/31/88.

Robert T. Schimke, professor of biological sciences, appointed the American Cancer Society Research Professor of Biology, effective 1/1/83.

Graduating seniors give high marks to undergraduate education program



Once more, Stanford has gotten very high marks from its students.

Among graduating seniors, Stanford's undergraduate education is rated "excellent" by 44 percent, "good" by 50 percent, and "average" by 6 percent, a new survey shows.

More than a third of the graduating class say Stanford was "better" or "much better" than their personal expectations, while 15 percent say it was "worse" or "much worse" than anticipated. Only one per cent fell in the last category.

Surveys over the past three years have shown "great stability" in student evaluation of the undergraduate program, the faculty and staff, and their personal abilities, according to a new report from the Office of the Vice Provost for Undergraduate Education.

There were "very modest upward trends" in the overall quality of education, courses in their academic major, adequacy of training in liberal education and faculty teaching, as seen by seniors.

Over the past three years, the proportion of students who regard their ability to use computers as high has increased significantly, to 50 percent from 38 percent. "Rising trends are evident for technology and foreign languages as well," the survey report notes.

The proportion of graduating seniors saying they plan to work full-time after graduation fell slightly last spring, to 49 percent from 52 percent. The proportion planning to continue studies full-time dropped slightly, to 38 percent. The rest plan to travel, work and study, or pursue other activities.

The proportion planning full-time work ranged from a high of 62 percent for engineering majors to a low of 24 percent for natural science majors, many of whom plan to attend medical school.

In the social sciences, 61 percent plan full-time work after graduation, as do 48 percent of the humanities majors.

The percentage of students planning full-time work immediately after graduation rose from 28 percent in 1975 to a high of 55 percent in 1979, but has fallen slightly since then.

The educational aspirations of Stanford seniors remain high, with 89 percent eventually planning to attend graduate or professional school.

Seniors rate their abilities quite highly, with half or more saying they have "good" or "excellent" ability in nearly all fields surveyed. The major weaknesses concern student understanding of Western and non-Western culture, foreign languages, computers and government. The University did not introduce a Western culture course requirement until the fall of 1980, when distribution requirements also were tightened by the faculty.

The overall rating of undergraduate education at Stanford was "considerably higher" than for some specific parts. Roughly three out of four rated courses within their academic major as "good" or "excellent," and training for further education was highly regarded in nearly the same proportion of the graduating seniors.

A substantial majority (57 percent) said their campus living arrangement contributed highly to their intellectual life.

Nearly nine out of 10 who attended an overseas program rated this experience "good" or "excellent." More than a thirds of Stanford's graduating seniors have studied overseas with the University for three months or more prior to graduation.

Two-thirds of the students said the overseas experience was "excellent," and again two-thirds said it was "better" or "much better" than expected.

More than nine out of 10 students (93 percent) felt the faculty were either "good" or "excellent" in research, but less than two-thirds (63 percent) felt the same way about their teaching. More than a third said faculty teaching was worse than expected.

Reiterating criticism voiced by their predecessors, nearly half (46 percent) rated their general academic advising as "poor" or "very poor," with more than half (58 percent) saying advising was "worse" or "much worse" than expected.

Opinions were considerably more positive for advising after students chose their major. Only 29 percent described their advising as juniors and seniors as "poor" or "very poor," compared to 40 percent saying it was "good" or "excellent."

Opportunities for working with individual faculty are considered very great, and much better than expected, by most students.

Students viewed the ability of faculty as teachers to be of much greater importance to them than faculty skills in research.

The quality of teaching assistants , whom the students rated lower, was "only of average importance" to the seniors, the report notes.

"The students seem to be saying: 'I get a very good education at Stanford, and it means a lot to me. Not all the professors are outstanding teachers or good advisers, but these shortcomings have not affected my educational experience that much.' "

Asked about their own skills, more than four out of five rate themselves as "good" or "excellent" in ability to write clear English prose. A strong majority rate themselves highly in ability to "understand social processes and institutions" and to "understand the significance" of gender and ethnicity in the U.S.

While there were few significant differences in opinion between men and women surveyed, the quality of liberal education and of advising within the academic major were especially important to women,

In general, humanities students expressed the greatest satisfaction with their academic major programs and departments, and social science majors the least.

Humanities majors also felt they got the best liberal arts education, with engineers the least satisfied in this regard.

On the other hand, natural science majors feel very well trained for further study, as do engineering majors, while humanities and social science majors felt much less adequately trained.

When asked what three factors affected their plans for the coming year, about 35 percent mentioned money or financial considerations, 23 percent the desire to "escape academics," and 20 percent intellectual interests and a desire to learn.

The survey was based on responses from 673 graduating seniors, 40 percent of the class. Results were analyzed by John Boli, research coordinator for Herant Katchadourian, vice provost for undergraduate education.

Grad students praise increase in stipends

As members of the graduate community, we applaud the University's decision to include funds for a special increase in the graduate fellowship stipend in the 1983-84 operating budget.

This is the third annual installment of such increases, which were designed to bring the fellowship stipend—which is the smallest stipend received by Stanford-supported Ph.D. students, and whose recipients are concentrated in the Humanities Departments—up to a target level of 70 percent of a minimal budget for living expenses.

While there will continue to be disagreements about the adequacy of the financial support provided to Stanford graduate students, we recognize that the University's decision to follow through on its original intention of providing this third increment was by no means trivial or automatic, coming as it did at a time of severe pressure on the University budget.

We are confident that this effort to increase the financial support for graduate education represents a solid long-run investment in the continued excellence of Stanford University.

Dirk Van Compernolle, president
Graduate Student Association

Jonathan Siegel, member
Committee on Services to Students

James McGrath, member
ASSU Senate

A. S. Krishnakumar, member
ASSU Senate;
secretary, Graduate student Association

Charles Jackson, member
ASSU Senate

Eric M. Berg, member
Committee on Graduate Studies;
treasurer, Graduate Student Association

Faculty, staff bowling leagues form at Tresidder for spring quarter

Faculty and staff may compete in the spring bowling leagues now being formed by the Tresidder Recreation Center.

An Interdepartmental Bowling League bowls on Monday evenings. This handicap league consists of four-person teams and will last for eight weeks, at which time the champion department will receive an award donated by the Recreation Center. This league will form at 6 p.m. Monday, April 4.

The "Bowl for Lunch Bunch" league is a relaxing way to exercise and have lunch at the same time. Lunch leagues are offered at noon Tuesdays and Fridays. Participants will bowl two games per week with one partner. These leagues will begin on Tuesday, April 5 and Friday, April 8.

The Tresidder Recreation Center offers special group rates to offices, organizations or Stanford affiliates that would like to reserve the bowling lanes for a special function. For more information contact the Tresidder Recreation Center at 497-4316.

For any of the leagues mentioned above you may sign up as a team or individually.

Senior citizen bowling

The Recreation Center is also organizing two bowling leagues specifically for senior citizens.

The leagues are handicap which allows everyone a chance to win. The Recreation Center staff will hold free bowling clinics and information sessions on these bowling leagues at 1 p.m. Monday, April 4, and 10 a.m. Wednesday, April 6.

The leagues will organize and start the week of April 11 and continue for eight weeks. The cost will be $2.50 per week, which includes three games of bowling, shoe rental and league statistics.

For more information call 497-4316.

Museum displays Nicholson's graphics

A collection of graphics by artist William Nicholson will be displayed at the Stanford University Museum from March 20 to May 22.

In connection with the opening, Associates of the Stanford University Libraries and the Committe for Art at Stanford will present an illustrated lecture by Stephen Gale Herrick on Sunday, March 20.

Herrick, who has loaned his extensive collection of Nicholson graphics for the exhibition, is well known as a book collector, hand bookbinder and as a founder of the Hand Bookbinders of California.

His talk, "Introducing Sir William: William Nicholson 1872-1949," will be given in the Carl F. Braun Auditorium, Mudd Chemistry Building at 3 p.m.

Nicholson is a well-known English portraitist whose works are represented in American collections including that of the Metropolitan Museum of Art. Knighted in 1943, he was the father of the late Ben Nicholson, also an important artist.



"California Seens," a selection of photographs by Lisa Hudson, will be shown at the Coffee House Gallery in Tresidder Union through March. Hudson is inspired by the beauty of nature and hopes to present to the viewer a new way of seeing.

Ph.D.orals

THURSDAY, MARCH 17

Robert Jon Perlmutter, electrical engineering. "Contributions to Digital Holography for the 3-D Display of Medical Imagery," 2 p.m., Room 450, Durand.

Mason's etchings shown at H & S for two months

An exhibition of etchings by Rob Mason was installed on March 12 in the recently renovated School of Humanities and Sciences space in Bldg. 1 on the inner quad. Mason's prints will remain on view for two months and will be followed by exhibitions arranged by Priscilla Hexter, coordinator of art exhibitions at Stanford's International Center.

Mason, born in Corvallis, Oregon, was brought up in Palo Alto. His father, Donald L. Mason, was associate professor of industrial arts at Stanford in the 1940s and '50s, and his mother still lives in the family home on Lincoln Ave. in Palo Alto.

The artist holds a bachelor's degree in industrial engineering from Oregon State University, where he also studied art. He is a registered professional engineer in California. After a 20-year career in various facets of the maritime industry Mason has chosen to pursue full-time his long-standing interest in art—especially printmaking from the etching process.

The influence of his background together with a personal interest in sailing is apparent in his art. Landscapes, still lifes and some figurative work are included in Mason's etchings, with much of the work at the School of Humanities and Sciences based on scenes along San Francisco Bay and the northern California coast.

The artist studied printmaking at Foothill College and is now himself an instructor in printmaking at the Palo Alto Art Club. He lives and has his studio in Palo Alto.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., March 16, to cover the week of Mon., March 21, through Sun., March 27.

MONDAY, MARCH 21

Baseball: vs. USC. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Discovery Film Series: "New Zealand". 2:30 p.m. Kresge Aud. $3.

Discovery Film Series: "New Zealand". 7:45 p.m. Memorial Aud. $4.

TUESDAY, MARCH 22

Women's Tennis: vs. San Diego State. 1:30 p.m. Varsity Courts.

WEDNESDAY, MARCH 23

Baseball: vs. Oregon State. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

THURSDAY, MARCH 24

Biological Sciences Special Seminar: "Molecular Probes To Study the First Differentiation in the Mouse Embryo," by Dr. Phillipe Brulet, Institut Pasteur , Paris, France. 4:15 p.m. Herrin Hall, Room T-175.

Stanford-Berkeley Joint East Asia Center: "Berkeley at Stanford" Lecture. Prof. John Jamieson (U.C. Berkeley Dept. of Oriental Languages), former Academic Advisor to the American Embassy in Beijing and recently Visiting Professor of History at Peking University, will speak on China. 7:00 p.m. Polich Room, Lou Henry Hoover Bldg.

Spirit of Japan Lecture Series: "Japanese Ceramics," by Prof. John La Plante. 8:15 p.m. Annenberg Aud. Non Members $5, Comm. for Art members & students $4.

FRIDAY, MARCH 25

Baseball: vs. Arizona State Univ. 2 p.m. Sunken Diamond. $2 general, Stanford students free.

Stanford Child Research Forum: Keynote Address by Annette Karmiloff-Smith, MRC Cognitive Development Unit, London. 8 p.m. Terman Aud. Registration for 3-day forum: $15 students, $20 general.

SATURDAY, MARCH 26

Baseball: vs. Arizona State Univ. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

International Association of Quality Circle Conference: "Circling Our Resources". 65 workshops will be held throughout the day. Material will be appropriate for managers, steering committee facilitators, circle leaders, and members. 8:30 a.m. to 4:30 p.m. Graduate School of Business. $30 Registration Fee.

Stanford Child Language Research Forum: Papers and workshops by Lois Bloom and Kenji Hakuta. 9 a.m. to 5:15 p.m. Terman Aud. $15 students, $20 general for three day forum.

SUNDAY, MARCH 27

Baseball: vs. Arizona State Univ. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

University Public Worship: Preacher: R.G. Hamerton-Kelly, Dean of the Chapel. 11 a.m. Memorial Church.

Stanford Child Language Research Forum: Presentation of papers and workshop by Dan Slobin. 9:30 a.m. to 4:45 p.m. Terman Aud. Registration for 3-day forum: $15 students, $20 general.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"Photographs of Old Russia," by Jack Kollman. Faculty Club. Jan. 17 - March 26.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Contrasts - Marina Goodier. Watercolors, some oils, and pastels in a delicate and warm expression of nature and grace. Tresidder Upper Lobby, 2nd. Floor. March 1 - March 31.

California Scenes by Lisa Hudson. The natural beauty of this world in a simple and straight-forward presentation. Coffee House Gallery. March 1 - March 31.

Annette Kaplan, *Luz do Sol*, Tapestries. I-Center. March 3 - March 30.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

Please be careful!

People who have responsibility for listing events in the *Campus Report* calendar should be especially careful to give the correct information, now that the calendar is on the computer.

A student employee enters the information into the computer at night to take advantage of cheaper rates, and University offices are not open then to check on discrepancies.

Events and Services depends on departments to supply the correct information about their events. If corrections or changes occur after initial information has been supplied, please send them to Events and Services, Press Courtyard. (After the calendar deadline has passed, phone corrections to Pat Black, ext. 7-2558.)

CAMPUS REPORT

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Parker issues 1983-84 salary guidelines

Guidelines for 1983-84 salary increases have been issued by Robert Parker, Director of Personnel.

University President Donald Kennedy said that the salary program, which is substantially smaller than last year's, reflects the University's budgetary realities.

"We've had to cut back on several fronts: tuition, administrative overhead, and academic program funding," he said. "The staff salary improvements are less than they were, but they are equitable in terms of the things we are doing elsewhere.

"We believe our salary program is sound, that it will still allow us to attract and retain the quality people for which Stanford is noted."

Parker noted that "in view of the sharp decline in inflation and the current recession, other Bay Area employers have sharply reduced the rate of increase in their salary programs compared to the last two or three years. Stanford's program is consistent with what's happening around us."

Highlights of the salary program include:

* Nonexempt, nonbargaining unit staff: a 5 percent upward adjustment of the Four-Step ranges, and a 7 percent merit program for Merit Zone employees. Also each range maximum has been increased by 1.5 percent.

* Exempt staff: a 6.3 percent merit program.

* Supervisory Merit ranges: a 6.3 percent merit program.

* Bargaining unit staff: the negotiated range adjustment of 5 percent and normal step increases. In addition, all steps 4 have been adjusted upward by 2 percent, in accord with the current contract.

The guidelines cover regular administrative, professional, clerical, library support, and bargaining unit employees, but exclude faculty. Also excluded are Bing teachers, social workers, nurses, and police supervisors. Guidelines for these groups will be issued in the near future.

The salary program guidelines were announced following approval by the Board of Trustees at its March 7 meeting. The guidelines were presented to the Board after several weeks of deliberations by the Administrative Council and the Budget Group.

The new guidelines include revised curve ranges, step ranges and supervisory merit ranges *(see accompanying charts and tables on pages 12-13.)*

Departments will use the guidelines when preparing salary proposals for review and approval in June by the University Vice-presidents and the President. The approved salaries are announced to employees in July and August, and are implemented September 1.

Law School applications dip but H&S, Engineering gain

Changes in the national Law School Admissions Test (LSAT) and its scoring have led to a sharp decline in applications to Stanford and other leading law schools.

The drop stems from differences between the expected and the actual distribution of student scores on the test, which is now graded on a scale of 10 to 50.

Where a score of about 45 was believed needed for those applying to top schools, a score of 40 proved equivalent to about the 91st percentile among those taking the test. In other words, those scoring 40 or higher were among the top tenth of all those taking the new LSAT.

Many of those scoring in the low 40s may not have applied to the most competitive schools, even though they ranked very highly among those taking the test.

As of March 15, applications to Stanford Law School declined about 22 percent from a year ago, to 3,357 from 4,324, for 172 places in the first year class.

Informal checks with Harvard, Yale, Penn, Chicago, Columbia and NYU indicate declines of about 5 to 20 percent in law school applications, according to

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Massy urges affordable housing

Affordable housing remains a central goal of the 1,275-unit Stanford West project, University officials told the Palo Alto City Council Wednesday night, March 16.

Vice President William F. Massy opposed proposals to reduce the planned density of the project or obtain further open space commitments from the University.

Stanford West would be located on 46 acres adjoining Willow Road, between the Oak Creek apartments and the Children's Hospital.

"The project we have proposed is 20 percent less dense than the zoning allows, would cover one quarter of the site instead of the allowable 45 percent, would provide three times as much open space as that required, and calls for buffer areas wider than stipulated," Massy said.

Present plans would provide nearly a four-fold increase in below market rate housing for Palo Alto, he added. Besides providing 220 below market rate (BMR) units at Stanford West, the University would make the four-acre Mayfield School site available to the city for only $100,000—a fraction of its market value—for construction of additional BMR units.

BMR units are available to those households earning incomes 80 to 120 percent of the county median.

Frank Morrow, director of real estate, noted that at least 80 to 85 additional BMR units could be built at the Mayfield site, bringing the total to nearly 25 percent. "This far exceeds any mitigations ever proposed by any developer in the area," he declared.

The non-BMR units for sale at Stanford West would range from $60,000 to $250,000, with an average price of $125,000 to $130,000.

"Given reasonable economic conditions and rational interest rates, these units would be very affordable, even in today's condition of 11.5 to 12.5 percent interest rates," he said.

A large single bedroom unit or small double bedroom could be purchased by those with a gross household income of $33,000 to $39,000. A large two-bedroom or small three-bedroom unit would be

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People

Theodore Hansch

Theodor W. Hansch, Stanford professor of physics, has won the 1983 Herbert Broida Prize from the American Institute of Physics.

The award is given annually for work in atomic and electronic spectroscopy and molecular physics.

The citation praises Hansch's work in inventing a Doppler-free spectroscope using a broadly tunable laser. According to AIP, Hansch's "elegant experimental method" is widely emulated in physics.

Hansch is a native of Heidelberg, Germany, and received his degree in physics from the University of Heidelberg (summa cum laude) in 1969. He was a NATO fellow and research associate at Stanford in 1972 and joined the Stanford faculty in September, 1972.

Much of his work in spectroscopy has been done with Nobel laureate Arthur Schawlow.

The award will be given at the spring meeting of the American Physical Society in Baltimore on April 20.

Carol Ellen Eger

Stanford Business School Assistant Professor Carol Ellen Eger has been named recipient of the 1983 Trefftzs Award of the Western Finance Association for her paper, 'An Empirical Test of the Redistribution Effect in Pure Exchange Mergers."

Her paper was judged the best student manuscript in an annual competition sponsored by the western states professional group. Eger, who joined the Business School faculty during the current academic year, was a doctoral student at the University of Minnesota at the time she submitted her manuscript.

Bruno Bettelheim

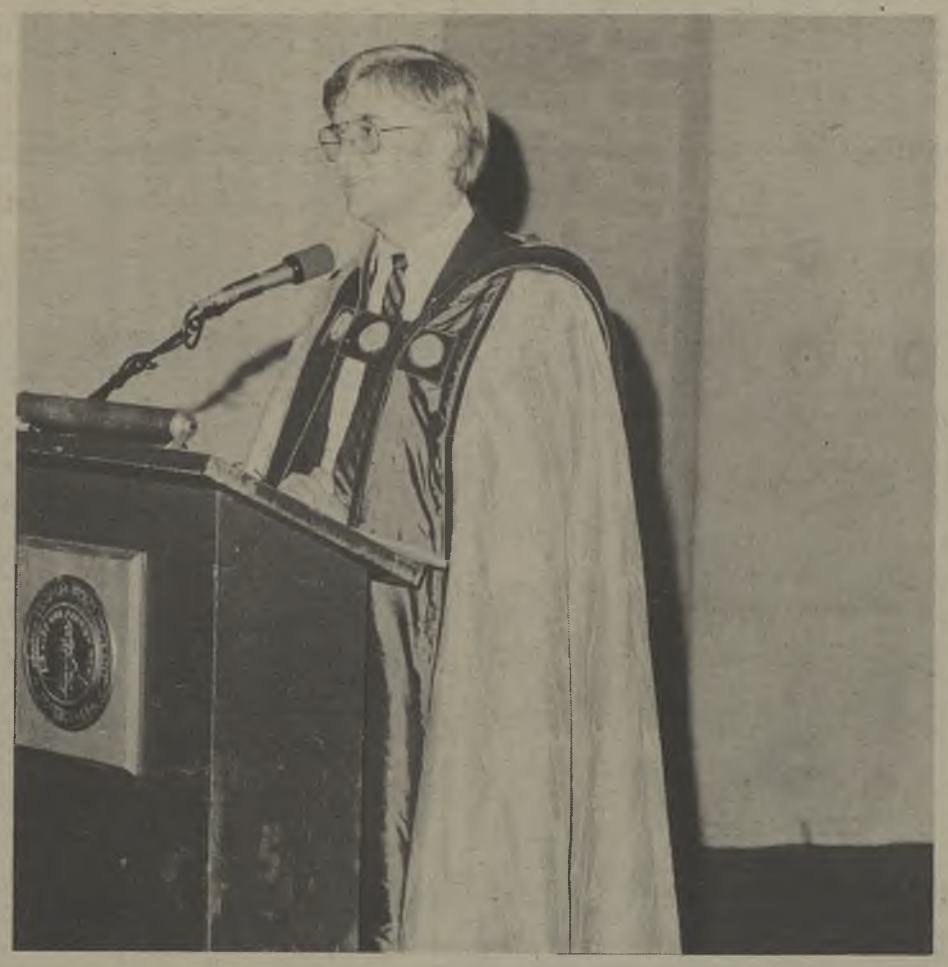
Bruno Bettelheim, visiting professor emeritus in the Stanford School of education, will receive the Goethe Medaille of the Goethe Institute in ceremonies at the German Consulate in San Francisco March 22.

One of the two highest cultural awards of the Federal Republic of Germany, it is given to no more than five persons annually on March 22, the anniversary of Goethe's death.

The citation accompanying the medal says "his work as child psychologist and author have assured Bruno Bettelheim the highest recognition the world over. In the U.S., he embodies the intellectual tradition of German culture to an especially impressive extent."

Now a resident of Portola Valley, Bettelheim was born in Vienna in 1903, emigrating to the U.S. in 1939 after a year in the concentration camps of Dachau and Buchenwald. He headed the Orthogenic School for autistic children at the University of Chicago for 30 years, where he held professorships in psychiatry, psychology and education.

He recently has investigated falsification of the work of Sigmund Freud at the time of its reception through inadequate translations into English.



Dean of the Chapel Robert Hamerton-Kelly wears the new Dean's cope, presented to Memorial Church in honor of his 10th anniversary at Stanford.

Friends honor Hamerton-Kelly

The Friends of Memorial Church have presented the Church with two gifts in honor of Dean of the Chapel Robert Hamerton-Kelly's 10th anniversary at Stanford: the Robert Hamerton-Kelly Summer Scholarship Fund and the Dean's cope, a liturgical vestment to be used on special days.

The scholarship fund—the "works" gift—will provide for three currently enrolled undergraduates, chosen by the Dean, to do religious or social service projects during the summer.

The new Dean's cope—the "faith" gift—was made by Charles Ross of San Francisco of fine silk with a mosaic-like pattern. The hood is embroidered with the cross that is carved in the marble altar of Memorial Church. It will be used on Christmas, Easter, Founders' Day, and Baccalaureate.

Hamerton-Kelly accepted the gifts at a Founders' Day dinner in his honor earlier this month. He also received a book of letters from 16 interns and Stanford students whose vocation to the ministry he influenced and a cross embroidered by needlework artist Marilynn Price.

Hamerton-Kelly's first Sunday at Stanford was Founders' Day 1973. For the same service this year University organist Herbert Nanney composed and associate choir director Gregory Wait arranged for the choir a new setting for one of the Dean's favorite hymns—"We Limit Not the Truth of God."

Prof. Lewis Spitz, history, was chairman of the Dean's Anniversary Committee.

The Friends of Memorial Church, now numbering some 150 members, was launched last fall to provide financial and program support for the Church, which does not have an official membership. For information on the group call ext. 7-1762.

Running the Dish? Get a permit

A permit to run the Dish?

Even though most people have either attempted this run or heard others tell about it, very few people are aware that a special pass is required to run in the Stanford foothills. The passes (good for one year) are available in Room 105 Encina Hall upon presentation of a Stanford ID.

Some of the rules for the Dish run are that parking is not allowed on Junipero Serra, running and hiking are limited to designated trails and *only* during daylight hours, and dogs are not allowed. The land is leased by Piers Dairy, which necessitates guidelines to ensure that the land is not abused. So next time you get ready to "run the Dish," don't forget your shoes, don't forget your shorts, and don't forget your pass.

For more information about this and 19 other Stanford runs, plus tips on warming up, pacing, nutrition, clothing and equipment, look for a copy of *Run the Foothills to the Bay*, published last spring by Tresidder Union. Copies are available at the Tresidder Store and Recreation Center, and the Stanford Bookstore. The book was written by Michael Mayhew, a 1981 Stanford graduate in economics and a former runner on Stanford track and cross country teams.

John Henry Merryman

Stanford Law Prof. John Henry Merryman has been awarded an honorary doctorate degree by the University of Aix-Marseilles, of France. The award ceremony took place Dec. 5 in Aix-en-Provence.

Merryman, an expert in comparative law and art law, is believed to be the first American lawyer to be so recognized by the French university.

He has been a member of the Stanford law faculty since 1952 and holds the endowed Nelson Bowman Sweitzer and Marie B. Sweitzer professorship.

Linda Kim

Tresidder Union has announced the appointment of Linda H. Kim as its new catering manager.

Kim previously operated her own catering service and worked for a number of catering services in Paris, France. She has attended the Academie du Vin, Ecole Lenotre and Le Cordon Bleu, all in Paris, and has a degree in food science and technology from UC-Davis.

She can be reached at the Catering Office, located off the Union Crossroads dining room in Tresidder Union, 497-4324.

Apologies to Nodding

Campus Report apologizes to Prof. Nel Noddings, whom it called Ellen in the headline and photo caption in the March 16 issue.

There was also an error in the title of her forthcoming book: it is *Caring: A Feminine Approach to Ethics and Moral Education*, to be published by the University of California Press.

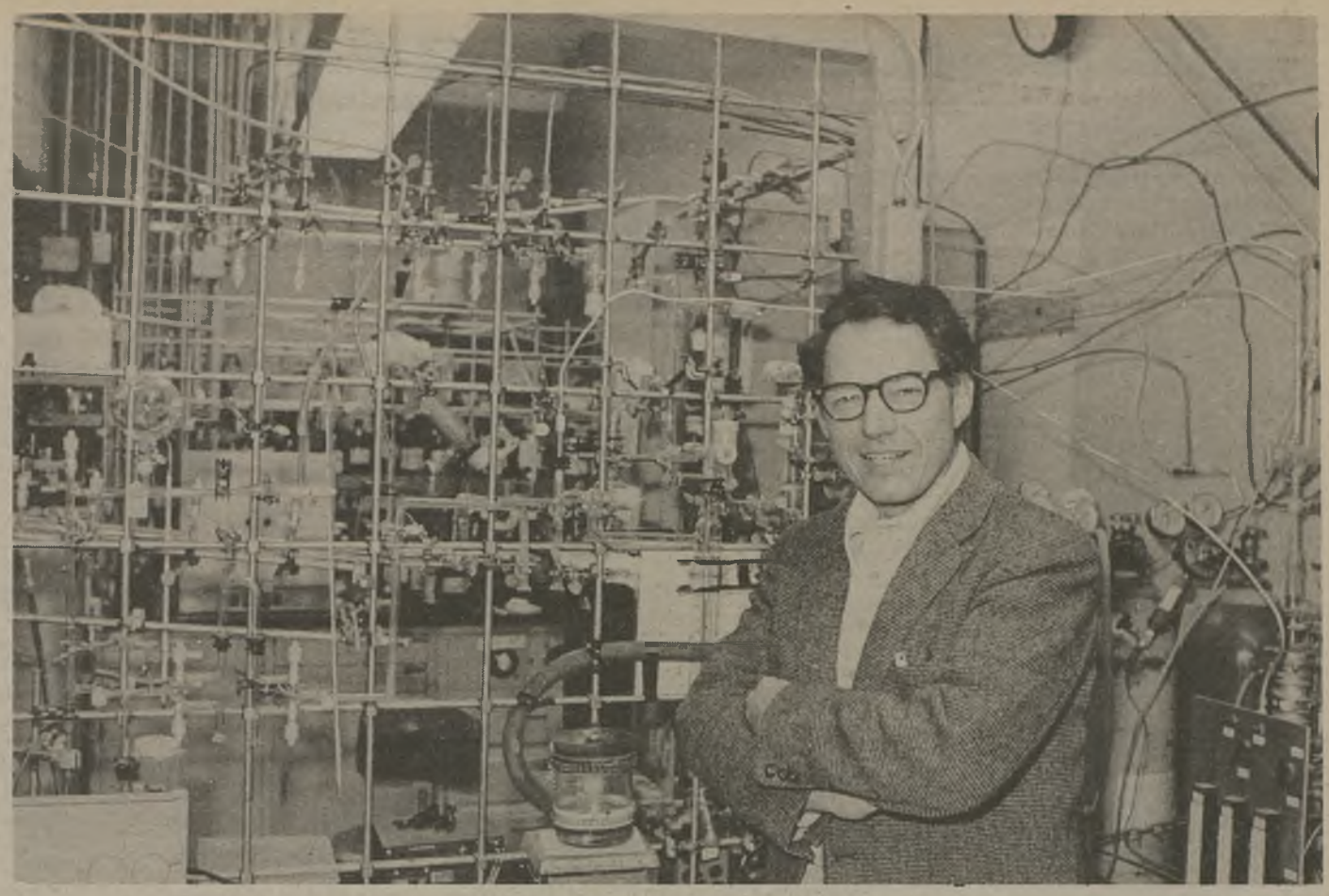
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A simple inexpensive way of creating superconductivity would bring abundant energy to the world at low cost, revolutionize our power systems, our transport, our lives. There's just a chance that James Collman may have found that way.

Strange new substances could be clue to superconductivity

BY DONALD STOKES

After many years of research Stanford Prof. James P. Collman, one of the leading chemists in the nation, has discovered a new approach to an almost mythical goal, a metallorganic polymer which might be superconducting.

It is a very long shot, but if it comes off it could become an extremely important discovery.

What is superconductivity? In basic terms, it is a means of overcoming the resistance to electrical currents which burdens present systems; energy now has to overcome the molecular resistance of the wires that carry it. The only known method up to now to overcome that resistance is to lower the temperature of the wires close to absolute zero—an expensive and impractical way.

Collman's new experiments are designed to produce a new class of materials which will test a very speculative, but exciting proposal made by Stanford Physics Prof. Bill Little, a double Ph.D. who has been experimenting with superconductivity for 20 years. Little has speculated that a different type of superconductivity could exist at much higher temperatures than now is possible with traditional superconduction.

A simple inexpensive method of creating superconductivity would bring abundant energy to the world at low cost, revolutionize our power systems, our transport, our lives.

Collman began the train of thought that led him to his present discovery 20 years ago, when he was a professor of chemistry at the University of North Carolina.

"When I came to Stanford in 1966, I met Bill Little and heard his theories about superconductivity and how it should be possible to create polymers (very long molecules) which conduct electricity without having to lower temperatures drastically," Collman said.

"I started to build chains of metals on which we could hang dyes, along the lines of Bill's theories. We were never able to produce anything that was as interesting as a superconductor. Eventually I gave up in frustration.

"But now I have evolved an idea, after six months of thought, about how to make the right sort of system. My team is getting to work on it, and I shall be discussing with Bill how my idea conforms with his theory. It is derived from some new substances we have discovered in the lab."

Are they organic substances?

"They are strange substances. They have a porphyrin ring such as you find in the oxygen carrier in hemoglobin. It is a big flat organic molecule and at its center there is an iron, but there can be other metals.

"We have discovered some metal porphyrins, which bind together in pairs, and the only force holding them together is a bond between two metals. This is a powerful bond, and one can vary its strength—called bond order.

"Such substances can have as many as four bonds joining the two metals. We have discovered that the bonding process happens spontaneously.

"I have conceived a scheme for converting these into a polymer." Collman drew diagrams to explain the process and went on: "If we take a substance such as elemental sulphur, we should be able to insert sulphur between the metals so that we create an infinite chain.

"There should be a band of electronic states in the solid. This looks as if it might fit in with Bill's idea. It would be a sort of everlasting shish-kabob of molecules, where the metal and another nonmetallic atom make up a long chain and the dyes are the 'meat' along the wire."

That would be the way to superconductivity?

"That is a very speculative possibility. Bill will have to decide whether the geometry is right. We are certainly going to attempt to create such polymers and they should be metallic. At the very least, they should be interesting new materials and possibly useful as infra-red detectors or something like that. If we are really lucky, they might be superconductors.

"That may be one chance in a thousand. However, if it does happen it will be a very important discovery.

"We are looking at something that is potentially significant, and also we are certain that at least some parts of it will work. So we shall get a little new chemistry, and maybe some new physics.

"This is the sort of risk that is worth taking, and the sort of risk I like to take. I often tell my students that I would rather swing for a home run rather than be content with a single."

When Collman 10 years ago abandoned his first effort to unveil the secret of superconductivity, he turned to other quests which were successful.

First came the synthesis of some molecules which behaved like the oxygen-carrying center in hemoglobin—the red pigment of blood.

"Nobody had been able to create such a viable hemoglobin mimic. I began to wonder why simple synthetic analogs didn't work. I conceived of some that should. We made them and they did work. We made some substances which are very faithful mimics of the oxygen carrier. They attracted attention from the biochemical world.

"We studied all the parallels and all the differences we could, in a way that showed what the protein wrapped around the hemoglobin was doing in the biological system, and what it wasn't doing.

"That sent me off on a search, taking hints from biology about how certain metal complexes function in enzymes. I have continued that line of activity and it has been quite successful."

Collman's team consists at this time of nine graduates, and a couple of postgraduates. Many of them work on research projects he suggests.

Collman had come to Stanford in 1967 largely because of Prof. Henry Taube, one of the great chemists of the nation. It was Taube who suggested to Collman an area of research which he had not realized was significant. It seemed simple; it was to reduce oxygen to water, in other words to add four electrons and four protons (hydrogen ions) with a catalyst.

"That process does of course work, but without a catalyst it is slow and inefficient. Nature has developed an enzyme to make that reaction very fast. Nature stores the energy from this reaction by creating the energy rich molecule, ATP, which is subsequently used for muscle action.

"There is also a need for such a reaction in air batteries or fuel cells where you take oxygen from the air and reduce it to water; in doing so you use electrons that you get from fuel in another electrode, a fuel-like hydrogen gas.

"Theoretically just by electrochemically burning the fuel, you could make current obtaining most of

continued on page 4

Collman/ continued from page 3

the available combustion energy.

"But there were no practical catalysts for the four-electron oxygen reduction. At Taube's suggestion, I began to think how I could invent some. We began a six-year task, with many students.

"A fuel such as gaseous hydrogen can be "burned" electrochemically with atmospheric oxygen. Such a device is called a fuel cell. The maximum theoretical efficiency of a fuel cell is far greater (about 2.5 times) than that of any heat engine.

If fuel cells are so efficient, why are they only used in space stations and a few other exotic places? Why not provide home electricity and power automobiles with fuel cells?

"The difficulty is in catalyzing the four-electron reduction of oxygen to water. Far less energy can be extracted from a one- or two-electron reduction of oxygen. The present commercial fuel cell catalyst, platinum metal, is expensive, slow, and operates at a potential far less than the theoretical value.

"Since World War II, chemists and engineers have looked for oxygen fuel cell catalysts which might be more efficient and less expensive than platinum. These largely empirical studies uncovered a few catalysts, but all were less effective than platinum since in all cases only oxygen was first reduced by two electrons at a relatively low voltage which produces much less power. Furthermore, the intermediate product, hydrogen peroxide, is quite corrosive."

This situation has now been dramatically changed through the collaborative efforts of Collman's group at Stanford and Professor Fred Anson of Cal Tech.

These chemists designed and constructed a series of dimeric metal porphyrin complexes and tested them as oxygen electrode catalysts. This work led to the discovery of a few very effective catalysts for the four-electron reduction of oxygen to water. At the same operating potential as the best current platinum electrode catalysts, these "face-to-face" cobalt porphyrin catalysts are more than 100 times faster. This research is multidisciplinary since it involves synthetic organic and inorganic chemistry, electrochemistry, and kinetic and structural studies.

It has also been discovered that the operating potential of these catalysts can be improved by chemical modification, which suggests the eventual development of even more potent catalysts. However, at the present time, these oxygen electrode catalysts are too expensive and insufficiently robust to be technologically useful.

This discovery is a chemical hallmark, since for the first time a synthetic multi-electron redox catalyst was developed through molecular design.

"It is as if an artificial enzyme has been invented!" said Collman.

Other very interesting multi-electron redox catalysts for processes such as nitrogen fixation could theoretically be designed and constructed. Such work has just begun in Collman's lab.

What practical application do these developments have?

"Theoretically you should be able to take a fuel such as hydrogen or a more complicated one like methyl alcohol, put it in the tank of your car, have a fancy battery system that draws oxygen from the air and so make electricity directly with great efficiency.

"It might have four times the efficiency you get from an internal combustion engine. You could power your house with electricity that way."

Are such developments a long way off?

"There are apartment houses which use fuel cells, and they are also used in space stations. However, they use platinum as their catalyst, which is expensive but somewhat effective. Our catalyst is much faster than platinum, although it is still very expensive and not so long-lived.

"I think that eventually a system such as ours, or analagous to it, may be used. We call these substances homogenous catalysts. It is feasible that



Prof. James P. Collman in his laboratory.

one day autos will run on such a system, although many difficult engineering problems remain to be solved, not to mention problems of durability and cost."

Collman's basic method, he says, is to try to steal Nature's methods and make them work in chemistry. "Enzymes are nature's catalysts. Our work is biominetic inorganic chemistry."

In cooperation with Prof. John Brauman, chairman of the Chemistry Department, Collman's team has developed metallic reagents which may some day find application in the manufacture of drugs, perfumes, insecticides and other high value chemical products.

Collman's approach to research is based on his particular talent, which is producing ideas. "I provide the chemicals and the lab space, the students, and find the funds, and John Brauman provides the brains, I think up the problem, and we codirect the student. John helps the student unravel reaction mechanisms, and I suggest how it might be done. We have all worked together in this way many times, and it is fruitful.

"By the end of such a process, the student comes out knowing what I know and what John knows!"

Collman once declared in a talk that "science is a young person's game." Asked if he still believed this, now that he is 50, he replied, "I used to think I would run out of ideas by my present age, but that is apparently not happening. I seem to be able to generate new ideas, and to convince young people to develop them."

Collman has received the dean's award for superior teaching, and is very popular among students for the way he helps them. Asked for his thoughts on teaching, he said that he tries to get students to think for themselves.

"Also, I don't grade on a curve. I don't give out the same percentages of "As" and "Bs." If all the students do well, I give them high grades; if they all do badly I give them all poor marks.

"Many students are easily discouraged by a teacher who does not communicate clearly. They are easily put down and their interest stifled by people who don't relate to them. That is unfortunate. A student should never allow a faculty member to decide his or her career simply because teacher and student don't mesh. But students do."

Are students less robust intellectually than they used to be? Collman thinks they are only more sensitive. He sees no sign at Stanford of the reported national decline in student's basic intellectual skills: "I would say it has slowly improved at Stanford in the years I have been here."

James Collman's family was among the original settlers of Nebraska, and his great-grandfather was a U.S. Senator.

He claims to have been an indifferent student at school, and that his main connection with sports was to run a book on football games. The only subject that interested him was chemistry.

He married Patricia Tincher, a farmer's daughter from the same state, and went to the University of Nebraska with the idea of becoming a lawyer.

"When I reached the university, the registration for freshmen was held in a very large hall, rather like the Cow Palace in San Francisco. I found there were no prelegal courses, as I had hoped. When I said that the only other thing I was interested in was chemistry, I was directed to a doddering old guy who automatically signed me up for all the required courses for a B.Sc. in chemistry.

"Fortunately I soon grew interested in the courses and by the time I was a sophomore, I was in a course consisting mostly of graduate students. I realized that I was better than they were, and they were being paid to come to class.

"I was intrigued at doing something I was good at, and before you know it I had my doctorate at the University of Illinois."

He joined the faculty of the University of North Carolina, where he stayed for seven years, rising to full professor. In 1965 he came to Stanford on a sabbatical with a National Science Foundation Fellowship.

Stanford had for three years been looking for an outstanding inorganic chemist, and in Collman they found one who is also interested in organic chemistry, materials science and biochemistry. He accepted Stanford's offer of a tenured professorship. "I don't know if I would have had the courage to come here without tenure.

"Stanford allowed me to split my time between organic and inorganic chemistry (nowadays I teach undergraduates in organic and graduates in inorganic chemistry). So I have always walked in both of these subdisciplines of chemistry. Most of the work I have done takes advantage of my knowledge of the two areas.

When I started out, organic chemistry was a very well-developed field that was in its golden era. There was new instrumentation and methods. It was a large and rich field.

"On the other hand, inorganic chemistry was thought to be almost dead. It seemed that there was nothing more to be done in it. Only a few notable chemists were working in it—Henry Taube was one. Most other inorganic chemists were more interested in structure rather than reaction.

"Even as an undergraduate, I had begun to ask questions such as: if you took an organic molecule and bound it to a metal, making a complex, what would be the reactions of that complex?

"When I was working for my Ph.D., my adviser was uncomfortable with my suggested projects and discouraged me from working on them. I pursued these ideas in North Carolina and found this to be a rich area of chemistry, and my work in it began to attract some attention.

"My work happened at a time when all over the world inorganic chemistry was just beginning to come into its own."

What *is* inorganic chemistry?

"Essentially it is chemistry that involves other elements besides carbon, hydrogen, nitrogen; and oxygen.

"Inorganic compounds are sometimes important on catalysis. They act very fast and selectively.

"These facts awakened industrial interest. I was part of the surge of attention given to inorganic chemistry in the early 1960s. Everything I thought of seemed to work immediately. I had a sort of Midas touch. I had some marvelous postdoctoral people working with me; curiously enough, they were mostly from New Zealand.

"When I came to Stanford on sabbatical, it was appreciated that inorganic chemistry was a rapidly growing area, but there were very few senior people in it, as it was really being reborn.

"At Stanford I tried to leap into some new fields of research, but they didn't work. I tried other fields, and slowly some of them began to bear fruit. And now some of my earliest ideas look very promising."

That process or research has spread over 20 years, but the fruit seems tantalizingly close today.

* * *

Collman has four daughters: Victoria, 22; Pamela, 19; Diane, 17; and Carolyn, 15.

"The only other male in the house is the dog!" says the great chemist, in mock dismay.

Bolivar House saved energy *and* money—the staff did the weatherstripping

A visitor to the Latin American Studies (LAS) Center at Bolivar House one January afternoon would have found music blaring, beer in the fridge, and graduate students, visiting scholars, staff, and the director of the program casually dressed.

An informal get-together, the visitor might conclude—but then why are these people carrying tools, getting caulk all over their hands, and putting up weatherstripping?

"We wanted to have an 'energy bee,' something like a quilting bee," said Prof. John Wirth, LAS program director.

"Everyone who uses Bolivar pitched in a few hours of work. We ended up having a good time during the actual 'bee' and saved six or seven hundred dollars on labor. Best of all, the weatherstripping worked so well we had to turn the thermostat down the next week."

Bolivar House provides space for staff, graduate students, a secretary, and visiting scholars. The building has been perenially cold and drafty, and the secretarial area, located on an uninsulated converted porch, was particularly chilly.

Cold air leaked into the building through loose-fitting door- and window-frames as well as louvered windows. Unused fans and air conditioners were virtually open holes in the walls.

A beginning

In 1977 people in the LAS program decided it was time to improve the energy-efficiency and comfort of Bolivar House. Wirth called Karl Johnson at the Energy Program Office, who surveyed the building and suggested a number of possible improvements. Labor was available, either in the form of a proposed SWOPSI workshop or volunteers from the LAS program, but at that time there were no funds available for materials.

Even so, the department made some substantial low-cost improvements. Awnings were installed on south-facing windows and the building's hot water was completely turned off. Later, some incandescent fixtures were converted to energy-saving fluorescents.

The problem of draftiness remained unresolved until last summer, when LAS program coordinator Kathy Durham sent a funding request to the Provost's Office. When an Operations and Maintenance estimate for weatherstripping the first floor, taking out a fan, and removing three window air conditioners totaled over $1,800, the inhabitants of Bolivar House decided that they could save money by doing much of the simpler work themselves.

Work party idea

Wirth contacted Johnson again in December, and the concept of the "energy bee" as a community work party began to take shape.

"I've always found that this kind of hands-on participation is particularly satisfying in the academic environment," Johnson said, "where rewards aren't often very tangible or immediate."

Most of the funding for the project came from the Provost's Office, with contributions from the LAS budget and the Energy Program Office. Johnson and Peter Skinner from the Energy Program Office provided expertise and arranged for the purchase of about $250 worth of weatherstripping, caulk, and other materials.

The actual "bee" lasted about three-and-a-half hours. The participants removed a ventilation fan and three air conditioners, sealed the holes, sealed a leaky stovepipe venthole, and weatherstripped all the outside doors and windows on the first floor. About 14 people, including Skinner and Johnson, were involved.

By doing the work themselves, the department has funds left over to pay for other projects requiring skilled labor, such as replacing the leaky louvered windows and unused air conditioners with sliding glass windows. In addition, Wirth hopes to get thermostatically controlled radiators.



The next step

Skinner noted that it might take the LAS program a little longer than usual to recover the costs of the weatherstripping. "The payback time for weatherstripping a house like Bolivar typically would be about a year or two. Here, it might be a little longer, since these people are so conscientious that their energy bills are already low and there is less room for improvement."

"The 'energy bee' was very much in the tradition of Bolivar House," Wirth added. "A few years ago we saved a lot of money by painting the house ourselves, and had a good time doing it. We find that the community effort we generate helps us work together on a day-to-day basis."

Wirth would like to move on to his next big project, renovating the attic to create more office space—"We just want to be able to get more foreign visitors per watt."

Linus Pauling—No dispute between nations can justify nuclear war

The U.S. should "institute a nuclear freeze by ourselves," Stanford Nobel Laureate Linus Pauling told about 200 local peace activists in Memorial Auditorium Tuesday, March 15.

Conceding that "the freeze movement may be running down a little," the Nobel Peace Prize winner urged individuals to "forget the channels" and "organize mass movements for peace."

Speaking in Moscow last December, "I advocated independent action against militarism" there, Pauling declared.

"The Soviet people are much more eager to have peace," he said. Having suffered 50 times as many casualties than the U.S. in World War II, "they know war in a way we don't" he observed.

Paraphrasing a quote from the Eisenhower era, Pauling said "the people want peace so badly that government should get out of the way and let them have it."

The growing complexity of nuclear weapons increases the danger of "the ultimate Holocaust" from psychological or technical accident.

It would be "absolutely insane" for the Soviets to deliberately attack the U.S., even if they had twice as many missiles as we do, because "they'd still be killed" by retaliatory strikes, he said.

The world now has about 60,000 megatons of nuclear explosives, he estimated. This is equivalent to about 13 tons for every person on Earth. (World population now totals nearly 4.5 billion.)

The first day of a nuclear conflict could unleash more than 10,000 times the destruction of all World War II, he said. One Institute for Defense Analysis study estimated that 720 million of the 800 million inhabitants of America, Europe and the Soviet Union would die within 60 days of a full-fledged nuclear exchange.

"No dispute between nations can justify nuclear war," Pauling said.

In adding as much as 15,000 megatons to U.S. nuclear capability, he suggested, President Reagan "can't distinguish between reality and fantasy. . . ."



Linus Pauling

"The Soviet Union follows our lead with a lag of about five years. It's likely the Soviets will soon have Cruise missiles if we deploy them."

Individual nations should begin to reduce their nuclear stockpiles from what physicist Phil Morrison has called "insane" to "less irrational levels."

In a two-hour interview with Moscow radio last December, Pauling said the Soviets were "incensed" when he pointed out that they exploded the largest single bomb—60 megatons—in 1961. But his interviewer, like half the world's present population, wasn't old enough to remember that event or recognize he'd been brought into "a world of militarism."

"The whole business is just plain crazy, preparing for a conflict which would mean the end of the human race," Pauling said.

But he expressed hope humanity might still "muddle through."

Asked the reason for his optimism, Pauling replied: "In 1960, the physicists estimated the probability of nuclear destruction at 10 percent per year. Just the fact that we've gone through 38 years is evidence that we can get through another 38 if we just use our heads a bit."

His talk, given during final exams at Stanford, brought standing applause from his audience. It was sponsored by the World Peace Council.

A recipient of the Lenin Peace Prize, he was awarded the Nobel Prize in chemistry in 1954 and the Nobel Prize for peace in 1962.

Letters to the editor

Reader objects to Stanford's hosting studies on nuclear weaponry

Editor, **Campus Report**:

As an unimportant member of the Stanford community, I should like, nonetheless, to offer an opinion on William Perry, fellow of the Northeast Asia-U.S. Forum of International Policy, whose talk, "Regular weapons, electronics nearly match nukes vs. tanks," was reported in **Campus Report** of March 16, 1983. I feel that William Perry and the subjects he studies have no legitimate place at Stanford University.

I graduated from Stanford in 1955—my degree was in English literature, with a minor in classics. At that time the Political Science Department offered no courses in nuclear weaponry, as far as I can remember, and there was no "Northeast Asia-U.S. Forum," which studied first-strike nuclear war scenarios. I am shocked more than I can say that Stanford now not only permits such research but encourages it.

William Perry's macabre researches are symptomatic of the national psychosis. His Chinese colleagues must be as sick as he and I feel that perhaps the best sort of therapy might be a year or so working with the children at Bing Nursery School on campus.

Unfortunately, there are all too many folks like William Perry; their number, in our society, is legion. If these people were obliged for a while to associate with young children, perhaps then they would be able to understand the consequences—in human terms, in medical terms, in environmental terms—of thermonuclear war.

I am a grandmother and dearly love my granddaughter, aged 16 months. She was born prematurely and for four months we in my family felt a ghastly anxiety about her. But she survived and has grown to become an expert crawler—agile, energetic and irrepressibly curious about the world around her. I am enchanted by her; this state of mind is characteristic of grandmothers. When I see my grandchild with her happy young parents, then I feel a loathing for nuclear weapons that is hard to describe.

I wish William Perry well. Like my granddaughter, like myself, he is a human being and deserves his place in the sun. But I wish he were in other work. We must all now take heed of the beautiful words in **Deuteronomy**; their warning could not be more relevant.

I call heaven and earth to witness against you this day, that I have set before you life and death, blessing and curse; therefore choose life, that you and your descendants may live. . .

Choose life.

Peace
Constance Kurruppu
Medical Secretary, Radiology

Another correction

Campus Report apologizes to Assistant Prof. Michael Taksar, operations research, whose paper on Soviet visitors in the U.S. we printed last week with a line omitted.

Below is the correct version of the 11th paragraph in the first column of page 16 of the March 16 issue.

Scholars who go abroad are considered to be fulfilling a Party and government assignment; they are on missions as representatives of the socialist state. To be considered for the mission, a scholar must obtain a character review from the local Party Bureau. The review must describe the applicant's political, business and social qualities and must necessarily contain a sacramental phrase: "The applicant is politically literate and morally stable." This is a euphemism meaning that the applicant will not be likely to defect, knows how to answer "slippery" political questions, and is not prone to having an affair during a visit abroad.

Raubitschek: Schools should become more discriminating about talent

Editor, **Campus Report**:

A short residence in hospital enabled me to read more carefully Donald Stokes' thoughtful report on (Prof. Myron) Atkin and his views on education.

Nothing in what follows is critical of Atkin's views or the account, but I am trying to examine two of the underlying issues, one as a student of philosophy and the other simply as an educator.

The classical philosophers almost unanimously thought that significant changes in the people's attitude towards political action could come about through education and not through legislation. Not only matters of career and vocation but attitudes to sex (abortion) and public service (registration for the draft) should be the result of education, and that means persuasion.

This would indicate that the home and the school would not take a neutral stand in these matters, but function as the exponents of society in seeking to provide its identity and its continuity. It is in a sense, the old fashioned "indoctrination" made more palatable and more justifiable by its being done within the framework of a public education (paid for or supported by taxation).

This would not only strengthen the schools through the eyes of the public, it would also save money from formulating and enforcing policies.

The second point is concerned with our attitude to education which presupposes that the major effort be made by school boards, parents, teachers, and that the pupils and students are little more than the precious object of education. It is obvious that this attitude is wrong, so wrong that it does not need to be argued. Implied in this error is a more harmful view, namely that to provide equal educational opportunity for all means that all have the same education potential.

We all know that this is wrong and we are keeping our young from achieving the best they can be telling them and ourselves that competition and discrimination based on it are morally wrong and undemocratic. This error must be eliminated and true discrimination must be practiced through our schools in order to encourage the best to do their best.

Prof. Antony Raubitshek
Classics, emeritus

Ronald Hilton writes about Cleopatra's nose, Jenkins' ear, and his own toe

Pascal remarked how different the history of the world would have been had Cleopatra's nose been a little longer. In 1739 the War of Jenkins' Ear, provoked by the de-earing of Captain Robert Jenkins, began the final assault on Spanish tyranny. Now Hilton's toe joins those illustrious extremities, as the symbol of the revolt against medical bureaucracy. Venceremos!

Since I lead a sober and virtuous life I see a doctor only once every ten years or so. Physicians require an assurance on this point before accepting a job in the Stanford area. Early last year I had a slight cut on my toe. Wishing to alleviate the penury of the medical profession, I decided to go to Stanford's Department of Extremities. I told the physician that I needed some extreme unction (I forgot that I had some in my medical chest). "Ah!" he beamed, "That's our specialty." It worked, so I reported back to said department. "How's your toe, honey?" said a feminine extremist. "Fine," said I. That conversation cost me $20, but I went away full of extreme good will.

Then my troubles began. Having come to Stanford in 1941, I retired before 1979, which the Stanford Administration has established as the dividing line between those emeriti who must fight for themselves and the rest of the faculty, including emeriti, who are eligible for Take Care. By coincidence, an "active" friend of mine (for some reason the Administration deems me "inactive") had the same problem as I. He pays the Clinic $4 a visit and $2 for medicine, and no sweat. He and a former secretary of mine, who served for just over 10 years and recently retired, are covered by Take Care until they are *in articulo mortis*.

The pre-79ers like myself must face the System, which not even Dr. Rube Goldberg, who invented it, can understand. I began to get a flood of incomprehensible bills, for which the computer was blamed. This bewildering confusion went on for weeks. I asked some doctors what to do, and was told "Don't pay. We don't. The bills just go away." "Ah," I objected, "You poor people are on Medicaid. We bloated humanists are expected to pay our bill." Which I did.

My nervous system had recovered when, nine months later, I got another bill. I saw red, the color of another deficit, and called the Faculty Practice Program, which had sent me some of the earlier bills. The reply was that the School of Medicine does not do tests. They are sent to the Hospital, which has a separate billing system, about which the F.P.P. knows nothing. I must call Medical Center Finance. To assuage me, the F.P.P. spokesman said that the F.P.P. is preparing a multimedia presentation, just like *son et lumiere*, to explain to people how to understand their medical bills. Unfortunately said presentation is just in the planning stage; I had already had a lot of *son* but not much *lumiere*.

Being smitten with the research bug, I was determined to find out how the System works. No one knows. A number of most helpful university officials gave me quite contradictory explanations. When I presented the conflicting versions to one of them, her response was "Why don't you go to the Senior Citizens' Center? I believe there is someone there who understands the System."

Back to my research project. Medicare uses a list of "Usual, customary, and reasonable charges." Could I have a list of them? For that you must go to Social Security, so down to Cambridge Avenue I went. The officials there looked at me in disbelief. There is no such public list; the Russians might get hold of it, so it is labeled "top secret." So back I went to the Medical School and asked for a list of their charges. This too is a deep secret; the attending physicians just put something into the computer.

One helpful Medical Center employee suggested: "Why don't you go to the Palo Alto Clinic? That's were I go." The charges there are apparently lower, but that again is top secret. I decided to call the Palo Alto Clinic, because in a sympathetic reaction to my toe, my finger had somehow got cut. I spoke to the Department of Extremities, which has two doctors, a nurse, and a receptionist, and asked for an appointment. "I can't give you one," said the receptionist, "because we make all our appointments by computer, and the computer is down." I gave up, but as a gesture of help for that department I sent it a small diary and a ball point pen.

Another helpful person said "The professors in the Humanities have been given computers to help with their home finances. Can't that help you?" No, I said, the emeriti had been classified as inactive and told to use abaci (or is it cusses?). Fortunately an especially enlightened administrator realizes that not even an abacus can understand the System, so we may get help.

Having lost faith in human inventions, I have decided to let Mother Nature take its course. She assures me that she does not use a computer and her charges are in the public domain. However, she pointed out that life, like all good things, must end. Perhaps when the emeriti lose their marbles they will be able to understand the System and make sense of their medical bills. I doubt it. Meanwhile, I am prepared to become ultimately a number in a computer. But what if the computer breaks down?

Venceremos. I have written my Requiem, the refrain of which is: "Glory, hallelujah! His toe goes marching on!"

Ridendo castigat mores.
Ronald Hilton
Professor of the Humanities, Emeritus

High technology probably will lower job skills most workers really need

High technology probably will lower job skills required for most U.S. workers, two Stanford educators declare.

Citing Bureau of Labor Statistics and other data, Prof. Henry M. Levin and Research Associate Russell W. Rumberger challenge a great deal of currently popular conventional wisdom. Levin directs the Institute for Research on Educational Finance and Governance at Stanford.

While many high-tech occupations have rapid growth rates, they will account for only 7 percent of the new jobs created between 1978 and 1990, according to the BLS projections.

The U.S. will need three times as many new janitors and sextons (600,000) as new computer systems analysts (200,000) in this period.

Total new jobs in the same period for computer programmers (150,000) are less than one-fifth the projected growth in fast food workers and kitchen helpers (800,000).

Few openings require degrees

Only three or four of the top 20 occupations in total number of new jobs require education beyond high school and only two—teaching and nursing—require a college degree,the Stanford educators note.

Growth in professional and managerial occupations, projected at 28 percent, will be far slower than the preceding two decades. These occupations grew 36 percent in the 1960s, and 45 percent in the 1970s.

High technology will "profoundly affect" many existing jobs. It is likely to "further simplify and routinize work tasks, reducing opportunities for worker individuality and judgment," Levin and Rumberger contend.

"Moreover, the displacement in jobs and the downgrading of skill requirements for most of the new positions will undermine employment generally, and especially the employment of skilled workers."

In a study of the impact of automation on job skill requirements in U.S. industry more than 20 years ago, Prof. James Bright of the Harvard Business School found that skill requirements rose at first, then fell sharply as mechanization increased. A similar pattern may prevail in high technology, Levin and Rumberger believe.

Software advances

"Advances in software enable many workers to use computers without any knowledge of computer languages. . . Moreover, office computers perform many of the tasks formerly done by secretaries, actually reducing the requisite skills of office work.

"Machines will be able to perform more complex, mental tasks as more advanced software is developed. But the use of such sophisticated equipment will not necessarily require workers with more sophisticated skills. In fact, past technological advances suggest the opposite is often the case.

"The automobile of today is far more sophisticated than its predecessor of 50 years ago, yet today's car is far easier to drive.

"Entire classes of skilled workers will disappear or will be severely reduced in numbers as their jobs are replaced by robots or computer software.

"For example, robots could replace up to 3 million operative jobs in the next 20 years and potentially eliminate all 8 million operative positions—currently 8 percent of the work force—by the year 2025.

"The widespread use of computer-aided design may virtually eliminate the occupation of drafter in the not-too-distant future, a potential loss of 300,000 skilled positions."

Over the past 30 years, technological advances in the printing industry have eliminated many highly complex craft jobs and sharply reduced the skills required for those remaining in composing rooms.

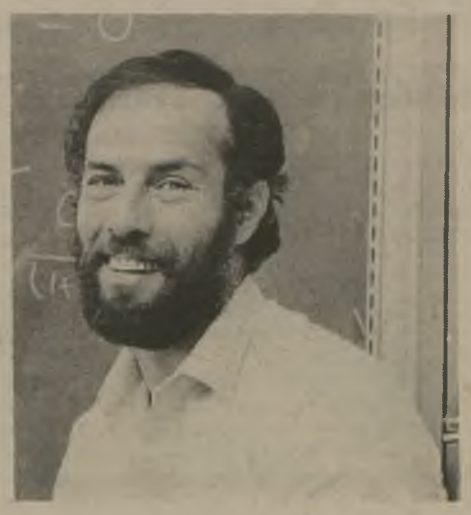
With the exception of a relatively small number of highly specialized positions, most new jobs will not require higher skill levels, Levin and Rumberger believe.

"The preponderance of people affected by industrial shifts and technological change will not need more mathematics or computer science.

"The general educational requirements for creating good citizens and productive workers are not likely to be altered significantly by high technology.

General education

"Everyone should acquire strong analytic, expressive, communicative, and computational skills as well as extensive knowledge of political, economic, social and cultural institutions. . . . To the degree that present schools fall short of providing these results, they should be sought for their own sake rather than because of the claim that they are required



Henry M. Levin

for a high technology future.

"Since we cannot predict in any precise sense which jobs will be available to particular persons, which jobs they will select from those available, and what the characteristics of jobs will be over a 40-year working life, it is best to provide students with a strong general education and an ability to adapt to a changing work environment.

"Such adaptation requires a sufficient store of information about culture, language, society and technology as well as the ability to apply that information and acquire new knowledge. Accordingly, general academic and vocational preparation should be stressed, as opposed to specific training, especially for young students.

"Specific job skills can best be learned on the job, if a worker's general background is sufficient. Recent surveys of both U.S. and British employers indicate that they seek new employees with a sound education and good work habits, rather than narrow vocational skills."

Education-industry ties

Abrupt changes in work requirements may require better ties between education and industry, and should not exclude the possibility of more industry-based training. Since workers may no longer acquire a set of jobs skills at the start of their careers useful over their entire work life, recurrent educational programs will be needed.

"The educational implications of high technology are that a solid basic education rather than narrow vocational preparation will become more important in the future," they conclude. "This will require elementary and secondary schools to strengthen virtually all their instructional offerings that require analytical and communicative skills."

Their research was supported by funds from the National Institute of Education, but the analysis and conclusions do not necessarily reflect its views or policies.

Copies of their report on "The Educational Implications of High Technology" may be obtained for $2 each from IFG, CERAS Building Room 402, Stanford, Ca. 94305. Phone (415) 497-2754.

Corporate strategy should consider firm's culture

A corporation may sabotage its best laid strategic plans if it fails to consider how the plans will mesh with that firm's particular culture, a pair of Stanford Business School researchers contend.

Professors L. J. Bourgeois and David B. Jemison have devised a way to include cultural analysis in strategic planning, enabling a company to tell how its strategic plans will or won't fit with the organization's culture. The pair describe the approach in the forthcoming issue of the Organizational Behavior Teaching Journal.

Although anthropologists have long known that any planned social change has to be shaped to the culture of the community, many businesses continue to believe it is the other way around, according to the authors. Bourgeois, assistant professor of business policy, and Jemison, assistant professor of management, both teach strategic management and strategy implementation at the Business School.

Heroic efforts

"Strategic planning has been around for several years but, as many critics argue, strategic planning without concomitant consideration of implementation issues is incomplete and quite often dangerous to the firm," they say.

"Companies will often undertake heroic efforts to understand their current strategic situation, the state of the (business) environment, and their capabilities, and then develop a strategy that is the 'best fit' among these without paying attention to the firm's culture.

"At other times, managers may try to understand the firm's culture in isolation and without considering the firm's strategic context. If a careful analysis of the culture is done, it can provide guidance with respect to the changes that are required and that are possible in implementing strategy."

Indonesian example

Bourgeois and Jemison, who developed the cultural analysis method while doing fieldwork with a variety of corporations, illustrate how it was applied in an Indonesian subsidiary of a North American firm.

The firm, which was in the process of changing the subsidiary's top management from a mixture of Westerners and Indonesians to an all-Indonesian executive force, was experiencing increased competition from new entrants into the field in an already highly competitive industry, said Bourgeois.

In its cultural analysis, the subsidiary found that its two strongest elements were commitment to management education and a "please the boss" mentality. The management education interest fit well with the firm's devotion to improving the knowledge and skills of the executive group, and the executives saw it as crucial to the company's success in competing.

The "please the boss" culture meant that subordinates often refrained from disagreeing with their bosses or passing along negative information. This was seen as a distinct mismatch for the company in an increasingly competitive environment, the executives reasoning that if they were shielded from the truth, poor decisions would be made.

The two elements were put together in a humorous way, said Bourgeois and Jemison, when one executive suggested that the reason the group chose management education was to please the managing director, who promoted education as one of his central concerns.

"The very fact that these executives could surface and discuss such a cultural element in the presence of the managing director was significant," the researchers said.

The executives decided "to recognize the implications of 'please the boss' in formulating strategy but not spend time trying to change it. The reason was simple, said the authors.

The executives or their parents had been raised under Dutch rule, before Indonesia became an independent nation. The colonial period bred an attitude of "tell the person in charge what they want to hear, even if it's not always the truth."

The executives believed that the next generation, raised under independence, would have a very different outlook on lifestyle and work-related questions, and would probably not harbor the "please the boss" attitude. In addition, said the authors, the Indonesian executives believed that it would take 20 years or more to change the attitude, and by that time a new generation of managers would be running the company anyway. The natural forces at work in the environment made any concerted attempt to change internal culture unnecessary, they concluded.

The result of such cultural analysis may show a company that a second choice rather than a first choice strategy may be much more efficient to the organization in the long run because it will not require upheaval of the culture.

Medical Center MEMO

Taking a fresh look at heart function after surgery

A blend of modern technology and cardiovascular research will be giving doctors a new look at the heart in much the same way that a dynamometer helps mechanics analyze engine function.

Dr. D. Craig Miller, associate professor of cardiovascular surgery at Stanford University School of Medicine, recently received a three-year, $491,334 federal grant to study the changes occurring in cardiac function immediately after open heart surgery.

The study is a collaborative effort with the Palo Alto Medical Research Foundation (PAMRF), where Dr. Neil Ingels Jr., Ph.D., and engineer George Daughters earlier developed the underlying technology for the research.

"It's difficult to believe, but we still are ignorant of certain changes in left ventricular function and bioenergetics which occur immediately following cardiac surgery," Miller said.

"We can partially compensate for the unknowns by extremely diligent monitoring. But better knowledge of these changes and responses to different drugs and interventions should translate eventually into better patient care," he added.

Specifically, Miller said, the study might answer questions about the optimum dose of many different drugs to be administered to patients in the crucial hours after surgery.

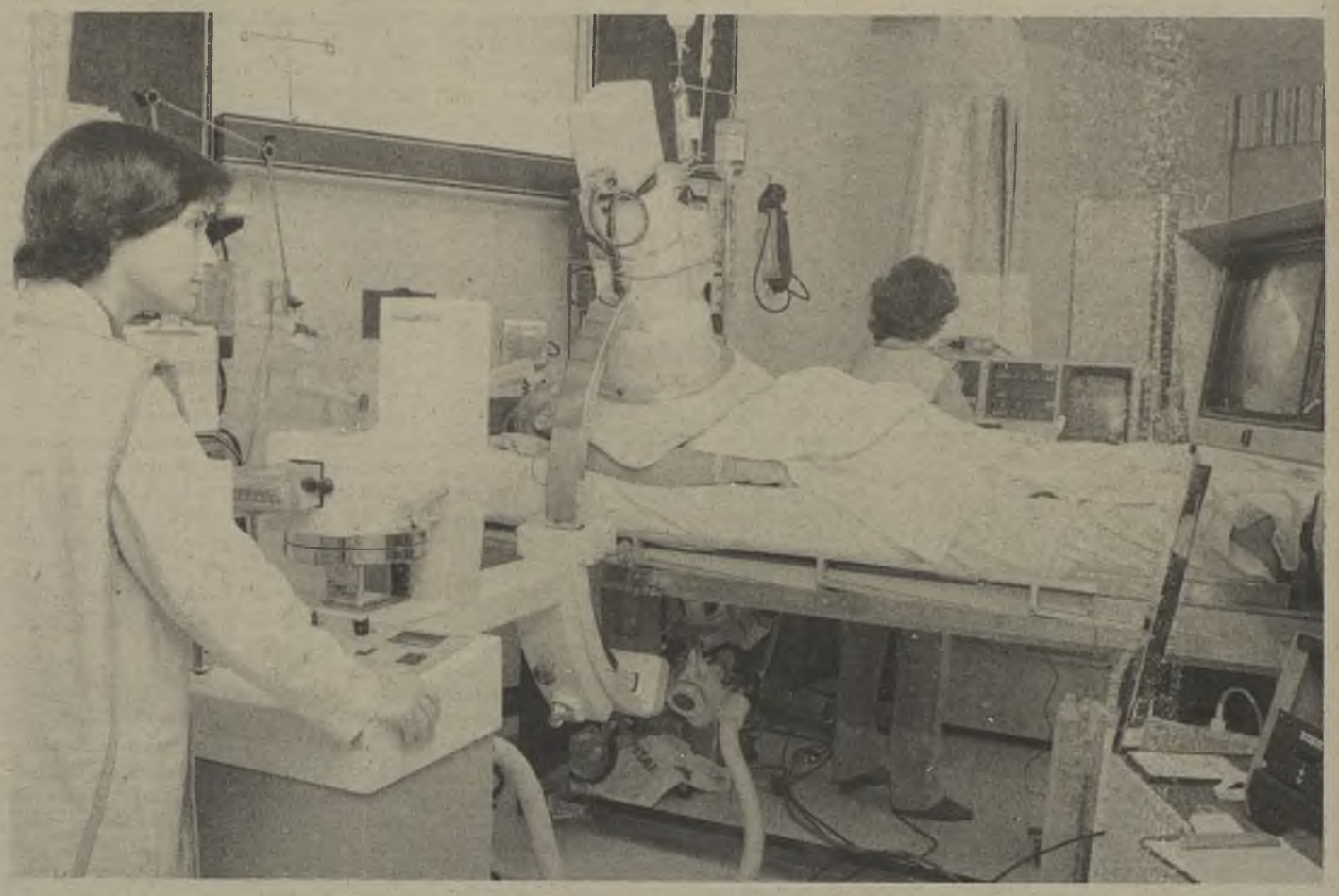
"We will be taking a precise look at the blood volume and pressure in the left ventricle," where blood is propelled from the heart out to the body, said Miller.

"Additionally, we will be measuring 'on line' coronary blood flow and the amount of oxygen used by the heart," he added.

Two "gadgets," actually serious technological advances both refined at PAMRF, are central to making the study possible, Miller said.

First is an X-ray machine which can be wheeled to the patient's bedside in the intensive care unit shortly after surgery. This device was modified specifically for the study to incorporate high resolution and high power in a large screen format, while simultaneously retaining sufficient portability and compactness to be used at the bedside.

Unlike traditional X-ray—which requires cumbersome equipment to record the picture on film—the technique employed in the current study permits a series of pictures to be recorded on a 10-inch video camera which is linked to a high quality video disk drive unit.



Anne Schwarzkopf, a research assistant in the Department of Cardiovascular Surgery, checks sophisticated monitoring equipment on a patient who recently underwent open heart surgery.

The data on the video disk, which includes blood pressure and other data as well as images, is later transferred to a permanent (dedicated) computer system.

A total of 1,200 frames, taken at the rate of 30 per second, can be recorded and eventually transferred to the main computer system for analysis.

Studies can be carried out every four to six hours after surgery for the first 36 hours and then again after the patient recovers.

Like a movie

"This enables us to track the beating of the heart muscle, since we will be able to see movement much like a television or motion picture," Miller explained.

But tracking the precise motion of soft tissue such as the inside of a heart is impossible without using a dye or other material injected directly into the left ventricle. So the researchers have developed a second technological aid. This involves a series of seven tiny, almost microscopic markers, which are placed in the wall of the heart during surgery.

Made of a rare metal called tantalum, these markers are visible in the X-ray pictures and will not be felt by the patient, Miller said.

The pictures actually will be images of the markers moving, which by being placed strategically, will offer an accurate blueprint of the changes in the left ventricle's size every 1/30 of a second, Miller said.

The markers have already been placed during the past eight years in heart transplant and other patients at Stanford, using bioengineering and computer techniques developed by Ingels and Daughters at PAMRF.

In the current tests, Miller said he hopes to record data from one patient per week undergoing either cardiac valve replacement or coronary bypass grafting. These patients will have been fully briefed about the study and will have signed a consent form agreeing to participate in the study.

To improve patient care

"What we are learning may be analogous to the information which a mechanic receives from a dynamometer. We don't anticipate that these studies will ever become a routine clinical test, but as a research tool, they will enable us to gain physiological information never before possible in man immediately after surgery. This should improve care for open heart surgery patients everywhere in the future.

"In the past we have not been able to study precisely and instantaneously what is occurring in the left ventricle immediately after surgery. Such information

continued on page 9

Family Medicine presents public lecture series on women and health

A Friday noon lecture series on *Women and Health* will be presented this spring at the Stanford Medical School by the division of family medicine.

Open to the public free of charge, the scheduled lectures are:

- April 1: "Transforming Stress into Creativity," with Margaret Buck, John F. Kennedy University;
- April 8: "Living with Questions," with Alla Bozarth-Campbell, Episcopal priest, gestalt therapist, feminist poet;
- April 15: "Women's Health Movement," with Sheryl Ruzek, M.P.H., Ph.D., postdoctoral research fellow in epidemiology, U.C. Berkeley, and core faculty, Women's Roles in Health and Healing, U.C.S.F.;
- April 22: "Abusive Images of Women in Mass Media and Pornography," a presentation by WAVPM (Women Against Violence in Pornography and Media);
- April 29: "Women and Women's Health Care: Legal and Professional Barriers," with Rosemary Mann, C.N.M., teacher of women's health care and law student;
- May 6: "Maternal Alcoholism and Family Life," with Genevieve Ames, Ph.D., Fellow - NIAAA, medical anthropologist, teacher and researcher, Alcohol Research Group, School of Public Health, U.C. Berkeley;
- May 13: "Barriers to Health Care for Older Women," with Donna Ambrogi, managing attorney, Bay Area Law Center on Long-Term Care, coordinator of Care Giver Task Force, Older Women's League;
- May 20: "Sex Role Development," with Julie Olsen Edwards, director, department of early childhood and family life education, Cabrillo Community College;
- May 27: "Women and the Nuclear Arms Race," with Dr. Deborah Gordon, family physician, co-president, Redwoods chapter, Physicians for Social Responsibility.

A discussion group with case presentations will be held for enrolled participants following each lecture, from 1:15 to 2 p.m., with the speaker, as well as research assistant Marita Grudzen, Jeanne DeJoseph, C.N.M., Ph.D., and Dr. Judith Martin from the Division of Family Medicine.

The lectures will be held from noon to 1 p.m. in room M114. For further information call 497-7043 between 8 a.m. and noon, or 497-6431 from 2 to 5 p.m.



Harold Schuknecht

Harvard scholar on dizziness

Understanding dizziness will be the topic of the seventh annual George S. Kiperash Lecture on Thursday, March 24, at Stanford University.

The lecture, "Labyrinthitis and Endolymphatic Hydrops, Cause and Effect," will be delivered by Dr. Harold Schuknecht, professor of otology and laryngology at Harvard Medical School.

Labyrinthitis, or infection in the middle ear, is among the leading causes of dizziness, explained Dr. Martin Hopp, assistant professor of otolaryngology/head and neck surgery at Stanford. Another leading cause, endolymphatic hydrops, or the enigmatic "Meniere's Disease," is characterized by severe recurrent dizziness, he said.

The public is welcome to attend the lecture, sponsored by the Division of Otolaryngology/Head and Neck Surgery, to begin 8 p.m. in the Forum Room, Meyer Library on campus. Continuing medical education credit is available.

Schuknecht is a well-known ear disease specialist who has been instrumental in developing new surgical treatments for dizziness disorders. These treatments, now available as well at Stanford University Medical Center, will also be discussed in his lecture.

A native of South Dakota where he received his bachelor's degree in 1938, Schuknecht had his medical training and residency at the University of Chicago, where he later served on the faculty. He served at the Henry Ford Hospital in Detroit from 1953-61 before joining the Massachusetts Eye and Ear Infirmary (Mass. General Hospital), where he is now chief of otolaryngology.

Schuknecht has been the president of four otolaryngology societies, served on the editorial boards of five professional journals, and published widely throughout his career.

The Kiperash Lecture was established to bring national and international figures to Stanford and to enhance continuing education and residency training. It is named after George Kiperash, Jr., a former Stanford patient and native of San Jose.

For further information regarding this year's lecture, call 497-6891.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

...News Notes...

Excerpts from an interview with Chief of Staff James Silverman, as well as historical photographs of Stanford Nursing School students, are part of a KQED program on nurses which will air this evening at 8 p.m. on Channel 9.

"Unsung Healers," a special program of KQED's Wednesday Report, chronicles the history of change in the nursing profession and acknowledges the special demands and frustrations of the modern nurse.

The half-hour report examines among others the fallacies that nurses exist to serve as "handmaidens" to doctors, and that nursing is a natural function of women rather than a chosen profession. And it questions the persistent problem of low status which nurses struggle against.

Nurses and other medical professionals from various Bay Area hospitals were interviewed to reveal their views on these and other subjects relating to the nursing experience.

The program will again air 3:30 p.m. Sunday, March 27, and 9:30 p.m. Tuesday, March 29, on Channel 9.

* * * *

Eleanor Hedenkamp, R.N., and Aaron Smith, M.S.W., L.C.S.W., both of SUH, answered questions last night, March 22, from members of "Parents for Heart," an information and support group sponsored by the Santa Clara County Chapter of the American Heart Association.

The group meets regularly to discuss aspects of children's heart disorders and to explore possible causes, treatments, and coping mechanisms with guest speakers. Anyone interested in further information about the group should call (408) 247-8555.

* * * *

Passover matzos will be available throughout the Holy Days in both the main center and Hoover cafeterias for 25 cents.

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Effective this week, there is a five percent price increase on all cafeteria items. This is the regular yearly adjustment for increasing food costs.

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Many Easter items are presently for sale in the Hospital's Auxiliary-run gift shop, along with a wide selection of other gift items.

Please note, however, that the gift shop will be closed for inventory Thursday, March 31.

* * * *

Annette Lee, a special procedures and angiographic technologist in SUH's department of diagnostic radiology, was named one of 15 winners of the YWCA's "Outstanding Mid-Peninsula Black Women Recognition Awards." Certificates of recognition were presented Feb. 25, as part of the Fifth Annual Black Experience celebration of the Mid-Peninsula YWCA.

Lee had been nominated for the award by Jeanne Kennedy, director of Community Relations.

Lee came to Palo Alto 15 years ago from Boston where she had worked in the field of diagnostic radiology since 1957. Before that she worked in Nashville, Tenn.

Besides her technical responsibilities, she teaches special procedures to students from Foothill Community College. These include the most sensitive and complicated diagnostic services: cardiovascular, coronary arteriograms, carotid arteriograms, and neurological procedures.

Lee has been listed in "Who's Who Among Women." In 1972, by special invitation she visited Yugoslavia, to see how a government hospital works under a socialist system.

She has been appointed president for 1982-83 of the Association of University Radiologic Technologists, and has other professional affiliations as well.

Lee is a member of the University A.M.E. Zion Church in Palo Alto. She was an active member for three years of the N.A.A.C.P. Every year she collects donations for the American Heart Association.

The awards were intended to recognize black women in this area who have contributed positively to the development of their communities.

Blood drive soon

The Stanford University Blood Bank will hold a blood drive in the central conference room at the Children's Hospital at Stanford from noon to 4 p.m. Tuesday, March 29. Medical Center and Hospital staff are especially encouraged to participate, and all university staff are invited to donate.

Renee Burgard of the Blood Bank said patients at SUH and Children's Hospital at Stanford often have complex and sophisticated transfusion needs, and the demand for all blood products is great. The two hospitals combined use more than 100 units of blood each day, and in order to support this need, the Blood Bank asks for everyone's support.

Call 497-7831 to make an appointment to donate March 29, or just drop by.

Cardiac studies...

continued from page 8

could only be gained by invasive cardiac catheterization techniques which simply aren't feasible to perform on patients in the intensive care unit every few hours during the first two postoperative days," Miller explained.

The grant from the National Heart, Lung and Blood Institute includes a $75,972 per year subcontract to PAMRF for bioengineering support and mathematical analysis of the myocardial marker data.

Collaborators in the current study include Drs. Edward Stinson and Philip Oyer, Miller's colleagues in the Department of Cardiovascular Surgery, and a Stanford cardiologist, Dr. Edwin Alderman.

Other researchers in addition to Ingels and Daughters are Geraldine Derby, research nurse; Carol Mead, senior research assistant at PAMRF; Anne Schwarzkopf, Stanford research assistant, and cardiology fellows Dr. Steve Osterle and Mike Fowler. —**Mike Goodkind**



Rodney Million

Million to give Culpeper talks

New combinations of treatments for aggressive cancers of the head and neck will be highlighted in a lecture given March 31 by Dr. Rodney Million, the 1983 Charles E. Culpeper visiting professor at Stanford University School of Medicine.

Million, professor of radiology and director of the division of radiation therapy at the University of Florida College of Medicine in Gainesville, will speak on "The Results of High Dose Radiation Therapy and Surgical Salvage for Carcinoma of the Pyriform Sinus" at 5:15 p.m. in room M112.

Although head and neck cancers are responsible for only seven percent of all cancers, they can be among the most vicious, said Dr. Malcolm Bagshaw, chairman of Stanford's department of radiology.

Surgery to eradicate the cancer can require cutting through the jawbone, or removing the larynx.

"Any supplemental treatment, such as radiation therapy, that can reduce the extent of the surgery is very useful," Bagshaw said. "Dr. Million is a distinguished researcher who has made great contributions in this area—demonstrating how radiation and surgery can work together to eliminate the cancer. He also has made important contributions in identifying some of the adverse effects of radiation, particularly on the eye."

Million will deliver three lectures, all open to the public, during his three-day visit to the Medical Center. "The Effects of Radiation on the Normal Eye and Optic Nerve" will be held 5 p.m. Wednesday, March 30 in room M106; while "Experience with Preoperative Radiation in Rectal Carcinoma" will take place 8 a.m. Friday, April 1 in room S092.

A 1954 graduate of Indiana University Medical School, Million has been a faculty member of the University of Florida College of Medicine since 1964, and has published more than 40 papers on cancers of the head and neck. In 1979 he was awarded the Grubbe Gold Medal award by the Chicago Radiological Society and, in 1982, garnered the Distinguished Alumnus Award from the M.D. Anderson Hospital and Tumor Institute in Texas.

This is the third year of a five-year rotating visiting professorship at Stanford sponsored by the Charles E. Culpeper Foundation of New York. The departments of surgery and medicine hosted the first two visiting scholars.

The Foundation primarily supports health, education, science and technology programs, in addition to offering grants to support arts and letters, youth activities, administration of justice and Native American affairs.



Charming the pint-sized crowd and demonstrating the proper way to brush one's teeth was a big bunny with a giant toothbrush at the children's health faire, Saturday, at the Stanford Shopping Center. The first of its kind, the well-attended event was presented on a (luckily) sunny day by Children's Hospital at Stanford and the pediatrics department of SUH. This community dental exhibit was one of more than 35 displays on the mall, all intended to teach kids about health-related topics.

Teens lose weight at summer camp

Stanford's behavioral medicine program this year is again offering a summer weight-loss day camp for teen-agers, ages 12—17, on the University campus.

Encouraging campers to take charge of their own weight management, the program will teach them to lose weight safely through eating and exercise patterns that promote permanent weight control.

Intended specifically for teen-agers, the camp will allow them to have fun and develop skills while slimming down. Included will be group seminars in behavioral change techniques and nutrition education; aerobic activity, tennis, swimming, and other recreational activities; group lunches on campus; and weekly seminars for parents.

(An important feature of the camp is consistent weight-loss management achieved through the intensive day program combined with parental support at home.)

Faculty will include members of the behavioral medicine program of the School of Medicine.

Two sessions will be offered, and a fee will be charged. The first session will run from June 20 through July 14; the second from July 18 through August 11. Both will take place Mondays through Thursdays, from 9 a.m. till 1 p.m. Campers may register for one or both sessions.

Early enrollment is recommended, as space is limited. For further information call Dr. Mary Southam, at 497-5065.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MARCH 23

Div. of Orthopedic Surgery Grand Rounds: "Paget's Disease"—Dr. Marjorie Oda. 8:30 a.m., M114.

Dept. of Genetics Seminar: "Immunoglobulin Transcription is Activated by Downstream Sequence Elements"—Dr. Cary Queen (National Cancer Institute). 4 p.m., M114.

Dept. of Biochemistry Seminar: "Genomic Sequencing of Mouse Immunoglobulin and Human Fetal Globin"—Dr. George Church (Harvard). Noon, M316.

Hematology Patients and Families Support Group Weekly Meeting: 10:30 a.m. till noon, TF-122c. For further information, call the hematology clinic at 497-6961.

Dept. of Biochemistry Seminar: "Genetic and Molecular Analyses of Alcohol Dehydrogenase Locus in *Drosophila*"—Dr. Michael Ashburner (Cambridge). 4 p.m., M316.

Progress in Medicine Lecture: "Ethical and Emotional Issues in the Care of the Dying Patient and Family"—Rev. Ernle Young, Ph.D. Last of a six-part public series on ethical dilemmas of intensive care. 7:30 p.m., Fairchild Auditorium.

MARCH 23 THROUGH 25

Dept. of Pathology Seminar: "Current Concepts in Surgical Pathology." 8:45 a.m. till 8 p.m. Wednesday; 9:45 a.m. till 5:45 p.m. Thursday; 8:30 a.m. till 4:45 p.m. Friday; Fairchild Auditorium. For further information, call 497-7211.

Nursing Educational Services and Perinatal Nursing Region of Stanford Hospital Symposium: "Advanced Perinatal Concepts." Room 270, Tresidder Union. Registration limited. For further information, call 497-5384.

THURSDAY, MARCH 24

Nursing Educational Services registration deadline: for "Pediatric Critical Care Course, Level I" to be held March 31. Geared toward nurses caring for children who undergo cardiac surgery. Addresses physiological, surgical and social service considerations of care for these patients. Registration required, fee charged, and continuing education credit available. Room to be announced. For further information, call Carole Kidder at 497-6366.

Dept. of Psychiatry and Behavioral Sciences, and Nancy Pritzker Laboratory of Behavioral Neurochemistry Lecture: "Structural and Mode of Action Studies on Peptide Toxins, Neuropeptides, and Peptide Antibiotics"—Dr. Dudley Williams (University Chemical Laboratory, Cambridge, England). 4 p.m., M112.

Dept. of Biochemistry Seminar: "Anatomy of Heat-Shock Promotors"—Dr. Hugh Pelham (Cambridge). Noon, M114.

Div. of Otolaryngology/Head and Neck Surgery 1983 Seventh Annual George Kiperash Lecture: "Labyrinthitis and Endolymphatic Hydrops, Cause and Effect"—Dr. Harold Schuknecht (Harvard). 8 p.m., Forum Room, Meyer Library.

Dept. of Medicine presentation of the Albion Walter Hewlett Award. Recipient will deliver Grand Rounds lecture. 8:30 a.m., Fairchild Auditorium.

FRIDAY, MARCH 25

Dept. of Pediatrics Grand Rounds: "Acquired Immunodeficiency Syndrome"—Dr. Charles Abilgaard (UC Davis). 8 a.m., M106.

Div. of Surgical Pathology Research Seminar: "DNA Repair Mechanisms and Meiosis"—Dr. Michael Resnick (NIEHS, Maryland). Noon, M112.

SATURDAY, MARCH 26

Stanford Audiology Clinic Seminar on Acoustic Coupling Hearing Aids. 7 a.m. till 6 p.m., Fairchild Auditorium. For further information, call 497-6816.

Div. of Hematology Stanford-UCSF Combined Conference. Presentations will be made by Drs. Thomas Kipps, Lee Levitt, Susan Perrine and Tania Weiss. 9:30 a.m. till 12:30 p.m., M110. Lunch served at 12:30 p.m. in C122b. For further information, call Lynda Spencer at 497-5007.

MONDAY, MARCH 28

Dept. of Gynecology and Obstetrics REI Conference: "Neurosurgical Therapy for Prolactinomas"—Dr. Jerry Silverberg. 8 a.m., A336.

Dept. of Medical Microbiology Seminar: "Human Infection with *Clamydia Trachomatis*"—Dr. Julius Schachter (UCSF). 1:15 p.m., M114.

Div. of Orthopedic Surgery Grand Rounds: "Bone Grafting—Principles and Techniques"—Dr. Darrell Hayes, 7:30 a.m., M114; and "Electrical Stimulation of Bone"—Dr. John Csongradi, 8:30 a.m., M114.

TUESDAY, MARCH 29

Stanford University Blood Bank Drive: Noon till 4 p.m., central conference room, Children's Hospital at Stanford. Please call 327-4800 ext. 244 to make a donation appointment, or just drop by during blood drive hours.

WEDNESDAY, MARCH 30

1983 Charles E. Culpeper Visiting Professorship Lecture: "The Effects of Radiation on the Normal Eye and Optic Nerve"—Dr. Rodney Million (Univ. of Florida at Gainesville). 5 p.m., M106. (*See story this issue or next week's calendar for Million's Thursday and Friday lectures.*)

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Graduate application trends: computer science, English, physics increase

continued from page 1

Dora Z. Hjertberg, Stanford law admissions director.

Prof. Jack Friedenthal said the LSAT was the "main factor" in the drop. "The original predictions of the percentage at the high end among those taking the test was incorrect."

Widespread publicity that "law is no longer an open field," with "an overabundance of people pounding the pavement" is "not true for graduates at top schools," he said.

Higher costs may also have had some effect on applications to the most competitive schools, Friedenthal added. "There's no question it's tougher to go. That's true anywhere. Stanford tries very hard to find money for those in need."

Minority applications to the Law School are running at a record rate, Friedenthal said. By mid-March, 395 minority applications had been received, up 15 from a year ago.

The decline in total law school applications may be part of a shift from professional programs to graduate studies.

While Business School applications are holding about even with last year at Stanford, other business schools are reporting a 5 to 10 percent decline.

Applications to the Stanford Medical School M.D. program are running about 5 percent below last year. The number of students taking Medical College Admissions Tests nationally declined slightly this year for the first time in several years.

As of March 15, all three professional schools at Stanford had about the same number of applicants as five years ago.

Graduate applications to the Stanford School of Humanities and Sciences are up nearly 11 percent this year, paced by gains in computer science, English, and physics. Engineering and Earth Sciences also report increases, while Education has declined (see table below.)

Business School Admissions Director Kathleen Gwynn said about 3,700 applications had been received by March 21. By the April 15 deadline, she expects slightly more applications than last year's 4,977 total for 320 places in the entering MBA class.

Stanford is the most selective of the nation's major business schools. Of those admitted, 75 percent enrolled, a "yield" rate not exceeded by any other school.

Overall, the number of minority applicants appears to be down this year, with the number of women remainng about 25 percent of the applicant pool. Last fall's entering MBA class included 10 percent minority students.

Vice Provost Gerald Lieberman, dean of graduate studies and research, said minority applicants in fields covered by the Graduate Admissions Office are up about 10 percent. By mid-February, American Indian applicants had increased from 8 to 20, and blacks from 93 to 109. But Chicanos dropped from 70 to 66 and Puerto Ricans from 26 to 25.

Lieberman is pleased but far from complacent over the increase. "Last year was not good at all," he pointed out. "To make a real impact on the applicant pool for jobs in academia we need a major increase nationally."

He's "not surprised" at the overall increase in graduate school applications, but puzzled at the failure of social sciences to show an increase here.

"In the humanities, at a time when the economy is in trouble, I'd expect more applications for graduate school.

"That doesn't apply to engineering, which is still a field with many job possibilities. Even there the market has tightened, except for electrical engineering and computer science."

The professions likewise are getting "somewhat overcrowded" and "students react to that," he observed. "Professional degrees are no longer the apparent sinecure they were five years ago."

Highly publicized national rankings of graduate programs "probably had no effect" on applications this year, since most college students made plans before the rankings were published, he said.

The impact of federal and university financial aid policies on graduate applications is "very hard to estimate," he added. While doctoral students receive financial support, "students can't live on that alone—they must have other sources." These include loans, which often are not made through the university, and hence not easily monitored.

The tables

Within the School of Humanities and Sciences, graduate applications in computer sciences jumped sharply, to 691 from 559. The department recently was top-ranked nationally. English applicants rose more than 100 and Physics more than 50.

Engineering School applications rose about 7 percent, to 2,730 from 2,559, with every department except engineering economic systems showing an increase. The largest gain was in mechanical engineering, with electrical engineering second.

Every department in Earth Sciences rose, with applied earth sciences and geology showing the greatest gains.

Medical sciences applications rose slightly, to 524 from 511.

Graduate applications by March 15

	1983	1982	1978
Business	3,125*	3,707	3,451
Law	3,357	4,324	3,486
Medicine (MD)	5,512	5,813	5,547
Earth Sciences	363	299	312
Education	336	360	472
Engineering	2,730	2,559	1,998
Humanities & Sciences	4,093	3,769	3,828
Humanities	(1063)	(915)	(1,022)
Social Sciences	(1,240)	(1,256)	(1,328)
Sciences	(1,790)	(1,598)	(1,478)
Medical Sciences	524	511	511
TOTAL	20,040	21,342	19,605

** Reflects a lower number of processed applications this year. Total applications received by the school by 3/21/83 were approximately 3,700.*

Humanities	1983	1982	1978
Art	104	98	124
Asian Languages	23	28	26
Classics	29	22	32
Comparative literature	44	35	24
Drama	17	25	27
English	376	265	330
French, Italian	16	19	20
German Studies	25	20	31
History	191	179	149
Latin American Studies	20	17	21
Modern thought, literature	33	41	44
Music	56	57	76
Philosophy	72	61	65
Religious studies	17	17	24
Slavic languages, lit.	16	11	8
Spanish, Portuguese	24	20	25

Social Sciences			
Anthropology	68	90	95
Communication	197	190	194
East Asian Studies	55	57	57
Economics	368	388	390
Food Research	50	47	45
Linguistics	55	54	45
Political Science	218	192	193
Psychology	180	171	246
Sociology	49	67	63

Sciences			
Applied Physics	171	176	131
Biological sciences	145	167	240
Biophysics	14	18	14
Chemistry	254	226	293
Computer science	691	559	309
Mathematics	117	103	126
Physics	356	301	293
Statistics	42	48	72

Engineering	1983	1982	1978
Aero and Astro	170	153	86
Chemical	211	197	146
Civil	395	380	353
Electrical	1,094	1,054	759
Engr. Econ. System	49	59	62
Industrial	87	81	92
Materials Science	122	103	94
Mechanical	507	444	320
Operations Research	95	88	86

Earth Sciences	1983	1982	1978
Applied Earth Sciences	102	73	73
Geology	119	97	152
Geophysics	99	87	67
Petroleum Engineering	43	42	21

Medical Sciences	1983	1982	1978
Biochemistry	87	81	58
Cancer Biology	24	26	—
Genetics	64	55	35
Hearing and Speech	2	2	6
Medical Microbiology	26	36	42
Neurosciences	55	47	43
Pharmacology	32	21	36
Physical Therapy	224	232	282
Physiology	8	4	6
Structural Biology	2	7	3

1983-84 salary guidelines cover four-step

continued from page 1

Four-step ranges

The Four-Step range structure has been adjusted upward by 5 percent for all ranges (B07 through B24). In addition, all range maxima have been adjusted upward by an additional 1.5 percent, allowing departments greater flexibility to reward outstanding long-term employees.

Effective September 1, 1983, the 5 percent range adjustment applies across-the-board to all employees on Steps A through C; these employees will also receive a 5 percent step increase on their annual salary review dates.

Individual salaries in the Merit Zone as of August 31, 1983 are not automatically adjusted by the 5.0 percent range adjustment; they are subject to a 7 percent control and are to be administered in the same manner as exempt salaries (see below).

Employees on Step D will receive either the 5 percent range adjustment or a merit increase which includes the 5 percent range adjustment. If Step D employees are to enter the Merit Zone, the 5 percent range adjustment becomes part of the total merit increase, which is subject to the 7 percent control.

Exempt staff program

The program for exempt staff is comprised of merit increases subject to a salary program control of 6.3 percent of the salary base, and special adjustments of .2 percent to help alleviate selected internal equity and external market problems.

While there is a University-wide salary control of 6.3 percent for merit increases, there will likely be variation among units, since some units may need to reserve a portion of their merit allocation to solve salary equity problems if the special adjustment allocation proves insufficient.

Some units may also choose to withhold a portion of the authorization for selected midyear increases; any resources withheld are limited to use for 1983-84 salary increases and not for other departmental needs.

A common misunderstanding about the salary program control percent is that it represents increases given to satisfactory employees, while larger increases go to superior performers. In fact, the typical employee in most units is an excellent performer; consequently, a merit increase near the control percent, above or below, would indicate strong performance.

In past years, central guidelines were issued which included a description of ranges of performance and suggested corresponding percentage merit increases. This year, that descriptive portion of the guidelines is omitted.

Exempt salary increases are limited in the aggregate by the salary control percent and the curve range structure; but within these constraints, the goal is to recognize and reward individual staff members' performance.

The omission of descriptive guidelines this year resulted from consultation with administrators and staff affairs officers, who felt that the old guidelines created confusion and false expectations. The approach this year is an experiment to simplify the salary-setting process, and is in keeping with the spirit of the recommendations of the Task Force on Personnel Policies and Administration.

Supervisors and managers will be expected to make judgments about the relative performances of their employees and to recommend corresponding salary increases. Salary increases within each Vice-Presidential area should aggregate to 6.3 percent, and the degree of dispersion around that number should reflect the extent of variation among employees' performances. Typically, the result will be a spread of salary increases a few percentage points above and below the salary program control percent.

As in the past, all recommendations for salary increases should be supported by documented performance evaluations maintained in the departments.

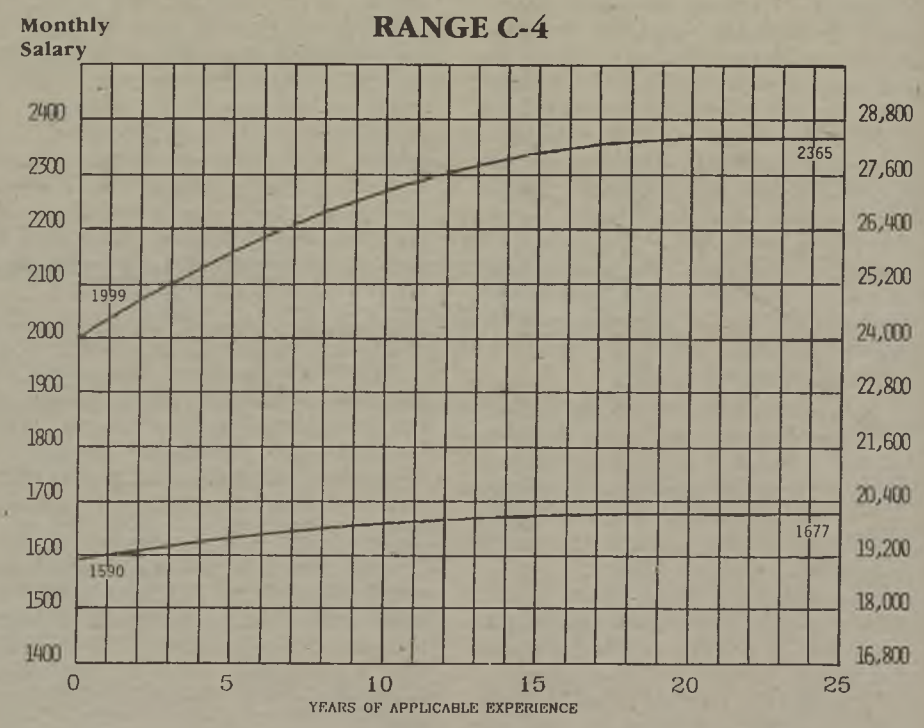
FOUR—STEP RANGE STRUCTURE
(effective September 1, 1983)

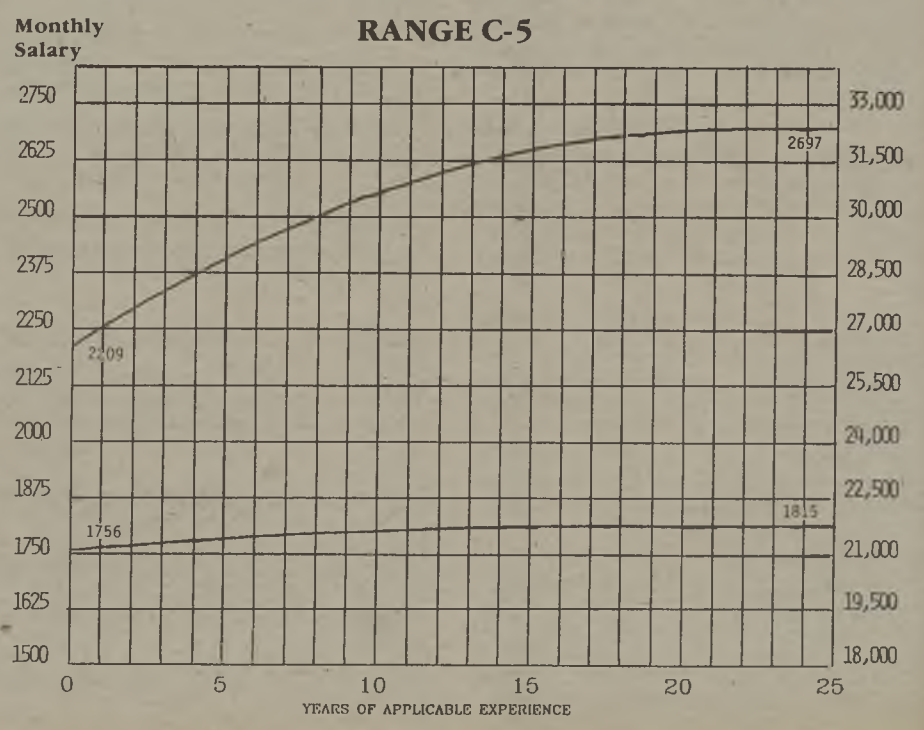
Range Number	Step A	Step B	Step C	Step D	Merit Zone	Range Maximum
B- 7	$1077/mo	$1132/mo	$1187/mo	$1248/mo		$1499/mo
B- 8	1132	1187	1248	1308		1573
B- 9	1187	1248	1308	1376		1654
B-10	1248	1308	1376	1442		1741
B-11	1308	1376	1442	1512		1826
B-12	1376	1442	1512	1590		1920
B-13	1442	1512	1590	1673		2018
B-14	1512	1590	1673	1755		2119
B-15	1590	1673	1755	1846		2230
B-16	1673	1755	1846	1939		2339
B-17	1755	1846	1939	2037		2455
B-18	1846	1939	2037	2143		2578
B-19	1939	2037	2143	2247		2710
B-20	2037	2143	2247	2360		2846
B-21	2143	2247	2360	2478		2984
B-22	2247	2360	2478	2605		3137
B-23	2360	2478	2605	2735		3295
B-24	2478	2605	2735	2869		3461

SUPERVISORY MERIT RANGE STRUCTURE
(effective September 1, 1983)

Range Number	Monthly Minimum	Monthly Maximum	Semi-Monthly Minimum	Semi-Monthly Maximum	Annual Minimum	Annual Maximum
S- 7	$1544	$1966	$ 772.00	$ 983.00	$18,528	$23,592
S- 8	1631	2066	815.50	1033.00	19,572	24,792
S- 9	1714	2169	857.00	1084.50	20,568	26,028
S-10	1802	2279	901.00	1139.50	21,624	27,348
S-11	1891	2397	945.50	1198.50	22,692	28,764
S-12	1986	2514	993.00	1257.00	23,832	30,168
S-13	2085	2640	1043.00	1320.00	25,020	31,680
S-14	2189	2773	1094.50	1386.50	26,268	33,276
S-15	2300	2913	1150.00	1456.50	27,600	34,956
S-16	2414	3057	1207.00	1528.50	28,968	36,684
S-17	2537	3212	1268.50	1606.00	30,444	38,544
S-18	2663	3373	1331.50	1686.50	31,956	40,476
S-19	2795	3541	1397.50	1770.50	33,540	42,492
S-20	2935	3721	1467.50	1860.50	35,220	44,652

Exempt curve ranges effe





supervisory, and exempt staff increases

Supervisory merit ranges

The Supervisory Merit Ranges are being adjusted upward by 5 percent at the minima and 6 percent at the maxima this year. While the Supervisory Merit Ranges include both nonexempt and exempt employees, the salary determination process parallels that for exempt classifications.

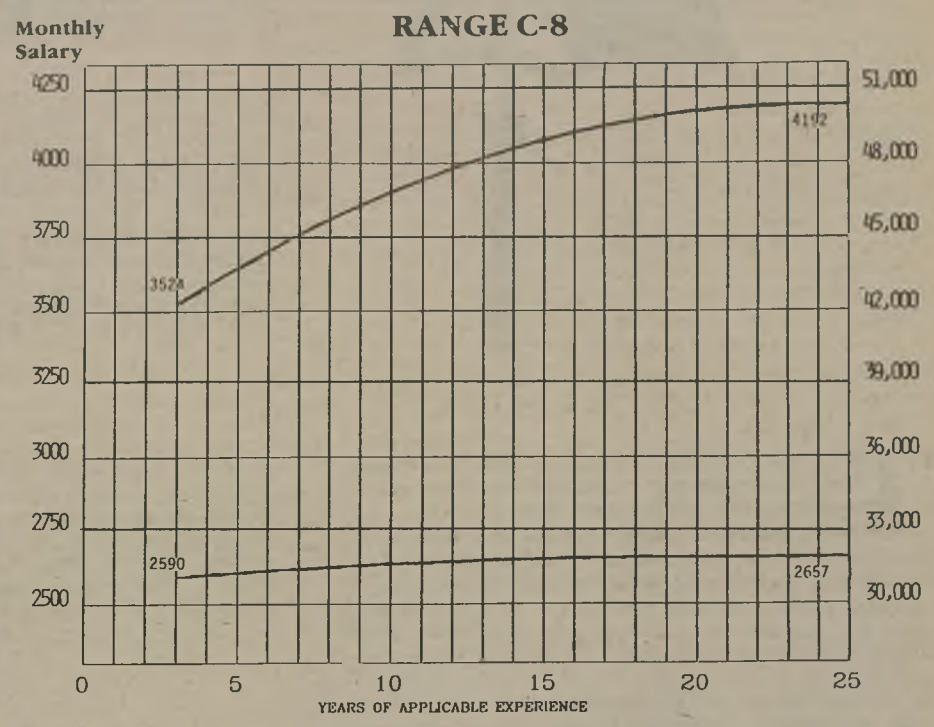
Individual salary decisions should be made in a manner consistent with the general guidelines for exempt staff. Managers should also consider the appropriateness of each supervisor's pay level with respect to the pay level of subordinates as well as to supervisors in similar jobs, so that pay differences reflect differences in both performance and responsibility.

Curve ranges adjusted upward 5-6%

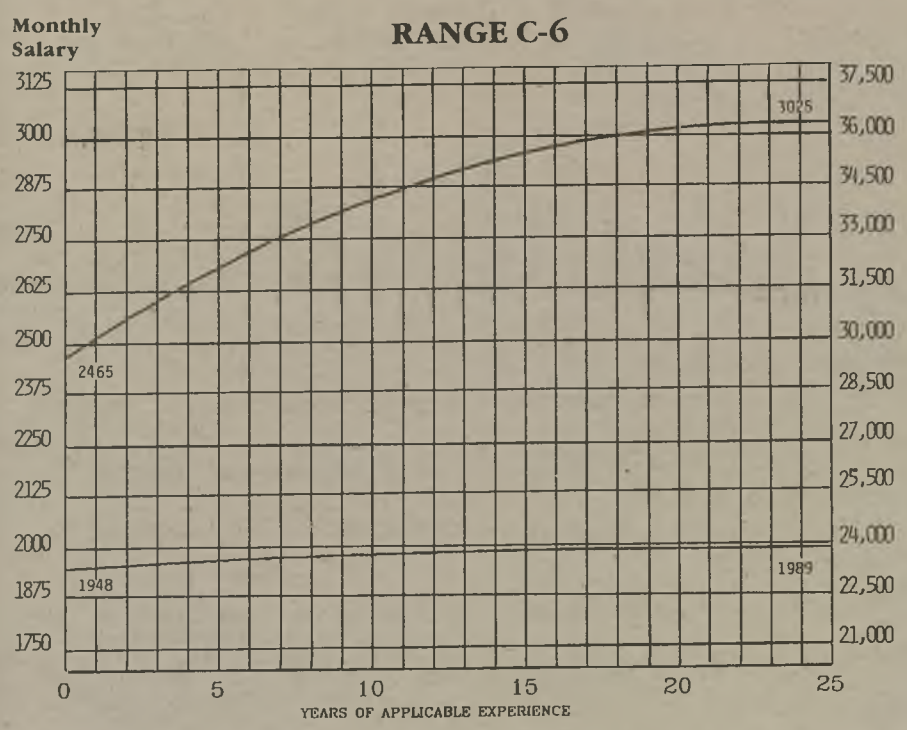
Most exempt positions at Stanford are assigned to the curve ranges for salary setting purposes.

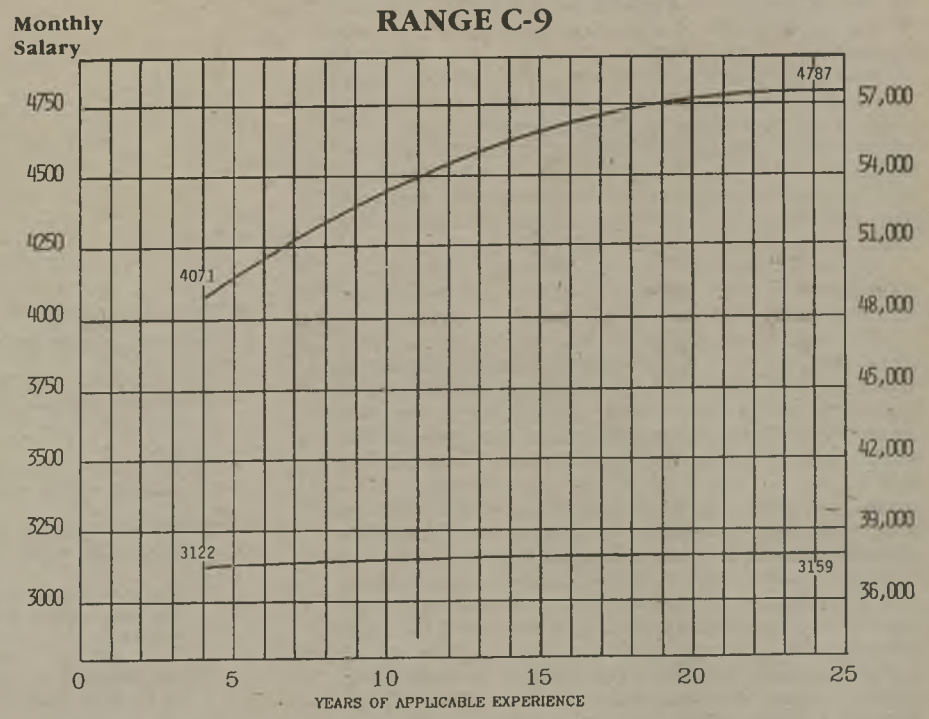
The curve ranges are designed to provide a general framework for setting salaries, while allowing supervisors maximum flexibility in recognizing job factors such as performance, length of service at Stanford, level of career development and equity considerations. These factors (rather than curve placement) are the key considerations in the salary setting process.

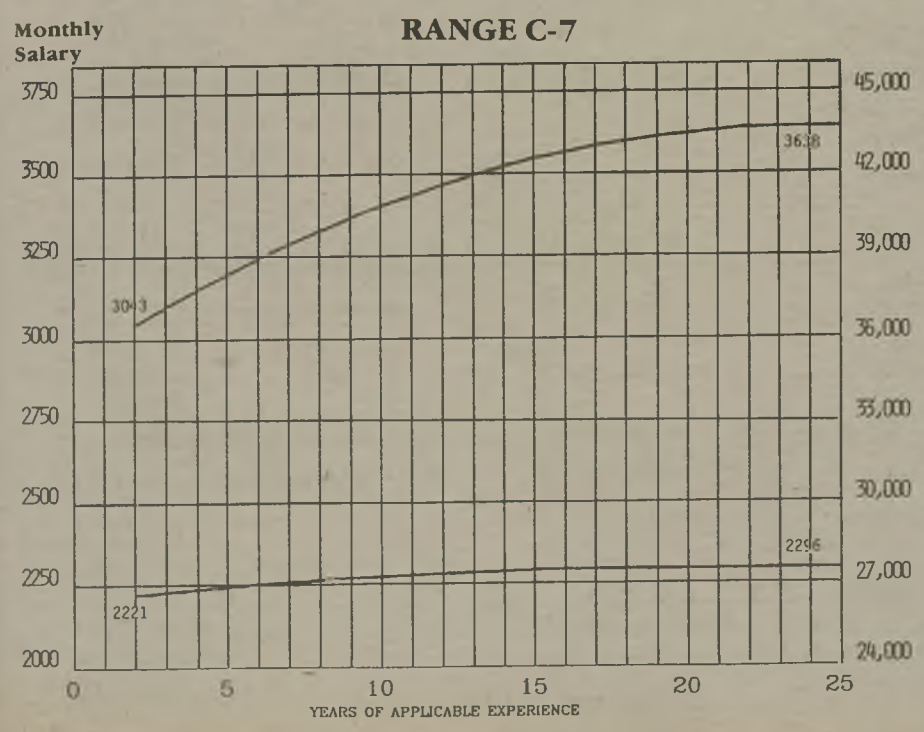
The lower and upper curve lines define the possible minimum and maximum salary for an employee based upon the individual's years of applicable experience (YAE). The 1983-84 curve ranges which appear on these pages reflect an upward revision of 5 percent at the minima and 6 percent at the maxima.

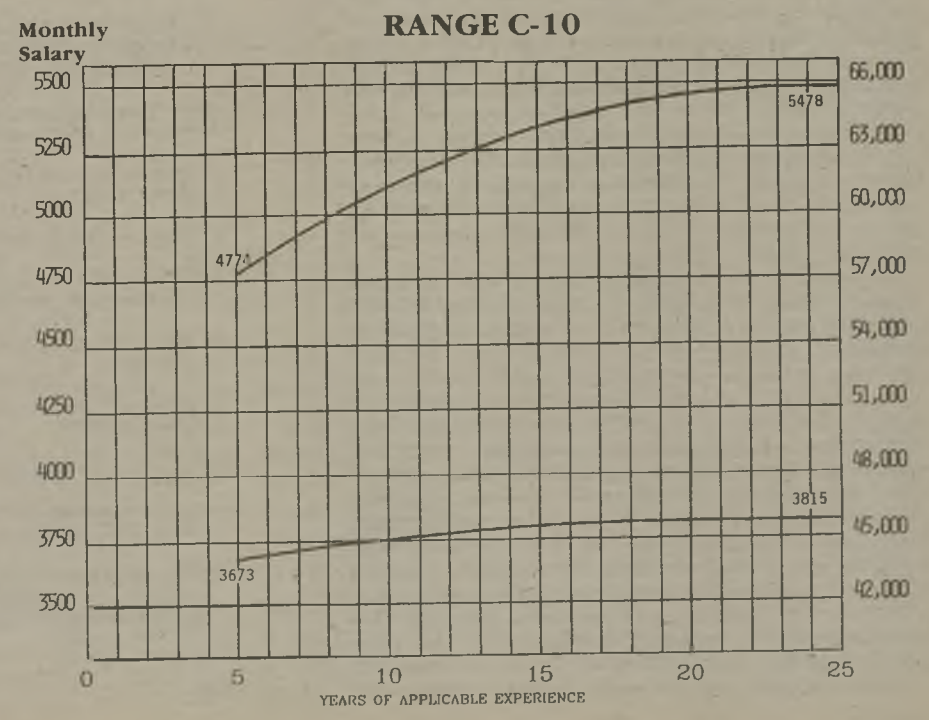


Effective September 1, 1983











SENIOR SURVEY

Except in general advising, Stanford gets high marks as Commencement nears; about half the class plan full-time work

The Senior Survey is an annual effort by the Office of the Vice-Provost for Undergraduate Education to ascertain the retrospective views of seniors concerning various aspects of their undergraduate experience.

The survey has four parts. The first part pertains to assessments by seniors of the undergraduate program, their general experiences with the faculty and administration, and their competence in broad areas. The results of this portion of the survey constitute the subject matter of the present report.

The second part of the survey, prepared and compiled at the Academic Information Center, reviews students' professional school plans. This is intended to provide undergraduates and their advisers with information about the success of Stanford students in gaining admission to particular programs. The results are available for reference at the Academic Information Center.

The third part of the survey elicits students' views concerning particularly outstanding or poor departmental and faculty performances. These results are not made public but are conveyed confidentially to department chairs and senior academic officers of the University. Department chairs are encouraged to share this information with their faculty at their own discretion but not to incorporate it in departmental faculty folders or otherwise keep it on file.

The fourth part of the survey consists of essays by the respondents on what constitutes an educated person and how they assess themselves in this regard.

The 1982 survey questionnaire was answered by 673 graduating students, some 40 percent of the graduating class. The usual procedure was followed: seniors received questionnaires by mail during spring quarter and they voluntarily returned the questionnaires anonymously. The return rate was about the same this year as in previous years.

In comparing the senior survey population with the graduating class as a whole, once again we find that the respondents quite faithfully match the larger population in most background characteristics. About 44 percent of the 1981-82 graduates were women, as against 43 percent of the survey population. Similarly, 14 percent of the class were transfer students, while 13 percent of the survey population were transfer students. The distribution of students across the major departments of the university was also similar within the two groups. These figures give us confidence that the survey results provide a meaningful picture of the views of the entire graduating class. Our confidence in the representativeness of the sample is further bolstered by the results we obtained from a special subpopulation randomly selected for the 1980-81 survey. About 90 percent of this identified random sample of students returned the survey, and their responses to the questionnaire items were very similar to those of students who returned the questionnaire anonymously that year. Hence, though we do not have a true random sample of respondents, we have strong evidence that the views of the survey respondents closely approximate those of all graduating seniors.

As shown in the two data summary tables, the results are subsumed under three broad categories: Table 1, Part A deals with general aspects of the undergraduate program; Part B deals with student interaction with faculty and staff. The items and scales used in this part of the survey were identical this year to those of the past two years, so we can look at the stability of results over time and begin monitoring trends in student evaluations. Table 2 presents self-ratings by students of their abilities in a wide variety of areas that cover the entire scope of our general education program. Items 3 through 11 in this list query the specific areas which encompass the distribution requirements instituted in 1980, including the Western Culture requirement. These items were also identical this year to the set of items used the past two years. They therefore provide us with a basis for studying the effects of the distribution requirements over time.

The assessments of the undergraduate program and personnel were made from three perspectives: **absolute** evaluations of items, evaluations **relative** to students' **expectations** concerning the items, and evaluations of the **importance** of the items to each student. The assessments of student abilities likewise included three perspectives: absolute evaluations, evaluations of the "degree of improvement" since the student entered Stanford, and the importance of the ability to the student. The summary results given here present, first, some highlights of student evaluations of the undergraduate program and its faculty and staff; second, the results with respect to students' assessments of their abilities; third, some analyses of differences between men and women and among students

continued on next page

TABLE 1

Evaluations of the Undergraduate Program and Interactions with Faculty and Staff 1981-82 Senior Surveys (percentages)

		On an absolute scale:					Relative to your expectations:					Importance of the item to you:				
	Not applicable or blank	Very Poor	Poor	Average	Good	Excellent	Much Worse	Worse	About as expected	Better	Much better	Very slight	Slight	Moderate	Great	Very great
A. With regard to your undergraduate program, please assess:																
1. The overall quality of your undergraduate education at Stanford.	1%	*	0%	6%	50%	44%	1%	14%	50%	30%	6%	0%	*	7%	34%	59%
2. The general quality of the courses within your major.	2	*	3	20	48	28	2	23	42	25	8	*	1	11	41	47
3. The coherence of your overall program of study.	3	*	6	30	49	14	1	22	46	25	5	1	5	36	36	22
4. The adequacy of your training for graduate or professional schools.	15	*	3	22	46	28	1	15	52	24	8	2	7	28	36	28
5. The adequacy of your general or liberal education.	3	1	8	24	41	27	3	19	43	27	8	1	4	19	38	38
6. Your experience at a Stanford overseas campus.	61	2	4	8	19	68	4	11	17	34	33	0	2	11	34	53
7. The contribution of your campus living arrangement to your intellectual life and learning.	4	5	12	26	29	28	8	18	25	27	22	2	8	26	32	32
B. With regard to your interactions with faculty and staff, please assess:																
1. Your advisor while you were undeclared	10	22	24	23	17	14	27	31	19	15	8	5	14	29	33	19
2. Your advisor in your major.	11	12	17	30	26	14	14	26	36	16	7	3	12	29	36	21
3. The faculty, on average, as scholars and researchers.	5	*	1	5	35	58	*	4	45	36	15	3	12	32	36	17
4. The faculty, on average, as teachers.	1	1	6	29	54	9	5	31	43	17	4	0	0	7	35	58
5. Faculty accessibility outside the classroom.	3	1	9	32	42	16	2	16	42	28	12	*	6	34	41	19
6. The general quality of TAs.	2	3	14	42	35	7	4	23	47	20	6	2	9	39	37	13
7. The opportunities for individual work with faculty.	28	2	9	18	37	35	3	10	29	33	25	1	8	28	37	26
8. The adequacy of the library reserve reading system in meeting your coursework needs.	11	4	11	35	32	18	4	20	50	19	7	4	16	46	22	12

*<.05%

(N = 673)

Senior Survey

continued from page 14

of different schools in the university; fourth, comparisons of results for 1979-80 through 1981-82, to determine if there are any systematic trends in students' responses; and fifth, a brief section on students' plans for the year immediately following graduation. To save space we have omitted the data tables on sex differences, but they are available for those who are interested in this information.

Evaluations of the Undergraduate Program (Table 1)

The overall quality of undergraduate education is rated as 'good' or 'excellent' by 94 percent of the respondents. This rating of the general Stanford experience is considerably higher than the ratings for more specific aspects of undergraduate education, such as courses within the major (rated 'good' or 'excellent' by 76 percent of the respondents) and training for further education (highly rated by 74 percent of respondents). The latter items are in turn more highly rated than both Stanford's liberal education (68 percent high ratings) and the coherence of the program of study (63 percent high ratings; see Table 1, Part A). Students thus have a globally positive view of undergraduate education at Stanford but consider some areas, such as liberal education, less satisfactory than others. On the whole these items suggest that students are quite positive about the academic aspects of the undergraduate program.

In addition, students' living environments are seen as contributing positively to their academic development, both at the home campus, and, even more, at the overseas campuses feel that their experiences there were good or excellent. Note that the great majority (68 percent) of students who went overseas characterize the experience as 'excellent,' the highest figure for any item in Table 1, and that 67 percent of the students feel that the overseas experience was better or much better than they had expected. These findings constitute further evidence that students are generally very positive about their undergraduate education.

The responses are more complex, however, with regard to assessments of the faculty and staff (Table 1, Part B). Faculty are clearly viewed as high-quality scholars and researchers, with 93 percent of the responses at the high end of the scale for this item. But faculty teaching is rated less highly (63 percent 'good' or 'excellent' responses and nine percent 'poor' or 'very poor'), and this is especially true with respect to students' expectations: 36 percent of students feel the faculty as teachers are 'worse' or 'much worse' than expected. Teaching assistants are also evaluated much less highly than the undergraduate program as a whole. This paradox, where students rate the undergraduate program as of considerably higher quality than the instructors who conduct it, has been found consistently in the survey in recent years.

Assessments of the faculty are ambivalent in other dimensions as well. The opportunities for individual work with faculty are considered very great, and much better than expected, by most students. But as advisers the faculty is disappointing to the students, especially for freshmen and sophomores before they declare a major, 46 percent of respondents say that their first advisers were 'poor' or 'very poor,' and 58 percent say that these advisers were 'worse' or 'much worse' than they expected. Opinions are considerably more positive for the major advisers, with only 29 percent of the students describing them as 'poor' or 'very poor' and 40 percent saying that they were 'good' or 'excellent' (compared to 31 percent for their initial advisers). The differences here are probably related to the different tasks expected of these two sets of advisers.

Turning briefly to the importance of these aspects of students' academic experiences, we see generally that items are considered of at least moderate importance by nearly all students, and most students consider most items of 'great' or 'very great' importance. The items concerning the undergraduate program considered of greatest importance are the overall quality of undergraduate education, the quality of courses in the major, and the overseas campus experiences—all items that are rated highly by the students on the absolute scale. With respect to the faculty and staff, the most important item (93 percent responding that it is of 'great' or 'very great' importance) is the quality of the faculty as teachers, while the quality of the faculty as researchers is of far less importance. The quality of teaching assistants is of only average importance, so that the lack of student enthusiasm for teaching assistant capacities is of less importance than student disappointment with faculty teaching abilities. Finally, all of the items concerning the faculty and staff, with the exception of faculty teaching quality, are considered of much less importance than the items concerning the undergraduate program as a whole. To sum up, we can say that the undergraduate program as a whole is perceived more positively, and as having greater significance, than the quality of the instructors and advisers who conduct it. The students seem to be saying, "I got a very good education at Stanford, and it means a lot to me. Not all of the professors are outstanding teachers or good advisers, but these shortcomings have not affected my educational experience that much."

TABLE 2

Self-Assessments of Abilities
1981-82 Senior Survey (percentages)

		On an absolute scale:					Degree of improvement since you entered Stanford:					Importance of the item to you:				
	Not applicable or blank	Very poor	Poor	Average	Good	Excellent	Very Slight	Slight	Moderate	Great	Very great	Very slight	Slight	Moderate	Great	Very great
C. Rate your current ability to:																
1. Write clear English prose.	2%	*	1%	15%	54%	29%	6%	14%	43%	28%	9%	0%	1%	13%	33%	52%
2. Use a foreign language effectively.	20	6	18	26	36	14	22	13	22	24	19	4	12	32	26	26
3. Understand the development of Western culture.	16	4	19	35	32	10	15	20	26	23	16	5	10	34	31	20
4. Understand a non-western culture.	19	10	22	32	24	12	21	19	25	19	16	5	15	35	27	18
5. Understand literature and fine arts.	5	1	10	30	43	16	5	14	33	35	13	1	9	31	33	26
6. Understand philosophical, social and religious thought.	7	3	10	32	41	14	7	14	31	33	15	3	9	30	34	24
7. Understand human development, behavior and language.	7	1	8	36	40	16	5	12	37	30	16	1	9	35	33	22
8. Understand social processes and institutions.	5	1	7	32	43	19	3	11	33	35	18	2	7	35	35	22
9. Understand mathematical sciences.	7	4	12	29	37	19	17	19	31	22	12	5	16	36	29	14
10. Understand natural sciences.	8	4	14	27	28	27	13	20	21	21	25	4	13	31	28	25
11. Understand technology and applied sciences.	10	7	17	26	28	23	15	16	21	27	21	3	13	31	31	21
12. Make use of computers.	15	10	12	27	33	17	13	8	18	25	36	2	10	32	34	22
13. (a) Absorb and analyze information.	2	*	*	8	48	44	1	3	17	49	30	*	*	6	32	61
(b) Use your creative faculties.	3	*	3	23	46	28	5	12	32	34	16	0	1	10	31	58
14. Understand the workings of the government.	6	3	11	41	30	15	11	23	32	22	12	3	9	33	36	20
15. Make judgments about international problems facing the country.	5	3	10	32	38	17	8	16	28	30	18	1	7	28	36	29
16. Use library resources to find information relevant to a particular topic.	3	1	3	27	40	29	8	14	34	28	17	2	10	37	33	17
17. Understand the significance of the following factors in how U.S. society functions:																
(a) Gender	6	1	6	25	47	22	4	8	30	33	24	3	10	30	28	28
(b) Ethnicity	6	1	8	33	43	16	6	15	38	25	16	3	11	31	30	25
(c) Social Class	5	*	6	30	45	19	5	12	33	32	18	3	9	31	31	26

*<.05%

(N = 673)

Assessments of Abilities (Table 2)

Graduating seniors have moderate to high opinions of their skills and abilities over the whole range of areas named on the questionnaire. Only a handful of items receive responses of 'poor' or 'very poor' from more than 20 percent of the respondents; similarly, for most items, only 15 percent to 20 percent of respondents are sufficiently bold to characterize their skills as 'excellent.' The most striking assessment concerns the ability to "write clear English prose," where a total of 83 percent say they have 'good' or 'excellent' skills. A strong majority of students give high ratings for their ability to "understand social processes and institutions" and to "understand the significance of" gender and ethnicity in U.S. society. Students also have very positive opinions of their more general abilities to "absorb and analyze information" (fully 92 percent rating themselves highly here) and "use your creative faculties" (74 percent giving 'good' or 'excellent' responses). The ratings on these two items are higher than for nearly all others. Interestingly enough, it is precisely those areas in which students assess their abilities most positively that are considered of greatest importance, with the ability to write well again topping the list.

The converse is also true: those areas deemed of least importance are those for which the respondents assess their abilities as weakest. Thus, only 36 percent of the students feel that they have 'good' or 'excellent' understanding of a non-Western culture, and only 45 percent feel this item to be of great importance. The corresponding figures for the ability to understand the development of Western culture are 42 percent and 51 percent respectively. Other areas in which the ability is considered least important include understanding mathematical sciences and using a foreign language (43 percent and 52 percent, respectively, at the high end of the scale for these items). With the exception of the mathematical sciences item, students also perceive their abilities as relatively poor for these items. The items relating to Western and non-Western culture as general subjects of study reflect the lower ratings mentioned earlier for the adequacy of the liberal education program at Stanford—students feel less competent with respect to areas of study that focus on the world outside the U.S., and they think that these areas are of less importance than other areas.

Most of the responses concerning the degree of improvement of student abilities at Stanford center around the 'moderate' and 'great' responses, with a rather balanced

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Senior Survey

continued from page 15

distribution across the other response categories. There is a fairly close correspondence between the absolute evaluations of abilities and the degree of improvement at Stanford. Thus, for example, three of the ability items receiving the most positive absolute ratings—understanding the natural sciences, understanding social processes and institutions, and making judgments about international problems—also rank high in the assessments of degree of improvement. One exception here is the ability to make use of computers. While only 50 percent of respondents say they have 'good' or 'excellent' computer skills, 61 percent feel they have improved 'greatly' or 'very greatly' at Stanford. Two exceptions of a different kind are the abilities to write English and use one's creative faculties, for both of which students feel that their ability is far greater than the degree to which it has improved at Stanford.

Items for which the degree of improvement is least include the abilities to use a foreign language (35 percent 'slight' or 'very slight' improvement); understand mathematical sciences (36 percent) and the natural sciences (33 percent); and understand a non-Western culture (40 percent) and the development of Western culture 35 percent.) These findings provide further evidence of the necessity of the recent revisions of the distribution requirements and the institution of the Western Culture requirement. The finding that students have relatively weak language ability also reinforces the importance of the new foreign language requirement, which went into effect in the 1982-83 academic year. The results for these items in future senior surveys will constitute a baseline for assessing the progress made by students covered by the revised requirements.

Differences by Area of Study and Sex

Among the analyses of the responses from various subsets of the respondent population, two dimensions of special interest are those of the area of study (grouped by 'schools') and sex. In the first case, the responses allow us to assess the various schools as they are perceived by those majoring in departments within them; in the second case we learn more about the students themselves through comparisons of the responses made by women with those made by men. To simplify the discussion, in this section we will use mean ratings rather than the percentage distributions across the ratings scales. The mean can range from 1.0 (very poor) to 5.0 (excellent).

A. Differences among schools (Table 3, Parts A and B)

We have grouped the majors into five 'schools': engineering, humanities, social sciences, natural sciences, and interdepartmental programs. The earth science students are grouped with engineering because they are so few in number. Data for the mean ratings by school are given in Table 3.

Students majoring in humanities departments give the highest overall evaluations for various aspects of their coursework and major departments (Table 3, Part A), nearly all of them rating the courses in their major highly (mean of 4.20) and most rating the faculty highly as teachers (mean of 3.87). Social science majors give the lowest overall ratings, with their major courses receiving a mean rating of 3.74 while the faculty as teachers are rated at 3.61 and major advisers at 3.10. Engineering majors rate their department courses and advisers very highly but give average ratings for the faculty as teachers (3.62). Natural science and interdepartmental majors also give mixed evaluations, rating the overall quality of their education relatively highly but giving low evaluations of their major advisers or courses. The most positive evaluations of teaching assistants come from engineering majors (mean of 3.43), while the humanities and social science majors give the lowest responses (3.17 and 3.08, respectively).

By contrast, humanities majors give relatively less positive ratings for the adequacy of their training for graduate or professional school (mean of 3.68), while natural science and engineering majors give the highest responses (4.29 and 4.21). Social science majors also give relatively low responses on this dimension. The humanities and social science majors feel that they received the most adequate liberal education (means of 4.17 and 4.14, respectively) while the engineering and natural science majors feel much less satisfied in this area (3.36 and 3.62). Separating the interdepartmental majors into two groups, one of a natural science orientation (human biology and mathematical sciences) and the other of a humanities and social science orientation (international relations, American Studies, and other small programs), we find that the former give responses very similar to those of the natural science majors while the latter resemble humanities students most. The only major difference is that the humanities/social sciences group is more satisfied than humanities majors with their professional training and major advisers.

With respect to perceptions of abilities, the results provide few surprises (Table 3, Part B). Engineering and natural science majors give themselves much higher ratings than other majors for such abilities as understanding mathematical sciences, making use of computers, understanding technology and applied sciences, and the like; while humanities majors rate themselves more highly for such abilities as understanding literature and fine arts, understanding a non-Western culture, and so on. Social science majors rate their ability to understand social processes and institutions, understand the workings of government, and make judgments about international problems more highly than do other majors.

B. Sex Differences

There are few significant differences between men and women with respect to their ratings of the undergraduate program and the faculty and staff. Men rate the adequacy of their training for further education higher than do women while women give more positive evaluations for faculty teaching and the quality of teaching assistants. The adequacy of training for professional school has the largest difference in mean rating at 0.28.

Similarly, there are few sex-related differences with regard to students' assessments of the quality of the undergraduate program and faculty relative to their expectations. However, women rate nearly all of these items as being of greater **importance** to them than do men. Especially important to women are the quality of their liberal education and their major advisers.

With respect to abilities developed in the undergraduate career, sex differences generally seem to follow traditional stereotypes: men rate their abilities more highly than women in the mathematical and natural sciences, technology, computers, and government and international problems. Mean ratings for men are higher than those for women by up to 0.70. Women rate themselves more highly, but by somewhat smaller margins, in the areas of foreign languages, literature and fine arts, human development, and understanding the significance of gender, ethnicity, and social class in how American society functions.

These sex-based differences are to some extent a reflection of the uneven distribution of men and women among the various majors. For instance, natural science and engineering majors rate their mathematics ability higher than do humanities majors. Since men are overrepresented in the natural sciences and engineering, we should expect to find a difference in mathematics ability

continued on next page

TABLE 3

Part A: Undergraduate Education Responses by Major School 1981-82 Senior Survey (means, absolute scale)*

	Major School				
	Engineering/ Earth Sciences	Humanities	Natural Science	Social Science	Inter-departmental
A. With regard to your undergraduate program, please assess:					
1. The overall quality of your undergraduate education at Stanford.	4.39	4.41	4.45	4.28	4.35
2. The general quality of the courses within your major.	4.13	4.20	3.93	3.74	4.16
3. The coherence of your overall program of study.	3.88	3.51	3.89	3.57	3.73
4. The adequacy of your training for graduate or professional school.	4.21	3.68	4.29	3.81	4.03
5. The adequacy of your general or liberal education.	3.36	4.17	3.62	4.14	3.77
6. Your experience at a Stanford overseas campus.	4.45	4.38	4.61	4.56	4.45
7. The contribution of your campus living arrangement to your intellectual life and learning.	3.66	3.45	3.60	3.71	3.63
B. With regard to your interactions with faculty and staff, please assess:					
1. Your advisor while you were undeclared.	2.87	2.74	2.87	2.80	2.56
2. Your advisor in your major.	3.36	3.13	3.01	3.10	2.97
3. The faculty, on average, as scholars and researchers.	4.50	4.40	4.55	4.52	4.52
4. The faculty, on average, as teachers.	3.62	3.87	3.57	3.61	3.52
5. Faculty accessibility outside the classroom.	3.54	3.79	3.50	3.71	3.49
6. The general quality of TAs.	3.43	3.17	3.37	3.08	3.45
7. The opportunities for individual work with faculty.	3.56	3.99	4.35	3.91	3.89
8. The adequacy of the library reserve reading system in meeting your coursework needs.	3.63	3.30	3.69	3.45	3.44
Typical number of cases	120	110	100	150	100

*Mean values can range from 1.0 (very poor) to 5.0 (excellent).

Senior Survey

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favoring men. However, even when we control for area of study sex differences often persist. For example, while women in the social sciences rate themselves much more highly than do women in engineering in the "male" domain of understanding government, they nevertheless rate themselves less highly in this dimension than do men in the social sciences. This pattern holds up most clearly for the areas of computers, technology, government, and international problems (men higher); and literature and the fine arts, and understanding gender and social class differences (women higher). One important exception is that sex differences for most of the math and science areas are negligible or quite small for both engineering and natural science majors. Women in these schools rate themselves about on a par with their male counterparts, and large sex differences are found mainly among students in other areas.

For both sexes, ratings of the degree of improvement of their abilities generally correspond to the ratings of abilities: where men rate their abilities more highly than do women, they also rate their degree of improvement higher; and likewise for women. Also, the importance of the abilities generally corresponds to the differences in assessments of the abilities: men attach more importance to the abilities in which they excel, and women attach more importance to the abilities in which they excel. All of the differences in this regard are relatively small except for the "social issues" of gender, ethnicity, and social class, where women express much more concern than men.

Comparison of Results for Three Years (Table 4)

For three consecutive years, the structure of the questionnaire used in the Senior Survey has not changed significantly. This means that we can begin to assess trends in student evaluations of Stanford. In this section we report a comparison of results for the past three years to show the kind of monitoring that is now possible.

In Table 4 we present the responses on the absolute scale for the questionnaire items for the three years. The striking finding here is the great stability of student evaluations of the undergraduate program, the faculty and staff, and their own abilities. Most of the differences within individual response categories are no more than three to five percentage points, or about the normal margin of error expected in sample survey results of this type.

For parts A and B of the survey questionnaire, which deal with evaluations of the undergraduate program and of the faculty and staff, we find very modest upward trends in the overall quality of education, courses in the major, adequacy of training, liberal education, and faculty teaching, and no downward trends. This is a welcome result. It is also reassuring to see that in areas where there was a modest decline in 1980-81 we find a rebound this year, most notably for the overseas campus experience and also for the coherence of the study program and the quality of teaching assistants.

Turning to the ability areas, we again find mostly stable response patterns for the three years. In three areas, however, real increases in ability ratings have occurred. The greatest increase is for the item concerning computers, with 50 percent of respondents saying they have high ability in 1981-82 compared to 38 percent in 1979-80, and only 24 percent rating themselves as 'poor' or 'very poor' this year compared to 32 percent two years ago. Rising trends are evident for technology and foreign languages as well. The increases for computers and technology make sense in light of the increasing proportion of students in engineering and the proliferation of computers on campus in recent years. The improvement in foreign languages is less easily explained, but it cannot be due to the new foreign language requirement because it applies only to students now entering the university.

Stability generally characterizes the responses for the other scales used in the questionnaire (assessments relative to expectations, importance of the items, degree of improvement of abilities). Exceptions are so few in number as to be expected on the basis of chance alone, and we therefore will not discuss these results in detail.

The overall results for the three years discussed here provide us with a further vote of confidence in the survey instrument, as it appears to yield a quite reliable range of responses for nearly all items. This finding reinforces our decision to use the survey instrument in its present form for at least several more years, so that a good longitudinal series of responses will be available for monitoring students' evaluations of Stanford and themselves.

TABLE 3

Part B: Abilities Responses by Major School 1981-82 Senior Survey (means, absolute scale)*

	Major School				
	Engineering/ Earth Sciences	Humanities	Natural Science	Social Science	Inter-departmental
C. Rate your current ability to:					
1. Write clear English prose.	4.01	4.46	3.93	4.13	4.00
2. Use a foreign language effectively.	3.02	3.54	3.13	3.58	3.23
3. Understand the development of Western culture.	2.90	3.81	3.09	3.28	3.01
4. Understand a non-Western culture.	2.83	3.29	2.94	3.23	2.93
5. Understand literature and fine arts.	3.25	4.29	3.40	3.60	3.55
6. Understand philosophical, social and religious thought.	3.11	3.83	3.48	3.64	3.49
7. Understand human development, behavior and language.	3.26	3.61	3.68	3.59	3.90
8. Understand social processes and institutions.	3.44	3.68	3.40	4.01	3.89
9. Understand mathematical sciences.	4.30	2.97	4.11	3.23	3.31
10. Understand natural sciences.	4.08	2.92	4.71	2.85	3.74
11. Understand technology and applied sciences.	4.60	2.63	4.06	2.74	3.30
12. Make use of computers.	4.19	2.80	3.59	3.23	2.92
13. (a) Absorb and analyze information.	4.49	4.26	4.41	4.31	4.33
(b) Use your creative faculties.	4.04	4.28	3.93	3.93	3.82
14. Understand the workings of the government.	3.14	3.42	3.05	3.81	3.37
15. Make judgments about international problems facing the country.	3.34	3.56	3.32	3.78	3.64
16. Use library resources to find information relevant to a particular topic.	3.80	3.97	3.87	3.99	4.02
17. Understand the significance of the following factors in how U.S. society functions:					
(a) Gender	3.66	4.05	3.59	3.92	3.85
(b) Ethnicity	3.51	3.79	3.55	3.76	3.63
(c) Social Class	3.57	3.94	3.61	3.91	3.80
Typical number of cases	120	110	100	150	100

*Mean values can range from 1.0 (very poor) to 5.0 (excellent).

Plans After Graduation

Just under half (49 percent) of the 191-82 respondents said they planned to work full-time immediately after graduation. Somewhat fewer (38 percent) planned to study full-time, and the remainder planned to travel, work and study, or pursue other activities. These figures represent a slight decline from last year in the proportion working full-time (52 percent). Women were more likely to work full-time after graduation than were men (55 percent to 44 percent), with a correspondingly larger proportion of men planning to study full-time. Further, there were considerable differences among students in the various schools. The proportion planning full-time work ranged from a high of 62 percent for engineering majors to a low of 24 percent for natural science majors, with the social science and humanities majors in between (61 percent and 48 percent, respectively). Nearly three-quarters of the natural science majors planned to study full-time, more than twice as large a figure as for the next highest school (humanities majors, 34 percent). This finding reflects the fact that many of the natural science majors attend medical school and do not delay their entry, unlike students entering many other fields of graduate study.

Longitudinal results concerning students' immediate plans show that the trend toward working full-time has been reversed. The percentage of students planning to work full-time immediately after graduation stood at 28 percent in 1975 and increased steadily thereafter to a high of 55 percent in 1979, but in the past three years it has declined to 49 percent. Again we should note that students maintain high long-term educational aspirations: fully 89 percent of all 1982 graduating seniors say that they eventually plan to attend graduate or professional school (or are already in a co-terminal master's program), a figure quite comparable to those of previous years.

When asked for three factors that affected their plans for the coming year, the students most frequently mention money or financial considerations (cited by about 35 percent of the respondents). The second most frequently mentioned category (23 percent) is the desire to escape academics and do something else. Third is intellecutal interest and the desire to learn (20 percent). The next three most often named factors are personal goals, a desire to apply knowledge or skills learned at Stanford, and personality factors. Particular individuals (parents, faculty, friends, etc.) are not among the most important factors mentioned. These results are very similar to those from 1980-81.

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Senior Survey

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Summary

The overall assessment of Stanford undergraduate education given by graduating seniors in 1982 is once again quite positive. Students rate both the undergraduate program and the faculty and staff highly, though there is less satisfaction with the faculty as teachers and genuine dissatisfaction with general advisers. Most aspects of undergraduate education are considered better than or equal to students' expectations, and students attach considerable importance to all of the aspects of their undergraduate training that are covered by the survey.

Students also rate their abilities quite highly, with half or more of all students saying that they have good or excellent ability for nearly all of the items mentioned. The major weaknesses here have to do with students' understanding of Western and non-Western culture, foreign languages, computers, and government. Students also see their abilities as having improved a great deal in nearly all areas queried and they view these areas as being of moderate or great importance to them, with the greatest importance being attached to those areas in which they perceive their abilities most positively.

There are important differences among schools, with humanities students expressing the most satisfaction with their major programs and departments and social science majors expressing the least. Humanities majors also feel they got the best liberal education, while engineers are least satisfied in this regard. On the other hand, natural science majors feel very well trained for further study, as do engineering majors, while humanities and social science majors feel much less adequately trained. Assessments of abilities tend to follow the expected lines based on major area of study, with the engineering and natural science majors strong in quantitative and technical areas; the social science majors strong in dimensions directly related to their disciplines; and humanities majors strongest in humanistic dimensions.

There are few sex-based differences with respect to evaluations of the undergraduate program and of the faculty and staff. The main differences here concern the importance attached to items, with women considering most items of greater importance. Differences in abilities conform generally to traditional sex-related images in American culture and often hold up when area of study is controlled. Evaluations of improvement in ability and of the importance of the various abilities generally correspond to the evaluations of ability: men claim to have improved most in areas in which they have done well, and they consider these areas to be of greater importance. The same is true for women.

This year's results bolster further our confidence in the survey instrument and our procedure of administering it. Comparing the 1979-80 through 1981-82 surveys, for which most of the survey items have been completely identical, we find very great stability in the results and thus feel reassured about the reliability of the questionnaire. These findings reinforce our decision not to alter the questionnaire in coming years so that longitudinal data can be gathered to monitor student evaluations meaningfully.

TABLE 4

Comparison of Responses for 1979-80 through 1981-82 Senior Surveys (absolute scale only; percentages)

	Not applicable or blank	Very poor	Poor	Average	Good	Excellent
A. Undergraduate program						
1. Overall quality						
1981-82	1%	*	0%	6%	50%	44%
1980-81	1	*	1	6	57	36
1979-80	*	*	2	6	57	35
2. Courses in major						
1981-82	2	*	3	20	48	28
1980-81	1	1	3	26	45	25
1979-80	*	1	6	22	50	22
3. Coherence of program						
1981-82	3	*	6	30	49	14
1980-81	2	1	10	33	42	14
1979-80	2	1	8	31	47	13
4. Adequacy of training						
1981-82	15	*	3	22	46	28
1980-81	12	1	6	22	44	27
1979-80	12	1	6	27	43	24
5. Liberal education						
1981-82	3	1	8	24	41	27
1980-81	2	1	9	24	43	23
1979-80	3	1	9	26	43	22
6. Overseas campus						
1981-82	61	2	4	8	19	68
1980-81	63	*	2	8	28	61
1979-80	65	2	2	8	20	68
7. Living arrangement						
1981-82	4	5	12	26	29	28
1980-81	3	6	16	27	28	24
1979-80	3	6	13	25	31	25
B. Faculty and staff						
1. Undeclared advisor						
1981-82	10	22	24	23	17	14
1980-81	11	25	23	23	15	13
1979-80	12	20	26	27	17	10
2. Major advisor						
1981-82	11	12	17	30	26	14
1980-81	11	10	20	29	26	16
1979-80	11	10	22	29	25	14
3. Faculty as scholars						
1981-82	5	*	1	5	35	58
1980-81	4	*	1	5	38	55
1979-80	4	*	*	5	40	55
4. Faculty as teachers						
1981-82	1	1	6	29	54	9
1980-81	2	2	7	32	52	7
1979-80	0	2	9	34	49	7
5. Faculty accessibility						
1981-82	3	1	9	32	42	16
1980-81	4	1	8	37	41	12
1979-80	2	1	6	38	42	12
6. Quality of TAs						
1981-82	2	3	14	42	35	7
1980-81	3	5	14	45	31	5
1979-80	1	5	14	42	34	6
7. Individual work						
1981-82	28	2	9	18	37	35
1980-81	27	3	9	20	37	31
1979-80	25	2	9	18	39	33

	Not Applicable or blank	Very poor	Poor	Average	Good	Excellent
C. Abilities						
1. Write English						
1981-82	2%	*	1%	15%	54%	29%
1980-81	1	*	2	18	49	30
1979-80	*	*	3	16	53	28
2. Foreign language						
1981-82	20	6	18	26	36	14
1980-81	18	7	22	30	28	14
1979-80	18	6	23	28	30	13
3. Western culture						
1981-82	16	4	19	35	32	10
1980-81	12	7	18	34	32	10
1979-80	8	5	19	33	33	10
4. Non-western culture						
1981-82	19	10	22	32	24	12
1980-81	17	14	25	27	28	7
1979-80	12	10	23	31	27	9
5. Literature, fine arts						
1981-82	5	1	10	30	43	16
1980-81	4	4	10	32	41	14
1979-80	2	3	10	32	38	17
6. Philosophical thought						
1981-82	7	3	10	32	41	14
1980-81	6	3	10	33	41	13
1979-80	4	3	12	33	42	10
7. Human development						
1981-82	7	1	8	36	40	16
1980-81	6	1	9	36	38	15
1979-80	6	1	12	34	39	15
8. Social Processes						
1981-82	5	1	7	32	43	19
1980-81	6	1	6	29	46	17
1979-80	3	1	7	31	46	15
9. Mathematical sciences						
1981-82	7	4	12	29	37	19
1980-81	6	5	13	29	36	18
1979-80..	3	3	13	32	35	18
10. Natural sciences						
1981-82	8	4	14	27	28	27
1980-81	7	3	13	29	30	24
1979-80	3	2	16	26	32	24
11. Technology						
1981-82	10	7	17	26	28	23
1980-81	10	7	21	28	24	22
1979-80	8	8	20	27	26	19
12. Computers						
1981-82	15	10	12	27	33	17
1980-81	15	15	12	30	28	14
1979-80	14	14	18	30	27	11
13. Government						
1981-82	6	3	11	41	30	15
1980-81	6	3	10	35	33	19
1979-80	4	3	12	35	35	15
14. International problems						
1981-82	5	3	10	32	38	17
1980-81	6	3	8	27	41	20
1979-80	4	2	10	32	39	17
15. (a) Analyze information						
1981-82	2	*	*	8	48	44
1980-81	1	*	*	7	44	48
1979-80	NA	NA	NA	NA	NA	NA
(b) Creativity						
1981-82	3	*	3	23	46	28
1980-81	2	1	4	23	43	29
1979-80	NA	NA	NA	NA	NA	NA

*<0.5%

Notes: 1. 1979-80 n=709; 1980-81 n=764; 1981-82 n=673
2. For full headings see Tables 1 and 2.
3. NA = not available (not included in that year's survey)

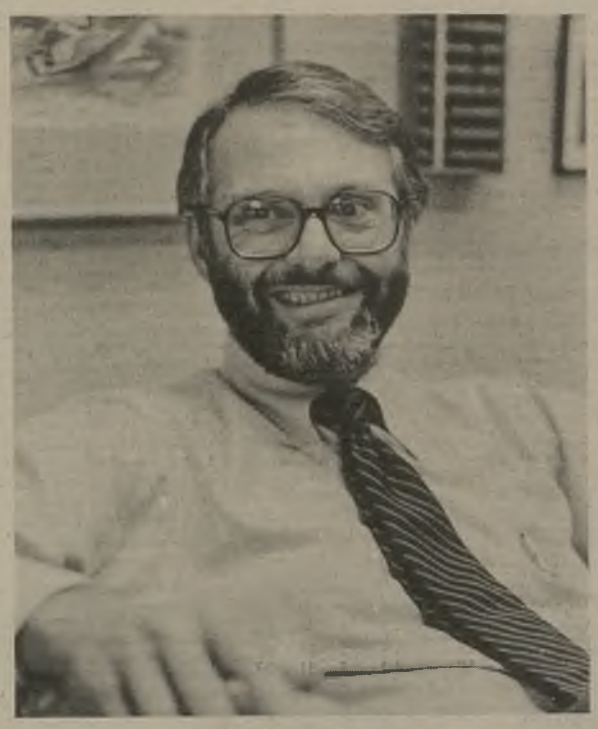
Stanford West will provide four-fold increase in below market rate housing

Following is a statement by Vice-President William Massy to Palo Alto City Council March 16, 1983:

I am Bill Massy, vice president for business and finance at Stanford. My colleagues and I are pleased to be here tonight to talk about the proposed Stanford West housing project.

I don't think that I need to belabor the need for housing in this area. During the past several years, study after study was reported on the serious imbalance that exists between jobs and homes. That is the theme that runs through your Interim Housing Statement of 1973, your two Comprehensive Plan Reviews, the County's 1977 Call for Action in housing, and in this Council's zoning decisions.

At Stanford, the housing shortage has been described by President Kennedy as one of the most serious problems confronting the University in the 1980s. The quality of the institution in the future is directly related to the academic appointments made today. Housing is a key ingredient in that recruitment process.



William Massy

Stanford has responded to the many internal and external pressures in a number of ways. We have constructed 82 units in the Pearce Mitchell project, and 140 units on Peter Coutts Hill. We have created the highly successful Stanford Second Mortgage Coinvestment Program, called "COIN." It enables those in Eligibility Pool I—faculty and senior staff—to buy homes within commuting distance of the University. By the end of June, we will have committed something on the order of $30 million to that program.

We also have created a Housing Allowance Program (HAP) that provides outright subsidies to help newcomers buy homes. We expect to spend up to $370,000 a year on this in the next few years.

We prepared the Stanford Comprehensive Housing Program, including a complete review of our housing policies for faculty, staff and students, as well as a detailed survey of their housing needs.

And now we have come forward with the Stanford West project, our first effort aimed at that large group of Stanford staff and others who do not fall within Eligibility Pool I.

We believe that our proposal is a sound one that is fully in keeping with the City's long-established zoning policies. The 46-acre site was identified in your **1953** General Plan as suitable for housing. The project we have proposed is 20 percent less dense than the zoning allows, would cover one-quarter of the site instead of the allowable 45 percent, would provide three times as much open space as that required, and calls for buffer areas wider than stipulated.

In her letter to you of February 28, Chairwoman McCown sums up the principal objectives of the project quite well, with but one exception. That exception is the Planning Commission's definition of "affordable housing" as necessarily having to be "below market rates." Here are the objectives she listed:

1. To address the housing needs of the Stanford faculty and staff, and graduate students respectively, followed by opportunities for persons employed on University lands, then persons working in Palo Alto.

2. To provide affordable housing (and here is the exception) which we define as being below market rates but within the range of households earning 120 percent to 150 percent of the Santa Clara County median income.

3. To lessen the jobs/housing imbalance in the area.

4. To reduce the adverse effects of commuter traffic by providing housing closer to Stanford jobs.

5. To provide a significant number of Below Market Rate (BMR) units for households earning incomes 80 percent to 120 percent of the County median.

Obviously, Stanford West will help reduce the jobs/housing imbalance in the area, and obviously it will cut commuter traffic. By the same token, Stanford has agreed to a BMR program that could result in 220 below-market-rate units, or nearly **four times** the number that have been built so far in all of Palo Alto.

The agreement, which contemplates a project as currently before you, also calls for the four-acre Mayfield School site to be made available to the City for only $100,000—a fraction of its market value. That will permit the construction of additional BMR units.

As to affordability, we consider "affordable housing" to be that which is within the financial reach of the target buying group, whether it is below market or not. It is here that we differ with the Planning Commission's definition, for the below-market-rate requirement could seriously jeopardize the entire project.

The Planning Commission "strongly supports these laudable objectives," Ms. McCown's letter reports. **So, I might add, does Stanford.** These are precisely the objectives that led us to commit the time, effort, and money that we have during these past two years. Our public statements, the location of the project, its density, the proposed BMR agreement, and the design concepts all testify to our search for those goals.

The location cuts commuting. The proposed density of 1,275 units spreads the fixed costs, reducing the price or rent of each unit. A limit of 920 units would be disappointing, not fully responsive to the area housing need, and conducive to higher costs.

The Stanford West design is intended to mitigate the visual and noise impacts of the housing, as you will hear from the architects tonight. We have listened to the concerns of our neighbors across San Francisquito Creek with great care. Clearly they prefer an open field, or a less intensive development, to the 1,275 units proposed. And yet, housing holds a competing high social value, or it would not be cemented in Palo Alto's Comprehensive Plan as strongly as it is.

Then too, it is our hope that Stanford West will have far less impact than is feared, given the orientation of the residents toward Stanford and the broad buffer provided by the creek, a 90-foot set-back, and substantial landscaping.

In short, the density and design concepts at Stanford West were developed with affordability in mind, as well as functionality and aesthetics. Given those concepts, **the units at Stanford West are targeted to be affordable to a broad cross-section of Stanford staff and others, at market prices and rents, under economic conditions that are expected to prevail on average over the life of the project.**

We believe that, given current and projected economic conditions, about half of the project will be affordable to those in the County's 120 percent-150 percent median income range. The half-million dollar Environmental Impact Report that accompanies this project is one of the most thorough that we have ever seen. It contains a considerable number of suggested mitigation measures. The Planning Commission has also proposed a reduction of density on the 46 acres to 920 units, and some incentives for achieving what the Commission believes are overriding public benefits.

Stanford is prepared to work with the City staff to try to reach an agreement with respect to mitigations. We can start this week, and I hope that we can arrive at conclusions before the scheduled May 2 meeting of the Council. A fair and reasonable solution with respect to traffic issues and similar mitigations should not be beyond our reach.

We shall approach the negotiations in a spirit of compromise, and I am confident that we can reach an understanding on most of the issues. At the same time, I urge everyone concerned to bear in mind the strong correlation between the cost of mitigations and the ultimate price of units.

We will approach the question of the project's design with the same spirit of cooperation. That question is not officially before the Council at this time, but it is a highly important element. Stanford West will be our community, too, and the quality of life for its residents is equally important to us.

Now let me turn to those incentives with respect to density that have been proposed by the Planning Commission. First, let me say that we appreciate the thinking that underlies the proposed incentives. The Commission tried to find a way to allow the number of units proposed while at the same time advancing values of importance to the community. In examining those incentives, however, we find that they run counter to some important University principles.

The open space allowance as proposed would tie up Stanford lands not related to Stanford West in long-term open space contracts. We share the concern of the citizens of the area for the environment. Like you, we treasure our outlying vacant lands, and our Land Use Policy emphasized the aesthetic and educational importance of that asset. That land was given to us in trust for University purposes.

Our policy is to evaluate each commitment of Stanford lands on its merits, in terms of the proximate values for that particular parcel. Committing acres to long-term open space contracts would violate that policy, even when the land in question might very likely remain open for many decades.

We cannot gauge the relative values, in terms of University purposes, of "incentive" units on Stanford West on the one hand, and the loss of irreplaceable resources that may be needed for future academic purposes, on the other.

We fear that the precedent of "linkage" would come to have no limits, and we are not prepared to take a step along that road. So it is that we must respectfully decline an invitation to exchange our open land for additional units at Stanford West.

The affordable housing incentive allowance also carries with it a number of implications that give us serious pause. In essence, it would ask us to guarantee, over the entire life of the project, that additional units (beyond the City's BMR requirements) be "affordable" to those in a set income range.

The problem is in administering and paying for a system of such **guarantees**, and in relating them to the University's role as an employer rather than a normal developer or a government regulatory or assistance agency. The value of the land enters into the equation, but it is not the most important factor.

Stanford is quite unlike other developers in that it is a permanent employer whose primary mission in life is education. The burden of instituting and monitoring forever the allocation of a scarce housing resource to a lucky few would be massive and complex.

Like Palo Alto, Stanford strives to achieve equity in compensation. The principle of equal pay for equal work would be systematically and significantly violated under the incentive proposal. A relatively small number of fortunate employees would receive disproportionate benefits; all the others would receive nothing. The original allocations could be based on need to be sure, but over time the perception of relative need could become blurred, or change entirely.

The list of problems goes on. The proposal would foster "company town" atmosphere in which housing problems are injected into the working place. We already find this to some extent on the campus.

When an employee left the University, the pressure to evict that individual from the housing would be great. The linkage of housing to employment also would tend to lock people into working at Stanford whether or not that is sensible from a career point of view. The occasional need to lay off or terminate an employee would be made all the more difficult and painful.

Finally, such a benefit would lead to demands for other housing assistance programs on the part of the 11,000 other employees at Stanford, the Hospital, and SLAC.

All in all, we can foresee major problems from the incentive proposal. We can make the adjustment for the BMR units required under your regulations, for that will be a relatively small program, and a mandated one.

The housing assistance programs for faculty and others that I mentioned earlier are designed to minimize those problems. They are entitlements for everyone within eligible sub-groups. They owe their success to the fact that they aid groups of people, rather than subsidizing housing for a few. It is a policy that has worked for us in the past, and one that we are anxious to continue.

There is no question but that Stanford will realize the value of some of its land endowment as a result of market pricing. The benefits of this to the University's educational programs cannot be denied. I want to emphasize, however, the realization of land value did in fact come about as a consequence of the market pricing decision, and **not** as the cause of it. **Frankly, we could realize as much value with a much smaller number of more expensive units on the 46 acres.** The density and unit mix that we have proposed are driven by our desire to provide as much affordable housing as possible, not to make money through land development.

In summary, our proposal is well within the City's regulations and policies, and is responsive to the call for housing that we have heard from so many quarters for so long. We think that the impacts will be far less than feared, that most of them have been anticipated by the City's zoning, and that they can be adequately mitigated.

If ever there is an issue on which Stanford and Palo Alto should be able to reach agreement for their mutual benefit, it is this one.

We want Stanford West to be affordable to our target groups, which are essentially those about which you and your colleagues in the Planning Commission are concerned. All of this is consistent with your goals, and with ours.

We are proud of Stanford's record in housing faculty and students, and look forward to the day when many employees of the University and its tenants may share in the benefits of living close to their work, on Stanford land in the City of Palo Alto.

We ask for your support in that undertaking.

Staff employment opportunities

Exempt

30396-LL (JCC:5932) CLINICS STAFF NURSE III: 50%; flex hrs nec, evenings & wkends; respon for assisting the Survey Ctr Supvr in collecting data on local cardiovascular risk reduction, morbidity & mortality in SHDPP's community study in Salinas; conducting case-finding & abstracting activities using death certificates, med record indexes, & patient records in local health depts & hospitals; interviewing death certificate informants regarding circumstances of death; contacting indivs eligible to participate in survey; maintaining records & files, etc; QUALIFICATIONS: valid Calif R.N. license; recent med record abstracting exp; public contact; interviewing skills; some exp in physiological measurements; accuracy of record keeping; work w/ a wide variety of people; knowl of area & Spanish-speaking highly desirable.; K03; $991-1072.

23945-VW (JCC:2028) ADMIN SERVICES MGR: I Respon for admin & financial mgmt of Offc of Student Affairs & Offc of Med Edu; interacts w/ & supports a highly intelligent & active student body; preparation of annual budget, monitoring of offc expenditures & some knowl of policies & procedures related to student financial aid; respon for med student orientation & commencement programs, spec projs for OME as well as accuracy & timely release of numerous publications incl Med Student Handbook & Bulletin of Med Sch'l; QUALIFICATIONS: have strong interpersonal skills, incl tact, diplomacy & ability to handle confidential mat'ls; demonstrated financial & statistical abilities required; prev exp in supvn & offc mgmt in an academic or similar environ.; C06; $1854-2312.

33004-JB (JCC:2036) ADMIN SERVICES MGR II: Marketing Administrator respon for develop't, coord, & maintenance of strong, responsive customer serv & marketing programs for Word Graphics; coordinating the efforts of group mgrs, & drawing staff support as needed; call on Univ depts; w/ computer aid, analyze Univ graphic needs; develop & implement marketing plans; survey marketplace; advise mgmt; QUALIFICATIONS: extensive working knowl of & exp in graphic serv & products; strong interpersonal skills; ability to conceptualize & develop customer serv & marketing programs; knowl of Univ needs & structures; some sys & data processing bkground helpful but will instruct; knowl of Affirmative principles & programs.; C07; $2113-2724.

44489-AW (JCC:4076/4084) Programmer/Analyst II/III: Operation of Research Library group's collection develop't, preservation, & tech processing programs; planning of internal structure of programs forming parts of RLIN interactive sys; representing the programs in data flow diagrams & supporting prose documentation; specifying the programs at a detailed level for subsequent program module develop't; coding, documenting & testing of major components of RLIN interactive sys using current programming & documentation standards according approved sys specifications, etc; QUALIFICATIONS: knowl of high-level structured programming lang; ability to learn new sys & programming langs & understanding of user needs; commu effectively in speaking & writing; familiarity w/ problems & goals of res libs, w/ data base applications & w/ interactive & batch processing; 2 yrs of exp w/ related applications using DBMS w/ large data base for P/A II & 3-5 yrs of same exp for P/A III.; C06/C07; $1854-2733/2113-3344.

12429-TC (JCC:5588) Life Sci Res Asst I: Work w/ gel tissue culture tech for growing & cloning human & mouse bone marrow cells in order to evaluate factors regulating hemotopoictic production; special procedures to be used incl: cell separation by immunologic tech, evaluation of cell surface antipens by immunologic tech, evaluation of cell morphology by special stains, & preservation of marrow cells by freezing tech; studies will incl determination of chemotherapeutic drug effects on myeloid precursors, evaluation of interactions betwn normal & leukemic cells, an assisting w/ biochemical procedures; ordering supplies & prep of media & solutions; QUALIFICATIONS: college degree or equiv & prior exp in tissue culture work in related fields; prior exp in biochemistry desirable.; C05; $1670-2086.

31947-VW (JCC:4092) PROGR/ANALYST GEN IV: Responsible for the design & implementation of the GRADS system and complete responsi for the user documentation & training of the GRADS database w/approx 225,000 demographic records & 400,000 monetary records; accountable for the final design & implementation of presently planned database modules, accountable for all phases of design & implementation of future modules, prep & publish all user documentation, train all OOD, Stanford Alumni Assoc & other authorized personnel to understand & use GRADS: QUALIFICATIONS: Analytical/quantitative abilities typically assoc w/the comp of a BS in Computer, Sci, Mathematics or equiv; good understanding of the role & nature of alumni recordkeeping & fund acctg; strong understanding of computing principles, programming langs & design tech assoc w/several yrs work exp; ability to commu w/ a wide variety of people, both verbally & in writing; interpret & translate tech facts to various audiences.; C08; $2464-3843.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

31151-PM (JCC:1771) LIBRARY SPEC IV: Performs duties in Dept of Special Collections; processes Mexican-American manuscript collections & separates non-manuscript items for further processing; oversees student assistants who handle the mat'ls & perform res on the mat'ls; prepares finding aids for collections & other supplementary mat'ls as required; prepares descriptions of each manuscript collection according to established guidelines & submits these to approp agencies & journals; prepares progress reports & statistics, etc; QUALIFICATIONS: typ 40; prev manuscript processing exp; excel clerical & organizational skills; commu well, both orally & in writing; reading competence in Spanish or ability to learn Spanish; prev supvry exp; academic bkground in history, preferably Mexican-American history desirable; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B16; $1593-1671.

28850-PM (JCC:2078) ADMIN ASST I (N): Admin of a small but very complex academic dept; serv as liaison betwn faculty, staff, students, & chairman; also betwn chairman & other depts & programs; implement dept'l policies & procedures; manage expenditures; monitor budgets & fund statements; prov admin direction to dept'l committees & advisory groups; approve orders of supplies, eqpt, & services; monitor bldg security & safety, facilities mgmt; supv dept secretary; coord 2 annual lecture series; coord grad admissions; schedule classes; prep, coord & edit copy for Courses & Degrees & Time Schedule; keep chairman's appt calendar, etc; QUALIFICATIONS: typ 70+; s/h, helpful; executive ability & judgment; high degree of tact & confidentiality required; familiarity w/ Univ procedures helpful; knowl of IBM-PC (WordStar) or willingness to learn; send appl/resume to Jean Lee, Religious Studies, Bldg 70.; B16; $1593-1671.

22441-PM (JCC:2554) SECRETARY II: Prov full range of sec'l support for a busy professor, who is also the Dir of Institute for Research on Edu'l Finance & Governance, for one Res Assoc, as well as for other members of the Institute as needed; input manuscripts on word processing eqpt; typ corresp, proposls, etc; keep files & appt schedule for the Dir; take phone messages & screen calls; prep certain Univ form; order supplies; recording grades; obtaining instructional mat'ls; handling student requests & student problems when possible; some lib work; coord & arrange mtgs, etc; QUALIFICATIONS: 2-3 yrs sec'l exp or equiv; word processing exp or ability to learn quickly; proven ability to produce accurate, finished-form typing, good spelling, grammar & punctuation skills; interest in ability to interact w/ a wide variety of people in a very busy res environ; good commu skills; send appl/resume to Diane Gunderson, School of Education, Room 105.; B11; $1246-1310.

31346-PM (JCC:2714) MED SERV ASST III-SPEC: Review documentation in Med Records regarding Medicare & Medical, determining errors so that corrections can be made by physicians; obtain information fr CSR's & physicians as nec; compile & formulate periodic compliance reports as applicable to gov't guidelines; order med records & other assorted clerical duties; QUALIFICATIONS: knowl of CSN & ICD 9 codes; med terminology & familiarity w/ med records; ability to analyze med data; good math skills & ability to use 10-key adding machine; good commu skills; contact: Wayne Chapman, SUMC S-155, 497-7637.; B12; $1310-1373.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

Administrative Asst I—Health Services Planning—#8217 (R-10): Responsibilities: Under direct supvn of Director of Health Svcs Planning & has responsibility for assisting in dvlpmt, implementation & evaluation of goals & objectives, policies & proceds, & systems relative to effective administration of Dept; Qualifications: Hi Schl grad or equiv; minimum of 3 yrs adminis sectl exp in health institution desired; must have knowl of dictation & word processing eqpt; must be able to communicate effectively w/ individuals of diverse bkgrds; must be mature, diplomatic, able to take initiative, work independently, have good organizational skills, & treat sensitive matters in a confidential manner; permanent, full-time, M-F, 8-5pm, $9.19-$12.63 hrly

24648-LL (JCC:5638) LIFE SCI TECH I: TMS Unit; involve some prep of growth media & sterile glassware; microbiological tech such as growing bacteria, cataloging & storing bacterial strains; & biochemical tech such as isolation of DNA; work together w/ other lab personnel, primarily grad students & postdoctoral fellows; use of variety of computers to enter data & add notes to res files using word processing; opportunity to learn computer work w/ data; QUALIFICATIONS: BA or BS or equiv exp; major in biology or chemistry; lab exp either in classes or in jobs, in microbiology & biochemistry; some familiarity w/ computers (data entry) or willingness to learn.; A18; $7.50/HR..

42608-TC (JCC:5644) LIFE SCI TECH II: 80%; required to work wkends; work part-time in diagnostic lab & part-time in animal health & treatment areas; lab work involves routine hematology, parasitology & urinalysis on a variety of samples fr animals; animal health work involves medicating animals & some sample collection; able to give pills, injections, collect blood samples, urine & fecal samples; may be asked to asst in surgery; observe dogs, cats & primates that have had experimental surgery for investigator w/in compliance of Federal Laws governing humane practices; QUALIFICATIONS: grad of an animal health technician program w/ 1 yr exp.; A24; $ 8.65/HR..

42603-TC (JCC:5835) ANIMAL CARE ASST I: TMS Unit; Thur-Mon, 7:30-4pm & holidays; basic husbandry & care for lab animals; changing & cleaning animal cages, trays, pans & bowls; prov feed & water as prescribed; observe assigned animals for signs of illness or abnormalities & report any irregularities to Supvr on prescribed forms; respon for animals & areas in an extremely clean & neat condition; check daily room temperatures; asst in transportation of animals, supplies & eqpt; required to commu effectively w/ Supvr; QUALIFICATIONS: some prior animal handling exp & have some mechanical ability & apptitude; requires high personal standards of cleanliness, neatness & atten to details; ability to read, write & commu in English & willingness to follow written & oral instructions; free of animal allergies & capable of undergoing a physical exam & immunization; able to lift 50 lbs or more.; A12; $6.54/HR..

12695-DS (JCC:7308) FOOD SERVICE WORKER II: TMS Unit; Wed-Fri, 8:30-5; Sat & Sun, 7-3:30; sets up counter lines according to procedure as assigned on daily schedule; serv breakfast, lunch & early dinner as scheduled; breaks down line & completes clean-up at breakfast & lunch; sets up for dinner; cleans dining rooms & serving lines after breakfast & lunch & brunch as assigned; QUALIFICATIONS: meet health & safety regulations for Food Service Workers; good physical health, habits of cleanliness & neatness; ability to stand for prolonged periods; able to read & follow instructions, & to work well w/ others.; A10; $ 6.23/HR..

39089-JB (JCC:8364)

39090-JB (JCC:8364)

39093-JB (JCC:8364) ELECTRICIAN MAINT: TMS Unit; fixed term 4/1/83-8/31/83; 8-4:30pm; installs new circuitry for eqpt, incl conduit, wire, cable boxes, outlets, switches fixtures & panels, makes additions, extensions & alterations in Electrical sys; tests for & repairs short circuits, grounds & other electrical disorders; uses a variety of tools & instruments such as hand tools of trade boltmeter, currentmeter, motor analyzer, megger bearing pullers hydraulic bending eqpt, motorize cable eqpt, etc; read drawings & blueprints; knowl of Nat'l Elec Code; QUALIFICATIONS: available for emergency repairs as required; grad fr 4 yrs apprenticeship & working knowl of Nat'l Elec Code; at least 5 yrs industrial elec exp as a journeyman; exp in electrical control troubleshooting & repairs incl use of tech meters & related tools.; A35; $11.22/HR..

39111-AW (JCC:8452) PLUMBER/STEAMFITTER: TMS Unit; 8-4:30; available for call backs; performs sewers maintenance; repairs all sewers on SU property; operates cable machine & street machine; order mat'ls required; maintains daily tally sheet of lines cleaned; checks sewage ejection pumps inside homes; cleans storm drains, sanitary sewers, grease traps; performs preventive maintenance for all outside sewers; performs installation, maintenanc & repair of domestic hot water & heating sys, boilers, heat exchangeers, hot water storage tanks, extensive piping, etc in Univ bldgs; QUALIFICATIONS: knowl of the methods, mat'ls & tools used in plumbing trade & the ability to do plumbing work; training & exp equiv to approx 4 yrs in plumbing trade; performs work in compliance w/ bldg codes; reads bldg drawings, blueprints & specifications; able to complete work orders, timecards, etc.; A37; $11.80/HR..

39098-AW (JCC:8440)

39099-AW (JCC:8440) STEAMFITTER MAINT: TMS Unit; 8-4:30; inspect & maintain 20.5 miles or 108,240 feet of steam & return lines, condensate pumps, & high to low pressure steam regulators; to install high to low pressure steam valves; repair & replace high to low pressure steam traps & to inspect & serv all high to low pressure slip joints; analyze each job & determine the parts, mat'ls & method of repair; on occasion accept emergency calls at home; repair & maintenance of steam plant boilers, steam turbines, feed pumps, & compressors; QUALIFICATIONS: extensive knowl of high pressure steam distribution sys of Univ & each bldg's indiv heating sys; know & observe the danger of high pressure 125 lbs steam; knowl of Electric Welder, Gas Welder, Pipe fitting tools, pipe cutter & threader, hydraulic jacks, high temperature pyrometer, Elec impact wrenches, gas generator, drill press, elec grinder, hand drill, etc; knowl of shoring.; A36; $11.52/HR..

Bargaining Unit

Health and safety report

Accidents and Injuries Occurring During Week of Mar. 14-18

Cause of Accident	Number	Number of Days Off
Contact with object:		
Pinched, squeezed, crushed	1	(0)
Fall from height (incl. stairs)	1	(2)
Fall from same level	1	(0)
Lifting improperly	2	(0, 5)
Overexertion	1	(0)

Carpools

One person to join existing carpool to Stanford. M-F, 8-5. We meet at Stevens Creek & Wolfe Road, Cupertino. Please contact Ana Errico at 7-0612.

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Carpoolers wanted, 8-5, M-F, from Pleasanton, Livermore, Union City, Fremont area to Stanford. Call Patty, ext. 7-2071.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, March. 29, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Rentals on Stanford West studio apartments could start at $400 per month

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affordable for those with incomes of about $44,000 or $45,000.

"We have targeted rentals for studio apartments to start at or near $400 a month," Morrow added. "That would require a 30 percent expenditure of a $16,000 per year income. We anticipate the average rental unit to be affordable to those with a household income of $32,000 to $33,000."

"To limit the total size of Stanford West to 920 units would be "disappointing, not fully responsive to the area housing need, and conducive to higher costs," Massy said.

"The balance between density and affordability is very delicate," Morrow said. "Specifically, by reducing the density by 100 units, the cost of the remaining units goes up by approximately $1,500 per unit. For the next 100 units lost the cost of those remaining rises $3,000 and for the third 100 the cost of the remaining units goes up nearly $7,000 per unit."

Massy "respectfully declined" a proposal to permit additional units in exchange for setting aside more open space on University lands. Such "linkage" could come to have no limits and result in "the loss of irreplaceable resources that may be needed for academic purposes," he explained.

An affordable housing incentive allowance "would ask us to guarantee, over the entire life of the project, that additional units beyond the city's BMR requirements be 'affordable' to those in a set income range."

"The burden of instituting and administering forever the allocation of a scarce housing resource to a lucky few would be massive and complex," Massy said. "A relatively small number of fortunate employees would receive disproportionate benefits; all the others would receive nothing."

"This proposal would foster a "company town" atmosphere in which housing problems are injected into the working place. We already find this to some extent on campus."

Massy said the University's educational programs would benefit from realizing the market value of the 46 acres as part of the project's pricing. But this was the result of Stanford's decision to follow market prices for the project—not the cause of that decision.

"Frankly, we could realize as much value with a much smaller number of more expensive units on the 46 acres," he said. "The density and the unit mix we have proposed are driven by our desire to provide as much affordable housing as possible, not to make money through land development."

Stanford's 8,000 acres remain one of the largest and most open private parcels of land on the plains and foothills of the San Francisco Peninsula.

Responding to the housing shortage, the University is now completing a new 800-unit, $35 million undergraduate housing complex. An additional 140 units of faculty housing recently opened at Peter Coutts Hill. An additional 14 units have been proposed on a site overlooking the Stanford Golf Course.

By the end of June, the University will have committed about $30 million to a second mortgage coinvestment program for faculty and senior staff.

The University expects to spend up to $370,000 a year in a housing allowance program to help faculty newcomers buy homes.

Rental housing

HOUSING AVAILABLE

□ **April 1 to June 1 (flex):** Los Altos, fully furn. 2BR/2BA, FR, AEK, 2 frpl, 2TV, park-like 1/3 acre. 1 Queen, 1 dbl bed. Dead-end st. Car poss. No pets. $1050/mo. Call (415) 967-2918.

□ **End June thru Aug.:** Fully furn. hse, 5BR/3BA, LR, DR, AEK, FR, W/D, closed yd. 20 min. to Stanf. No pets. $900/mo. incl. grdn. serv. Sec. dep. + util. + phone. Call Wendy Waldie, (408) 736-8368 (day), (408) 732-7799 (eve).

□ **Regularly avail.:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **June 16 to Sept. 5:** Fully furn. hse. 5BR/5BA, new ktchn w/microwave, encl. crtyd, pool, jacuzzi w/dress. Spanish-style, balc, spiral staircase. Full acre, creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501 (day), (408) 739-3141 (eve).

□ **NOW:** Fully furn. hse, 4BR/2½BA, DR, FR, study, 3 car gar., patio. Year lease incl. kitchenware, linens, 2TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call (415) 965-1302 (eve).

□ **July 1 to Sept. 30:** Fully furn. 3BR/2BA hse in Crescent Pk, Palo Alto. Lovely garden, patio. Cul-de-sac. Nr. park, pool, tennis crts & schl. $1250/mo. Call 321-1142 or 497-4364 (day).

□ **April to end June:** Oak Creek apt, 2BR-1-1/3BA, fully furn, built-in bar. Gar. avail. Util. incl. Call Alice, 321-2625.

□ **NOW:** Attrac. campus apt. 2BR/2BA, patio w/view. Easy walk to campus ctr. Adults only, nonsmokers, no pets, share lndry. Priv. gar. entr. Short term lease: $750/mo. Long term: $650. Call 322-2026.

□ **April 1 to July 1 (flex):** 2BR/2BA fully furn hse, 2250 sq. ft. In Los Altos, 10 min. to campus. $900/mo incl. grdnr. Call (415) 948-6370.

□ **May 1 to July 1:** Fully furn. hse in Palo Alto, 3BR/2BA. Convenient location. $1000/mo. incl grdnr. Call (415) 856-9549.

□ **Beg. May 1; 6 to 8 mo. (flex):** Fully furn. & equipped 1BR apt. Pool, tennis, adj. Stanf. campus. $950/mo. Call (415) 324-2177.

□ **NOW:** 2BR apt to SHARE. Menlo Pk 1.8 ml. to campus. 1 blck to shops and transp. Female pref. Call 497-3639 (day), 321-4592.

□ **June 19 to Aug. 31 (flex):** Fully furn. spacious hse. 3BR/2BA, No. Palo Alto, nr. park, pool, libr., shops. Easy bike to campus. Children welcome. Call 497-6878 (day), 328-4681 (eve).

□ **Beg. April 1:** Spacious 3BR hse, fully furn. in Palo Alto to SHARE. Frpl, hrdwd flrs. W/D. 2 women & dog seek 3rd woman; are Stanf. grad. stud. & staff person. Quiet, neat, nonsmokers. $275/mo. Call 493-6942, leave message.

□ **Sept. '83 to June '84:** Florence, Italy; fully furn 3BR/2BA apt. w/garden. Close to ctr, incl. car. Seek EXCHANGE w/similar accommodation in Berkeley, Bay area. Call Gregson Davies, 323-7565.

□ **Apr. thru Dec. '83:** Cozy 1BR bungalow, 15 min. walk to Stanf. & dwntwn P.A. Fully furn. w/study, office, or child's BR area, patios, easy upkeep yd. Ideal for cpl. $800/mo. Call 326-3450.

□ **Aug. '83 to Aug. '84 (flex):** Fully furn. campus hse. 4BR (1 converts to study), DR. Children, pets OK. $1300/mo. Call 856-4038 before 8 pm.

□ **Beg. Apr. 3:** Prof. woman w/beaut. 2BR/2BA apt in Sharon Hgts to SHARE. Incl. stereo, pool, tennis, W/D. 5 min. to Stanf. No pets, nonsmoker, female. $400/mo. + ½ util. Call Sunny (415) 858-3933 (day), 854-8621 (eve).

□ **June 1 to Aug. 31, '83:** Summer Sublet. 2 or 3BR/1½BA, LR, DR, encl. patio. 1 mi. to Stanf, dwntwn Palo Alto, Menlo Pk. $825/mo. Call 322-0234 (eve).

□ **Beg. Apr. 1:** Lrge furn. hse, 6BR/2BA, W/D. nr. shops., fenced yd, off-st. prking. Berkeley, 1 blck no. of U.C.B., Walnut/Vga area, in "gourmet ghetto." Mo. to mo. terms. $1500/mo. or nego. terms to right tenant for lease w/maintenance. Call Lucien (415) 548-6288 (day or eve), Diana (415) 329-1298 (eve).

□ **June to Aug. '83:** Approx 10 wks. Charming Los Altos Cape Cod hse 3BR/2BA w/hot tub & lovely yd. Tennis, etc. nrby. Call (415) 961-4218 (eve).

□ **June 1 thru Aug. 29:** Fully furn. west Atherton estate. 5BR/3½BA, pool, maid service, grdnr, util. incl. No pets. $9750 total. Call 321-4100.

□ **July & Aug. '83 (flex):** Fully furn apt. Wash. DC, nr embassies. 1BR, DR, air-cond., AEK, DW, new, fireproof bldg, pool. EXCHANGE for furn. apt., hse in Palo Alto area. Call Whitney (202) 296-8863.

□ **June, July, Aug. '83:** Exec. fully furn. 5BR/3BR hse., pool, W/D, panoramic view, Portola Valley. Rent incl. grdnr, clean., pool serv. Call 851-2481.

□ **Beg. Mar. 18; beg. Apr. 1:** Two rms in old Victorian priv. hse on each of given dates. Fully furn, ktchn priv, lndry. Walk to dwntwn, Stanf. Short term rental pref. $400/mo. Call Peggy (415) 327-2510.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, Com. Ctr. Prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **Apr. 1 to June 1 (flex):** Fully furn hse, 2BR/2BA, FR, lrg LR, AEK, 2 frpl, 2TV, park-like 1/3 acre. 1 queen, 1 dbl bed. Quiet dead-end st. Car poss. $1050/mo. Call (415) 967-2918.

□ **July & Aug.:** Very attrac. summer rent, dwntwn Palo Alto. 1BR/2BA condo, fully furn. Suit. cpl. Libr. w/spiral strcse, balc, pool, secure. 18th C. Europ. style. $1500/mo. Call Pat Mueller-Vollmer 324-1624 (eve), 327-3505.

□ **Beg. June 1:** Summer rent, and/or 1 yr. High Portola Val. (Ladera). Beaut. 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis. 7 min. to Stanf. $1500/mo. Call Pat Mueller-Vollmer, (415) 324-1624 (eve), 327-3505.

□ **NOW:** Fully furn hse, 2BR/1BA, W/D, piano, grdnr. Nr. Stanf. lrg. encl. grdn. $850/mo. incl. grdnr. Call Jenny, 497-6017 (day), 321-9760.

□ **Aug. '83 to Aug. '84:** New 1600 sq. ft. hse on Maui on slopes of Haleakala. Energy effic., 3-4BR, sleep loft, sep. liv. areas con. by porch, shoji drs, W/D, microwv, DW, w/w carpet, on 4 acres incl mtn. stream, 2 min. to store, 7 min. to surf beach, 12 ml. to Kahului ctr. Contact Laurie or Sam Friedman, 3728 Redwood Circle, Palo Alto 94306 or call (808) 572-1481 for info. EXCHANGE for home in Palo Alto.

□ **Late Aug. '83 to late Mar. '84:** Campus hse, fully equipped, 3BR/3½BA + guest/FR, study, DR. $1400/mo. incl. grdnr. Call 497-1941 (day), 493-0777.

□ **Beg. April 13 (approx):** Indef. Oak Creek studio sublease. Fully furn. 5 pools, jacuzzi, sauna, steam bath, gym, tennis, cov. prkng, view. Conv. to Stanf. Call 857-1885, eves & wknds.

□ **Academic Yr. '83-'84:** Twnhse, heart of London. 3-4BR/2BA, mod. ktchn, DW, W/D, TV, VCR, gar. new Barbican complex, access to grdns, playgrnd, schls, London U. EXCHANGE for similar home in Palo Alto. Call Ian Benson c/o Desi Glassel, (415) 859-6487.

□ **Aug. 1, '83 to June 30, '84 (flex):** Fully furn. campus hse, 4BR/3½BA, LR, DR, study, library, frpl, pool, view, acre. $1600/mo. incl. grdnr, pool serv., water. Call (45) 327-5204 or 497-4732 (day).

□ **Beg. April thru June, Aug. longer:** Peter Coutts Hili, 2BR/2BA, LR, DR, + study, fully furn. $1100/mo. Or will rent portion of unit: 1BR/1BA, LR, DR + study for $850/mo. Call Frances Duignan, 321-2052, or (415) 435-3044.

□ **June 18 thru Aug. '83:** Fully furn. campus hse, 4BR/2½BA, FR, piano. Will EXCHANGE for London hse/flat, or RENT for $1500/mo. incl. water, util., cleaning, grdnr. Nonsmokers, no pets. Call 493-8874.

□ **Beg. Sept. 1:** Fully furn. 2BR/2BA Pearce Mitchell condo on campus. Yr-round pool, jacuzzi, rec. ctr. Adults. No pets. Call 497-1745 (day), (415) 522-4917 (eve).

□ **June 25 to Jan 1, '84:** Fully furn 3BR/2BA hse. nr San Jose State, 1 mi. to #680/280. LR, DR, patio w/vines & citrus, in family nghbrhd. Ideal for children. $900/mo. Call Dr. Otten (408) 288-6331.

HOUSING NEEDED

□ **Beg. Sept. (flex) for Academic Yr:** Mature Stanf. Bus. Sch. stud. seeks hsesit or lodging in return for serv. (gardening, gourmet catering, bartend, handyman). Resp., personable, Harv. grad., multilingual, CPR, WSI cert. Served valet to Harv. Prof. Pref. det. qtrs. Impeccable refs. Call COLLECT 1—800—638-1527, x5718, 9 to 5 eastern time.

□ **Beg. July 1, 1-4 mos.:** Reliable Stanf. staff seeks HOUSESIT for summer. Nonsmoking, childless cpl, returning from east will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write David Mark, M.D., 20 Walnut Rd., Chestnut Hill, MA 02167.

□ **Beg. Aug. 21 for 3 to 6 wks:** Prof. cpl. w/daughter wish to hsesit in Stanf. area. Local refs. Write D.K. Nordstrom c/o Oster, Gyllenstlernsgatan 18, 11526 Stockholm, Sweden, or call (415) 857-1641.

□ **Beg. Summer '83 for 1 yr:** Visit. scholar & fam. need 3 to 4 BR furn. or unfurn. hse. Can furnish loc. refs. Call 493-6401 anytime before 10 p.m.

□ **Beg. May 15 for 1 mo:** Polish Prof, former Stanf. Prof. Journalism Fellow, a visit. tchr. at Antioch's San Francisco campus would like to hsesit or rent at Stanf. Accompanied by wife and 2 dghtrs, 5¼ & 11. Call Harry Press, 497-2558 or 497-4937 (day).

□ **April 10 to May 10:** Visit. Scholar at Hoover Inst. seeks 1 rm or 1BR apt. nr. Hoover. Call COLLECT United Kingdom 865-512872 before Mar. 27.

□ **Beg. April-May, or May-June, 6-8 wks:** British Visit. Scholar at Hoover Inst. seeks rm on or nr campus. On leave from Manchester Univ. Stanf. refs avail. Call George Duca, 323-7680, noon or eve. before 10:30 p.m.

□ **Beg. Oct/Nov '83 for 1-2 yrs:** Visit. Australian M.D., wife & 2 children (5 & 2) seek 3 or 4 BR furn. hse on or nr campus. Refs. avail. Call B. B. Barnett 497-5913 (day).

□ **Sept. '83 to Aug. '84:** Visit. French M.D. and wife seek 1BR furn. apt. on or nr. campus. Call B. Barnett, 497-5913 (day). Local refs.

□ **Aug. '83 to June '84:** BETHESDA, MARYLAND area. Stanf. fac. family, nonsmokers, 2 boys, 11 & 14, seek furn. hse, apt. or condo while on sabbatical at the NIH. Call Paul Basch, Sch. of Med., 497-6698 (day), 493-4590 (eve).

□ **Summer '83 to summer '84 (flex):** Visit. Prof. (cpl & 2 children) need furn. 3+BR home, Palo Alto, or campus. Call 321-0250.

□ **NOW:** 3rd yr. med. student seeks studio or 1BR apt. within bike dist. to Stanf. Call Steve Freedman, 857-9357.

□ **April to July:** Single female prof. Sabbatical at Stanf. seeks hsng. or hsesit. To $440/mo. Call COLLECT (213) 206-6121.

□ **Sept. 1, '83 to June '84:** Prof. from Stanford Florence seeks 3-4BR furn. hse on campus. Call Sandy Glover, 497-4865 (a.m.) or 328-3023 (p.m.)

□ **Beg. April or May:** SLAC physicist, wife, baby wish to *trade* Swiss country villa for all or part of 2 yr stay here. Call SLAC Hsng. Off. 854-330, X3111.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



"A Was an Artist," a woodcut by William Nicholson

Museum show of William Nicholson who changed the art of woodcuts

An exhibition of woodcuts and related lithographs by the English artist William Nicholson (1872-1949) opened March 20 at the Stanford Museum and will remain through May 22. The exhibition contains over 100 works done by the artist at the turn of the century for the London publisher William Heinemann.

Among the works of particular interest is the illustrated *Alphabet* (1898). ABC's intended for adults as well as children, it starts out with "A was an Artist" and "B for Beggar" which respectively are portraits of Nicholson and his brother-in-law James Pyrde (who had earlier collaborated in designing posters under the pseudonym of J. & W. Beggarstaff).

Another is the *Almanac of Twelve Sports* (1898) devoted to the sporting life so prized by the English, with text by Rudyard Kipling. In 1927 Nicholson received a gold medal at the Olympic Games in Amsterdam honoring the work.

Nicholson's series of *Twelve Portraits* (1899), portraying well-known figures of the day, begins with his now famous portrayal of Queen Victoria as "an animated tea cosy," an image that provided the world with a lasting impression of the monarch during her final years.

After 1901, Nicholson abandoned the woodcut as an art form. Nevertheless the outstanding quality of his work affected the whole concept of graphic art in England and established his reputation as an artist when he turned to portraiture and landscape in the years to follow.

The prints in the Stanford exhibition, including both single prints and those as published in book form, have been lent by Stephen Gale Herrick of San Francisco.

The Stanford Museum is open to the public Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday from 1 to 5 p.m. It is closed on Mondays. Admission is free. Docent tours are given on Thursdays at 12:15 and Sundays at 2 p.m.

Pottery Workshop offers courses

The Stanford Pottery Workshop will offer beginning courses on Tuesday or Thursday evenings during spring quarter.

Classes will emphasize wheel-thrown ware, including specific forms such as teapots, mugs, juicers, and casseroles. No prior experience is necessary. All tools are provided (wear old clothes).

Come to sign up at 7:30 p.m. Thursday, March 31, in the basement of the Wilbur dormitory complex (across the hall from the student laundry facilities). Or call 497-1471 between 4 and 5 p.m. weekdays for early registration or further detail.

Faculty, staff, spouses, and any other members of the Stanford community are welcome to join the Workshop and take the class. The fee is $45.

Classes tackle problems of weight management, stress and smoking

Three exercise benefits that are particularly important from a cardiovascular standpoint are weight management, stress management, and smoking cessation.

Because of the major role that exercise can play in each of these factors, the Health Improvement Program will sponsor special two-session workshops on each of these topics during spring quarter. Information about how exercise can affect weight, stress and smoking habits will be given along with specific details about how much and what types of exercise are needed. This knowledge should then be combined with actual experience for maximum benefits; therefore, concurrent enrollment in a Health Improvement Program exercise class (or equivalent) is required.

Exercise and Weight Management meets 5:15-6:45 p.m. Tuesday April 19 and Tuesday May 24.

Exercise and Stress Management meets 5:15-6:45 p.m. Thursday April 21 and Thursday May 26.

Exercise and Smoking Cessation meets 5:15-6:45 p.m. Tuesday April 26 and Tuesday May 31.

All HIP spring workshops will meet at the Stanford Heart Disease Prevention Program Conference Room, 730 Welch Road, Suite B.

HIP offers several opportunities for exercise during spring quarter.

Walk/jog/run includes walking (1+ miles), beginning jogging (0-2 miles), jogging (2-3 miles), and running (over 3 miles). There will be two walk/jog/run classes. Section 1 meets MWF 12:10-12:50 p.m. at Roble Field and Section 2 meets TTH 12:10-12:50 p.m. at Angell Field. People of all ability levels are invited to join either (or both!) classes for a fee of $5 for the 10-week spring session. Classes begin the week of April 4.

The Joy of Swimming offers individualized swimming instruction at all ability levels. There are two sections for swimming on MWF at either 12-1 p.m. or 1-2 p.m. at DeGuerre Pool. Anyone interested in swimming is invited to join the group for a fee of $5 for the 10-week spring session. Classes begin the week of April 4.

Aerobic Movement/Workout offers stretching, aerobic and toning exercises to music. Three classes will be offered this spring. Section 1 meets MWF from 12:10-1 p.m. in Roble Gym. Fee: $30. Section 2 meets TTh from 1-1:50 p.m. in the Encina Gym Wrestling Room. Fee: $20. Section 3 meets MW from 5:30-6:20 p.m. in the International Center Assembly Room. Fee: $20. All Aerobic Movement/Workout classes are eight weeks and begin the week of April 4.

Stanford University faculty and staff may register for any HIP exercise class or Spring Workshop by sending their name, ID mail address, campus extension, class registering for, and a check payable to Stanford University to HIP, School of Medicine.

For more information call the Health Improvement Program at 497-9649.

HEALTH
IMPROVEMENT
PROGRAM

Exercise facilities: here are hours

Encina lockers and showers—M-F 7:30 a.m.-9 p.m.; SS 9 a.m.-6 p.m.

Roble lockers and showers and weight training facilities—M-F 8 a.m.-12 midnight; Sat 9 a.m.-8 p.m.; Sun noon to 8 p.m.

Olympic Gamefield, Angell Field, track, Perrier Parcourse—daylight hours every day.

Taylor and IM Fields and Angell Field infield—reserved only, call 497-0505.

Maples Pavilion—recreational basketball from 11 a.m.-1 p.m. M-F (show ID). Closed Mar. 28, Apr. 14-15, May 5-6.

Roble Gym floor—Open many hours during the week and on weekends for open recreation, volleyball, basketball, and badminton. Check the schedule at Roble Gym. (Show ID.)

Roble Pool—M-F noon to 1 p.m. faculty and staff only. Recreational swimming T 1-3 p.m.; M, W 2-3 p.m.; Th 1-5 p.m.; F 2-5 p.m. Closed weekends. (Show ID.)

DeGuerre Pools—M-F noon to 2 p.m.; 5:30-7 p.m. SS family swim 1-5 p.m. (Show ID.)

DeGuerre Courts—Phone in reservations M-F 10-11 a.m.; open for play M-F 11 a.m.-11 p.m.; SS 9 a.m.-11 p.m.

Tennis courts—Sign-up sheets are posted on court bulletin boards for next day's play: Encina and Roble courts, 8:30 a.m.; Varsity courts, 5:10 p.m. Courts open for play F, S, S from sunup to sundown; M-Th when no classes are scheduled. M-F noon to 1 p.m. Encina and Roble courts reserved for faculty and staff only.

Encina weight room—M-Th 9-11 a.m.; noon to 2 p.m.; 3:15-8:30 p.m.; F 9 a.m.-8:30 p.m.; SS noon to 5 p.m.

Roble field—Check schedule at Roble Gym office.

Roble Dance Studio (dance only), Studio 42, (mat work), and Room 33—check at Roble Gym office.

Golf course driving range—M-F 8:30 a.m. to one hour before dark; SS, holidays, 7 a.m. to one hour before dark.

Golf course—T-F first available starting time; T, priority ladies; SS, holidays, first available starting time after 11 a.m. Closed Mon. Obtain starting time in person and show ID at Pro Shop. For more info call 323-5633, 497-4344, or 327-6592.

Take your ID when you use recreation facilities

Those who use Stanford's recreation facilities should have Stanford ID with them. Due to overcrowding, spot checks of ID may be made at any of the above facilities.

For information on group use or to offer comments or suggestions, call recreation coordinator Shirley Schoof, 497-3089.



It's true—they're all McLains except that fellow second from left, Michael Riopel, who is married to Ruth McLain (in front of him).

The McLain Family Band brings traditional blue grass to Stanford

The six member McLain Family Band will perform traditional bluegrass music at 8 p.m. Saturday, April 2, in Dinkelspiel Auditorium, at Stanford.

The program will include such old favorities as: "Orange Blossom Special," "Cackling Hen," "Shortenin' Bread," "Tennessee Waltz," and others.

Internationally known, the McLain Family Band comes from Eastern Kentucky's Appalachian Mountains. They have toured to 62 foreign countries as the State Department's musical ambassadors, and to 48 of the 50 states. They have made six appearances at the Kennedy Center, a debut at Carnegie Hall in April, 1982, and have performed on numerous occasions at the Grand Ole Opry and at festivals, fairs, and jamborees throughout the country.

Each year, the McLains host their own yearly festival for family bands near their home in Berea, Kent. This event has been carried on NPR'S Folk Festival USA and Filmed by Kentucky Educational TV for national distribution.

The McLain Family Band has made appearances on NBC's "Today" Show and on the BBC. Since 1969 they have been featured on weekly radio programs and, most recently, on two series for WKYT-TV.

The McLains have recorded nine albums for Country Life Records.

The McLain Family Band is presented by the Lively Arts at Stanford. For ticket information call Tresidder Ticket Office, (415) 497-4317.

Spring quarter brings varied concerts

The Department of Music at Stanford begins an action-packed Spring Quarter Concert Series, March 29.
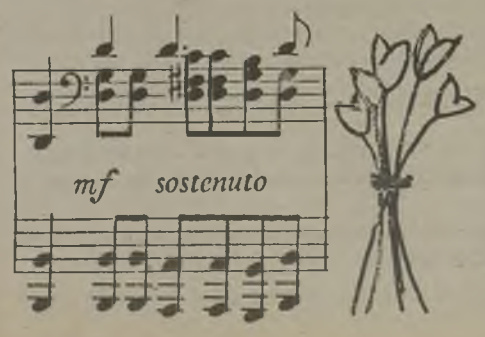
Highlights of the "season" include chorus and two performances of the *Verdi Requiem* on May 20 and 22 with the Stanford Chorus and Symphony Orchestra;

The Helsinki Academic Male Choir visiting from Finland on May 8;

A solo recital by newly appointed voice teacher Lila Stuart accompanied by Jodi Gandolfi on April 5;

A Faculty Voice Recital April 26 with Stuart, William Ramsey, and Gregory Wait, and;

A Symphony Orchestra program featuring the Chopin Piano Concerto in F minor and the Mozart Violin Concerto No. 4.



Also on the calendar are concerts by the Renaissance Wind Band March 29; the Symphonic Band May 21, in their second annual Sousa concert; the Early Music Singers, Glee Club, Chorale, Jazz Band, and a number of solo and chamber music recitals.

For a copy of the Spring Concert Calendar, call the Department of Music at 497-3811.

Evans to lecture on German people

Prof. Richard Evans of the University of East Anglia will present a free public lecture on "The Peculiarities of the Germans—the *Sonderweg* Debate" at 4:15 Thursday, March 31, on the Stanford campus, History Corner, Room 205.

Evans is the author of *The Feminists, Movement in Germany, 1895-1933*, and *The Feminists* and has edited *Society and Politics in Wilhelmian Germany, the German Family*, and *The German Working Class*. His current research deals with society, politics, and the cholera epidemic of 1982 in Hamburg.

M.L. King Games attract top-notch college athletes

The Dr. Martin Luther King Jr. International Freedom Games to be held April 1-2 at Stanford Stadium will be the occasion of some exciting rematches between some well-known people.

Three of the best college pole vaulters in the country will be there: Felix Behni of San Jose State, Doug Lyttle of Kansas State, and Dave Kenworthy of USC.

The women's 800 will feature the rivalry between Delisa Walton-Floyd of Tennessee and Bobin Campbell of the Stanford Track Club, along with Lois Romo of Cal, Regina Jacobs of Stanford, Joetta Clark of Tennessee, and Yvonne Hannus of the Stanford Track Club.

Two of the best collegiate hurdlers in the country—Candy Young of Fairleigh-Dickinson and Bonita Fitzgerald of Tennessee—will compete in the 100-meter hurdles, perhaps being joined by No. 1 U.S. female hurdler Stephanie Hightower.

The men's hurdles will bring together Milan Stewart and Toni Campbell of USC, Larry Cowling, formerly of Cal, and Villanova's Rodney Wilson.

Competing in the women's shot put are record holder Meg Ritchie of Arizona and Carol Cady of Stanford. Champion discus throwers expected are Lorna Griffin of the U.S. and Rosemarie Haunch of Canada.

Included in the meet are teams from USC, Kansas, Kansas State, BYU, San Jose State, and Villanova. The women will have leading teams from Nebraska, Tennessee, and Stanford. UCLA, the outdoor champion, will be joined by teams from Arizona, San Diego State, and Arizona State.

Oda Bittel to give I-Center concert

Pianist Oda Bittel will appear in recital at 8 p.m. Friday, April 1, at the International Center.

Bittel, a student at Musikhochschule in Frankfurt, W. Germany, has received numerous prizes in both piano and flute competitions. She has appeared in many concerts in Germany and has been recorded on piano, flute, and recorder.

Bittel will include works by J. S. Bach, Schumann, Chopin, and Debussy. There is no admission charge, although donations will be accepted.

Bourne to present Griffin lecture

Kenneth Bourne of the London School of Economics will present a Griffin lecture on "Palmerston at the Foreign Office" at 4:15 p.m. Tuesday, March 29, in History Corner, Room 205 at Stanford.

Bourne holds a Ph.D. from the London School of Economics and has taught international history there for more than 20 years. A former Fulbright Fellow, he has been a visiting professor at Kenyon College, Stanford, the University of California, and the University of Southern Mississippi. His books include *Britain and the Balance of Power in North America, 1815-1908*, and *The Foreign Policy of Victorian England, 1830-1902*. His edition of Palmerston's letters was published by the Royal Historical Society.



Bass baritone James Tyeska

Marlboro musicians to perform here next Wednesday

The Lively Arts at Stanford will present the distinctive music-making of Music from Marlboro at 8 p.m. Wednesday, March 30, in Dinkelspiel Auditorium.

The musicians, all participants in the Marlboro Music Festival, will be: Lydia Artymiw, piano; Isidore Cohen, violin; Mei-Chen Liao, violin; Ah Ling Neu, viola; Robie Brown Dan, cello; James Tyeska, baritone; and Robert Routch, horn.

The program will include Haydn's "Quartet in F Minor, Op. 20, No. 5, Hob. III: 35"; Brahms' "Trio in E-flat Major, Op. 40"; Barber's "Dover Beach, Op. 3"; and selections from Beethoven's "Irish and Scottish Songs."

Founded in 1951 in Marlboro, Vermont, the Marlboro Music Festival brings together leading musicians from all parts of the U.S. and many foreign countries for two months each summer. Both young professionals and mature artists come to Marlboro at their own expense to exchange ideas and explore the vast repertoire of chamber music in an informal and intimate setting, removed from the pressures of professional concert life.

The festival's artistic director is Rudolf Serkin, who was also one of the founders.

The Music from Marlboro touring program was inaugurated in 1965 to offer repertoire not frequently heard in live performance to a wider audience, and to offer additional concert opportunities to outstanding young musicians.

During its 17-year history, the Music from Marlboro touring program has presented more than 150 exceptional young performers, many of whom went on to international recognition as soloists, chamber and orchestral musicians, and teachers. Among them have been members or founders of such noted chamber ensembles as the Cleveland, Juilliard, Guarneri, and Vermeer String Quartets, the Chamber Music Society of Lincoln Center, and TASHI.

The 1982-83 Music from Marlboro touring program is sponsored by Philip Morris Incorporated.

Music for harp featured next Friday

Three of Marjorie Chauvel's harp students will perform at 8 p.m. Friday, April 1, in Tresidder Lounge: Camilla Passarelli, Linda Shwetz, and Ruth Bonaparte.

They will be joined by Stanford flutists Yuri Ito, Yvonne Kendall, and Kathryn Barnard and string bass player Lara Shwetz in works by Andriessen, Grandjany, Faure, LaParra, Salzedo, Ibert, Hindemith, and Caplet.

Chauvel is Stanford Music Department's lecturer in harp and has recently published two music books for harp.

Bonaparte, from Portland, graduated from Stanford last year and is currently a professional harpist in the Palo Alto area. She placed fifth in the American Harp Society national competition for young professional harpists in 1981.

Passarelli, a senior music and sociology major, is also from Portland. An accomplished pianist as well as harpist, she is accompanist for the Stanford Chorale, San Francisco Chamber Singers, and many solo performers.

Shwetz, a senior majoring in electrical engineering, is from San Luis Obispo. She also plays viola in the Stanford Symphony Orchestra.

Flutists Barnard and Ito have both soloed with the Stanford Chamber Orchestra this year, and flutist Kendall recently performed at Stanford to enthusiastic reviews.

Bassist Lara Shwetz, Linda's sister, is a grad student at Stanford in biology and a member of the Stanford Symphony Orchestra.

The concert is free.



Harp students Ruth Bonaparte and Camilla Passarelli (seated l to r) and Linda Shwetz.

Wind Band plans Tuesday concert

The Stanford Renaissance Wind Band, under the direction of Herbert Myers, will open the Department of Music's spring concert series at 8 p.m. Tuesday, March 29, in Kresge Auditorium.

The Band will perform late 15th-century and early 16th-century works from Germany and Flanders, drawn primarily from two sources: the printed collections of Ottaviano Petrucci (the Gutenberg of music printing) and the so-called Copenhagen Wind Band Manuscript. The latter consists of partbooks compiled in Prussia by a bandsman prior to his employment by Christian III of Denmark, and thus provides a fascinating glimpse into the practice of an early group.

Pieces to be performed include settings of Tandernaken, De tous biens plaine, La Spagna, and other early popular melodies. Among the composers represented will be Josquin des Prez, Johannes Ghiselin, Hayne van Ghizeghem, Heinrich Isaac, and Ludwig Senfl.

The Band will perform on its usual battery of period instruments: recorders, renaissance flutes, shawms, sackbuts, cornetts, curtals, crumhorns, doucaines, vielle, and viola da gambas. The concert is free.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., March 23, to cover the week of Mon., March 28, through Sun., April 3.

MONDAY, MARCH 28

Stanford Hillel: Passover Seder dinner. The Hillel Seder will be a strictly kosher meal, with wine and all traditional Seder dishes. Home hospitality will be available for both first and second Seders through the Hillel Office. 6:30 p.m. Tresidder Union Large Lounge. Students, seniors & children: $13.50; General $18.

TUESDAY, MARCH 29

Baseball: vs. U. Nevada-Reno. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

Women's Soccer: vs. Brigham Young. 3 p.m. Maloney Field.

History Dept. Lecture: "Palmerston at the Foreign Office," by British Scholar Kenneth Bourne. 4:15 p.m. Bldg. 200, Room 205.

Applied Physics Colloquium: "Time Dependent X-Ray Diffraction and Spectroscopy Using Synchrotron Radiation," by Dr. Dennis Mills, CHESS Lab., Cornell. 4:15 p.m. Applied Physics 200.

Urban Planning Lecture Series: "Consistent Formulation of Integrated Transportation Network Demand, Supply and Design Models," by Prof. David Boyce, Univ. of Illinois, Urbana-Champaign. 4:15 p.m. Terman Aud., Rm. M-33.

Coffee House Piano Concert: "Roberto y su Madre". Songs of the Mexican Revolution. 5:15-6:15 p.m. Coffee House. Free.

WEDNESDAY, MARCH 30

Men's Tennis: vs. UC Santa Barbara. 1:30 p.m. Varsity Courts. $2 Adults; $1 Child.

Baseball: vs. Santa Clara. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

Center for East Asian Studies Colloquium: "Current Developments in Sociology and the Study of Social Problems in China," by Prof. Yuan Jihui, Fedan Univ., Shanghai, China. 4:15 p.m. Lou Henry Hoover Bldg., Room 238.

Men's Volleyball: vs. Loyola Marymont. 7:30 p.m. Maples Pavilion.

Lively Arts at Stanford: Music From Marlboro, featuring works by Haydn, Brahms, & Beethoven. 8 p.m. Dinkelspiel Aud. $9.50, $8.50.

THURSDAY, MARCH 31

Women's Softball: vs. Hayward. 2 p.m. Roble Field.

Women's Soccer: vs. Hayward. 3 p.m. Maloney Field.

History Dept. Lecture: "The Peculiarities of the Germans—the *Sonderweg Debate," by Prof. Richard Evans, Univ. of East Anglia. 4:15 p.m. History Corner, Building 200, Room 205.*

Industrial Engineering Symposium: "Technological Uncertainty and Experts' Subjective Judgment in Public Sector Risk Assessment: Thoughts on Some Opportunities and Problems," by Prof. Granger Morgan, Carnegie Mellon Univ. 4:15 p.m. to 5:30 p.m. Terman Aud.

FRIDAY, APRIL 1

Martin Luther King Games: A major track meet, events for men and women. 8 a.m. to 6 p.m. Stanford Stadium. Tickets $4/$2. More information at 497-1021.

Bechtel International Center Concert: Piano Recital by Oda Bittel. Program will include works by J.S. Bach, Schumann, Chopin, and Debussy. 8 p.m. I-Center. No admission charge; donations accepted.

STARTS Concert: Cat Hermann, acoustic guitar and vocals. 9-12 p.m. Coffee House, Tresidder Union. Free.

SATURDAY, APRIL 2

Martin Luther King Games: A major track meet, events for men and women. 8 a.m. to 6 p.m. Stanford Stadium. Tickets $5/$3. More information at 497-1021.

Baseball: vs. St. Marys. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

The Lively Arts å Stanford: The McLain Family Band. Six musicians play traditional bluegrass music. 8 p.m. Dinkelspiel Aud. $9.50, $8.50 , Students $3 off regular price.

SUNDAY, APRIL 3

Memorial Church: with Dean R.G. Hamerton-Kelly and preacher Ernie Young. 9:30 and 11 a.m. Memorial Church.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

California Scenes by Lisa Hudson. The natural beauty of this world in a simple and straight-forward presentation. Coffee House Gallery. March 1 - March 31.

Contrasts - Marina Goodier. Watercolors, some oils, and pastels in a delicate and warm expression of nature and grace. Tresidder Upper Lobby, 2nd. Floor. March 1 - March 31.

Annette Kaplan, *Luz do Sol*, Tapestries. I-Center. March 3 - March 30.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

Photos from the Barrio Assistance Program by Phillip Baca. Coffee House Gallery. April 1 - April 30. .

Photographs of Africa by Sylvie Cohen. Tresidder Upper Lobby, 2nd. Floor. April 1 - April 30.

CAMPUS REPORT

Volume XV, Number 26 | A publication for Stanford University faculty & staff | March 30, 1983

New minority graduate enrollment drops 42%

New enrollment of minority students in graduate and professional programs at Stanford fell 42 percent last fall, to 88 from 151 students.

A report on graduate student affirmative action, scheduled for discussion at the Faculty Senate Thursday, March 31, expresses hope the setback was temporary.

"We are not sure of the reasons for this decline, but we are not alone among research universities facing such a situation," the report notes.

"We remain committed to our recruitment efforts, sustained and impelled by the knowledge that the goal of producing outstanding minority and women scholars and professionals is a worthy one."

The total number of graduate and professional degrees earned by minorities rose to 123 from 118 in 1982.

By mid-February, 1983 applications from American Indians, blacks, Chicanos, and Puerto Ricans were running about 10 percent ahead of last year, according to Vice Provost Gerald Lieberman, dean of graduate studies and research.

The total number of minority applicants to graduate and professional programs fell about 7 percent in 1982, to 1,486 from 1,593. Admissions dropped about 17 percent, to 210 from 255. But the biggest decline was in the "yield" rate—the proportion of those admitted who actually enrolled. This fell from 60 percent to 42 percent.

The total number of minority students enrolled in graduate professional programs declined slightly, to 392 from 414. Blacks dropped to 186 from 196, Chicanos to 162 from 174, and native Americans to 23 from 29. Puerto Ricans rose to 21 from 15. The proportion of targeted minorities dropped to 5.9 from 6.3 percent of total graduate and professional enrollment.

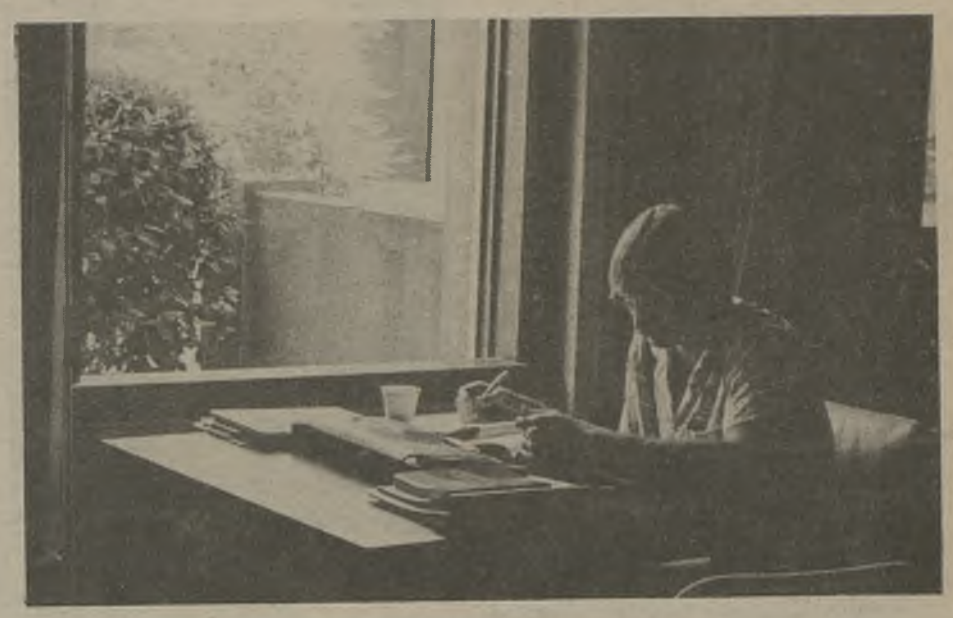
The proportion of women fell to 27 from 28 percent of total graduate and professional enrollment.

Women applicants to graduate and professional programs rose slightly, to 6,898 from 6,852, as did admissions, to 1,088 from 1,024. But new enrollments dropped about 4 percent, to 529 from 552.

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Mozley seeks review, curbs on weapons-related research

Stanford should review and possibly restrict weapons-related research, Prof. Robert Mozley of the Stanford Linear Accelerator Center believes.

In a proposal circulated for discussion at the regular Faculty Senate meeting Thursday, March 31, Mozley asks that "the Committee on Research study the volume and character of weapons-related research at Stanford, and possible criteria relating to end use which might be used to reduce the volume of such research, if this proves desirable."

Mozley also requests that the committee submit a preliminary report to the Senate during spring quarter. Whether this timetable is feasible remains uncertain, if the Senate decides to request the study.

In a telephone interview March 25, Mozley said he was "worried more about the future" than the outcome of a controversial proposal to do unclassified weapons-related research at the Stanford Synchrotron Radiation Research Laboratory (SSRL), which depends on the SLAC beam line for its experiments.

Developed by scientists at Lawrence Livermore, Sandia, and Los Alamos national laboratories, the proposal was not included in President Reagan's 1984 budget request.

In a letter circulated to the Faculty Senate, Mozley said: "I believe that the proponents of the new x-ray beams at SLAC are likely to resubmit a proposal that will meet all present Stanford requirements, and that their use of SSRL may well be approved.

"SLAC would then meet its contractual obligation to SSRL and provide for production of the required x-rays.

"Although the short time allotted for Stanford's decision about this new project may make it impossible for the (Faculty) Senate to contribute to decisions taken in this matter, the problem raised is an example of others which may affect the University in the future."

In a telephone interview, Mozley said he would like to prevent this happening again in the future. "Maybe not even rules," he added. "Just make people more self-conscious" about the end uses of their research.

Mozley was not among 15 SLAC faculty who petitioned the Committee on Research in January, asking it to determine whether research explicitly dedicated to nuclear weapons tests and instrumentation should be permitted at SLAC or anywhere on campus, even when unclassified.

In the phone interview, Mozley said he was equally impressed with the petition signed by 280 SLAC staffers in mid-January expressing similar concerns to SLAC Director Wolfgang Panofsky.

Many staffers noted that SLAC's openness and non-involvement in weapons work led them to join it and made it a world center for research. Their petition reflected "the soul of this place," Mozley said. "A large number are now asking for transfers." (The SLAC Personnel Office has received no requests for transfers and reports only three resignations since Jan. 1.)

In his letter to the Senate, Mozley said: "It is probable that if other sources of research funding become smaller, principal investigators will seek the more readily available funds relating to weapons development and national defense.

"A large amount of research at Stanford is done under Defense Department contracts, and much of this is related to military development. The major part of this research is quite appropriate for a

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Tenure-track appointments of minorities, women rise

Tenure track appointments of women and minorities hit a 10-year high in 1981-82 at Stanford, a new study shows.

Provost Albert Hastorf will discuss the faculty affirmative action report with the Faculty Senate at its regular meeting Thursday, March 31.

A total of 18 women, including 12 in the humanities, accounted for 24 percent of all new faculty appointments last year.

There were 11 minority group members among the 75 new faculty appointees, including seven Asians, three blacks and one Hispanic.

The highest previous totals were in 1972-73, when 21 women and 14 minorities joined the faculty.

In the past 10 years, women have constituted 17 percent of all new Academic Council appointments, and minorities 9 percent.

During 1981-82, four women already on the faculty were promoted to tenure, as were one black and one Hispanic. One tenured woman resigned and two died during the year. There were no such losses among tenured minority faculty.

Since 1972, changes in the tenure-line faculty at Stanford have been as follows.

	1972	1977	1982
Tenure-line faculty	1,035	1,072	1,151
Total women	67	86	108
Percent women	6.47	8.02	9.38
Total minority	50	72	84
Percent minority	4.83	6.72	7.30
Tenured faculty	676	752	833
Total women	24	29	48
Percent women	3.55	3.86	5.76
Total minority	20	41	51
Percent minority	3.00	5.45	6.12

People

Classical scholars honor Raubitschek on 70th birthday

People from another world came to Stanford on Friday and Saturday March 25-26.

They brought with them the wit and wisdom of an age that refuses to die, though it seemed to vanish 2,000 years ago.

About 100 classical scholars from all over gathered to honor the 70th birthday of Prof. Antony Raubitschek, professor emeritus of classics at Stanford, one of the world's outstanding figures in classical scholarship.

For 50 years Raubitschek has been revealing new facets of the ancient Greek civilization, largely from his studies of inscriptions, the public and private notices carved in stone by the Greeks.

From his transcriptions, Raubitschek has thrown new light on the laws, the customs, the sports, the habits, and the philosophy of the race that has influenced western civilization more than any other.

Beginning when he was 23, just before he graduated in classics from the University of Vienna and the Nazis took over Austria, his articles have come to be pathfinders in the classical world. His latest paper *The Mission of Triptolemos* (co-authored with his wife Isabelle), covered a wide span of Athenian architecture, sculpture, and topography.

Among those who came to honor Raubitschek at the two-day celebration were Sir Ronald Syme, of Oxford, author of the noted work *The Roman Revolution*; he spoke on Thucydides at a dinner meeting Saturday.

Others included W. Robert Connor of Princeton, where Raubitschek once did research; David Lewis of Oxford, another expert on inscriptions; Michael Walbank and Haruo Konishi, from Canada; Donald Lateiner, of Ohio Wesleyan; and Steven Hirsch, of Tufts.

Notables from Stanford included Paul A. Robinson, Lionel Pearson, and Susan Stephens, papyrologist; Nobel Laureate Kenneth Arrow and historian Gordan Craig.

A center of respectful attention was Raubitschek's wife of 41 years, Isabelle, his career-long collaborator and a leading art historian of ancient Greece. Since their marriage they have focused most of their



Antony Raubitschek

waking hours on ancient Greece and Rome, and they have sometimes written articles jointly. They have four children and six grandchildren.

The conference was organized by Prof. Michael Jameson and Assistant Prof. John Winkler.

"The new knowledge gained from inscriptions, papyri and archaeology has made classical scholarship all the more aware of the place of historians in literary and intellectual traditions," Jameson said.

"It is time to ask what effect the newer modes of criticism have had on our understanding of the historians and of the history of the classical world; in turn, what the deep legacy of scholarship on the ancient historians has to contribute to contemporary humanistic concerns."

In the future, he added, "we have to consider what direction research and explanation should take in the coming decades, in an age when neither readers nor even scholars of other disciplines can be assumed to have close acquaintance with the classical historians and their historical subjects."

The conference was made possible by support from the Stanford Humanities Center, the School of Humanities and Sciences, and Anastasi Oung, in memory of her father M. C. Oung.

—Donald Stokes

Four win Sloan research fellowships

Four assistant professors in economics and neurosciences at Stanford are among 88 winners of Sloan research fellowships, the Alfred P. Sloan Foundation has announced.

The Stanford recipients are Assistant Profs. Ben S. Bernanke, Graduate School of Business and economics; Thomas E. Macurdy, economics; Andrew R. Hoffman, medicine; and Eric I. Knudsen, neurobiology.

Each will receive two-year fellowships of $25,000 to stimulate fundamental research. Designed to permit the greatest possible freedom and flexibility, the fellowships do not require recipients to pursue a specified research project. They are free to shift the direction of their research at any time.

The fellowship funds may be used for technical assistance, professional travel, summer support, computer time, support of predoctoral and postdoctoral research assistants, equipment and supplies, or any other purposes approved by the University.

Candidates were nominated by senior scholars familiar with their talents. About 400 were reviewed nationally this year. Prof. William Fairbank of Stanford was one of three scholars reviewing nominees in physics.

Lewis Spitz

History Prof. Lewis W. Spitz will give the 34th annual Payton Lectures April 5-7 at Fuller Theological Seminary in Pasadena.

Dr. Spitz will speak on "Images of Luther," a particularly appropriate theme for his 500th anniversary jubilee of Martin Luther's birth. Lectures will be at 10 a.m. and 4 p.m. each day, with morning sessions at Pasadena Presbyterian Church (Colorado Boulevard at Madison Avenue) and afternoon sessions at Fuller. Lectures are "Luther the Man," "Luther the Professor," "Luther the Churchman," and "Luther, the Man of Learning."

Dr. Spitz holds the William R. Kenan Jr. professorship at Stanford University. He received his Master of Divinity from Concordia Seminary in Missouri and his Ph.D. from Harvard University. He has been a Fulbright professor, a Guggenheim fellow and a senior fellow of the National Endowment for the Humanities. He is author of several books on Reformation history and is currently at work on three more.

The Payton Lectures were instituted by Fuller Theological Seminary in 1949 to honor Dr. and Mrs. John E. Payton, parents of the late Mrs. Charles E. Fuller whose husband founded the Seminary. The themes of the lectures usually fall within the areas of the uniqueness of Christianity, the confutation of non-Christian views or the formulation of biblical doctrines.

For more information call (213) 449-1745, extension 3570.



Ingram Oklin

Stanford Prof. Ingram Olkin, statistics and education, has been elected president of the Institute of Mathematical Statistics (IMS). His term of office begins at the annual meeting in Toronto in August.

The IMS was founded in 1935 to foster the development of mathematical statistics, and is currently one of the most prestigious societies in statistics. The society publishes two journals, *The Annals of Statistics* and *The Annals of Probability*.

Olkin was previously editor of *The Annals of Statistics*.



Anthony Cirone

Anthony Cirone has been appointed lecturer in percussion by Stanford's Music Department.

He has been percussionist with the San Francisco Symphony since 1965 and holds bachelor's and master's degrees from Juilliard. Cirone has soloed with the New York Philharmonic under Leonard Bernstein and several times with the San Francisco Symphony.

Cirone has composed 10 works for Percussion Ensemble, two for percussion and voice, sonatas, and method books. His *Double Concerto for Two Percussion and Orchestra* was premiered by the San Francisco Symphony in 1970. Cirone's latest book, *Master Technique Builders for Snare Drum*, was recently published by Belwin-Mills.

Cirone directs the San Jose State University Percussion Ensemble, and looks forward to reinstituting a performing Percussion Ensemble at Stanford. The San Jose Ensemble will perform one of his works May 9.

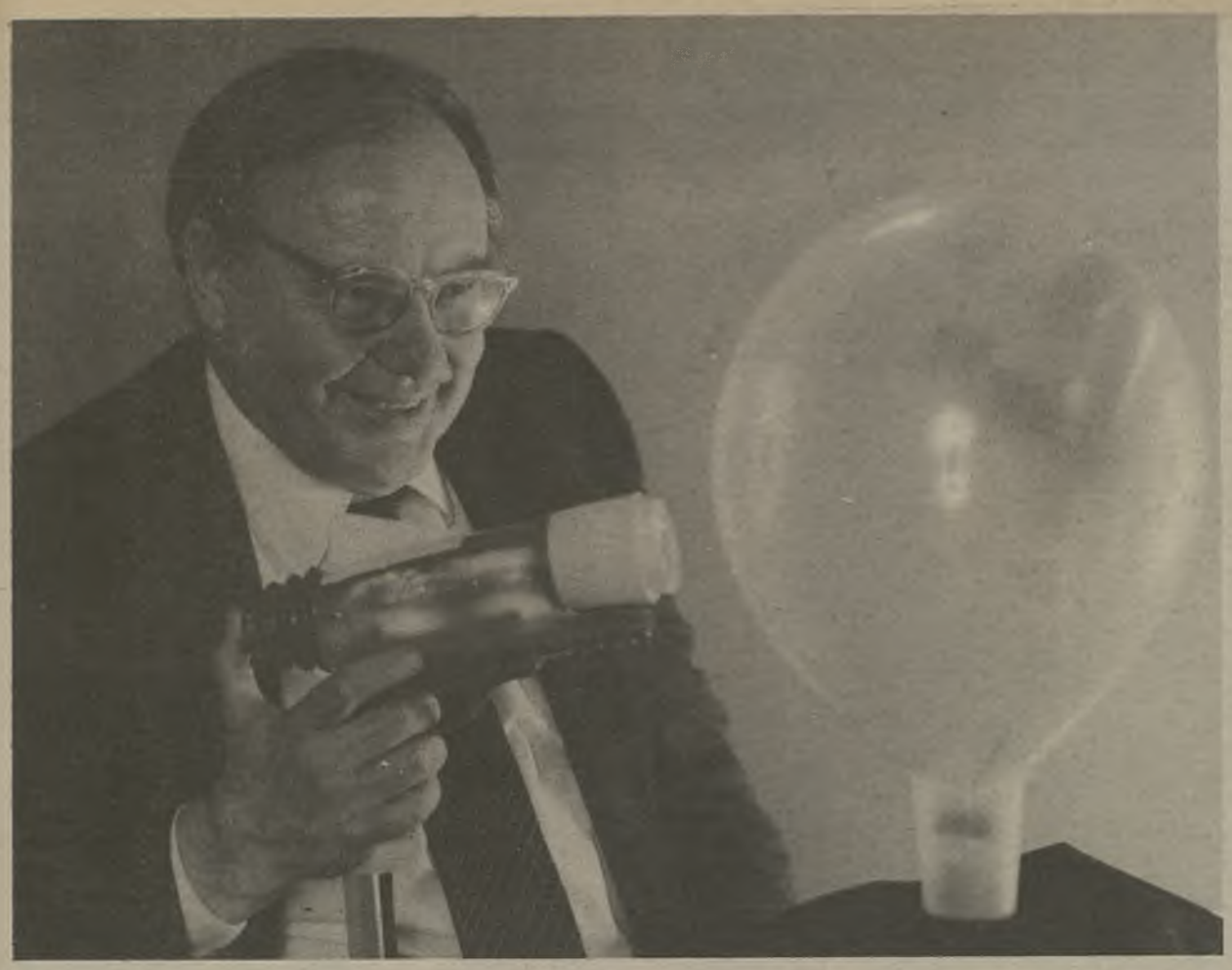
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'Star Wars' Schawlow zaps Mickey Mouse, inside the balloon, with a laser gun.

Arthur Schawlow, pioneer of lasers, is skeptical they could beat A-missiles

BY DONALD STOKES

Arthur Schawlow, the Nobel Prize winner who coinvented the laser, is willing to help defend the U.S. against A-missiles. However, he does not wish to receive secret information he cannot share with his students.

"This balance of terror, with A-missiles on both sides, is unstable," he said at Stanford, where he is the Jackson-Wood professor of physics. "If I could do anything worthwhile to help in our defense I would certainly consider getting involved in weaponry if I believed such a defense could help to remove the terrible threat hanging over us.

"I would be willing to help, if I did not give up my ability to say what I know about scientific matters.

"If I were to learn about some laser techniques that could be useful in our research, but could not tell my students about them, that would be a very awkward situation for me. And whatever I thought about what was being done, I would not then be able to comment on it publicly."

The U.S.A.F. is reported to be trying to create a laser defense against A-missiles, an interviewer pointed out, and now President Reagan has named lasers as one of the means by which missiles could be made obsolete.

"They are trying to create such a defense, and have been trying for some time. Money is being thrown at the problem. I have never been involved in such programs, but one hears things, one way or another.

"The military tried in the early years to build a giant ruby laser. Well, a ruby just isn't the right material for producing a great deal of power—and clearly a very great amount of power would be needed for such a laser.

"The attempt to get a weapon with a giant ruby drained off a lot of money which could better have been spent on more wide-ranging exploration.

"It would be terrible to think we had a defense and in fact it did not work.

"Today we are capable of building large lasers which could destroy missiles, but there are some obvious disadvantages. I don't know how big these machines are, or details of what they can do, but they are certainly very big, and if they can hold a missile in their sights long enough they could do a lot of damage.

"There are several clear disadvantages of so called laser 'death rays,' and I don't know what solutions there might be. One is that you have to secure a direct hit—a near miss doesn't do anything.

"The advantage is of course that a laser beam goes at the speed of light, which is almost instantaneous.

The suggestion has been made that laser stations should be placed in outer space where one would not have the problem of the atmosphere, which would absorb some of the beamlight and heat it. In space lasers would not be affected by atmospherics.

"A laser battle station out in space would be a sitting duck. If the enemy wanted to launch missiles at us, the first thing they would do would be to destroy the opponent's laser stations in space.

"An extremely accurate system would have to be perfected in order to reach a rapidly-moving missile thousands of miles away."

And there would probably be a great number of missiles to be destroyed?

"Also the fact that the enemy would not only be shooting at you with missiles, but also jamming your electronics and setting off atom bombs. If you sent out radar to guide the laser that would send out magnetic pulse interference in space, so they would not be bothered by the atmospheric effects.

"It is easier for the attackers. Missiles would need to be protected only for the few minutes they are outside in the atmosphere. They could be accompanied by smoke-screens or vapor clouds to absorb the lasers, or they could be equipped with multiple mirrors.

Maybe there will be lasers for short-range battle. But the big ones would be lasers for defense against missiles, and I am skeptical of the practicality of this idea.

—Arthur Schawlow

"One can think of other ways in which the attackers could protect their missiles.

"I am sure I don't know everything about what could be done to enhance or protect laser weapons—or 'death rays' to use the sci-fi jargon—but I don't see at the moment that they would be practical.

"I don't want to appear as if I'm burying my head in the sand and ignoring the possibilities. Also I don't want to pay the price of being unable to divulge things, as one would have to do in order to really help. In other words I don't want to join the defense establishment and participate in laser research for military purposes unless I feel I could make a real contribution to our defense.

"So called 'death rays' are a very old idea, of course, going back to Buck Rogers and his 'disintegrators' and to H.G. Wells' *War of the Worlds*. There is even the apocryphal story of Archimedes burning enemy ships by reflecting sunlight off warriors' shields.

"Even if you had laser rays of immense power they would not be weapons of universal destruction because unlike bombs they are very precisely directed. They have got to be aimed with pinpoint accuracy. Their fearsome aspect is that they are so fast, as fast as any weapons can ever be.

"There are of course weapons that I never envisaged when I worked on the birth of the laser. There are laser-guided bombs where one puts a spot of light on the target and the bomb homes in on that. The light is coded so that the bomb is not 'confused' by diversionary attempts at defense.

"There are other laser weapons, such as those used in reconnaissance, and maybe there will be lasers for short-range battle. But the big ones would be lasers for defense against missiles, and I am skeptical of the practicality of this idea."

An interviewer pointed out that the Nobel Prize award specifies that it is meant 'to enable the recipient to undertake or complete a project which has as its ultimate objective the wellbeing of mankind.' Which of his projects came under that heading?

"Our main research is supported by the National Science Foundation. It is for research into spectroscopy and quantum electronics.

"It is very hard to define my field of research. This is awkward, because sometimes the atomic physicists think I am one of them, sometimes the optics people, and sometimes the quantum electronics people think I belong to them. I try to bridge the gap between them.

I don't feel I am inter-disciplinary. I have my own discipline which isn't quite the same as anybody else's. This is the way it should be, because if you start doing work just like others you had better watch out, for that means you are in a rut.

"I always have lots of ideas, and I say that if anybody in the world wants to take up any of them, that's fine, go ahead and do it. I'll do something else. The fact is, I usually have ideas that other people think are not worth bothering with.

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I have to say no one stood in my way.

—Lois M. Stolz, pioneer in the study of child development

Stolz, 91, sees children as our prime resource

BY MILLICENT DILLON

We have yet to develop consistent, long-term programs for the development, education, and guidance of young children as an integral part of the fabric of society. And for one who has participated actively in all these stop-gap programs, the time seems long overdue for a genuinely constructive social approach."

So wrote Stanford emeritus Prof. Lois Meek Stolz in 1965 in an overview of her more than 40 years as a pioneer in child development. Now 91, still active in her field—she is to give a talk at the fiftieth anniversary meeting of the Society for Research in Child Development in April—she still stands by what she said 15 years ago.

"Those programs, by and large, have been flashes of light, soon extinguished and leaving slight residue in social life."

The basic principle which has guided her in her own work through the years has been a simple one, she says. "Children constitute the primary resource of a society, and the direction which society will take depends in large measure upon the kind of children society develops."

She has fought for that resource as director of the Institute of Child Development at Columbia University in the '30s, as director of the Kaiser Care Centers in Oregon during World II, and as professor of psychology at Stanford from 1946 until her retirement in 1957.

The Kaiser Centers, created in 1943, and lasting until the end of the war, were the most innovative child care centers that have ever existed in the U.S. they could, says Stolz, serve as a model even now—especially now—for industry sponsored day care centers.

It was Edgar Kaiser, who ran the shipyard, who decided that they should construct their own child care centers. After a national search he called Stolz and asked her to be his director. James Hymes, who had formerly assisted her at Columbia, was secured to be manager of the child centers in the two yards.

There were 25,000 women employed in the two shipyards, some of them office workers, but many more welders and chippers and burners, workers in the heart of the yards and at the ways. At that time there were almost no facilities in the city to handle the children who needed care. Yet it was clear that absenteeism and lateness for many of the women was connected with the care of the children.

At first there was great concern in the Portland community about the child care centers, says Stolz.

"Some people did fear that a center for children at the very entrance to a war industry might suffer from an enemy air attack. And others felt it was inappropriate for an industry to manage a program for children.

"The world's first day care centers were the rooms set up by factories for children in the early days of the Industrial Revolution. And many people were very concerned about what this industrial day care center would be like. Social workers, in particular, fought the idea tooth and nail. They were deeply bothered, fearing that an industry with its eye on holding women workers and appealing to new women workers might exploit children.

"The company itself, in its initial discussions with the objecting professional people, fed into these anxietes. Coming out of a background of dealing with sand and gravel, with road building and with dam construction, it had little awareness of the special needs of young children or of the hazards involved in group care over long hours.

"The company assumed—naively yet understandably—that it could staff its two new centers easily from the women applying for jobs as welders and office workers."

In fact, after consultation with Stolz and other professionals, Kaiser saw to it that an enormous amount of care went into both the construction and staffing of the center.

Each center, designed by the firm of Wolff and Phillips, was a building of 15 rooms, built out as spokes from a central hub-like enclosed play yard. Each room was large, with good storage space and with two walls of windows opening onto the shipyard so the children could see the ships their mothers were working on.

A home service food facility was set up in

continued on next page

Stolz/ continued from page 4

conjunction with the centers. "Eleanor Roosevelt, on a trip to England, had seen women war-workers buy precooked food for their family's supper right at their factories. She had passed the idea on to Kaiser and he was eager to try it."

Each center also had an infirmary for the care of ill children, supervised by the medical director of the yard and staffed by nurses and professional teachers. The centers were open 24 hours a day, 364 days per year.

Stolz was about to initiate an infant service that would provide 24-hour care for infants, as this was increasingly needed, when the War suddenly came to an end and the shipyards were closed and the centers disbanded.

Stolz notes that 3811 children were taken care of—a total of 250,000 child care days, which freed almost 2 million working hours for the women.

Handsome, alert, vigorous, witty, and as intellectually rigorous as ever, Stolz is often asked by young women how she did what she did in a time so inauspicious for the advancement of women in any field. Was it in spite of the situation, in spite of the men? they ask.

She laughs and says, "Well, I can't quite give them that answer. I have to say that no one stood in my way. Things just seemed to happen that made it possible for me to do what I needed to do."

All along, she notes, there were people who influenced her, men and women, some in a positive, some in a negative way.

First, she recalls, there was the influence of her father, Alexander Kennedy Meek, a lawyer with the Federal government. "When I graduated from high school all I wanted to do was to go to a finishing school, where I thought I could become beautiful and attractive."

But Stolz's father insisted she go to a Normal School, a two-year teacher's college. "Every woman should be able to earn her own living, if she has to," he said.

"Oh, did I hate my father for a month," she remembers. "I decided I'd go but I'd flunk out. So I sat in the back row, drawing pictures and talking to my friend Louise.

"But one day Louise said, 'You can stay here and fool around but I have to earn my living when I get out of here,' and she got up and went to sit in the front row."

Stolz followed her friend, for company more than anything else.

"That was my undoing. You know I couldn't fool around in the front row. I had to listen. I listened and I was hooked. I began to learn about the world I lived in, rather than the academic world of the high school classical curriculum. All the teachers at the Normal School were women, with excellent backgrounds and a verve for teaching."

While in Normal School, Stolz did her practice teaching in the Washington, D.C., school system, under the supervision of a remarkable educator, Rose Hardy.

"I was teaching a second- or third-grade class and there was a little boy in the group, Michael, who ruined every single day.

"One day I got so angry at him that I grabbed him and took him up the steps—the class was meeting in the basement—and when I got to the top of the stairs Rose Hardy was standing there. I was so mad at him, I think I had him by the ear. Rose Hardy never said a word. She just stood there and watched me as I went by with him.

"But at the end of the day, when Rose had her daily conference with me she said, 'Michael's giving you a lot of trouble. I wonder why he behaves that way. Do you know anything about his family?'

"That was the first time that I can ever recall that anybody had ever made that connection for me—about the why of behavior. She and I did go to visit the family. I don't remember much about that visit, but the question of that 'whyness' has remained with me ever since."

Following graduation from Normal School, Stolz taught in an elementary school and then became model teacher and supervisor in D.C. During those years she became interested in Progressive Education and did some experimental teaching.

Stolz took her B.A. at George Washington University in 1921 and then went on to Columbia, where she majored in educational sociology. "I was lucky there too because the chairman of that department was David Snedden.

"He didn't believe that women should bother with higher degrees, he thought they should be homemakers. So anything I wanted to take he approved. As far as he was concerned, it didn't matter."

Taking classes from many different psychologists, she soon became convinced that her major interest was child psychology. It is difficult from this vantage point, over sixty years later, to realize how little anyone cared about child psychology at the time. At Teacher's College, Columbia, the the most important institution for graduate study in education in the country, there was only one course in child psychology and "not a very good one at that."

"The teaching of child psychology was a drab affair then," she notes. "The indexes of some of the old books gives you an idea. These words do *not* appear: father, sibling, social class, dependence or independence, anxiety, hostility, or aggression."

After receiving her Ph.D. at Columbia, Stolz went to work for the American Association of University Women in 1924 to direct a program funded by the Laura Spelman Rockefeller Memorial. She was in charge of an adult education program in child development, set up to disseminate information about children to members of the Association.

According to Stolz, the Laura Spelman Rockefeller Memorial, under the leadership of Beardsley Ruml and Laurence Frank, was the dominant influence on child development research in the '20s and the '30s. With funds from the Memorial, Child Development Institutes were set up at the Universities of Columbia, Minnesota, Iowa, Yale, UC-Berkeley, and Toronto.

Curiously, or perhaps not so curiously, Stolz found a certain opposition to the program within the AAUW.

"There was some feeling among women who worked in the accepted disciplines of academic life that child development was a comedown for professional women.

"English, foreign languages, mathematics, Greek and Latin, even psychology were acceptable—but not child development.

"In general those who had this view were the very people who had worked hard to get opportunities for women in colleges and universities to be accepted as scholars equal to men.

"They didn't want the women to think of themselves as homemakers and taking care of children. They wanted them to think of themselves as intellectual leaders.

"Although these women irritated me at the time, in retrospect I can see that they felt that this was a lowering of standards for women, that child development would become a women's field, and that there would again be this differentiation which they had worked so hard, since 1882, to get rid of."

Under Stolz's guidance the AAUW program did have considerable influence. In the course of her years there she traveled extensively throughout the country, participated in meetings, and visited institutions and new programs which were being set up.

She was appointed chairman of a yearbook committee of the National Society for the Study of Education, the first women to be so honored.

She met and came to know many leaders in the field including Bird Baldwin, Harold Jones, George Stoddard, Arnold Gesell, Beth Wellman, Rachel Stutsman, and Nancy Bayley as well as Herbert Stolz, her future husband.

After five years at the AAUW she returned to Columbia and was appointed professor of education and director of the Child Development Institute.

"Those years were difficult years in some ways. It was the Depression. All employees got a cut in salary. The Laura Spelman Rockefeller Memorial went out of business. But it was also a very rewarding time. We supervised some excellent Ph.D. dissertations. We developed a syllabus for a major graduate course in child development; a family consultation center was opened, and a guidance nursery was developed."

During these New York years Stolz also participated as an advisor for the establishment of nursery schools for children of families on relief. Sponsored by the Emergency Relief Administration, this was the first involvement of the Federal government in any nursery school program.

In 1939 Stolz gave up her position at Columbia and married Dr. Herbert R. Stolz, the first director of the Institute of Child Welfare Research at UC-Berkeley.

A graduate of Stanford, he had been a Rhodes scholar before returing to Stanford to complete his medical studies.

In California she became involved in giving institutes for teachers, in the writing of two books, in research on adolescent development and in the mental health movement.

When the War came, Governor Olsen appointed her as his assistant in charge of "Care of Children in Wartime."

"There were many frustrations in that job," she notes, "most of them because of political problems. There was a lot of competition between different departments for control of the program."

But from that frustration she went on to the Kaiser Care Centers, the project she considers to have been the most exciting in her life.



Lois Stolz

There was some feeling among women who worked in the accepted disciplines of academic life that child development was a comedown for professional women.

—Lois Stolz

Letters to the editor

Kahn cites cases, contends that corporate morality is *not* high

Editor, **Campus Report**:

I was pleased to read the article in the February 23 issue entitled "McBride: Public morality lowered by bad examples up top" and to learn that the development of a corps of competent Inspectors General may bring about some improvement in this area. This is particularly true if they have the dedication of Mr. McBride.

However, the overall implication is that the public morality is low and the individual and corporate morality is high.

Unfortunately, this is not true. In recent years we have seen the Bank of America contesting through the courts (and losing) a claim by the State for money, in effect, stolen from small inactive accounts in their custody. When 14 years were allowed before inactive balances were reported to the State, the Bank of America (*and all other banks*—but only Bank of America contested it through the courts) applied service charges monthly to the accounts and, after a certain period of inactivity, stopped crediting interest.

In all cases with which I am familiar (and this includes all major banks), if a person came in with a passbook before the 14 years were up, the bank then eliminated the service charges and credited interest—unless the account had already been absorbed into the income of the bank.

The courts held that under the escheat laws of the State the State stood in the same place as the owner of the account and at the time the accounts were transferred to the State the same transaction should take place.

In another area, virtually all of the major department stores in the country had a practice of not sending statements to customers with credit balances (returned goods after payment, double payment, etc.) on the theory that it would confuse the customer and he might pay it again. Instead, if the credit was not used within 90 to 180 days, the credit balance was absorbed into the income of the company. The largest California retailer cited by the Federal Trade Commission was Carter Hawley Hale, who had taken some $4 million in this manner over a period of six years.

When the Pacific Telephone and Telegraph Company offered me an opportunity to purchase my telephone equipment, I found out that they were offering me equipment I had never had; and when they checked the records going back nine years, I received a credit of approximately $600 that had been charged to me "in error." For those who receive telephone bills, you know that the item that reads "service and equipment" is never ifemized. If you attempt to get an itemization, it may take you several weeks to several months to obtain the listing.

I hate to bring up the name of such major companies, all of whom have been or who are contributors to Stanford, but I did want to point out that these actions were formal corporate policies (perhaps PT&T could be credited to incompetence—but this always could have been cured by sending each customer a confirmation, after installation, of the items and cost being installed).

I dislike naming companies but it is the only way to drive home the point involved. I do this on the basis that Mr. McBride had no hesitancy in indicating that "there are places such as New Jersey, New York, and Reading, Pennsylvania. . . " where fraud and corruption exist. Nor did he hesitate to say, "In New York City you will find more corruption at all levels than you will find in, say, Kansas City, or Phoenix."

Robert Kahn, CMC
Stanford 1938

Cohn pushes Barnett's button—again

Editor, **Campus Report**:

Let's call this one "Counterpoint II." Once again Robert Cohn has invoked my muse—"pushed my button," as we technicians put it. Our antiphony might better be performed privately, taxing neither your continuing indulgence nor your column-inch budget. Still, your readership might relish the scrap—Cohn keening on the fuddy-duddy (ZAP!), Barnett twiddling the bits (OOF!).

Professor Cohn's letter in your March 18 issue is a tough tune to counter; he harps a mean melody. But, like many productions of the electronic slavery that revolts him, though the parts are impeccably—nay, artfully—crafted, the whole is flawed. His hymn to the redemptive toil of creative writing culminates in (fizzles into?) a smirk at the Tiro Project. Let me introduce a contrasting theme, one whose original score also was hand-wrought, non-linear, smudged, and laborious fun.

Word processors are really no big deal, unless we fail to surmount our opportunities.

We can expect too much from our machines. We were lured some years ago by the Prelude to Artificial Intelligence. Some of us are still. One thing we've demonstrated, in considerable and convincing detail, is how little we know of intelligence. Perhaps we shall see machines worthy of a lesser label, Artificial Ignorance, but not yet. (Belaboring the point would betray Real Stupidity.)

We can expect too little from our machines. There are many varieties, and they become ever more capable of conserving our time (as word processors can) or dissipating it (as video games can). If machines can do something as well as we, good; let's let them, while we do something else. We may also hope that our young, nurtured in a culture replete with such potential "friends" and "enemies," will be taught and led by folks who know those friends and enemies well, and can distinguish them.

We can expect too little from ourselves. We can, indeed, publish too hastily, what with movable type and electronic typesetters and now word processors and all. Even those with nothing to say are finding it easier and more profitable to say it in print. I'm sure we can rely on Professor Cohn and camp to teach and demonstrate that writing deserves care and a "justification" other than mere margin alignment. That doesn't mean that the ability to write something well makes it worth writing, much less true, nor even convincing.

We can expect too much from ourselves. That danger is remote.

Hang in there, Tiro crew, and Godspeed! Some belletristic John Henry's may opt to sacrifice themselves to out-word-driving a machine. We'll mourn them, of course, and illuminate an occasional manuscript in their memory. What technocracy needs, though, are Renaissance voices singing of both the heft of the hammer and the route of the right-of-way—voices that will keep us from desecrating John's grave, certainly, but also help us bend our ever-lengthening track away from the precipice.

With or without word processors, we will continue to write possibly much worse, but not much better, than our expectations. If a non-humanist may paraphrase the Bard, "The fault, dear writer, is not in our machines, but in ourselves, if we are hacks."

Mark Barnett
Programmer of Computers

My Ode to Parking

'Tis the season to write letters. . . or so it appears.
It's lack of parking spaces that promotes our fears.
Why do we pay 75 dollars a year. . .
. . . is it for the privilege of working here?
We all have to work to earn a living,
And how can you take when no one is giving?
It's hard to arise at the crack of dawn,
So you can arrive and find close parking gone.
For if you arrive after eight on the lot,
It will take you forever to find a spot.
Is this a ploy to make sure we're on time,
And that way you know we earn every dime?
Once you find a place you're literally trapped,
And if you leave you should be slapped.
When you return from an errand again attempts fail,
So you park illegally and have to post bail.
We must find a way to come up with an answer;
This thing is spreading faster than cancer.
If it weren't for the staff the students wouldn't be here;
So let them park far and us park near.
Thanks for the space to air my views.
I'm glad I've been published in the campus news.

Peggi Polen
Department of Surgery

Taksar's analyses impress Hilton

Editor, *Campus Report*:

As editor of the *World Affairs Report*, which specializes in the methodical analysis of Soviet foreign policy, I wish to say how impressed I was with Michael Taksar's article "How Soviets control professors visiting the U.S." (*Campus Report*, March 16). It should be required reading for anyone making pronouncements on the subject.

Our universities are structured in such a way that a serious grasp of Soviet realities is a rarity. We are therefore lucky to have Michael Taksar on our campus and to have the benefit of his well-documented analyses. He should be listened to by us all, even though he is tucked away in Operations Research.

Ronald Hilton
Editor, *World Affairs Report*

Homeowners Assoc. sets annual meeting

Annual General Meeting—8 p.m. Wednesday, April 6—Bishop Auditorium, GSB

The Stanford Campus Homeowners Association had a brand new group of District Representatives elected to its Board at last year's annual meeting. These new Board members, along with the at-large representatives whose terms expire this year, are a concerned and enthusiastic group and are anxious to meet with residents from their districts at the annual meeting, April 6.

At the meeting, Prof. Haresh Shah of Stanford's Civil Engineering Department will talk about earthquake preparedness for homeowners, and will discuss the need for and desirability of various levels of earthquake insurance depending upon structural, financial, and other factors.

At this meeting we will also be seeking nominations for four new at-large representatives on the Homeowners Associate Board.

Some of the activities which the Board has pursued during the past year include:

1. Investigating the source and use of ground rents to determine whether homeowners are receiving fair benefits for the ground rents which they pay to the University, and how this has changed over the years. To do this we met with Marvin Herrington, director of public safety, and Janet Sweet, assistant controller, as well as Robin Hamill, Barbara Klein and Lucille Long of the Faculty/Staff Housing Office.
2. Providing input in opposition to the proposed County ordinance which would have required solar energy retrofits before a residence could be resold. This ordinance was not implemented.
3. Investigating the seismic safety of the Mayfield Reservoir which adjoins the Nixon Elementary School and some homeowner's property. This is still under way.
4. Providing input in opposition to an informal proposal by the University that homeowners assess themselves a "tax" to help pay for the costs of replacing eucalyptus trees in the green belts. The University subsequently decided to finance this from other sources.
5. Developing a brochure to set out for homeowners the services that are provided by the University as part of the lease agreement, and whom to contact for each of these services. This activity is scheduled to be completed during the spring quarter.

To carry out our function as representatives of homeowners, it is essential that we hear from homeowners about their concerns. A membership campaign this past month has been extremely successful. We received membership dues from over two-thirds of the campus homeowners, and a list of some of their concerns. The board hopes for a good turnout at the April 6 meeting. After the talk by Haresh Shah, we will have an opportunity to meet with neighbors and district representatives over cheese and wine to discuss common concerns.

Raymond E. Levitt
President

Kris Speer studies music, earth science, sells computers

BY JULIA SOMMER

Diversity is often cited as the hallmark of Stanford undergraduates, and junior Kris Speer is a fine example.

Speer is double-majoring in music and applied earth sciences, will pursue either music or an MBA upon graduation, and has worked as both installer and sales manager for a local computer firm.

"I have too many interests. . . it's hard for me to focus on just one thing, so I'm still riding the fence," she says. "I wish I had time to take *more* undergraduate classes—especially art. It doesn't seem like I've learned enough to merit a college degree. . . 180 units is awfully short."

Speer entered Stanford in 1976 as a double major in music and civil engineering. "All my high school aptitude tests said I should pursue engineering, and I knew it was a good job market. There was an unspoken feeling in my family that music was an avocation and not to be pursued as a profession because it wasn't practical and didn't pay well—the same old story. But I enjoyed music and did well in it and wanted to continue private lessons on the bassoon."

Despite the aptitude tests, Speer didn't do particularly well in engineering. "By sophomore year I would stare at an engineering problem for three hours in the library, get nothing done, and feel totally dejected. Plus I had advisers in both departments, and they were each pressuring me to take more courses in their particular department."

At the end of fall quarter in her junior year, Speer stopped out. "I had lost interest in school and I didn't know what I really wanted to do anymore. It made me feel guilty that my parents were paying for such an expensive education and I wasn't getting anything out of it. I didn't have enough direction to make the time count, and Stanford's not the kind of place where you goof off."

Originally, Speer planned to stop out for just one quarter. That quarter grew to almost four years. She interviewed for a secretarial job at Marketron in Menlo Park, which makes computer systems for radio and TV stations. President Jerry Cronin suggested she join their Service Department instead. "When he said it would entail a lot of traveling, I said 'Great! Sign me up!' " Speer recalls.

She was trained on the mini-computers, then answered service calls, and after six months was on the road installing customized mini-computer systems around the country and instructing radio station employees on their use. "The hardest part was getting people to change their daily routine," says Speer.

"I enjoyed working at the radio stations. . . there's always an air of excitement because you're creating something live and you hear it immediately all over the station. I don't know any other place where you would find accountants working to the accompaniment of hard rock!

"I got a good overview of radio because I worked with everyone—schedulers, salespeople, management. Marketron computers are used to schedule commercials and music, and everyone's energies are centered around getting out that daily log. All three networks used Marketron's machines—they were the best on the market. I wouldn't mind working at a radio station in the future as an operations manager."

After a year on the road, Speer was put in charge of starting up and managing Marketron's assembling operation in San Carlos. "We had been buying computers ready-made, but could assemble our own cheaper using generic parts.

"I really liked working with the hardware," says Speer. "It was my favorite time at Marketron. I ordered parts, attended management meetings, and made sure we got the computers and parts kits out on time."

Speer then moved to the sales department. "Jerry felt my hardware knowledge would make me an effective salesperson, and it did. I knew what I was talking about, having worked with both the software and hardware. I eventually became manager of the department selling on-line services, mainly programs using rating information.

> ***My first quarter at Stanford I played in the marching band. It was a lot of fun, but one quarter was enough. A lot of my education freshman year actually came from being in the band.***
>
> ***— Kris Speer***

"That's when I traveled the most—about two weeks out of every month. We were paid a straight salary because so many of the systems sales were team efforts taking many months. Our systems sold for $15,000 to $40,000."

Speer ended up working almost four years for Marketron. "Initially, I felt I should go back to school, but I was enjoying myself and making good money. I moved up rapidly, but came to the point where I couldn't go any further without a degree. And I really wanted the education. . . I felt inadequate not having a degree.

"After I was promoted to sales manager, I really had nothing to sink my teeth into and felt ineffectual. Once I got my staff going on their projects, there wasn't enough for me to do. I felt like an overpaid babysitter. They were responsible people and knew what they were doing, and didn't need me to breathe down their necks. That's when I realized it was time for me to leave."

Speer left Marketron last July, then went on a two-week backpacking trip alone, covering the northern half of the John Muir trail in the Sierras.

"It was a good time to make the trip," she says. "I had never hiked alone, and I was making a big change in my life. It was a challenge, and the fact that it came off so well made me feel very self-confident. I didn't get bored like I thought I would, and could have gone for another week. I had perfect weather—it was criminally easy."

Speer plans another solo backpacking trip this summer—the southern half of the Muir trail. She may apply for work at a computer company: "They are exciting places to work because the technology is changing so quickly."

Speer returned to Stanford this fall. "When I came back, it was a huge change in lifestyle. I had to gear up my energy level by several points and learn how to study again—and play the bassoon! I hadn't touched the bassoon in four years and didn't even recognize my reeds!

"My first quarter back, if I ever found myself idle, I assumed there was something I *should* have been doing.

"I'm doing very well in school now because I enjoy what I'm doing. I'm very clear about what I want academically, so neither of my advisers can push me into taking anything I don't want to. Also, earth sciences has a looser curriculum than engineering, so I have more freedom to pick courses I'm particularly interested in.

"I enjoy the music history courses much more than I thought I would, mainly because of the excellent teachers. Right now, I'm split between going on for a graduate degree in music and applying to business school. I don't know if I'm dedicated enough to be a bassoonist, and I enjoy business, so that might be the best way to go."

Speer studies with Stanford's new bassoon teacher, Rufus Olivier, who is bassoonist with the San Francisco Opera. She plays in Stanford's Symphony and Chamber orchestras under Andor Toth.



Kris Speer

"Toth is terrific," she says. "It's a real privilege to play for him. He brings music out of the group that you never thought was there." She also sings with the Early Music Singers.

"My first quarter at Stanford I played in the marching band. It was a lot of fun, but one quarter was enough. A lot of my education freshman year actually came from being in the band!"

Speer has noticed some changes on campus since her return. "In 1976, the average student wore sloppy jeans. . . there was more of a '60s flavor. Now I see the ultra-preppy look, especially among freshmen women.

"I can't believe all the make-up, fantastic clothes, perfectly curled hair, and *nylons* every day! If anyone had dressed like that in 1976 they would have been considered a freak! In general, the students are much more serious. The only thing that hasn't changed is the band.

"I notice a new feeling of pride in the Music Department and more recognition of the department around campus. I think the new music building has something to do with it—we're not hiding up at the Knoll anymore. Many students don't know where the Knoll is, or think it's a museum!

"I'm shocked at the number of students who don't take advantage of all the activities on campus, so many don't even go to class! I can't understand it, because the faculty is the best thing about Stanford.

"Every professor I've ever wanted to talk to has made time for me. And they're neat people as well as teachers. Stanford is too rich for some of these kids."

Speer lives in Durand, an undergraduate dorm. "I don't feel any older than the rest of the house, but my roommates tease me about being a quarter-century old.

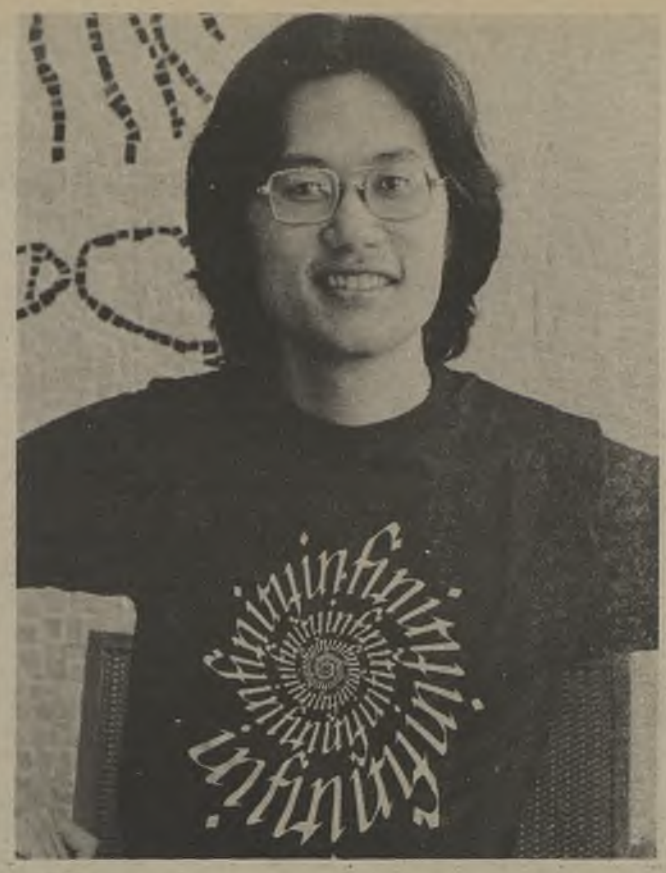
"I always announce Music Department concerts at dinner, but very few go. But those who *do* go always come to me afterwards and say how great it was. I'm surprised that more students don't take advantage of all this music so close by."

continued on page 19

Computer programming hot, profitable field, many students discover

By converting their dormitory rooms into small computer companies, some students sell their own software to Silicon Valley firms. Others, now consultants, hope to create their own companies.

Following are profiles by Craig LaGrow.



Scott Kim

Mike Boone

One of the most successful among this new breed is Mike Boone, 21, a senior majoring in petroleum engineering.

His company, appropriately called Boone Corporation, went into business last June with the initial investment of $75,000 by an anonymous wealthy investor whom Boone met two months after the company was organized. Since that time, his company has been evaluated by local venture capitalists to be worth over $1 million.

Boone's company now employs 26 people, half of whom are Stanford students.

"My philosophy is that if you hire talented people who want to work hard and enjoy what they're doing, and if you treat them like independent contractors, your company can't possibly fail," said Boone.

Run from the office headquarters of his own dormitory room in Lagunita Court, Boone meets informally with his student computer programmers. Some are Ph.D.s and graduate students who, according to Boone, "gave up some pretty attractive career options to have the freedom to work in a small company like mine."

David Stone, chief financial officer at Boone Corporation, revealed that the company now has plans to market a three-dimensional video game program that recreates the experience of playing golf at a famous national golf course. In the game, every sand trap, fairway, and lake is depicted on the video screen in the exact location as in the original golf course.

"This is a game in a class by itself," said Stone. "The three-dimensional graphics are surprisingly complex and we're sure that it'll be a big financial success for us when it hits the market."

Scheduled for release sometime this summer, the golf game program will be sold to anyone in the country who owns an IBM personal computer. According to Stone, businessmen and golf enthusiasts are the primary audience for the golf game.

In addition to the golf game, Boone's company plans to sell, within a year, three other computer programs which range from business to medical software.

"All you have to do to sell software is find a small 'vertical market' and monopolize it with a software program that suits its needs," said Boone. "That's how the golf game will work. I'm sure that country clubs across the country will be going wild over this game soon."

When asked to describe what it's like to start his own company, Boone replied, "I'm an extremely hyperactive high achiever who loves to sell things; I could sell an Eskimo a refrigerator, easy.

"I think I've gone through about four phases to get to the point where I am now. After the initial 'idea phase,' there came a phase where I had to develop the stamina and courage to do all the grunt work needed. Then came the 'super-hard work phase,' followed by the 'maturity phase,' which I've only recently entered."

Gary Retelny

But Mike Boone is just one of many Stanford students who are finding that, with enough energy and insight, they can become their own bosses.

Gary Retelny, a second-year Stanford MBA student, recently started his own business software company called Exemplary Software.

He is selling a computer program called RankMaster, which makes investment decisions for businesses and individuals based on the financial data that they input into their home or business computers.

So far, Retelny's company has sold 25 separate software programs, priced at $200 each. "We sold that many without even trying that hard," he claims.

Retelny believes that developing a good marketing strategy is essential to selling computer software. "Ideas are a dime a dozen. It's the effort behind the ideas that really count," he said.

Retelny sees his company's main competition coming from what he calls the "four major software houses in the United States" (VisiCorp, MicroSoft, Digital Research, and MicroProbe).

"These software giants are gobbling up the little independent software companies like ours and paying only a reasonable fee for the original ideas we develop," he said. Retelny is hoping, however, that his RankMaster software program will sell well enough so that his company will not have to "sell out" to these larger companies.

Scott Kim

Scott Kim, 27, a Ph.D. in computer science and graphics design, founded his company, called Look Twice, in 1975 after he published a book called *Inversions—a Collection of Computer-Generated Graphic Designs*. Kim wrote and published the book while he was an undergraduate at Stanford.

"I do for words and lettering what Escher did for visual thinking," said Kim. "I intend to prove that computers can be successfully applied to the arts. I even use myself as a guinea pig for things that I expect will become common for artists in the near future," he said.

Kim not only uses his computer to do graphic design, but also to keep track of his company's daily accounting. In addition to Kim's book, Look Twice also sells computer-designed T-shirts. He is also planning to design and sell computer graphic posters.

For all his various projects, Kim's company last year produced a gross revenue of $25,000.

"I hope that my company will one day help others to discover that there is art in the icons of the computer culture."

Craig Carlson

Youth appears to be no obstacle to making money in the computer software business. At least that's what 19-year-old Craig Carlson, an undergraduate in electrical engineering, has found.

So far, he has made about $6,000 by writing two business software programs for a company in Los Angeles called Continental Software, Inc.

Carlson does not run his own software company; instead, he is known in the industry as an "independent software writer."

"I like this kind of arrangement because I can go wherever I please," said Carlson. "Besides, they (Continental Software) treat me so well that, in turn, I sell them all my software."

Carlson has designed a computer program that can manage one's personal financial portfolio—everything from balancing your checkbook to keeping track of the money you've spent on credit cards.

Robert Lisbonne Kurt Thams

Robert Lisbonne, 18, and his best friend Kurt Thams, 18, write their own independent software programs and work as consultants to private firms.

Like Craig Carlson, they also have no formal company. Both work independently on their own software projects.

"We've known each other since sixth grade and have grown up with computers," said Lisbonne. "I remember the day that I bought this cheap little Radio Shack computer with only four bytes of memory. Kurt and I have learned a lot since then."

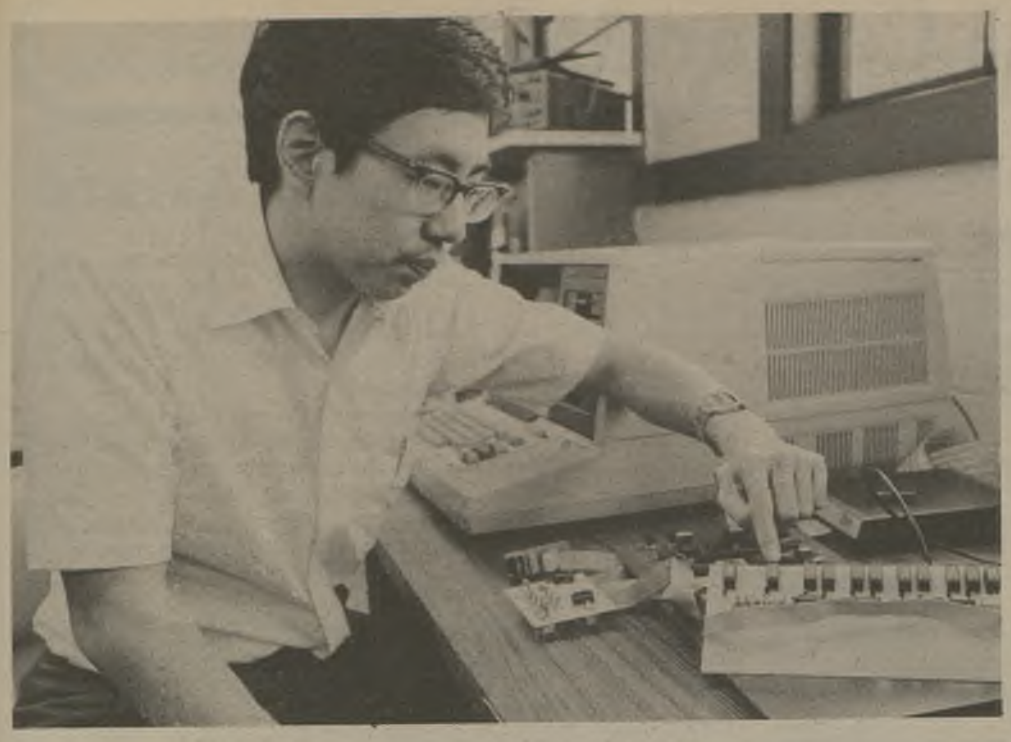
Lisbonne writes software on a contractual basis for companies that want a computer program to do a specific task for them. For a utility company in Los Angeles, Lisbonne designed a software package that helps the company determine just how to get the maximum energy from burning waste products.

"Basically, I made it so that they could get quick answers to their technical questions. Now they're using my software as a daily working guide."

In the near future, Lisbonne hopes to steer away from the consulting side of his software business and write programs on a large-scale production basis. He hopes to sell software to any one of several "vertical markets."

"There are a lot of specific applications that computers can be used for on a one-time basis; but I'm more interested in the software packaging for entire business fields," he said.

continued on next page



His competitive swimming led Glen Inn (left) to design a computerized timing system.

Mike Boone (below right, with employee Brad Davis) claims he could sell refrigerators to Eskimos. He runs the Boone Corporation, with its 26 employees, from his room in Lagunita Court.

Robin Chang

High school teachers can now have their own compact minicomputer network for a fraction of the cost of buying their own individual microcomputers, thanks to Robin Chang, 20, an electrical engineering undergraduate at Stanford.

As a senior in high school, Chang discovered a way to hook up 15 microcomputers to one disk drive memory unit so that teachers could store records of their students' ongoing academic progress in the computer's memory.

Chang's invention was manufactured by a retail computer hardware outlet called Skyles Electric Works. Last year, his invention brought $300,000 in gross sales. Chang's net profit for last year was $37,000. Not bad for a 20-year-old student.

While Chang has not yet formed a company of his own, he does have plans to do so in the near future. In fact, he is now in the process of incorporating.

"The only problem now is that I have to figure out a good name for my company, and this step is harder than it sounds," he said.

In the past, Chang designed computer software programs only for hobbyists and fellow computer enthusiasts. "But software for hobbyists just changes too quickly and one software program may be worthless after a year or so," he said.

Chang admitted, however, that trying to balance school work and his computer business has become a lot tougher than he had planned for.

"I've been working my butt off lately," he said. "But if I don't keep up with my computer projects, someone else is going to come and do them instead of me."

According to Chang, learning to start a computer company has given him the chance to put his education to the test. "It's a lot of pressure to deal with at times, but I think that it can really pay off in the long run," he said.

Glen Inn

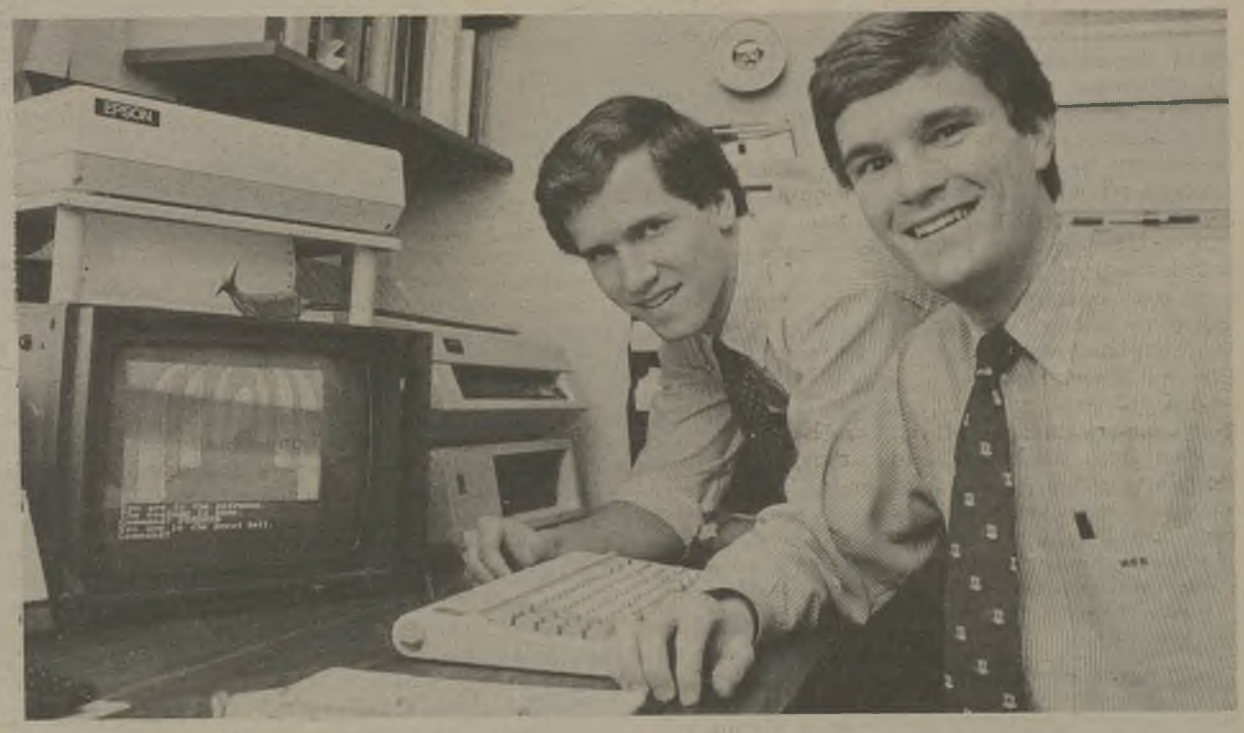
Computers can even be used at swim meets, or so claims Glen Inn, 21, an undergraduate in electrical engineering. He has designed a computerized timing system that monitors, in milliseconds, the elapsed time in a swimming race.

Inn calls his timing device "Accuplace" and rents it to sponsors of local swim meets.

"Ever since I was six years old, I've been a swimmer. And it's always bugged me that no one has ever devised an accurate method of determining who really won or lost a close race," he said.

Inn designed the software for the swimming system as well as the hardware too. He has even built much of the equipment himself.

Although he has no formal company, Inn hopes to one day start his own computer hardware and software company.



Alan Ballweg

Alan Ballweg, 23, a senior majoring in economics and industrial engineering, started a company called Business Data Systems in December of 1981.

Since its beginning, his company has grossed $12,000 and today Ballweg charges an hourly consulting rate of $25. Ballweg has written four custom-designed computer programs for an engineering firm in Los Angeles, two financial consultants in the Bay Area, and a law firm in Palo Alto. He is now working on negotiations to sell a real estate software program to companies all across the country.

"I just realized that software writing is a big, wide-open market, that it pays well, and that it is growing rapidly," he said. "I also don't have any illusions about this business, though; but I do feel that there will be plenty of business out there for awhile."

Ballweg not only designs software to suit the specific needs of his customers; he also contracts with each company to "maintain" the programs that he writes. "If somebody wants me to add or change something on their computer system, as they do all the time, I provide that service as part of the contract."

Even though Business Data Systems is still solely run by Ballweg, he indicated that his long-term plans are to develop a corporation and hire a large staff.

Aaron Weiss

Another successful student entrepreneur is Aaron Weiss, 22, a senior in electrical engineering, who started Reliable MicroSystems with only $5,000—half from his savings and the other half from a short-term loan from his father.

Since his computer software company began last spring, Weiss has multiplied his original investment by five times. He now plans to hire a staff of computer programmers when his company expands this summer.

"I guess that I should apologize that I didn't start this company out of my garage," he joked. "It would sound a lot more believable than if I tried to convince you that my company actually began in my bedroom."

Weiss writes all kinds of computer software programs, from a medical accounting package to a scientific data analysis program.

Reliable MicroSystems actually started out by accident, Weiss claims. Because of the unexpected success of a computer program that he wrote for a hospital administrator, Weiss discovered that writing software on his home computer could mean big money.

By last fall, Weiss had already signed contracts with four local companies to develop software programs for their businesses.

"But the real fun is coming this summer," he said. "The money I've been making has only, up to now, been reinvested into my hardware. By the end of this summer, I plan to make the megabucks, hire a permanent staff, and become an incorporated firm."

Medical Center MEMO

His colleagues honor Rosenberg with first Hewlett Award

Dr. Saul Rosenberg, professor of medicine and radiology at Stanford University School of Medicine, is the first recipient of the department of medicine's Albion Walter Hewlett Award.

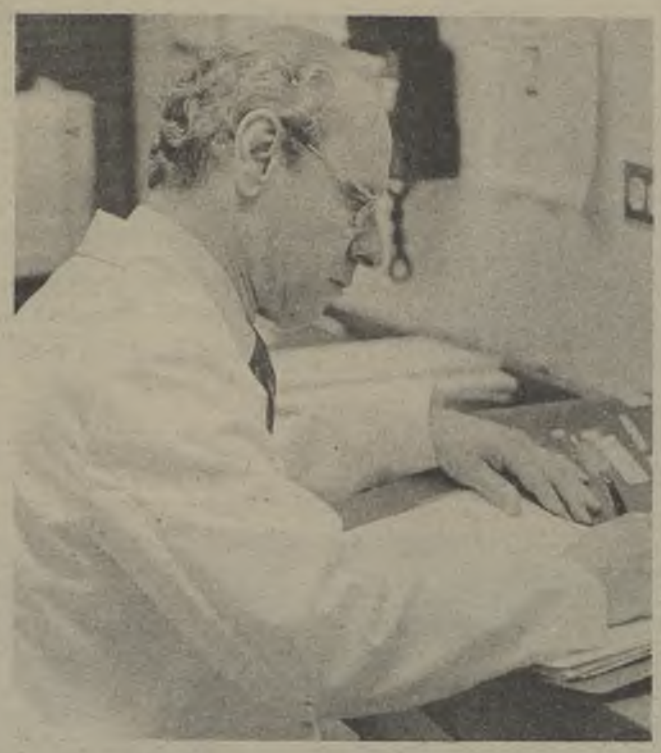
Dean Dominick Purpura announced the award at last Thursday's medical grand rounds.

Rosenberg "has been recognized by his colleagues as the epitome of the academician dedicated to discovery in the biological sciences and to the sensitive and scientific application of such new knowledge in the effective treatment of human disease," states the award certificate.

The award was established last spring by the department of medicine to honor academic physicians who have advanced scientific knowledge and applied it to patient care. Dr. Albion Walter Hewlett was an internationally known professor of medicine and leader in clinical investigation at Stanford from 1916 until his death in 1925.

"There is no greater honor than to be recognized by your own," Rosenberg said. "Nothing is as important, appreciated, or difficult as being recognized by your own family, especially those who are not in your precise field. It gives me a special sense of satisfaction, as well as a special challenge to be the appropriate model for this award so the tradition can continue."

Rosenberg, a leading oncology expert, has received international acclaim for his research on Hodgkin's disease. He and Dr. Henry Kaplan, D'Ambrogio Professor of Radiology—both pioneers in the field—have made dramatic advances in the diagnoses and treatment of the disease, which have led to better than 80 percent survival at five years for all stages of the disease. Seventy-five percent of the patients are now permanently cured, according to published figures.



Rosenberg at work—the first time he applied to medical school he was rejected; today he is renowned as a pioneer in the treatment of Hodgkin's disease.

Rosenberg was among those who spearheaded the development of oncology as a specialty of internal medicine. He is chief of the division of oncology at Stanford, which was established in 1965. He is also director of the Debbie Probst Oncology Day Care Center, a treatment center for cancer patients, which opened here in 1978.

Rosenberg has also received the Henry J. Kaiser Award for Excellence in Teaching, and was the first recipient of the Arthur Bloomfield Award for Excellence in Teaching in Clinical Medicine. Medical education is one of his primary concerns—he took a year-long sabbatical to study the problems of premedical students competing to get accepted to medical school.

A native of Ohio, Rosenberg received his undergraduate degree, and then his medical degree in 1953, at Western Reserve University. The first time he applied to medical school he was rejected; the second time he was told he could come work in a laboratory for a year, after which his application would be reviewed.

The laboratory was involved with radiobiology research, which spurred his interest in radiation as a treatment method for malignancy. He also enjoyed internal medicine during medical school. Upon graduation, he decided the way to combine his interests was to specialize in oncology. But first, he had to create the specialty.

He trained at various hospitals that offered radiation therapy and cancer programs, and came to Stanford in 1961 to work with Kaplan. Their mutual interests in radiation therapy and cancer led to their research in Hodgkin's disease. And the support of the department of medicine, Rosenberg said, led to the development of the oncology specialty.

"Perhaps an equal accomplishment to the research in Hodgkin's disease is that of establishing the field of medical oncology as a respectable, successful field in internal medicine. I have had a major role in that at Stanford and we have been one of the strongest programs in the country. On a national scene, I've probably helped more people by helping establish this field and training physicians in it," he said.

The Hewlett Award consists of a certificate, a silver medallion depicting several figures from a sculpture symbolizing the award, and funds with which to buy books for the Hewlett Library.

The sculpture, housed in Stanford University Hospital's main lobby, was unveiled last spring. It depicts "man—his isolation intensified by disease—and the evolution of his integration with society through the intervention of the physician," according to Dr. Kenneth Melmon, chairman of the department of medicine.

All local members of Hewlett's family, including son William; daughter Louise Nixon; and grandchildren Walter, James, and William Hewlett, took part in the day's ceremonies.

—Shirley Kraus

Don't wrench autonomy from dying patients, says chaplain



"When people are conscious. . .decisions about life and death really do need to be checked out with them."

—Ernle Young

Patients slipping toward death in hospital intensive care units need help, but they are adults, not children, cautions a hospital chaplain.

When the kidneys, heart, and lungs begin to fail and death is imminent, there is often a temptation to make decisions for the patient, wrenching from him the last shreds of autonomy, said Dr. Ernle Young, chaplain at Stanford University Hospital and lecturer in medical ethics at the School of Medicine.

"The form of the relationship between caregiver and patient ought not to be 'parent-child' but 'adult-adult,' " Young said in a public lecture Wednesday evening, March 23. "This means that paternalistic decisions on the part of caregivers ought to be the exception rather than the rule. And the exception always requires justification."

In the last in a series of community lectures on progress and ethical dilemmas of intensive care, Young focused on the dying patient, and the ethical and emotional issues that permeate his care.

"Even though the patient may not be able to speak or to articulate anything, one of the skills that has to be acquired in the intensive care setting is learning to communicate with people who can't verbalize what they want to say," Young said in a related interview.

"One of the things you do is focus on nonverbal forms of communication. Another thing you can do is intuitively understand what they are trying to say, and express it for them. You say, 'is that how it is?' and you get a signal—maybe a squeeze of the hand—that says 'yes, that's what I'm feeling.' When people are conscious, all of these decisions about life and death really do need to be checked out with them."

In theory, permitting a conscious, competent patient to decide when artificial life support should be discontinued "scunds fantastic, but in practice is often very difficult," Young said.

"Some of us here tonight were up in the adult ICU earlier today where a lady, who was still conscious and who was party to the decision that aggressive treatment should be withdrawn, is now dying.

"It is a very much more difficult thing for caregivers and family alike to (be with) such a person in her dying than it would be if she were unconscious and out of it altogether," he said. "She is staring death in the face with enormous courage and peace."

When the patient is an infant or unconscious, and can't be consulted, the thorny decision shifts to the family and health care team. Though the family should assume an important advisory role, the physician and other members of the critical care team must take ultimate responsibility for deciding when to halt life support, Young said.

Such assertiveness on the physican's part might be considered paternalistic, Young admitted, but he added that the "irreversibility of disease is a uniquely medical decision."

But even the medical decisions are not always clear-cut, he said, describing the case of a man hospitalized for internal bleeding, who underwent 16 operations during his 14 months in Stanford's intensive care unit, and acquired a bill of $750,000 before his death.

"How long do you keep on going before you decide, 'OK, we've given it our best shot, the time has come to quit?' " Young asked. "In this case, the patient died before we quit—14 months and much suffering later."

Families who fear guilt feelings after assenting to termination of aggressive life support for a person who has no chance for recovery need to realize that "it's not the withdrawing of the support that kills a person, it's the underlying disease process," Young said.

—Deborah Franklin

Auxiliary celebrates landmark year for donations

The Auxiliary of Stanford University Hospital has passed the $1 million mark in contributions to the hospital since 1960. The record number of gifts was reached with this month's approval of a $28,000 project to fund *Lifeline*, a home emergency response program for the elderly and chronically ill.

Celebration of the landmark highlighted this year's Auxiliary reception, given last week at the Faculty Club by the board of directors and administration of Stanford University Hospital (SUH).

"I think it's very special to have given $1 million," said Auxiliary president Dee Gaynor to her co-members on accepting a plaque from SUH director and executive vice president Sheldon King. "We'll hang this proudly," she said.

Most of the money the Auxiliary dispenses is raised at the hospital gift shop, and almost all of the gifts are for patient care, approved upon department request. Examples of gifts this past year were a fluorescent microscope for the Department of Pathology, Social Services' patient care emergency funds, and two fetal heart monitors.

"We've worked very hard to get the sorts of things we want for the hospital," Gaynor concluded. *Lifeline*, King noted, will help keep the elderly safer at home and out of nursing homes longer. Components of the community service system should arrive at SUH within a month.

Gaynor, who has served as Auxiliary president for 1982-83, also received the gift of an antique white brass cooking pot from Korea, called a "shinselo," in honor of "her quick wit, compassion, and ability to forge ahead enthusiastically," as was inscribed on the pot.

Gaynor praised the efforts and cooperation of all Auxiliary members, encouraging them to lend the same support to her successor, Donnie Ellington, for the coming year. The total number of volunteer hours as of March, 1983, was impressively tallied at more than 1.6 million.

Other speakers at the well-attended event—which included cocktails, hors d'oeuvres, and a background of live music by the Benji Austin Quartet—were Dr. Donald Kennedy, chairman of the SUH Board and president of Stanford University; and Dr. Lawrence Crowley, vice president for medical affairs and president of the hospital.

Kennedy remarked, "I am here to extend the university's deepest gratitude and my own to all of you for all you do for the hospital."

The March 21 event was arranged by the Department of Community Relations, under the direction of Jeanne Kennedy. Buttons and balloons commemorating "our Auxiliary—one in a million" were distributed. This was the third time a reception was held for the Auxiliary, the first having been in 1980.

—Lisa Ames





Auxiliary members can be found everywhere at SUH, from the pediatrics playroom (left, Margaret Rice) to the gift shop (below, from left: Carol Davis, Laurie Cecil, and Dollie Mendelson), generating funds for numerous donations to the hospital.

Nursing gets grant to expand research training program

A grant to develop a research training program for practicing nurses has been awarded to Stanford University Hospital Nursing Services.

The three-year $600,000 grant from the Division of Nursing of the Department of Health and Human Services is the first such research training grant to a hospital nursing service department. Until very recently nursing research training was focused almost exclusively within university schools of nursing.

The project director is Duane Walker, R.N., M.S., associate director of SUH and director of nursing services.

"We believe that nursing research is a powerful tool nurses can use to bring about changes in the delivery of health care," said Walker, "and research findings contribute to the scientific basis of nursing practice."

The Stanford nursing research program is directed at integrating clinical research as a part of nursing practice.

The research training will be designed for nurses who are daily involved in the care of patients. "They are in the best position to identify the problems that need study. They are also in the best position to collect data with the least disruption of patient care and to propose and implement solutions," according to Dr. Lois Welches, associate director of nursing services. She and Dr. Marianne Zalar, assistant director of Nursing Research, will administer the project.

Goals of the project are to develop educational programs in research methods, provide consultation support to nurses throughout the research process, and provide facilities such as research sites, libraries and data processing mechanisms. Research courses and seminars will be conducted for beginning and intermediate level nurse researchers.

The training will be offered to practicing nurses from a consortium of eight Bay Area hospitals and a visiting nurses association, all located within a 35-mile radius of Stanford. The consortium was established in 1980 under Walker's leadership.

The nine agencies in the Research Consortium of Hospitals are: Stanford University Hospital, Children's Hospital in San Francisco, Mount Zion Hospital in San Francisco, El Camino Hospital in Mountain View, Mills Memorial Hospital in San Mateo, San Francisco Veterans Administration Hospital, Palo Alto Veterans Administration Hospital, Children's Hospital at Stanford, and the Santa Clara County Visiting Nurses Association.

Nurses from each of these institutions can join together to conduct studies over a far larger study base than would be possible alone.

A major problem encountered in clinical research, according to Welches, is obtaining an adequate study sample, since the patient's stay is so short. Data collection in all of the consortium agencies will yield a far greater sample as well as enable the researchers to generalize findings.

For example, a research proposal was developed at Stanford to compare two methods of treatment for decubitus ulcers, or bed sores. Nurses have the primary responsibility for the prevention and treatment of decubitus ulcers. Many methods of care are available, but no definitive treatment has been identified.

Stanford nurses collected data on two alternative treatments and made recommendations based on healing time, nursing time, and cost factors.

The Research Consortium has expanded this pilot study and data are currently being collected simultaneously in six of the consortium agencies. Results based on the larger study may lead to a change of treatment policy and greater impact on quality of patient care.

The Research Consortium is the only group of its kind in the country. "Hospitals throughout the country have asked to join," said Walker, "but more cannot be accommodated during the pilot phase of the project." He hopes, however, that the group will serve as a model for others.

Walker is committed to the need for nursing research within the hospital setting. "It is essential that we critically and systematically examine our practice if the optimal quality of care to patients is to be ensured," he said. —Barbara Battino



Dominick Purpura

Palo Alto endorses HMP in wake of access agreement

The Palo Alto City Council last Monday, March 21, reaffirmed its support for Stanford University Hospital's modernization program (HMP). Last year the council had made its endorsement conditional on the success of negotiations over community physicians' access to laboratory equipment.

While council endorsement is not required, the state and regional agencies which must approve all hospital construction projects review local community support while assessing whether the requested improvements are needed in the local area.

Ending more than four years of discussions, the hospital's board of directors March 4 approved an access plan which is acceptable to both the hospital and community physicians.

The agreement includes formation of a hospital board access committee to review applications and decide policies for access to new technologies. Earlier agreements had already established community physician access to most of the specialized labs, and ways to replace community physicians who currently have access when they retire.

Dr. Lawrence Crowley, president of SUH and vice president for medical affairs, said the hospital will file a "certificate of need" application for the HMP with the state and county after March 30. Scaled down somewhat in the last six months, the HMP had initially been priced at $123 million.

School implements fraud committee

A new committee to evaluate allegations of research fraud has been established at Stanford University School of Medicine, Dean Dominick Purpura announced in a March 4 letter to faculty members.

Though instances of verifiable fraud have remained "vanishingly small" nationally, Purpura said, "even a rare instance of scientific fraud damages science as an intellectual enterprise, violates expectations of fundamental trust and diminishes all who take special pride in a commitment to the pursuit of truth and excellence."

"It is sufficient for these reasons that we undertake a program for dealing with allegations of academic fraud swiftly, fairly, and honorably," he said.

Both the American Association of Medical Colleges and the National Institutes of Health have, in recent months, urged medical schools nationwide to establish such committees in an effort to curb research fraud.

While a protocol for disciplining an errant researcher has long been established at Stanford, evaluating the legitimacy of allegations has been "tortuous" in the past, Purpura said. "We now have a framework within which we can examine and resolve allegations swiftly."

Anyone who believes an act of academic fraud has taken place at the medical school should promptly contact the dean, who will notify the provost and president of the university, and refer the matter to the "Committee on Ethical Scientific Performance" for preliminary study, Purpura said.

A summary of the charge and results of the committee's findings are to be forwarded to the provost within four weeks of the initial allegations. The president then will determine whether formal charges should be filed in accordance with the process set forth in Stanford's long-standing "Statement on Faculty Discipline."

Both the dean's and president's inquiries will be confidential, to be made public or disclosed to research sponsors at the discretion of the president.

Members of the Committee on Ethical Scientific Performance are: Dr. Jack Barchas, professor of psychiatry; Dr. Roland Ciaranello, associate professor of psychiatry and chairman of the school's faculty senate; Dr. John Collins, professor and chairman, department of surgery; Dr. Stanley Falkow, professor and chairman, department of medical microbiology; Dr. David Korn, professor and chairman, department of pathology; and Dr. Kenneth Melmon, professor and chairman, department of medicine.

—Deborah Franklin



When patients need to be moved between hospitals, critical care transport plays crucial role

At the Palo Alto Airport (above), a five-week-old infant with severe pneumonia is rushed from air to ground ambulance on the way to SUH, by a specially trained Stanford medical team and equipment dispatched to retrieve the ailing child.

The Department of Critical Care Transport, formed in 1978 to provide high quality intensive care during interhospital movement of patients, epitomizes Stanford's role as a regional center for the critically ill.

The innovative service is credited with saving many lives. In 1982, 556 adult, obstetric, neonatal and pediatric patients were transported, most of them from community hospitals within 200 miles of Stanford. But the number of much longer-distance transports is also increasing.

The need for such a program lies in the increasing sophistication and costs associated with critical care; not every hospital has the staff and equipment to deal with critically ill patients, explained Dr. Alvin Hackel, director of the department.

An associated program is the Northern California Perinatal Dispatch Center (NCPDC), also directed by Hackel. NCPDC helps regional physicians quickly locate available intensive care beds for critically ill babies and high-risk maternity patients, and arranges for transport when requested.

Stanford pioneered the program in 1974, and it operated on a pilot basis until it received state funding in 1976. The outreach region for the dispatch center covers almost 200,000 square miles. A similar center that covers the lower part of the state is based at the Huntington Memorial Hospital.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MARCH 30

1983 Charles E. Culpeper Visiting Professorship Lecture: "The Effects of Radiation on the Normal Eye and Optic Nerve"—Dr Rodney Million (Univ. of Florida at Gainesville). 5 p.m., M106. *See listings below for Thursday and Friday Culpeper lectures.*

Basic Science Research Colloquium: "The Formation of Synaptic Connections Between Nerve and Muscle in Culture"—Dr. Bruce Wallace. 5 p.m., Fairchild Auditorium.

Div. of Orthopedic Surgery Grand Rounds: "Bone Grafting—Principles and Techniques"—Dr. Darrell Hayes, 7:30 a.m.; and "Electrical Stimulation of Bone"—Dr. John Csongradi, 8:30 a.m.; M114.

Div. of Clinical Pharmacology Seminar: "Approaching Membrane Bound Transport Systems of the Kidney: Looking for a Needle in a Haystack"—Dr. Richard Mamelok. 4 p.m., M110.

MARCH 30 through APRIL 1

Dept. of Dermatology: Practical Dermatology Conference. Wed. 8 a.m. till 5 p.m.; Thurs. 9:30 a.m. till 4:30 p.m.; Fri. 9 a.m. till noon. Fairchild Auditorium. For further information, call 497-7854.

THURSDAY, MARCH 31

Culpeper Visiting Professorship Lecture: "The Results of High Dose Radiation Therapy and Surgical Salvage for Carcinoma of the Pyriform Sinus"—Dr. Rodney Million (Univ. of Florida at Gainesville). 5:15 p.m., M112.

Div. of Otolaryngology/Head and Neck Surgery Clinical Survey Course: "Middle Ear Anatomy and Reconstruction"—Drs. George Wilson and Chris Daniell. Noon. M105.

Dept. of Medicine Grand Rounds: "Can Computers Help Us Teach Medicine?"—Dr. Roy Maffly. 8:30 a.m., Fairchild Auditorium.

Nursing Educational Services: "Pediatric Critical Care Course, Level I." 8 a.m. till 1 p.m., M112; 1:45 till 4:30 p.m., M104. For further information and to register, call Carole Kidder at 497-6366.

FRIDAY, APRIL 1

Culpeper Visiting Professorship Lecture: "Experience with Preoperative Radiation in Rectal Carcinoma"—Dr. Rodney Million (Univ. of Florida at Gainesville). 8 a.m., S092.

Div. of Child Psychiatry Grand Rounds: "The Health and Well-Being of Children in Institutions"—Dr. Saul Wasserman (San Jose Hospital) and Dr. Jerry Klein (chief of medical services, Santa Clara County Children's Institutions). 11 a.m. till 12:15 p.m., Faber Auditorium, Children's Hospital at Stanford.

Dept. of Biochemistry Seminar: "Functional Genes and Sites in Insertions Sequence of IS1 and Their Expression"—Dr. Eiichi Ohtsubo (Univ. of Tokyo). Noon, M316.

Div. of Family Medicine: "Transforming Stress into Creativity"—Margaret Buck (John F. Kennedy University). Noon till 1 p.m., M114. First in a spring lecture series on women and health to be held Fridays at noon. For further information, call 497-7043 between 8 a.m. and noon, or 497-6431 from 2 till 5 p.m. weekdays.

Dept. of Pediatrics Grand Rounds: "Long Term Outlook Following Surgical Repair of Congenital Heart Disease"—Dr. David Baum. 8 a.m., M106.

TUESDAY, APRIL 5

Dept. of Dermatology Lecture: "Metabolic Inhibitors of Cancer—Inducers of Oxidative Stress"—Ronald Pardini, Ph.D. (Univ. of Nevada). 10 a.m., Dermatology Library, R136.

THURSDAY, APRIL 7

Dept. of Biochemistry Seminar: "An Adenovirus Vector System for the Expresson of Eukaryotic Genes"—Carl Thummel, Ph.D. Noon, M316.

FRIDAY, APRIL 8

Registration deadline for Nursing Research Seminar: to be held **Friday, April 15.** "Nursing and Anthropological Research: More Than Passing Meds in the Congo." 8 a.m. till 4 p.m., Peninsula Covenant Church, 3560 Farm Hill Blvd., Redwood City. For further information and to register, call Betty Kibbe at 497-7062.

Dept. of Biochemistry Seminar: "Transposable Elements in *Zea mays*"—Dr. Peter Starlinger (Inst. for Genetics, Germany). Noon, M316.

TUESDAY, APRIL 12

Nursing Educational Services: "Critical Care Course, Level II: Multiple Trauma Symposium." 8 a.m. till 4:30 p.m., Faber Auditorium, Children's Hospital at Stanford. For further information or to register, call Carole Kidder at 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

What Shumway thinks of artificial hearts

In response to inquiries regarding the death in Salt Lake City of artificial heart recipient Barney Clark, Dr. Norman Shumway, chairman of Stanford's department of cardiovascular surgery, issued the following statement Thursday, March 24:

"The concept of an artificial heart is one that everyone must respect as an answer to the overall problem of heart replacement. However, the experience in Utah is indeed an indication that the idea is still very much in the development stage.

"The need for artificial devices as an interim measure while patients await biological hearts is crucial because of the chronic shortage of donor hearts."

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

...News Notes...



Armanda Holland

Armanda Holland, dietitian assistant at the Hoover Pavilion, has won the newly instituted Department of Dietetics Outstanding Employee Award for her exemplary job performance.

Recently developed to acknowledge exceptional service from dietetics personnel, the award will be given on a quarterly basis.

Employees nominated by their supervisors for the award are evaluated in three categories: creativity in improving some regularly-carried out responsibility or frequently-confronted problem; courtesy and good communications skills in dealing with their coworkers, supervisors, patients and visitors; and exceptional performance of their duties, showing keen judgment in solving problems and willingness to assume special responsibilities.

Holland was commended for developing a time-saving method of recording patient nourishments and testing her system on a small scale in her unit at Hoover.

Also noted were her special rapport with patients, self-confidence, dependability, and willingness to work extra hours when staff shortages occur. Her award includes a certificate and a $50 bonus.

Two other dietetics employees, Jim Barnes and Patsy Obayashi, were awarded honorable mentions. Barnes works in Sanitation, and Obayashi is in Clinical Dietetics.

* * * *

The Hospital Auxiliary has agreed to purchase three rocking chairs for the intensive care nursery (ICN), along with two transilluminators (a device which helps detect lung collapse) for the ICN and pediatrics units. Baby Photo proceeds will help pay for these items, which total over $2,500.

* * * *

The Department of Nursing publication **Nursing at Stanford University Hospital** *has won a merit award from the Western Art Directors Club in the "brochure" category.*

The recruitment magazine illustrates nurses in diverse hospital settings with individuals' comments about some of the gratifying aspects of their chosen specialties.

Among those specifically commended for the production of this brochure are the departments of nursing and community relations, Ronnie Welch of medical development for editing, Art Kirsch for art direction and design, and Mark Tuschman for photography.

Preoperative lab tests could be performed as much as seven days before surgery, if the hospital board and medical staff eventually approve a medical board recommendation made last month.

Currently, no tests conducted more than 72 hours before an operation may be used. Some physicians in private practice had objected to the old regulation, stating it discriminated against outside laboratories, and sometimes required that tests be duplicated unnecessarily at an SUH lab.

Both the old and proposed new rules require that preoperative lab work be performed in a state-approved lab that is also acceptable to the SUH director of laboratories.

The board accepted the recommendation of its bylaw committee, and the issue will now be submitted to a vote of the medical staff for final approval at the time they vote for other bylaw changes.

* * * *

Brian Wallace, a former pediatrics patient at SUH, has been named the Santa Clara County March of Dimes Poster Child for the second year in a row.

Brian, who is six years old, underwent surgery here in November, and is regularly treated at Children's Hospital at Stanford. He has cerebral palsy and cystic fibrosis.

Brian's mother Chris is a clinic services representative in Stanford's department of immunology.

One upcoming event Brian will help send off is the annual WalkAmerica walkathon, to take place April 24. Anyone interested in walking or sponsoring a participant should call Chris Wallace at 497-6001, or the March of Dimes, at (408) 297-1864.

* * * *

All Hospital exit doors are presently being modified for better security and handicapped accessibility, according to Ron Just, director of operations and maintenance.

Two exit stairwells, near the cafeteria and the Emergency Department, have been completed, and others will follow in the next few weeks.

The changes have come about for several reasons. Personnel had reported security hazards caused when damaged doors appeared closed and locked, but were easily opened. Replacement hardware became obsolete, and occasionally parts had to be specially made, Just said. Finally, when facilities are upgraded, certain codes require that they be made accessible to handicapped persons.

* * * *

"Communication with your Boss," "Eat Light," and "Meeting Management for Supervisors and Managers" are just a few of the classes being offered this spring, from April through June, by the Human Resources Development Department (HRD) of SUH.

To find out what courses are available this quarter or to register, call HRD at 497-5233.

A 10-year high for faculty affirmative action

...but the road ahead remains challenging. Senate to hear more from Hastorf

This is the 10th annual report to the Senate of the Academic Council on Faculty Affirmative Action. The report is being made in accordance with the February 1973 Senate legislation calling upon the Faculty Affirmative Action Officer to make an annual report to the Senate on the representation of women among Stanford faculty: 1) newly hired and 2) promoted during the preceding year. All such reports have included data about minorities as well as women.

All appointments are reported as of the academic year they become effective. Tables I and I-A show new apointments since 1972-73, of women and minorities to the Academic Council by school and division. They also show cumulative totals and percentages. There were a total of 18 women appointed to the faculty during the 1982-83 academic year. This represents the highest percentage (24%) of women faculty appointments during the past decade. The greatest gains were in the humanities area with 12 new faculty women appointments. There were a total of 11 minority faculty appointments, the greatest percentage (15%) over the past decade.

Tables II and II-A show new appointments by rank and also include cumulative totals and percentages. Table II displays that during 1982-83, there were 16 women appointed to the tenure line, including one at the level of full professor, and 2 at the nontenure line. There were 11 women appointed to the level of assistant professor which constitutes the highest percentage (28%) of appointments at that level during the past decade. In the past 10 years, there have been 147 women appointed to the Academic Council constituting 17% of all new appointments. There were a total of 11 minority faculty appointed to tenure track. Of these, 2 were at the level of full professor. Over the past 10 years, there have been 23 blacks, 31 Asians, and 19 Hispanics appointed which constituted 9% of all new appointments to the Academic Council.

Table III and III-A show the number and percentage of women and minorities in tenure line positions and with tenure. The number of tenured women has doubled since 1972 but the percentage of tenure line and tenured professors who are women continues to increase slowly. The number of tenured minorities has also shown considerable progress but it should be noted that the percentage of tenure line professors who are minorities has increased slowly.

Tables IV and IV-A show women and minorities at the nontenure line professoriate since 1980. Table IV shows a total of 10 women (9%) and 7 minorities (6%) who were appointed to the nontenure line professoriate.

Tables V and V-A reflect promotions to tenure, terminations and resignations, retirements, and deaths. Over the past decade, 29 women (11%) and 20 minorities (8%) have been promoted to tenure. During 1981-82, 4 women were promoted to tenure, the highest percentage since 1973-74. Half as many minorities were promoted to tenure. There have been 60 women and 29 minorities under terminations and resignations. While this continues to underscore the need for continued vigilance in the area of retention, it is important to note that the percentages involved are not much out of line with university norms.

Provost Hastorf will present further information about this report and other faculty and administrative affirmative action results at the March 31st Senate meeting.

continued on next page

TABLE I: New Appointments* to Academic Council by School and Division—Women

SCHOOL	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	Cumulative 1973-1983		
												F	M	F
Business	2					1		1			2	4	65	6
Earth Science							1	1				2	20	9
Education	1	2		1		1	1		4			10	19	34
Engineering	2				1		1		2	1	2	9	107	8
Humanities and Sciences:														
Humanities	6	4	3	2	5	2	2	2	3	2	12	43	100	30
Science & Math	2		1		1		1		1	1		7	114	6
Social Sciences	4	5	1	3	4		1	1	2.	3		24	87	22
Law						1	1		1			3	23	12
Medicine:														
Basic Science		1				1	2			1		5	26	16
Clinical Science	4	3	4	5	2	3	2	2	3	5	2	35	299	10
	F M	F M	F M	F M	F M	F M	F M	F M	F M	F M	F M	F	M	% F
TOTAL	21 60	15 89	9 76	11 74	13 83	9 79	12 71	7 75	16 65	13 73	18 57**	144	863*	17

* Appointments are classified by the academic year appointment was effective (9/1/AY - 8/31/AY); includes tenure line and non tenure line ranks.
** includes 3 non-minority male appointments at SLAC and SSRL.

Source: Annual Reports, Vice President and Provost's Office, Stanford University; complete documentation available from the Office of Management & Budget.

Minority students...

continued from page 1

The report notes that "Stanford conducts graduate recruitment for minority students and for women in science and engineering. Our efforts have developed in recognition of the legacy of discrimination which has excluded, to a large extent, members of these groups from graduate education opportunity.

Recruitment complex

"Minority recruitment, in particular, is a complex matter, precisely because of the pervasiveness of this legacy. Sometimes a minority student's talent and ability may be misread or undervalued by both the student and the graduate admissions officials.

"In addition, the details and benefits of a scholarly field or profession may be relatively unknown to the minority undergraduate whom we expect to recruit. The lack of minority role models in academe can deprive minority students of important mentor relationships and help to foster inhibitions about graduate work.

"Financial considerations are often viewed differently by minority students because of family background and family financial demands. The acclaim of Stanford has not reached some minority communities and, where Stanford is known, it is often seen as inaccessible.

"Given these circumstances, along with the highly selective nature of Stanford's academic-programs, our approach to minority recruitment must be diversified, sensitive, and persistent.

Promoting an idea

"The aim is to increase the number of minority students enrolled in graduate programs at Stanford, but the task includes promoting the *idea* of graduate studies among minorities nationwide, a task which will benefit Stanford in time.

"Women in science and engineering have also faced discrimination and remain underrepresented in these fields. Many factors, some of them akin to the minority experience, work to exclude women from these fields.

"As a major research university with excellent educational opportunities in science and engineering, we accept a special responsibility to recruit women graduate students."

Three assistant deans—Anne Medicine, Keith Naylor, and Noey Lozano—have responsibility for the four groups targeted for minority recruitment: American Indians, blacks, Chicanos, and Puerto Ricans. An associate dean, Jean Fetter, has responsibility for recruitment of women in science and engineering.

Faculty Affirmative Action/continued from page 14

TABLE I A: New Appointments to Academic Council by School and Division—Minorities

SCHOOL	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	Cumulative 1973 - 1983		
	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	M	Total	%M
Business	1 1 1			1				2			1 2	9	69	12
Earth Sciences	1						1				1	3	22	12
Education	2 2				1				1			6	29	17
Engineering	2 1		1	1						1	1	7	114	6
Humanities and Sciences:														
Humanities	1	1	1 1		1 1 2			1		2	2 1	16	146	10
Science & Math		1	1 1		2				1 1	1	1	9	120	7
Social Sciences	1	2	1	1 1		2	1		1	1 1	1	13	113	10
Law					1							1	26	4
Medicine:														
Basic Sciences												0	35	0
Clinical Sciences	1	2	1		1	1	1		1 1	2 1	1	13	340	4
	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H	B A H			
TOTAL	5 4 5	6 0 0	2 3 2	1 3 0	1 3 5	0 2 1	0 3 0	1 2 0	2 1 3	3 2 4	3 7 1	77	1017**	7
Total Minority	14	6	7	4	9	3	3	3	6	9	11			

* Appointments are classified by the academic year appointment was effective (9/1/AY - 8/31/AY); includes tenure and non-tenure line ranks.
Source: Annual Reports, Vice President and Provost's Office, Stanford University.
There was one Native American appointed in AY '72-73 in H&S, Humanities Division.
Key: B=Black; A=Asian;/Pacific Islander; H=Hispanic.
** includes 3 non-minority male appointments at SLAC and SSRL.

TABLE II: New Appointments* to Academic Council by Rank—Women

RANK	1972-73			1973-74			1974-75			1975-76			1976-77			1977-78			1978-79			1979-80			1980-81			1981-82			1982-83			Cumulative 1973 - 1983		
	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	F
Assistant Professor Subject to Ph.D.	6	10	38	2	5	29	2	11	15	2	10	17	1	5	17	2	8	20	1	6	14	2	5	29	4	7	36	1	5	17	3	8	27	26	80	25
Assistant Professor	9	35	20	10	52	16	4	42	9	9	42	18	9	37	20	7	44	14	11	35	24	4	44	8	8	29	22	11	46	19	11	28	28	93	434	18
Associate Professor	0	4	0	0	17	0	1	10	9	0	6	0	1	10	9	0	3	0	0	8	0	0	8	0	3	7	30	0	5	0	1	5	17	6	83	7
Full Professor	3	8	27	1	12	8	1	9	10	0	8	0	1	16	6	0	13	8	1	16	6	0	12	0	0	9	0	1	13	7	1	8	11	9	124	7
Sub-Total	18	57	24	13	86	13	8	72	10	11	66	14	12	68	15	9	68	12	13	65	17	6	69	8	15	52	22	13	69	16	16	49	25	134	721	16
Non-Tenure Line Prof & Assoc Prof Teaching	1	1	50	0	1	0	2	0	100	0	1	0	0	1	0	0	3	0	0	1	0	1	1	50	0	0	0	0	1	0	1	0	100	5	8	38
Prof & Assoc Prof Research	2	2	50	2	6	25	0	3	0	0	5	0	0	2	0	0	1	0	0	5	0	0	3	0	0	6	0	0	3	0	1	8	11	5	45	10
Professor Clinical							1	2	33	0	3	0	1	4	20	0	3	0										0	0	0	0	0	0	2	12	14
Assoc Prof Clinical													0	8	0	0	5	0	0	4	0	0	2	0	1	7	13	0	0	0	0	0	0	1	26	4
Sub-Total	3	3	50	2	7	22	3	5	38	0	9	0	1	15	6	0	12	0	0	10	0	1	6	14	1	13	7	0	4	0	2	8	20	13	91	13
TOTAL	21	60	26	15	93	14	11	77	13	11	75	13	13	83	14	9	80	10	13	75	15	7	75	9	16	65	20	13	73	15	18	57	24	147	812	17

Includes SLAC.
* Appointments are classified by the academic year appointment was effective (9/1/AY - 8/31/AY).
Source: Annual Reports, Vice President and Provost's Office, Stanford University; complete documentation is available from the Office of Management & Budget.

continued on next page

Faculty Affirmative Action/continued from page 15

TABLE II A: New Appointments* to Academic Council by Rank—Minorities

	1972-73			1973-74			1974-75			1975-76			1976-77			1977-78			1978-79			1979-80			1980-81			1981-82			1982-83			Cumulative 1973 - 1983				
	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	B	A	H	Total	M
Asst Prof Subj to Ph.D.	2		3				1			1					2	2			1										1		1	2		5	5	6	16	15
Asst Prof	2	4	1	4			1	2	2		3		3	1			1			2		1	2		1	1	2	3	2	2	2	3	1	14	23	10	47	9
Assoc Prof	1			2				1						1															1					3	1	2	6	7
Full Prof			1										1																		2			1	2	1	5	4
TOTAL	5	4	5	6	0	0	2	3	2	1	3	0	1	3	4	0	2	1	0	3	0	1	2	0	1	1	2	3	2	4	3	7	1	23	31	19	74	9
Total Minority	14			6			7			4			8			3			3			3			4			9			11							

Includes SLAC; does not include Adjunct Professoriate

* Appointments are classified by the academic year appointment was effective (9/1/AY - 8/31/AY).
Source: Annual Reports, Vice President and Provost's Office, Stanford University; complete documentation available from the Office of Management & Budget.

There was one Native American appointed in 1972-73 as a full professor.
Key: B=Black; A=Asian/Pacific Islander; H=Hispanic.

TABLE III: Women and the Tenure Line Professoriate

TENURE LINE PROFESSORIATE	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Headcount of Women	67	77	75	78	89	86	93	95	94	103	108
Headcount of Men	968	963	958	968	980	986	1010	1020	1032	1052	1043
Total Tenure Line Professoriate	1035	1040	1033	1046	1069	1072	1103	1115	1126	1155	1151
% of Tenure Line Professors who are Women	6.47	7.40	7.26	7.46	8.33	8.02	8.43	8.52	8.34	8.92	9.38
TENURED PROFESSORIATE											
Headcount of Tenured Women	24	29	27	25	26	29	32	35	38	43	48
Headcount of Tenured Men	652	657	676	685	699	723	736	752	766	777	785
Total of Tenured Professoriate	676	686	703	710	725	752	768	787	804	820	833
% of Tenured who are Women	3.55	4.23	3.84	3.52	3.59	3.86	4.16	4.45	4.93	5.24	5.76

NOTE: Includes ranks of Full Professor, Associate Professor, Assistant Professor and Assistant Professor subject to Ph.D.
All information as of September 1 of the academic year.

Source: Sex-Rank-Tenure Charts, based on the Professorial Faculty Data File. Complete documentation available from Office of Management & Budget.

continued on next page

Faculty Affirmative Action/continued from page 16

TABLE III A: Minorities and the Tenure Line Professoriate

TENURE LINE PROFESSORIATE	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Minority Headcount	50	55	55	66	71	72	72	77	76	75	84
Non-minority Headcount	985	985	978	980	998	1000	1031	1038	1050	1080	1067
Total Tenure Line Professoriate	1035	1040	1033	1046	1069	1072	1103	1115	1126	1154	1151
% Tenure Line Professors who are minorities	4.83	5.29	5.32	6.31	6.64	6.72	6.53	6.91	6.75	6.49	7.30
TENURED PROFESSORIATE											
Headcount of Minorites	20	26	29	35	39	41	43	49	49	48	51
Headcount of Non-minorities	656	660	674	675	686	711	725	738	755	772	782
Total Tenured Professors	676	686	703	710	725	752	768	787	804	820	833
% Tenured Minorities	3.00	3.79	4.13	4.93	5.38	5.45	5.60	6.64	6.09	5.85	6.12

NOTES: Includes ranks of Full Professor, Associate Professor, Assistant Professor, and Assistant Professor Subject to Ph.D.

Source: Sex-Rank-Tenure Charts, based on the Professorial Faculty Data File; complete documentation is available from the Vice Provost for Faculty Affairs.

TABLE IV: Women and the Non-Tenure Line Professoriate

	1980			1981			1982		
HEADCOUNT	W	M	%W	W	M	%W	W	M	%W
Professor and Associate Prof. (Teaching; Performance)	5	11	31	5	8	38	4	11	27
Professor and Associate Prof. (Research; Applied Research)	4	46	8	4	47	8	4	48	8
Professor (Clinical)	1	14	7	1	14	7	1	13	7
Associate Prof. (Clinical)	0	23	0	0	26	0	1	33	3
TOTAL	10	94	10	10	95	10	10	105	9

All information as of September 1 of the academic year.
.Source: Professorial Faculty Data File.

Faculty Affirmative Action/continued from page 17

TABLE IV A: Minorities and the Non-Tenure Line Professoriate

HEADCOUNT	1980 B	A	H	NA	Total	%M	1981 B	A	H	NA	Total	%M	1982 B	A	H	NA	Total	%M
Professor and Associate Prof. (Teaching; Performance)	1				16	6	1				13	8	1				15	7
Professor and Associate Prof. (Research; Applied Research)		1	1		50	4		1	2		51	6		1	2		52	6
Professor (Clinical)					15	0					15	0					14	0
Associate Prof. (Clinical)	1		1		23	9	1		1		26	8	1	1	1		34	9
TOTAL	2	1	2	0	104	5	2	1	3	0	105	6	2	2	3	0	115	6

All information as of September 1 of the academic year. Source: Professorial Faculty Data File.

TABLE V: Academic Council Promotions and Departures* —Women

	1972-73			1973-74			1974-75			1975-76			1976-77			1977-78			1978-79			1979-80			1980-81			1981-82			CUMULATIVE 1973 - 1983		
	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F	F	M	%F
PROMOTIONS TO TENURE*	2	18	10	6	19	24	2	30	6	1	27	4	1	22	4	3	36	8	3	21	13	3	16	19	4	22	15	4	14	22	29	225	11
TERMINATIONS AND RESIGNATIONS	4	57	7	5	53	9	3	61	6	7	41	15	5	42	11	6	46	11	8	42	16	10	39	26	*T2 *N3	11 29	15 9	T1 N6	9 34	10 15	60	464	11
RETIREMENTS	4	22	15	4	16	20	2	13	13	0	19	0	2	16	11	2	13	13	1	10	9	1	6	14	2	12	14	0	9	0	18	136	12
DEATHS**	0	2	0	0	0	0	1	2	33	0	0	0	0	0	0	0	5	0	0	0	0	0	2	0	0	1	0	2	0	100	3	12	20

*Promotions and departures are classified by the academic year they were effective (9/1/AY - 8/31/AY); data includes reappointments conferring tenure.
** Does not include emeriti deaths.

Source: Annual Reports: Vice President and Provost's Office, Stanford University; complete documentation is available from the Office of Management & Budget.

*T = Tenured
*N = Non-tenured

TABLE V A: Academic Council Promotions and Departures*—Minorities

	1972-73				1973-74				1974-75				1975-76				1976-77				1977-78				1978-79				1979-80				1980-81				1981-82				CUMULATIVE 1972 - 1982					
	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	B	A	H	NA	TOTAL	
PROMOTIONS TO TENURE*					1	2	1		1				1	2				2			2				1	1	1						1	2			1	1			6	7	7	0	20	3
TERMINATIONS AND RESIGNATIONS	1		1		1		1		1					1			1				1	2			3	2			2	4	1		*T	2		1	T				10	12	6	1	29	6
																																		*N	1	1		N		1	1					
RETIREMENTS													1					1																							1	0	1	0	2	1
DEATHS**																																	1								0	0	1	0	1	7

*Promotions and departures are classified by the academic year they were effective (9/1/AY - 8/31/AY); data includes reappointments conferring tenure.
**Does not include emeriti deaths.

*T = Tenured
*N = Non-tenured

Source: Annual Reports: Vice President and Provost's Office, Stanford University; complete documentation is available from the Office of Management & Budget.

SCIRE, SWOPSI seek codirectors

Noon hour informational meetings will be held Wednesday, April 6, Tuesday, April 12, and Thursday, April 14, in Old Union Room 590A for students who are interested in applying for a position as codirector of SCIRE or SWOPSI.

The directorship of these programs is shared by a professional and a student codirector. Each year two new students are selected to serve as codirectors from September through June.

Both positions are half time (20 hours per week), and the students have the option of enrolling half time for half tuition (eight units or fewer). The salary is in the administrative level range.

Responsibilities of the SCIRE codirector are student outreach, coordination of student applications, administrative liaison, administration of the Innovation Fund, general office work, and serving as an *ex officio* member of the Policy Board.

Responsibilities of the SWOPSI codirector are organizing and coordinating SWOPSI workshops and other public events, overseeing the process of course approval, catalogue production and other publicity, and acting as liaison for the program and the Policy Board with the community.

Applications for the two positions are due by 5 p.m. Wednesday, April 20. Questions should be directed to 497-4504.

Sample caterers' food

The Tresidder Catering Service will present its new catering manager, Linda Kim, the new chef, Justine Krantz, and some of their delicious menu options from 11:30 to 1:30 p.m. Friday, April 1, in Tresidder's Room 281.

Those who attend can sample the goodies and discuss their catering needs.

Speer...

continued from page 7

Speer comes from a tiny farming town in Iowa—Stanwood. "There were 62 in my class, including all the students from the next town. Most of my classes senior year had only four students."

She started studying the bassoon in sixth grade, and traveled almost every weekend, with her oboist sister, to nearby cities to play with youth symphonies, such as Cedar Rapids and Iowa City. "We entered many competitions and were well-known in eastern Iowa. My bassoon teacher at the University of Iowa was very disappointed when I decided to go to Stanford," she recalls.

Speer first heard of Stanford from fellow Sierra Clubbers on a service trip. "My parents said, why not apply? It was quite a shock when I got in!"

Her father is a large-animal veterinarian with a far-flung rural practice; her mother takes calls at home and relays them to him over a two-way radio and keeps the books. "They're straight out of Herriot's book *All Creatures Great and Small*," she recalls with affection. "It's perfect for them."

Speer's sister graduated from Yale and now goes to law school. One older brother is a flight test engineer in the Air Force; the other recently finished a master's degree in physics at the Navy's postgraduate school in Monterey.

Speer goes home about once a year. "Stanwood never changes, but my perception of it has. I used to feel insulted when people would comment on how flat Iowa is, but now I realize it is!

"It was a big change for me coming out here. One of the biggest shocks was people being rude to me for no reason. That doesn't happen in a small town—there is no impersonalized nastiness. If someone is rude to you, you know exactly why.

"I like Iowa, but there aren't enough jobs back there. I'd have to live in a city and I don't want to. Once you've been going at a faster pace out here in the Bay Area, life back there looks just too slow, but eventually I'd like to go back to a rural life. Wyoming is the type of place that attracts me. I would rather face challenges from nature than from people. But for now, I want to be here."

Dental insurance cost rises for some

Jeannie K. A. Thomas, manager of benefits and records, announces an increase in premium rates under the Stanford University Group Dental Plan.

Faculty and staff members who are not currently required to contribute to the cost of the dental premiums because of their appointment or the terms of a collective bargaining agreement will not be affected by the rate increase.

Those who are currently paying one-half of the dental premium because of appointment status will be affected by the dental rate increase. Participants in the Dental Plan who are on leaves without salary and paying the full cost of the premium will also be affected.

The rates under the Stanford University Dental Plan have remained unchanged since the implementation of the plan on September 1, 1980. The initial rates were based on a projected use of the plan and must now be increased to reflect the actual utilization of the past two-and-one-half years.

If you are currently paying for half the dental premium through payroll deduction, you will see an increase in monthly deductions beginning with your paycheck of May 22, 1983. Here are the rates effective June 1, 1983:

For	50-74% Time Your Monthly Contribution	Leave Without Salary Your Monthly Contribution
You alone	$ 5.62	$11.25
You plus one dependent	$10.29	$20.58
You plus two or more dependents	$16.76	$33.52

If, as a result of this rate increase, you should decide to cancel your dental coverage for yourself or dependents, you must wait 12 months before applying for coverage again.

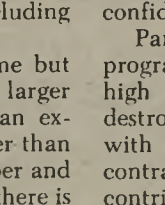
If you have questions or wish to change your coverage please contact the Office of Benefits and Records at 497-1776 or 1777. SLAC employees should call the SLAC Benefits office at 28-2357.

Four million copies

DURING THE MONTH OF MARCH 1983
the Stanford Word Graphics Copy Centers produced four million photocopies. This is a significant milestone of service to the University.

The University is dependent upon the timely and economical availability of the paperwork that supports its day-to-day operation. The cheerful, dependable service that we have come to expect from the copy centers is much appreciated.

Congratulations



Above is a citation presented to the Word Graphics Copy Centers by Vice-President for Business and Finance William Massy at a special celebration. The four million copies consumed 2.6 million pieces of paper (26,000 pounds). Seventy percent of the work was printed on both sides of the paper—if it had not been, four million sheets (40,000 pounds) would have been used.

Elsewhere on this page is a good suggestion on what to do with all those pieces of paper (if, of course, they're white) after you've read them.

Please RECYCLE white paper by itself

ASSU Recycling now offers small white bins for white paper only in addition to the large green ones many University offices are familiar with.

All paper that's white may be put into the white barrels, with the following exceptions: NO newsprint, glossy-finished paper, glue-bound books, cardboard, envelopes with self-adhesive labels or plastic windows, or carbons (including "carbonless" carbons).

Computer paper is also welcome but often is better accommodated in a larger green barrel. White paper with an excessive amount of colored ink (other than black ink) is classified as mixed paper and should be put in a green barrel. If there is no green barrel for mixed paper at hand, ASSU Recycling asks that the mixed paper be stacked to the side of the white bin.

The white paper program began in 1980, after a human biology environmental policy course discovered that the University processed 25,886 reams of white paper or 13,000,000 sheets (about 2,500 miles if laid end to end) during winter quarter 1979. ASSU Recycling services more than 40 offices and departments with white barrels now and will add more as requested.

Long-fiber white paper is considerably more valuable than lower quality newsprint, explains Leslie Young of ASSU Recycling. It is cheaper to make paper from used white paper than from a mix of papers, and the product is more satisfactory.

Separating white paper from mixed paper at the source saves many hours of very tedious work for the recyclers. The small white bins can be put right next to a desk or a copy machine.

Last year the recycling program initiated a new white paper/computer paper project on a larger scale specifically for confidential material. Large three-cubic-yard dumpsters, complete with lock and key, were placed at four locations on campus which generate high volumes of confidential papers.

Participants are very satisfied with this program. No longer do they have to pay high haulage or incineration fees to destroy the papers—ASSU Recycling deals with a reliable, certified destruction contractor. In addition, these offices are contributing used paper to be made into new paper products, thus helping to conserve dwindling resources. There is no cost to them, and the paper generates revenue for the nonprofit, student-run recycling project.

During this school year, ASSU has recycled approximately 5.3 tons of computer paper and 5.6 tons of white paper per month. Last year's total volumes were 59.52 tons of computer paper and 56.89 tons of white paper.

Volumes are steadily rising and could increase drastically if all paper at Stanford were recycled. White barrels are ready at the recycling yard on Pampas Lane for assignment to needy offices. The large dumpsters for confidential material can also be ordered through ASSU Recycling—locations are worked out with the Planning Office.

For answers to questions or more information about the recycling projects, call ASSU Recycling, 497-0915.

Academic Council

TO MEMBERS OF THE ACADEMIC COUNCIL
NOTICE OF MEETING
Friday, April 1, 1983

A meeting of the Academic Council will be held on Friday, April 1, 1983, beginning at 4:15 p.m. in the Physics Lecture Hall (ph100).

Agenda for the meeting will be as follows:

1. Minutes of the Council meeting held on February 3, 1983 (Draft minutes below)
2. Memorial Resolutions:
   Cly H. Hatcher
   Frederick E. Terman
   Harry A. Williams
3. Report on Senate activities Autumn Quarter:
   A. L. Fetter, Chair
4. Report from the President
5. Unfinished business
6. New business
7. Adjournment

Clara N. Bush
Academic Secretary

Draft minutes of the meeting of the academic council

February 3, 1983
(Subject to Approval)

The Winter Quarter meeting of the Academic Council was held on Thursday, February 3, 1983, beginning at 4:15 p.m. in Room 290 of the School of Law with President Donald Kennedy presiding.

The minutes of the last meeting of the Academic Council, held on October 8, 1982, which had been published in *Campus Report* on January 26, 1983, were amended as follows: The paragraph announcing Eric W. Wright as the recipient of the John Bingham Hurlbutt Award for excellence of teaching in the School of Law was corrected to read "...the son of a distinguished Stanford professor...." The minutes were accepted as amended.

The following memorial resolutions were presented to the Council:

MEMORIAL RESOLUTION
LOREN R. ("YANK") CHANDLER
1895-1982

Professor William Northway presented a resolution in memory of the late Loren R. "Yank" Chandler, Emeritus Professor of Surgery, who died on October 16, 1982. The resolution was prepared by Emeritus Professor David A. Rytand (Chair), Professor Robert A. Chase, and Emeritus Professor Roy B. Cohn.

MEMORIAL RESOLUTION
ANTHONY E. SOKOL
1897-1982

Professor Robert C. North presented a resolution in memory of the late Anthony E. Sokol, Emeritus Professor of Political Science, who died on November 11, 1982. The resolution was prepared by Emeritus Professor Robert A. Walker, Professor Robert C. North, and Emeritus Professor Kurt Steiner.

MEMORIAL RESOLUTION
JAMES T. WATKINS IV
1907-1982

Emeritus Professor Kurt Steiner presented a resolution in memory of the late James T. Watkins IV, Emeritus Professor of Political Science, who died on September 27, 1982. The resolution was prepared by Emeritus Professors Kurt Steiner (Chair) and Robert A. Horn, and by Professor Robert C. North.

The three memorial resolutions were adopted by the Council in the customary manner.

Memorial Resolution
Cly Howard Hatcher, M.D.
1900-1982

Cly Howard Hatcher, M.D., Emeritus Professor of Surgery and former Head of the Orthopaedic Division of the School of Medicine died December 19, 1982 of a massive heart attack from which he never regained consciousness. Memorial services were held at St. Bede's Episcopal Church on January 3, 1983. He is survived by his three children, Barbara, Nancy, and Henry. His lifelong companion and devoted wife, Annabel, died in 1981, leaving a great void in his life.

Howard Hatcher was a product of the West, having been born in Porterville, California on January 13, 1900. After graduation from Chaffee Union High School, Ontario, California in 1918, he joined the U.S. Navy in which he served as a medical corpsman during World War I until 1919. He entered the University of California, Berkeley in 1920 and obtained his A.B. degree in 1924. His Medical School was the University of California in San Francisco, where he was awarded the M.D. degree in 1929.

In the middle of his medical education he married Annabel in 1927. He did his internship at the U.S. Naval Hospital, San Diego, from 1927-28, but found that it was not recognized by the University of California where he applied for a residency in Orthopaedic Surgery. As a result, he repeated his internship at the Southern Pacific Hospital in San Francisco in 1928-29.

This era of his Far Western education ended in 1930 when he volunteered to become the first resident in Orthopaedic Surgery at the new University of Chicago School of Medicine. It was here that he came under the influence of Dallas Phemister, M.D., Professor of Surgery. Together they built an intense interest in bone pathology, and for the next 30 years laid the foundations for contemporary orthopaedic surgery as Howard Hatcher progressed from resident in Orthopaedic Surgery to a full professor at the University of Chicago in 1950.

In 1960, the Hatchers moved to Palo Alto to head the Orthopaedic Division of the Department of Surgery in the newly-built Stanford Medical School that moved from San Francisco. Dr. J. Garrot Allen, the new Professor of Surgery and former colleague of Dr. Hatcher, had recruited him to take on this new venture when most men were thinking of retirement. The move from the City to the Farm was disruptive. Only a few stalwarts from the old Stanford, such as Dr. Roy Cohn, came down from the City. Dr. David Hunt, a medical student at Stanford at the time, and now a Hatcher-trained practicing orthopaedic surgeon, wrote that when Dr. Hatcher arrived at Stanford "an authentic hero had arrived; the magnetism and the authority radiated." Three of that group of six surgical interns were drawn to orthopaedics that year!

In 1965 Howard became Professor Emeritus of Orthopaedic Surgery, but remained with us as our teacher of orthopaedic pathology, patiently sitting on the other side of the microscope tutoring every resident for the next 15 years, and acting as the consultant for the faculty of the Orthopaedic Division.

He gained an international and national reputation in the diagnosis and treatment of bone tumors despite the fact that his curriculum vitae consisted of only 18 publications. He held fast to the belief that publication for publication's sake was useless.

Dr. Hatcher brought a meticulous scholarly approach to orthopaedics. He continually sought ways to improve the accuracy of diagnosis of difficult conditions, particularly benign and malignant tumors of bone. He was gifted in devising surgical approaches, combining a high likelihood of cure with minimal compromise of function. He always pursued a detailed knowledge of his patients so that they felt bound by his genuine interest in their lives; they would write him of marriage, child rearing, and family events, as well as reporting their physical status. His was the ultimate extended family.

Because of his scholarship in the field of bone pathology and its clinical correlations, radiologists and pathologists, as well as orthopaedic surgeons, will long remain in his debt for the advances he made in this field.

When you look for his monument, we must document the extraordinary circle of academicians in orthopaedics who were his graduate students at the University of Chicago: Professors James S. Miles (Colorado), J. Crawford Campbell (Boston), William F. Enneking (Florida), Michael Bonfiglio (Iowa), Eugene R. Mindell (Buffalo), Thomas D. Brower (Kentucky), Henry J. Mankin (Boston), and the late Mary Sherman (Dallas) and John J. Fahey (Chicago).

When he was an intern in Chicago, the chairperson of this resolution learned about Howard Hatcher from one of his former University of Chicago students, John J. Fahey, M.D., one of the "Hatcher" orthopaedic surgeons to become national and international leaders in the field. He said, "Howard Hatcher was different." Indeed he was! His difference was in strict scholarship without oen taint of political motivation, sometimes a painfully direct comment, and scrupulous honesty in all his relationships. In 1973, the Orthopaedic Division under the leadership of Donald A. Nagel, M.D., established the Howard Hatcher Visiting Professorship, which has now become an annual event to ensure our memory of his contribution to orthopaedic surgery, and to rekindle his scholarly approach to patient care as a model for the faculty and students.

Eugene E. Bleck, M.D., Chair
Harry Oberhelman, M.D.
Henry H. Jones, M.D.

Memorial Resolution
Frederick Emmons Terman
1900-1982

Frederick Emmons Terman, provost emeritus of Stanford University, died in his sleep at his campus home on December 19, 1982. A memorial service was held on January 4, 1983 at the Stanford Memorial Church. He is survived by three sons, Frederick, Terence, and Lewis, and by five grandchildren. His wife of 47 years, the former Sibyl Walcutt, died in 1975.

Fred Terman was born in English, Indiana, on June 7, 1900. He was the son of Professor Lewis M. Terman, the psychologist who developed the Stanford-Binet intelligence quotient after moving to Stanford in 1910.

Fred grew up on the campus and acquired an early interest in radio. He obtained a bachelor's degree in chemical engineering in 1920, following this with the engineer's degree in electrical engineering two years later, under Professor Harris J. Ryan. He received his doctorate at MIT in 1924 under Professor Vannevar Bush. He then contracted a severe case of tuberculosis which required nearly a year's convalescence. In spite of this handicap, he was able to undertake part-time teaching at Stanford, and to begin the first of a series of textbooks on radio engineering. The success of these volumes enhanced Stanford's reputation in engineering on a nationwide basis. He became an assistant professor in 1927 and in recognition of his teaching and writing ability was made full professor and head of the department in 1937. His reputation was such that in 1941 he was named president of the Institute of Radio Engineers—the first person so chosen who lived farther from New York City than Rochester.

Always keenly interested in and dedicated to the University, his Stanford career was interrupted only during the Second World War when he was called upon to organize an 800-person government laboratory at Harvard University whose purpose was to develop anti-radar devices. As a result of his wartime responsibilities, Terman became part of a relatively small group of individuals who exerted great influence on U.S. science policy for the postwar period.

In 1946 he returned to Stanford as Dean of Engineering and began the program of faculty selection and organizational innovation that brought the Stanford School of Engineering to the forefront among American universities. He did this by recognizing that in the postwar period there were opportunities to obtain government support for basic research and graduate study in the universities without compromising their traditional independence. In addition, he perceived that an organized interaction with local high-technology industry could provide not only

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Academic Council. . .

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REPORT ON SENATE ACTIVITIES:
AUTUMN QUARTER 1982-83 A. L. FETTER, CHAIR

Following is the text of the February 3 report on the previous quarter's Senate activites as presented by A. L. Fetter, Chair of the Fifteenth Senate of the Academic Council:

During Autumn Quarter, 1982-83, the Senate heard the customary annual reports of the previous year's work from standing committees of the Academic Council.

The Committee on Undergraduate Admissions and Financial Aids reviewed Stanford's current financial aid policy and practice, strongly endorsing Stanford's need-blind admissions policy and highly commending the admissions office operations and personnel. The committee noted that applicants from middle income levels are now most vulnerable to rapidly rising tuition costs and decreased availability of financial aid. The committee intends to monitor this development. It is also studying the completion of bachelor's degrees, in relation to students' financial aid packages and their non-financial needs.

On the recommendation of the Committee on Graduate Studies, the Senate voted to establish two new interdisciplinary graduate degree programs (an M.A. program in International Policy Studies, and a Ph.D. program in Medical Information Sciences) and to extend two others that had been favorably reviewed (Biophysics and Neurosciences). The Senate expressed concern, however, about the proliferation of graduate interdisciplinary programs and the need for continuity and perspective in their review. It charged the Committee on Graduate Studies to consider drafting for Senate approval sunset legislation for graduate interdisciplinary programs. The proposed review procedures and master review schedule should specify the Senate's role.

The Committee on Academic Appraisal and Achievement, in addition to its regular yearly work, reported on the Registrar's implementation of the Revised Pass/NC Policy. This spring, it intends to report the extensive work of its Subcommittee on the Evaluation and Improvement of Teaching.

The Committee on Libraries, and its guest Dr. Patricia Battin, Director of Libraries at Columbia University and Acting President of the Research Libraries Group, described recent developments and improvements in the Research Libraries Information Network (RLIN). Automated circulation at Stanford remains infeasible for the immediate future, however, because available systems are either prohibitively expensive or too restrictive for RLIN purposes.

The Committee on Undergraduate Studies summarized its timetable for the review of extradepartmental undergraduate programs and its work last year as a committee of the whole on the new distribution requirements. This year a new subcommittee will consider criteria for distribution requirements, and the new Curriculum Committee in the School of Humanities and Sciences should assume responsibility for reviewing those extradepartmental programs confined within the School. These developments should ease the recent heavy work load for C-US.

The Committee on Research recommended two changes in University policy, both of which were endorsed by the Senate: one established third-party University oversight of faculty employment of Stanford students outside the University; the other amended the Secrecy in Research Guidelines by significantly shortening the allowed publication delay of research results.

In addition to these six annual reports, the Senate heard an interim report from the *Ad Hoc* Committee to Study the Question of the Length of Academic Terms. That committee, which expected to present its final report by the end of the quarter, was unable to agree on a single new system that affirmed all educational values. The split between adherents of the quarter and semester systems was principally along disciplinary lines. Attempts to devise a compromise, e.g., five-week units ("Golubs") to produce terms of various lengths, were judged too complex and also too burdensome on the advising system.

The Senate spent a large part of its Autumn Quarter on University budget problems, particularly the shortfall in the recovery of indirect costs and the resulting effect upon the long-range financial forecast. Provost Hastorf detailed the gap between projected income and expenses based on standard and explicit assumptions, and then outlined the administation's proposals for closing the gap over the next few years. Vice-Provost Lieberman and Associate Controller Riddle summarized the procedure for determining indirect costs and for negotiating their recovery. They also discussed the factors that drive up indirect costs. The administration will continue to solicit faculty opinion on indirect cost recovery and budgetary control. The goal is to restore the University to financial health in as short a time as possible without undue damage to its academic integrity.

Memorial Resolution
Harry A. Williams
1901-1982

Harry Andrew Williams, Emeritus Professor of Civil Engineering, died of a brain tumor on Christmas night, December 25, 1982, at the age of 81. Williams devoted most of his professional life to the University and was a Stanford man through and through. His attention to the welfare of the Civil Engineering Department, and particularly to its students, is probably without parallel.

Williams was born in Fallon, Nevada, on August 7, 1901. In 1916, his family moved to the Santa Clara Valley, where he completed his high-school education in Santa Cruz and San Jose, graduating in 1921. He attended the College of the Pacific (then located in San Jose) for one year; he then transferred to Stanford where he received the AB degree in Civil Engineering in 1925. For the next five years, he worked as a professional engineer for the Standard Oil Company, rising quickly from draftsman to design engineer.

In 1930, Williams returned to Stanford, again majoring in Civil Engineering, to work toward the Degree of Engineer, which he received in 1933. For the first year of his graduate program he was also a part-time teaching assistant, and for the next two years, a part-time instructor. His thesis was a pioneering study of the newly-developed relaxation method for analyzing statically indeterminate structures.

On receiving his degree, Williams joined the Civil Engineering faculty, serving successively as instructor (1933-36), assistant professor (1936-41), associate professor (1941-51), and professor from 1951 until his retirement in 1966. He was recalled to active duty in 1967-68, thereby completing 38 years of devoted teaching. His primary fields were engineering mechanics, structural engineering, soil mechanics, design of foundations, and marine structures. In later years most of his teaching was at the graduate level, but he maintained a strong interest in undergraduate education and always taught at least one undergraduate course each year.

In his teaching and research, Williams was not only a pioneer but also a cooperative faculty member when the department's interests were at stake. For example, during the World War II era, he saw a void in Stanford's Civil Engineering curriculum in the then-developing area of soil mechanics, now called geotechnical engineering. To fill this gap, he developed a soil mechanics laboratory and created undergraduate and graduate courses which he taught until 1966. He covered these same subjects at the University of Hawaii in 1966-67 and 1969-70. A similar developmental role in the area of foundation design was also a Williams contribution, thus demonstrating his unusual ability to do teaching and research in many areas of structural engineering. His early investigations were in the Stanford "Vibrations Lab," located in what is now the Havas Building. He studied the effects of dynamic loads on buildings, with Professor Lydik Jacobsen, and the fatigue properties of building materials. Later, with Professor Jack Benjamin, he performed a series of now classical experiments on shear walls (structural walls designed to resist the horizontal shaking of buildings during earthquakes). Other investigations included the behavior of light-weight concrete, masonry, and plywood. He published numerous articles in these fields.

Harry served as an occasional consultant to industrial firms on stress analysis, materials, and vibrations problems. His clients included Douglas Aircraft, Corps of Engineers, U.S. Bureau of Reclamation, Tracerlab, and Westinghouse. In addition, he spent 15 months (1949-50) on research at MIT and two separate years after retirement as a visiting professor at the University of Hawaii, where he helped organize a new Department of Ocean Engineering.

Williams was a responsive and willing adviser, both academic and personal, to numerous graduate and undergraduate students. Harry and his wife Gertrude opened their home to those who needed counsel and friendship, whether related to academic, employment, or personal matters. For several years, he was Faculty Adviser to the Stanford Student Chapter of the American Society of Civil Engineers. In all of his work, he was a true professional, participating actively in several engineering organizations. Professionalism characterized his teaching as well; technical subjects were presented with an emphasis on professional practice and professional ethics.

Within the department, Harry's gentleness served well. Often, he was the conciliator and peacemaker, undertaking roles that no one else desired, and in his quiet way he calmed many a controversy. Faculty and students alike both loved and respected him. Through his association with the Bechtel International Center, where his wife Gertrude worked for many years, he spent many hours with visiting scholars, particularly from Japan, who desired an informal opportunity to improve their conversational English.

Harry's friendliness was outstanding, whether it be a game of golf, a lunch at the Seniors in Retirement monthly meeting, or a chat by the swimming pool. He was willing to work with you on refurbishing your golf clubs or to listen to your latest joke. He knew your interests and would lead you to discuss them. As both a good listener and a sharp questioner, a discussion with Harry was a fruitful experience.

He is survived by his wife of more than 50 years, Gertrude Smoyer Williams; a son, Brian Kirk Williams; a daughter, Susan Williams Lyons; five grandchildren; and two sisters. A memorial service was held on January 6, 1983, in Stanford Memorial Church. Harry is sadly missed by his many friends.

A. L. London, Chair
C. H. Oglesby
J. M. Gere

Memorial Resolution
FREDERICK EMMONS TERMAN

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financial assistance but intellectual support and stimulation as well for both faculty and students. Terman was extraordinarily successful in creating what he called "a community of scholars."

Terman became provost in 1955, and from 1959 served in addition as vice-president of the University until his retirement in 1965. During that period he devoted his full energies to developing the University as a whole. It was widely agreed that he and President J. E. Wallace Sterling constituted a remarkably effective team. Particularly evident during this interval was Terman's ability—characteristic of his entire career—to think constructively about the future, and to act accordingly.

Terman achieved during his lifetime a truly international reputation. He received five honorary degrees and was decorated by three governments. He held the highest U.S. civilian awards—the Presidential Medal for Merit, and the National Medal of Science.

Fred Terman was a giant in vision, innovation, and achievement, but he never lost his humility. He was always available to junior faculty, graduate students, and former students. His wisdom and clear reasoning influenced the personal and professional lives of an extraordinary number of people, and as David Packard has said, "He was responsible more than any other single person for the position of excellence Stanford now enjoys."

Oswald G. Villard, Jr., Chair
William R. Rambo
Ralph J. Smith

Report from the president

President Kennedy devoted his report to a review of the problem of indirect cost recovery.

This year there has been a significant reduction in the recovery of indirect costs associated with sponsored research projects. This has resulted in increased pressure on other sources of income, e.g., tuition, and has prompted significant efforts at expense reduction and internal reallocation of funds.

In reporting the history and status of indirect costs over the past decade, President Kennedy defined direct and indirect costs, specified how indirect costs are figured and negotiated, and discussed the interrelationships among indirect cost rates, research volume, and unrecovered costs. He surveyed the rise of indirect cost rates in recent years, outlining the factors which have contributed to significant increases in the rate at Stanford and at other similar institutions.

Having reaffirmed Stanford's policy of fully allocating research costs and fully recovering them, pointed to the economic and political realities which may prevent our recovery of full indirect costs on research, currently and in the immediate future:

1) Fixed indirect costs are currently spread over fewer projects because of a low rate of research volume growth.
2) Actual rates of indirect costs over the past few years have exceeded the negotiated rates, resulting in large positive carry-forwards.

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Both these factors will tend to drive up indirect cost rates to unacceptably high levels, and to strain relationships between research faculty (who are concerned about the political climate in Washington and about their competitive status versus that of their counterparts in other institutions) and administrators (who are responsible for full indirect cost recovery on behalf of the University).

These conditions may lead the University to modify, for the immediate future, its practice of pressing for full recovery of indirect costs. Stanford plans to take the following steps in the next year or so to ameliorate this problem:

1) Ease the immediate push for full indirect cost recovery as a concession to current political and competitive forces;
2) Work to gain understanding here and in Washington of the reality of indirect costs;
3) "Back up" to full recovery of indirect costs by reducing indirect expenses as much as possible consistent with our other responsibilities.

These actions will be taken to limit the risks to Stanford's principal investigators and to private research universities in today's political climate, while at the same time working for the University's return to full overhead recovery. The full text of President Kennedy's Academic Council report on indirect costs was published in *Campus Report* on February 9, 1983.

At the conclusion of his report, President Kennedy has asked how the indirect cost rate will be set if it is not based on the principle of full recovery. He responded that it then must be set much as any other price is set, by approaching full recovery as close as we dare, considering market and competitive factors as well as the political forces at work. Price-setting is said to be the toughest and most "seat of the pants" judgment that organizations ever have to make.

He was asked how this short-run change in recovery practice would affect the recovery of the very large amounts the government now owes the University because of underrecovery in past years. He responded that arbitrary limitations on recovery rates (self-imposed or otherwise) will make full recovery of all present carryforwards virtually impossible.

In response to a final question about effecting full recovery through cutting indirect costs, President Kennedy emphasized that no one effort alone is likely to bring us into a full recovery mode; it will take cutting of indirect costs, increased research volume, and also increasing the understanding of those in Congress and in federal funding agencies about the reality of indirect costs.

There being no further questions, President Kennedy then introduced Dean F. Hargadon, who reported from a broad perspective on the undergraduate admissions picture at Stanford. Dean Hargadon, whose report was laced with wry comments and illuminating tabular data, made a number of major points:

1) It is not everyone's dream in life to attend Stanford. Only 14,000 of the approximately three million high school graduates in a given year even apply. Of those admitted to Stanford, there is no reason given by a student for coming to Stanford that is not cited by another as the reason for not coming to Stanford.

2) The potential college applicant pool in a given year is far less manipulable than is generally assumed to be the case.

3) Significant changes in the makeup of a student body are possible over time. In the last fifteen years at Stanford, at least three noteworthy trends have been established:
   a) an increase in the number of the minority students enrolled (18 % of the current freshman class as compared to 3% in 1966);
   b) an increase in the number of women enrolled (42% of the current freshman class as compared to 32% in 1966); and
   c) an increase in the number of different secondary schools from which our applicants, admits, and enrolled students come (applicants from 4,059 schools in 1982 as compared to 2,614 in 1966; enrolled students from 991 schools in 1982 as compared to 653 schools in 1966).

4) Sheer geographical proximity to particular institutions of higher education exerts a strong influence on the college application and enrollment decisions of high school seniors. The great majority of students in this country attend college within 400 miles of their homes. Even institutions like Harvard and Stanford, with an obvious national spread among enrollees, show strong evidence of this geographical effect in their enrollment patterns.
5) For colleges like Stanford, the rather sharp decline in the absolute numbers of students scoring at the highest levels on one or another national standardized test is far more significant than the more highly publicized declines in the mean test scores. In 1982, for example, fewer than half as many students scored above 700 on the Verbal SAT (i.e., 8,240 as compared to 17,560 in 1972), or above 750 on Achievement Tests in English Composition (i.e., 1, 302 as compared to 2,918 in 1972). The declines are not all so dramatic, but they occur in all fields and at all levels.

The Stanford applicant pool has steadily increased in size and in the proportion of students who achieve very high scores on standardized tests. Stanford's practice of favoring those applicants whose academic programs appear to have been most rigorous helps to balance whatever limitations the test scores may have. The percentage of freshman applicants admitted each year has declined from 52% in 1948 to 18% in 1982; the percentage of transfer applicants from 23% in 1972 to 8% in 1982. Stanford applicants, by and large, reflect the changes with regard to career patterns which occur nationally.

Dean Hargadon closed with three additional points:

1) Achieving some admissions balance overall is a continuing goal, but it is simply impossible to achieve in any absolute sense. Maximizing any single criterion means that something else has to give.
2) The present basis for calculating need for financial aid appears to penalize frugality and reward families who spend their money on luxuries rather than save for higher education. This is a knotty problem, however; for whatever reason, the student does need financial aid to accept admission.
   Unfortunately, financial aid is now too often expected as a right, and not fully appreciated when it is received.
3) The recent NCAA legislation on athletic eligibility needs to be revised. Some sort of rule whereby colleges would be allowed to award incoming athletic scholarships only in proportion to *graduating* seniors who had been on athletic scholarships would help ensure that students' educational needs and interests were not overlooked, and would raise the academic standards of intercollegiate athletics everywhere.

Dean Hargadon's stimulating presentation was received with thanks.

There being no further business, the Academic Council adjourned at approximately 5:30 p.m.

Clara N. Bush
Academic Secretary

Imposing end-use criteria on research would hurt science, Lieberman says

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university. Most contribute only indirectly to the national defense and much other non-Defense Department funded research contributes in a similar way.

"Almost all research can be said to have some military utility. What I am concerned about is that a general move. . . in this direction will produce a narrowing of the intellectual life here.

"Stanford can contribute best to the national defense by the broad excellence of its research and training. . .

"Some of the more specific hazards I see are the following:

"Problems such as those presently visible at SSRL will occur where an outside group such as SLAC finds itself in 'involuntary servitude' to a weapons-related project.

"Groups from outside the University may continue to purchase the use of Stanford facilities (like SSRL), removing them from the control of Stanford faculty and staff.

"Programs with short-term relevance may become classified as secret, causing the work to be discontinued, with bad effects on students and staff.

"Programs with immediate relevance to military uses may be subject to pressures for expansion and priority which affect other research."

In a separate interview, Vice Provost Gerald Lieberman, dean of graduate studies and research, said there was "no objecting to the faculty reviewing our criteria. The Committee on Research did that when the issue first arose."

These criteria bar secrecy in research on campus, but impose no limits based on prospective end use of the research.

"Personally, I feel the criteria are very reasonable," Lieberman said. "Imposing an end-use criterion could be detrimental to the progress of science in the U.S."

While he will be in London when the Senate discusses the issue, Lieberman expressed his personal opinion that it would be "just as appropriate, and much more relevant" to discuss "mission-oriented research" rather than "weapons-related research," a more inflammatory term.

In the fiscal year ending Aug. 31, 1982, he said, about $24 million of research expenditures at Stanford came from the Defense Department. Total research volume was $123 million, excluding $61 million paid SLAC from the Department of Energy.

Both the National Science Foundation and the Department of Health and Human Services accounted for a larger share of Stanford research volume than did Defense.

But the overall share of Stanford research funding from Defense has risen, in line with national trends. In fiscal 1981, Defense accounted for $22 million of a $120 million total, excluding SLAC. In fiscal 1978 it amounted to $10 million in a total of $81 million.

No funding was included in President Reagan's fiscal 1984 budget for the controversial proposal for research at SSRL by three national laboratories: Lawrence Livermore, Sandia, and Los Alamos.

They seek about $5 million for the development and testing of high speed x-ray detectors from the Department of Energy's Office of Military Applications. Besides funding SLAC entirely, the Department of Energy is the largest source of funding for SSRL.

The SSRL proposal review panel, a group of 10 experts outside the University, has raised several questions concerning the national laboratories' proposal, but neither these questions nor Stanford research policy would bar the research on the basis of its application in weapons testing.

In his letter to the Faculty Senate, Mozley said: "It may be possible to decide on criteria for end-use which will add an additional screening to that obtained by banning secrecy. The question is, can this be done without at the same time preventing generally interesting work from being done, or intruding too much on the choice of work by the faculty."

He suggested that distinctions might be made on the basis of 1) short-term relevance to military uses, 2) issues of "involuntary servitude," and 3) reducing the ability of outside groups to "purchase" the use of Stanford facilities.

The University might also require those principal investigators wishing to do weapons-related work to defend their choice to a peer group, Mozley said.

"This, although intrusive, could have the effect of making principal investigators aware of possible unpleasant consequences, such as those at SSRL. It is best to stop such projects before they are clearly formulated. . . .

"There should be an examination of the volume and character of research being done here to see if the drift toward military relevance is occurring. . . .

"In making this proposal, I do not wish to imply any criticism of the (University) Administration in its handling of these issues.

"I feel that the problem is real and should be understood by the University as a whole. The Senate is therefore a suitable forum.

"Even if no clear solution to the difficulties can be found, the discussion should make the complexity of the situation clear to the University community."

The Committee on Research is headed by Prof. James Meindl, electrical engineering. Members include Profs. Jon F. Claerbout, geophysics; Michael D. Fayer, chemistry; Edward Garwin, SLAC; Philip C. Hanawalt, biological sciences; Sumner M. Kalman, pharmacology; and John B. Shoven, economics; Marcia M. Bieber, research associate in radiology; Rosemary Redfield, graduate student in biological sciences; and John Halamka, senior in medical microbiology.

Lieberman and Earl Cilley, director of the Sponsored Projects Office, serve ex-officio, without vote.

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"The term 'quantum electronics' was only invented in 1959, during the early days of masers. It conveyed the idea of using atoms and molecules instead of electron tubes to generate first radio waves and then we were able to extend it to light waves.

"So the science of generating and controlling electromagnetic waves through atoms and molecules is the subject of quantum electronics, but the raw materials of quantum electronics are the atoms and molecules. You have to understand those deeply before you realize what they can be made to do.

"If I were fully into quantum electronics I would be spending more time on devices than I do. Instead, I like to explore atoms and molecules not just for their own sake, but to find new ways of doing it.

"The hope is that they may give us new ways of creating and controlling electromagnetic radiation.

"For the last couple of years we have been concerned with systematic ways of using lasers to 'label' one particular state of molecules so that we can identify what connects to that one state in the spectra.

"We have had a good deal of success in simplifying a few spectra, but we are more interested in developing a general method. We are concentrating on the molecule of sodium, which is a convenient one to work on, and we have learned a great deal about that molecule."

The research of the Schawlow team is carried out in an eight-room laboratory which he shares with a brilliant young German-born researcher, Prof. Theodor Hansch, who came to Stanford as a postdoctoral fellow from Heidelberg on a NATO fellowship.

"As soon as he arrived we realized that he was extraordinary, and within two years we had hired him as an associate professor, and a short while after that he was made a full professor.

"I try to keep out of his way in research as much as possible so that he can go straight ahead. We do collaborate occasionally, and we have a number of fields in common.

Ours is a nice informal atmosphere. We like to improvise. When I try to plan things for the future it hardly ever works out the way I imagine. On the other hand if we get an idea, and we have the necessary equipment, then we can try it out immediately.

"Our equipment is getting more elaborate. Typically, in our work, we will have one laser that drives another laser. It is room-sized equipment, nothing gigantic."



In my own basic research I never dreamed that the first practical use of lasers would be to repair detached retinas of the human eye.

—Arthur Schawlow

Is Schawlow's research affected by current cuts in research expenditure?

"Our funds were cut back soon after I received the Nobel! They cut us by about 10 percent. They said it was hoped that the cuts would be restored before long, but I am not counting on it. We face being nibbled away by inflation. Winning a Nobel is no protection in research, though perhaps it may be to some.

"We do receive some money from the Navy, part of a general contract on advanced laser source research."

Schawlow believes that it is not always a good idea to go directly at a problem in order to solve it. "In my own basic research I never dreamed that the first practical use of lasers would be to repair detached retinas of the human eye. I had never even heard of a detached retina, but today this condition is being treated as a routine, by lasers.

"I think if I had been trying to prevent blindness I would not have been fooling around with simulated emissions from atoms."

Schawlow keeps a close eye on the latest uses of lasers. "It is gratifying to see how lasers are becoming common in surgery. It is bloodless, and the use of lasers in operations is growing quite rapidly.

"Lasers are wonderful in dermatology for removing tattoos or removing unsightly birthmarks."

Schawlow smiled as he pointed to a plaque on the wall which certified that he is an honorary member of the Gynecologic Laser Society, whose members have done good work in removing pre-cancerous tumors in the cervix.

"I like to think lasers can save lives in other ways. There are systems which the police are using, consisting of a neon laser beam mounted on a rifle so that a suspect knows that he is in the sights when the spot of light hits him, and so encourages him to give up.

"Lasers are being used in machining in an increasing way, because they are very useful in welding metals which otherwise could be treated only with very great difficulty.

"Another important use is in the highly selective hardening of particular parts of a metal. A leading auto manufacturer says that this may lead to treating the walls of engine cylinders in stripes, so that the hardened parts take the wear while the softer parts enable oil to penetrate.

"Lasers are also coming into use to harden the teeth of gears. They tell me that the lasers are far more reliable than the machine tools they replace, because there is no tool bit to wear.

"New uses are still being found for coherent radiation in spectrophysics. With a laser it doesn't matter whether a subject is very hard or very soft. Lasers cut everything from diamonds to the rubber nipples of babies' bottles.

"They are also being used to measure the drift of continents, by using a marker our astronauts left on the moon. They are also being used in earthquake studies."

Schawlow is pleased by the impetus lasers have given to the creation of holograms. Pioneer work on holography was done at Stanford before lasers, by Emeritus Prof. Paul Kirkpatrick, aided by students Ralph Wuerker, Hussein El Som, and Albert Baez.

Baez's daughter, Joan, is the world-famous singer. While Joan was at Palo Alto High School she cut her first record in the physics lecture hall.

"I like to observe that if we had that record to sell," said Schawlow, "we might have made enough to build a new Physics building."

The physicist whose 33 years of research have helped to improve the world, who has been given the highest honors any scientist can receive, sighed as he thought back over his career.

"There have been so many hurdles, so many difficulties." He paused: "But it has all been worth it."

Faculty Club shows Haden etchings, photographs of "China's Elders"

An exhibit of etchings by Sir Francis Seymour Haden, as well as a photographic exhibit on "China's Elders," most taken by members of the Stanford community, will open at the Faculty Club on Easter.

The Haden selections are from the collection of Stanford alumni Hannah and Russel Kully of San Marino, who have been collecting his work for more than a decade.

Seymour Haden, wed to the sister of young James A. McNeill Whistler, was a prosperous London surgeon who, in his forties, took up etching seriously. During the next 40 years, he became one of art history's famed etchers.

Haden was dedicated to catching the spirit of landscapes rather than rendering every detail of the scene. Most etchings deal with the British countryside, but some represent countries where Haden vacationed.

Whistler, who was some 20 years younger than Haden, and the surgeon often went out together to etch from nature until a rift occurred in their friendship. They never mended their differences.

Haden founded and served as president of the organization that became the Royal Society of Painters, Etchers, and Engravers. Although he was a leader in the revival of etching in England at the end of the previous century, he was not knighted until 1894, near the end of his career.

"China's Elders" consists of photographs of citizens of the People's Republic of China taken by Peninsula residents who traveled there between 1975 and 1982.

While none of the photographers is a professional, the lives of Chinese senior citizens are captured clearly in their careers and sociological roles—caring for tots, helping with homework, passing time with friends.

Seven members of the Stanford community are represented: Dean Myron Atkin, School of Education; Dr. Paul F. Basch, professor of international health; Robert Beyers, director of news and publications; Dr. Esther B. Clark, clinical professor emeritus of pediatrics and founder of the Children's Health Council; Beverly Fuchs, director of group services for the Senior Center of Palo Alto; Prof. John Gurley, economics; and Robert Hall, professor of economics and senior fellow at the Hoover Institution.

Also represented are Derwood Baker, professor emeritus of New York University; Gertrude Bleiberg, Palo Alto artist; and Dr. Iva Gendzel, Palo Alto psychiatrist.

Fuchs organized this exhibit, which is sponsored by the Senior Coordinating Council of the Palo Alto Area, Inc. and the Chinese Community Center.

Both exhibits will close in early May.



Woman with Wrinkled Face, by Prof. Robert Hall, economics

Staff employment opportunities

Exempt

21557-JB (JCC:2344) INTERNAL AUDITOR III: Respon for auditing organizational & functional activities to evaluate the adequacy & effectiveness of admin controls; determine whether Univ & external regulatory policies & procedures are being followed; advise sr. mgmt on policies & procedures & internal control practices; perform audits in accordance w/ acceptable standards; report audit findings; make recommendations for change whenever approp; QUALIFICATIONS: broad & thorough knowl of audit practices & principles; excel tech & professional judgment; familiarity w/ Univ acctg & health care facilities; and an understanding of computer-based informa sys highly desirable; excel oral & written commu skills; able to establish & maintain effective working relationships w/ all levels of mgmt.; C07; $2113-2724.

44396-BP (JCC:2070) ADMIN ASST II: Act as Personnel Offcr, Offc Mgr & Staff Assistant to the Registrar; coord all hires, w/ assistance fr OAIV for non-exempt staff; trains mgrs & supvrs in personnel policies, incl Affirmative Action; prov informa to staff about Univ policies, benefits, promotional opportunities; asst in cost control & productivity efforts; prov bkup to Admin Asst & Asst Registrars & to manage offc workflow during NSI planning & new sys implementation; reviews monthly budget, projs trends & expenditure patterns; coord budget & salary setting process; res & drafts mat'l in connection w/ Registrar's internal offc & genl Univ respon as Associate Provost; QUALIFICATIONS: requires knowl & work exp in all areas of personnel, budgeting, & supvn; ability to plan, organize, proj & implement; familiarity w/ Stanford policies & procedures preferable.- Send application/resume to Laurie Mathers, Old Union, Rm. 137; C05; $1670-2086.

40327-LL (JCC:5924) CLINICS STAFF NURSE II: 50%; evenings & wkends occasionally; respon for assisting Survey Ctr Supvr in collecting data on local cardiovascular risk reduction, morbidity & mortality in SHDPP's community study in SALINAS; conducting case-finding & abstracting activities using death certificates, med record indexes, & patient records in local health depts & hospitals; conducting med interviews; maintain approp records & files; contacting indiv eligible to participate in survey, etc; QUALIFICATIONS: Valid Calif R.N. license; recent med record abstracting exp; public contact & interviewing skills; some exp in physiological measurements; ability to work w/ a wide variety of people; knowl of area & Spanish-speaking highly desirable.; K02; $952 50.

39176-TC (JCC:1530) HEAD TEACHER: 11-6pm and by arrangement; Head Teacher has the highest level of teaching respon & prov leadership & coord for a team of teachers & student & parent aides w/in the classroom; respon for planning & implementing w/ his/her teaching teams the program for young children, completing on-going develop'l rprts on all children, setting teaching-learning objectives for children, mtg & conferencing w/ parents, participating in res projs which are on-going, & participating in school-wide activities & events; a day-care program for 3, 4 & 5 year olds; QUALIFICATIONS: knowledgeable & exp'd in the field of early childhood edu; desirable to have Master's Degree in child develop't, early childhood edu, or a related field; at least 3 yrs exp as lead teacher working w/ young children; current Calif teaching credential in early childhood edu desirable.: T02; $1489-1986.

29566-AW (JCC:2094/8880) Misc Professional/Admin Asst II: The Operations Sys Supvr, C-4, oversees operations of Centrex Info Sys, OAIS, TWX/TELEX serv, radio dispatching & other support work; work shift assignm'ts may vary as operations run day/-night everyday; supvn of telephone console operator; union interfacing; emergency maint call-outs; review operators performance & make recommendations on empl decisions, etc; C-5, hire full & part-time operators; develop & design training & serv improvement programs; asst mgr in develop't of operat'l plans & policies; QUALIFICATIONS: C-4, should have 3+ yrs practical telecom exp; BS or BA in business or equiv knowl/skills; math abilities of college algebra level; 2 yrs supvsry exp w/ work scheduling, training, performance reviews; familiarization w/ computer info sys, w/ programming skills desirable; strong oral & written commu skills w/ rprt presentation ability; C-5, addition to the above, 3-5 yrs of direct telecom exp; 2+ yrs of practical working knowl of acctg & budget prep desirable; C05/C04; $1670-2086/1511-1880.

30400-TC (JCC:6826) SOC SCI RES ASST III: 30-40 hrs/wk (negotiable); some evenings; working w/ Weight Loss/Exercise Proj steering committee; act as Program Coordinator; plan strategies for participant recruitment & program implementation for 3-year study w/ 150 participants; design & implement publicity strategies; initiate regular Executive Committee mtgs; supv 2-6 research assistants, etc; QUALIFICATIONS: prev successful exp as coordinator of moderately complex scientific proj involving many participants required; some knowl of exercise physiology and/or nutrition preferred; work well w/ diverse group of professionals but effectively w/ participants in proj is key; exceptionally well organized, enthusiastic, personable, & a good leader.; C05; $1670-2086.

30399-TC (JCC:7358) DIETICIAN II: 30-40 hrs/wk (negotiable); usually 8-5, some evenings; respon for all nutritional aspects of the Weight Loss/Exercise Proj; plan nutritional strategies to maintain participants on 'healthy' diet; maintain control & exercise groups of stable diet for further period; write nutritional newsletter regularly; conduct group mtgs w/ participants for nutritional instruction; construct indiv diet plans & counsel participants frequently to maintain desired weight-loss patterns & participant cooperation & enthusiasm, etc; QUALIFICATIONS: R.D. required; exp w/ prep of menu plans for nutritional studies & in dietary counseling of study participants required; training in res methods & documentation (Master's degree) and/or in public health issues (M.P.H.) desirable; must be well organized, competent nutritional instructor, personable, & interested in nutritional research.; C06; $1854-2312.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Gaivez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

25925-BP (JCC:2454) OFFICE ASST II: 50%, some nights & wkends; performs opening & closing functions & related acctg procedures; specific duties incl cashiering, pricing & stock work, housekeeping & supvn of student cashiers; QUALIFICATIONS: exp w/ electronic cash registers required; ability to use calculator & adding machine w/ speed & accuracy; related exp & prior work w/ students helpful; ability to deal w/ customers in a tactful & courteous manner & to perform duties w/ minimal supvn nec; ability to lift 50 lbs; valid Calif. driver license preferred; send appl/resume to John Hyde, The Store, Tresidder Union.; B09; $565-595.

27100-PM (JCC:2554) SECRETARY II: Sec prov full range of sec'l serv in Hoover Institution Archives; typ corresp, memo, rprts, catalog cards, & lists in accurate, finished form, using both typewriter & word processor; set up & maintain files & records for dept; screening & referring incoming calls & visitors to approp staff; order offc supplies fr vendors; prep expense rprts, purchase reqs, & other standard forms; QUALFICIATIONS: typ 60; accuracy & reliability in typing; 2+ yrs offc exp & ability to coord work w/ others; strong organizational skills, good memory, orderly work habits, etc; ability & willingness to learn word processing eqpt; send appl/resume to Charles Palm, Hoover Institution Archives, 497-3563.; B11; $1246-1310.

32281-BP (JCC:2554) SECRETARY II: Sec to Dept Chairman; full range of sec'l duties incl answering & screening of telephone calls, preparing agenda for all mtgs; typ manuscripts, grant proposals class notes, admin corresp; prep confidential mat'ls, w/ high degree of discretion; make travel arrangements; maintain files; wide variety of contact w/ people at all levels of respon w/in & outside of Univ; asst in planning of dept'ml receptions & commencement activities; QUALIFICATIONS: typ 70; s/h, 80-100; min 2-3 yrs sec'l exp; tech typing exp preferred; knowl of Univ policies & procedures helpful; willingness to learn computer & word processing eqpt; send appl/resume to Julie Parker, McCullough 154.; B11; $1246-1310.

18670-PM (JCC:2562) SECRETARY III: 75-100%, 8-3pm or 8-5pm; sec'l serv for 2 professors active in computer applications in petroleum engrg; typ tech manuscripts using 'heavy' Greek & mathematical symbols; typ ltrs, rprts, proposals, announcement, class work, using Sel II or Word Processor; will place, receive & respond to internat'l phone calls; prep expense rprts; make travel arrangements; help organize tech workshops & oversee accts for an affiliate program; set up & maintain files; prep payroll documents for personnel working on this program, etc; QUALIFICATIONS: typ 70; excel tech typing skills; good offc exp bkground, & training or the ability to learn word processing sys; must have demonstrated organizational & commu (written & verbal) skills in prev work exp; send appl/resume to Jean Cook, Petroleum Engineering Dept, Mitchell Building.; B14; $1440-1514.

21375-BP (JCC:2596) SECY II-SPEC: Prov receptionist & genl sec'l duties for Ctr for Mat'ls Research's main offc; prov sec'l serv to Crystal Sci group & others in CMR Central Facility; asst CMR Admin Offc by typing fr written mat'ls & fr dictation machines; operate various offc machines; run errands; sort mail; typ & mail wkly seminar list; answer phones; make basic calculations for monthly salary charges & check & minor reconcile budget statements; typ w/ high accuracy tech manuscripts, abstracts, rprts, proposals, & ltrs fr longhand drafts & some tapes; QUALIFICATIONS: typ 70 accurately; some technical; ability to transcribe tapes; operate offc machines aptitude w/ numbers; offc exp nec; interact well w/ faculty, staff & students; good written & oral commu skills; knowl of Micom w.p. or willingness to learn; send appl/resume to Imogene Hogan, McCullough Bldg. 111.; B12; $1310-1373.

23946-PM (JCC:2630) SPECIALIST TYPIST: 50%; work on Lexitron Word Processor; doing publications & Dean's letters; typing & formatting of forms, memos, ltrs, documents, etc for entire offc; order supplies fr campus via computer access on Lexitron; QUALIFICATIONS: typ 70+; neatness, accuracy, familiarity w/ & adaptability in use of various types of clerical eqpt; ability to carry heavy workload, meet deadlines, shift priorities, & interact w/ a variety of individuals w/ varied assignments; word processing exp mandatory; send appl/resume to Diane Winkle, Med Ctr M105, 497-6954.; B12; $655-687.

Bargaining Unit

31600-DS (JCC:7654) CUSTODIAN: TMS Unit; 50%, 7:30-11:30am; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot cleans, shampoos, waxes, dusts, & oils furniture; supvr schedules work & prov detailed Instructions; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift moderately heavy items, 25-75 lbs; ability to withstand extensive walking, pushing, pulling, stopping, & squatting.; A13; $6.68/HR..

44324-JB (JCC:6604) SR S&E TECH - ELECTRO MEC: TMS Unit; assembly of ultra-high vacuum chambers, components, & test Instrumentation fr blueprints, sketches, or verval instruc; asst, coord, & perform activities in preparing components, beam lines, & chambers for pumpdown, bakeout, & instal'tn; prov tech asstance to users & staff; prov leak detection serv to users; rebuild, modify, repair, maintain, & calibrate, pumps gauges, leak detectors, & other UHV related tools & eqpt; QUALIFICATIONS: several yrs' exp w/ mech assembler & precision instruments; exp in assembling, troubleshoot, repairing non-recleanable components using proper UHV handling tech; working knowl of basic elec circuits, machine shop practices, strengths of mat'ls, cleaning procedures & clean room procedures; able to read, understand, & generate engrg drawings or sketches; exp in Installing sub-sys onto layer sys, esp high & ultra-high vacuum sys.; A34; $10.97/HR..

SLAC

195084-JM (JCC:5484) DATA AIDE II Input data fr original data sheets, cards or charts Into computer data base using standard CRT terminal; create & maintain a variety of complex records, etc; run standard programs; gather & interpret info; typ rprts, ltrs & memos using typewriter or data processor langs such as xedit, script or wylbur; act as receptionist; answer phones & perform other clerical duties as required; QUALIFICATIONS: must have some exp & familiarity w/ computers, word processors or other data processing sys; typ 40; ability to perform arithmetic calculations good commu skills incl correct usage of English grammar & spelling required.; B10; $1189-1246. APPLY AT SLAC

94332-JM (JCC:7166) DELIVERER II: TMS Unit; collect scrap & salvageable mat'l or eqpt, disassemble as required & store; maintain salvage facility & scrap yard in neat & efficient order; maintain records; be alert for & report conditions of property & recommend corrective action of nec; QUALIFICATIONS: ability to comprehend & commu both orally & in writing; ability to perform arithmetic calculations; exp in or ability to learn rapidly, the safe & efficient use of forklift eqpt; ability to move heavy objs or mat'l when use of forklift is not efficient or possible; prior exp in plant protection or property respon desirable; able to qualify for gov't driver's license.; A17; $1271. APPLY AT SLAC

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

Acctng Mgr. Genl Acctng: #3336 (C-37): Responsibilities: Manage Genl Acting Dept which involves direct supvn of Accting Supvr, the Receipts/Disbursemt Plan Accountant Supvr, the Payroll Supvr, the Accts Payable Supvr. Duties also include reviewing all ledger entries & grant acct, review policies & proceds of cash control & mgmt; develop proposals affecting cash control & mgmt to Controller; ensure timely & p roper preparation of mthly Hosp Board Repts, Qtrly CHER repts; Otrly Gift Fund Repts & Annual CHFC Repts; Qualifications: Broad knowl of hosp finance in genl & accting principles & proceds; B.S. degree in Business Admin w/ major in accting or equiv; 3-5 yrs managerial experience, preferably in health care finance; permanent, full-time, M-F, 8-5pm, $15.18-23.15 hrly

Health and safety report

Accidents and Injuries Occurring During Week of Mar. 21-25

Cause of Accident	Number	Number of Days Off
Animal/insect contact	1	0
Impact with object	2	(0, 0)
Pinched, squeezed, crushed	1	0
Fall from height (incl. stairs)	3	(0, 3, 3)
Fall from same level	4	(0, 0, 0, 0)
Other	1	0
Overexertion	1	0

Carpools

Carpoolers wanted. Dublin/San Ramon/Pleasanton to Med Ctr. Hours 9-5:30, M-F. Call Ed at 7-5569.

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Ph.D.orals

David Hinson, electrical engineering, "Radio Scintillations Observed during Voyager Planetary Occultations: Internal Gravity Waves of Titan and Magnetic Field Orientations at Jupiter and Saturn," 4:15 p.m., 134 McCullough.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, April 5, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

HIP offers courses in stress management, personal health improvement

The Health Improvement Program (HIP) is now accepting registration for two spring quarter classes: "How to Manage Stress" and "Changing toward Health," both classes are open to all Stanford University faculty and staff and their families.

How to Manage Stress—This popular stress management class will be taught again by Christine Rosche, M.P.H., a health educator who has taught stress management at Stanford, Midpeninsula Health Service, and San Jose State University. Students will learn to recognize stress-producing techniques, exercise options, time management skills, effective communication, and positive thought statements.

The class will meet from 5:15-7:15 p.m. Mondays, April 11-May 16, at the Stanford Heart Disease Prevention Program conference room, 730 Welch Road, Suite B. The fee is $25.

Changing toward Health—This is a pilot class taught by Corinne Powell and David Schrom, who have conducted the HIP noon swimming program for the past two years.

As an outgrowth of their work they recognized the need for a class to help each individual lay plans for personal health improvement. The new class will teach both subjective and objective methods of assessing current health and evaluating the potential for improved health.

Using an individual problem-solving approach students will record health improvement activities, monitor change, and evaluate the results. By learning to follow the steps outlined in the class they will develop a general method for lifelong health improvement.

Each class meeting will include discussion of such topics as redefining health, heart-healthy nutrition, exercise, and stress management, and will include a practice session for relaxation training. This training includes gentle yoga and dance steps based on exercises to extend your range of motion and visualization, and meditation techniques to enable one to be more relaxed and at ease in any circumstance.

The class will meet from 12-1 p.m. Tuesdays and Thursdays, April 19-May 26, in Encina Gym Room 350. There is an incidental registration fee of $5.

Registration—To register for either of these classes please send name, department, and extension along with a check for the registration fee made out to Stanford University to HIP, School of Medicine.

For further information please call the HIP office at 497-9649 between 10 a.m. and 2 p.m.

Spring dance classes scheduled

Stanford Dance Quorum offers a wide variety of dance classes for faculty, staff, and students during spring quarter.

The Dance for Lunch Bunch Jazz Class meets from noon to 1 p.m. Tuesdays and Thursdays beginning Tuesday, March 29, in Roble Studio 42. The instructor is Lisa Christensen; cost is $40.

Intermediate Modern Dance meets from noon to 1 p.m. Mondays and Wednesdays, beginning March 30, in Roble Studio 42. The instructor is Kathy Stewart; the fee is $38.

Stretching and Relaxation, a new class, is designed to relieve the kinks and tension of a long, rough day at work. It meets from 6 to 7 p.m. Tuesdays in Elliot Program Center (Governor's Corner) and 6 to 7 p.m. Thursdays in Roble Room 33, starting March 31. Lisa Christensen is the instructor; the fee is $40.

Other classes include Jazz at 6-7 p.m. Mondays and Wednesdays in Roble Studio 42; Floor Barre 6-7 p.m. Tuesdays and Thursdays in Roble 42; Ballet 7:15-9 p.m. Tuesdays in Roble 42 and Thursdays in Roble 33.

Saturday classes include Modern Dance 10-11:30 a.m. in Elliot Program Center; Floor Barre 11:30-12:30 p.m. in Roble 33; Ballet 12:30-2 p.m. in Roble 33; and Jazz 11:30 a.m.-1 p.m. in Elliot Program Center.

Children's dance

A limited number of spaces are available in Children's Dance at Stanford spring classes. Nine- to 13-year-olds may participate in Ballet, Modern Dance, or the Performance Workshop. Boys ages six to eight are invited to join "Dance for Boys," a curriculum of rhythms and movement designed to challenge body and mind.

Ballet meets Tuesday and Thursday afternoons from 4 to 5 p.m. Other classes are held Friday afternoons at 4 and 5 p.m.

Childrens' Dance at Stanford is sponsored by Stanford Dance Division at Roble Dance Studios. It offers a full dance curriculum for children ages three to 13.

For more information and registration call Dance Quorum at 497-4254.

Tennis classes

Tennis lessons (six pupils per group) will again be offered to staff and/or families on weekday mornings or Saturday mornings. Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed printed information and registration forms. Lessons begin week of April 18.

Fun Run for 50 +

Runners 50 years of age or older are invited to participate in a Fun Run which will start at 9 a.m. Sunday, April 24, at the south end of Stanford Stadium near El Camino Real. The run covers a four-mile course (twice around the two-mile Peterson loop).

The event is sponsored by Fifty-Plus Runners Association, which has its headquarters at the Stanford Heart Disease Prevention Program.

For further information contact Don Carpenter evenings at 327-8043.

Rental housing

HOUSING AVAILABLE

□ **Aug. 15, '83 to June 15, '84 (flex):** Fully furn hse in Palo Alto, 3BR/1½BA, den, gar., patio, W/D, quiet cul-de-sac, nr schls, park, com. ctr., auto sprinkl, grdnr, nonsmokers. Professor on sabbat. $1250/mo. Call 497-3095 (day), 493-8259 (eve).

□ **June 10 to Aug. 15, '83 (flex):** Beautiful, spacious fully furn. hse., 3BR/2½BA, all appliances. Santa Clara. $1000/mo. No pets. Call (408) 985-1866.

□ **Beg. April 1:** College Terr. Housemate(s) wanted to SHARE 3BR twnhse. 2BR avail. Frpl, DW, W/D, garden. $250/mo. + 1/3 util. Call Betsy 497-2569 (day), 857-0898.

□ **April 1 to Nov. 15, '83:** Lovely Swedish furn. contemp. hse. in Palo Alto. 3BR/2BA, FR, LR, all appl., many xtras. Lrg. cov. patio, lush grdn w/auto. sprinkl. Bike 2½ mi. to Stanf. No pets. $1000/mo. + dep. (incl. water/grdnr). Call 858-0880.

□ **April 15:** Fully furn studio in Palo Alto. Panoramic view of mtns. Sec. bldg., prkng, 1¾ mi. to campus. $485 + util. ($25) mo. Assum. lease. Sec. dep. req. Call 325-7009.

□ **Aug. to Dec. '83 (flex):** Fully furn. hse. 4BR/3BA (1BR/BA sep. entr. & rentable), study, FR, 2 frpl., AEK, W/D, 2 patios. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **June 14 thru Aug. 29, '83:** Fully furn. west Atherton estate. 5BR/3½BA, pool, maid serv., grdnr, util incl. No pets. $9750 total rent. Call 321-4100.

□ **Beg. April 1:** Partly furn. hse, 4BR/2BA, W/D, frig, stove, new carpets, drapes, recently refinished. No pets, nonsmokers. Lease or monthly. 3.5 mi. to Stanf., in Menlo Pk. $800/mo. Call H. Edwards, 497-9266 (day).

□ **July & Aug. '83:** Attrac. campus hse, 4BR/2½BA, study, fully furn. & equipped. Call 493-0997 (eve).

□ **NOW:** Rm. w/BA & priv. entr. on campus. $175/mo. or poss. exchange child care. Call 857-9298.

□ **June 18 to Aug. 28, '83:** Fully furn. campus hse, 4BR/2½BA, FR, DR, piano, lrg. fenced yd. Will EXCHANGE for London hse/flat or RENT for $1500/mo. incl. water, util, wkly clean, grdnr. Nonsmokers, no pets. Call 493-8874 (day or eve), (408) 279-5683 (day).

□ **Beg. Sept. 1:** Fully furn. 2BR/2BA Pearce Mitchell condo on campus. Yr-rnd pool, jacuzzi, rec. ctr. Adults, no pets. $850/mo. Call 497-1745 (day), 522-4917 (day).

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, park, com. ctr., prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **July 1 to Nov. 1, '83:** Magnificent Crescent Park hse, fully furn. 4BR/3½BA, MBR suite w/sauna, jacuzzi, frpl. NO PETS. $1975/mo. Call (415) 326-7558, (415) 328-6112.

□ **Sept. to June '84:** Sea and ski. So. of France nr. Cannes, Grasse. 16th C. 3BR stone house, modern comforts. Call (415) 858-2590, (415) 326-5521.

□ **April 1 to July 1 (flex):** 2BR/2BA fully furn hse, 2250 sq. ft. In Los Altos, 10 min. to campus. $900/mo incl. grdnr. Call (415) 948-6370.

□ **May 1 to July 1:** Fully furn. hse in Palo Alto, 3BR/2BA. Convenient location. $1000/mo. incl grdnr. Call (415) 856-9549.

□ **Beg. May 1; 6 to 8 mo. (flex):** Fully furn. & equipped 1BR apt. Pool, tennis, adj. Stanf. campus. $950/mo. Call (415) 324-2177.

□ **NOW:** 2BR apt to SHARE. Menlo Pk 1.8 mi. to campus. 1 blck to shops and transp. Female pref. Call 497-3639 (day), 321-4592.

□ **June 19 to Aug. 31 (flex):** Fully furn. spacious hse. 3BR/2BA, No. Palo Alto, nr. park, pool, libr., shops. Easy bike to campus. Children welcome. Call 497-6878 (day), 328-4681 (eve).

□ **Beg. April 1:** Spacious 3BR hse, fully furn. in Palo Alto to SHARE. Frpl, hrdwd flrs. W/D. 2 women & dog seek 3rd woman; are Stanf. grad. stud. & staff person. Quiet, neat, nonsmokers. $275/mo. Call 493-6942, leave message.

□ **Sept. '83 to June '84:** Florence, Italy; fully furn 3BR/2BA apt. w/garden. Close to ctr, incl. car. Seek EXCHANGE w/similar accommodation in Berkeley, Bay area. Call Gregson Davies, 323-7565.

□ **Regularly avail.:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **June 16 to Sept. 5:** Fully furn. hse. 5BR/5BA, new ktchn w/microwave, encl. crtyd, pool, jacuzzi w/dress. Spanish-style, balc, spiral staircase. Full acre, creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. nat'l forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501 (day), (408) 739-3141 (eve).

□ **NOW:** Fully furn. hse, 4BR/2½BA, DR, FR, study, 3 car gar., patio. Year lease incl. kitchenware, linens, 2TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call (415) 965-1302 (eve).

□ **July 1 to Sept. 30:** Fully furn. 3BR/2BA hse in Crescent Pk, Palo Alto. Lovely garden, patio. Cul-de-sac. Nr. park, pool, tennis crts & schl. $1250/mo. Call 321-1142 or 497-4364 (day).

□ **April to end June:** Oak Creek apt, 2BR-1-1/3BA, fully furn, built-in bar. Gar. avail. Util. incl. Call Alice, 321-2625.

□ **April 1 to June 1 (flex):** Los Altos, fully furn. 2BR/2BA, FR, AEK, 2 frpl, 2TV, park-like 1/3 acre. 1 Queen, 1 dbl bed. Dead-end st. Car poss. No pets. $1050/mo. Call (415) 967-2918.

HOUSING NEEDED

□ **June 17 to Aug. 21, '83:** Institute for Humane Studies needs furn. apts for Visit. Profs. Stanf./Menlo area. Also need 2BR/2BA apt. nr. Stanf. May 7 to Aug. 1. Call Pat Dunbar, 323-2464, 7 a.m. to 3:30 p.m.

□ **Beg. anytime:** 1st yr. resident, xclnt refs, SU undergrad, seeks hsesit, short or long term. Call 564-2622 (eve) or 493-5000, pager 229, Marjorie Shuer.

□ **July 1 to Aug. 31, '83:** Swiss prof, wife, 4 yr. old son seek fully furn hse, 3 to 4BR/2BA, pool. Please send conditions, photos, to Prof. F. Weinberg, Freiestrasse 19, CH-8032, Zurich, Switzerland.

□ **Sept. '83 to Aug. '84:** Cpl on sabbat. lv. from NY w/15 yr. old son, nonsmokers, seek 2BR furn apt. nr Stanf. Call COLLECT (212) 598-7757. Will consider SWAP for 2BR village apt. in NYC.

□ **Beg. Aug. 21 for 3 to 6 wks:** Prof. cpl & daughter wish to hsesit in Stanf. area. Local refs. Write D.K. Nordstrom, c/o Oster, Gyllenstiernsgatan 18, 11526, Stockholm, Sweden, or call (415) 857-1641.

□ **April to July '83:** Female prof. on sabbat. at Stanf. seeks hsng. or hsesit. To $440/mo. Call COLLECT (213) 206-6121.

□ **Beg. Sept. (flex) for Academic Yr:** Mature Stanf. Bus. Sch. stud. seeks hsesit or lodging in return for serv. (gardening, gourmet catering, bartend, handyman). Resp., personable, Harv. grad., multilingual, CPR, WSI cert. Served valet to Harv. Prof. Pref. det. qtrs. Impeccable refs. Call COLLECT 1—800—638-1527, x5718, 9 to 5 eastern time.

□ **Beg. July 1, 1-4 mos.:** Reliable Stanf. staff seeks HOUSESIT for summer. Nonsmoking, childless cpl, returning from east will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write David Mark, M.D., 20 Walnut Rd., Chestnut Hill, MA 02167.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Morgan State University Choir

Morgan State choir concert April 6

The Stanford Black Community Caucus and the Stanford University Gospel Choir will present the Morgan State University Choir in concert at 7:30 p.m. Wednesday, April 6, in Memorial Church.

Tickets ($5 general admission, $3 students and senior citizens) may be purchased at the door.

The Morgan State University Choir is famous for its wide musical repertoire and its professional style of performance. It has toured Europe, the Caribbean, and the U.S. It is directed by Nathan Carter, a graduate of the Juilliard School of Music.

The two-hour concert will include songs by the Stanford Gospel Choir, adding diversity and a touch of local pride.

For further information, call 497-1587 between 10 a.m. and 5 p.m. Monday through Friday.

German theologian Solle to speak

The Stanford Progressive Alliance and the Ecumenical Ministries at Stanford will sponsor a lecture and discussion with German theologian Dorothee Solle at 4:15 p.m. Thursday, April 7, in the Old Union Clubhouse Alumni Room.

The visit of Solle to Stanford is part of a national tour organized by the Youth Section of the Democratic Socialists of America.

Solle is a member of the Evangelical Church of Germany (EKD) and has been a lecturer in the theological faculty of the University of Hamburg since 1978. Since 1978 she has been the Harry Emerson Fosdick Visiting Professor at Union Theological Seminary during spring semesters. She has also delivered lectures in most of the major German Universities, in many European universities and ecclesiastical institutions, and has toured Great Britain through the Sponsorship of the Goethe Institute, London.

Solle has published numerous articles and books on theology, including in English translation, *Christ the Representative*, *The Truth is Concrete*, *Choosing Life*, and *Political Theology*. Her recent publications include a volume of poetry and a feminist disarmament story, *In the House of the People-Eater*.

Solle has been deeply involved in the Peace Movement in Europe and has spoken at most major peace demonstrations in Germany, including the Bonn rally in 1982 that drew more than 250,000 people.

Women in Science, Engineering series

The Stanford Women in Science and Engineering spring quarter lectures begin at 4:15 p.m. Thursday, April 7, with a discussion of Science and Engineering Research in Academe in Room 420-041 (basement of the Mathematics Department).

Participating in the discussion are Assistant Prof. of Biological Sciences Patricia Jones, Assistant Prof. of Neurobiology Carla Shatz, and Margaret Wright, senior research associate in operations research.

All members of the Stanford community are welcome; refreshments will be served afterwards.

The series is designed to promote interdisciplinary discussion among women in science and engineering. It is jointly sponsored by the Office of the Dean of Graduate Studies and Research and Women in Science and Engineering at Stanford.

Brandenberg discusses origin of catacombs

Hugo Brandenburg, formerly at German Archaeological Institute, Rome, and now professor of classical archaeology at the University of Munster, West Germany, will discuss "Origin and Development of the Jewish and Early Christian Catacombs in Rome" at 4:15 p.m. Friday, April 8, in History Corner, Room 205 at Stanford.

Brandenburg has written articles in Jahrbuch fur Antike and Christentum, Romische Quartalschrift, Romische Mitteilungen, Archaologischer Anzeiger. His most recent books are on Early Christian Sarcophagi in Rome (1967) and Italy (forthcoming), Early Christian Churches in Rome, Late Roman and Early Christian Art.

Richard to direct Wynter's play, *Maskarade* in the Nitery next week

The Stanford Drama Department and Black Performing Arts musical production of *Maskarade* has been moved from the out-of-doors space in the Old Union Courtyard to the Nitery Theater.

The new performance schedule is at 8:30 p.m. Thursday through Saturday, April 7-9 and April 14-16, with matinees at 3 p.m. Sunday, April 10 and April 17.

The play, written by Sylvia Wynter of the African and Afro-American Studies program, will be directed by Sandra L. Richards, who is director of Black Performing Arts and a member of the drama faculty.

The setting for "Maskarade" is Jamaica in the mid-19th century during the Jonkonnu Festival, a celebration similar to Mardi Gras in New Orleans and Carnival in Trinidad. It was celebrated during the Christmas season marking the end of harvesting and provided the slaves with an opportunity to express their creativity and ambition through elaborate costumes and riotous merry-making.

The participants drew their inspiration from both African and European cultures and incorporated masked paraders reminiscent of Africa, pieces from Shakespeare, and harlequin and clown characters with singing and dancing—all to the sounds of reggae, calypso, ska, and the special Jonkonnu sounds combining African drums with European flutes.

Musical director for the production is Michael Britt, choreography is by Halifu Osumare, scenic design by David McLain, and a parade of exotic, elaborate costumes and masks by Douglas A. Russell.

Tickets are on sale at Tresidder Ticket Office and major Bay Area Agencies, and by telephone (497-4317) with major credit cards. Because seating in the Nitery is limited and recent Drama Department productions have been sold out, early ticket purchase is advised. General admission is $4, students and seniors, $2.

Hill, Wynter to discuss Carnival

Profs. Errol Hill and Sylvia Wynter will discuss "The Social Implications of Carnival—Mardi Gras and Jonkonnu" in a Stanford Drama Department talk at 4:30 p.m. Wednesday, April 6, in the Forum Room of Meyer Library.

The lecture is given in connection with the upcoming production of Sylvia Wynter's musical play, *Maskarade*, which opens the following evening in the Nitery Theater. Hill, the Willard professor of drama and oratory at Dartmouth and former chairman of its drama department, is the author of *The Trinidad Carnival: Mandate for a National Theatre* and editor of *The Theatre of Black Americans*, Vol. 1 and 2, a collection of critical essays.

During spring quarter, Hill will be visiting professor in the Department of Afro-American Studies at Berkeley.

Wynter, professor of African and Afro-American Studies and Spanish and Portuguese at Stanford, lived in London during the late '50s and early '60s where she was an actress, dancer, and writer.

Along with her fellow Caribbean writers, George Lamming and Jan Carew, she wrote radio plays for the B.B.C. In 1962 she returned to Jamaica where she wrote several plays in which she tried to mold documentary material into drama through the vehicle of a folk idiom.

An invitation to deliver a paper on folk dance in Jamaica from UNESCO served as the stimulus for writing what would become the musical play, *Maskarade*. In the process she discovered cultural forms which had been forgotten or ignored by the Jamaican middle-class. The reinterpretation and reevaluation of West African and European folk forms later gave rise to the reggae forms so popular with audiences today. She is author of *Hills of Hebron* and former chairman of the African and Afro-American Studies.

The Drama Forum Series lecture is open to the public and admission is free. Performances of *Maskarade* are at 8 p.m. April 7-9 and April 14-16, and at 3 p.m. Sundays, April 10 and 17. Tickets for the *Maskarade* production are on sale at Tresidder ticket office.

Film series on Japanese women starts April 7 at I-Center

The Other Cultures Film Series continues the tradition of international cultural, environmental, and social themes during spring quarter, with the first program of the quarter focusing on Japanese women.

"Four Women Four Choices," "Setaro Tanaka" and "The Image of Japanese Women" will be shown at 7:30 p.m. Thursday, April 7, at the International Center.

"Four Women Four Choices" examines the lives of four Japanese women through interviews and a close look at their daily activities. The film focuses on the choices and decisions afforded these women as they follow their individual lifestyles in modern Japan.

"Sataro Tanaka" explores the universal nature of art through a portrait of Sataro Tanaka's life as her father's successor, a tsuzuji musician for the Kabuki Theater. This sympathetic portrayal of her lifestyle focuses on her peculiar role as the only female musician for the theater. She is a celebrated performer, teacher, student, and mother of three.

"The Image of Japanese Women" describes the progress of women's rights through the eyes of Japanese women. The issues surrounding the problems that these women perceive include higher education, salary and retirement differentials, shared housework, and child care.

The Other Cultures Film Series visits the British Isles on April 14, when it presents "Glasgow" and "Dublin," both from the Cities of the World Film Series. An hour-long film on the ancient Chinese imperial city, "Xian," will be shown on April 21.

For additional information, phone 497-1831. Admission to the films is free, though a 75 cent donation will be requested at the door to help cover the cost of the series.



Nathaniel Rosen

Nathaniel Rosen, Brooks Smith set concert April 8

Nathaniel Rosen, first American cellist to win the Tchaikovsky Competition Gold Medal (1978), will be presented in concert with pianist Brooks Smith by the Lively Arts at Stanford at 8 p.m., Friday, April 8 in Dinkelspiel Auditorium.

The program will be as follows: "Introduction, Theme, and Variations (from a work for piano, four hands, Op. 70, No. 2)," by Schubert (arr. Piatigorsky); Beethoven's "Sonata in A Major, Op. 69"; Bach's "Suite No. 3 in C Major for Unaccompanied Cello, BWV 1009"; Faure's "Elegie, Op. 24"; Tchaikovsky's "Valse Sentimentale"; and David Popper's "Spinning Song."

A Native Californian, Rosen began his cello studies at age six, and at 13 began a long association with Gregor Piatigorsky, who became his teacher and mentor. At age 22 Rosen became Piatigorsky's assistant, a post he held for six years, up until the master's death in 1976.

A graduate of the University of Southern California, and former principal cellist with the Pittsburgh, and the Los Angeles Chamber Orchestras, Rosen has performed in recital, chamber music, and orchestral concerts with major conductors and orchestras throughout the world. In 1977, he was winner of the Naumberg Cello Competition.

Smith, a native of Texas, studied with Rosian and Josef Lhevinne at the Juilliard School. He has performed with Heifetz, Milstein, Perlman, Piatigorsky, Harrell, and the Juilliard, Cleveland, and American quartets.

Currently on the faculty at the University of Southern California, he has also taught at the Aspen Music Festival and the Eastman School of Music.

Greene landscape show

Landscape paintings of Jasper Ridge Biological Preserve by Pamela Greene will be shown at the Falconer Biology Library through April 30.

The exhibition includes 18 recent works in oil from summer 1982 to the present.

The Falconer Library hours are: Monday through Thursday 8 a.m.-11 p.m.; Friday 8 a.m.-6:30 p.m.; Saturday 10 a.m.-5 p.m.; Sunday, 10 a.m.-10 p.m.

Chisholm to give Kant lecture series

"The Primacy of the Intentional" will be the theme of the eighth annual Immanuel Kant Lectures, to be delivered by Prof. Roderick Chisholm of Brown University April 5, 7, 11, and 13 at Stanford.

Chisholm is America's most distinguished epistemologist, having written and edited more than a dozen books and over 200 articles on the Theory of knowledge and related topics.

Sponsored by the Department of Philosophy, his free public talks on "The Primacy of the Intentional" are scheduled at 4:15 p.m. in Room 200-2 History Corner as follows:

April 5: Objective Reference

April 7: Properties Intentionally Considered

April 11: Psychological Properties

April 13: Language Intentionally Considered

Chisholm is the Andrew W. Mellon professor of the humanities at Brown. He received his Ph.D. from Harvard University in 1942. He is the author of *Perceiving, Realism and the Background of Phenomenology, Theory of Knowledge, Person and Object*, and *The First Person* as well as other books.

Chisholm's book *Realism and the Background of Phenomenology* was the main cause of interest in the European philosophical movement in the U.S. Phenomenological themes have played a larger and larger role in Chisholm's philosophy, and in these lectures he moved the categolry of the intentional to center stage.

Chisholm is the editor of "philosophy and Phenomenological Research," the associate editor of a number of philosophy journals, and has been the Carus Lecturer of the American Philosophical Association, the highest honor the Association can bestow on a member.

For further information, contact the Philosophy Department at 497-2547.

Ogilvy to discuss overspecialization

"Academic Departments and the World Problematique: Is Tunnel Vision an Occupational Hazard for the Well-Trained Professional?" is the title of a talk to be given by James A. Ogilvy, senior social scientist of SRI International, at noon Tuesday, April 5, at Bechtel International Center.

The program will be the first Tuesday Luncheon/Lecture of the spring quarter series, which will focus on some of the solutions to problems of world-wide conflict and poverty addressed by speakers during the fall and winter.

James A. Ogilvy is the author of *Many Dimensional Man* and *Seven Tomorrows: Seven Scenarios for the '80s and '90s*. He is a Williams College graduate and Ph.D. who taught at Yale University, the University of Texas, and Williams College before coming to SRI International. At SRI he works in futures studies, values and lifestyles, and lectures widely.

Other questions Ogilvy will address are: "Can professionals cope with the multidimensional character of present problems?" and "Can scholarship be applied to the future?"

Luncheon tickets are available at a cost of $2.50 one week before the event at the I-Center office or at the door while they last. Brown baggers are also welcome at no charge. For more information about this and other programs being planned for spring quarter call 497-1831 or stop by the I-Center.

Stuart plans first Stanford recital

Soprano Lila Stuart will give her first Stanford recital, accompanied by pianist Jodi Gandolfi, at 8 p.m. Tuesday, April 5, in Dinkelspiel Auditorium.

Stuart is the Music Department's newly appointed voice teacher with a national reputation as both opera singer and voice teacher.

Her program will include lieder by Schubert, Strauss, and Schoenberg; the aria "To This We've Come" from Menotti's opera *The Consul:* melodie by Debussy, and *La Bonne Cuisine* by Leonard Bernstein—four songs based on outlandish recipes.

Tickets for Stuart's April 5 recital are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door.

Belgian film showing

"Belgium: Land of Two Peoples," a travel documentary produced and narrated in person by Kathleen Dusek, will be presented twice on Monday, April 4, by Stanford University Events and Services.

Part of the Discovery Film Series, the film will be shown at 2:30 p.m. in Kresge Auditorium and at 7:45 p.m. in Memorial Auditorium.

Belgium has been the crossroad of Europe for centuries. In her film, Dusek visits all of the major cities and sights of the country, weaving its political and artistic history into her narrative. She also explores the distinctive cultures of the Dutch-speaking Flemish of the north, and the French-speaking Walloons of the south.

Tickets are $3 for the matinee and $4 for the evening showing. Tickets are available at the door and at Tresidder Ticket Office, (415) 497-4317.

Mendicants plan Wine Taste Concert

The Stanford Mendicants will present their fifth annual Wine Taste Concert at 8 p.m. Saturday, April 2, in the Tresidder Union large lounge.

The evening will include an hour-long concert by the Mendicants and wines from Christian Brothers, Sonoma Vineyards and local wineries, homemade breads, cheese, and nonalcoholic beverages. Semiformal dress is requested.

Tickets at $6 ($10 per couple) are available at Tresidder Ticket Office or may be bought on White Plaza at noon March 30 through April 1.

The Mendicants of Stanford is a group of 13 men who follow the tradition of East Coast collegiate singing. The group was founded in 1963 by a transfer student from Yale.

The Mendicants has a broad repertoire of music, both *a capella* and bass-and-guitar-accompanied songs, including barbershop, bluegrass, plainchant, '40s jazz ballads, folk, and contemporary pop.

They have sung for many local groups including women's clubs, country clubs, service organizations, corporate groups, and retired people in a variety of settings, from dinner parties and luncheons to meetings and award ceremonies.

Proceeds of the Wine Taste Concert will benefit the Mendicants' tenth album and a joint tour with Counterpoint (their female alter egos) to Hawaii in June.

For information contact John Rowehl at 327-0667 or the Mendicants' office at 322-0974.

Mueller gives recital

Organist Jill Mueller will give a free solo recital at 8 p.m. Monday, April 4, in Memorial Church. She will graduate from Stanford in June with both a B.A. and M.A. in music.

Presented by the Department of Music, Mueller's program will include Bach's *Fantasia and Fugue in G minor*, Maurice Duruflue's *Prelude, Adagio, et Choral varie sur Veni Creator*, and Liszt's *Fantasy and Fugue on Ad Nos*. Mueller studies with university organist Prof. Herbert Nanney.



Sclaelo Maredi

South African play set Friday

South African playwright Selaelo Maredi will direct and act in his play "For Better Not for Worse" at 8 p.m. Friday, April 1, in Dinkelspiel Auditorium on the Stanford campus.

The play is a political comedy of hope and struggle for the end of apartheid in South Africa. It is sponsored by the Stanford African Students Association and the Committee on Black Performing Arts.

Maredi was born in Sophiatown, one of Johannesburg's oldest ghettos. He was still in school when all the black families, including his, were removed from their homes by policemen and bulldozers because Sophiatown had become attractive to the white community.

Maredi was attracted to the theater at an early age and has won several awards for his work, which includes a musical play, "Melodi," coauthored with Hugh Masakela. He plays the part of Shai in this play.

Moeketsi Bodibe, born near Johannesburg in Alberton, plays Mampane. He has acted in musicals as well as dramas, and also is a singer, dancer, and drummer.

Tickets for "For Better Not for Worse" are $5 ($2 for children).

Fool for Christ to be shown

Fool for Christ, a film based on the life of Ken Feit, itinerant storyteller, mime, and clown, will be shown at noon Monday, April 4, at the Clubhouse Common Room (top floor).

The director/producer of the film, Jim Friedrich, will be present.

The film is sponsored by Episcopal Fellowship at Stanford. All are welcome.

Women 50 to 69 needed for study

Graduate students in Stanford's department of physical therapy are seeking women volunteers aged 50 to 69 years for a study of the changes in balance associated with age.

Women interested in volunteering for the study, which involves a single, brief test of their balance as they attempt to stand still, should call Kathy Sherwood at 497-5795 or 948-8679.

Give blood at Terman Friday

The Stanford University Blood Bank will hold a blood drive from 10 a.m. to 4 p.m. Friday, April 1, in the mezzanine of Terman Engineering Building.

Faculty and staff are urged to donate blood at this time, and whenever possible, to announce the blood drive to students and colleagues.

Patients at Stanford Hospital and the Children's Hospital at Stanford often have complex and sophisticated transfusion needs, and the demand for all blood products is high.

The two Stanford hospitals combined use over 100 units of blood each day, and in order to support this need, the Blood Bank asks your support.



Dvorak exhibits rice paper works

Raffaello Dvorak's exhibition of work on rice paper at Stanford's International Center April 1-30 features recent woodcuts and paintings.

A reception for the artist will be held at the Center from 5-7 p.m. Friday, April 8.

The exhibition includes the exaggerated still lifes for which Dvorak is known and impressionistic landscape paintings which are seldom exhibited.

Some of these landscapes are painted on wrinkled rice paper and later mounted and flattened with conservator's rice paste. Others employ collage—layers of colored rice paper, Chinese ink and watercolor.

Dvorak has studied Japanese woodcut printmaking, Sumi painting, and Chinese brush painting.

A graduate of the University of Illinois and UC-Berkeley, Dvorak is currently conducting drawing workshops for the extensions of the University of California, Foothill College and the College of San Mateo. His studio is in downtown Palo Alto.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., March 30, to cover the week of Mon., April 4, through Sun., April 10.

MONDAY, APRIL 4

Episcopal Fellowship at Stanford Film: "Food for Christ," about Ken Feit, itinerant story-teller, mime, and clown. Noon. Clubhouse Common Room. Free.

Biological Sciences Seminar: "Parasitic Infections as Regulators of Animal Populations," by Dr. Robert May, Dept. of Biology, Princeton University. 4:15 p.m. Room T-175 — Herrin Hall, Dept. of Biological Sci.

Numerical Analysis Seminar: "Two Fluid Instabilities," with Bruce Stewart, Brookhaven Laboratories. 4:15 p.m. Room 380C, Math Corner.

Law School Lecture: "Thinking About the Bill of Rights." with Sir Zelman Cowen, former governor-general of Australia and present provost of Oriel College, Oxford. 3 p.m. Room 290. Crown Quad. Free.

TUESDAY, APRIL 5

STARTS: Crochet. Learn to make your own creative clothing with Karen Springen. $8 for 8 week session. Noon. Tresidder Union Room 263.

Learning about Racism Lunch Series: "Internalized Racism," by Gloria Watkins, teacher of courses on Women's Studies at S.F. State Univ. and U.C. Santa Cruz. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Room.

Mens' Tennis: vs. San Jose State. 1:30 p.m. Varsity Courts.

Discovery Film Series: "Belgium," with Kathleen Dusek. 2:30 p.m. Kresge Aud. $3.

Baseball: vs. Sonoma State. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

CROW Poetry Reading: Shirley Kaufman, author of *The Floor Keeps Turning, Gold Country & From One Life to Another*, reading from her poetry. 4:15 p.m. Briggs Room, English Dept.

Discovery Film Series: "Belgium," with Kathleen Dusek. 7:45 p.m. Memorial Aud. $4.

WEDNESDAY, APRIL 6

Gifts and Exchange Division, Stanford Univ. Libraries: Book Sale. Books in many fields. Harbound $1.50 and up, paperbacks 25 cents and up, periodicals 10 cents and up. 11 a.m. 1:30 p.m. Green Library, West Wing, First Floor, Room 101.

Chemical Engineering Colloquium: "Rheology of Rodlike Macroions in Solution," by Professor Guy Berry, Carnegie Mellon University. 4:15 p.m. Chemical Engineering Conference Room.

Drama and Black Performing Arts Lecture: "The Social Implications of Carnaval—Mardi Gras and Jonkonnu," by Errol Hill (Dartmouth College) and Sylvia Wynter (Stanford). 4:30 p.m. Meyer Library Forum Room. Free.

United Campus Christian Ministry Worship: with leaders: Rev. Carolyn Roberts, Rev. Keith Naylor, Rev. Byron Bland. 6:45 p.m. Clubhouse Common Room.

Men's Volleyball: vs. Hawaii. 7:30 p.m. Maples Pavilion.

United Campus Christian Ministry Morning Seminar: Informal discussion of interesting theological, social, and personal questions and struggles. 8 a.m. - 9 a.m. Clubhouse Common Room.

Stanford Society of the Archaeological Institute of America: "The Etruscan Tomb Paintings of Tarquinia," by Friedrich Wilhelm von Hase of Mannheim. 8:15 p.m. Room 370.

THURSDAY, APRIL 7

Theology & Natural Sciences Lunch Series: "History of the Relations between Science & Theology," by Bob Russell, director of Center for Theology & Natural Sciences, Berkeley. Bring a bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

Stanford Women in Science and Engineering Lecture: Science and Engineering Research in Academe. Featuring: Patricia Jones, Assist. Prof. of Biological Sci.; Carla Shatz, Assist. Prof. of Neurobiology; & Margaret Wright, Senior Research Associate in Operations Research. 4:15 p.m. Building 420, Room 041.

Applied Mechanics Division Seminar: Mini-Max and Relaxed Mini-Max Problems in Structural Optimization," with Professor John E. Taylor, Dept. of Aero. Engineering, Univ. of Michigan. 4:15 p.m. Skilling Aud.

Biological Sciences Special Seminar: "The Alcohol Dehydrogenase Genes of Maize: Structure, Expression and Controlling Elements," Dr. Elizabeth Dennis, Dept. of Biochemistry, Stanford Medical School. 4:15 p.m. Room T-175 Herrin Hall, Dept. of Biological Sciences.

Numerical Analysis Seminar: "A Large Time Step Generalization of Godunov's Method for Systems of Conservation Laws," by Randall LeVeque, Courant Institute of Mathematical Sciences. 4:15 p.m. Margaret Jacks Hall, Room 352.

Other Cultures Film Series: "Four Women Four Choices," "Setaro Tanaka (Kabuki)," & "Image of Japanese Women," 3-films on Japanese women. 7:30 p.m. Bechtel International Center. ,75 cent donation requested.

Spirit of Japan Lecture Series: "Japanese Woodblock Prints," by Roger Keyes. 8:15 p.m. Annenberg Aud. Comm. for Art members & students $4, non members $5.

FRIDAY, APRIL 8

Men's Tennis: vs. Arizona State. 1:30 p.m. Varsity Courts.

Women's Tennis: vs. UC-Irvine. 2 p.m. Varsity Courts.

Materials Science and Engineering Colloquim: "Dynamic Compaction of Rapidly Solidified Materials and Their Properties," by Dr. Carl Cline, Chemistry and Materials Dept. 3:30 p.m. Room 550A Building 550 - Peterson Lab.

The Lively Arts at Stanford: Nathaniel Rosen, cello. 8 p.m. Dinkelspiel Aud. $10.50, $9.50, students $3 off regular price.

STARTS Great Directors Friday Film Series: "My Love Has Been Burning," by Japanese Director Kenji Mizoguchi. 8 p.m. Geology Corner, Room 320. $2.50 general.

STARTS/Coffee House: Jon Jang with Steve Killion and Frances Wang (jazz). 9-12 p.m. Coffee House. Free.

SATURDAY, APRIL 9

Baseball: vs. California. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Men's Tennis: vs. Arizona. 11 a.m. Varsity Courts.

Coffee House/STARTS: The Rescue (Mo-town rock & roll). A special spring event on the Coffee House patio which includes dancing. 9-12 p.m. Coffee House Patio. Free.

SUNDAY, APRIL 10

University Public Worship: with preacher Wendy Smith, Associate Dean of the Chapel. 11 a.m. Memorial Church.

The Lively Arts at Stanford: Suk Trio. Haydn: Trio in D Major; Schumann: Trio in D minor; Dvorak : Trio in F minor, Op. 65. 2:30 p.m. Dinkelspiel Aud. $10.50, $9.50, students $3 off.

EXHIBITS

Inventions. An exhibition of books and manuscipts relating to the history of science and technology. Lurie Rotunda, second floor, West Wing, Green Library. Jan. 15 - April 8.

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

The Prints of William Nicholson. Tues.- Friday 10 a.m.- 5 p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

R. Raffaello Dvorak, works on rice paper. I-Center. April 1 - April 30.

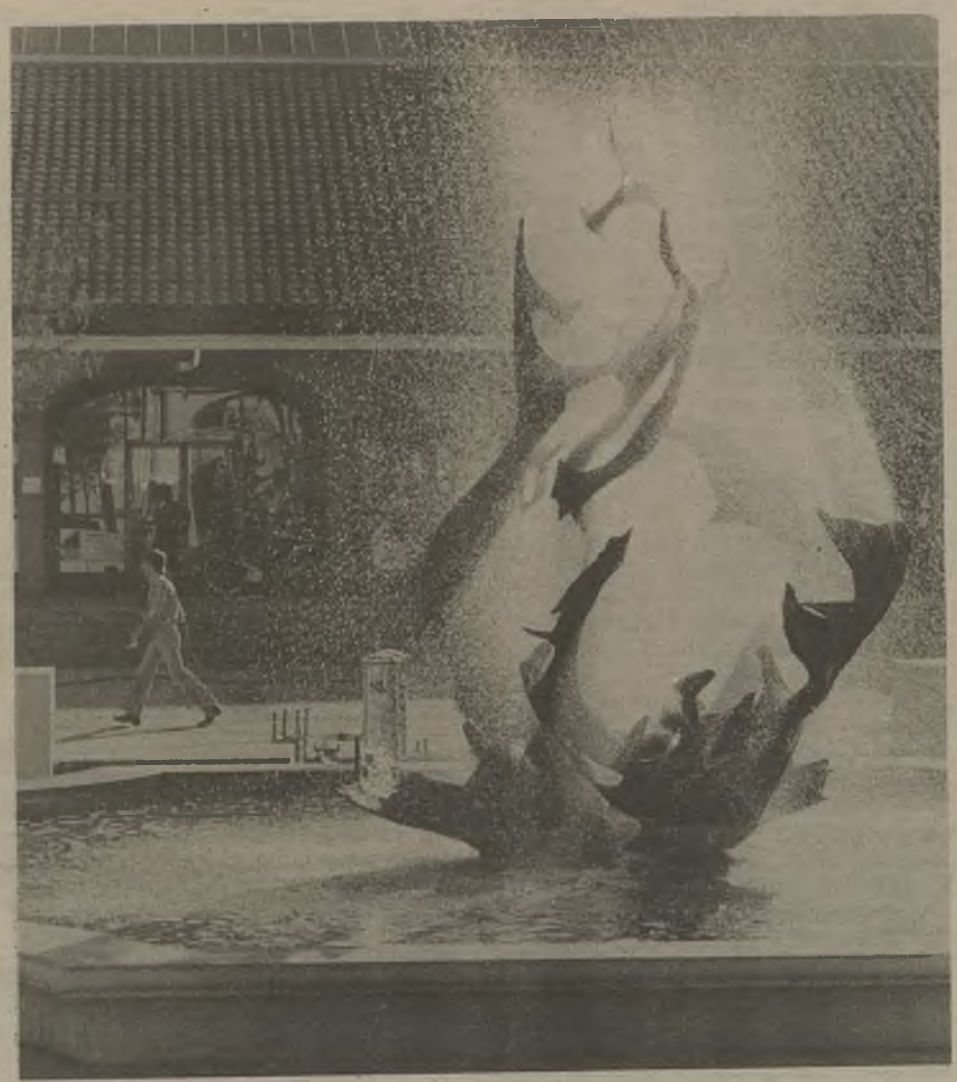
Photographs of Africa by Sylvie Cohen. Tresidder Upper Lobby, 2nd. Floor. April 1 - April 30.

Photos from the Barrio Assistance Program by Phillip Baca. Coffee House Gallery. April 1 - April 30.

Trans Arts Gallery. Exhibit and Sale by Trans Art Gallery. 11 a.m. to 5 p.m. Tresidder Union Lobby 2nd. Floor. April 7April 8.

CAMPUS REPORT

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When that Aprille...

Riggs to head Development with Hinchliffe



Henry E. Riggs



Bruce G. Hinchliffe

Prof. Henry E. Riggs, 48, and Bruce G. Hinchliffe, 47, have been named vice president and associate vice president for development, respectively, Stanford President Donald Kennedy announced Friday, April 1.

A veteran Silicon Valley entrepreneur and award-winning teacher, Riggs has headed the Department of Industrial Engineering and Engineering Management since 1980. Now on sabbatical leave in Japan, he will return to campus April 15 and assume the vice presidency July 15.

Hinchliffe, a 1957 classmate of Riggs at Stanford, will continue as acting vice president for development until then. His full title will be associate vice president and director of development.

"Together, these appointments will provide a strong faculty imprint and imaginative, effective leadership in fund-raising and management for the University," Kennedy said. "Henry is greatly admired as a teacher and has been a strong advocate for institutional programs. Bruce has done a superb job as acting vice president and is one of the best professional fund-raisers at any university. We're lucky to have them both."

Riggs will succeed Joel P. Smith, who resigned the vice presidency for reasons of health last year, but continues as secretary to the Board of Trustees.

Stanford received $77 million in gifts during 1981-82 and $79.5 million in 1980-81, the highest totals in the University's

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Senate asks study of volume of weapons-related research

The Stanford Faculty Senate Thursday, March 31, asked the Committee on Research "to study the character and volume of weapons-related research" at the University.

Adopted by a substantial majority in a divided voice vote, the resolution said it was "desirable that a preliminary report on issues and procedures be delivered to the Senate" this spring.

Prof. James Meindl, electrical engineering, chairman of the Committee on Research, said it probably would not be able to discuss the issue until its May 4 meeting. It already has scheduled an open forum April 26 on proposed changes in computer software and copyright policy.

Prof. Robert Mozley of the Stanford Linear Accelerator Center (SLAC), who introduced the resolution, said "President Reagan's support for a major increase in funding for beam-weapons research makes clear the pressures of funding availability which may move University research programs in a weapons-related direction.

"Although it is difficult and dangerous to apply criteria in selecting research appropriate to a university, a slight move toward avoidance of work with a clear direct military mission might be desirable to prevent Stanford from becoming too deeply involved in military research."

He said the resolution was motivated by "the probability that a beam-weapons related project at the Stanford Synchrotron Radiation Laboratory (SSRL) will command the effort of SLAC people who do not wish to work on it." But he

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Kennedy foresees no change to restrict research by use

Stanford President Donald Kennedy Friday, April 1, strongly supported open research, warning that "today's benign restriction might become tomorrow's suffocation. . . .

"Once you begin making value judgments about the possible outcomes of scientific work, there is no place to stop."

In his spring quarter talk to the Academic Council, Kennedy said he planned no change in present Stanford policy to restrict unclassified weapons-related research at the Stanford Synchrotron Radiation Laboratory, "nor do I think that my colleagues should wish to do so." *(See text, page 16.)*

"I would hold that view even if the project under consideration were much more heavily involved than it is to end-uses with which I am personally uncomfortable."

In a divided voice vote at its regular meeting Thursday, March 31, the Stanford Faculty Senate asked its Committee on Research to examine "the character and volume of weapons-related research" at the University. But it deleted a request that the committee study "possible criteria relating to end use which might be used to reduce the volume of such research if this proves desirable."

In December, 1971, the Senate adopted a policy statement that allocation of research resources should be based on "scholarly and educational merits" and "not on speculations concerning the political or moral impropriety of the uses which might be made of its results."

Former commissioner of the Food and Drug Administration, Kennedy said Friday that "many of us here believe that the present direction of our national effort is tragically wrong. Our dependence on

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People



Richard Bube

Richard Bube

Prof. Richard H. Bube, chairman of the Stanford Department of Materials Science and Engineering, is making several extended speaking tours in order to discuss the integration of science and Christianity. On March 21, 22, he was an invited lecturer at the 75th Anniversary of Olivet Nazarene College in Kankakee, Ill. On March 23, 24, and again on April 21, 22, Bube is lecturing as a Staley distinguished Christian scholar on the campuses of Evangel College, Springfield Mo., and Bethel College, St. Paul, Minn. On April 20, he will lecture at the University of Minnesota, and on May 2 at Sonoma State University.

Bube is active in research on photovoltaic conversion of solar energy through the use of suitable semiconductor junctions. He lectures on the technical aspects of this subject, as well as on the broader subjects involving both science and Christian faith.

He is the author of several books on solid-state physics, *The Encounter Between Christianity and Science* and *The Human Quest: A New Look at Science and Christian Faith*; books that will appear in print this year or next include *Fundamentals of Solar Cells*, written with Stanford Senior Research Associate Alan L. Fahrenbruch, and *Science and the Whole Person*, which has been published serially in the *Journal of the American Scientific Affiliation* which Prof. Bube serves as editor.

Lisa Adler

Senior Lisa Adler has been selected as the 1983 recipient of the Haas-Koshland Award, which provides an all-expenses-paid year in Israel for study and personal development.

Adler is an economics major who is writing an honors thesis on "Resistance in Literature of the Holocaust." She plans to use the year in Israel to examine the bonds between the diaspora and Israel.

Adler is a native of Shawnee Mission, Kansas. She had her first trip to Israel in the summer of 1978 with a group of 58 students and has hoped since then to return for a longer period.

The Haas-Koshland Award is a special fund of the Jewish Community Endowment Fund of the Jewish Community Federation.

Clare Bell

Clare Bell, a graduate student in the Design Division of Mechanical Engineering at Stanford, has just published her first science fantasy novel *Ratha's Creature* (Athaneum), a tale about a society of intelligent cats close to extinction 25 million years ago.

Bell, who has worked as a test manufacturing equipment engineer for a major computer company for the past four years, is an honor's cooperative student at Stanford. She is currently working on a Stanford team, designing a robotic manipulator to be controlled by severely disabled people, under the sponsorship of the Veteran's Administration Hospital and Prof. Larry J. Leifer.

By the age of 12 she began to write stories about her own flying ships and animals, or around the characters she otherwise imagined. Thus she gradually developed the evolutionary theme that runs through her written and artistic work.

Anna Durand
Glen Nager

Two recent graduates of the Stanford Law School will fill U.S. Supreme Court clerkships during the 1983-1984 term.

They are Anna Durand of Albuquerque, N.M. and Glen Nager of Houston, Texas. Both are members of the Class of 1982.

Durand will clerk for Justice Harry Blackmun, and Nager will clerk for Justice Sandra Day O'Connor.

Durand completed the four-year Stanford law and business program, graduating with the combined JD/MBA degree. In addition to her studies, she served as managing editor of the *Stanford Law Review*.

Durand's honors include the Frank Baker Belcher award for best academic work in the evidence course, and election to the Order of the Coif, the national law school honor society.

Upon graduation she clerked for Judge Herbert Choy of the U.S. Court of Appeals, Ninth Circuit.

Nager is currently clerking for Judge J. Skelly Wright, U.S. Court of Appeals, District of Columbia Circuit.

At law school he was editor of the *Stanford Law Review* and won election to the Order of the Coif.

The duties of the U.S. Supreme Court clerks include reviewing petitions, writing bench memoranda, and assisting the justices in drafting legal opinions.

Riggs, Hinchliffe head development

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history. Among private universities, Stanford ranks second to Harvard in total gift support, averaged over five-year intervals.

Riggs received the Tau Beta Pi outstanding teaching award in the School of Engineering in 1979 and was cited for his "extraordinary energy, skill and zest" when he received a Walter J. Gores award for teaching in 1980.

In the late 1960s, while he was president of ICORE Industries in Sunnyvale, he used to teach an 8 a.m. class at Stanford three times a week. "I concealed from them successfully that I would have worked for nothing, but they paid me," he once told a campus interviewer.

During 1970-74, he served simultaneously as vice president of finance for Measurex Corporation and as consulting professor at Stanford. He became an adjunct professor in 1976 and full professor in 1980.

He is the author of a McGraw-Hill textbook, *Accounting: A Survey* (1981), and *The Use of Computer-Based Exercises (Games) in Engineering Management Education* (1979) and *Biomass Energy Options for Hawaii*.

Highly regarded as a teacher by students in the Graduate School of Business, he has been involved in several Silicon Valley startup firms and is a director of University National Bank and Trust, Palo Alto. Several of his engineering students have started their own companies.

His introductory course in basic accounting has attracted as many as 500 students over two academic quarters, including both graduates and undergraduates. Known for his bow ties and aggressive enthusiasm, he still likes teaching 8 a.m. classes.

In a 1981 talk to the Business Development Association, he said the key to success "is to be very good at what is really important." Small firms can make effective use of "misfits...creative people who may be a bit hard to get along with but are even harder to do without."

Among his caveats for consulting with small business were; 1) "Always worry about cash"; 2) "Be skeptical about any balance sheet"; 3) "Design the organization to fit the people—not the other way around. And keep it lean."

In a 1980 talk to engineering alumni, he said small firms thrive by finding a small market niche, and then energetically dominating it.

Born in Chicago Feb. 25, 1935, he received his bachelor of science in industrial engineering at Stanford in 1957, graduating Phi Beta Kappa and Tau Beta Pi. He was a student in the honors cooperative program here the following year, then obtained his MBA at Harvard with high distinction in 1960. He worked as a process engineer at Ampex and as an industrial economist at Stanford Research Institute before helping found ICORE Industries in 1963.

Hinchliffe received his bachelor's degree in economics in 1957 and his MBA from Stanford in 1959. He has been with the Stanford Development Office since 1963. Under his leadership of corporate fund-raising, receipts grew from $8.3 million in 1978-79 to more than $17 million in 1981-82.

He served as associate director and chairman of the executive committee of the $300 million Campaign for Stanford during 1972-77.

Sterling award nominees sought

Nominations are being accepted for the J. E. Wallace Sterling Award, presented annually by the Stanford Alumni Association to recognize a graduating senior who has demonstrated strong potential for service to the University and to the Alumni Association. The prize, established in 1979 and presented during Class Day exercises in June, honors Stanford's chancellor and former president, Wallace Sterling.

Members of the senior class are particularly encouraged to submit names of classmates who should be considered for the award, which consists of a medal and a life membership in the Alumni Association. Suggestions are also welcomed from members of the faculty and administration.

In defining "potential for service," Association Director William Stone noted that it could be reflected in a student's record of involvement in programs and services that have benefited the University and the community and could include participation in activities such as clubs, counseling, athletics, drama and musical productions, student government, religious organizations, residential education, development committees, publications, social and political organizations, or tutoring.

Nominations must be made to the Alumni Association by April 22. Selection of the winner will be made by an Alumni Association committee. Further information may be obtained by contacting Marie Earl or Karen Porter at Bowman Alumni House, 497-2021.

Research associate vacancy at HEPL

Applications are sought for a Research Associate position to begin October 1, 1983, for a term of up to two years. The successful candidate would carry on a Stanford-Berkeley program of heavy ion scattering and reactions at the LBL 88" Cyclotron and Bevalac. Candidates must have a Ph.D. degree and preferably have experience with magnetic spectrometers, solid state, scintillation and gas detectors, and conventional electronics.

Applications with curriculum vitae and three letters of recommendation may be sent by July 1, 1983, to Professors K. Van Bibber and M. R. Yearian, High Energy Physics Laboratory, Stanford University, Stanford, CA 94305.

Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify qualified minority and women applicants.

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Schawlow: the brilliance, burden, and caring of a Nobelist

A rumpled, plump physicist, he thinks to classical jazz, seeks help for autistic son

BY DONALD STOKES



Arthur Schawlow

Arthur Schawlow of Stanford is far removed from the popular image of a Nobel Prize winning physicist.

The man who helped to transform our world by co-inventing the laser is not an ascetic stepping from the calm of his lab to tranquilly enjoy the crock at the end of the rainbow.

Instead, he is a troubled man with a load of very special responsibilities and demands on his time.

He is grateful and proud to have received the Nobel, but he is equally glad, more than a year after the award, that subsequent winners are being publicized, and he can give more time to research and his family responsibilities.

Schawlow is the fifth Stanford physicist to gain a Nobel, and they are all busy on campus. But Schawlow is unique in his style, his problems, and his outlook.

To see him at work, one could not guess at the heavy load of his responsibilities. He is a rumpled, plump figure who thinks, whether in the office or in his car, to the accompaniment of classical jazz music.

He finds the likes of Louis Armstrong or Bix Beiderbecke, chosen from his collection of 1,500 records and cassettes, to be conducive to working out his problems. He buzzes around campus on a moped, amiably waving to his friends.

His impish sense of humor revels in his scientific tricks of demonstration in the classroom, and his students regard their tousled professor with deep affection.

Schawlow is a caring man, and this has caused many of his burdens since he won the big prize. He cares about the good causes which seek his name in support; he responds to friends and acquaintances in the worlds of physics, engineering, and science who want him to lecture or to visit. He is an easy touch for the collectors all over the world who ask for his autograph or photo.

He gives earnest thought to the swarm of letters from those who imagine that a man of his eminence must be able to help them shape their careers.

He worries about becoming politicized. "All sorts of people want my name to add to their manifestoes or appeals," he said. "Often I am approached by people whose judgment I respect, and it is very difficult to decline, but at the same time I am anxious not to become a political figure. Winning the Nobel in no way enhanced my judgment in political affairs.

"Sometimes these appeals do some good, such as when an Argentine physicist was released from jail because of international pressure, to which I added my name.

"Certainly the time I have available for the things that really interest me has been cut down considerably. I hope that will get better as time goes by."

Schawlow is asked to testify before U.S. Congressional Committees, to give talks to audiences all over the country. Each time there are additional burdens involved.

"There are so many things to watch out for. For example, having traveled somewhere to give a talk, the organizers say they want to print the talk, that they have recorded it and will ask me to edit the manuscript.

"Of course, there is a great difference between the way one talks and the way it should be presented in print, so a great deal of work is involved in editing it into suitable shape."

Another time-consumer is the steady stream of requests from all over the world for his autograph or photo. A surprising number of them come from Germany and Austria.

"I hope what I'm saying doesn't seem to imply that I'm sorry I won the Nobel. Far from it. It is just that there are heavy new responsibilities I had never dreamed of."

Schawlow worries that the flood of expectations from others that surrounds him will take too much time away from his research. "The scientific world is sometimes like the political arena, where the refrain is 'What have you done for me lately?' In science, unless you are doing new creative things, you are regarded as washed up. You really lose respect.

"Of course, in the wider world, the fact that one is a Nobel Prize winner still means a great deal to many people. I remember giving a talk to a group of physics students and teachers, where one of the teachers told me that he had been teaching physics for 20 years, and had never met a Nobel winner before.

"At Stanford they are fairly common, and if you go to a meeting of the American Physical Society they are almost the norm."

Schawlow's new eminence does bring some dividends. When he fell ill with a severe virus infection recently while giving a talk at a Navy college, he was taken to a Navy hospital and given the red carpet treatment, with awed nurses and intravenous feeding.

This was the very first time in his life that Schawlow had ever been treated in a hospital. He remembers how, at the age of five, he was laid out on the dining room table at home so that his tonsils could be removed. On another occasion he contracted diphtheria ("we've wiped that out now") and an enormous needle was plunged into his leg with anti-toxin.

In all the range of his caring, nothing is more pressing to Schawlow and his wife Aurelia than the plight of their first-born, a son of 27, named after him. Artie, as he is called, is autistic.

Nobody knows the cause nor the cure for autism, a withdrawn condition in which the patient is unmindful of objective reality. The baffling frustration is that the person is often of good intelligence. The very existence of the condition was little known when Artie was young. Today it is much better known, and facilities and behavioral treatment are available for autistic children.

But the problem of caring for autistic adults is largely unmet. The Schawlows face the problem that their son is fully-grown and quite husky—5'10" tall and weighing 180 pounds. It is therefore difficult to secure adequate care for him.

Artie speaks only a few words. "Nearly all the time he is gentle and sweet," said Schawlow, "but on the rare occasions he gets annoyed, his very size makes him a problem.

"Very few facilities are available for adult autistics. This is particularly difficult for us because of Artie's size." Schawlow sighed deeply and his normally benign features creased into lines of deep worry. "It is a problem bristling with difficulties.

"Autistic people have just as much comprehension as more fortunate people, but they find it difficult to communicate, and this makes them frustrated. They need to learn—I suppose by techniques of behavioral modification—how to conform to the group.

"Children are often rough when they are little, but they learn to conform. Artie was very withdrawn when he was little and did not learn some of the social lessons he might have. In those days hardly anybody had heard of autism, people wondered whether our son was retarded or disturbed. It may be neither, or it may be something of both.

"The root cause of the affliction is unknown; perhaps it is a disease, perhaps a syndrome. It may be a birth defect of some kind. It was given a name only as recently as the 1940s.

"Usually autistics are very withdrawn, but Artie is not so anymore. Some people say—and I tend to agree with them—that autistics are not insensitive to their environment, but hypersensitive to it, and they withdraw into their shell because they cannot cope.

"Today there are programs in some schools for them, where they are taught to process information. When Artie grew up there was no such help, so he is

continued on next page

Schawlow on autism: 'It's one of those things you can never give up on'

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having a hard time now.

"What he needs is to be in a group so that he can learn from others, and enjoy a certain amount of group support and learning. At home there are no contemporaries for him to relate to.

"At one time he was very hard to reach, but now he is open and warm and wants to learn, so we hope he can be given the opportunity."

During his travels Schawlow meets many medical people, also parents, who are involved in the world of autistics. Very often he has found proof of the intelligence of autistics. In Sweden he learned of a young autistic who has learned to communicate by means of a typewriter device.

In Florida he heard of an autistic who has earned a Ph.D. in mathematics, but has been unable to hold a job because of his withdrawn manner.

An interviewer suggested that there might be a keen brain in Artie, trying to express itself. "That could be," replied Schawlow. "The father paused and said slowly: "It's just one of those things one can never give up on."

The Schawlows have given substantial help to the Peninsula Children's Center, Palo Alto, which is doing excellent work for young autistics. So far, unfortunately, the Center has not been able to help Artie.

The Schawlows hope that they may be able to find help through other organizations. In any case, they expect that the bulk of the Nobel prize money will go on trying to find help for Artie.

"Just in the past three or four years," said Schawlow, "Artie has become willing, indeed eager, to sit at a table and work on academic skills. He can now recognize a considerable number of words, can add some numbers and is beginning to use some sign language.

"It is very important for him that he can find somewhere to live where he can be comfortable and happy and continue to learn.

"It is all very difficult, and we live with it all the time."

As part of the media attention given to Schawlow when he won the Nobel, and the problems he faces with Artie, he received a large volume of mail from people giving suggestions about treatment.

"The trouble was, it didn't add up," said Schawlow. "I have taken Artie to many doctors, each of whom looks at Artie in perspective of his own particular specialty. Some look at brain-waves and nothing else. Psychiatrists try to analyze the parents. Others say there is something genetic about the condition."

Wherever he goes, whether in the office, in his car, or traveling, Schawlow likes to listen to classical jazz. He has a hi-fi set in his office, and stereo speakers in his car, and wherever he travels he tries to find time to visit local record shops to search for new finds, from New Orleans sounds, Dixieland, the swing era, and the big bands.

He switched on his set in the office and a clarinet solo from Dixieland filled the room with sharp perfection.

"I turn the music on most of the time as background, but not if it is too distracting—and the really great masters are distracting. I am not really a musical person. I can't carry a tune, nor play an instrument."

His interest in music goes back to when he was finishing high school, and he built a radio. "About the only thing worth listening to was swing music. Being of scholarly disposition I went to the library to find books on swing. They had none, but they did have books on jazz, so I read about people like Louis Armstrong. I have been amassing jazz records ever since.

"I had about a thousand 78 rpm records, and I gave those to the Archive of Recorded Sound at Stanford. Today I have a lot of LP's. As soon as I have bought a new record I play it once, then put it on cassette so that I can listen to it here and in my car.

"I am an amasser rather than a collector, although I am a member of the International Association of Record Collectors, and have written a number of articles about jazz. I have never wanted to have rare records—I never wanted to pay premium prices or spend time going through junk piles.

"I am uncomfortable with rare records, and when I do get one I give it to a real collector. I want the music, and in a form I don't have to worry about."

He has fallen behind in listing his 1,500 records because he has been so busy. He thinks he must have 100 records of his particular favorite, Louis Armstrong, essentially all of his early records and many of the later ones.

"I also have everything Bix Beiderbecke ever played—what a pity he died so young. Then there is Irving Fazola, the great clarinetist, Artie Shaw, Duke Ellington. . . .

"I have been fascinated during the last couple of years by some Swedes and Danes who are remarkably fine copyists of the old masters. There's one Dane, Theis Jensen, who in some tapes sounds better than Louis Armstrong himself. He plays the way Louis did in 1932 when he was at the height of his powers."

When the famous Preservation Hall Dixie band played on its 50th anniversary at Stanford, Schawlow thanked Richard Lyman, then president of Stanford, for bringing them on campus; he gave Lyman a record of Joe Muranyi, a fine clarinetist who used to play with Armstrong.

The result was unexpected. "One night when I was in New York I went to the well-known Jimmy Ryan's bar to listen to Joe Muranyi in person. While I was chatting with Muranyi (about whom I had written an article for a fan magazine), he excused himself to circulate among the customers and sell his records.

"Joe came back to me grinning, saying 'I tried to sell one to one dude but he said that he had already been given one—he gave me his card.' The card was Dick Lyman's, who was among the crowd!

"I like classical music also. My wife is a classical musician; she studied voice and has a master's degree in music. She plays the piano and organ, and conducts the choir at Ladera Community Church. We like to go to opera and classical concerts.

"Aurelia tolerates jazz, but she doesn't really like it."

The Schawlows have two daughters. The elder, Helen, is 25, a year-and-a-half younger than Artie. She gained her B.A. at Stanford and her master's at UC-Berkeley, and is now considering graduate studies in French. Edith, who is 23, has a B.A. in psychology, and is working for a personnel manager. She is married.

What makes Schawlow popular with students is the empathy he creates. He cares deeply about them and worries about their difficulties.

"There are many problems for them," he says. "For example, at one time going into medicine was a sure way of finding a satisfying career, but it has become so over-extended. Today so many try to get into medicine, and in the classes I teach I am aware of the almost frenzied straining in the highly competitive atmosphere.

"At the peak of the frenzy they try desperately to get that extra point in a test, because it may make all the difference in their grades and their chances of a career."

Schawlow has a great reputation as a teacher. He is particularly noted for the way he uses novel demonstrations in class to drive home points. An example famous on campus is when he uses a laser on one of the familiar types of balloon which has another balloon of different color within it.

Schawlow directs a laser on to this type of balloon and the inner part collapses, since the inner balloon has a dark blue color and so absorbs the intense red light from the ruby laser.

In sciences you have to do what you can do, to make sure that it is something new, and you have to depend on your instincts that you are working in a fruitful direction. . .
Doing research is an art as much as a science. It uses science, but it is a creative art. There are pitfalls on both sides.

—Arthur Schawlow

Schawlow was widely expected, by his professional colleagues, to win the Nobel Prize in 1964. With his brother-in-law, Charles Townes, he had first shown the possibility of creating a laser.

Schawlow speaks now of his disappointment in a calm, almost offhand manner. "By the end of 1957 Charles Townes and I were working on the principle of an optical maser, extending the principle of masers to visible wave-lengths. Six years earlier Townes had invented masers, the first devices that used atoms to amplify radiation. But they worked in the radio region and we wanted to see if something like that could work for light.

"We thought we could not afford to waste two or three years trying to build one, for it had never been done, and looked terribly difficult. So we published a theoretic paper showing the calculations, which proved that it could indeed be done, and describing the structure that most lasers use.

"One example we used was potassium vapor from potassium lamps; we had enough information about that so that we could calculate everything.

"Townes and his students started trying to build one using potassium. I thought that solids were better than gases for the purpose, so I started to study the optical properties of solids, including rubies. I proposed a dark ruby for an optical maser; later on it was demonstrated and it worked.

"We had shown that an optical maser could be built, and how to do it. But if we had had to have a particular wavelength or level of efficiency, it would have added more conditions that would have made it impossible.

"In science you have to do what you can do, to make sure that it is something new, and you have to depend on your instincts that you are working in a fruitful direction."

When the Nobel Prize winners were announced in 1964, Charles Townes was named as a co-winner, with two Russians, who like Townes had done pioneer research on masers.

Schawlow had to wait another 17 years for his.

"Doing research is an art as much as a science," says Schawlow equably. "It uses science, but it is a creative art. There are pitfalls on both sides.

"You can work on the obvious recognized problems, which may be impossible to solve, or you may look under the lamp post for the lost quarter because that is where you can see, though you lost it somewhere else."

Humanities and Sciences dean to oversee curricular programs in DAPER

Humanities and Sciences Dean Norman Wessells will become responsible for overseeing curricular programs offered by the Stanford Department of Athletics, Physical Education, and Recreation (DAPER), effective Sept. 1.

Provost Albert Hastorf announced the change to the Faculty Senate Thursday, March 31, following an extensive committee study and consultation with Athletic Director Andy Geiger and others.

The change is designed to reduce the isolation of DAPER's Division of Educational Programs from other academic units.

Headed by Associate Prof. Pamela Strathairn, the division offers no degree programs. Its present isolation handicaps efforts to coordinate curriculum where undergraduates seek work in physical education to complement other academic majors or to heighten their career options, the committee study found.

At present, there is no forum for discussing standards for credit and grading or for comparing physical education courses with extradepartmental courses or activity courses in other departments.

"The division's isolation also diminishes the University's ability to see the full continuum of courses, among them physical education activity courses, which the faculty have decided can play only a limited role in student completion of the baccalaureate degree," Sally Mahoney, University registrar and committee head, informed Hastorf.

"Although the School of Education is committed in principle to maintaining its master's level programs in physical education and in the dance area of arts education, the division is not well positioned" to respond to these needs.

The committee recommended that:

1) The academic staff for teaching use the titles senior lecturer and lecturer, as is done elsewhere in the University;

2) The dean of humanities and sciences appoint a committee, including at least two faculty outside DAPER, to oversee its curriculum;

3) Further limits be placed on use of physical education courses as credit toward baccalaureate degrees, integrating them with limits now applied to extradepartmental programs;

4) DAPER courses generally be graded on a pass-no credit basis, unless specifically excepted by the oversight committee; and

5) The dean of humanities and science, the dean of education, and the head of DAPER's curricular division agree on plans for advanced training programs.

Hastorf suggested that these recommendations be reviewed by Wessells, Geiger and Strathairn after Sept. 1.

"Any bill in particular is worth tackling only because doing so holds promise of added value for our overall educational objectives," Hastorf said in a memo to Geiger and Strathairn.

"We think the promise is there in large part because of the quiet and effective attention you and your colleagues have paid to the quality of a curriculum that serves a wide variety of undergraduates and the professional training of a small number of others.

Besides Mahoney, those serving on the ad hoc committee included Education Dean Myron Atkin, Assistant Provost Cecilia Burciaga, and Profs. Jack Friedenthal, law; Michael Kirst, education; and Richard F. Thompson, human biology and psychology.

Volunteers sought for nutrition study

Interested in good nutrition? Want to find out how well *you're* eating?

The Communication Department needs volunteers to evaluate draft versions of materials for a nutrition education campaign. The materials, a nutrition self-assessment chart and a companion 16-page booklet, are being developed in cooperation with the Nutrition Education Unit of the United States Department of Agriculture.

Volunteers will be asked to use the booklet and the chart to keep track of what they eat for a week, then meet with a researcher and six to eight other volunteers to offer opinions and criticisms of the materials.

The group discussion will be held at the Communication Department (Building 120) from 5:15 to 6:30 p.m. Wednesday, Apil 27, and Thursday, April 28.

To be eligible, volunteers must be: 1) the person in their household who does most of the cooking and food shopping, 2) 20 to 50 years old, and 3) have at least one child aged 2 to 18 in the household. Staff employees preferred.

If you are interested and can attend one of the two discussion groups, please call Kathy Malin at 497-4700 by April 15.

Carstens to discuss South African events

Kenneth Carstens, lecturer at Harvard University and consultant on South Africa to the United Nations and other groups, will discuss events in South Africa at 8 p.m. Thursday, April 14, in the Round Room of the Stanford University Memorial Church.

A panel will follow including Robert Hamerton-Kelly, dean of the Chapel, and Profs. William Gould, law school, Prof. David Abernethy, political science, and Joel Samoff, education.

The event is sponsored by the Social Action Committee of the Friends of Memorial Church.

For more information, call the Church office at 497-1762.

Mahoney summarizes recommendations on DAPER's educational programs

Following is the major portion of a memo to Provost Albert H. Hastorf from Sally Mahoney, associate provost and registrar, concerning summarizing the report of the Ad Hoc Committee to Review Educational Programs in Physical Education.

The Department of Athletics, Physical Education and Recreation (D-APER) through its Division of Educational Programs headed by Associate Prof. Pamela Strathairn offers no degree programs but does offer an extensive curriculum in support of several objectives the staff understands the University expects of them. The Division seeks to contribute to general education, to elective work within certain undergraduate majors, to pre-professional exploration and preparation, and to advanced training programs in the School of Education.

Our principal finding is that D-APER's curricular division is separated, indeed, isolated from the other academic units. It is the responsibility of no School, nor has oversight responsibility for it been assigned to any of the University's faculty deans.

This general circumstance affects several aspects of the Division's function. The Division's efforts to maintain an effective instructional staff have not been matched by developmental opportunities for its professorial faculty and its academic staff for teaching (who hold distinctive titles which simply may isolate them further from others in the University of the same status and similar responsibilities).

Isolation seems to hamper the work of the Division's curriculum committee: they have only informal means and no formal structures through which to coordinate curricular planning with departments and programs whose undergraduates seek work in physical education to complement majors or to heighten career options; they have no forum for the discussion of standards for credit and grading or for comparing physical education courses with extradepartmental courses or with activity courses in other university departments.

The Division's isolation also diminishes the University's ability to see the full continuum of courses, among them physical education activity courses, which the faculty have decided can play only a limited role in student completion of the baccalaureate degree.

Finally, although the School of Education is committed in principle to maintaining its Master's level programs in physical education and in the dance area of arts education, the Division is not well positioned to respond to the needs implied by that commitment.

In response to these findings we make several recommendations:

First, we recommend that the Dean of Humanities and Sciences be appointed the Division's cognizant academic officer, assuming oversight of D-APER's curricular program and the staff supporting it.

Second, we recommend that the Division's cognizant academic officer respond to several personnel matters. In that connection, we specifically recommend that the Division's academic staff for teaching use the titles, Senior Lecturer and Lecturer, used generally in the University and not the special titles used in the Division since 1972.

Third, we recommend that the cognizant academic officer charge a committee, to include a core of the Division's own curriculum committee and at least two academic council members from outside D-APER, with oversight of the Division's curriculum.

Fourth, we recommend limitations beyond those now in place on the use of physical education courses in support of Stanford's baccalaureate degrees and, further, that these limits be integrated with other credit limits now applicable to extradepartmental programs.

Fifth, we recommend that D-APER courses, generally and unless specifically excepted by the oversight committee, be graded on a Pass (P)/NC basis.

Sixth, we recommend that D-APER's cognizant academic officer, the Dean of the School of Education, and the head of D-APER's curricular division come to closure on the advanced training programs to which D-APER's curricular Division contributes, reporting their plans, as appropriate, to the Provost.

This assignment proved an interesting task for the members of the committee. We have enjoyed the cooperation of many, and we are especially appreciative of the contributions of Valerie Veronin of the Office of Management and Budget, who provided the staff support for our work.

Should you wish to discuss our recommendations, we would be happy to meet with you at some mutually convenient time.

J. Myron Atkin
Cecilia P. Burciaga
Jack H. Friedenthal
Michael F. Kirst
Sally T. Mahoney
Richard F. Thompson

Hastorf accepts key recommendation, defers rest

Following is a March 21 memo to Andy Geiger, director D-APER, and Prof. Pam Strathairn, associate director for educational programs, from Provost Albert H. Hastorf.

All of us have had more than a little interest in the recent report of the *ad hoc* committee which reviewed D-APER's educational programs, specifically those involving the formal credit curriculum. Having studied the report and having learned your reactions to it and the reactions of others, I am persuaded of the committee's central finding: that D-APER's educational objectives for its credit curriculum are made difficult by the program's isolation from other units offering a credit curriculum.

Furthermore, the thrust of academic reorganization implemented during the past year has been, wherever possible, to locate credit programs within the Schools of the University. After discussions with Humanities and Sciences Dean Norman Wessells, which had been preceded by conversation between Associate Dean Carolyn Lougee and you, I am announcing that the School of Humanities and Sciences is accepting responsibility for the D-APER credit curriculum, effective September 1, 1983.

Having accepted the primary recommendation of the *ad hoc* committee, I think it would be in the spirit of their report to suggest that after September 1 the Dean and you review the other recommendations. I will look to his specific recommendations and actions following that.

There are, of course, several matters about which to be concerned: the workings of D-APER's internal curriculum committee and the possible establishment of a School level program policy committee; appropriate staffing arrangements responsive to issues raised in the report; matters of grading and credit limitation which may involve consideration and action by C-AAA or by C-US; and, as you work with the Dean's Office, still other issues beyond those raised by the *ad hoc* committee but which bear on the educational contribution of the program.

Any bill of particulars is worth tackling only because doing so holds promise of added value for our overall educational objectives. We think that promise is there in large part because of the quiet and effective attention you and your colleagues have paid to the quality of a curriculum that serves a wide variety of undergraduates and the professional training of a small number of others.

I expect that between now and year's end there will be opportunity for some informal discussions among you and Norm and his colleagues, discussions that will aid your planning for the formal change to come in Autumn. Let me know if further clarification would assist you or if I can be of other help.

Faculty Senate discusses weapons-related research, asks more information

continued from page 1

said this particular problem "can most likely be best handled by the Stanford administration without direct (Faculty) Senate involvement."

In a March 29 letter to 280 SLAC staff who petitioned against the research in mid-January, SLAC Director Wolfgang Panofsky said SLAC would "cooperate fully" if the unclassified proposal to SSRL were accepted by the University. So far, the proposal has not secured funding and has not been acted upon by the SSRL proposal review panel.

(For text of Panofsky letter, see p. 8.)

Developed by Livermore, Sandia, and Los Alamos national laboratories, part of the proposed research involves the development and testing of high-speed x-ray detectors, used in the analysis of nuclear weapons tests. This application was "very blatant and clear," Mozley said.

Meindl noted that the 42-page proposal was discussed by the committee Jan. 26 and found in accord with current University research policy. This requires openness, but does not consider end use.

The proposal, which also includes many University of California faculty research projects not involving weapons, was "full of all kinds of soft x-ray applications," he added. These involved astrophysics, the life sciences and several other disciplines "far beyond weapons."

Trying to restrict research on the basis of end use could "easily take a whole year of meetings," Meindl said.

Prof. Kenneth Arrow, Nobel Laureate in economics, could see "no logic" for distinguishing between weapons-related work and other defense research. He noted that he receives funds from the Office of Naval Research.

The more interesting issue, Arrow said, is the "involuntary servitude" of SLAC staff, whose skills provide the electron beam on which SSRL depends.

While it's "perfectly proper" to have the committee make a study, "we're not saying necessarily there's a problem. We're asking the cpommittee to think about it."

Prof. Gerald Gillespie, German, who seconded Mozley's motion, expressed "misgivings" about trying to "predicate limits on end use" on deciding whether or not to accept research. The question of volume could be more easily examined.

Defense Department funding

In the fiscal year ending Aug. 31, 1982, the Defense Department funded about $24 million in research expenditures at Stanford, according to Vice Provost Gerald Lieberman, dean of graduate studies and research. Total research volume was $123 million, excluding $61 million for SLAC from the Department of Energy. SSRL's largest single funding source is the Department of Energy, whose Office of Military Applications was asked to provide $5 million for the national laboratories' proposal. Another $1 million would come from the University of California.

Prof. Robert White, electrical engineering, said that end use was "an awfully treacherous criterion" to use in evaluating research.

Mozley said that "whatever problems we have at SLAC can only be resolved by a general University ruling" on research policy.

"I don't like ad hoc solutions," he added, agreeing with White's concerns. He acknowledged that a study could be "very time consuming," noting in a statement to the Senate that "a great amount of factual material must be obtained and evaluated. The problems of any possible restrictions must be studied in relation to the very diverse community here."

He and Gillespie agreed to delete language from the initial draft resolution asking the Committee on Research to also study "possible criteria relating to end use which might be used to reduce the volume of (weapons-related) research if this proves desirable."

Mozley told the Senate that even "a preliminary look to find out how difficult the problem (of weapons-related research) is would be very helpful."

Prof. Anthony Siegman, electrical engineering, suggested that those concerned might undertake the study themselves, since the underlying data should not be hard to get from "voluminous reports" published by the Sponsored Projects Office. (Before debate began, Provost Albert Hastorf noted that SPO had requested faculty "forgiveness and patience" on grant applications, since they are short two people and training two others.)

Siegman, who directs the Ginzton Laboratory, noted that two projects there might be erroneously identified with directed beam weapons.

These are free electron laser research by Prof. John Madey and a prospective x-ray laser being developed by Prof. Steven Harris. The latter has "nothing to do with the atomic-bomb pumped laser that Edward Teller (prominent physicist at Lawrence Livermore Laboratory and senior research fellow at Stanford's Hoover Institution) has been working on," Siegman said.

Both the Madey and Harris experiments represent "work of the highest possible scientific order and Stanford should be proud to have these faculty members and these projects here," he added.

"The likely practical consequences of one of these projects will be negligible and the other enormous, but I won't say which," he quipped. "Neither one of them is likely to be a weapon."

Senate statement by Mozley

Following is a statement by SLAC Prof. Robert Mozley to the Faculty Senate.

First let me make it clear that I am not representing SLAC administration in requesting that the University examine possible problems relating to doing weapons-related research. I would guess that I have the complete support of about half of the SLAC faculty and a considerable number of the staff. I will assume or at least hope that you have read the enclosed material.

My proposed resolution was motivated by the probability that a beam-weapons related project at SSRL will command the efforts of SLAC people who do not wish to work on it. The resolution does not directly address this problem but relates to my concern that this particular issue may be part of an increasing set of problems which will arise if Stanford's research efforts should become more and more directed to military goals. I believe that the particular SSRL-SLAC problem can most likely be best handled by the Stanford Administration without direct Senate involvement.

President Reagan's support for a major increase in funding for beam-weapons research makes clear the pressures of funding availability which may move University research programs in a weapons-related direction.

Although it is difficult and dangerous to apply criteria relating to the use of research in selecting the research appropriate to a university, a slight move toward avoidance of work with a clear direct military mission might be desirable to prevent Stanford from becoming too deeply involved in military research. The University may be more liable to government pressures when weapons research is involved. At some level such involvement could change the character of students and staff attracted to Stanford and, as we have already seen, can have an effect extending beyond the departments directly involved.

This is a subject which has broad effects on the entire Stanford community, and merits discussion in the Senate. To discuss it intelligently a great amount of factual information must be obtained and evaluated. The problems of any possible restrictions must be studied in relation to the very diverse community here. The Committee on Research seems the appropriate starting point.

Therefore I propose the resolution presented in Senate Document 2479.

(See text, p. 19.)

Ph.D. oral exams

WEDNESDAY, APRIL 13

Leon Avery, biochemistry, "Tandem Duplications as a Genetic Tool in *Myxococcus xanthus*," 2:15 p.m., Medical Center M316. **Mark Allen Miller,** petroleum engineering, "The Effect of Temperature on Oil-Water Relative Permeabilities of Consolidated and Unconsolidated Sands," 2:15 p.m. Mitchell 350.

THURSDAY, APRIL 14

Abraham Sageev, petroleum engineering, "Pressure Transient Analysis of Reservoirs with Linear and Internal Circular Boundaries," 2:15 p.m., Mitchel 350. **Toshimitsu G. Tanaka,** materials science and engineering, "A Unified Numerical Method for Integrating Stiff Time-Dependent Constitutive Equations for Elastic/Visco-Plastic Deformation of Metals and Alloys," 2:30 p.m., 550 A.

FRIDAY, APRIL 15

Walter P. Lowe, physics, "Structural and Superconducting Properties of Metallic Multilayers," 3 p.m., 200 Applied Physics. **Ken W. Weissenburger,** applied earth sciences, "Lakeview Uranium Area, Lake County, Oregon—Constraints on Genetic Modelling from a District Scale Perspective," 2:15 p.m., ESMB 350.

Health and safety report

Accidents and Injuries Occurring During Week of Mar. 28-Apr. 1

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	1	0
Pinched, squeezed, crushed	2	(0, 5)
Overexertion	1	5

Judging end use tricky, difficult. . .

continued from page 1

large stockpiles of nuclear weapons, and on deployment measures and countermeasures with great destructive potential, have placed us all in collective jeopardy.

"Recent extensions of those policies have caused the defense budget to hypertrophy at the expense of social programs that fulfill human needs; and within the Department of Defense itself, an increased focus on weapons technology has weakened the support of more fundamental research efforts."

The controversial research proposal for SSRL was developed by Lawrence Livermore, Sandia, and Los Alamos laboratories, who seek $5 million from the Department of Energy's Office of Military Applications. An additional $1 million would come from the University of California for faculty research not related to weapons.

Kennedy said "A careful reading of the proposals reveals in fact a wide variety of work, including a number of programs on the fundamental properties of living materials, is to be conducted, although the weapons applications are understandably stressed in the short form of the proposal directed to the funding agency.

"The heterogenous mix of intentions and prospective uses for this proposed (beam line) demonstrates clearly just how tricky and difficult it is to judge end-use and intent.

"Sometimes the search for knowledge leads one to unexpected places. No research can safely be predicted to be free of harm—nor, conversely, can a piece of work that includes a military end-use automatically be defined as 'bad.'

"Our policy is that Stanford scientists are free to conduct work of their own choosing as long as it can be carried out in accord with the principles of openness and freedom of publication.

"The principle underlying the policy is that the special benefit flowing from free and unimpeded efforts to gain new knowledge will outweigh the cost exacted by occasional pieces of dangerous knowledge we obtain as a result of free inquiry.

"Because I believe in the principle, I support the policy."

—Bob Beyers

Panofsky says nuclear defense initiative 'ill-advised'

President Reagan's nuclear defense initiative is "ill advised," says Stanford Prof. Wolfgang Panofsky.

An internationally respected physicist and arms control expert, Panofsky says the President's "vision" of developing an "impenetrable umbrella" against strategic nuclear missiles "could lead us in an extremely dangerous direction," encouraging further escalation of the arms race.

No study has yet shown an impenetrable defense against mass nuclear attack to be technically feasible, he adds. "You cannot coerce technology by a policy decision."

Speaking as a citizen, Panofsky finds the President's proposal "somewhat spiritually troubling." He believes it was "a national tragedy" that so little detailed preparation preceded the President's public announcement March 24.

Panofsky favors continued research and development of new defense systems. "I don't want us to be surprised," he says. To identify defense research with evil is "a perversion."

The Soviets are "wrong" to charge the President's initiative with violating the existing Anti-Ballistic Missile (ABM) Treaty, he adds: "The type of research now going on in both the U.S. and the Soviet Union on space ballistic missile defense is fully permitted under the treaty.

"However, the President's initiative does contain the seeds for future abandonment of not only the ABM treaty, but also other existing treaties," including the ban on nuclear weapons in space and the Limited Test Ban Treaty of 1963, which bars nuclear tests in space and in the atmosphere.

Feasibility questioned

Unlike the exhaustive, careful studies which preceded the decisions of President Roosevelt to build an atomic bomb and of President Kennedy to go to the moon, "no study has indicated the feasibility of a massive, impenetrable defense to protect the population of the U.S. against the combined nuclear threat of missiles, both ballistic and air-breathing, airplanes, and other means of delivery," he notes.

As long as nuclear arsenals remain near their current level, 'there is no foreseeable technical means to eliminate the mutual hostage relationship that now exists between the people of the U.S. and those of the Soviet Union. . . .

"Ballistic missiles can be shot down from the ground after being detected by radar by various forms of interceptors, including some which may use nuclear weapons.

"We have learned, starting from the 1969 ABM debate, that such systems cannot possibly protect the entire population in an effective way, although they may be of some use to protect a few selected targets.

"The President seems to be relying instead on suggested space-age weapons, such as satellite-borne lasers or sources of particle beams, or on the type of x-ray laser that is fed by nuclear explosions, as recently publicly advocated by Dr. Edward Teller (now a senior research fellow at Stanford's Hoover Institution).

"In principle, such weapons can be designed and built so they shoot down individual incoming ballistic missile boosters or warheads. But does that constitute the type of impenetrable defense that the President envisioned?

"All previous studies. . .have led to extremely pessimistic conclusions about whether such a defense is feasible or advisable. Its costs would be enormous; the possible counter-measures are many; the opponent could increase his offensive power and leave the U.S. population in just as much danger as they were before.

"The President's proposal, although currently asking only for intensive study and not for an immediate increase in the $1 billion a year that now goes into 'directed energy' weapons, could lead us in an extremely dangerous direction.

"The danger stems simply from his public advocacy of such a program, not from the technical reality of these weapons.

"It is dangerous because such a 'new technology' initiative may well lead the Soviet Union to match or follow what we do, as they have done in the past. Even more serious, they may be led to increase their offensive power even further because of the possibility that the President's initiative may lead to at least some limited form of protection. . . . We would do precisely the same had Mr. Andropov given the speech that was delivered by President Reagan. . . .

"No technical choice beyond mutual deterrence exists as long as the arsenals of the U.S. and the Soviet Union, which by now contain over 50,000 nuclear weapons, remain as enormous as we have permitted them to become. . . .

"The President implies that increased armament is needed first to 'bring the Russians to the bargaining table.' But we are already at the bargaining table with the the Russians in the START and Intermediate Range Nuclear Force (INF) talks.

"In fact, the Soviets want to be at more bargaining tables than we do. At the end of the previous Administration, we had signed the SALT agreement and started the INF talks. We were engaged in negotiations with the Soviets on means to terminate the threat of anti-satellite warfare, to end all nuclear tests, and to limit conventional arms transfers. None of these negotiations have been continued by the present Administration.

"The Soviets introduced into the U.N. in late 1981 a request for the beginning of negotiations to eliminate all weapons from outer space, but we have not yet reacted to that initiative.

"The use of space has been a boon to mankind, both commercially and to enhance security. Communication satellites are in world-wide use, and the use of outer space for reconnaissance has made this a more open world by permitting all nations to see what others are doing and to verify compliance with arms control agreements. Introducing the threat of making space a battlefield will endanger these achievements. . . .

"The best way to reduce nuclear arms is to reduce nuclear arms, not to say that we must build more arms in order to reduce them. The costs of yet another layer of defense are many: the financial costs are enormous and there are grave risks to present and future arms control agreements.

"There is one additional grave risk. . .should a secure defense umbrella against nuclear weapons over the entire country be accepted as a realistic concept, then this could support the view that nuclear war fighting under the cover of that umbrella might become acceptable."

"If a nuclear war starts, under any doctrine, in any theater of war, through the first use of nuclear weapons by either the U.S. or the Soviet Union, then a grave threat to the future of civilization as we know it will exist. This risk. . .will only be increased if we add another layer of weaponry, rather than reducing what we already have."

Panofsky's views were developed in a column for the *San Jose Mercury*, interviews with *The New York Times* and other media, a national telecast with David Brinkley, and in an office interview with Stanford News Service.

Drell says U.S. soon faces decision on war in space

America very soon will face a decision about war in space, says a nationally prominent Stanford arms control expert.

Prof. Sidney Drell, a physicist who headed early studies of MX missile basing for the Defense Department, warns that "we are rapidly getting to a point of no return if we want to head off yet another dimension in arms competition and, through negotiation, maintain space as a sanctuary for our important communication and reconnaissance satellites."

The decision could be as profound as the earlier ones to proceed with the hydrogen bomb or multiple independent reentry vehicles (MIRVs), he adds.

He takes a skeptical view of "wonder weapons" and anti-ballistic missile defense systems.

In a recent talk at New York University on news coverage of nuclear weapons, Drell urged reporters and the public to avoid being trapped by "the fallacy of the last move—the belief that a magical new weapon will not provoke a response which counters and defeats it.

"Recall the Anti-Ballistic Missile (ABM) debate of 1969-70. Technical arguments for deploying a ballistic missile defense, then called Safeguard, collapsed when the next move was analyzed carefully—when the ease of response by the Soviet offense to such an ABM deployment was considered.

"The very recent proposal for the Densepack system—or closely spaced basing of the MX missile—similarly collapsed when the plausible ease and speed of reaction by the Soviets was considered.

"Now there is sweet technical appeal to space-based ABM systems using lasers or other directed energy beams to attack ICBMs shortly after they have been launched.

"But don't forget that many potential counters—such as, for example, decoys or space mines—that have the potential to neutralize and defeat them. And these space-based systems will certainly be very extensive and expensive."

In a campus interview March 24, Drell said he's "puzzled" by President Reagan's call Wednesday, March 23, for a new system designed to neutralize nuclear weapons after they are launched. This may simply have been designed to boost support for more defense spending in the President's budget. But it could signal the beginning of a new and dangerous redirection of national security policy, Drell said.

The President's insistence that whatever is done would be within the confines of the present ABM treaty is "a very severe limit" on any testing or deployment of new systems, Drell noted.

Both the U.S. and the Soviet Union are spending billions on research for space-based particle beams, lasers and other devices. "The technology is pretty well known," Drell said. "The problem is putting them together in a system. To do that requires testing, and many forms of testing would violate the ABM treaty."

On technical grounds alone, Drell sees little prospect for developing an effective system.

"Any serious effort would require pulling out of the existing ABM treaties. Then we would end up with less security.

"You can talk all you want about an anti-ICBM system based in space, but the cruise missiles never come up out of the atmosphere.

"We all have a vision of getting out from under the nuclear threat. The question is how. The best hope is arms control. Perhaps the President could offer a joint venture for cooperation in space with the Soviets, rather than more competition.

"We lost the opportunity to talk about and possibly avoid MIRVs and, before that, hydrogen bombs.

"This could be another big step. I don't see it as being effective.

"But it's hard to know what the President is talking about. He didn't ask for anything specific. Both the U.S. and the Soviets have research and development programs in progress.

"If what he has in mind is another Manhattan Project (which led to the atomic bomb in World War II) that would be terrible."

Scoville to speak on arms control

Herbert Scoville, Jr., currently the president of the Arms Control Association, will talk on "The Impact of New Weapons on Arms Control" at 7:30 p.m. Thursday, April 14, in Kresge Auditorium at the Stanford Law School.

Scoville has served as assistant director of the Arms Control and Disarmament Agency, deputy director of the Central Intelligence Agency, and technical director of the Armed Forces Special Weapons Project.

Scoville wrote "MX: Prescription for Disaster," (1981), which earned acclaim as a landmark contribution to the strategic weapons debate. He also has authored numerous articles on the concept of deterrence, the dangers and benefits of space technology and the potential impact of neutron weapons in defense of Europe.

Measures which he has championed include: abandoning the land-based leg of the strategic triad; efforts to curb an arms race in space; and reduced reliance upon tactical nuclear weapons for defense of Europe against conventional attack.

Scoville's lecture is sponsored by the Stanford Arms Control and Disarmament Forum.

Letters to the editor

Blacker on challenge of arms control

Editor, *Campus Report*:

The sharp and impassioned tone of Constance Kurruppu's letter to the *Campus Report* (March 23), prompts me, as a member of both the Arms Control and Disarmament Program and the Northeast Asia-U.S. Forum on International Policy to respond in some detail.

To begin, the Political Science Department does not now offer, nor has it ever offered, any course on nuclear weaponry. The Department does offer, through the auspices of the Arms Control and Disarmament Program, a two-quarter course sequence on the challenge of nuclear arms control and disarmament.

We who teach these courses feel strongly that the first and most important step in eliminating these weapons of mass destruction must be to learn about their origin and development. Only through careful study of these weapons—including the implications of their possible use and the ongoing efforts to control their proliferation—can we as concerned citizens hope to have a positive and enlightened impact on the decisions reached by our national policymakers.

Only by confronting the problem directly, as discomforting as that task may be, can we hope to avert the holocaust of nuclear war and begin to change the world in which we live. We believe firmly that an educated citizenry, able and willing to express its views on these difficult issues, can influence government policies in a way a less enlightened public cannot.

On a related matter, the Northeast Asia-U.S. Forum on International Policy at Stanford does not now study, nor has it ever studied, nuclear "first-strike scenarios." The Forum, established in 1979, brings together a diverse group of American, Japanese, and Chinese scholars and former government officials to study collectively problems of special concern to these countries.

The international character of the Forum, as well as its multidisciplinary approach to problem-solving make it unique. Topics of study include economic cooperation and competition, the implications of the revolution in high technology, health problems and nutrition. Forum associates also examine the problem of security in Northeast Asia from a number of differing perspectives.

It is critical to note in this regard that the Forum was the first university-based program to discuss with Chinese scholars the importance of nuclear and conventional weapons control in Asia. These discussions, which began in 1978, continue; we hope to convene yet another meeting with specialists from the Peoples' Republic of China in 1984. Work with Japanese scholars on these issues dates from 1973.

Finally, I should like to comment on the work of Dr. William Perry, who is associated with both the Forum and the Arms Control and Disarmament Program. Mrs. Kurruppu comments that there are "all too many folks like William Perry." I sincerely wish that were the case.

As Undersecretary of Defense for Research and Engineering in the Carter administration, Dr. Perry was one of the most articulate and forceful advocates of nuclear arms control ever to serve in the U.S. government. During the consideration of the ill-fated SALT II Treaty in 1979, Dr. Perry spoke out repeatedly, at great length and in great detail on the merits of this agreement. He traveled tens of thousands of miles to argue the case for SALT II. He addressed citizens' groups nationwide to urge ratification of the treaty.

It is precisely Dr. Perry's conviction that nuclear weapons must never be used that has led him to propose new measures to guard against a nuclear war through accident or miscalculation. It is this same conviction that has prompted him to offer alternative strategies for maintaining national and international security, including the development of certain kinds of conventional weapons as well as negotiated limits on weapons of all kinds.

In discussing with the Chinese the possible subsitution of precision-guided munitions for nuclear weapons, Dr. Perry was attempting to communicate the critically important message that nuclear weapons are completely unsuitable for use in war and appropriate for one and only one mission—deterrence of nuclear attack. Dr. Perry's important efforts on behalf of arms control should not go unrecognized; his work merits strong support.

The larger issue raised in Mrs. Kurruppu's letter—the injunction to choose life over death-serves to remind us that these are issues of the utmost gravity, beside which all others pale. I want to assure Mrs. Kurruppu and all members of the Stanford community that those of us who study these problems feel deeply the urgency of that message. We have chosen, in fact, to make nuclear arms control and the prevention of nuclear war the central focus of our professional lives. We sincerely hope that others will do the same.

Coit Blacker
Associate Director
Arms Control and Disarmament Program

Cohn questions word processors again

Editor, *Campus Report*:

A number of interesting objections have been raised against my remarks on the dangers of using word processors for creative or humanistic work, and I will answer a few here.

It is hypothetically true that creativity is a purely spiritual matter independent of instruments, and in my piece I left room for the *possibility* of first-rate writing being done on a word processor.

But in normal existence there is a lively interchange between pure mind and concrete, earthly matters; artists have traditionally cared a great deal about their choice of medium, the tools of their craft, the condition of their mind and body, time of day, location, and so on. These things are too well known to merit documentation here. What I want to stress is that a machine may not be *helpful* in just this humbly concrete sense.

It is evident that one cannot *blame* the gadget for hasty writing, but there is this mysterious yet familiar fact that the very act of taking to the machine both implies and abets a quantitative frame of mind which works against the all-important qualitative attitude. In one of those currently much-discussed "undecidables" of existence, it is hard to say whether the error lies in a previous disposition ("implies") or a specific act ("abets"). But, regardless, one knows in a flash of instinct simply to turn away from both, when it counts.

Someone took exception to my view that the gadget made for glibness, a sort of premature perfection which discouraged creative effort; this person observed that a piano offered similar "glibness" and that great composing has been done on it for centuries anyway. The answer to this is twofold:

First, the piano does represent a real problem of automatic perfection as compared to, say, a violin, and that has to be reckoned with in practice. Composers have frequently feared working with it partly for that reason, and the matter has been much discussed. For similar reasons, they eschew prematurely lush tone in the vocalization of their incipient music, and there is the well-known phenomenon of the "blank composer's voice."

Secondly, the piano is not just a docile efficient transmitter of impulses comparable to a word processor; it takes many years of arduous practice to begin to get the thing to translate your complex musical intentions adequately.

On both grounds, then, the example of the piano confirms my point. Meanwhile, when someone has gotten anything as compelling as a Brahms concerto out of a computer, please let me know.

Robert Greer Cohn
Prof. of French

SLAC will 'cooperate fully' if SSRL approves research proposal—Panofsky

Following is a March 28 memo to petitioners relating to the SSRL Program from W. K. H. Panofsky.

First, let me apologize to you for delaying my response to the petition which has been signed by so many of you until this time. I have used the opportunity, in the meantime, including a recent eastern trip, to discuss the basic problems raised in your petition with many of my colleagues and friends in institutions where similar problems have arisen in the past or might arise in the future.

Let me make the facts clear as they stand. SSRL is a laboratory under the direction of Professor Bienenstock which reports to the President of Stanford University independently of SLAC. We have made an agreement with SSRL to deliver beam and take care of certain of their needs such as radiation safety, vacuum protection, and so forth. However, the authority to determine the program of SSRL is vested in the SSRL director under the advice of a separate program advisory committee.

SSRL has received a proposal from the Lawrence Livermore National Laboratory, the Los Alamos National Scientific Laboratory, the Sandia Corporation, and several campuses of the University of California.

This proposal has been submitted to the SSRL program advisory committee and has not as yet been acted on. Funding for the proposal has not as yet been secured. The Livermore National Laboratory has made a submission to the Department of Energy's Division of Defense Programs for financial support; this may or may not be forthcoming. I have discussed the content of the proposal personally with the management of the Livermore Laboratory which is proposing to carry the largest part of the financial load and will do most of the work in constructing a new beam line.

The management of Livermore is committed to having their proposal be considered under precisely the same terms in which any other user proposals at SSRL are treated. This means that the University policies regarding lack of any secrecy, free access and publication, and the availability of running time on the newly constructed beam line for general SSRL use will be obeyed.

The proposal encompasses a large number of scientific and technical activities. An open seminar on the total proposed program will be scheduled at SLAC in the near future. The proposal states explicitly that some of the expected scientific results will be useful for the nuclear weapons program. It is this explicit statement by the proponents which has been the basis of the objections raised by you as well as through a separate petition which has been submitted by 15 members of the SLAC faculty to the Committee on Research of the Stanford University Academic Senate.

The faculty petition was heard by the Committee on Research during the meeting of January 26, 1983. At that meeting it was not as yet clear whether the work proposed by Livermore and the other laboratories was going to be in full conformance with University policy; in the meantime commitment in this respect has been secured. The Committee decided that it was not going to recommend imposition of any further University restrictions based on either *intent* or *end use* of work proposed. Rather, they felt that if the work conformed to the University policies as formulated, the matter of final decision was the responsibility of the SSRL director.

University policies on the acceptability of Stanford research were born during the general turmoil of the 1960s. At that time many initiatives arose aimed at limiting the University's involvement in various forms of research. The question then was faced explicitly how to define "good" and "bad" research. Stemming from the soul-searching of that time, the University decided that reliance should be on the *conduct* of the research only. Basically, current policy is to assure that the conduct of such research is consonant with the basic educational mission of the University, independent of intent or end use. This implies that all members of the University community, including students, faculty, visitors, and staff should have full access to classrooms and laboratories, and that the result of the research should be published just as soon as the results merit publication from the point of view of the quality of the findings.

End use was judged to be a quality difficult to predict; therefore trying to outguess end use constitutes an inacceptable burden on the freedom of research initiative. The matter of intent is even more complex. The intent or applied goal of the proponent may or may not be declared publicly. IF it is stated publicly, then indeed someone can judge whether he is or is not in agreement with the purpose, but opinions will differ. If this is not stated, then such judgment lacks any solid basis. It was for this reason that intent was not judged to be an acceptable test for the suitability of Stanford research.

Based on all this earlier agonizing, the University Committee on Research reaffirmed the policy that only the scientific merit of the proposed research should be the test of acceptability, provided that the other University policies discussed are met. In addition, a laboratory director also has to decide how to allocate finite resources among a variety of meritorious proposals, and he has to determine whether the proposal is in accordance with the basic mission of the laboratory. Note that SSRL and SLAC have quite different purposes. SLAC is a single-function laboratory dedicated to elementary particle physics. SSRL is a laboratory operating in various areas of pure and applied science, be it physics, biology, medicine, semiconductors, or other practical applications. It is only in the area of applied science where the matter of intent or end use becomes a basic policy issue as discussed above.

Based on all these considerations, I have decided that the only course of action for SLAC fitting these circumstances and policies is to assure the director of the Stanford Synchrotron Radiation Laboratory and the president of Stanford University that SLAC will cooperate fully with the proposal of the Livermore, Los Alamos, and Sandia Laboratories, and campuses of the University of California, if it were accepted. I cannot predict at this time when or if this will happen.

I am communicating this decision in response to your petition, realizing that it meets the concerns of some, but not all of you. I'll be happy to discuss the matter further with those of you who may wish to go into the matter further.

Carrier Pidgin serves global network of linguistics in pidgin, creole

Stanford is becoming a center for the study of pidgin and creole language with the publication of an international newsletter, the *Carrier Pidgin*, according to John Rickford, assistant professor of linguistics.

"We've a relatively high percentage of Ph.D.s and post graduates in creole languages, and we'll attract more as we become better known as a center—in my opinion the center for pidgin and creole studies."

A pidgin is a mixture of three or more languages used for rudimentary communication. A creole is an expanded variety which has acquired people who speak it as a native tongue.

Unique in its field, *The Carrier Pidgin* provides information about new books and papers, conferences, and notes and queries. Rickford observed, "it is the only source that let's you know what people are doing as they do it."

Theoretical significance

"Pidgins and creoles have been receiving more national and international attention," said Rickford, "because of their theoretical significance for linguistics and other fields. For instance Derek Bickerton's book, *Roots of Language*, draws on creole language data to shed light on the origin of human language. It suggests that people are prewired with a creole-like linguistic system called a 'bioprogram.' "

Pidgins often arise on colonial plantations, with a small powerful group speaking one language and a larger, powerless group speaking a variety of native languages. The pidgin takes its vocabulary from the language of the ruling group, like English or French, and its syntax from the subordinate group, like the West African languages of slaves brought to the Caribbean.

The pidgin undergoes simplification, losing inflectional endings and some grammatical categories.

The children of pidgin users learn it as their first language. It has then become a creole and, with greater work to do, expands its vocabulary and grammatical resources. In ordinary language acquisition parents are experts and children novices; with creoles the reverse is true.

Where do children get the tools and material to create a more developed language? Bickerton argues they get them from whatever it is that humans have wired into their system, the linguistic-genetic bioprogram. When the children don't have a complex language, they have to draw on their bioprogram to create one.

Evidence for bioprogram

Further evidence for a bioprogram, Bickerton suggests, is the fact that many creoles are similar in ways that are very different from their associated standard language. By studying the creoles and the similarities, we can begin to understand the structure of this bioprogram.

The Carrier Pidgin, now celebrating its tenth anniversary, came to Stanford one year ago when Rickford assumed the editorship with support and encouragement from the Dean's Office and News and Publications. He and Associate Editor James Fox have expanded the publication by printing book reviews and biographies of creolists. Future issues will cover various controversial subjects.

Other Stanford professors on *The Carrier Pidgin's* editorial board are Elizabeth Traugott, who is interested in literary dialects and historical linguistics, and Charles Ferguson, who has explored the similarities between pidgins and creoles and simplified registers like baby talk.

Rickford, an assistant professor of linguistics, works on Guyanese and Sea Island creoles and their implications for sociolinguistic variation and change. Fox, an assistant professor of anthropology, works on Russenorsk, a Russian-Norwegian creole, and its implications for pidginization and creolization.

Funding for the newsletter comes mostly from subscriptions, $6 a year.

—David Weissmann

Library exhibits pidgin, creole language materials

Pidgin and Creole language material from the Green Library collections at Stanford will be exhibited in the Lurie Rotunda from April 15 to May 1.

Stanford has the primary collecting responsibility for these studies for the Research Libraries Group.

Assistant Prof. John Rickford, linguistics, and James A. Fox, anthropology, recently became editors of the *Carrier Pidgin*, a newsletter serving 700 subscribers and correspondents in this specialty world-wide.

Languages represented in the exhibit will include Hawaiian Pidgin English, the French-based Creoles of Mauritius and Seychelles, Australian Aboriginal Kriol, Solomon Islands Pijin, and several West Indian Creoles.

FOR, FO' (FOAH) To.
Haole: "I was only trying to get to know you."
Pidgin: "Ah was on'y tryeen fo' touch yo' body."

U.S. Postal Service encourages using ZIP plus four

Four more digits have been added to the 94305 University zip code, and their use is encouraged by the U.S. Postal Service, according to Stanford University administrators Kent Peterson and Jack Albrecht, who met recently with local postal officials.

The Zip + 4 program is voluntary but, say Peterson and Albrecht, mail recipients will receive faster service if they encourage the use of the additional four digits on incoming U.S. mail. An incentive plan to encourage the use of additional digits on outgoing mail is under discussion, but is not yet final.

The 94305 area has been divided into geographical sectors, and Stanford has been assigned 15 sector numbers running from 10 through 24. Several offices in close proximity may have the same sector number, but each separate mail delivery point has its own discrete segment number. For example, the President's Office Zip + 4 number is 94305-2087; the Controller's Office is 94305-1994.

All current mail delivery points will probably be notified of their new Zip + 4 numbers by the Postal Service sometime in the future, according to Albrecht. But, he stated, if departments are renewing subscriptions, having new stationery printed, etc., they are encouraged to begin using the additional four digits now.

To find out what they are, call the Postal Service Address Information System in San Francisco at 550-5205 between 8 a.m. and 4:30 p.m. Monday through Friday and state department name or street address. There is no office at Stanford responsible for providing or verifying this information.

Campus residences will be notified of their Zip + 4 numbers in October.



The Stanford Sierra Camp at Fallen Leaf Lake will open for a special Spring Weekend April 29 through May 1, according to Wim Steenbakkers, camp director. The Alumni Association decided to take advantage of this year's heavy snows and to make the facility available at a time when there would still be snow, in all likelihood accompanied by sunshine.

The weekend program will include ski touring, movies, hiking into Desolation Wilderness, a snow picnic, and fireside music and socializing.

Rates for the weekend are $100 per adult, $50 per child 8-14, $40 per child 3-7; and $20 per child under three. The six meals included will begin with dinner on Friday and end with lunch on Sunday.

Further information may be obtained by contacting Sue Cahn at Bowman Alumni House, 497-2021.

$ Alumni to host financial seminar

The Stanford Financial Seminar for Executives, sponsored by the Stanford Alumni Association, will be held April 12-14 on campus.

The program is designed for executives and managers who have a limited financial background or who work principally in nonfinancial areas.

Profs. James T. S. Porterfield and George G. C. Parker of the Stanford Graduate School of Business are the seminar's leaders. Among the subjects covered will be forecasting financial requirements, accounts receivable management, the measure of investment worth, and working capital management.

One of the Alumni Association's Continuing Education Executive Programs, the seminar is open to all interested.

Tuition is $900, exclusive of accommodations. Further information may be obtained by contacting the continuing education staff at Bowman Alumni House, (415) 497-2021.

Medical Center MEMO

HMP now under review by state and county

Plans for the modernization of Stanford University Hospital have been filed with state and local agencies for their review during the next several months.

Certificate of Need (CON) applications were filed last Wednesday with the California Office of Statewide Health Planning and Development in Sacramento and with the Santa Clara County Health Systems Agency in San Jose.

The CON process is required of hospitals seeking to renovate or expand their facilities, to ensure that a community need exists for the project.

The 400-page document includes financial feasibility studies, space plans, and extensive documentation of need for all aspects of the renovation and construction. It was prepared by the hospital's Office of Health Services Planning, in conjunction with the Hospital Modernization Project (HMP) office and The NBBJ Group, an architectural and planning firm in Seattle and Palo Alto.

Included in the documents are financial and economic analyses and forecasts prepared by Amherst Associates Inc. of Walnut Creek.

The cost of renovation, new construction, equipment and fees is estimated to be about $114 million. The total cost will depend on financing conditions, but it is expected to be about $125.5 million.

The goal of the modernization is to upgrade the physical facility to meet the needs of modern medical care. Earlier studies have cited serious functional deficiencies that compromise the efficiency of the hospital and its future ability to provide quality patient care.

Because of inadequate space, the hospital has been unable to utilize all of its 663 licensed bed capacity. Some multi-bed patient rooms will be replaced with private rooms in the new construction. This will enable the hospital to accommodate a wider range of patient needs without adding to its licensed capacity.

The number of beds will be increased only in the 25-bed neonatal intensive care unit, which will be remodeled to accommodate 31 beds. State and regional studies have indicated that the need for care of critically ill infants is increasing in the region.

Project Director Elvia Garwood explained that the modernization project is designed to take place in three stages.

The first stage calls for finishing the Phase I building, an expansion opened in 1978 but never completed.

In the second stage, a four-story, 349,000 square foot diagnostic and treatment wing and eight new nursing units will be constructed. These will be located north and west of the present building, with a connecting atrium to the present facility.

The new construction will increase the number of private rooms available, allow existing nursing units to be updated and remodeled, and provide space for moving about 90 beds from Hoover Pavilion to the main center.

A new surgical suite with new operating rooms will be built, and several hospital functions, such as clinical laboratories, will be consolidated in the new space.

In the third stage of the project, existing space in the original 1959 building will be remodeled as newly constructed space becomes available to relocate services.

When the project is approved at state and local levels, construction on the first step of the renovation could begin as early as next spring.

According to Ron Hill, director of health services planning, the agencies will conduct an initial review of the CON documents to determine if they are complete. Detailed reviews are expected to last through the summer. Public hearings may be scheduled at local and state levels as part of the review process.

In addition to the CON, the hospital is preparing an Environmental Impact Report which will be filed with the City of Palo Alto later this year.

In the meantime, The NBBJ Group and the modernization project staff will be working with hospital departments, faculty and community physicians, to develop detailed plans and equipment needs.

—Barbara Battino

Cancer patients learn 'I Can Cope'

A useful, practical course of the American Cancer Society, for people dealing with the implications of living with cancer, will be offered at Stanford University Medical Center on eight consecutive Wednesday evenings beginning May 4.

Nutrition, body image, rehabilitation, and sexuality are among the topics covered by the course, which is intended for cancer patients and their families. "I Can Cope" seeks to help participants be more aware of their own strengths in coping with cancer, live within limits, and like themselves. It provides a setting where ideas and concerns may be shared and discussed.

The unique course deals with daily health problems as well as legal and work issues, and allows participants to express and resolve their feelings. Free of charge, it will be taught by a team of Stanford oncologists, nurses, dietitians, physical and occupational therapists, and social workers. Information about and access to appropriate community resources will be provided.

"Participants in this course are given an opportunity to realize they are not alone in their adjustments to everyday life," according to co-leader Sherry Feld, L.C.S.W. "Those with cancer and their loved ones need ways to cope with fears and anxieties as well as the disease."

Implemented nationally, she said, the patient education program is helping move people from asking, "What can I do?" to stating, "Here's what I can do!" The course supports the premise that increased knowledge about cancer decreases anxiety and increases a personal sense of participation on the part of the patient and his or her "significant others," with the medical system.

The course was developed by Judi Johnson, R.N., and Pat Norby, R.N., for the Minnesota Division of the American Cancer Society. The course content starts out with very concrete information about cancer, presented in an educational format.

Sessions will be held from 5:30 to 7:30 in room TF 122c of the Psychiatry Building. Susan Weisberg, L.C.S.W., will co-lead. Enrollment is limited. For further information and registration, call the Department of Clinical Social Work by April 27, at 497-5091.

Workshop aims to promote exercise

A structured workshop for people who want to start and maintain a regular physical exercise regimen will be offered at Stanford University on 10 consecutive Tuesday evenings beginning April 19.

Open to the public, the newly developed workshop will provide information, individual assessment, support, and both behavioral and cognitive strategies designed to get participants to the point where exercise provides its own self-sustaining incentive and reward.

No exercise will actually be engaged in during sessions, said leader-coordinator Dr. Fritz Bottjer of the Behavioral Medicine Program. Participants will undergo some testing, including before-and-after body mass, psychological, and cardiovascular functioning.

In addition to attending sessions, participants will be expected to read handouts, engage in exercises of their choice, and to complete assessment and other assignments.

According to Bottjer, success at maintaining regular exercise suitable to the individual has been linked to a variety of positive physiological and psychological outcomes. These include:

- improved cardiorespiratory functioning and resistance to disease;
- improved appearance, body image and self-confidence;
- enhanced strength, energy and sports performance;
- appetite and weight control;
- lowered incidence of depression;
- improved sleep;
- heightened sexual interest and appeal;
- improved management of stress;
- the general maintenance of a healthy, attractive and youthful body.

Sessions will run for two hours, and the required fee is due at the first session. For the program overview or further information, contact Bottjer at 497-7340, or write to him at the Behavioral Medicine Program, TD 205, Stanford University School of Medicine, Stanford, CA 94305.

Prospective participants are requested to call or write by April 15.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Edward Rubenstein



Edgar Engelman



Carla Shatz

SMASH series resumes for spring season

This week marks the opening of the spring quarter 1983 lineup of S*M*A*S*H lectures at Stanford School of Medicine.

The season's lectures are as follows:

- April 8: "Medical use of synchrotron radiation"—Dr. Edward Rubenstein, professor of medicine (clinical) and associate dean of postgraduate medical education;
- April 22: "T-lymphocytes and their function in man"—Dr. Edgar Engelman, assistant professor of medicine and pathology, and medical director, Stanford Blood Bank;
- May 6: "Order from chaos: Prenatal development of the mammalian visual system"—Dr. Carla Shatz, assistant professor of neurobiology.

The lecture series—whose full name is "Stanford Medical and Scientific Highlights"—was initiated in 1980 by the medical school's Faculty Senate, which now cosponsors it with the Stanford Medical Students Association.

The organizing committee hopes to encourage a wide exchange of ideas, and to provide a forum by which the medical center community may be informed of significant medical research and developments at Stanford. The Friday talks are geared towards all those with basic scientific understanding.

This season's presentations will all take place at 4:30 p.m. in Fairchild Auditorium, with TGIF gatherings afterwards in the lobby.

Stanford may again perform kidney transplants

Renal (kidney) transplants could be resumed at Stanford University Hospital if an application filed last Wednesday is approved by the state Office of Statewide Health Planning and Development (OSHPD).

The application must also be reviewed by the Santa Clara County Health Systems Agency (HSA) in San Jose.

Dr. Rex Jamison, professor of medicine and chief of the Division of Nephrology, said the program would provide the only renal transplant facility in Santa Clara County and would enhance and expand existing organ transplant research at Stanford.

Renal transplants were performed at SUH between 1965 and 1971, and then the specialized program became inactive.

"Recent developments in drugs to prevent rejection of organs and other research have increased survival of transplanted kidneys," Jamison explained. "This is an opportune time to revive the program."

In its application to reactivate the program, Stanford estimated that more than 80 persons under age 50 in Santa Clara County were waiting for new kidneys. Currently, these persons must seek transplantation at centers outside the area, often requiring burdensome travel or living expenses away from home, Jamison said.

Currently the two existing renal transplant centers in northern California—at University of California at San Francisco and Pacific Medical Center, San Francisco—are experiencing long waiting lists, according to Stanford's application to the HSA.

No additional hospital facilities would need to be built to accommodate the new program, since the hospital has the necessary specialized resources, said Patricia Stone, the health care planner responsible for processing the application. Jamison said a transplant surgeon and a transplant nephrologist would be recruited and that transplants could begin as early as January 1984 if the application is approved.

Among issues to be reviewed by the state agency are that the facility is medically and financially sound, and most important, that the project fulfills a health care need in the region, which was indicated in the application to be about 25 to 30 transplants a year.

The project would be a joint venture between the Department of Surgery and the Department of Medicine's nephrology division.

Stanford currently operates transplantation programs in hearts, heart/lungs, corneas and within the next few years, bone marrow.

"All of these programs complement one another, and the addition of kidneys would add to the research and instructional capabilities of the institution as well as improve patient care," Jamison said.

Research programs currently under way include efforts to use radiation to retard rejection, the body's natural response to "attack" and eliminate foreign tissue. This study is directed by Dr. Samuel Strober, chief of the Division of Immunology.

The heart and heart/lung transplant program, pioneered by Dr. Norman Shumway, chairman of the Department of Cardiovascular Surgery, is currently working with improved medication to control rejection while allowing tissue to heal. Cyclosporine is being used on an experimental albeit so far highly successful basis to control rejection of transplanted hearts. The drug, a fungal derivative, is being used for kidney transplant patients at other centers.

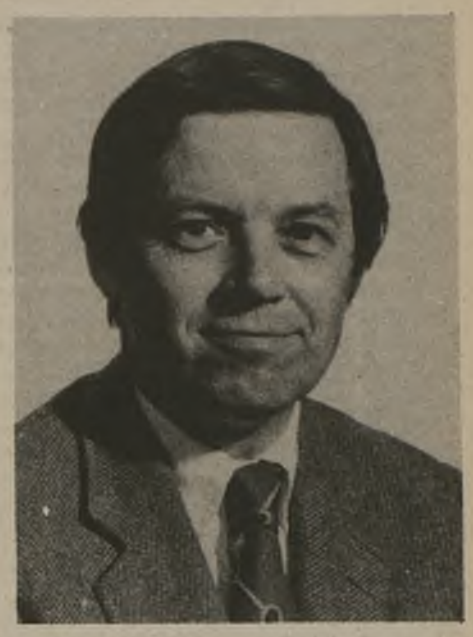
Stanford's existing nephrology program includes a hemodialysis unit, where about 40 patients undergo regular maintenance.

Jamison said that such treatment offers the sole alternative for some patients, particularly the elderly, but that transplantation offers the opportunity for a less restricted and more active lifestyle, despite the possibility of rejection.

Hemodialysis patients must spend two to four hours several times weekly immobilized while a machine removes waste products from their blood.

He said even with the threat of rejection, transplanted kidneys usually are more effective than the dialysis machine.

—Mike Goodkind



"Recent developments in drugs to prevent rejection of organs and other research have increased survival of transplanted kidneys."

—Rex Jamison

SCI to host visit of Yale physician

Dr. Samuel Thier, chairman of the department of internal medicine at Yale University School of Medicine and chief of the medical service at Yale-New Haven Hospital, is the Stanford Community of Internists (SCI) visiting professor for the week of April 11-15, 1983.

During his visit, Thier will meet with community and faculty physicians, Stanford University Hospital housestaff and Stanford medical students. Discussion topics will include the role of clinical faculty in academic institutions, and the coexistence of faculty and community physicians.

Thier will present a lecture on "Potassium Homeostasis" at Stanford's medical grand rounds, 8:30 a.m. in Fairchild Auditorium April 14, and a lecture on "Physiologic Approach to Acid-base Disorders" at Santa Clara Valley Medical Center's grand rounds, 8 a.m. April 15.

Thier has authored almost 80 articles and a medical textbook. He has had numerous honors bestowed upon him, including membership in the Institute of Medicine, National Academy of Sciences.



Samuel Thier

PHOTO BY J.D. LEVINE YALE UNIVERSITY

Co-chaired by Drs. Lawrence Crapo and Charles Feldman, SCI includes about 130 community and faculty physicians. The four-year-old group offers educational programs and "comraderie" for local physicians, said Sally Mixer, administrative assistant to Stanford's department of medicine.

Officials refute cruelty charge; VA lab treated dog properly

David Mendelow, associate dean for administration, said last week that no specific inquiry was necessary in response to written and verbal allegations by the Santa Clara County Humane Society.

Mendelow said ongoing monitoring of animal care was aggressive and appropriate, and that a dog injured in a fight with another dog in a Veteran's Administration Medical Center laboratory in Palo Alto had received proper care for its injuries.

On Friday, the humane society issued a "Fact Sheet," stating that the dog was taken home by a third-year medical student working in the lab on the evening of March 24. The student, Peter Barran, said he telephoned Dr. Carolyn Reed, the Stanford veterinarian responsible for the dog's care.

Reed said she asked Barran to return the animal to the lab so that she could examine it. Barran told a news conference that he asked Reed to come to his house to treat the dog, which Reed refused to do.

Reed later said that she refused to come to the house of a student she didn't know late in the evening. She requested instead that he return the animal to the laboratory, where veterinary equipment was available for proper treatment.

Randy Hemphill, a Palo Alto veterinarian, said the dog was brought to him at the South Peninsula Veterinary Emergency Clinic. Hemphill told the humane society's news conference that he euthanized the dog soon afterwards.

Reed said the medical student may have been acting under a sincere concern for the animal's welfare "but it was clearly wrong for him to remove the dog from the facility."

Reed said the dog had been under treatment after it apparently had been bitten by another animal housed in the same VA laboratory, where Stanford surgeons conduct cardiovascular research. (Stanford provides medical care under contract to the VA, and some faculty members' research is conducted there. Stanford is responsible for veterinary care in the Palo Alto VA).

"The experiment insofar as that individual dog is concerned was compromised," Reed said.

Mendelow said in a statement that "animals which augment human knowledge and ultimately help us gain knowledge used to alleviate suffering are a precious resource which we must conserve and use appropriately.

"Constant monitoring by ourselves, as well as the United States Department of Agriculture, ensures that we will provide optimum care to our laboratory animals. An accident which produces injuries such as befell the dog involved in the allegation is serious and punctuates the need to constantly maintain a vigil.

"But to assume that the incident implies widespread problems involving animal welfare is ludicrous," Mendelow continued.

Barran, who brought the incident to the attention of the public, told the news conference that he had not seen another such incident during the 10 months he worked in a research laboratory where dogs are used.

Reed said the dog had been bandaged immediately after it was bitten during the week before it was taken home by the student. She said bandages were removed March 23, the day before the dog's removal, and that she determined the best treatment was to let the bite wounds drain. Surgical incisions in the groin area had been sutured but may have opened after the March 23 examination, Reed said.

—Mike Goodkind

NLRB upholds vote against union

The National Labor Relations Board in Washington has turned down a union's appeal of an election in which service and maintenance employees at the Hospital rejected bargaining representation.

Mike Vartain, associate staff counsel, said the University was informed in a March 25 telegram from the NLRB that an appeal by Local 715 Service Employees International Union, AFL-CIO (United Stanford Workers) had been denied.

The board's action lets stand the Feb. 7 decision of the regional NLRB in Oakland, which upheld results of the Nov. 5-6, 1982 hospital election.

With approximately 90 percent of the 1,150 eligible voters casting ballots in November, the results tallied 778 to 253 against representation by Local 715.

The regional board overruled seven objections filed four days after the election by the union.

Vartain said the most recent NLRB action is final.

No employees are represented by Local 715 at the hospital. At the university, a Local 715 contract covers a bargaining unit of 1,350 workers.

Teens used CPR to save their drowning friend's life

The victim of a near-drowning incident spent nearly a week recuperating at Stanford University Hospital (SUH) after a heroic rescue that reads like both a movie adventure and an endorsement for cardiopulmonary resuscitation (CPR).

Brian Miller, 18, was "doing well" last week, according to Dr. Linda Bosserman, thanks to the immediate reaction of his eight friends who began administering mouth-to-mouth resuscitation after pulling him out of a river in which he was submerged for more than three minutes.

Bosserman said the immediate administration of CPR not only saved his life but also prevented any apparent brain damage.

"All the care we gave Brian was possible because of the early CPR treatment he received," Bosserman said. "Without that early care it is highly unlikely that he would have survived no matter what physicians did later."

Brian was admitted to the intensive care unit March 29, flown here from King City by Stanford's department of critical care transport. He was originally listed in critical condition because of potential complications of the heart and kidney and susceptibility to pneumonia, Bosserman explained.

Brian was moved to an intermediate care unit April 1, before being released from the hospital April 3.

What Brian and his friends—all students at King City Joint Union High School—experienced in the remote, canyon-like area called the Shutins near King City, however, could easily have had a tragic ending.

It promised to be a great camping trip, recalled Brian's twin brother, Bruce, who explained the incident:

School was out for the week of spring vacation, and the weather finally cleared, making conditions ideal for the five-mile trek in from the road where the boys left their truck Monday.

Brian, Mitch Anderson, and Rick Bender were exploring caves near their campsite. The river had more than the normal amount of water in it due to the recent excessive rainfall, so the boys tied a rope around their waists as a precaution.

Suddenly, Brian stumbled and fell off a rock into the river. Mitch jumped in to grab him, only to be swept off by the current.

Back at the campsite, the rest of the boys heard screams. They ran to the caves to see Rick pulling Mitch out of the water.

Brian, however, was pinned under a rock. His head was submerged under water.





Good news about the medical condition of Brian Miller (inset), who nearly drowned during a backpacking trip near King City and was saved by his eight friends, brought smiles last week to Brian's mother and twin brother, Barbara and Bruce Miller.

Bruce said he does not remember diving in the river with a knife to cut his brother loose. He managed to drag Brian's 6-foot-3-inch frame onto a rock. He was blue, Bruce recalled, and was not breathing. He had no detectable pulse, and was unconscious.

Peter Anderson, who works as a lifeguard during the summer, began shouting directions on how to start mouth-to-mouth resuscitation.

Together with Keith Knott and Gill Latham, they tried to breathe life into the still body.

Meanwhile, Doug Latham ran the five miles out to the truck, and began to drive into town. When the truck broke down, he ran the last 12 miles to the nearest farm. From there, he notified the fire department, sheriff, and military ambulance.

Brian began to throw up shortly after his friends began the CPR treatment. Not until 15 long minutes had passed, however, did he begin to breathe on his own again. Once he came to, he fought his friends violently, activity doctors said helped keep him alive.

Everyone Doug notified about the crisis set out immediately in rescue vehicles. Because of the location, however, none could make it to the cave site. Finally, two military medics hiked in. Navigating their way across the rocks, one fell in the river and hurt his back. The other reached Brian, and together with Peter's assistance, pulled him onto firm ground.

Darren Bryant had begun sending out smoke signals from the campsite to attract attention. A helicopter passed overhead after about an hour, but didn't land. It finally landed shortly thereafter.

Brian was lifted into the helicopter and taken to the Fort Hunter Liggett Dispensary. There he received oxygen and intravenous fluids, and was then transferred to George L. Mee Memorial Hospital in King City.

"Everyone in town rallied around Brian," said his mother of her friends in the small community. "They prayed for him all night."

Brian's physicians at Mee Hospital decided he should be transferred to a better-equipped hospital.

"He was brought to SUH because we are able to provide round-the-clock intensive care services under specialized physician and nurse supervision," explained Dr. Alvin Hackel, head of the transport service. (About 400 persons are transported by air to Stanford each year for care.)

Brian's father accompanied him on the plane, while the rest of the family drove up to Stanford.

"When I saw Bruce he said, 'Mama, we did all we could. Did we do enough?' " his mother continued. They did indeed.

"We learned CPR during our sophomore year in high school," Bruce said. "At the time we thought it was just something to know. I never thought I'd have to use it. With Peter leading and all of our knowledge put together, we were able to save my brother."

"I'm thanking God every minute," added his mother.

And meanwhile, back at Stanford Medical Center, Dr. Myer Rosenthal, director of intensive care units, thanked CPR training in the schools.

"Some states routinely require this training in high schools. It might be a wise idea everywhere," he said.

—Shirley Kraus

Early detection to thwart kidney failure

Novel applications of new diagnostic techniques may enable physicians to prolong the life of transplanted kidneys, according to a Stanford researcher.

More than half the number of patients receiving kidneys from unrelated donors each year experience kidney failure within two years following the transplant, said Dr. Bryan Myers, director of clinical nephrology and associate professor of medicine (nephrology). Well over 4,500 people have kidney transplants each year, according to National Kidney Foundation statistics. In 1981, for example, 4,883 received new kidneys.

"Our goal is to identify injury in the kidneys leading to chronic rejection early on. This will allow intervention sooner than is now possible, which may reverse the rejection process and extend the life of the kidney," he said.

Myers plans to do this, he explained, by using unique analysis equipment purchased with funds from Beta Sigma Chi, an international philanthropic organization. The group has been donating funds—$45,000 to date—for kidney research to Stanford since 1975.

The ELISA (enzyme-linked immunoabsorbant assay) technique allows physicians to measure the concentration of protein in more minute quantities of biological liquids, such as urine, than ever before.

The protein concentration in urine reveals how effectively the kidneys are functioning. The ability to detect the concentration sooner gives physicians the opportunity to begin administering therapies—immunosuppressant drugs, for example—sooner, which may help ward off kidney failure.

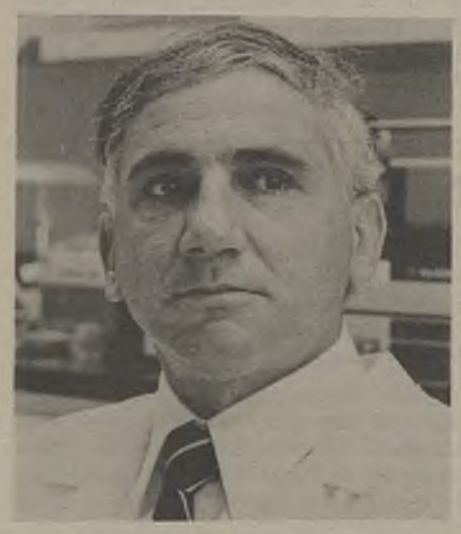
Kidneys contain millions of tiny filters, called glomeruli. When healthy, they separate toxic substances from blood to urine for excretion. The filters do not, however, allow larger-sized proteins to pass into the urine.

In diseased kidneys requiring transplantation, the filters become clogged, thereby retaining the toxic substances. Enlarged pores in the filters allow the proteins to slip through into the urine, leading to protein depletion and kidney failure.

Myers can simulate proteins leaking through the filters by injecting synthetic sugars—similar in size to proteins—into patients' bloodstreams and measuring their appearance in the urine.

Myers' research is supported by National Institute of Health funds also.

—Shirley Kraus



Bryan Myers

Medical Center Calendar

PUBLIC EVENTS

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, APRIL 6

Physicians for Social Responsibility Lecture: "The Reagan Administration's View of Survivability"—Robert Scheer, reporter for the *Los Angeles Times* and author of *With Enough Shovels: Reagan, Bush and Nuclear War*. 8 p.m., Fairchild Auditorium.

Basic Science Research Colloquium: "Nerve Growth Factor"—Eric Shooter, Ph.D. 5 p.m., Fairchild Auditorium.

THURSDAY, APRIL 7

Dept. of Biochemistry Seminar: "An Adenovirus Vector System for the Expression of Eukaryotic Genes"—Carl Thummel, Ph.D. Noon, M316.

Dept. of Pharmacology Seminar: "The Structure of the Gap Junction Channel and Regulation of Cell-to-Cell Communication"—P. Nigel Unwin, Ph.D. 4:15 p.m., R358, Pharmacology Library.

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Radical Neck Dissection from the Top Down"—Drs. Greg Steadman and Victoria King. 6:15 p.m., R117, Wang Library.

Dept. of Medicine Grand Rounds: "Diagnosis and Treatment Issues in Mild Hyperparathyroidism"—Dr. Robert Marcus. 8:30 a.m., M106.

FRIDAY, APRIL 8

Div. of Family Medicine Friday noon lecture series on Women and Health: "Living with Questions"—Alla Bozarth-Campbell (Episcopal priest, gestalt therapist, feminist poet). Noon till 1 p.m., M114.

Deadline for Nursing Research Seminar: to be held **Friday, April 15**, "Nursing and Anthropological Research: More Than Passing Meds in the Congo." 8 a.m. till 4 p.m., Peninsula Covenant Church, 3560 Farm Hill Blvd., Redwood City. For further information or to register, call Betty Kibbe at 497-7062.

Dept. of Medicine Resident Lecture Series: "Oncogenes"—Dr. Linda Boxer. Noon, M110.

Dept. of Pediatrics Grand Rounds: "Unusual Sleep Disorders in Childhood"—Dr. Thomas Anders. 8 a.m., M106.

Dept. of Gynecology and Obstetrics Grand Rounds: "Support for Parents Who Have Experienced Neonatal Death"—Emily Corpus and Shirley Sweeney (HAND of the Peninsula). 8 a.m., A336.

SMASH Lecture: "Medical Uses of Synchrotron Radiation"—Dr. Edward Rubenstein. First of the spring SMASH series. Open to all. 4:30 p.m., Fairchild Auditorium.

SATURDAY, APRIL 9

Medical Center Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call 497-6636.

MONDAY, APRIL 11

Dept. of Biochemistry Seminar: "Transposable Elements in *Zea mays*"—Dr. Peter Starlinger (Inst. for Genetics, Germany). Noon, M316.

Dept. of Medical Microbiology Seminar: "Developmental Events Occurring During the Intracellular Growth of *Bdellovibrio Bacteriovorus*"Dr. Edward Ruby (USC). 1:15 p.m., M114.

Dept. of Biochemistry Seminar: "Transmembrane Assembly of Membrane and Secretory Glycoproteins"—Dr. John Hanover (National Cancer Institute). 3 p.m., M114.

TUESDAY, APRIL 12

Dept. of Biochemistry Colloquium: "An Algorithm for Relating Amino Acid Sequence to Protein Function"—Prof. M. Laskowski (Purdue). Noon, M316.

Dept. of Biochemistry Seminar: "Enzyme Transport in Mammalian Cell Mutants Defective in Acidification of Endosomes"—Dr. William Sly (Washington University). 4 p.m., M114.

Nursing Educational Services: "Critical Care Course, Level II: Multiple Trauma Symposium." 8 a.m. till 4:30 p.m., 900 Welch Road, room 15. For further information or to register, call Carole Kidder at 497-6366.

Dept. of Dermatology Grand Rounds: "Cutaneous Markers of Internal Malignancy"—Dr. Schwartz. 10 a.m., R136, Dermatology Library.

WEDNESDAY, APRIL 13

Dept. of Biochemistry Seminar: "The Role of Protein Phosphorylation in Branch Point Regulation: The Glyoxalate Bypass"—Dr. David LaPorte (UC-Berkeley). Noon, M114.

THURSDAY, APRIL 14

Dept. of Medicine Grand Rounds: "Potassium Homeostasis"—Dr. Samuel Thier, Stanford Community of Internists' Visiting Professor, from Yale. 8:30 a.m., Fairchild Auditorium.

Stanford Magnetic Resonance Laboratory Seminar: "NMR Studies of the Filamentous Bacteriophages"—Dr. Stanley Opella (Univ. of Pennsylvania). 4 p.m., Chemistry Gazebo, Chemistry Bldg.

FRIDAY, APRIL 15

Dept. of Biochemistry Colloquium: "Membrane Proteins Involved in Cellular Cholesterol Metabolism"—Prof. Richard Anderson (Univ. of Texas Health Center). Noon, M316.

Please register by now: for the Behavioral Medicine Program's 10-week workshop on starting and maintaining a regular physical exercise regimen. (*See related story in this issue.*) For further information or to register, call 497-7340.

TUESDAY, APRIL 19

Dept. of Structural Biology Seminar: "Actin Assembly"—Dr. Albrecht Wegner (Institute for Physiological Chemistry, West Germany). 4 p.m., Fairchild Bldg., D102.

WEDNESDAY, APRIL 27

Registration deadline for American Cancer Society course: "I Can Cope," on living with cancer, intended for cancer patients and their families. Sponsored by dept. of clinical social work at SUH. (*See related story in this issue.*) For further information or to register, call 497-5091.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

...News Notes...

Hospital personnel, consider your linen usage! A chart displaying the total linens used monthly is now in place outside the cafeteria entrance in the "P" wing, said Joyce Miller, R.N., of the Linen Conservation Committee.

The chart has been implemented to illustrate the amount of patient linens used on all SUH units, in order to encourage conservation. The chart also shows the specific use of sheets, blankets, towels and bedspreads. All figures are computed on a "pounds per patient day" basis. A single complete bed change requires approximately 12 pounds of linens.

* * * *

All Medical Center employees and their families are eligible for special discounts on tickets to the Santa Cruz Boardwalk, Great America and Marine World Africa USA. The reduced rates apply to specific days beginning in May.

Also available are three group rate vacation packages to the Caribbean, Alaska or Mazatlan.

Both discounts are offered by the human resources group (HRG) of the Medical School, and Catherine at 497-6295 has further information on both.

* * * *

Stanford Clinical Laboratories will celebrate Medical Laboratory Week April 10 through 16.

The California Association for Medical Laboratory Technology (CALMT) has this year chosen the theme "Laboratory Professionals Serving the Patient Community" to emphasize the clinical laboratory practitioner's role in modern medicine.

* * * *

Several members of the medical center academic community are participating in a Palo Alto Medical Foundation Tuesday seminar series which began April 5.

April 12, Dr. William Robinson of the Department of Medicine will speak on "Hepatitis B Virus and Liver Cancer."

April 26, Dr. Sun Win Chou, postdoctoral fellow in Infectious Diseases, will address "DNA Hybridization Methods for Rapid Diagnosis of Viral Infections."

Each May lecture will feature a Stanford faculty member as well. (See future "News Notes" for details.)

The events begin with lunch at 12:15 p.m., and the seminars follow at 12:45 p.m. They take place at the Palo Alto Medical Foundation's Research Institute at 860 Bryant Street, Palo Alto.

For further information, call the office of Dr. Marcus Krupp at 326-8120.

* * * *

Drs. Diana Guthaner, Philip Oyer and Stuart Jamieson of Stanford were recently made fellows of the American College of Cardiology at that organization's annual meeting held in New Orleans, La.

* * * *

Nominations for the 1983 Thomas A. Gonda award are being accepted through April 8, said Susan Cabral, employee relations specialist for the hospital's Personnel Department.

The award honors a hospital staff member who has been employed for at least five years and has contributed in a special way to the hospital's mission.

The two most recent recipients of the award were Aaron Smith, social worker, in 1982; and Barbara Petree, clinical nursing coordinator in the Delivery Suite, in 1981. The award is named for Gonda, SUH president from 1968 to 1974, and present chairman of the department of psychiatry, in honor of his exemplary dedication and service to the hospital community.

This year's award will be presented at the upcoming spring banquet. Those wishing further information or a nomination form may call hospital personnel at 497-6251.

* * * *

The department of clinical social work is sponsoring a series of speaking events to begin April 27, as part of the continuing 70th anniversary celebration of social work at Stanford. These events are free of charge, and the public is invited.

The April 27 lecture, given by Rose Grobstein, C.S.W., is entitled "Genetic Counseling and Prenatal Diagnosis," and will be held at Faber Auditorium, Children's Hospital at Stanford, from 2:30 to 3:30 p.m.

On April 29, an all-day conference will be offered on "Oncology Social Work and Clinical Research," at Fairchild Auditorium. Isabel Walker, Patricia Fobair, Sherry Feld, Jill Lehman and Susan Weisberg, all licensed clinical social workers, will lead the conference, which will take place from 9 a.m. to 4 p.m.

On May 20 and June 24, two-hour workshops will be offered, the former on "Adaptation to Hemodialysis," and the latter entitled "Approaches to Psychotherapy with Borderline Patients."

Further information on the talks will appear in upcoming **Medical Center Calendars**. *Also, information is available by calling the department of clinical social work at 497-5091.*



Smaller schools, local governance keys to improved urban systems—Levin

"The organizational building blocks of a strong urban school system are smaller schools with school-site governance," according to Stanford Prof. Henry Levin, director of the Institute for Research on Educational Finance and Governance.

"There is no educational argument for primary schools larger than about 300-350 students," he declares. "Smaller schools can be viable down to about 150 students if they share some services with neighboring schools.

"Likewise, four-year secondary schools can be as small as 300-400 students if they are able to cooperate through the use of some shared teachers and professionals in highly specialized areas. . . .

"As a rule of thumb, any primary or secondary school is probably too large if the principal and teachers do not know most of the students by name."

School closures should be viewed with caution, he adds. Anticipated savings from closures are often exaggerated, for several reasons:

1) Teacher and administrator salaries and benefits, the largest cost categories, usually are unaffected or reduced only slightly by closings;

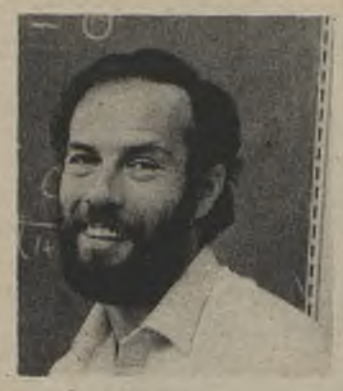
2) Schools are rarely leased at market prices or sold expeditiously after they are closed; and

3) Added costs of moving children from a local neighborhood are high, both in transportation costs and the political alienation of parents.

Levin suggests that several "mini-schools" could operate in a single large building with considerable autonomy, sharing resources needed for handicapped students, bilingual, and other programs.

In some instances, excess space could be leased while maintaining school operations for a smaller student body in the same facility.

Parents, community representatives and teachers should work with administrators in governing smaller school units, he adds. At the secondary school level, students might also be included in governing bodies.



Henry Levin

Governance responsibilities should include the selection of the school principal, serving on a multi-year contract and evaluated on the basis of performance.

"School-site governing boards also could set local policy for educational accountability, information availability on school and student performance, and student behavior. These policies would be implemented by the professional staff of the school," he adds.

In their preoccupation with school finances people often overlook a wide variety of human and material resources available to schools, including the use of senior citizens for tutoring, field trips, language instruction. Their involvement could contribute to political support for the schools.

Students also could be encouraged to tutor their colleagues and to help with clerical tasks and logistical duties. "In Japan, students spend part of the day cleaning and maintaining their schools, a collective activity that gives them a sense of ownership and pride," he notes.

"Research on peer teaching suggests that both cross-age tutoring and same-age tutoring improves instruction for students in need of extra assistance and also raises the skills of the tutors."

Young people should be active initiators of learning, not just passive recipients. Students should help each other.

Smaller, more personalized schools should welcome parental participation. Local businesses can contribute, both in material resources and in jobs for students. They may also provide managerial advice for improving school operations

"The overall aim is to draw in new resources in a spirit of commitment and enthusiasm, so the entire community identifies with its schools, or mini-schools," Levin explains.

Central administration would remain responsible for the overall financial administration of large urban school systems, even if many spending decisions are made on the local level.

The central administration also would be largely responsible for maintaining accurate records on personnel and students, and for negotiations on salaries and working conditions with employee organizations.

Besides providing technical assistance, the central administration would be responsible for a city-wide program of testing and information, whose results would be available to local schools and their governing bodies.

Revitalization of urban schools requires "fundamental changes rather than cosmetic alterations," Levin believes. "The patient is gravely ill. . .radical surgery and treatment is needed.

"Many established groups in education will view radical surgery as unthinkable because of the apparent risk it implies for altering the present claims of their constituencies. But students, parents, teachers, other school personnel, taxpayers, and the cities themselves are facing an increasingly moribund situation without hope of a 'quick fix' or a magic rescue.

"Continuation along the present path promises further deterioration in which all of the participants will be certain losers."

Levin's views are contained in *Policy Perspectives*, a publication of the Institute. Copies may be obtained by writing IFG, School of Education, CERAS Building, Stanford, Ca. 94305-1691.

CIT to upgrade operating system

As campus users of computer facilities see terminals springing up everywhere around them, they may wonder where all the computer power to handle this dramatic increase is going to come from. What is to prevent response and turnaround time from eventually grinding to a standstill?

Starting this month, CIT is addressing this very problem. At the end of April and the beginning of May, CIT will begin to prepare for the greatly expanded present and future needs for main memory by upgrading the MVS operating system to the next version, MVS/XA. ("XA" stands for Extended Architecture.)

In order to install the new system, CIT has had to set up a somewhat altered schedule of weekend unavailability, starting Saturday, April 30. The total number of hours that the IBM 3081 will be unavailable to users will remain unchanged, however. Presently, the system is down for routine maintenance on Saturday and Sunday from 6 a.m. to noon. As it is necessary to use large, contiguous blocks of time for installing the MVS/XA, the downtime hours have been extended on Sunday to 3 p.m. On Saturday, however, the system will be available starting at 9 a.m.

CIT plans to have the installation finished either early in August, if the modifications and testing are completed early, or in October, if not. (The intervening time is reserved for the "closing" of the fiscal 1983 school year, and no changes can be carried out during that time.)

MVS/XA will increase the virtual memory addressing capcity—about which more later—from the current limit of 16 megabytes to 2,000 megabytes.

This huge increase of over a hundredfold (the 2,000 megabyte limit comes as a package deal with the MVS/XA) will not be used all at once, but will allow the system room for growth, including the addition of real memory.

The key reason for increased demand on memory, said Ed Williams, director of Computer Services and Systems Division at CIT, is the heavy present and anticipated use of SPIRES, Stanford's data base management system, which was adopted last fall as the principal administrative data base system. Several other systems also contribute to the demand upon memory: on-line users are making increased use of printing and storage facilities and of electronic mail facilities; and they are using more microcomputers, to which the IBM 3081 acts as one of the hosts.

The benefits from the users' point of view will be that the MVS/XA will be able to accommodate this increased demand while maintaining responsiveness and providing good turn-around on batch jobs.

For information, contact Ed Williams, Cedar Hall, 7-3907.

Guidelines for fundraising support

Following is a March 15 memo to Vice-Presidents, Deans of Schools, Department Chairs, and Directors of Institutes from Provost Albert H. Hastorf on establishment of fundraising support groups:

A marked increase in proposals to establish new groups which require membership payments or dues in support of particular activities at Stanford points once again to the need for a written policy where none now exists.

Such groups have made significant contributions to several programs here. That is precisely why they are proliferating. But proliferation poses problems, and I am persuaded that for the future we must institute procedures which will permit us to be certain that such groups not only serve the purposes for which they are intended, but also that they do not divert funds from other University objectives, or consume the time of Development staff and others which might be spent more productively.

Henceforth, then, it will be the policy of this administration that new groups formed to support and raise funds for a particular objective will be established only with the approval of the Provost. In deciding whether such approvals should be granted, I shall seek the advice of the Office of Development and of other appropriate University officers. On occasion, when the proposed group has such significant ramifications that it warrants consideration at higher levels, I may seek the advice of the Administrative Council and the approval of the Trustees.

Proposals for new support groups should include the following information:

1) Justification of the need for funds, and academic relevance of the program;

2) Description of the program and of any privileges to be offered members;

3) A plan setting forth the organization's long-range financial goals, anticipated costs, and staffing needs;

4) An initial budget;

5) A fundraising plan, worked out in collaboration with the Development Office, including:

a) Annual dollar target;
b) Expected prospect constituency;
c) Membership categories;
d) Proposed solicitation techniques;
e) Volunteer plan, including leadership identified, committee structure, etc.

The initial proposal should be submitted first to the department chairman or, if he/she is the proposer, directly to the cognizant dean for preliminary review. After appropriate consultations, a final proposal should be prepared for review by the dean and the Development Office and, if it meets with their approval, for the Provost.

In evaluating proposals, my office will be guided by the following criteria:

1) New support groups must further important University objectives as determined by the academic leadership.

2) There must be potential for substantial new gift dollars. Therefore the constituency for new groups should be predominantly nonalumni and nondonor.

3) The sponsoring organization must be able to provide the necessary direct staff support for the fundraising and programmatic efforts. Such staff will be jointly accountable to the sponsoring organization and to the Vice-President for Development or his designee.

4) Funds raised should carry a single designation consonant with the agreed-upon objectives of the group, and donors should not be permitted to place further restrictions on their gifts. Control over expenditure of funds which these groups help to raise should rest with the recipient University entity, not with volunteer committees.

5) Fundraising by support groups should be strictly limited to seeking recurring, annual, expendable gifts of $1,000 or less. Larger gifts solicitations require the usual academic and Development Office approvals.

6) Gifts to a support group would not exempt an alumnus or parent from a regular Annual Fund or large gift solicitation.

Finally, we intend to apply a sunset law to new support groups. The Office of Development will make a cost/benefit audit of them after the second and fifth year, and at subsequent five-year intervals. Based on these analyses, the Provost's Office, in consultation with the Office of Development, will make decisions about the programs' continuance.

UAW probably will be bargaining agent at Fremont Toyota-GM plant—Gould

The United Auto Workers probably will become the bargaining agent for workers at the Toyota-GM plant in Fremont, says Prof. William Gould of the Stanford Law School.

A former attorney with the UAW, Gould has just completed a book comparing U.S. and Japanese labor laws. He was a visiting-professor at the University of Tokyo Law School in 1975 and 1978.

He believes the courts are likely to uphold Toyota's position that the new plant will "start from scratch."

The union is in a "somewhat weak" position to argue that the Toyota-GM plant is truly a "successor" company under the old GM-UAW contract, he noted.

"Plans to increase the reliance on robots and to adopt the kanban system—the integration of parts manufacturing facilities with the assembly plant—are signs of substantial change that argue against 'successorship.' So does the two-year hiatus between the closure of the assembly plant and the start of a new facility in 1984.

"A lack of preferential hiring (of former GM workers) is the most telling argument against successorship. The UAW cannot oblige management to bargain until it establishes that it represents a majority of the work force's 'full complement.'

"While the odds are long against the courts finding that Toyota-GM is a 'successor' firm under the old contract, it's conceivable that the National Labor Relations Board might rule that the company is a 'successor' for bargaining purposes.

"If so, the company would be free to set its own terms of hiring so long as it did not discriminate against applicants because of union membership. The UAW can be expected to be vigilant about any such discrimination.

"The chances are that the law will be largely irrelevant to recognition problems because of the longstanding UAW-GM relationship.

"The odds are that the UAW will use its leverage with GM and become the bargaining agent. We can expect hard bargaining as the contract is put together. Toyota-GM's strong legal position will no doubt soften up the union.

"For starters, management will seek and probably obtain more flexibility in work assignments. It also will resist Japanese-style UAW incursions into white-collar ranks.

"New procedures may be announced for the resolution of grievances, another area in which Japanese and American practices differ markedly. But labor relations that smack of paternalism will be more difficult to sell to California auto workers, regardless of their previous work experience.

"The Japanese have avoided or resisted unions in most American production facilities. If I am correct in assuming that the UAW will have a bargaining relationship with Toyota-GM, it will present an unusual opportunity for East and West to meet.



William Gould

"Fremont may be an important listening post for those—I count myself among them—who would like our system to promote more cooperation and less conflict."

Gould's views were developed in a commentary for *The Los Angeles Times* in interviews with *The Oakland Tribune* and Stanford News Service.

Al Hastorf to mount soap box May 11 at 'Majors Event' for undergraduates

For most students, choosing a major is the heaviest of all problems.

In May, Stanford is going to help make that choice easier—or, at the very least, provide students with every possible bit of information on which a decision can be based.

The Inner Quad—the center of Stanford's academic campus—will be transformed on May 10 into a "Majors Event," with just about every academic department represented to sell its programs. On the following day, departments will hold open houses for discussions.

There even will be a "Hyde Park Corner" according to Provost Albert H. Hastorf, the University's academic vice-president, "where departmental representatives, or merely interested parties, can offer public comments on various fields of study.

"I, for instance, will be mounting the soapbox to extoll the field in which I was an undergraduate major."

Audrey Bernfield, coordinator of departmental student services, who is organizing the two-day event, says "too many students select majors without thought or information. They shouldn't just follow the crowd. "It's very important that students understand that they can focus on almost any major and still go on to any professional school or job.

"The main thing is to major in something you love. We're talking about the quality of your undergraduate life: follow it, pursue it, and be challenged. In the long run, you'll be happier."

Hastorf feels that making the "Majors Event" an annual affair will streamline departmental efforts and make better advising possible through a more efficient use of faculty time.

"Until now," he says, "systematic attention across the university community has not focused on students' decisions about their major field."



Etchings by Rob Mason may be seen in the newly renovated School of Humanities and Sciences offices in Building 1 on the Inner Quad through mid-May. The artist is a registered professional engineer who turned to art full time after a 20-year career in the maritime industry. Mason grew up in Palo Alto; his father was a Stanford professor, and his mother still lives in the family home in Palo Alto.

Alvarado, Aguirre featured speakers at meeting on Hispanic professionals

Linda Alvarado, president of Alvarado Construction Co., and Jesse Aguirre, director of corporate affairs for Anheuser-Busch, will keynote a conference on "The Hispanic Professional: A Question of Dual Commitment" at Stanford Saturday, April 16.

Alvarado, a recipient of the 1982 National Businesswoman of the Year award, has spoken frequently on economic development, business management, and the promotion of women in non-traditional careers.

Aguirre, an alumnus of Stanford and of Harvard Law School, has contributed to the political and cultural enrichment and welfare of the Hispanic community at the local and national level.

The day-long conference at the Stanford Graduate School of Business will bring together professionals, students, and local community members, starting with registration at 8:30 a.m.

Topics covered will include "The Hispanic Professional in the Business Setting: Obstacles and Opportunities" and "Balancing Professional Life and Community Involvement," among others.

The conference is sponsored by the Latino Business Society, Stanford Society of Chicano Engineers and Scientists, the La Raza Staff Association, and the Personnel Management Association of Atzlan.

According to Ruben Rodriguez, student member of the Steering committee, the conference is unusual in the range of subjects and the diverse background of participants from the Chicano professional community.

Registration fee is $5 for students and $10 for professionals and the general community, including registration materials, lunch, and a reception.

Further information and advance registration can be obtained by contacting Rodriguez at (415) 497-3967 or Edward Escobedo at 497-2009 at the Stanford Career Planning and Placement Center, Stanford, Ca. 94305.

Placement Center open in noon hour

Beginning Monday, April 4, 1983, the Career Planning and Placement Center will remain open between noon and 1 p.m.

This trial arrangement is being made in order to allow noontime access to the Center by its many users, both those coming from on and off campus.

Limited services will be offered during the noon hour.

Sponsored Projects closed in noon hour

Beginning Monday, April 4, the Sponsored Projects Office will close between 12 noon and 1 p.m. Those wishing to deliver materials during this time may leave them on the table adjacent to the main entrance way.

Kennedy does not plan to change research policy based on end-use limits

Following is the text of President Donald Kennedy's talk to the Academic Council on 4/1/83.

As most of you know, a research project at the Stanford Synchrotron Radiation Laboratory has been proposed jointly by Lawrence Livermore National Laboratory, the Los Alamos National Scientific Laboratory, the Sandia Corporation, and several campuses of the University of California. Under the terms of the proposal, a new beam line would be constructed at SLAC, at a cost of some $6 million; the derived radiation would be used for a wide range of materials research applications, including one that relates quite directly to nuclear weapons testing.

A number of researchers at SLAC have petitioned the director of that facility to protest the project, objecting to the doing of weapons research and alleging that they will be made unwilling collaborators in programs they find unacceptable, and of a kind they understood would not be undertaken at SLAC. With some of the petitioners' concerns I find myself in sympathy. The problem of "involuntary servitude" is a knotty one. I also agree that there are questions regarding the degree to which outside users can determine what is done in a Stanford facility. A resolution by Prof. Mozley which raises these questions among others, received thoughtful attention by the Senate yesterday afternoon, and the Committee on Research will be examining them in the future.

The question I want to examine today is different. To put it in the most concise form: should we undertake a modification of Stanford's research policy so as to rule out this and other projects that have prospective military uses? Some background is essential before considering that important issue.

The Stanford Synchrotron Radiation Laboratory (SSRL), an interdisciplinary research laboratory of Stanford University, is a national facility used by some 400 scientists from universities, industry, and the government. These researchers, from a variety of disciplines, utilize the intense ultra-violet and x-radiation from the SPEAR storage ring at SLAC. SSRL receives the majority of its funding from the U.S. Department of Energy, although various other government and non-government sponsors also support the Laboratory's research activities.

All proposals to construct instrumentation and to perform research at SSRL are evaluated by an SSRL External Proposal Review Panel, made up of distinguished scientists from around the country. The Panel uses these criteria to rank the proposals:

1) the scientific quality of the proposed work;

2) the ability of the researchers to perform the proposed tasks;

3) the level of contribution of the proposed work to SSRL's scientific development; and

4) the contribution of the proposed work to the education of Stanford students who participate in research at SSRL.

Because multi-million dollar investments are needed for the construction of each new beam line at the Lab, SSRL has guaranteed some sponsors who fund construction of new beam lines access to a portion of those beam lines for scientific projects. Any agreements involving guaranteed access by the sponsor are currently limited to three-year terms, with renewals subject to the criteria given above.

When guarantees of access to the beam line have been given a research sponsor, at least one-third of the total beam time must be available to general (non-sponsor) SSRL users whose proposed research is approved by the Review Panel.

All work performed at SSRL must conform to all University research policies, including the Secrecy in Research Guidelines. The latter provides that no research agreement can prohibit a scientist's right to publish or otherwise disseminate the results of his/her University research activity. Although an "incidental" amount of proprietary information may be given in confidence by a sponsor to a University researcher, the principle of freedom of access by all interested parties to the underlying data, to the processes, and to the final results of research is of overriding importance. Accordingly, it is Stanford's policy that no program of research that requires secrecy is to be conducted at the University.

To insure openness of research and timely disclosure of research results, SSRL has taken two additional steps beyond those specifically required by University policy. First, no research involving proprietary data may be performed by a sponsor during the period of time in which the researcher is utilizing his "guaranteed time" on the beam line; all proprietary research must be approved on a specific project-by-project basis by the External Review Panel, in competition with all other proposals submitted by the general SSRL user community. Second, the director of SSRL must be provided all of the proprietary information involved and is responsible for seeing that the research results, including the proprietary data, are indeed published after the research results have been analyzed.

All University research activities, including those conducted at SSRL, are governed by Stanford's "Statement of Principles Concerning Research" which was adopted by the Senate on December 16, 1971. It reads, in part, as follows:

". . . The individual scholar should be free to select the subject matter of his research, to seek support from any source for his work, and to form his own findings and conclusions. These findings and conclusions should be available for scrutiny and criticism as required by the University's Policy Guidelines on Secrecy in Research.

"Research techniques should not violate established professional ethics pertaining to the health, safety, privacy, and other personal rights of human beings or to the infliction of injury or pain on animals.

"The University should foster an environment conducive to research. Where, because of limited resources, the University cannot support all research demands, it should allocate space, facilities, funds, and other resources for research programs based on the scholarly and educational merits of the proposed research, and not on speculations concerning the political or moral impropriety of the uses which might be made of its results.

"The above principles circumscribe the University's role with respect to University-connected research. They in no way diminish, and indeed they reinforce, the individual researcher's personal responsibility to assure that the sources of funding for his research, and its perceived applications, are consistent with his own judgment and conscience."



Although the quoted policy results from a Senate action in 1971, the critical debates over the issue actually occurred during 1969—hardly a sleepy time with respect to such issues. Indeed, I remember well much of the flavor of that debate in the Senate, since I was the author or seconder of several of the amendments. An adequate indicator of the intensity of feeling at the critical meeting of April 26, 1969, is given by the termination time recorded in the minutes. It was 10:40 p.m.

In a series of discussions before and after that, the Committee on Research and the Senate repeatedly walked up to the conclusion that Stanford faculty members should be prevented from doing research *intended* for particular purposes, or likely to be *used* for particular purposes. In the end we wisely walked away.

There is a certain sense of *deja vu*: the reason today's problem is vexing and controversial is the same as it was then: a prospective end-use of the research is involved with weapons development.

There are various views, on this campus and elsewhere, about the need for applying the research skills of this nation to the development of military technology in the interest of our national security. But many of us here believe that the present direction of our national effort is tragically wrong. Our dependence on large stockpiles of nuclear weapons, and on deployment measures and countermeasures with great destructive potential, have placed all of us in collective jeopardy.

Recent extensions of those policies have caused the Defense budget to hypertrophy at the expense of social programs that fulfill human needs; and within the Department of Defense itself, an increased focus on weapons technology was weakened the support of more fundamental research efforts. There are, in short, a variety of reasons to be uncomfortable about weapons research.

In the present instance, we have a research program that will produce some output clearly related to nuclear weapons testing. A careful reading of the proposals reveals that in fact a wide variety of work, including a number of programs on the fundamental properties of living materials, is to be conducted, although the weapons applications are understandably stressed in the short form of the proposal directed to the funding agency.

The heterogenous mix of intentions and prospective uses for this proposed facility demonstrates clearly just how tricky and difficult it is to judge end-use and intent. Sometimes the search for knowledge leads one to unexpected places; no research can safely be predicted to be free of harm—nor, conversely, can a piece of work that includes a military end-use automatically be defined as "bad."

That is why the Committee on Research and the Senate reached the conclusion I described earlier—that is, that University restrictions on research would not be imposed based upon intent or end-use, but only upon conduct.

The Stanford faculty decided that to open the door to prohibitions of this kind would, in the long run and in the aggregate, do more harm than good. It foresaw that today's benign restriction might become tomorrow's suffocation: that once you begin making value judgments about the possible outcomes of scientific work, there is no place to stop. In summary, we placed our faith in the ultimate net benefit of free inquiry.

I therefore do not plan to try to change the University's policy on research in order to eliminate this proposed program, nor do I think that my colleagues should wish to do so. I would hold that view even if the project under consideration were much more heavily devoted than it is to end-uses with which I am personally uncomfortable.

Good general principles often get their severest and most meaningful tests in such uncomfortable situations. That is why those who are devoted to civil liberties sometimes find themselves defending dreadful people, and it is why the courts frequently have to release felons when it turns out that the police discovered their felonies in inappropriate ways.

Our policy is that Stanford scientists are free to conduct work of their own choosing as long as it can be carried out in accordance with principles of openness and freedom of publication.

The principle underlying the policy is that the social benefit flowing from free and unimpeded efforts to gain new knowledge will outweigh the cost exacted by the occasional pieces of dangerous knowledge we obtain as a result of free inquiry. Because I believe in the principle, I support the policy.

'Working against Sexism'—rally, speakers, workshops set

"Working Against Sexism" is the theme of four days of workshops, films, and discussions at Stanford, starting with a White Plaza rally Monday noon, April 11.

Rally speakers will include Barrie Thorne, visiting associate professor in feminist studies and sociology, and Alice Supton, assistant dean of residential education. Thorne will lead a workshop on "Sexism in the Classroom" at 7:30 p.m. Monday in Gavilan House of Florence Moore Hall.

A free public panel discussion on "Sexual Harassment: In Education and in the Workplace" will be featured at 7:30 p.m. Tuesday, April 12 in Kresge Auditorium of the Law School.

Participants will include Catherine MacKinnon, author of *Sexual Harassment of Working Women*, and visiting professor at Stanford last year; Karen Haney, director of Women Organized Against Sexual Harassment; Anna Price, former Yale student harassed by a professor there and defended by MacKinnon; and Peggy McGinnis, one of the first women to follow a sexual harassment case through the courts.

Topics covered will include recent legal development, practical strategies for dealing with sexual harassment, and theoretical and social interpretation of sexual harassment in the workplace.

Sherry Ortner, associate professor of anthropology at the University of Michigan, will discuss "The Cultural Construction of Gender and Sexuality" at noon Wednesday, April 13, in Terman Auditorium as part of the Jing Lyman lecture series on "Female Sexuality" of the Stanford Center for Research on Women.

Featured programs Thursday will include a women's self-defense demonstration at noon in White Plaza and and candlelight "Take Back the Night" march, starting at 7 p.m. from the end of California Ave. in Palo Alto near the Co-Op market and the fountain. A community get together and potluck will precede the march, starting at the Stanford Women's Center at 5 p.m.

The self-defense demonstration will include Matt Thomas and Sheryl Doran of Model Mugging, Inc., an organization which teaches practical self-defense to women. Taken by thousands of college students nationally, this program enables women to test their skills at full strength against fully padded attackers—kicking them in the groin, the head and other vulnerable spots.

Four more workshops besides Thorne's are planned for Stanford students, faculty, and staff.

"Sexual Harassment: What to Do if You Are Harassed" will be discussed at noon Tuesday, April 12, at Tresidder Memorial Union. "Power Pinch," a 30-minute film on dealing with harassment in the workplace, also will be shown.

"Changes in Relationships Between Men and Women" will be discussed at 2:30 p.m. Tuesday, April 12 in Donner House of Stern Hall by Jim Steyer, instructor in the SWOPSI class on "Men's Lives," and Carrie Griffin, outreach discussion leader with the Rape Education Project.

"Abuse in Dating and Love Relationships" will be discussed by Anne Wurr, community educator for the Mid-Peninsula Support Network for Battered Women, at 4:30 p.m. Wednesday, April 13 in Trancos House of Wilbur Hall. Studies done with college age adults show that one in five students have experienced physical violence with their dates or lovers.

"Growing Up Male: Violence in Our Lives" will be the topic for Alan Creighton and Andrew Bundy, workshop leaders for Men Overcoming Violence, at 7:30 p.m. Wednesday in Rinconada House of Wilbur Hall.



Patricia Lind

Self-improvement: in your thinking...

Do you know how you learn most effectively? Are you aware that your thought process may be blocking your success in school or work, developing new skills or improving old ones?

"Assessing Your Thinking Style" will be taught by Patricia Lind, M.A., from 7 to 9 p.m. Tuesdays, beginning April 5, in Tresidder Union. (Even though the first meeting was yesterday, those interested in the class should call 497-9671 to see if there's still room.)

Participants will learn how their thinking style works for them and how it works against them. Study techniques will be given to enhance particular styles, such as organizing facts and ideas in the form of a map, to see the "whole picture."

Lind has taught at Foothill College, is a consultant to school systems, and currently is the director of Educare Learning Center. The Center has developed new models from recent brain research for releasing learning block patterns in adults and children.

The fee for the course is $18, payable the first time you attend.

...and in shedding weight permanently

The Health Improvement Program (HIP) is offering an experimental weight loss course designed for those not wishing to participate in traditional weight loss classes.

Research conducted by the Stanford Heart Disease Prevention Program and investigators at the University of Minnesota suggests that self-administered weight loss formats which minimize contact between participants and program staff can be as effective as more "intensive," face-to-face treatment approaches.

The Health Improvement Program self-help course has been tested by Stanford Heart Disease Prevention Program researchers in Monterey and Salinas as part of its Five City Project in an effort to improve the cardiovascular health of the general populations in the two areas.

The available evidence indicates that the program is as effective as those using group treatment formats.

Orientation meetings to describe the course are scheduled for the following dates: 5:15-6:15 p.m., Tuesday, April 12; 4-5 p.m. Wednesday, April 13; 12 noon-1 p.m. Friday, April 15. To reserve a place at one of the meetings, telephone HIP at 497-9649 between 1 and 3 p.m.

Tennis lessons start soon

Tennis lessons (six pupils per group) will again be offered to staff and/or families on weekday mornings or Saturday mornings. Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed printed information and registration forms. Lessons begin week of April 18.

Ram's Head plans all-student version of 'Hello Dolly!' starting April 14

Ram's Head Theatrical Society at Stanford will present an all-student production of "Hello Dolly!" at 8 p.m. Thursday and Friday, April 14-15 and at 2:30 and 8 p.m. Saturday, April 16, in Memorial Auditorium.

Based on Thornton Wilder's book, "The Matchmaker," the title role of Dolly Levi will be played by Alexandra Cocu. An aspiring opera singer, she recently returned from studies in Vienna and has resumed vocal training with Stanford's Lila Stuart.

Richard Gerrig, a Yale graduate studying for a doctorate in psychology at Stanford, will portray Horace Vandergelder.

Costume designer is Cynthia Cook, a Palo Alto High School graduate who came to Stanford to study petroleum engineering but became a drama major.

Musical Director Susan Silverman, of Hillsborough, attended Crystal Springs and Exeter Academy. Still a sophomore, she already has been musical director of three Ram's Head productions, including "Cabaret."

Ticket prices are $6 for the general public and $4.50 for students for the evening performances, and $5.50 adults, $4 students and senior citizens, and $3.50 children for the matinee.

Tickets are available at the Tresidder ticket office at Stanford.

Stanford West hearing Monday

A public hearing on the pros and cons of the proposed Stanford West housing project will take place at 7:30 Monday night (April 11) before the Palo Alto City Council.

Strong opposition to the housing is expected from Menlo Park residents across San Francisquito Creek from the Willow Road housing site.

Stanford faculty, staff, and graduate students will be eligible to live in the 1,275-unit project. The units will range in price from $60,000 to $250,000, with rentals targeted at or near $400 a month.

Those interested in expressing their views on the subject may attend the meeting in the Palo Alto Civic Center, 250 Hamilton Ave., or may write in care of the City Clerk, at the same address, Palo Alto, 94301.



Carpools

Ongoing carpool needs another partner. Leaves Oakland at 8:30 a.m. Leaves Stanford at 6 p.m. M-F. Call John Bundor at 7-4480.

Carpoolers wanted. Dublin/San Ramon/Pleasanton to Med Ctr. Hours 9-5:30, M-F. Call Ed at 7-5569.

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Senate report

Senate asks study of volume, character of weapons-related research here

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 10

Summary of Actions Taken by the Senate
March 31, 1983

At its meeting on March 31, 1983, the Senate took the following actions:

1. On the recommendation of the Comittee on Academic Appraisal and Achievement, the Senate, by unanimous voice vote, conferred bachelor's degrees on candidates who had met the various requirements for those degrees.

2. On the recommendation of the Committee on Graduate Studies, the Senate, by unanimous voice vote, conferred advanced degrees on candidates who had met the various requirements for those degrees.

3. On the recommendation of the Committee on Graduate Studies, the Senate, by unanimous voice vote, revoked an M.D. degree which had been awarded in error last September.

4. On a motion made by R. Mozley and seconded by G. Gillespie with a friendly amendment proposed by S. Dornbusch, the Senate passed, on a divided voice vote, the following resolution:

> Resolved: that the Committee on Research study the volume and character of weapons-related research at Stanford.
>
> It is desirable that a preliminary report of issues and procedures be delivered to the Senate during the Spring Quarter of 1983.

Minutes of the Fifteenth Senate
of the Academic Council
March 31, 1983
(Draft subject to approval by the Senate)

A meeting of the Fifteenth Senate of the Academic Council was held on 3/31/83, beginning at 3:18 p.m. in Room 180 of the School of Law with A. L. Fetter (Chair) presiding. Present were 40 representatives, 8 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 3/3/83 (SenD#2481) were approved with one amendment. In the discussion of the Report of the *Ad Hoc* Committee to Study the Question of the Length of Academic Terms (page 3), the last sentence of the fourth paragraph should read as follows:

> He advises that such experiments be tried first at advanced undergraduate and graduate levels.

Conferral of Degrees

Under the Action Calendar, the Senate, by unanimous voice vote,

1. Conferred bachelor's degrees on candidates recommended by the Committee on Academic Appraisal and Achievement in the Preliminary List (SenD#2482), a Supplementary List (SenD#2483), and a final list of three candidates added by Registrar Mahoney.

2. Conferred advanced degrees on candidates recommended by the Committee on Graduate Studies in the Preliminary List (SenD#2484), and a Supplementary List (SenD#2485).

3. Revoked an M.D. degree awarded in error last September.

Report of the Steering Committee

In the report from the Steering Committee, A. L. Fetter, Chair, reminded the Senate of the April 1 Academic Council meeting and called attention to the Senate schedule for May 12, which includes both the C-AAA-EIT report and the report from the Dean of Humanities & Sciences. The plan is to limit debate to 45 minutes or so on the committee report at that meeting and continue the discussion at the following Senate meeting.

Report of the President

The President reported that he intended to address his remarks at the Spring Quarter Academic Council meeting on April 1 to the matter of the SSRL research program and the controversies which have risen from it.

He then commented on Stanford's position regarding the coupling of Selective Service registration and financial aid derived from government sources. In light of the present legal situation, Stanford will process applications as usual, as if the regulations did not apply. Students will be advised to follow a similar course of action.

Report of the Provost

The Provost first reported that the Sponsored Projects Office is currently training two new staff members to fill recent vacancies and hopes that faculty will be patient if there are occasional delays in handling grant applications during this period.

He also reported on actions he has taken in response to the report of an *Ad Hoc* Committee to Review Academic Programs in Physical Education, which he appointed over a year ago. The committee, chaired by S. Mahoney, was composed of J. M. Atkin, C. Burciaga, J. Friedenthal, M. Kirst, and R. Thompson.

He has implemented the following recommendations of that committee, effective September 1983:

1. That the Dean of Humanities and Sciences be appointed the cognizant administrative officer of the Division of Educational Programs of the Department of Athletics, Physical Education and Recreation (D-APER);

2. That the Division's academic staff for teaching use the titles, Senior Lecturer and Lecturer, used generally in the University and not the special titles used in the Division since 1972, and

3) That the cognizant administrative officer charge a committee, to include a core of the Division's own curriculum committee and at least two Academic Council members from outside D-APER, with oversight of the Division's curriculum.

Two other recommendations of the *ad hoc* committee are yet to be acted upon. These will be addressed in the future by the Dean of Humanities and Sciences and the appropriate Academic Council committee. They are:

4) That limitations beyond those now in place be put on the use of physical education courses in support of Stanford's baccalaureate degrees and, further, that these limits be integrated with other credit limits now applicable to extradepartmental programs (with C-US), and

5) That D-APER courses generally, and unless specifically excepted by the oversight committee, be graded on a Pass/No Credit basis (with C-AAA).

Annual Affirmative Action
Report on Graduate Students

Associate Dean of Graduate Studies A. Gelpi presented the Annual Affirmative Action Report on Graduate Students, 1981-82 (SenD#2478).

At the outset, he pointed out that Assistant Dean D. K. Naylor had prepared the final report, to which all of the staff of the Dean of Graduate Studies and Research had contributed. He also reminded readers that the report bridges two academic years, in that the dean's office activities in one year affect the enrolled graduate student population of the following year.

He emphasized that the situation described in the report is troublesome, as the Dean of Graduate Studies had predicted it might be in his affirmative action report last year. The data show that for fall enrollments in all schools there was a decline in the number of minority students, while the number of women enrolling held steady in the School of Medicine and increased in the other schools. Applications and admissions figures also showed the same trends.

This has caused the dean's staff grave concern and has resulted in renewed efforts in recruitment, even though it mirrors a general national picture.

Stanford's commitment to its affirmative action goals in graduate student recruitment are evidenced by a number of recent developments in the dean's office. These include the appointments of three assistant deans for minority recruitment, an increased program of campus recruitment visits, revised publications, liaison affiliations with departments, participation in minority name exchanges, special fellowships for minorities, and Stanford academic workshops to build a faculty network of connections with colleges which can provide promising minority applicants.

He introduced the dean's administrative officers for recruiting: Assistant Deans D. K. Naylor for blacks and Puerto Ricans; A. Medicine for native Americans; and N. Lozano for chicanos, and Associate Dean J. Fetter for women in science and engineering.

Last June a graduate student minority recruitment committee composed of minority graduate students from all the schools was asked to assess the affirmative action program at Stanford and make realistic plans for the future.

All the University affirmative action officers now meet together in regularly monthly meetings. A day-long University-wide retreat is presently being planned for 1983 for all those involved in the affirmative action programs at Stanford; its purpose will be to review the past and the present, and plan for the future.

The dean's office is eager to learn from departments any suggestions on how affirmative action efforts can be improved, and any way in which the dean's staff can assist departments in their own affirmative action programs.

The prospects for next year seem to look a little better. Although admissions processes are still going on, there are indications that figures for minorities and women are either holding even or are already higher than last year's figures in nearly all schools.

Annual Affirmative Action Report
on Academic Staff/Research

Associate Dean Gelpi then went on to present the Annual Affirmative Action Report on Academic Staff/Research, 1981-82 (SenD#2477).

He pointed out that even with a 3 percent decrease last year in the total number of academic staff/research appointments, the number of minority appointments remained the same. The bad news is that these numbers are very small.

Dean Lieberman has observed that, since 1979, the increased numbers of minority academic staff/research appointees who leave here to take regular faculty positions elsewhere is an encouraging new development, with implications for affirmative action. Such positions here and elsewhere may prove a fertile source of minority faculty appointees in the future.

Associate Dean Gelpi closed with a request for faculty support and cooperation in reversing the downward trends of 1981-82, and pledged the wholehearted assistance of the dean's staff in that effort.

In the discussion following these two reports, the question was asked why the recruitment effort for women is focused only on science and engineering. Associate Dean Fetter responded that it was a matter of targeting areas of the most severe underrepresentation. She pointed out, however, that even in fields in which women are not underrepresented in graduate admissions generally, they may well be so at the Ph.D. as opposed to the Master's level. This affects the potential pool for affirmative action appointments on college and university faculties.

B. Roth commented that affirmative action programs seem to be systematized by now all over the country. There are some new initiatives (like the networking system), but by and large most faculty aren't being utilized in the affirmative action effort. Somehow it seems that the system isn't working.

Associate Dean Gelpi responded that the new departmental liaison plan is intended to involve more faculty directly. Associate Dean Fetter added that the new Minority Access for Research Careers Program (MARC) has been another notable development for involving faculty. Assistant Dean Naylor described a model Stanford summer program in biomedical research sponsored by NIH which involved faculty as mentors and provided access to laboratory facilities for minority undergraduates with high potential for research careers. He added that the dean's staff would like to have more contact with faculty, and greater continuity of such contact. He urged departments to designate faculty who have an interest in affirmative action and will take the time to work with the dean's staff. He sees faculty participation as a critical component in attracting high-potential minority applicants.

Associate Dean Gelpi added that the dean's staff is currently working on a plan for some kind of a mentor program to involve interested faculty. This is still in the early stages of planning.

To the question of how effective the Compton fellowships are as recruitment tools, Assistant Dean Naylor replied that they are presently very limited, because there are so few and because the awards are somewhat out of phase with Stanford admissions decisions. A conference

continued on next page

Senate report

continued from page 14

will be held soon for participating institutions so that they can plan how to make better use of these fellowships.

L. Rosenberg, speaking from years of experience with the Medical School's minority recruitment program, expressed the view that affirmative action has to be declared more or less a social failure. Given the best will in the world and the most serious institutional effort, there is no significant improvement in minority representation at professional levels. The pool of candidates is not only limited but has gotten poorer in the last few years. Given the lack of support for education in the cities and in the public sector generally, the possibility that a sustained affirmative action program will be effective is very problematical. Perhaps as an institution we could think of something that we could do to improve the applicant pools. To have half a dozen top universities competing every year for the 4 or 5 minority applicants in any one field doesn't really make any social impact. We should continue to do that as energetically as we have, but we have to do something a little different to address the question of what the quality of the pool is and how we can make it bigger.

Asked to comment, Dean Atkin of the School of Education agreed that while education has made great strides nationally in bringing populations formerly poorly served up to some minimal level, it has not done well for a broad range of the population, majority students included. We have to work considerably harder to improve the schools, and this will be done in the future to a significantly greater degree than it has been in the recent past.

To the question of whether or not long-term career planning is a part of minority recruitment programs, Assistant Dean Medicine responded that efforts are made to identify promising native American students in reservation schools. Contacts are then established and maintained over the student's next two or three undergraduate years to encourage potential applicants for medical school, for example, in planning their careers.

Annual Affirmative Action Report on Faculty

In opening his presentation of the Annual Affirmative Action Report on Faculty 1981-82 (SenD#2480), Provost Hastorf commented that graduate affirmative action is obviously crucial to faculty affirmative action.

He also reminded the Senate that Santiago Rodriguez, the University's Affirmative Action Officer, chairs the Task Force on Staff Affirmative Action. He could not attend this meeting, and staff affirmative action will not be reported here.

The provost then asked Assistant Provost C. Burciaga to report on the processes in effect now for faculty affirmative action. She detailed a number of processes, both internal and external to the University.

Internally, the University is working toward involving faculty and departments more and more directly. A faculty Affirmative Action Committee is now advisory to the president and the provost on both the recruitment and the retention of women and minority faculty. It also meets with school and departmental faculty affirmative action representatives to assess the role of these representatives in the program and to discuss problem areas within disciplines. The deans and the provost will also be meeting with these departmental representatives. The intent is to extend the commitment to affirmative action deeper into the department and faculty level—to decentralize the program.

A special emphasis is being put on the early identification of talent within a discipline. Departments are urged to maintain rosters to serve as a talent pool, and to extend each search as broadly as possible. Appointment searches are being monitored for affirmative action procedures, and conspicuous improvements have been noted in the recent past. The faculty affirmative action fund is one of the oldest and most effective of the University's internal tools for implementing affirmative action. This year it has been heavily used, but even so, departments are urged to apply to it if necessary when an opportunity to make an affirmative action appointment arises.

One of the external processes in affirmative action is Stanford's regular report to the Department of Labor. These reports have been very favorably received, and Vice-Provost Burciaga commended the dean's staff for the excellent work done on these reports. Federal reporting is an effective mechanism for monitoring our own program.

Regular affirmative action meetings are now being held with counterpart officers at sister institutions in the East. These have provided another external process for monitoring our progress.

The Provost confirmed that this year, for the first time, the affirmative action fund has been committed to the limit of both its budget base and its savings, but that even so, inquiries will be welcomed.

In summarizing the report data on faculty affirmative action, Provost Hastorf pointed out the trends evident over five-year periods:

	% women		% minorities	
	Tenure line	Tenured	Tenure line	Tenured
Ten years ago	6.5	3.5	4.8	3.0
Five years ago	8.0	3.9	6.7	5.5
Last year	9.4	5.8	7.3	6.1

He commented that last year was the best in the last ten years for faculty affirmative action: 24 percent of all new faculty in the fall of 1981 were women (18 women in all). Twelve of those were in the humanities. Two, however, were appointed in the School of Business, which represents a real breakthrough. (He added that the School of Business has tried several times to make prestigious senior appointments of women or minorities without success, but not for lack of effort. Rather, he thought, it was because of the intense competition for candidates in a severely limited pool, as had been suggested earlier.)

Last year was also the best year of the last ten for new appointments of members of minority groups. Eleven new minority faculty members were appointed in the fall of 1981. Good as the faculty affirmative record on new appointments was in 1981-82, it is no cause for complacency, he added.

He pointed out also that four women were promoted to tenure effective in the fall of 1981 and that the record of this year's promotion of women to tenure will be even better.

Finally, he addressed the question of the appointment of women or minorities to academic administrative positions, and reported that the percentages have remained essentially unchanged over the past three years.

A. Mellor pointed out that the data given in the report on departures pools terminations and resignations, and that the separation of that information would be of interest. Discussion then moved to the difficulty of interpreting the meaning of "resigned," since the act has many motivations including on occasion the expectancy of termination. There was some agreement that while at least some terminations are documentable, resignations are enormously difficult to interpret. It may not be possible to make a valid separation of departure figures in that regard.

Resolution on Weapons-Related Research

The last item on the agenda was the presentation of a resolution to refer the problem of weapons-related research at Stanford to the Committee on Research for study (SenD#2479). R. Mozley, in presenting the resolution, pointed out that he did not represent the administration at SLAC in proposing this resolution. He estimated that he did have the complete support of about half the SLAC faculty and a considerable number of the staff.

He was motivated to propose the resolution because of "the probability that a beam-weapons related problem at SSRL will command the efforts of SLAC people who do not wish to work on it." That immediate problem, he believes, can best be handled by Stanford administrative officers without Senate involvement. He sees this problem, however, as a warning example of what can happen if university research becomes focused more and more in a weapons-related direction because of the pressures of funding availability.

Recognizing that criteria relating to the use of research are both difficult and dangerous to apply, he nevertheless proposed that they be considered in order to heighten awareness of the problem and the effect that such an influence could have upon the University.

For these reasons, he proposed the following resolution:

> Resolved: That the Committee on Research study the volume and character of weapons-related research at Stanford, and possible criteria relating to end use which might be used to reduce the volume of such research if this proves desirable.
>
> It is desirable that a preliminary report be delivered to the Senate during the Spring Quarter of 1983.

J. Meindl, Chair of the Committee on Research, was asked to comment on the resolution on behalf of his committee. He responded that C-Res had spent its January meeting in several hours of discussion on the SSRL project, concluding that there was no apparent violation of University policy involved. C-Res is now working on the problem of software and copyright policy and has identified several promising areas for policy change. The April meeting is being planned as an open meeting for copyright and software policy discussion. The last meeting of the year will be needed for closure on policy changes to be recommended. These Spring Quarter plans for C-Res, he said, could be changed if the Senate decided to accept the resolution before it.

K. Arrow commented that the matter is one of serious concern which should be considered. The resolution as worded, however, presumes both that there is a significant problem with weapons-related research here and that it demands correction. Presumably, all DOD research has some eventual relationship to defense; whether or not it is directly weapon-related is another matter. Different scholars take different positions on whether or not they wish to work on such research. The case with the SSRL project is different because of the involuntary service aspect. That is an interesting ethical issue, a problem worthy of study. However, the record should show, if the resolution passes, that the issue of weapons-related research as a "problem" has not been prejudged; rather, C-Res has been asked to think about it.

G. Gillespie remarked that R. Mozley's presentation made it clear that the SSRL project is open and above-board and does not contravene present University policy, and that it can probably best be handled by University administration without Senate intervention. The dangers of a large volume of the University's research being funded by a single dominant sponsor are real and diversification of sponsorship is important. As the resolution is formulated, however, there is another danger—the danger of predicating hypothetical end use and by so doing, restricing freedom of research in many fields.

J. Adams recalled the Senate's earlier lengthy debates on research policy and on the problem of determining what is a weapon and what is not. He asked Meindl what effect the passing of this resolution would have on C-Res and its agenda.

Meindl responded that resolving the issues concerned would necessarily absorb the committee for at least another year.

R. White pointed out that potential end use is a treacherous judgmental measure for assessing research and proscribing who may do what within a university context.

J. Merryman asked to what extent Mozley would be satisfied with a narrowing of the resolution to deal with the problem of involuntary involvement by research staff. Mozley responded that that would serve only as a partial answer. The basic issues, he feels, demand University-level policy decisions.

At this point, S. Dornbusch proposed a friendly amendment to the resolution. As amended, it would read:

> Resolved: that the Committee on Research study the volume and character of weapons-related research at Stanford.
>
> It is desirable that a preliminary report of issues and procedures be delivered to the Senate during the Spring Quarter of 1983.

G. Gillespie seconded both the original motion and the amendment.

After a discussion of the contrast in the terms "weapons-related" and "defense-related," the original term was retained. It was also made clear that the clause relating to end use criteria which the amendment would delete was motivated by a desire to have the present University research policy re-examined in the light of recent developments. There was objection, however, to the implicit hope expressed in the end use clause that C-Res would devise some criteria based on predicated end use (and perhaps research volume per sponsor) which would arbitrarily limit freedom of research at Stanford.

R. Mozley accepted the amended resolution as proposed and seconded.

There was then some discussion of both the importance and the feasibility of the spring reporting time but N. Gage pointed out that "desirable" does not mean mandatory and "preliminary" does not mean final.

As the discussion closed, A. Siegman commented that there are other ways to get information than by mandating that it be produced by a committee. He suggested that those concerned might readily obtain the data needed for such a preliminary survey.

Put to a vote, the resolution as amended passed on a divided voice vote.

The meeting adjourned at approximately 5:10 p.m.

Clara N. Bush
Academic Secretary

Staff employment opportunities

Exempt

30788-AW (JCC:1980) UNIV MANAGER III: Asst. Dir-Energy Resource Mgmt Group; respon for the mgmt of sys, personnel & resources to deliver steam, chilled water & electrical service to the campus & med ctr/hospital reliably & efficiently; respon to manage Univ's energy conservation program; directs a professional/technical staff of engrs & others to accomplish the above; short & long range planning for the specified utility sys, incl formulation & implementation of all capital improvements, operational & maintenance respon, & fiscal/budgetary control of several major utility budgets; QUALIFICATIONS: requires a degree in mech or elec engrg & 10 or more yrs exp in production and/or distribution of steam, chilled water & electrical utilities; ability to dir energy conservation programs required; knowl of computer/micro-processor-based energy mgmt sys nec; must possess excel managerial & commu skills; a professional engrg registration & tech competence or exp w/ HVAC sys desired, but not nec.; C09; $2972-3642.

28219-LL (JCC:4076) PROGR/ANALYST GEN II: Programmer/Analyst for Data Bank Network (17 US & Canadian data banks) which use to TOD (Time-Oriented Database) Software Sys; write TOD programs in PL/I on IBM 3081 computer, incl editing, debugging, & documenting (using Script & Wylbur); maintain TOD schemas for data banks, check & transpose data, & maintain user-specified coding & compute routines; transfer & convert data fr other sys to TOD; trouble-shoot hardware & data commu problems; QUALIFICATIONS: BA w/ emphasis on applications programming & sys analysis skills or a combination of edu & exp in computer programming area; required to work flexible hrs (evenings and/or wkends); commu skills (oral & written) commensurate w/ facilitating instruc of users; ability to develop effective work methods & work thru projs to their completion.; C06; $1854-2312.

26732-LL (JCC:5042/5050) Sys Programmer II/III: Primary respon for develop't/mgmt of DEC VAX 11/780 & 2 VAX 11/750 computers w/ UNIX operating sys; specific tasks incl develop't/maintenance of VAX/UNIX kernel, Ethernet interface software, user subsys (e.g., text processors, languages, mail sys, networks), other sys software; analyzing sys performance, recommending configuration upgrades, working w/ users to solve special software/hardware interface problems; working w/ hardware maintenance people to isolate/correct sys failures, etc; QUALIFICATIONS: sys programming exp (level III if significant UNIX exp otherwise will be considered at II level); knowl of VAX UNIX & proficiency in Computer programming lang; good oral/written commu skills; DECsys 2060/TOPS20 sys programming exp; exp w/ Motorola MC68000-based workstations.; C06/C07; $1854-2312/2113-2724.

22958-LL (JCC:5588) LIFE SCI RES ASST I: Preparation & purification of proteins; column chromatography; high-pressure liquid chromatography; centrifugation; radioisotopes; absorption spectroscopy; enzyme kinetics; work on photoenzymology of vision, starting w/ purification of rod outer segments fr retinas; much of the research will deal w/ purification & characterization of proteins involved in amplification; detailed protocols for most of these studies have not been worked out; LSRA will design experimental plans based on genl guidelines provided by supvr; these plans will often have to be evaluated & modified on a daily basis in response to experimental results; QUALIFICATIONS: bkground in biochemistry essential; BS or equiv in biochemistry desired; at least 1 yr exp as a res assistant.; C05; $1670-2086.

26108-LL (JCC:5596) LIFE SCI RES ASST II: Perform research at cellular, biochemical & animal level analyzing the mechanisms which control immune response & immunologically relevant cellular interactions; generation & maintenance of long-term in vitro cultures of alloreactive murine T cell clones, receptor specificity & genetic restriction analysis utilizing mixed lymphocyte reactivities; reconstitution of immunodeficient animals; head res assistant for lab organization—selection & maintenance of capital eqpt, overseeing mouse colony status, supvn & training of tech personnel QUALFICATIONS: BS degree or equiv relevant lab exp; exp in doing innovative & independent res; capable of admin decision-making involving lab personnel on res projs.; C06; $1854-2312.

44332-TC (JCC:6214) CLIN CYTOTECHNOLOGIST: Microscopic evaluation of Gyn & non-Gyn smears for cellular abnormalities; occasional specimen preparation & staining; asst Radiology personnel in preparation of specimens for fine needle aspirations; work closely w/ Pathologists in the evaluation of cases; work w/ clinicians; QUALIFICATIONS: ASCP registered; 4-5 yrs exp preferred.; C06; $1854-2312.

30787-JB (JCC:8688) TRADES & CRAFTS SUPVR III: Supervisor-Water Systems; respon for day-to-day operations of domestic water, lake water & fire protection water mains sys, the sanitary sewer sys, the storm drainage sys & all Stanford lakes & wells throughout the campus & faculty/staff housing areas; supv a crew of 4; interface w/ O&M & Facilities Proj Engrg; able to respond in emergency situations & bring the sys back on line w/ a min of inconvenience to users; QUALIFICATIONS: 5 yrs of exp as a line mgr or operations supvr & a thorough working knowl of operation & maintenance of water & sewer sys; posses or obtain w/in 1 yr a Water Quality License; good working knowl of construction practices for underground pipeline sys is mandatory; knowl of civil engrg skills (surveying, hydrology, pipe design) are desirable.; S18; $2536-3182.



Why the orange lights? Electrician Greg Redondo installs a new roadway light as part of the conversion of outdoor lighting to high-pressure sodium. The conversions produce an orange light but also provide increased illumination at substantially lower energy cost. An additional incentive is a PG&E rebate program which underwrites part of the cost of conversion to more efficient light sources. The project is under the direction of Facilities and Services. Installation is by University electricians and by Cupertino Electric, electrical contractors. Comments and questions about tbe conversion are welcome and should be directed to the Utilities Department at 7-3765.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

31154-PM (JCC:1755) LIBRARY SPEC II: Performs duties in Copy Cataloging Unit of Catalog Dept; processes monographs online w/ MARC, LC & RLIN member copies; searches MARC, SUL main catalog, LC printed copy, Name Authorities, Online Authority File (LCR) & Monographic Series to verify name headings & series treatment; typ authority cards for personal, conference & coporate name headings; typ series cards using AACR II format; files in Main Catalog; inputs prepared copy into RLIN database, etc; QUALIFICATIONS: typ 40; prev lib ex, preferably in tech processing; atten to detail; demonstrated public serv skills; high rate of accuracy in typing; reading knowl of one non-English Western European lang; ability to lift heavy catalog trays (approx 15 lbs); prev exp w/ RLIN II or other automated sys desirable;; B12; $1310-1373.

31152-PM (JCC:1755) LIBRARY SPEC II: Performs duties in Gov't Documents Dept; processes federal gov't depository shipments; processes US federal collection monographs; instructs & trains student assistants; keeps statistics on work completed; other duties as assigned; QUALIFICATIONS: typ 40; prev lib exp, preferably w/ tech processing and/or federal documents; ability to commu effectively; ability to handle a high volume of complex mat'l; interest in or knowl of federal gov't agencies & their activities desirable; contact Bob Johnson, Green Library, Room 223 (497-3152).; B12; $1310-1373.

31153-PM (JCC:1755) LIBRARY SPEC II: Performs duties in Copy Cataloging Unit of Catalog Dept; processes monographs online w/ MARC, LC & RLIN member copies; searches MARC, SUL main catalog, LC printed copy, Name Authorities, Online Authority File (LCR) & Monographic Series to verify name headings & series treatment; typ authority cards for personal, conference & coporate name headings; typ series cards using AACR II format; files in Main Catalog; inputs prepared copy into RLIN database, etc; QUALIFICATIONS: typ 40; prev lib ex, preferably in 1 tech processing; atten to detail; demonstrated public serv skills; high rate of accuracy in typing; reading knowl of one non-English Western European lang; ability to lift heavy catalog trays (approx 15 lbs); prev exp w/ RLIN II or other automated sys desirable;; B12; $1310-1373.

39403-PM (JCC:2078) ADMIN ASST I (N): Admin Asst for Div of General Surgery; respon to Div Chief & Dept Business Mgr & respon for interpretation & application of admin policies & procedures to div faculty members & staff; organization & supvn of clerical staff of approx 4 persons; prep of grant & contract proposals; records maintenance; supplies requisitioning & expenditures; coord of Surgery residency program, incl intern selection/matching & housestaff rotation schedules, etc; QUALIFICATIONS: typ 65; knowl of Univ, Med Sch'l & Hospital policies & procedures & w/ Stanford acctg & payroll sys; supvry exp essential; organizational skills & commu skills, both verbal & written; contact: Rhandal Smart, Room A246, 497-6489.; B16; $1593-1671.

31946-BP (JCC:2210) ACCOUNTING ASST III: To accurately, efficiently & independently prepare for recording & acknowledgement all gifts & pledges made to Univ; review & batch work of employees still in a training period; prep, reconcile & maintain various logs, records & reports; prep agenda & 1 minutes for dept mtgs; share in assumption of supvry respon in supvr's absence; oversee daily workflow of various personnel w/in dept; overtime required; QUALIFICATIONS: strong acctg aptitude or bkground; familiarity w/ SU acctg procedures extremely helpful; supvry skills; good written & verbal commu skills; legible handwriting; exp in working w/ large volumes, constant pressure & frequent deadlines & interruptions; able to use 10-key adding machine; send appl/resume to Liz Trujillo, 301 Encina Hall.; B14; $1440-1514.

23947-PM (JCC:2454) OFFICE ASST II: 50%; fixed term 4/1/83-10/31/83; file xerox, track folders, bkup phones, disseminate miscellaneous mat'ls; typ applications, awards, notebooks & misc corresp; include data collection for year-end reports; QUALIFICATIONS: typ 50+; ability to deal w/ pressure, students, many diverse tasks punctuated w/ interruptions; contact: Nancy Smith, M127 Med Ctr, 497-6958.; B09; $565-595.

30676-BP (JCC:2462) OFFICE ASST III: Prov sec'l & clerical support for Row & Cluster Facilities Office; organize mat'ls & files effectively; accurate record keeping & atten to detail; prep corresp; answer & screen calls; prep & process personnel, payroll & other univ forms, etc; QUALIFICATIONS: typ 60; high sch'l diploma or equiv edu/exp; knowl of genl offc routine & use of offc machines; willingness to learn HP 3000 sys (computer terminal); accurate typing; effective public relations; exp in payroll procedures desirable; supvry exp desirable; understanding of basic household maintenance problems & ability to commu well w/ students & staff; send appl/resume to Heloisa Edwards, 672 Lomita Drive, 497-9266.; B11; $1246-1310.

29466-PM (JCC:2562) SECRETARY III: Prov full range of admin & sec'l support for Asst Dean-Dir, Corporate Relations, & Reg'l Dir, Corp Rel; answer questions about all Business Sch'l & Univ develop't programs & Stanford admin procedures; draft letters/reports; make appts & travel arrangements; maintain calendar; prep expense reports & monitor & reconcile budgets; typ finished corresp & reports w/ high level of accuracy; use offc machines, incl computers for word/data processing; supv part-time or other support personnel; QUALIFICATIONS: typ 60-65; sec'l exp w/ proven ability to handle respon independently; ability to establish prior & meet deadlines w/ min supvn; excel writing, editing & typing skills; knowl of word/data processing or willingness to learn; send appl/resume to Norma Sandy, GSB Rm. 24 or call 497-3012.; B14; $1440-1514.

30514-PM (JCC:2596) SECY II-SPEC: Full range of sec'l serv for Dir of Ctr. for Economic Policy Research & Chairman of Steering Committee; receives & screens visitors & phone calls; routes incoming mail & composes routine corresp; types or inputs in word processor tech papers containing math formulae, Greek symbols, statistical tables, graphs & figures; maintains & updates filing sys & mailing lists on word processor; assts w/ conference planning & arrangements; orders & maintains offc supplies; serv as petty cash custodian; QUALIFICATIONS: typ 60; 2-3 yrs of genl sec'l/clerical exp; excel spelling, grammar & punctuation; ability to interact effectively w/ diverse group of faculty, staff & public; knowl of uses & limitations of specialized typing eqpt; proficiency on word processor, preferably NBI; contact: Jean Barnes, CEPR, 329-1211.; B12; $1310-1373.

SLAC

94684-JM (JCC:1050) Electronic Engineer: Design, build & test one-of-kind electronic devices that are commercially available; assist physicists in setting up eqpt for experiments; analyze faults in eqpt; test & recommend commercial eqpt for purchase; QUALIFICATIONS: BSEE & extensive exp or equiv; must have capability to design analog & pulse counting eqpt; exp w/ ultra high impedance circuits & some basic knowl of radiation detection devices desirable; able to do hands-on work.; C99; $2500-3000. APPLY AT SLAC

94680-JM (JCC:2580/2596) Sec II-S or Trainee: 50%, afternoons; asst in providing all sec'l serv for group of 20; typ genl corresp, tech papers (physics & engrg) using mathematical symbols; maintain files & keep records; make appts; arrange travel; QUALIFICATIONS: typ 50; couple yrs offc exp; knowl of bookkeeping helpful; ability to learn use of computer terminals & operate test/computer or be willing to learn; knowl of punctuation, syntax & spelling; exp in tech typing using Greek & math symbols, or willingness to learn.; B00/B12; $623-655/655-687. APPLY AT SLAC

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, April 12, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Bargaining unit

42304-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; prep cell preparations; carry out experiments on membranes under supvn & analyze data; some exp w/ computer desirable; perform routine tissue culture work (maintenance of stock cultures); grow suspension cultures & batch cultures attached to growth surfaces; exposure of cells to precisely controlled environmental conditions and/or X-irradiation; asst investigators in a variety of experimental tech related to biochemistry & biophysics of cellular membranes; prep graphs & analyze data; participate in a variety of routine lab functions; QUALIFICATIONS: 2 yrs of relevant exp of described duties; 2 yrs of exp in Biochemistry or a related sci.; A24; $ 8.65/HR..

Jerzy Grotowski, Polish avant-garde dramatist, to speak here April 13

Jerzy Grotowski, a leading figure in avant-garde theater, will lecture on the "Theater of Sources" at 4:30 p.m. Wednesday, April 13, in the Little Theater.

His free public talk is sponsored by the Stanford Department of Drama and the University Lecture Fund.

Grotowski established the Polish Laboratory Theater in 1959 in Opole in southwest Poland with literary and drama critic Ludwik Flaszen. In 1965 the Laboratory Theater was moved to Wroclaw in western Poland, and Grotowski's direction focused on the great Polish and world classics such as Byron's *Cain*, Slowacki's *Kordian*, Shakespeare/Wyspianski's *Hamlet*, and Marlowe's *Dr. Faustus*.

He acquired world fame through his work by restricting his productions to a very small number of spectators, in which the space of the theater was recreated specifically for each play to give the audience the maximum illusion of being involved in the play and in direct physical contact with the actors. These productions toured many countries in the West and established Grotowski as one of the main influences in contemporary avant-garde theater.

Since 1976, Grotowski has been pursuing a transcultural experiment called the "Theater of Sources." Developed in various cultural contexts—in Poland, Italy, Haiti, Nigeria, Mexico, and Bengal—this work brings together people trained in different cultural and religious backgrounds. The work aims to discover the basic, technical, preritualistic elements in these traditions and to produce a practice that is simple rather than synthetic or eclectic.

Peter Brook, a leading British avant-garde director, world-famous for his productions of *Midsummer Night's Dream* and *Dream* and *King Lear*, says "since Stanislavski and Brecht no one has exerted a greater influence. He is known as a superb teacher of actors, and as a pioneer who has shaken all existing forms. . . .

"For Grotowski, theater is not a matter of art, it's not a matter of plays, productions, performances. . .theater is an ancient and basic instrument that helps us with one drama only, the drama of our existence, and helps us to find our way toward the source of what we are."

Grotowski has been named professor of theater arts at Columbia University, for the spring and summer 1983 and is presenting a series of lectures on his current field of research on the West Coast prior to beginning his residency there. He is the author of *Towards a Poor Theater* and was professor of drama at the University of Rome, Italy, before coming to the United States.

TMU displays Transart interiors

"Interiors of Transart Industries," a collection of fine-art, original limited editions, posters, and customed-designed prints will be on exhibit on April 7, 8, and 9, at 11-5 p.m., in the Tresidder lobby.

Miriam Cherry, an independent accessory designer, will represent Transart. Formerly of the Stanford campus ministry (1969-79), Cherry now directs an American Indian spiritual program, Spotted Eagle. She is also forming her own art business in connection with Transart.

Transart Industries, based in Atlanta, was founded in 1975 by William L. Crolley. The title "Entrepreneur of the Year" was conferred on him by Stanford Business School, Atlanta Chapter, in 1979.

Rental housing

HOUSING AVAILABLE

□ **June 20 to beg. Sept.:** Fully furn 4BR/3BA campus hse, lrg. study, FR, LR, pool, spa. $1500/mo. incl pool serv., grdnr. Call J. Evans, 493-3695.

□ **Beg. June (3 mos. to 1 yr.):** Fully furn. 2BR/2BA hse, W/D, DW, AEK, pool, grdnr. In Los Altos. $1000/mo. Call 968-7410.

□ **NOW:** Room in spacious 2BR Palo Alto apt. Piano, ktchn facil., W/D. $300/mo. Call Julie, 858-0887 (eve), (408) 252-1822 (day).

□ **Beg. May 1 to end Aug. (flex):** Fully furn. 1BR/1BA Pearce Mitchell adult condo, grnd flr. $675/mo. incl. util. (excpt phone). Call 857-9657.

□ **Early May to end July:** Dreamy studio cottage, fully furn., nr campus. Ideal for visit. female prof. or student. $200/mo. Call Ingrid, (415) 574-6151, 9 a.m. to 3 p.m.), 323-6201 (eves, wknds).

□ **June 14 to Sept. 15:** Old Palo Alto furn. 2BR/1½BA hse; secluded garden, bike to Stanf. $750/mo. incl. grdnr + water. Call 321-4614.

□ **July '83 to June 30, '84 (flex):** Berkeley hse, 5BR/3BA, LR, DR, library, frpl w/yr. of wood, piano, 1 acre, lush grdn, auto water, grdnr, sec. system. $1500/mo. Call (415) 483-8484 (day), (415) 548-1735, eve & wknd. Will also consider xchnge for Stanf. hse.

□ **Beg. Apr. 15:** Attrac., immac. 2BR/1BA hse, all appl., carpets, lge. fenced yd. Nr. Sunset mag., 3 mi. to campus. Nonsmokers, no pets, $800/mo. incl. water + dep. Call B. Lucas, 326-7195 (day), 321-0287 (eve).

□ **June, July, Aug.:** Portola Valley exec. 4BR/2BA fully furn. hse, nr. Stanf. Walk to tennis, pool. $2000/mo. Call (415) 326-5270, 9:30 to 3 p.m., M-F.

□ **Now:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **NOW:** Attrac. furn. hse, 2200 sq. ft., 4BR/2½BA, w/study, DR, FR, 3 car gar., patio. Incl. ktchn-ware, linens, 2 TV, grdnr. Yr. lease. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call (415) 965-1302 (eve).

□ **July 1 to Sept. 30:** Fully furn. 3BR/2BA hse, Crescent Pk, Palo Alto. Patio, grdn. Cul-de-sac. Walk to park, pool, tennis, schl. $1250/mo. Call 321-1142 or 497-4364 (day).

□ **June 15 to Aug. 15 (flex):** Fully furn. 1BR apt, piano, pool, sauna, sec. gate. 1 mi. to Stanf. Nonsmoker, female, no pets. Util. pd. $1100 for 2 mo. + refundable $200 sec. dep. Call Sheri at 858-0235.

□ **Beg. April 1:** Prof. woman or female student to SHARE furn. Sharon Hgts twnhse; patio, pool. Close to Stanf., #280. No pets, nonsmoker. $450/mo. Call 854-5893.

Low rent in xchng dog care. Nonsmokers. 857-9438, 497-2473.

□ **NOW:** Modern twnhse, Menlo Pk. 3BR/2½BA, AEK, air-cond, carpeted, lots of closet space. Walk to SRI, train, dwntwn. $1000/mo. Call 328-0606.

□ **June 7 to July 16:** Fully furn. 4BR/2BA hse in so. Palo Alto. Back yd. opens to Mitchell Pk. Call Bill, 497-1415 (day), or 494-1921 (eve).

□ **Sept. to June '84:** Sea & ski: S. of France nr. Cannes, Grasse. 16th c. 3BR stone hse, modern comforts. Call (415) 858-2590 or (415) 326-5521.

□ **July 27 to Aug. 31:** Spac. Victorian hse, 4BR/3BA, gourmet ktchn, DR, FR, lrg. yd. Nr. dwntwn P.A., Rinconada Pk, pool, tennis, libraries. Call (415) 328-6794 (eve).

□ **Sept. 1, '83 to July 1, '84:** On-campus furn. hse, 5BR/3BA, $1400/mo. or can be 3BR/2BA, $1200/mo. Nonsmokers, no pets; grdnr, water & cat incl. Call 326-3842 to 6 p.m.

□ **Late Aug. '83 to late March '84:** Campus hse, fully furn. 3BR/3½BA, guest/FR, DR, study. $1400/mo. incl. grdnr. Call 493-0777 or 497-1941 (day).

□ **Dec. 1, '83 to Aug. 1, '84:** Spacious 3BR/2BA hse; FR, new AEK, study, pool, spa; 1/3 acre in Los Altos. 20 min. to campus. $1400/mo. incl. grdnr. Call (415) 966-8242, eve.

□ **June 11 to Aug. 25, '83:** Fully furn. hse, 3BR/2BA, FR, baby grand, 2 car gar., no pets. $1500/mo., payable in advance + $200 clean. dep. Call Phoebe Rowles, 9415) 851-1940.

□ **Aug. 15, '83 to June 15, '84 (flex):** Fully furn hse in Palo Alto, 3BR/1½BA, den, gar., patio, W/D, quiet cul-de-sac, nr schls, park, com. ctr., auto sprinkl, grdnr, nonsmokers. Professor on sabbat. $1250/mo. Call 497-3095 (day), 493-8259 (eve).

□ **June 10 to Aug. 15, '83 (flex):** Beautiful, spacious fully furn. hse., 3BR/2½BA, all appliances. Santa Clara. $1000/mo. No pets. Call (408) 985-1866.

□ **Beg. April 1:** College Terr. Housemate(s) wanted to SHARE 3BR twnhse. 2BR avail. Frpl, DW, W/D, garden. $250/mo. + 1/3 util. Call Betsy 497-2569 (day), 857-0898.

□ **April 1 to Nov. 15, '83:** Lovely Swedish furn. contemp. hse. in Palo Alto. 3BR/2BA, FR, LR, all appl., many xtras. Lrg. cov. patio, lush grdn w/auto. sprinkl. Bike 2½ mi. to Stanf. No pets. $1000/mo. + dep. (incl. water/grdnr). Call 858-0880.

□ **April 15:** Fully furn studio in Palo Alto. Panoramic view of mtns. Sec. bldg., prkng, 1¾ mi. to campus. $485 + util. ($25) mo. Assum. lease. Sec. dep. req. Call 325-7009.

□ **Aug. to Dec. '83 (flex):** Fully furn. hse. 4BR/3BA AEK, W/D, 2 patios. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **May 30 thru June 24:** Campus hse, 2BR/2BA, pool. (1BR/BA sep. entr. & rentable), study, FR, 2 frpl.,

□ **Beg. April 1:** Partly furn. hse, 4BR/2BA, W/D, frig, stove, new carpets, drapes, recently refinished. No pets, nonsmokers. Lease or monthly. 3.5 mi. to Stanf., in Menlo Pk. $800/mo. Call H. Edwards, 497-9266 (day).

□ **July & Aug. '83:** Attrac. campus hse, 4BR/2½BA, study, fully furn. & equipped. Call 493-0997 (eve).

□ **NOW:** Rm. w/BA & priv. entr. on campus. $175/mo. or poss. exchange child care. Call 857-9298.

□ **June 18 to Aug. 28, '83:** Fully furn. campus hse, 4BR/2½BA, FR, DR, piano, lrg. fenced yd. Will EXCHANGE for London hse/flat or RENT for $1500/mo. incl. water, util, wkly clean, grdnr. Nonsmokers, no pets. Call 493-8874 (day or eve), (408) 279-5683 (day).

□ **June 14 thru Aug. 29, '83:** Fully furn. west Atherton estate. 5BR/3½BA, pool, maid serv., grdnr, util incl. No pets. $9750 total rent. Call 321-4100.

□ **Beg. Sept. 1:** Fully furn. 2BR/2BA Pearce Mitchell condo on campus. Yr-rnd pool, jacuzzi, rec. ctr. Adults, no pets. $850/mo. Call 497-1745 (day), 522-4917 (day).

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, park, com. ctr., prof. going on Sabbat. $1500/mo. Call 325-1709.

□ **July 1 to Nov. 1, '83:** Magnificent Crescent Park hse, fully furn. 4BR/3½BA, MBR suite w/sauna, jacuzzi, frpl. NO PETS. $1975/mo. Call (415) 326-7558, (415) 328-6112.

□ **Sept. to June '84:** Sea and ski. So. of France nr. Cannes, Grasse. 16th C. 3BR stone house, modern comforts. Call (415) 858-2590, (415) 326-5521.

HOUSING NEEDED

□ **Academic Year '83-'84:** Visit. scholar, wife, nonsmokers seek medium size hse on campus. Poss. xchnge for hse in Bethesda, Md., 10 min. to NIH. Call Gurley, 857-0169.

□ **Aug. '83 to June '84:** Father and son (13) seek furn. hse or apt. while on sabbatical at SLAC. Prefer bike dist. to Stanf. Call COLLECT (602) 323-8283 (eve).

□ **Beg. June 1, 2 wks to 4 mos:** Resp. prof. cpl., married, will care for pets, plants & your home all or portion of stated period. Call Jim (415) 393-8688 (day), (415) 346-8122 (eve).

□ **NOW:** Stanf. MBA, female, seeks unfurn. 1BR apt. or cottage. Resp., nonsmoker. Secure nghbrhd. Refs. avail. Call B.J., 497-4473 (day), (408) 257-1379 eve).

NOW: Mature, prof. cpl. seek 3BR/2BA unfurn. hse within 5 mi. of Stanf. Lease for 1 yr. Nonsmoker, no children, no pets. Call 854-7162 (eve).

□ **Mid-June to mid-Aug.:** SLAC summer visitor, spouse, 2 girls (10 & 6) seek 2-3BR hse. Flex. time period. Nonsmokers. Call Lela Sarnat, 854-6805 or Meadows, (513) 871-7756 COLLECT.

□ **July to Dec. '83:** Visit. scholars + 2 children (11 & 14) seek furn. 3BR hse on or nr. campus. Call Dr. S. Levine, 497-5781 (day).

□ **Nov. 15, '83 to June '84:** Furn. hse. or apt. for cpl. with 2-yr-old girl & grandmother. Nr. shops, parks, etc. desirable. Call Gwen Bowen, SLAC Hsng. Offc, 854-3300, x3111.

□ **July, August:** 17-yr-old French woman, half way thru Baccalaureate, seeks July, Aug. home stay w/American family. Interested in exchange from American student to follow her Calif. visit. Call Gwen Bowen, 854-3300, x3111 or 321-3803 (eve).

□ **Summer '83:** Harvard Law student wants to hsesit or sublet San Francisco apt. for summer. Call Kathy, (415) 329-1136, eves & wknds.

□ **July 1 for 1 to 4 mos:** Reliable Stanf. staff seeks hsesit for summer, returning from east. Nonsmoking cpl, no children, will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write: David Mark, M.D., 20 Walnut Hill Rd., Chestnut Hill, MA 02167.

□ **Mid-June to mid-July '83:** Careful tenant English woman seeks rent or hsesit apt. or hse on or nr. campus. Staying longer than planned. Call H. Himmelweit, 321-2052 (day) or 321-8979 (eve).

□ **Beg. Aug. 1:** New Stanf. prof. seeks long term rental, 2BR apt. or hse., Palo Alto, Stanf. area. Excellent refs. Call COLLECT (617) 492-5154.

□ **June 17 to Aug. 21, '83:** Institute for Humane Studies needs furn. apts for Visit. Profs. Stanf./Menlo area. Also need 2BR/2BA apt. nr. Stanf. May 7 to Aug. 1. Call Pat Dunbar, 323-2464, 7 a.m. to 3:30 p.m.

□ **Beg. anytime:** 1st yr. resident, xclnt refs, SU undergrad, seeks hsesit, short or long term. Call 564-2622 (eve) or 493-5000, pager 229, Marjorie Shuer.

□ **July 1 to Aug. 31, '83:** Swiss prof, wife, 4 yr. old son seek fully furn hse, 3 to 4BR/2BA, pool. Please send conditions, photos, to Prof. F. Weinberg, Freiestrasse 19, CH-8032, Zurich, Switzerland.

□ **Sept. '83 to Aug. '84:** Cpl on sabbat. lv. from NY w/15 yr. old son, nonsmokers, seek 2BR furn apt. nr Stanf. Call COLLECT (212) 598-7757. Will consider SWAP for 2BR village apt. in NYC.

□ **Beg. Aug. 21 for 3 to 6 wks:** Prof. cpl & daughter wish to hsesit in Stanf. area. Local refs. Write D.K. Nordstrom, c/o Oster, Gyllenstiernsgatan 18, 11526, Stockholm, Sweden, or call (415) 857-1641.

□ **April to July '83:** Female prof. on sabbat. at Stanf. seeks hsng. or hsesit. To $440/mo. Call COLLECT (213) 206-6121.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Endellion String Quartet

Endellion String Quartet to perform

The Endellion String Quartet, 1981 winner of the Young Concert Artists international auditions, will be presented by the Lively Arts at Stanford at 8 p.m., Wednesday, April 13, in Dinkelspiel Auditorium.

Quartet members are Andrew Watkinson and Louise Williams, violins; Garfield Jackson, viola; and David Waterman, cello.

Their program will consist of Haydn's "Quartet in C Major, Op. 74, No. 1"; Bartok's "Quartet No. 6"; and Beethoven's "Quartet in F minor, Op. 95, ('Serioso')."

Formed in 1979 in Britain, the Endellion Quartet, whose name means "near perfect" in Greek, had immediate success at the international string quartet competition in Portsmouth, England, where they placed second. Soon after they won first prize in the British string quartet competition in London.

The quartet has since made over 100 concert and festival appearances in Europe, including the "Schubertiade" in Rotterdam, and the Gstaad Festival, at the invitation of Yehudi Menuhin. They have also made numerous recordings for the BBC.

In the U.S., they have played at the 92nd Street Y in New York and at Washington's Kennedy Center. The Stanford concert is part of their first coast-to-coast tour.

Perspectives on modern Japan:

Colloquia planned

"Perspectives on Twentieth Century Japan," a series of colloquia focusing on various aspects of Japanese development, will begin with a lunchtime presentation April 8 in Room 241, Lou Henry Hoover. The remainder of the talks will be at 4:15 p.m. Thursdays, April 14, 21, 28, and May 5, 12 in Room 238, Lou Henry Hoover.

The talks are co-sponsored by the Center for East Asian Studies and the Stanford-Berkeley Joint East Asia Center.

Speakers and their topics are as follows:

April 8—Prof. Peter Duus, History Department, Stanford University, "Aspects of Meiji Imperialism";

April 14—Prof. Van Gessel, Oriental Languages Department, UC-Berkeley, "Japan's Lost Generation: Four Post-War Japanese Novelists";

April 21—Prof. Barbara Molony, History Department, University of Santa Clara, "Colonial Investment Decisions in the Pre-War Japanese Chemical Industry";

April 28—Prof. Koichiro Fujikura, Law Faculty, University of Tokyo, Visiting Professor, UC-Berkeley Law School, "Environmental Control—The Japanese Experience and Approach";

May 5—Dr. Ernest Notar, Post-doctorate Fellow, Center for Japanese Studies, UC-Berkeley, "Japan's Wartime Labor Policy: The Search for Method";

May 12—Col. David Holt, United States Air Force, "Japan's Defense: Remilitarization or Free Ride?"

Film series set

A free series of four Japanese Films will be shown on Thursday evenings in April and May under the sponsorship of the Center for East Asian Studies, the History Department, EAST House, and Okada House.

All showings will be held at 7:30 p.m. in Room 40, Building 420 (Jordan Hall, Psychology Department). The films are in Japanese with English subtitles:

April 7—*The Quiet Duel* (Shizuka Naru Ketto, 1949), directed by Akira Kurosawa, starring Toshiro Mifune and Takashi Shimura. A young doctor returns from war after contracting syphilis from a patient while operating on him; he decides not to marry.

April 21—*Sword of Doom* (Daibosatsu Toge, 1967), directed by Kihachi Okamoto, starring Tatsuya Nakadai and Toshiro Mifune. A professional political assassin is pitted against a high-minded instructor of swordsmanship.

May 5—*Twilight in Tokyo* (Tokyo Boshoku, 1957), directed by Yasuhiro Ozu, starring Setsuko Hara, Isuzu Yamada, Ineko Arima. Two women living with their father find out that their mother, whom they thought was dead, is alive and living with another man. This results in the dissolution of the family.

May 19—*Captive Island* (Shokei no Shima, 1966), directed by Masahiro Shinoka, starring Akira Nitta and Rentaro Mikuni. The son of an anarchist whose family was murdered sets out to get revenge but ends up burying his past.

I-Center hosts three Quebec programs

The culture and politics of the Canadian Province of Quebec will come to Stanford in three days of activities this month.

The presentations, which include lectures by a political scientist and a novelist, a film, and a dinner, are sponsored by Bechtel International Center, the Stanford Department of French and Italian, and the Delegation du Quebec a Los Angeles. All events are open to the public.

The program opens at 6:30 p.m. Sunday, April 10, with a dinner at Bechtel International Center. Tickets are $3.50.

This will be followed by a free "armchair travel series" slide show at Bechtel.

The film, "It Can't Be Winter, We Haven't Had Summer Yet," directed by Louise Carre, will be shown at Bechtel at 7:30 p.m. Monday, April 11, without charge. It is in French, with English subtitles. It tells the story of the discovery of independence by a woman, mother of eight, who is widowed at 57.

On Tuesday, April 12, as part of Bechtel's Tuesday Luncheon Series, Dr. Paul Painchaud, professor of political science at Laval University in Quebec, will talk on "Quebec Representation in the United States." He is director of research for the Quebec Center of International Relations. Luncheon tickets are $2.50.

This will be followed, at 4:15 p.m., by a conference in French conducted by Quebec novelist Louis Caron. The title of his talk is "Quebec, une partie' de l'Amerique." It will be given in Building 260, Room 268, Caron has been president of the Quebec Writers' Union, and also has written for television and radio.

Further information may be obtained by phoning the International Center at 497-1831.

Astronaut Schmitt to speak Monday

Harrison "Jack" Schmitt, the only geologist who has visited the moon, will speak at 4:15 Monday, April 11 in Room 320, Geology Corner, at Stanford University in the Harold W. Hoots visiting lectureship series.

His topic is "Science and Technology: Key to Freedom's Future."

As lunar module pilot for Apollo 17 and the only geologist in the space program, Schmitt landed on the moon in the Valley of Taurus-Littrow in 1972. As the last person to step on the moon, he named some of its craters in honor of famous explorers of geographical and intellectual frontiers. He has been elected to the International Space Hall of Fame.

Schmitt was born in Santa Rita, New Mexico, a town that subsequently disappeared and has been replaced by an open-pit copper mine. After he had earned a bachelors degree from California Institute of Technology, a Fulbright scholarship took him to the University of Oslo. As a teaching fellow at Harvard, he earned his doctorate in geology based on his work in Norway.

After spending a year with the U.S. Geological Survey, working on space-related projects in Flagstaff, Arizona, Schmitt joined the NASA Apollo program in 1965. Before piloting a lunar module, he learned to fly both jets and helicopters. After his space flight, Schmitt organized and directed NASA's various energy programs.

The Harold W. Hoots visiting lectureship is an annual, winter-quarter series sponsored by the School of Earth Sciences and featuring scientists from industry, the professions, and government. Hoots received his Ph.D. from Stanford in 1925. Until his death in 1979 he was known throughout the petroleum industry as a finder of oil fields. He and his wife, Thelma, endowed the lecture series in 1962.

Architectural critic Allan Temko to talk

Architectural critic Allan Temko will speak on "The Past 25 Years of Architecture in San Francisco: Construction and Destruction" at 8:15 p.m. Wednesday, April 13, in Annenberg Auditorium.

Temko is a visiting faculty member in Stanford's Art Department. His lecture is one of a series sponsored by the Committee for Art at Stanford. The speakers will explore the changing face of San Francisco architecture and its impact on the spirit of the city and the lives of its citizens. Others in the series will be Sally Woodbridge and Gray Brechin.

Stanford staffers meet

Stanford Staffers' Tuesday, April 12, lunch meeting will be held at the Center for Computer Research in Music and Acoustics (CCRMA) for a presentation on "Computers and Music: A Rich Interaction" by Prof. John Chowning, director of the Center.

Reservations must be made by April 8 by calling Jean McMillan, ext. 7-2680. Carpooling will be available.

CROW lectures focus on female sexuality

Current scholarship on female sexuality will be discussed in six Jing Lyman lectures sponsored by the Center for Research on Women at Stanford during spring quarter.

The free public talks, all scheduled for noon Wednesday in Terman Auditorium, are as follows:

April 13—"The Cultural Construction of Gender and Sexuality," Sherry Ortner, associate professor of anthropology, University of Michigan;

April 27—"Female Sexuality in the Nineteenth Century," Estelle Freedman, assistant professor of history, Stanford;

May 4—"Sexuality and Gender in Children's Daily Worlds," Zella Luria, professor of psychology, Tufts University, and Barrie Thorne, associate professor of sociology, Michigan State University;

May 11—"Lesbian Sexuality," Martha Kirkpatrick, psychiatrist, Los Angeles;

May 18—"Cross-Cultural Sexual Attitudes and Behavior: Hispanics and Anglos," Maria Luisa Flaherty, clinical social worker, San Jose;

May 25—"What is Female Sexuality," Marilyn Safir, senior lecturer in psychology, University of Haifa."

In addition, CROW will sponsor a symposium on "Sex, Pornography, and Violence" at 8 p.m. Monday, April 18, in the Tresidder Memorial Union Lounge.

Speakers will include Susan Griffin, author of *Women and Nature* and *Pornography and Silence*, and Deirdre English, editor of *Mother Jones* magazine.

Zella Luria, Tufts University professor of psychology and visiting scholar at CROW, will moderate.



Festival celebrants Martin Jackson as a vegetation figure with Suzette Craft and Jim Cadena as the Queen and King in the Stanford Drama Department/Black Performing Arts production of *Maskarade*.

Sylvia Wynter's *Maskarade*, a musical, opens at Nitery Theater on Thursday

Maskarade, a musical production jointly presented by the Stanford Drama Department and the Committee on Black Performing Arts, opens in the Nitery Theater at 8 p.m. Thursday, April 7.

Directed by Sandra L. Richards, performances continue Friday and Saturday, April 8-9, and Thursday through Saturday, April 14-16. Two matinees have been scheduled at 3 p.m. Sunday, April 10 and April 17.

Written by Sylvia Wynter, professor of African and Afro-American Studies and Spanish and Portuguese at Stanford, *Maskarade* is set in Jamaica in the 1840s. The play concerns a young couple from the country who come to the Kingston capital seeking work and fame via the Jonkunnu festival.

Jonkonnu is a celebration similar to the Mardi Gras of New Orleans or the Carnival of Trinidad and Brazil for it represents a time of year when society can renew its vitality through outrageous satire, fantastic costuming, and general merrymaking.

Jamaican festival

Historically, the Jamaican festival was an annual event held during the Christmas holidays. At that time slaves were allowed, or even encouraged, to participate in elaborate street parades. Often free people of color as well as some whites joined in the festivities.

In researching the Jonkonnu festival, Wynter found that many other folk cultures had devised similar occasions at which the passing of the old year was celebrated, as young people danced in hopes of ushering in a prosperous new season. Thus, the African slaves easily mixed their West African harvesting rituals with the folk practices of Scottish and Irish indentured servants and overseers.

Characteristic of the celebration was a central dancing figure known as the "Jonkonnu" or "John Canoe" who dressed in a wild, outlandish costume which included a large plantation house worn on his head. Accompanying him in dancing to the pulsating rhythms of African conga drums and British marching music were fully masked vegetation figures, clowns, kings, queens, and set girls wearing costumes reminiscent of the extravagant attire of the French Sun King, Louis XIV's court.

For this production music director Michael Britt has arranged typical Jonkonnu music as well as written more contemporary calypso and ska tunes. Fred Simpson has added drum rhythms which enhance the tremendous vitality of the dance pieces choreographed by Halifu Osumare.

Costume designer Douglas A. Russell has utilized copies of lithographs from the 1840s to design costumes which capture the exaggeration and swirl of color typical of Jonkonnu. Set and lighting designer David McLain has worked to suggest the interplay of African and European cultures which lies at the heart of the Caribbean identity.

The Drama Department and the Committee on Black Performing Arts will also host two auxiliary events in conjunction with the production of *Maskarade*. At 4:30 p.m. Wednesday, April 6, Prof. Errol Hill of the Dartmouth Drama Department, author of *The Trinidad Carnival: Mandate for a National Theatre*, and playwright Wynter will discuss the social significance of the Jonkonnu festival complex as part of the Drama Forum Lecture Series. The free public lecture will be held in the Forum Room of Meyer Library. Wynter also will answer audience comments following the April 10 matinee performance.

Tickets for *Maskarade* are on sale at the Tresidder Ticket Office and major Bay Area Agencies and by telephone (415) 497-4317 with major credit cards. General admission is $4; students and seniors $2. Because seating in the Nitery theater is limited, early purchase is advised.

Savoyards plan gala performance

Celebrating its 10 years of producing Gilbert and Sullivan opera repertoire, the Stanford Savoyards will present the 1983 Gala at 8 p.m. Friday through Sunday, April 15, 16, 17 and 22, 23, 24, in Dinkelspiel Auditorium.

The production features the one-act *Trial by Jury* in its entirety, along with the highly charged confrontation between *Islanthe's* Fairies and Fairy Queen and the entire splendid British House of Peeres; a fearsome encounter with the larger-than-life *Mikado* and his trembling minions, and highlights from performances of *Princess Ida*, *Patience*, and *Ruddigore* (in which Stanford dignitaries appear as ghostly ancestors of the murgatroyd family).

The Savoyards, named for the famed London Savoy Theatre in which Gilbert and Sullivan staged their many popular works, was founded in 1973 by four Stanford students; Armand Gilinsky, a freshman with professional G&S stage experience, Dan Robinson and Joe Haletky, both Stanford University music majors, and Mason Blacher of the School of Education as producer.

The Pirates of Penzance was chosen as the first show because of its popularity and because the costumes could be improvised easily; most of the cast provided their own.

From this humble start an exciting, quality production company was formed, which soon became self-supporting.

Ticket prices have been kept to a modest fee and proceeds are used to fund the next production, usually two per year.

Cast directors and musicians changed constantly over the years. In the early years SLAC librarian Rita Taylor, assisted by her husband Prof. Richard Taylor of SLAC, assumed the role of producer, maintaining continuity and standards in the company.

The Spring Gala provides a focus for a Savoyards reunion. Many devotees and performers are expected to return for the show and alumnae festivities.

The present cast is filled with seasoned favorites from previous casts.

Kevin Skiles and Jacqueline Dickey, recent real-life newlyweds, portray the plaintiff and defendant in *Trial by Jury*'s breach-of-promise suit.

Ella Asbury Harsin, veteran of nine productions (among them the first) returns as the Fairy Queen.

Rick Dehmel delights audiences with his roles as a love-struck judge and the imperial Mikado.

Dan Allen as Sir Roderick Murgatroyd entices from their picture frames the ancestors, as portrayed by faculty members Art Bryson, John Breakwell (also in the Mikado excerpt), Merton Bernfield, John Ellis, Kenneth Arrow, Lincoln Moses, and Barry Hennings.

Also returning from previous productions are Patty Wolfe, Armand Gilinsky, Liz Barbour, Ben Brink, Ed Finestone and many others.

Appearing in every show since 1977, Assistant Provost Keith Smith appears as a juror and in full peer regalia displaying supercilious disdain.

Behind the scenes and in the pit, Dan Powers directs music, assisted by Lita Libaek; Christopher Hahn directs staging and Wendell Cole designs sets. Bonnie Senko provides the grand assortment of costumes.

Tickets are available at Stanford's Tresidder Box Office (497-4317).



Ella Asbury Harsin

Suk Trio plays Sunday in Dink

Czechoslovakia's leading chamber music ensemble, the Suk Trio will perform at 2:30 p.m. Sunday, April 10, in Dinkelspiel Auditorium at Stanford.

The trio will perform Haydn's "Trio in D Major"; Schumann's "Trio in D minor"; and Dvorak's "Trio in F minor, Opus 65."

The members of the Suk Trio are violinist Josef Suk, cellist Josef Chuchro, and pianist Josef Hala. Each is a soloist in his own right and performs with orchestras and in recital.

The trio was founded by violinist Suk (Antonin Dvorak's great grandson) in 1952 and quickly established a reputation for being a major chamber ensemble. The trio has performed throughout Austria, Belgium, Egypt, Germany, Poland, Romania, the Soviet Union, South Africa, Yugoslavia, the Netherlands, Switzerland, France, England, and Australia.

Suk has won France's highest honor for his recording—the Gran Prix Du Disques—six times.

Chuchro, currently a professor at the Prague Conservatory, has received high critical acclaim for his concerts and was awarded the title "Soloist of the Czech Philharmony" by the Minister of Culture in 1961.

Hala, a professor at the Prague Music Academy, began playing at concerts in 1951 and has appeared as soloist with many orchestras. He has recorded extensively.

His recordings of Bohuslav Martinu's piano compositions have received critical acclaim.

Chuan to discuss Chinese music

A re-creation of music from ancient China will be the topic of a slide and tape recording presentation by Victoria Chuan at 7:30 p.m., Tuesday, April 12, at Bechtel International Center.

A set of 64 bronze bells from 433 B.C. was excavated in the Hubei province in 1978. These rare bells were inscribed with musical notations, which made possible a transcription of the notations re-creating the music of that era. Victoria Chuan, taught at the Shanghai Conservatory of Music for 28 years and is now affiliated with the Department of music, UC-Santa Barbara.

Presidential candidates, past and present, to speak in Law Forum series

Five former presidential candidates and one current candidate will be visiting the Stanford Law School during the next several weeks in a Stanford Law Forum Series entitled *Visions of America in the 1980s: The 1984 Presidential Elections*.

All meetings are open to the public without charge.

The series will include Sen. Gary Hart (co-sponsored with the Zale Lecture series at Stanford), Democratic candidate for president; former Democratic presidential candidates Eugene McCarthy and Morris Udall; former Republican presidential candidates Harold Stassen and Pete McCloskey; and former Libertarian Party candidate for president, Ed Clark.

The series will also include Stanford Profs. Seymour Martin Lipset, Richard Brody, Martin Carnoy, Steven Chaffee, and John Manley. Other potential and former candidates, party leaders, and commentators may also speak as part of the series, though dates for their visits are not yet confirmed.

The calendar for the series is as follows:

Friday, April 8—Prof. Seymour Martin Lipset, Hoover Institute—7 p.m., Branner Hall lounge;

Tuesday, April 12—Congressman Pete McCloskey—7 p.m., Branner Hall lounge;

Thursday, April 14—Gov. Harold Stassen—6:30 p.m., Branner Hall lounge;

Thursday, April 21—Ed Clark—7 p.m., Branner Hall lounge;

Friday, April 22—Sen. Gary Hart—7:30 p.m., Kresge Auditorium, Law School;

Monday, May 16—Sen. Eugene McCarthy—7 p.m., Bishop Auditorium, Graduate School of Business;

Friday, May 20—Congressman Morris Udall—4 p.m., Kresge Auditorium, Law School.

The series was developed by David Lempert, who is studying toward joint degrees in the Law School and Business School, and is president of the Law Forum. The purpose, according to Lempert, is to "present differing views on the directions America should be taking in the 1980s and to comment on the issues and intrigue which will surround the 1984 presidential contest."

The first two events include gatherings of professors to discuss political polls, the influence of the media, changing voter attitudes, and the issues which can and should be raised in the election.

Pete McCloskey, a former Republican candidate for president in 1972 and a challenger to then-incumbent President Nixon, is currently teaching a course at Stanford. He is an alumnus of the Law School.

Gov. Harold Stassen was the youngest governor ever elected in Minnesota, and is the only living signer from the U.S. delegation of the U.N. Charter. He is a former member of the National Security Council and a former Republican presidential candidate in 1948, 1952, 1956, 1960, 1964, 1968, 1972, 1976, and 1980.

Ed Clark ran for president in 1980 on the Libertarian party slate.

Sen. Eugene McCarthy, a Democrat from Minnesota, challenged Lyndon Johnson for the Democratic presidential nomination in 1968. In 1976, he ran as a third party candidate for the Committee for a Constitutional presidency.

Arizona Congressman Morris Udall sought the Democratic Party nomination in 1976.

Slide show, report on 'Nicaragua Today'

"Nicaragua Today" is the title of a presentation featuring a slide show and special report from the border by Olga Talamante, at 3 p.m. Saturday, April 9, at Stanford's El Centro Chicano (Old Union basement lounge).

The slides were made when a delegation from the Institute for the Study of Labor and Economic Crisis made a recent trip to Nicaragua at the invitation of the Nicaraguan Cultural Workers Association.

The group talked to government officials, trade union leaders, intellectuals, health workers, military officers, rank and file soldiers, the editor of an independent newspaper, and many people in the markets and on the streets.

The event is open to the public.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., April 6, to cover the week of Mon., April 18 through Sun., April 24.

CORRECTION

FRIDAY, APRIL 8

Law School Lecture: "Thinking About the Bill of Rights." with Sir Zelman Cowen, former governor-general of Australia and present provost of Oriel College, Oxford. 3 p.m. Room 290, Crown Quad. Free.

MONDAY, APRIL 11

Medieval Studies/ Religious Studies Lecture: "The Medieval University—The Influence of Academic Structure on Ideas," by William J. Courtenay, Univ. of Wisconsin. 4:15 p.m. History Corner, Room 205.

Numerical Analysis Seminar: "The Use of Nonrational Functions to Represent Steep Fronts," with John Greenstadt, IBM Scientific Center. 4:15 p.m. Room 380c, Math Corner.

Biological Science Seminar: "Yeast DNA Replication—A Model Eukaryotic System," by Dr. Judith Campbell, Dept. of Chemistry, Cal Tech, Pasadena, CA. 4:15 p.m. Room T-175 Herrin Hall.

Bechtel International Center Film: "Ca Peut Pas Etre L'Hiver on N'a Meme Pas Eu D'ete" (It Can't be Winter We Haven't Had Summer Yet). Full length color documentary in French produced by Quebecoise Louis Carre, formerly with the National Film Board of Canada. 7:30 p.m. I-Center.

TUESDAY, APRIL 12

Learning About Racism Lunch Series: "Dynamics of Racism/Sexism," by Cecilia Burciaga, Assistant Provost at Stanford. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Room.

Bechtel International Center Lecture: "Representation of Quebec Interests in the United States," by Dr. Paul Painchaud, Laval U. Quebec. Noon. Bechtel International Center. $2.50 for lunch, brown baggers free.

Tower Talks Presents: "Issues in Immigration Law Enforcement," by Ted Harwood, National Fellow. 3:30 p.m. Lou Henry Hoover Room, Hoover Tower. Free.

Genetics and Medical Microbiology Seminar: "The Genes Mediating Transportation and Tetracycline Resistance in Transposon Tn1721". 4 p.m. M112, Medical Center.

Applied Physics Colloquium: "Collective Properties of Neural Net—A Spin Glass-Like Model," by Prof. John J. Hopfield, Crellin Lab, Caltech. 4:15 p.m. Applied Physics 200.

WEDNESDAY, APRIL 13

CROW Lecture: "The Cultural Construction of Gender and Sexuality," by Sherry Ortner, Associate Professor of Anthropology, University of Michigan. Noon. Terman Aud.

Chemical Engineering Colloquim: "Ultra-Compact Bioreactors," by Professor Channing R. Robertson, Stanford. 4:15 p.m. Chemical Eng. Conference Room.

Men's Volleyball: vs. UC- Santa Barbara. 7:30 p.m. Maples Pavilion.

Lively Arts at Stanford: The Endellion String Quartet. 8 p.m. Dinkelspiel Aud. $7.50, $6.50.

THURSDAY, APRIL 14

Theology & Natural Sciences Lunch Series: "Cosmology," by Robert Wagoner, Professor of Physics at Stanford. Bring a bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

Men's Tennis: vs. UC-Santa Barbara. 1:30 p.m. Varsity Courts.

Stanford Magnetic Resonance Laboratory Seminar: "NMR Studies of the Filamentous Bacteriophages," by Dr. Stanley J. Opella, Dept. of Chemistry, Univ. of Pennsylvania. 4 p.m. Chemistry Gazebo.

Industrial Engineering Symposium: "Reliability of Offshore Structures," with Dr. Robert Bea , PMB Systems. 4:15 p.m. Terman Aud.

Berkeley at Stanford Lecture Series: "Japan's Lost Generation: Four Post-War Novelists," by Prof. Van Gessel, U.C. Berkeley. 4:15 p.m. Lou Henry Hoover Bldg., Polich Room.

Solid Mechanics Seminar: "Industrial Research in the Engineering Sciences," by Dr. Franz Geyling, Member of the Research Staff, Bell Laboratories. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Commensurate-Incommensurate Transitions in Novel Systems," by Dennis McWhan, Bell Laboratories, Murray Hill, N.J. 4:15 p.m. Applied Physics 200.

Bechtel International Center: "Glasgow," and "Dublin". 7:30 p.m. I-Center. .75 donation requested.

Spirit of Japan Lecture Series: "Search for the Spirit of Japan" by Prof. John La Plante. 8:15 p.m. Annenberg Aud. Comm. for Art members & students:$5, non members $5.

FRIDAY, APRIL 15

The Stanford U.S. Intercollegiate Tournament: Men's Golf. All Day. Stanford Golf Course.

Men's Tennis: vs. USC. Noon. Varsity Courts.

Baseball: vs. UCLA. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

Nuclear Film Program Series: "Kennedy vs. Khrushchev". 7 p.m. & 9:30 p.m. History Corner, Room 2. Free.

STARTS: Sharon Gwatkin with Bob Valdez (acoustic guitar and vocals). 9-12 p.m. Coffee House. Free.

SATURDAY, APRIL 16

The Stanford U.S. Intercollegiate Tournament: Men's Golf. All Day. Stanford Golf Course.

Baseball: vs. UCLA. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Men's Tennis: vs. UCLA. 12 & 6:30 p.m. Maples Pavilion.

STARTS: Raskidus Roots Connection, the Bay Area's most popular reggae band. 8 p.m. Tresidder Lounge. $5.

Music Dept. Concert: Baroque Chamber Music. Judith Linsenberg, recorder; Jonathan Salzedo, harpsicohord; Patricia Halverson, viola da gamba. Works by Bach, Handel, & Corelli. 8 p.m. Annenberg Aud. Free.

SUNDAY, APRIL 17

Women's Tennis: vs. UCLA. Noon. Varsity Courts.

Baseball: vs. UCLA. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

University Public Worship: with preacher Kenneth Carstens, South Africa Defence and Aid, Cambridge, Mass. 11 a.m. Memorial Church.

STARTS and the Department of Community Medicine: George Gibson, piano and Rita Kingsley, cello. 2 p.m. Tresidder Upper Lounge. $3 general, $2 students.

The Lively Arts at Stanford: Phillip Glass. 4/17/83. Memorial Aud. $10.50, $9.50, $8.50, $7.50.

ASSU Sunday Flicks: "Reds". 8 p.m. Memorial Aud. $1.50.

Music Dept. Concert: Chamber Music by S. Dan Cher, violin; Shelley Whitehouse, flute; Camilla Passarelli, harp; Linda Shwetz, viola; Randy Walker, cello. 8 p.m. Tresidder Lounge. Free.

EXHIBITS

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

The Prints of William Nicholson. Tues.- Friday 10 a.m.- 5 p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

Photos from the Barrio Assistance Program by Phillip Baca. Coffee House Gallery. April 1 - April 30.

R. Raffaello Dvorak, works on rice paper. I-Center. April 1 - April 30.

Photographs of Africa by Sylvie Cohen. Tresidder Upper Lobby, 2nd. Floor. April 1 - April 30.

Etchings by Seymour Haden. Faculty Club. April 3 May 3.

"China's Elders," PRC senior citizens photographed by members of the Stanford Community. Faculty Club. April 3 - May 3.

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

CAMPUS REPORT

Volume XV, Number 28 | A publication for Stanford University faculty & staff | April 13, 1983



Instructional TV brings $3 million revenue

A quiet revolution in professorial productivity has taken place in the Stanford School of Engineering.

Through the Stanford Instructional Television Network (SITN), graduate students in 100 Bay Area companies and research organizations receive regular classroom instruction, including audio feedback to their teachers.

At 30 sites beyond broadcast range, unedited videotapes, regular classroom materials, and local tutors are used in a program of tutored video instruction (TVI) with results comparable to those for students in a regular classroom.

Recently cited as a national model for lifelong cooperative education by MIT, SITN is the largest and most successful part-time graduate program in the U.S. providing quality education toward an advanced degree via television.

Gross revenues of $3 million annually are plowed back into additional support for faculty teaching.

Under the energetic, entrepreneurial leadership of Mary Lou Allen, SITN currently is exploring the interest of Stanford faculty outside engineering and science in televising their teaching. It recently submitted a proposal to the California Council on the Humanities for a series of half-hour symposia by Profs. Rene Girard, John Freccero and others.

Prof. Henry Riggs, Silicon Valley entrepreneur and industrial engineer, recently named Stanford's vice president for development, is one of Allen's enthusiasts.

Faced with overflow classes of 500 or more for his introductory course in accounting, Riggs already uses TV to broadcast his lectures to satellite rooms on campus.

Prior to acceptance of his new administrative job, effective July 15, he was planning to videotape a live series of 20 lectures on this subject. Besides being broadcast, these could be supplemented by 10 lectures in person by junior faculty or teaching fellows, providing more personalized instruction for students on campus in groups of 40 or so.

At present, SITN provides more than 170 Stanford courses per year in all fields of engineering and in computer science, math, applied physics, and statistics. It broadcasts 12 hours a day on four channels allocated by the Federal Communications Commission.

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Nine faculty to receive Guggenheims

Nine Stanford faculty members have received Guggenheim fellowships for 1983, the John Simon Guggenheim Memorial Foundation has announced.

The Stanford recipients, their departments and field of study are:

Eve M. Clark, associate professor of linguistics, acquisitional principles in word formation;

John Felstiner, professor of English, Holocaust poetry and the process of translating Paul Celan;

William J. Goode, professor of sociology and senior fellow at the Hoover Institution, patterns of power;

Anne K. Mellor, the Howard and Jesse Watkins University professor of English and feminist studies, a critical study of Mary Shelley's life and writings;

David D. Perkins, professor of biology, the genetics and biology of *Neurospora*;

Frank E. Stockdale, professor of medicine and biology, studies in protein characterization;

Elizabeth Closs Traugott, professor of linguistics and English, semantic change;

Lenore J. Weitzman, social science senior research associate in sociology, the social and legal effects of divorce law reforms in England, Sweden, and the U.S.; and

Arthur P. Wolf, professor of anthropology, childhood association, sexual attraction, and the incest taboo.

Since 1974, 66 other Stanford faculty members have received Guggenheims.

Stanford's total for 1983 is exceeded only by Cornell, with 11, and tied by Harvard. Berkeley faculty received 8

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Artificial Intelligence: Think about machines that *think*

BY JOEL SHURKIN

A physician in the Oncology Clinic at the Stanford Medical Center sits at a computer terminal at a nursing station. His patient is a 22-year-old woman with unclassifiable Hodgkins Disease.

In a matter of moments the computer and the physician are having a conversation. Generally, the computer asks the questions, the physician answers. When the computer has the information it seeks, it advises the doctor on when the woman should return to the clinic and what her treatment should be.

The protocol for treating most cancers is incredibly complex, involving combinations of dozens of drugs, most of which are toxic. Picking the correct drugs, weighing the inherent risks, is a complicated, and for the patient, a dangerous thing to do.

The computer program being used in the oncology center is called ONCOCIN, an example of artificial intelligence research in which a computer is being programmed to think like an expert. Yes, think!

The program is what is classified as an expert system, and the techniques used to build it fall under the rubric of heuristics. Much of the work in building expert systems is being done at Stanford, and the granddaddy of all expert systems was invented here.

"(Expert systems) emulate in particular fields what human experts do," says Thomas Rindfleisch, director of Stanford's Heuristic Programming Project (HPP). "They are characterized by trying to capture the knowledge an expert has, and are able to reproduce a seasoned solution in that domain that is understandable to another practitioner in that domain."

Expert systems and knowledge engineering are important for reasons that extend outside laboratories where they are being tested—by designing these computer programs, AI researchers are learning more about how the human mind thinks.

Writing these programs is among the most complex creative problems ever (some programs run 50,000 lines and are several inches thick when printed out), in part because the researchers are still dealing with first principles. They are confronted, like the ancient Greek philosophers, with the basic problem of epistemology.

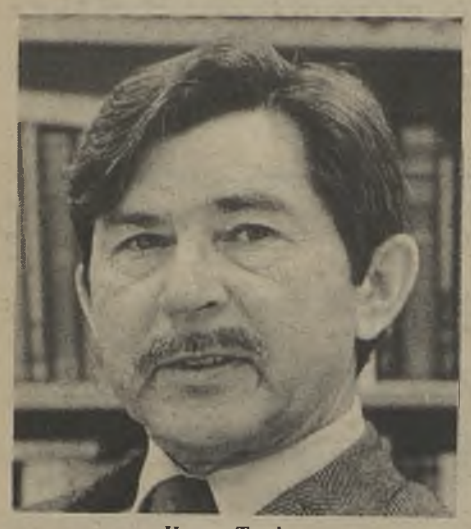
"It seems complex because we haven't been able to distill the general principles yet," says HPP's Bruce Buchanan. "That's one of the things we're trying to do in this laboratory."

Key to understanding how expert systems works is the word "heuristics," which stems from the Greek heuriskein, to invent or discover. When computer scientists use it they mean proceeding on empirical lines, using rules of thumb to find plausible answers to problems.

"Judgmental knowledge" is the definition preferred by Rindfleisch. "There are things that are not justified in terms of some underlying theory or mathematics. There are rules for pièces of expertise

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People



Henry Taube



Jerry Nightingale

Henry Taube, Theodor Hansch

Professors Henry Taube, of the Chemistry Department, and Theodor Hansch, of the Physics Department, are the recipients of two of the eight 1983 awards honoring outstanding contributions to science from the National Academy of Sciences.

Taube will receive a $5,000 prize for "pioneering work on inorganic reaction mechanisms, specifically his discovery of 'inner- and outer-sphere' mechanisms of electron transfer reactions." His work has profoundly influenced studies in biochemistry and organic chemistry. The Academy's award in chemical sciences was established in 1978 by the Occidental Petroleum Corp. in honor of Armand Hammer.

Hansch will share the $5,000 Cyrus B. Comstock prize with Peter Sorokin of IBM for "their pioneering efforts in the development of dye lasers and of dye laser spectroscopy." The Comstock Fund was established in 1907 and is awarded every five years in recognition of an important discovery or investigation in electricity, magnetism, or radiant energy.

The awards will be presented by the National Academy of Sciences at an awards ceremony on April 25, during the 120th annual meeting of the National Academy.

Jerry Nightingale

The Stanford Controller's Office has appointed Jerry Nightingale assistant controller for expenditure control and reporting.

Nightingale will be responsible for interpretation, application, and development of University policy in the Processing, Billing, and Reporting (PBR), Auxiliary Accounting, Student Aid and Receivables sections of the Controller's Office.

A Certified Public Accountant, Nightingale has worked as an auditor and senior management consultant with the CPA firms of Price Waterhouse and Coopers & Lybrand. He was also corporate accounting manager for Michigan Consolidated, a Fortune 500 energy organization in Detroit.

Nightingale was most recently in business for himself providing accounting services to small business owners.

Nightingale was educated at Lawrence University, Appleton, Wisconsin, where he received a BA with honors in mathematics, and at the University of Michigan, where he earned an MBA in operations research and management science.

Sarah E. Thomas

Sarah E. Thomas, manager of library coordination for Research Libraries Group (RLG) has been selected to participate in the 1983-84 Academic Library Management Intern Program by the Council on Library Resources, Inc.

Thomas is one of five chosen from a group of 90 applicants.

She will work with David Bishop, director of libraries at the University of Georgia.

Thomas graduated from Smith College and received her Ph.D. in German literature from Johns Hopkins University. Her master's degree in library science is from Simmons College.

Frances Allocca, Eric Larkin, Susanne Lee, Mark Shaw

Tresidder's Corner Pocket has a new group of student managers—juniors Frances Allocca, Eric Larkin, Susanne Lee, and Mark Shaw.

The new group will retain the popular pizza and frozen yogurt, but they'll also be responsible for further menu development, pricing, hiring student employees, marketing, public relations, and the day-to-day operation.

Last year's managers—Sally Boyce, Dan Burgess, and Steve Francis—saw the Corner Pocket experience a 1,500 percent growth in sales after they took over.

Alessa M. Johns James D. Herbert,

Two 1981 Stanford graduates are among the first 96 recipients of Mellon fellowships for graduate study in the humanities, the Woodrow Wilson National Fellowship Foundation has announced.

They are James D. Herbert, an undergraduate major in art history, and Alessa M. Johns, who majored in English.

Each will receive a $7,000 stipend plus tuition and standard fees during their first year of graduate school. The awards may be renewed for a second year, with a one-third contribution toward tuition and fees from the host institution. Those who excel in their studies and are in a position to complete their Ph.D. within five years also will be eligible for support during their final dissertation-writing year.

Created by the Andrew D. Mellon Foundation in response to rising concern over the increasing number of talented youth with scholarly potential who are not now entering academic careers, the new program is expected to involve 500 to 600 recipients at a total cost of $25 million over the next five to 10 years.

Administered by the Woodrow Wilson National Fellowship Foundation, the program is directed by Robert F. Goheen, former president of Princeton University. Prof. Albert M. Camarillo of the Stanford Department of History is one of seven faculty on a national committee assisting Goheen.

Faculty members at nearly 700 campuses nominated 2,267 candidates the first year. Of these, 1,374 completed applications to seven regional committees. About 200 were interviewed. Cornell had the most recipients (7), followed by Yale (5), Berkeley, Bryn Mawr, and Harvard (3 each).

The first recipients included 47 women and 49 men.

Corey Goodman gets Waterman Award

A 31-year-old developmental neurobiologist, whose research interests center on the embryonic development of the nervous system, has been selected to receive the National Science Foundation's eighth annual Alan T. Waterman Award.

Associate Prof. Corey S. Goodman of the Department of Biological Sciences at Stanford University was selected from among 153 nominees to receive the award which includes a medal and an NSF grant of up to $50,000 for three years of research and advanced studies. According to the NSF his studies are having a profound impact on broad areas of biological science.

The award, authorized by Congress in 1975, will be presented at a dinner ceremony on May 18, at the Department of State. Leading scientists and educators, members of Congress and other Washington officials concerned with the national research effort are expected to attend.

The award is given annually to an outstanding young research worker in any field of science, mathematics, or engineering. A recipient must not be over 35 years of age or not more than five years beyond receipt of the Ph.D. degree, and must be an American citizen who has exhibited quality, innovation, and potential for discovery.

Goodman has made a major contribution to the field of developmental neurobiology by defining for the first time the sequence of developmental changes that occur during the life of an identified population of nerve cells. More recently he has extended this work to study the way in which growing nerve fibers identify the course they should take and the targets with which they should form connections. The achievement of being able to watch neural development on a cell by cell basis, coupled with the possibility of doing physiological experiments on the same cells, has significant promise for understanding the development of the nervous system.

The award is named in honor of the first director of the NSF, who died in 1967.

Goodman, a native of Chicago, received his bachelor of science degree with honors and distinction in biology from Stanford in 1972. He received his Ph.D. from UC-Berkeley and did post-doctoral work at UC-San Diego.

Committee on Research open meeting

The annual open meeting of the Committee on Research will be held 3-5 p.m. Wednesday, April 20, in the Bechtel International Center assembly room. All members of the University community are invited to attend.

The meeting will be devoted primarily to a discussion of disposition of intellectual property rights arising from research activities. A proposed revision to the copyright policy will be presented.

Guggenheims...

continued from page 1

fellowships, while Northwestern, Pennsylvania, and Yale tied with 7 each.

The fellowships were awarded to 292 scholars, artists, and scientists from 102 institutions. They were chosen on the basis of "demonstrated accomplishment in the past and strong promise for the future."

The Committee of Selection included Nobel Laureate Kenneth Arrow, professor of economics and operations research at Stanford.

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Japanese firms give workers broad span of control, delegate more responsibility to get high performance—Wheelwright

BY DONALD STOKES

Many firms in Silicon Valley will be in peril unless they change their view of manufacturing.

Whole American industries, including machine tools—key to U.S. heavy industrial production—face domination by foreign competitors.

One consolation: The U.S. is streets ahead of the Russians in all areas of production.

These views are among those of Steven C. Wheelwright, associate professor of manufacturing policy at Stanford's Graduate School of Business.

Wheelwright is one of the very small band of researchers nationwide that has for the last decade been probing the reasons for America's decline in manufacturing competitiveness with foreign rivals.

Until recently the voice of this band has been a lone one urging that American production methods need to be improved drastically. The U.S. has neglected many of the lessons it taught the rest of the world.

"One of the reasons why many American industries are in trouble is that they think about productivity incorrectly," said Wheelwright in a Stanford interview.

"Such pioneers of productivity research as Frederick Taylor back in the 1920s thought in terms of monitoring workers on the production lines with stopwatches. They thought of production in purely mechanical terms, of time and motion studies.

"They did not think about the problem-solving side. They tended to dissect individual jobs, with the result that the span of each job became narrower and narrower. You see the results on the auto assembly lines in Detroit today.

"There was little thinking about how integration of jobs was important. More recently, people have begun to wonder whether it might not be better to restructure the jobs, so that instead of being so concerned with the manual effort of the workers, we ought to concentrate their attention on problems, so that they work with the same set of issues as management.

"I think that much of what the Japanese have done in the manufacturing area is just that. They tend to have much broader spans of control; they delegate more problems and responsibilities to the work force; and they tend to involve workers much more in contributing to the overall improvement of the organization.

Wheelwright has spent considerable time in Japan studying industrial organizations on the spot. Among them were Sanyo, Toshiba (the General Electric of Japan), Matsushita-Reiki, and Daihatsu, an auto manufacturer affiliated with Toyota.

Asked if the Japanese were better motivated than Americans, Wheelwright said: "No, I don't think they are better workers. However, they are more homogeneous and more willing to submit themselves to the group. They are less individualistic.

"One of the strong contrasts between Japanese and American workers is how they are viewed by managements. Some very interesting studies have been made recently about factories that are run by Japanese firms. What they have found is that you can run manufacturing operations in the United States the same way they run them in Japan and get as good or better results.

"Sony, for example, carries out a worldwide rating of quality and efficiency among its farflung operations. Up till about two years ago their number one plant in the world was in San Diego. Then they built a new plant in the southeastern part of the U.S., and it surpassed the San Diego operation.

"No, I don't think there is any evidence that Japanese workers are superior."

How about quality of management?

"There are several important differences in the areas where management focuses its attention. First, a continuing emphasis on improvement is vital. In order to make that happen, you need to have some long-term direction setting. It is shortsighted to focus just on this month's shipments, or this quarter's profits.

"Second, manufacturing processes must be established that make sure we do it right the first time.



Steven Wheelwright

"Management should also take advantage of the human resources it has at every level of the organization. That means you want people to really stretch in terms of problem-solving, and to focus their efforts on improving.

"Some companies in the U.S. have pursued these aims. They are talked about as firms offering attractive environments. These include Hewlett-Packard, IBM, Eastman Kodak, Rolm, and several others. There is no reason why all American firms cannot do this.

"One of the pressing problems for firms such as General Motors is 'How quickly can we adopt the new ideas? We are now behind $1,500 in cost on every car we make as compared with the Japanese, so clearly we don't have much time.'

"This Fremont setup between General Motors and Toyota is a fascinating one to me, for it has brought into public focus the problems I research all the time. The public is asking: 'Why is GM, a firm three times the size of Toyota, signing up with Toyota to run this plant?' The reaction of the chairman of Ford was 'Can't GM figure out how to make a small car?'

The answer is that GM doesn't have time to figure it out. It is not just a question of getting out a new car, from blueprint to production, they also have to change their method of production. GM believes that the new partnership is a good way to get new methods of production firmly imbedded in their organization.

"There is nothing wrong with the capabilities of American managers. They need to focus more on areas where the greatest opportunities and leverage lie.

"One potential difficulty is that we may start to do better, and then, as that removes some of the

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Stolz profoundly influenced child development research

BY MILLICENT DILLON

Second of two articles



Lois Stolz

Coming to Stanford in mid-life, after a career in administration, Lois Meek Stolz had a profound influence on the Psychology Department and its students and ultimately on national attitudes toward child development research and public policy.

"When she came in 1946, she brought with her a number of remarkable talents," says emeritus professor of psychology, Robert R. Sears. "She had a strong intellectual capability and a good background in social sciences, along with a strong interest in caring for children and the practical grasp of what could be done for them.

"Usually people have the mentality of hard scientists or they have the desire to change the world through social programs. She had both," notes Sears, an eminent child psychologist and former president of the American Psychological Association.

"The first research she did here on the relationship between war veterans and their children had a powerful effect nationally."

"It demonstrated how practical problems could be affected using good methods of research. In that work she provided substantial information to other returning veterans about these men and their difficulties with their children and how they tried to solve the problem.

"We now have state and national programs on the application of social science research to public policy. Lois Stolz was one of the forerunners. Her work helped to create this link."

Stolz's own story of her coming to Stanford is, typically low key.

"It was a fluke. Roger Barker (professor of psychology at Stanford) and I had met at the Institute in Chicago (the forerunner of the Center for Advanced Study in the Behavioral Sciences). In May of 1946 he came to Oakland to ask me if I'd teach one of his summer classes so that he could be released.

"I thought about that long trip to Palo Alto and I just kept shaking my head—no, no, no. And all the time I was doing this my husband was nodding his head—yes.

"Roger," I said, "I couldn't make that trip."

"I think we could do that for Roger," my husband said.

"*We*," she says, laughing.

"So that's how I came to Stanford, and it was a very lucky thing for me."

Stolz taught several summer sessions and in early 1947 Prof. Ernest R. Hilgard, then head of the Psychology Department, now emeritus, asked her to teach a course in child psychology during the winter term. " 'You'll really like it here, Lois,' he told me, 'we have very small classes. At the most 40 students.' "

Stolz agreed to teach the course and arrived early the first morning for the nine o'clock class—with 50 copies of the syllabus. "The class was held in Classroom 1 at Cubberley. When I started to go in, I saw that the front hall of Cubberley was packed with students. I had to work my way through to get to Classroom 1, and I found that absolutely jammed."

It was not the small class Hilgard had promised her. In fact, 300 students had showed up.

"I've always thought there were two reasons that they came," she says. "First, it was listed as child psychology and that sounded like an easy course. But the other thing was that many of the students were veterans who had returned and were having a helluva time with their children."

Once the class moved into Cubberley Auditorium, things settled down, says Stolz. She refused to teach the class from the platform—"I'm just not that kind of person"—so she had a table set up level with the first row and talked from there.

"In the first few classes I did notice that there were a number of men students at the back reading the *Daily*. I stood that for about two meetings and then I announced, 'There is a very nice lounge on the top floor of this building and if you want to read the paper, I suggest you'd be much more comfortable up there. And if you're not, I certainly would be.' " The newspapers disappeared.

According to Sears, up until the time Stolz came to Stanford, child psychology as a field here was only a minor division of clinical psychology. "The only important work in child psychology that had been done here was in the field of intelligence and achievement tests.

"But when Lois Stolz came, she changed that. She developed an entire program in child psychology."

Stolz maintains that the creation of the nursery school at Stanford did a great deal to enable her to expand the child development program, through providing facilities and children for observation, experimentation, and research.

"In the spring of 1947 a number of veterans and their families were living in Stanford Village, the Dibble Hospital during the war. Some of these men went to the acting president of the University, Al Eurich, and said they wanted a nursery school set up for their children.

"Eurich didn't know what a nursery school was, so he called Education Dean Bartky. He didn't know what a nursery school was either, so he called Hilgard. Hilgard said, 'I don't know anything about nursery schools, but I know somebody who does.'

"So they came over to me and we conferred and the nursery school was opened that next September.

"We did have two problems. The first was that we didn't have any money, and it takes money to run a nursery school. Jack Hilgard got the Peninsula Volunteers to raise money for us.

"The second thing was that we didn't have a nursery school teacher. But finally we did get one—and a very good one. It happened accidentally. That's the way most good things seemed to happen then at Stanford.

"The National Association for Nursery Education just happened to be having a conference in San Francisco, so Dean Bartky got one of his graduate students to go up there and see if he could find us a teacher. He came back with Lucy Mallet. When I saw her, I nearly passed out. She was such a beautiful young woman, I was convinced this student had just gone up there and picked the best looking woman he could find.

"Well, I was wrong. She was a fine teacher. Of course, we didn't manage to keep her very long. I used to send my students over to the nursery school to observe and one of them, Hawley Smith, went over there, but he didn't look at the children. He looked at Lucy. So at the end of the second year, Lucy left."

Luckily through another chance happening, Stolz found Edith Dowley, who had worked with her at the Kaiser Child Care Centers. Dowley, became

continued on next page

Stolz/ continued from page 4

head of the Nursery School and later a professor of psychology.

Many students, particularly veterans, came to talk to Stolz during her office hours. "They would come to see me about their observations but I soon saw that they stayed to talk about their own children.

"I had to extend my office hours to three days a week. It took so much time and energy I said to Jack Hilgard, 'You should have somebody doing research on this problem.' And he said 'Why don't you?'

"I said I didn't have the time. Then he told me that the National Institute of Mental Health had just gotten some funds and we might be able to get a grant."

Stolz applied for funds for research on war veterans and their children, and received the first grant that was ever given to Stanford by NIMH.

Assisted by ten graduate students, Stolz made a comprehensive study of the effect of postwar adjustments of fathers to first children born while the fathers were at war.

"Our research showed how the necessity for these men to adjust to the roles of breadwinner, husband, and father simultaneously—rather than in sequence—affected their behavior and attitudes.

"Coming from a military culture, the fathers used techniques of discipline and punishment to control their children, to require behavior often beyond their level of development.

"In consequence, the firstborns developed more problems, especially in eating and elimination, than children in the control families. They had more difficulties in relations with peers and with authority figures, including their fathers.

"They were in conflict about expressing agression; but they showed high levels of anxiety," says Stolz.

Out of this research new courses were developed. "For example, I had to have a seminar for graduate students on research methods. Among those who came were Alberta Engvall Siegel (now professor of psychology in the department of psychiatry and behavioral sciences of Stanford Medical School) and Harold Stevenson (professor of psychology at Michigan, currently at the Center for Advanced Study in the Behavioral Sciences.)

"Let me tell you how Harold got into child psychology. He was a graduate student specializing in the psychology of learning, doing some experiments with rats. That's how everybody used to learn about learning—with rats. I called them the 'rat boys.'

"Harold came to see me because he wanted to do the same experiment with children that he'd been doing with rats. He asked if he could work with some children in the nursery school.

"I said, 'Harold, do you know anything about children?"

"He said, 'No.

"I said, 'Well go down to the nursery school and watch some of them. And when you have made friends with a child and gotten him or her to go into a room with you—that's difficult to get a child to go into a room with a stranger—then you can try your experiment.'

"So he made friends with a few children and he took them into a room and he had them try the puzzle, the same material he'd used with the rats. And of course they finished it just like that.

" 'You know, they're a lot smarter than rats,' he said. He was so surprised and overcome that he began taking courses in child development."

Stevenson went on to become one of the leading child psychologists in America. (He and Siegel are now editing a volume on *Child Development Research and Social Policy* for the Society for Research in Child Development, of which he is a past president.)

And, in fact, the list of Stolz's former students is a roster of the most important professionals in the field of child development today. These students include, besides Siegel and Stevenson: William Langdon Faust at Pomona, Margaret Siler Faust at Scripps, Clara Baldwin at Rochester, Dr. Jerome Oremland at Children's Hospital and UC Medical Center in San Francisco, Dr. William Menninger and Constance Menninger of the Menninger Foundation in Kansas, Freya Owen of the Palo Alto school system, Lynette Friedrich-Cofer at Chapel Hill, North Carolina, Laverne Johnson at the Naval Research Center in San Diego, Eleanor Willemsen at the University of Santa Clara, Bob Gowin at Cornell, William Calvert at New Jersey State College, Nancy Guy Stevenson at Children's Hospital, Stanford, and Charles Nakamura at UCLA. Influenced by Stolz, they have all been involved in the application of scientific research to public policy.



Coming here was 'a fluke... a very lucky thing for me'



Recalling her student days with Stolz, Siegel says that one of the many important things she learned as Stolz's assistant was respect for the work of students. "For example, Lois would never write on a student's paper, when she was grading it. 'It's not respectful to do that,' she'd say. 'It's more courteous to write your comments on a separate sheet.' "

"She was also, at the same time, a person of great independence of mind. There's a story—I don't know if she told you—about the time that she and John Dewey went to vote in New York City. Dewey was an emeritus professor at Columbia, Lois a graduate student.

"They had registered Socialist but the officials at the polling place, controlled by the Democratic Party, refused to let them vote. 'Do you have a high school diploma you can show us?' Stolz and Dewey were asked. 'No,' they said, 'they didn't have one with them.' 'Well, you'll have to take a literacy test,' they were told. So the two of them took the subway downtown to an old public school building and they sat in a third grade classroom—you know the kind with inkwells in the desks—and they took their literacy tests. Then they went back uptown with the evidence that they'd passed, and they voted Socialist."

While Stolz was teaching at Stanford half-time (some half-time, she says), she was also producing a series of research studies. In 1951 appeared *Somatic Development of Adolescent Boys;* coauthored with Herbert R. Stolz, in 1954 *Father Relations of War-Born Children*; in 1957 "A Study of Maternal Employment and Children," published by the *Journal of Child Development;* in 1967, written with others at Stanford, *Influences on Parent Behavior;* and in 1971, with Freya Owen, a monograph on learning disorders in children.

She has received a number of national awards and in 1950 was an important participant in the White House Conference on Children.

During her years at Stanford Stolz was also active in a number of other projects. She initiated a study at the Children's Convalescent Home (now the Children's Hospital) of individual children, bringing together data from observations by students, therapy sessions by a graduate student and interviews with parents. These case studies were presented at Staff Rounds for discussion and planning.

Stolz was also chairman of a committee set up in the spring of 1957 to study the needs of women at Stanford. The Committee issued a report on "Motivation and Education of Stanford Women students" in 1958, which was expanded by Siegel for the Study of Education at Stanford in 1967.

Ten years ago at a reception given by the Association of Women Students, Stolz was asked to give an address on "Women in Stanford History."

In typical fashion she tackled the subject of endowed professorships, pointing out how women had contributed to the university, but noting that not one endowed professorship up to that time had been named for a woman professor and that not one woman professor had as yet been appointed to a named professorship.

She challenged the women present to do something to change the situation. "Well, they must have," she says, "because beginning with the professorship named for Helen C. Farnsworth, late of the Food Research Institute, and the one for Margery Bailey, late of English, the spell has been broken.

"In addition, Stanford now has several women on the faculty who hold endowed chairs, starting with Ruth T. Gross in Pediatrics."

When Lois Stolz first started commuting to Stanford from Oakland in 1946, she was one of the relatively few drivers who would cross the Dumbarton Bridge regularly.

The ticket taker on duty used to call out as she drove up, "Here comes the Professor."

So she was and still is.

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that have come out of experience, abstracted from lots of examples, and are judgmental kind of decision rules that experts have."

Example: the game of chess.

The number of possible sequences of moves in the game of chess probably exceeds the number of molecules in the universe, almost infinite. It is not possible to produce a computer program that could play chess by considering every possible sequence of moves.

Even early in the game, some potential moves would require a decade for a computer to analyze.

Clearly, something must be done to chess-playing programs to make them work realistically. This is accomplished in two ways: one, the program only considers the possibilities one or two moves in advance but considers them all (brute force); or two, the computer is made to consider only the most likely moves and to weigh their potential. In the latter case, the computer is exercising judgment. In many ways, experts play that way.

That is heuristics.

The first expert system program—and in some ways the most successful—was born at Stanford in 1965, out of a conversation between Nobel laureate Joshua Lederberg, then at the Stanford Medical Center, and Edward Feigenbaum, a former student of Herbert Simon at Carnegie, who had just joined Stanford's Computer Sciences Department by way of Berkeley.

"I began to get interested in a set of problems that it seemed to me hadn't been well explored by earlier AI work," Feigenbaum said, "namely tasks of empirical induction. Given a set of data elements, construct the hypothesis that purports to explain that set of data. And I viewed empirical induction as first of all being prototypic of scientific behavior."

"So I was interested in modeling what scientists were doing in their problem-solving, particularly in what they were doing in empirical-induction activity."

The computer is made to consider only the most likely moves and to weigh their potential... the computer is exercising judgment... That is heuristics.



Edward Shortliffe, who has helped marry the 'intelligent' computer to medical practice.

Lederberg suggested that a good field for Feigenbaum to explore in this matter might be analysis of organic compounds using mass spectroscopy. Lederberg, who had to learn computer science to help, was co-investigator.

The program was eventually called DENDRAL.

The task seemed enormous. The researchers had to devise ways of formulating hypotheses from the spectrography data. This involved looking at the data and trying to find which possible molecules would fit the parameters set by the data.

They then had to figure out a way of representing this logic in symbology a computer could understand.

Finally, the main task: picking the brains of the experts to determine what they know and how they make judgments.

Heuristics was the only model that could conceivably work; like the chess players, the computer could not simply try every possible molecule to see which fitted the bill. To give the heuristics a chance, Feigenbaum, Lederberg, and the chemists working on the project had to provide a huge knowledge base in the computer.

"In the early stages," Rindfleisch says, "in the very early systems that we built, (we) sort of hand-crafted the knowledge about the field in the sense of feeding into this program the factual knowledge, and trying to get out of the experts this judgmental knowledge that they used to solve problems."

DENDRAL was successful; eventually expanding to include data from analytical devices such as nuclear magnetic resonance (NMR), and reaching a level of expertise so high, the program has been licensed by Stanford and is sold to chemical laboratories around the country.

The success of DENDRAL stimulated the researchers to try again with something even more complex.

DENDRAL was what is called a rule-based program.

"Rule based is very little more than talking about associations as conditional rules," explains Buchanan, who came to Stanford just as DENDRAL was starting. "If you know A, B, and C, then you know D. We believed that this methodology is sufficiently strong to support expert-level inferences in another domain."

The domain was medicine.

Other attempts had been made to create "thinking" programs in medicine.

"Diagnostic programs that used statistical theory could be shown to reach excellent decisions, and yet somehow or other, never seemed to address the clinically important issues, or were never usable in a clinical setting," said Edward Shortliffe, assistant professor of medicine.

Shortliffe, who came to Stanford in the early '70s, is a rare species: a physician with a passion for computers, who had found the hoary halls of Harvard less hospitable to a student with such an odd outlook than Stanford. He was just what the AI people were looking for.

"AI seemed to present a different set of tools, for both modeling the cognitive issues that were involved, and for dealing with the issues of the human interface with the physician," he said.



Dr. Robert Carlson consults ONCOCYN, an AI program, with patient Jon Aguinaga

Shortliffe recognized that one problem AI would have to confront, would be that interface—convincing physicians the program could add something to their practice. In part, he felt, that was because the programs were written by computer people, not medical people. He proposed to be the first physician to try his hand at this problem as his Ph.D. dissertation.

"I was very fortunate to have Stan Cohen as my adviser. He believed in medical computing as encompassing a great deal of important basic medical issues, and he supported my application." (Cohen, of course, later became famous as co-developer of the techniques for recombinant DNA.)

After two conventional years at Stanford Medical School, Shortliffe went to work full-time on his project, which would be known as MYCIN.

Shortliffe picked infectious disease so he could borrow the expertise of Cohen and another physician, Stanton Axline. The program would

continued on next page

attempt to give advice to physicians on antibiotic selection.

"We just sat around, went over patient cases, and tried to understand how Axline and Cohen would decide how to treat those cases," Shortliffe says. "We'd stop them—those of us who knew a little medicine and were more computer scientists—interrupt and ask, 'Well, why do you say that?'

"We met once a week for an hour and a half. Axline would bring in an interesting case, a chart, and Cohen would ask him questions.

"Axline would answer them from the chart," Shortliffe says. "Cohen would be problem-solving, trying to figure out what he'd do for that case, and we would try to understand why Cohen was asking the questions he was.

We'd write down the rules that he'd told us, that Axline would help refine with him, and in the interim week, I'd put those rules into this developing and emerging computer system.

"And then we'd all have a good laugh the following week when I showed them how the computer had tried to handle the same case. What you did, in this way, interactively, you'd discover the great simplifications they made in explaining the rules the previous week, where they'd go wrong if you tried to run it on any kind of different case," Shortliffe explains.

Getting the rules seemed to be a lot easier than the fine tuning. "Plus, every once in a while, some issues would arise which caused a major change in the underlying structure of this developing program," Shortliffe said. "Suddenly it wasn't just a matter of writing the rules; you had to key in program changes."

The researchers believed it was crucial not only that the program operate at an expert level, but that it be able to explain to the user exactly how it came to the conclusions it did. This would be the only way they could convince users (here physicians) to trust what they were seeing.

"There were some new wrinkles here," Buchanan says. "Among other things, it became very clear that the inferences were not logical inferences so much as plausible inferences. We associated some degree of strength with the inferences, just as you need to associate some degree of strength with the evidence.

"If a person has a fever then he has a small chance of having a cold, a small chance of having lots of other things," Buchanan says. "If a person has a fever and a running nose then you can believe that he has a cold a little more strongly.

"But we were talking not just about probabilities, about something closer to strength of inference, or importance, because we were trying to codify in this new measure of strength, the risk involved in leaving the conclusions unattended.

"There's very little risk in failing to notice that a person has a cold, but big risk in failing to notice that a person has meningitis.

When you're gathering the evidence," Buchanan says, "you don't always believe your eyes if you're a physician and the test results come in ambiguously. And so, there's some degree of strength associated with each of the things that you say you know. The premises of each of those plausible rules is itself a plausible conclusion."

MYCIN proved the point: the heuristic approach could work in medical AI program. But what was to prove more important, MYCIN could be made to work in other AI fields both within and outside medicine.

The logical portion of the program, what came to be called the Inference Engine, seemed to be relatively universal. By extracting it and simply plugging in new data from a different domain than infectious diseases, the MYCIN program could work just as it did in its original form.

The Inference Engine became known as Essential

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Bruce G. Buchanan, a leader in artificial intelligence work

The researchers believed it was crucial not only that the program operate at an expert level, but that it be able to explain to the user exactly how it came to the conclusions it did. This would be the only way they could convince users (here physicians) to trust what they were seeing.

Glossary

The following is a glossary of terms commonly used in artificial intelligence.

Algorithm—A method of solving problems mathematically; in computers problems within programs are solved by the creation of algorithms, usually a repetitive calculation.

Cognition—The process of knowing or perceiving, acquiring an idea.

DENDRAL—The first expert system, developed at Stanford by Joshua Lederberg and Edward Feigenbaum, used to help chemists identify organic molecules.

Domain—Field of knowledge. Organic chemistry is a domain as is infectious disease. The domain provides the knowledge base for AI programs.

ELIZA—An AI experimental program in which a computer emulates a conversation by a psychiatrist. It has been known to fool subjects, and has been credited by a few researchers with having therapeutic benefit. The program was developed by Joseph Weizenbaum of MIT and Kenneth Colby, a psychiatrist then at Stanford.

EMYCIN—The heuristic part of the MYCIN program, the Inference Engine which made MYCIN work.

Expert Systems—Computer software that attempts to make computers think like humans.

Heuristics—Judgment, in computers the method by which AI programs attempt to make intelligent guesses in order to emulate human thought.

Inference Engine—The part of an AI program containing the heuristics.

Knowledge base—The information drawn upon by AI programs, usually consisting of two parts, fact and heuristics.

LISP—The standard computer language used in AI, differs from other languages in that the instructions and the data are treated similarly. Developed by John McCarthy, now at Stanford.

MYCIN—An AI program that experimentally attempts to emulate the thought processes of an expert in infectious diseases, the best known of the medical AI programs.

Neuron—The basic unit of the nervous system, consisting of the nerve cell and its processes. Early in the history of AI it was assumed that digital computers could be designed to reproduce neuron processes, a theory now out of fashion.

Paradigm—Model.

Robotics—The study of the use of mechanical devices to reproduce human activity, now considered a subset of AI. Usually the robots are devices that can imitate only a few human functions.

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MYCIN, or EMYCIN.

"EMYCIN is the program which knows how to use rules if there are some," Shortliffe says. "It knows how to explain those rules; it knows how to translate them into English; it knows how to select the rules for a given program, but it doesn't know anything about infectious diseases per se."

Implicit in the existence of the Inference Engine is the notion that perhaps human reasoning itself is structural in nature and can be duplicated by a machine.

"The inferences, looked at modularly speaking, were not terribly complicated," Buchanan says. "It's a question of either chaining backward from what you want to what you need to know; or chaining forward from data available to conclusions that you can make.

"Those are pretty straightforward kinds of inferences. It can get to be more complicated, it's just that for many problems those simple models suffice."

He points out that in some fields, say legal research, the model would not work. Human thought is very complicated.

The AI researchers, therefore, can be said to be exploring human reasoning from the bottom up—from putting together reasoning programs to see what the first principles may be. They are leaving the basic epistemology, reasoning from the top down, to scientists-philosophers like John McCarthy, who named the field back in the 1950s.

Shortliffe and the other MYCIN researchers obtained a National Institutes of Health grant to continue their work. The efforts in medical AI became SUMEX-AIM (Stanford University Medical Experimental Computer for Artificial Intelligence in Medicine), a nation-wide network plugged into a Digital Equipment PDP-10 at the medical center.

Other researchers around the country run their own AI programs on the SUMEX system on a time-shared basis.

MYCIN is not actually being used in a clinical setting—that was not its purpose—but it was tested out at Stanford and operated at an efficiency equal to that of a human expert. The MYCIN framework was used to develop another program, called PUFF, written in the commom computer language BASIC, which interprets pulmonary function tests on a small computer at the Pacific Medical Center in San Francisco.

A program called INTERNIST is running in a hospital in Pittsburgh. ONCOCIN is getting a test run at Stanford.

The researchers, however, had one more experiment they wanted to do on MYCIN: turn it into a tutoring program for medical students. The program had limitations, but in AI those limitations sometimes tell you more than your successes.

A medical student needs to know more than the expert about how decisions are reached, Buchanan points out.

"The practitioner, from years of experience, doesn't think things out from first principle any more. He remembers those distilled associations, compiled associations, because he was once able to learn from first principles, but then he throws (them) away. The teacher of medicine needs to know more."

The HPP lab is working on that problem now.

HPP is confronting other problems as well. For instance, how do you pick the knowledge from the expert's brain? Buchanan is working on this.

"The answer used to be that a programmer would become very knowledgeable about one domain and construct a program himself," Buchanan says. "That's just not workable."

Another way of doing it was the way Shortliffe obtained his knowledge from Cohen and Axline—sit them down with a programmer who extracts the information from the expert in a way usable to the computer.

"That activity came to be called knowledge engineering because it's the activity of transferring knowledge from a specialist for the program to use; it's an engineering activity. . . .

"That's the best method of the 1980s, but it is very time-consuming." The basic knowledge base can be obtained in about a week, Buchanan says, but it could then take several man-years to refine it and keep it from doing stupid things.

Buchanan is working on a new concept called "knowledge acquisition." Why not have the expert talk directly to the computer? Why not have a program that would enable the computer to build the knowledge base without the intercession of a programmer?

"That's not totally far-fetched," he says, "and we're pressing on those activities to see how far we can push them."

Another way of educating the computer is to have it learn from its mistakes.

At the moment the computer has to rely on the human to catch the mistakes and make the appropriate alterations.

"This whole area of knowledge acquisition is vast," Buchanan says, "but we keep chipping away at it. I don't see that we've made any great breakthroughs, nor are we about to, but we know an awful lot more about it."

Another Stanford-made program is called MOLGEN, which helps design laboratory experiments in molecular biology. MOLGEN is the work of Peter Friedland.

One of the most complex tasks facing engineers in the computer age is designing Very Large Scale Integrated Circuits (VLSI).

"Most design processes are not algorithmic; that is, when an engineer sits down to design a complex computer, or other chip, there's no procedure that he goes through in cranking out that design," Rindfleisch says. "There's a concept of what the machine or the electronic device ought to do. . . . There's a lot of lore about what works and what doesn't work, based on experience. . . .

"It's more complicated than it looks, and as the density of devices increases with the very heart of the VLSI, it becomes very difficult for human beings to cope with the complexity of the designs."

Sounds like a job for AI, and investigators, particularly Stanford's Harold Brown, have begun working on it. Penny Nii and Bruce Delagi (from Digital Equipment) are studying new computer architectures specially tuned to running the knowledge-based programs under development. Another task is a program that diagnoses computers much the way MYACIN diagnoses humans. Michael Genesereth is working on this.

"It would be nice if out of all of these experiments. . . ultimately, we'd get a theory of knowledge, a theory of knowledge-based information processing that sort of derives from general heuristics about problem solving. . . . "

"It's an empirical science so that each program is a data point. Given that it takes a few years to construct each new data point, it's no wonder that we're a little slow to reach the general principles."

After all you've heard on computers, the *real* revolution still lies ahead, Artificial Intelligence buffs believe

BY JOEL SHURKIN

. . . There is one question I would like to answer: What is the number, that a man may know it, and a man that he may know a number?

—*Warren McCulloch*

It is entirely possible that the computer revolution has yet to begin.

The real revolution may not be the silicon chips, microprocessors, and home computers of the 1980s, but in the new kind of software, almost psychogenetic in nature, that will run them. This revolution may come when scientists produce the software to make computers "think," to make them simulate human thought processes, and then to make the machines smarter than the humans who designed them.

The field of research is called artificial intelligence. If the experts in AI succeed, civilization could be altered in ways beyond our imagining.

"The AI paradigm, symbolic reasoning, is going to effect a revolution in the use of computers at least as big as the introduction of computers for data processing and scientific computation," says Bruce Buchanan, of Stanford's Heuristic Programming Project (HPP). That, agrees HPP's Edward Feigenbaum, may be the greatest revolution of them all.

The first results of this research are by now reaching the market place in such widely diverse forms as chess-playing programs for home computers, and software designed to help industrial chemists analyze and synthesize organic molecules from laboratory tests. AI programs are beginning to show up in clinics and hospitals to help diagnose lung disease, or to help refine treatments for some forms of cancer.

The world of science is beginning to take AI seriously. The excitement is almost palpable.

The three leading centers for AI research in this country are Massachusetts Institute of Technology, where the field began, Carnegie-Mellon in Pittsburgh, and Stanford. Considerable advance research is also being performed at places such as UC-Berkeley, Yale, California Institute of Technology, and other universities, and in companies such as SRI, Schlumberger, and IBM. Several firms whose sole business is developing and selling AI software have been formed.

Essentially, AI research can be divided into four areas. The best known is probably robotics, the study of machines that simulate human physical activity.

Another is known as expert systems, computer programming that attempts to solve problems and make decisions at the level of a human expert in a particular field. This is sometimes known by the general term "knowledge engineering."

Another field is language understanding, which includes things like translating from one language to another, a process which requires an understanding that goes well beyond word-for-word substitution.

Finally, there is what can only be described as epistemology, research using computers into human thought at its most philosophic, almost metaphysical, level.

Stanford researchers are now actively pursuing all aspects of AI.

Producing machines that "think," or producing unnatural organisms that simulate human thought, has been a common theme in the human psyche. Unfortunately for AI researchers, the literary history has not always been sunny and up-beat. For instance, writer Pamela McCorduck, who was on the staff at Stanford in the 1960s and has written the best-known textbook on AI, points out that the first real description of artificial intelligence in literature may have been Mary Wollstonecraft Shelley's

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Frankenstein, written in 1818 on a dare from Lord Byron.

That attribution makes most AI researchers cringe, as do more recent fictional characters, such as HAL, the homicidal computer in the Arthur Clarke-Stanley Kubrick film, *2001: A Space Odyssey*.

Byron's only legitimate daughter, Ada, may have been the first to actually attempt a rudimentary form of AI scientifically. She became, arguably, the world's first computer programmer when she helped her mentor, Charles Babbage, design the logic for a mechanical computer he was building which he called the Analytical Engine. Babbage, one of the great eccentrics of 19th century Britain, never completed the machine, but the design would have produced a machine which made decisions and acted on them.

The real possibility of artificial intelligence came 100 years later, however, when J. Presper Eckert and John Mauchly at the University of Pennsylvania produced ENIAC, the world's first electronic general-purpose digital computer. The machine, a military secret during World War II, was revealed in 1946, and opened the computer age.

Once the problem of storing and altering instructions in memory was solved, it was possible to produce complex programs which could not only solve complex problems, but could fulfill an ancient dream of scientists to simulate logic symbolically on a grand scale.

The work of several dozen scientists through the years converged at about this time. There was, for instance, the binary logic system devised by the Englishman George Boole in the 19th century, which represented logical processes using only the one and the zero.

In 1937, Claude E. Shannon, a masters student at MIT, used Boolean algebra to describe how electronic circuits behaved. Shannon would later go a step further—if logic could be used to describe circuits, couldn't circuits be used to describe logic?

In 1948, Shannon, then at Bell Labs, produced what is known as Information Theory, a pivotal paper that did for information what Newton did for energy. Shannon's paper was aimed at radio and telephone engineers, but it became almost a metaphor for nature.

Essentially, Shannon held that information could be described in statistical laws that were universally true, that information, messages, could survive in the face of disorder and need never become unravelled. His equations were almost identical to the equations for entropy developed a century earlier.

Shannon's work was complemented by Norbert Weiner, also at MIT, whose book, *Cybernetics*, is considered a milestone in 20th century science. Weiner also believed that much of nature could be explained by information theory, objects could receive impressions and consequently perform acts. The theory bridged the gap between the physical sciences and biology and psychology.

The gap was further spanned by two men at the University of Illinois, Warren McCulloch and Walter Pitts, in a paper written in 1943. McCulloch and Pitts described cognition in purely physical terms, the logical calculus of neurons.

Implicit in all their work, and in the work of the English scientist Alan Turing, and the Hungarian-American John von Neumann, was that any process of human kind or behavior could be reproduced in a computing machine.

In an abstract to one of his papers, Turing wrote:

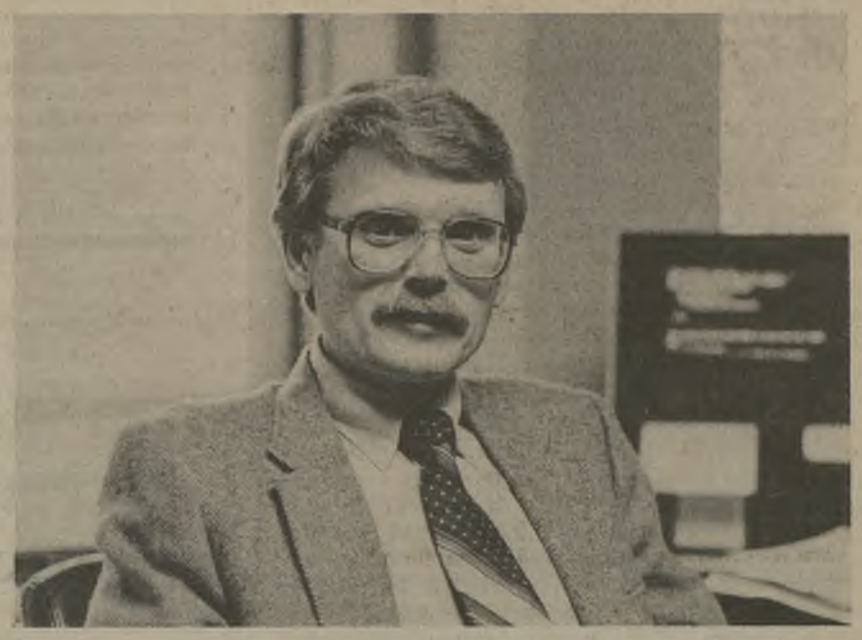
"The possible ways in which machinery might be made to show intelligent behavior are discussed. The analogy with the human brain is used as a guiding principle. It is pointed out that the potentialities of human intelligence can only be realized if suitable education is provided. The investigation mainly centers around an analogous teaching process applied to machines."

IBM ARCHIVES



Charles Babbage, 1860

They had trouble publishing the paper because no science journal wanted to publish a paper in which the proof was thought up by a machine.



Thomas Rindfleisch of Stanford's Heuristic Programming Project.

That's what AI researchers are trying to do.

Turing proposed actually building such a machine in 1947. He also devised what is now known as the Turing Test, a test that would determine when a machine could be said to be actually thinking: simply put, if a human could sit at a terminal and hold a conversation with a computer but could not tell whether the responses were coming from a computer or a human. (Most computer scientists now think the Turing Test is too easy.)

Scientists in the U.S. and Britain dabbled with programming in an effort to reproduce something that resembled thought. Many tried their hands at chess programs, understanding that chess is one of the most complicated games imaginable and hoping to learn something by trying to synthesize the logic of the game.

The turning point came in 1956 at Dartmouth College. Four researchers interested in the field had convinced the Rockefeller Foundation to fund a conference to discuss ways of simulating thought with computers. The four were Marvin Minsky, then of Harvard, John McCarthy, then at Dartmouth, Nathaniel Rochester of IBM, and Shannon. They invited others to join them.

It was at the conference that McCarthy dubbed the field "artificial intelligence," a name that rankled a few of the participants who were afraid the name would bring derision to their research. Several papers were given.

One, which received almost no notice at the time, actually reported the development of a thinking program.

The program, called Logic Theorist, was developed by Allen Newell and Herbert Simon of Carnegie Tech in Pittsburgh, and J. C. Shaw of the RAND Corporation of Santa Monica. Their program had proven several mathematical theorems proposed by Whitehead and Russell in Principia Mat' ematica, and had, in at least one case, provided a more elegant proof than the one provided by Whitehead and Russell.

They had trouble publishing the paper because no science journal wanted to publish a paper in which the proof was thought up by a machine.

Minsky now runs the Artificial Intelligence Laboratory at MIT. McCarthy is at Stanford. Simon, a Nobel laureate for his work in economics, and Newell are still in Pittsburgh, but their university is now called Carnegie-Mellon.

Now, there are about 500 scientists around the world working on programs and projects far more complicated than the Logic Theorist. They have branched out into several fields of science, pulling in experts in medicine, chemistry, biology, engineering, astronomy, geology, and most of the other natural sciences, in a unique marriage of knowledge. The goal is the understanding and emulation of human thought.

Their work is not without controversy.

Some critics, like the Dreyfus brothers, Hubert and Stuart at Berkeley, believe that machines will never "really" be able to think—at least not the way a human thinks. That criticism is not taken seriously by scientists in the field.

Others, like Joseph Weizenbaum of MIT, the co-author of the famed program ELIZA (which carries on conversations without understanding the subject matter), believes there are moral questions that must be answered by AI researchers. His criticism is taken more seriously, but most AI scientists think his fears are overblown.

Most seem more intent on the work itself than on what it will lead to at the moment. They are convinced the result will be a revolution, even if they are not sure just what kind of world that revolution will build.

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pressures, we may slip back into the bad old ways.

"The public is inclined to believe that many of our new industries, such as those in Silicon Valley, are very advanced in their methods. In fact, if you examine the methods of many of the firms around here, you'll find that their methods are not all that different from those used in our auto industry.

"They handle their people somewhat differently, but the way they handle the actual manufacturing task is not much different.

"If you ask many Silicon Valley managers, 'Don't you think manufacturing is important?' they will answer, 'Yes, but everything is relative, and product innovation, marketing, and so on are more important.

"Atari's response when it ran into trouble was to pack up and go to a low-cost labor area abroad. That 'solution' may gain you a little time, but it doesn't solve your basic problem.

"My guess is that we are going to see some other electronics firms move out of the U.S.

"If Silicon Valley wants to stay prosperous, it will have to get very serious about manufacturing. If not, many firms there will be in peril.

"A major shortcoming of most American planning systems," says Wheelwright, is emphasis on short-term results. "A firm should look several years ahead.

"Honda took the lead in the world motorcycle market by persisting in its U.S. efforts while running at a loss for seven years. After that it reaped a significant harvest. Most U.S. organizations would have given up before the seven years were up.

"An interesting fact about many Japanese methods is that they came from the U.S., and were refined by the Japanese. Ford, General Motors, and General Electric had systems 20 years ago that included many of the characteristics of the 'just-in-time' inventory system, which Toyota has now made famous.

"The Japanese executed the idea of keeping inventories down to a bare minimum much better than the American pioneers. The Japanese view inventory as a liability, while most U.S. firms look on it as an asset."

During periods of inflation, a large inventory may steadily grow in value. But Wheelwright points out that "interest rates are usually higher than the inflation rate, so it costs you more to keep your inventory."

Minimum inventories could result in frequent breakdowns in the pipelines of supply. "The heart of the problem," Wheelwright says, "is to eliminate the causes of uncertain supply, whether it is erratic quality control, transport, communication, or labor troubles."

The U.S. has the ability to catch up with Japan in productivity, he believes. "We are ahead in some areas, for example in some of the semi-conductor firms, and some segments of the computer industry. In spite of Caterpillar's strike problems (which are directly related to the firm's determination to get better productivity), it is ahead in many respects.

"In product-intensive industries such as paper and pulp the U.S. tends to be ahead.

"I think a good number of American firms are going to do much better than the Japanese. Some will not.

"Several industries in America are going to wake up, too late, and find that they have lost half their home market base. The machine-tool industry is well on its way to that position. The figures of our imports of German and Japanese machine tools are alarming.

"There is a distinct possibility that America may end up having to rely on Germany and Japan for many of the tools that are the core of much of our industry. They are basic to all fabricating metal-based manufacturing.

"The robotics industry is a branch of the machine-tool industry, and the Japanese have half of all the industrial robots in the world.

"Gomputers can also be looked at as robotics, and here also we have to be on our toes. This is an area of national competence that we should want to keep viable."

Wheelwright gave examples of practical work done in studying recent problems in production.

"Recent studies have shown that U.S. auto manufacturers are at a cost disadvantage, compared with their Japanese competitors, of about $1,500 per car. So the challenge to us is: How can we get even with them again?

"Caterpillar is right on the border now in its competition with Komatsu of Japan, and this sort of peril is spreading to other industries.

"Views vary greatly on what should be done about the situation. One theory is that industries mature and become less profitable, and when they do, it is better to move into something new and more profitable; therefore, we should be willing to forego autos and concentrate, say, on electronics, and when that becomes less worthwhile, to switch into something else. I don't buy that."

Can we derive any comfort from the fact that the U.S. is probably far more productive than the Soviets?

"All the evidence I see is that we are infinitely more productive than the Russians. Take the auto industry. If you compare us with the Russians on the same scale that we use for comparison with the Japanese, we are several times more efficient.

"The Soviets are not even close. They don't even have a set of organizational structures, a set of philosophies about management that are conducive to good practices."

The U.S. has the ability to catch up with Japan in productivity...

I think a good number of American firms are going to do much better than the Japanese. Some will not.

—Steven Wheelwright

Born and raised in Salt Lake City, Wheelwright belongs to a pioneer Mormon family. His great-grandmother pulled a handcart all the way from St. Louis, across the Great Plains, to get to Utah in the 1850s.

The second oldest of six children, Wheelwright always wanted to go to Stanford, which he visited several times with his printer father. The family firm printed the Stanford yearbook. His parents preferred that he stay closer to home, so he gained his bachelor's degree at the University of Utah.

After that he made his wish come true and went to Stanford. Within the space of four years he was awarded both an MBA and a Ph.D. from the Graduate School of Business.

He had married Margaret Steele, another Mormon, while a senior in college. After attending Stanford, they decided that he would pursue an academic career. He joined the Harvard faculty, teaching quantitative methods and decision sciences.

Prior to their first two years at Harvard the Wheelwrights, who then had two children, went on a sabbatical to France, where he taught at the European Institute of Business Management, at Fontainbleu. In 1973 they returned to Salt Lake, where Wheelwright helped manage the family printing business. Then it was back to Harvard.

"I decided to get out of quantitative methods, as I did not believe that was where the answers were," said Wheelwright. "I decided to concentrate on studying production. I like production people. They tend to be down-to-earth, pleasant to be with, and to have traditional values.

"It also looked like an area that had been grossly neglected by researchers.

"At that time the 20 or so people working on production at Harvard probably numbered half of all such teachers in the U.S. Today, of course, everybody is for production."

In the spring of 1979 Stanford offered him a tenured associate professorship, which he accepted. "At that time there was no required course in production, and there was nowhere near the interest in it that there was in business policy, the other area I was asked to work in.

In the last few years the School's interest has grown, and people such as Mike Harrison, Dave Kreps, Evan Porteus, Chuck Bonini, and Jerry Miller have taken a major interest in discussing production topics, with me and with Chuck Holloway.

"This group took on a major assignment. They said: 'Let's do a required course.' It turned out to be 'Analysis of Reductive Systems,' which essentially deals with manufacturing operations.

"Because growing pressure from business organizations finally convinced business schools across the country that they were missing a key element in training, the study of the production function and research into production are now being done widely."

Wheelwright's ideas have come into their own at last.

This fall he is in line to become a full professor.

Wheelwright is regarded as an outstanding teacher. He has developed extensive course materials, including well over 100 cases and teaching notes. In addition to teaching heavily in the production and operations management areas, he teaches business policy and strategy.

He has written, among other books, *Forecasting Methods and Applications* (Second edition: New York John Wiley and Sons, 1983). He is now at work on *Competing through Manufacturing* to be published this year.

The Wheelwrights have five children. Marianne, 16, is a sophomore at Palo Alto High School; Mindy is nearly 13; Kristin is 10, Matthew 7, and Spencer 4.

Margaret Wheeler is proud to call herself a homemaker.

The family has a couple of horses; they hike and fish in the summers and ski in the winters.

"We do a lot of things as a family," says Wheelwright. "Because I have to do a lot of traveling, I take each of my five children on a trip with me once every year. I try to pick places where arrangements can be made for them to be looked after while I am working.

"Of course, Margaret has a standing offer to join me on any trip she would like to, and she takes me up on this at least two or three times a year."

Carpools

Ongoing carpool needs another partner. Leaves Oakland at 8 a.m., leaves Stanford at 6 p.m., M-F. Call Dan Crump, ext. 7-4433.

Ongoing carpool needs another partner. Leaves Oakland at 8:30 a.m. Leaves Stanford at 6 p.m. M-F. Call John Bundor at 7-4480.

Carpoolers wanted. Dublin/San Ramon/Pleasanton to Med Ctr. Hours 9-5:30, M-F. Call Ed at 7-5569.

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Partners program links juvenile offenders with 50 Stanford volunteers

When speaking with people involved with the Partners program at Stanford, one word enters into the conversation more than any other: "rewarding."

"I've learned a tremendous amount about the problems kids go through," said senior Jeff Maltzman, co-founder of the Stanford branch of the national organization. "Sometimes I learn about myself and it makes it easier to remember what it was like to be a kid. It's a highly rewarding experience."

Partners is a non-profit, privately funded organization which provides volunteer intervention services to juvenile offenders. And in just three years it has blossomed into a major force on the Stanford campus, touching the lives of troubled kids and students, who serve as senior partners, alike.

There currently are more than 50 Stanford students matched up with junior partners, who spend three to five hours a week with each other—talking, listening, and learning while oftentimes building lasting friendships.



Stanford student Lisa Naulls (left) and Becky Cooper (right) with junior partner Sherri.

Academic credit

Children aged 10 to 18 years old are referred to Partners by probation departments, schools, parents, and other youth service bureaus, and participation is on a totally voluntary basis.

Students who participate in the program receive two to three units of credit per academic quarter of involvement in the program, providing they attend training sessions, fulfill terms of a contract stipulating how often they meet with a junior partner, and turn in a journal (to be graded) on the experience. Students also write a paper examining an aspect of juvenile deliquency at the end of the program.

Stanford student Lorraine Stevens has experienced both the frustration and the enrichment that being a senior partner can bring.

"At first I was appointed a 15-year-old girl for two quarters, and it just didn't work out," Stevens said. "She really didn't want to spend the time with me, and she told me that." But that was not typical of the program.

Stevens tried again.

"Last spring, I got assigned another girl who just turned 14," she said. "She's great, and we get along really well. Shhe really appreciates the time i spend with her. And her family is great, too. Just as much as I've taken Vickie as a sister, they've taken me as a daughter. It's a rewarding feeling knowing that I'm helping out a child in need. I'm learning how other families live. It just feels good."

Stevens got involved immediately when she heard about the program. "I had always been interested in social work, particularly youth and the law, and I wanted to apply that interest but I didn't know how I could. Partners represented the perfect opportunity."

Worthwhile help

Though her Stanford schedule is hectic, Stevens nevertheless always finds time for her junior partner.

"It's not a lot of time, and it's time I enjoy," she said. "I say I don't have time and I always seem too busy, but I'm really not, and afterwards I always feel it is definitely worth the time I spent."

Another Stanford student who feels likewise is R. Keith Allaun. "It's very rewarding at times, it's very frustrating at times," Allaun said, when trying to relate his experience as a senior partner. "It's almost like being a parent."

Allaun and his junior partner meet two to three times a week and talk on the phone other days. Allaun also has his partner stay overnight every other weekend. "There needs to be a lot of contact. The physical presence is very important. You can't say, 'I care. . . see you in three weeks.'

"There were several people in my life who were instrumental as role models," Allaun, who grew up without a father, explained. "If I didn't have them as role models, things would have changed drastically in my life. It feels so good to give and get so much satisfaction in return."

Positive intervention

Partners is more than just another "Big Brother/Big Sister" organization. There are basic differences.

Partners deals with all children who need attention, regardless of their family status. It is not exclusive to children from single-parent families.

Partners attempts to reach the kids before they get into any major sort of trouble. Becky Cooper, director of the San Mateo County branch of Partners, said. "A lot of times we are notified by youth counselors at school if they think a child might be headed for trouble. We try to get them some positive attention to help turn them around." Less than one-half of one percent of all government money devoted to juvenile justice is related to prevention, Cooper said.

Partners is also less expensive than traditional juvenile justice programs. The cost figure at the California Youth Authority, for example, is approximately $24,000 per person per year, according to Cooper. Partners' cost per child is around $1,000 per year.

The results also seem more effective.

In studies conducted at Partners' home office in Denver, which has been in operation for 15 years, results showed that there was a 20 to 80 percent decrease in repeat offenses.

"The studies also showed that (participants') self-concept really increased and they were more effective in social relations," Cooper said. "Their attitudes towards school were much better."

Cooper, who graduated from Stanford with a bachelor's degree in psychology and a master's degree in early childhood education, was the head teacher at Bing Nursery School when she heard about the beginning of a Bay Area branch of Partners.

"I wanted to get out into the community and I thought it would be a good change for me," she explained. "It combined a lot of my interests, and I wanted to go where I could help kids who needed some immediate attention. Knowing I'd be on the ground floor of a new development and being in on the planning stages was also exciting."

Student organizers

Stanford's segment of Partners was organized three years ago by then-sophomores Bill Halter and Maltzman.

"We wanted to establish some sort of intern program where students could get experience in the juvenile justice system" Maltzman said. "The juvenile justice program most interested in working with Stanford students was Partners.

"We felt that Stanford students would serve as excellent role models," Maltzman continued, "and could serve as an advocate if a kid did get in trouble."

The next step was to seek out interested students. Halter and Maltzman recruited on campus, with 11 people becoming involved initially on a trial basis during spring quarter of 1981. The program met with enthusiasm and success, and has continued to expand over the last two years.

Halter, a senior who is a Rhodes Scholar, and Maltzman, destined for law school next year, designed and sponsored a one-quarter SCIRE (Student Center for Innovation in Research and Education) course entitled "Juvenile Justice Workshop," which taught senior partners how to deal with potential problem youngsters.

The course included weekly seminars focusing on a different aspect of the causes and cures of juvenile delinquency, with speakers from Stanford Law School and Psychology Department as well as from the San Mateo County Juvenile Probation Department and the public school system.

Program grows

SCIRE co-directors Guillermo Nodarse and Judy Adams were both very enthusiastic with the results of the Partners program at Stanford. "All of the students. . . thus far have enjoyed their experience with Partners tremendously and feel that the services offered by the program are extremely worthwhile," Nodarse said.

"We are pleased to have (the) program grow," Adams added. "It is a model for the kind of student initiative and innovation that we wish to encourage."

Partners is funded totally by private donations, primarily from over 100 corporations in the Bay Area. Maltzman said that Stanford students usually fund their own activities personally, but "if the junior partner wants to do something, the senior member might encourage the junior member to earn the money to do the activity, maybe have them wash some cars in the dorm or something.

"The only drawback at all to the Stanford program," Maltzman continued, "is that students often get too busy and have to really struggle to find time to maintain the friendship, especially around finals time."

The Bay Area Partners program is one of six branches nationwide, each of which was set up and is run independently. Partners sponsors free or discounted medical and dental care for children in the program, much of which is contributed by local practitioners; group activities for the partners; such as trips to amusement parks, and fundraising events.

Volleyball fundraiser

One such fundraiser coming up which includes more Stanford students, both current and former, is the All-Star Volleyball tournament to be held May 6 at Homestead High School at 7 p.m.

Former Cardinal football players and current San Francisco 49ers Milt McColl and Rick Gervais will play, as well as 49ers Bill Ring and Randy Cross. The Stanford Men's volleyball team will play "The Village Host," a local club team that finished 11th in the nation last year, in the feature match.

Maltzman looked back on his three years as founder and co-director of the Stanford branch of Partners.

"We have found it to be a very successful program," he said.

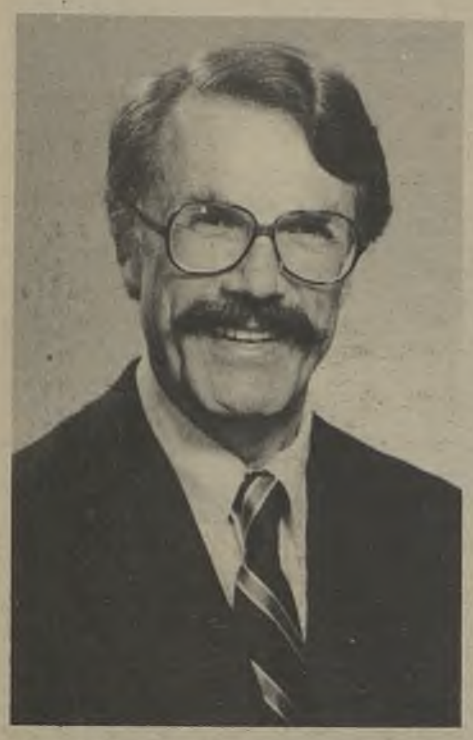
"The kids really look up to Stanford students. They often come from an environment where college is not emphasized. This gives them a chance to come to Stanford and see that college is a lot of fun, and gives them a goal they can strive to attain. It teaches them the importance of doing well in school.

"And it really gives a child the feeling that somebody cares."

Statistics, dollar signs, and course credits aside, that is what really makes Partners the success it is.

—Steve Odell

Medical Center MEMO



John Farquhar

Prestigious award goes to Farquhar

Dr. John Farquhar, director of the Stanford Heart Disease Prevention Program (SHDPP), was honored by the American College of Physicians (ACP) Monday, for research linking changes in eating and smoking habits with decreased incidence of cardiovascular disease.

Farquhar, a professor of medicine in the Division of Family, Community and Preventive Medicine, received the 35th annual James D. Bruce Memorial Award, which recognizes outstanding contributions in the field of preventive medicine.

Former recipients include polio vaccine pioneers Jonas Salk and Albert Sabin.

"The Challenge for Physicians in Newer Forms of Preventive Medicine" was the title of Farquhar's Bruce Award speech at the San Francisco meeting.

Farquhar, who founded SHDPP in 1971, helped develop an interdisciplinary approach towards preventing and controlling heart disease. One aspect of this is a public health project in several California cities intended to educate people, primarily via newspapers, radio and community classes, on the health benefits of eating better and smoking less.

The recipient graduated in 1952 from the University of California School of Medicine at San Francisco and then completed his training in internal medicine and cardiology at UCSF and the University of Minnesota.

Other Stanford participants at the annual ACP meeting included Drs. Edwin Alderman, associate professor of cardiology; William Hancock, professor of cardiology; Jack Remington, professor of infectious diseases; Maurice Fox, clinical professor of medicine; Kate Lorig, Arthritis Center; Ronald Pearl, physician specialist in medicine; Eugene Robin, professor of medicine; and Howard Spiro of the Center for Advanced Study in Behavioral Sciences.

Associate dean leaves for Washington

Dr. Elizabeth Short, associate dean of student affairs, announced she will be leaving Stanford University School of Medicine for the Association of American Medical Colleges (AAMC) in Washington, D.C.

A new associate dean of student affairs has yet to be named.

Short's new position as director of the association's division of biomedical research and faculty development, and associate director of the department of academic affairs, will begin this summer.

In her new role, Short said she will deal with issues affecting the nation's academic medical centers, ranging from funding sources for biomedical research to faculty development and medical education.

"I think it's an exciting opportunity to obtain a national perspective on issues of concern to faculties and students," Short said. "It's a time when changes are occurring in public policy that will have major impact on academic medical centers."

Short will bring to her new position her experience in academics and administration at Stanford, and in shaping public policy on biomedical research as a member of the American Federation for Clinical Research (AFCR). She is on the AFCR executive and public policy commmittees, and is editor of its journal.

"Stanford is an exciting medical school, and I feel privileged to have worked with the students here. I will bring to the AAMC job perspectives gained at an excellent academic institution," she added.

Short has been associate dean of student affairs since 1978. "She has made substantial contributions to the clinical education of Stanford's medical students," said Dr. John Steward, associate dean of student affairs.

"Two of her major responsibilities have been assigning students to clerkships and writing letters to support students' applications for internships. In both of these important and major roles she has been an extraordinarily valued member of the Office of Student Affairs, and will be missed."

Short has also been an assistant professor of internal medicine, specializing in medical genetics. She came to Stanford in 1973 and served as chief resident in medicine the following year, after which she joined the faculty.

Short received her medical degree from Yale University School of Medicine. She completed her residency training in medicine and research fellowship in human genetics there also.



PHOTO BY ELSON-ALEXANDRE

"It's a time when changes are occurring in public policy that will have major impact on academic medical centers."

—Elizabeth Short

Investigation proceeds. . .

VA panel to review incident of lab animal injury

An animal welfare panel at the Palo Alto Veteran's Administration Hospital will review the accident which resulted in injuries to a research dog, officials said last Wednesday.

Barbara Gleason, administrative officer for research at the VA hospital, said a general investigation of VA animal care facilities was inappropriate, since the animal's condition appeared to have resulted from an isolated incident and did not indicate more generalized difficulties.

"We are researching this incident basically to reassure everyone that while the accident involving this dog was unfortunate it does not reflect negatively on the high quality laboratory animal care provided at the VA center," Gleason explained.

Dr. Carolyn Reed, veterinarian at both Stanford Medical Center and the Palo Alto VA, said the dog was attacked by another dog in an adjacent cage in late March. The dog was being properly treated when it was removed by a medical student from a cardiovascular research lab, Reed said.

It was later euthanized after the student, who worked in the lab, brought the dog to a private veterinarian who said he didn't think the dog would recover.

At an April 1 news conference, officials of the Santa Clara County Humane Society contended that proper treatment may not have been provided the animal. In a position statement the society contended that after investigating the incident, the organization planned to file charges with the Santa Clara County district attorney's office under a county ordinance covering animal abuse.

On Wednesday, Larry Kemp, the society's chief humane officer, said the incident "is still under investigation by the Santa Clara and Peninsula Humane societies."

Deputy Dist. Atty. Robert Harpainter, supervisor of the Santa Clara County DA's Palo Alto office, said that he had spoken with Kemp and at least one other humane society official earlier in the week.

"At this point, I don't plan on doing anything further," Harpainter said Wednesday. He said his office lacked jurisdiction because the county ordinance didn't apply in the Palo Alto city limits where the VA is located.

A "fact sheet" issued at the humane society's news conference said the dog was found "in the Stanford Research Center."

However, Gleason said the VA's panel would investigate since the VA was responsible for the dog, which was owned by the VA and participating in a VA-sponsored study.

The internal review would be conducted by VA personnel, she said. Chairman of the panel would be Dr. Malcolm Anderson, a radiologist on the Stanford faculty assigned to research and patient treatment at the VA. Anderson is chairman of the VA's Animal Care Subcommittee of the Research and Development Committee.

Reed said because of residual anesthesia, the injured animal was unaware of the biting and didn't shift positions, "a regrettable, but fortunately unusual occurrence," she said.

The dog was participating in an an experiment intended to perfect techniques for repairing and replacing blood vessels.

The VA study was being conducted by faculty members and other researchers from the Stanford Medical School. Most VA physicians have dual appointments at the university.

Dr. James Dewson, director of laboratory animal medicine at Stanford, said no university probe was planned since the incident did not involve a Stanford research project.

"If a similar accident were to occur at Stanford, our Panel for Laboratory Animal Care would conduct an immediate and thorough review of the specific incident," Dewson said.

Stanford's participation in VA research stems from a contract with Stanford to faculty physicians for patient treatment and research at the VA.

Reed is chief veterinarian at the university and also works part-time supervising veterinary care at the VA, where she reports to VA officials, Dewson said.

—Mike Goodkind

We stand corrected

Beta Sigma Phi, an international philanthropic organization, was misspelled Beta Sigma Chi in the story on Dr. Bryan Myers' kidney research in the April 6 issue of the *Medical Center Memo*.

In addition to the $45,000 donated by the international organization, the California chapter of Beta Sigma Phi has donated more than $225,650 to Stanford medical research since 1970.

Precious drops of blood crucial for life's early entrants

Born about three months too soon, Geneva McKensie (pictured at right) needed periodic blood transfusions from her first days of life through an extended hospital stay, though, after the repair of a hole in her heart, she was "doing just fine," according to her nurse, Barbara Boyington (also pictured).

Even when healthy, most patients in Stanford's neonatal intensive care nursery need frequent, small transfusions to replenish the blood taken in the daily laboratory tests that help physicians monitor the delicate balance of each child's metabolism.

"It's also important to keep the hematocrit (ratio of red blood cells to blood volume) high," said Kathy Palange, clinical nursing coordinator for the unit. "Most of these kids have respiratory problems associated with their prematurity and need the boost in oxygen carriers."

To conserve the precious fluid, technicians usually match three or four infants to one unit of blood. The rich, packed red cells then may be diluted still further with sterile saline solution to find the mix appropriate for each child.

Today Geneva is home from the hospital and doing well, her happy mother reported.

Fifteen years ago, however, one of the biggest hazards for patients in neonatal nurseries was "cytomegalovirus" or CMV, a common virus that is harmless to most healthy adults, but can kill premature newborns and others who lack a fully developed immune system.

Dr. Anne Yeager, associate professor of pediatrics, reduced the threat in 1974 when she discovered that the virus often was transmitted through blood transfusion. Before that year, more than 13 percent of all infants transfused in the neonatal intensive care nursery contracted CMV virus.

By screening all blood given to newborns for CMV, the Stanford Hospital has now reduced the incidence of the disease acquired through transfusion to zero, and has prompted the American Association of Blood Banks to require each of its members to routinely screen blood for the virus.

Yeager's work is a prime example of how a top-notch blood bank serves as a "natural bridge" between research frontiers and the community, said Dr. Carl Grumet, associate professor of pathology and medical director of Stanford University Hospital's Transfusion Service.

"The cooperation in combining Dr. Yeager's experimental protocol with a broad screening program is the kind of thing this blood center is devoted to," said Grumet. "It's this cooperation that makes spin-offs possible."

The most recent issue of **The Healing Arts** *magazine deals with various aspects of the Stanford Blood Center's activities and roles. It profiles a sampling of the many ways blood is vital both to the health of current patients, and to the success of research into new ways to prevent and control disease. Copies are available by calling 497-6911, or writing to the News Bureau, Room TC-135, Stanford University Medical Center.*



Most grads get chosen internships

Internship match day at Stanford University Medical School was a happy occasion for 76 percent of this year's graduating students who have been appointed to one of their top three hospital choices.

According to Dr. Elizabeth Short, associate dean of student affairs, this shows improvement over the past decade's average of 70 percent.

What's more, 53 percent of the students were appointed to their first hospital choice, compared with the past decade's average of 44 percent.

About 18 percent of the graduates will be staying at Stanford. About 64 percent will be interning at university hospitals.

Internal medicine is the number one specialty choice, with more than 55 percent opting for it. Other popular specialties include surgery and family practice.

"In a time when the number of medical school graduates exceeds the number of internship positions, our graduates did extremely well," Short said.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Nigel Unwin

Unwin made fellow of Royal Society

Dr. Nigel Unwin, professor of structural biology, has been made a fellow of the Royal Society of London, as recognition for his contributions to electron microscopy in its application to structural studies of certain biological specimens.

The Royal Society of London for Improving Natural Knowledge, as it is formally titled, was founded in 1660, and is comparable to the National Academy of Sciences in the United States. Queen Elizabeth II is the Society's patron.

Unwin was born in Great Britain and received his Ph.D. from Cambridge University in 1968.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, APRIL 13

Dept. of Biochemistry Seminar: "The Role of Protein Phosphorylation in Branch Point Regulation: The Glyoxalate Bypass"—David LaPorte, Ph.D. (UC-Berkeley). Noon, M114.

Basic Science Research Colloquium: "Exploring Gene Expression and Protein Structure in Heterologous Cells"—Dr. Laurence Kedes. 5 p.m., Fairchild Auditorium.

Div. of Clinical Pharmacology Seminar: "Effects of Interferon on Hepatic Metabolism"—Glyn Taylor, Ph.D. 4 p.m., M110.

Dept. of Neurology Grand Rounds: "Pathophysiology of Nerve Regeneration"—Dr. Jeffrey Kocsis. 5 p.m., Palo Alto Veterans Administration Medical Center, bldg. 7, rm. B108.

Dept. of Biochemistry Oral Examination: "Tandem Duplications as a Genetic Tool in *Myxococcus xanthus*"—Leon Avery. 2:15 p.m., M316.

THURSDAY, APRIL 14

Dept. of Medicine Grand Rounds: "Potassium Homeostasis"—Dr. Samuel Thier, Stanford Community of Internists' Visiting Professor, from Yale. 8:30 a.m., Fairchild Auditorium.

Tickets go on sale for the Stanford Medical Alumni Association musical presentation "The Hypocritic Oaf" to take place at 8:30 p.m., Friday, April 29 in Dinkelspiel Auditorium. Tickets may be purchased from noon till 1 p.m. in the Medical Student Lounge or from the Medical Alumni Association Office, 800 Welch Road, Suite 221. A "Hypocritic Oaf" T-shirt will be available through the Alumni Association and at the performance. For further information, call 497-5064 or 497-6389.

Stanford Magnetic Resonance Laboratory Seminar: "NMR Studies of the Filamentous Bacteriophages"—Dr. Stanley Opella (Univ. of Pennsylvania). 4 p.m., Chemistry Gazebo.

Stanford Central American Action Network Special Lecture: "Medical Care Behind Rebel Lines"—Dr. Charles Clement. 7:30 p.m., M104.

Dept. of Pharmacology Seminar: "Expression of P-Glycoprotein and Multidrug Resistance in Tumor Cell Lines"—Dr. Victor Ling (Ontario Cancer Institute, Univ. of Toronto, Canada). 4:15 p.m., Pharmacology Library R358.

FRIDAY, APRIL 15

Dept. of Biochemistry Colloquium: "Membrane Proteins Involved in Cellular Cholesterol Metabolism"—Richard Anderson, Ph.D. (Univ. of Texas Health Center). Noon, M316.



The 1981 Stanford Album Quilt, hand-stitched by members of the Stanford Medical Faculty Women's Association, has been framed and mounted for display in the hallway beside the Hospital cafeteria. The quilt—with blocks representing such familiar scenes as Lake Lagunita, the Hoover Pavilion, the Stanford Stadium, and Memorial Church—is on long-term loan by its owner, Margaret Burchell (left), who said she "thought it belonged at Stanford." A tradition started by Gladys Kirkman (right) in 1974, the quilting leads to a handmade prize for a lucky winner each year, with chances sold to benefit the Medical Student Scholarship Fund. Burchell, who has joined in the quilting herself for the past eight years, spends only winter quarters at Stanford, while her husband Howard serves as a visiting professor in cardiology. At a reception last week for the association, Sheldon King (above), director of SUH, and Jeanne Kennedy, director of community relations, thanked Burchell and the group for their continued generosity and support. The 1983 quilt will be ready this month, with the drawing to take place May 13. Tickets will be sold May 8-13 in the hospital lobby, and at other locations to be announced.

Please register by today: for the Behavioral Medicine Program's 10-week workshop on starting and maintaining a regular physical exercise regimen. For further information or to register, call 497-7340.

Div. of Child Psychiatry Grand Rounds: "Treatment and Research at Stanford"—Dr. William Dement. 11 a.m., central conference room, Children's Hospital at Stanford.

Div. of Family Medicine: "Women's Health Movement"—Sheryl Ruzeck, M.P.H., Ph.D. (UC-Berkeley and UCSF). Noon till 1 p.m., M114.

Pediatric Grand Rounds: "Giardiasis"—Dr. William Liebman (Children's Hospital at Oakland). 8 a.m., M106.

Dept. of Gynecology and Obstetrics Grand Rounds: "Adolescent Pregnancy"—Nancy Moss, Ph.D. 8 a.m., A336.

Nursing Educational Services workshop: "Nursing and Anthropological Research: More than Passing Meds in the Congo." 8 a.m. till 4 p.m., Peninsula Covenant Church, 3560 Farm Hill Blvd., Redwood City. For further information, call 497-7062.

MONDAY, APRIL 18

Dept. of Medical Microbiology Seminar: "Plasmid Mediated and Temperature Regulated Surface Properties of *Yersinia Enterocolitica*"—Dr. Ralph Martinez (UCLA). 1:15 p.m., M114.

Registration deadline: for "Ethical Issues in Clinical Practice" sponsored by Friends of Nursing and Nursing Educational Services. To be held May 5 at Rickey's Hyatt Hotel. A fee is charged. The conference, which begins at 8:15 a.m. and includes lunch and a wine and cheese reception, will continue until 6:30 p.m. For further information or to register, call Carole Kidder at 497-6366.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Tinnitus and Tinnitus Therapy"—Dr. F. Blair Simmons and Holly Hosford-Dunn, Ph.D. 7:30 a.m., R117.

APRIL 18 and 19

Nursing Educational Services and Human Resources Development: "Writing for Professional Publication in Health Care." Hoover Cottage Lounge. For further information, call Carole Kidder at 497-6366.

TUESDAY, APRIL 19

Dept. of Structural Biology Seminar: "Actin Assembly"—Dr. Albrecht Wegner (Institute for Physiological Chemistry, West Germany). 4 p.m., Fairchild Bldg., D102.

Dept. of Biochemistry Colloquium: "Membrane Proteins Involved in Cellular Cholesterol Metabolism"—Richard Anderson, Ph.D. (Univ. of Texas). Noon, M316.

Div. of Orthopedic Surgery Grand Rounds: "Prevention of Spastic Paralytic Dislocated Hip"—Dr. Vicki Kalen. 8:30 a.m., M114.

WEDNESDAY, APRIL 20

Medical Center Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call 497-6636.

THURSDAY, APRIL 21

Dept. of Pathology Research Seminar: "The SOS Signal Generated by Miscarriage of mini F Plasmid"—Dr. Raymond Devoret (Gif Sur Yvette, France). 4 p.m., M104.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.

Teller hails Reagan defense initiative as turn toward assured survival

President Reagan's March 23 speech may mark a historic turning point from "mutually assured destruction to mutually assured survival," according to Edward Teller, senior research fellow at Stanford's Hoover Institution.

A physicist who played a central role in development of the hydrogen bomb, Teller believes Reagan's decision may rank in importance with President Roosevelt's 1939 decision to proceed with the atomic bomb.

Teller spoke with the President a few months ago and "very strongly" urged this basic shift in research emphasis from offense to defense. He was among those at the White House the evening of Reagan's talk.

"What the President has said, in my hearing, is that the threat of retaliation has prevented war. As a solution of indefinite duration, this will not do. We must look for a real defense.

"And I," said the President, "am ordering research on real defense, as best we can do it. And that, of course, includes against ballistic missile attack, but it includes defense against every other kind of possible attack. It has a component of space, but it has many other components."

Telephone interview

In a telephone interview on campus, Teller said the President's talk marks a "very broad" shift in emphasis of "what we do to prevent war. . . ."

"It is incomparably more practical than what we have today. . . .

"An equilibrium based on the balance of terror is inherently unstable," Teller said. "An equilibrium based on impregnable defense is inherently stable.

"No defense is impregnable. But the Soviets are inherently cautious." Improved defense will make them more reluctant to attack. "By the time we have defenses they probably can't overcome, then we're practically safe," he added. This could take years to achieve.

Switching from offense to defense in research was a gradual process of change which took "roughly 25 years" in Teller's own mind. The change was based on "an accumulation of technical information, much of it secret."

The main point always has been which was more effective. "In the antiballistic missile (ABM) debate of the late 1960s, I believed that defense was still more expensive than offense, but only marginally so," Teller said. "But the chance of a turnaround (then) was great enough (that I thought) we ought to pay serious attention to the ABM.

"In the meantime, younger colleagues produced really splendid ideas—at least half a dozen excellent proposals. I consider it practically a certainty that one—or possible two, three, or four (ideas)—will work out to give defense a predominant position."

Simple common sense

What the President said was "simple common sense," and may attract highly qualified young research talent.

"I believe that people who got used to the idea that defense (against nuclear attack) is very difficult, if not hopeless, will not change their minds.

"To change (your) mind is not easy. You have to get thoroughly familiar with new proposals. You have to question, experiment.

"The more I looked, the more (the ideas) stand up, the more they appear to be substantial and promising."

While the President sought no additional funding, Teller said, basic research "costs little enough to provide for (this change). . . ."

"When research yields enough results so that one begins to think seriously about deployment, additional money will be needed. By that time, the proposals will be much more solid." Current treaties permit research but not deployment of new ABM systems.

"My hope is that by the year 2000 of the money spent for strategic purposes, 95 percent will be on defense and 5 percent on offense," Teller continued. "This will be the best insurance to avoid war. Under those conditions, the Soviets would be bound to follow suit."

Cooperate with allies

The U.S. should cooperate closely with its allies. "Where we can help each other is not sufficiently emphasized," Teller said.

"I'm very definitely for sharing (new defensive) technology with our allies.

"To be so sure of ourselves to share (the technology) with our opponents is something I may hope for, but it is in the distant future.

"Sometimes we look at the Soviets as people who don't understand technology. We should look at them as people who have concentrated their technology on military purposes. We too often underestimate them.

"If the Soviets were willing to fully reciprocate, that would be wonderful. But how many think they will?

"If the Free World becomes strong by emphasizing defense and cooperation, we might gain strength so that the children of the present Soviet leaders might genuinely want to cooperate.

"If the desire is mutual, the proposition is very much worth discussing."

Questioned about recent government efforts to apply export arms regulations to academic activities, Teller said: "I would not like to see government regulations applied to conferences, travel, papers, or publication independently of classification. I know some things have to be classified. . . .

Conference safeguards

"I do not favor indiscriminate conference going with people against whom we have objections." It is quite appropriate, for example, for psychiatrists to object to conferences with the Soviets when psychiatry is applied for purposes of torture. Similarly, physicists may decide that so long as Sakharov is mistreated they may withhold invitations or refuse to attend conferences with the Soviets.

"I like to see scientists decide (these questions) for themselves," Teller said.

At a recent international conference he attended on the prevention of nuclear war "the Soviets sent along an uninvited man who was clearly KGB. No other country sent a single person who was not invited."

The KGB man advised Soviet colleagues what to do and what not to do. "We should not close our eyes to irregular behavior" of this kind, Teller said.

Blood Bank drive at GSB Tuesday

The Stanford University Blood Bank will hold a blood drive from 11 a.m. to 4 p.m. Tuesday, April 19, in the downstairs lounge of the Graduate School of Business.

Faculty and staff are urged to donate blood and, whenever possible, to announce the drive to students and colleagues.

Demand for all blood products is high—Stanford Hospital and Children's Hospital use more than 100 units of blood each day.

Letters to the editor

Separate weapons work, UC proposal

Editor, *Campus Report*:

President Donald Kennedy's remarks concerning the controversial weapons-related research at SSRL (*Campus Report*, April 6, 1983) deserve some response.

Kennedy points to the grave difficulty involved in making a judgement as to the desirability of certain research based on the presumed end use, particularly in the case of such a broadly written and extensive proposal as the one in question. Kennedy states: "A careful reading of the proposal reveals that in fact a wide variety of work. . . is to be conducted. . . " And he goes on to point out that this "demonstrates clearly just how tricky and difficult it is to judge end use."

It would be unwise of me to suggest the President Kennedy is politically naive in these matters, but in the face of these statements it is difficult to avoid that conclusion. Surely he understands that the unnecessary and artificial collaboration between the nuclear weapons laboratories and the University of California has from the first been intended to create exactly this "tricky" situation. After all, as the proposal clearly states, the institutions represented in the collaboration "have over three thousand researchers who could potentially benefit" from the use of this facility. That is, there are about 50 times the number who could conceivably be accommodated.

And surely nobody is going to suggest that the nuclear weapons laboratories, with a combined budget around the one-billion level, needed to form a collaboration with the University of California to gain access to the $1 million which is their share of the $6 million budget.

The fact that the weapons work is embedded in the midst of a wide range of experiments in general science is clearly intentional. In fact the scientific proposal carefully avoids any mention of weapons-related work altogether. This presentation was very evidently designed to provoke precisely the response that President Kennedy has presented.

The main proponents, the people involved with the nuclear-pumped, x-ray laser work, were well aware that if they presented their proposal openly and separately it would not be "tricky and difficult" to make a judgement about the social benefit of that research, and their application would be rejected. Every knowledgeable person that I have spoken to who has experience with the politics that surround this particular proposal understands that very well. The collaboration with the University of California is a Trojan horse.

Given these facts one can suggest that there is a way to make the judgement in this case easier: the University can require that the artificial juncture between the weapons laboratories and the University of California be separated for clarity. The weapons laboratories should be required to present their proposed work by itself, with the understanding that any work not specifically outlined in the proposal may not be carried out without further application.

It seems to me that this step is in any case required to conform with the 1971 "Statement of Principles Concerning Research," which requires that research decisions be made "based on the scholarly and educational merits of the proposed research. . . " It would not, I think be "tricky and difficult" for the University to make a judgement as to the scholarly and educational benefits of a program of "development of a number of. . . fast response detectors to characterize absolutely the intensity, time, and energy distribution of weapons-generated x-rays," which is what the Livermore Laboratory told the Department of Energy was the purpose of this proposal.

In any case, where a research proposal is so widely different in content from the information provided to the funding agency I would think that the University should require some clarification before proceeding with a review. To do otherwise is to put the University in the position of a collaborator in an act of deception.

John Harris
Staff Member
SLAC

Affordable housing top staff concern

Editor, *Campus Report*:

I was amazed to read, in the Staff Task Force Report published in the Feb. 16 *Campus Report*, that parking is the staff's No. 1 gripe.

Personally, I think that housing, and salaries woefully inadequate to cover it, are the No. 1 concerns of staff, along with treatment of staff as third-class citizens.

Faculty are lured here with generous housing subsidies; students are provided with subsidized housing on campus. Staff, on the other hand, who make up 85 percent of the work force, get no help at all (other than the housing ads in *Campus Report*) in either locating affordable housing or paying for it—except for top-level management, who obviously need help the least.

This sorry situation seems to exemplify the University's attitude that staff are third-class citizens—definitely more expendable than faculty or students. Stanford has already failed, in too many cases, to attract and retain top-notch staff due to the salary/housing dilemma. Prestige doesn't pay the rent.

As for the proposed Stanford West project, it may well be another case of too little too late. The average price of a unit at Stanford West, according to the March 23 *Campus Report*, would be $125-130,000. What staff member could afford that, except those who already own houses?

How could the many single staffers afford such a price? And how much competition for the much-vaunted "BMR" units, if built, would there be? Wouldn't subsidized faculty immediately have the advantage? Even the average rental unit at Stanford West would require an income of $32-33,000, which again presupposes two incomes.

The University's mission is obviously education and research, but without the underpinning of a consistent, high-quality, motivated staff, the effectiveness of this mission is eroded and diluted, as I think it already has been.

If Stanford truly cares about the morale and productivity of its staff, I suggest that helping us find a place to live is more important than finding us a place to park.

Julia Sommer
Staff, Department of Music

Summer institute in microcomputers brings teachers better jobs quickly

Despite the fact that many teachers cannot find jobs, school districts today are suffering from an acute shortage of computer educators. "I have no trouble placing computer teachers. They are in high demand," says Mary Beth Robinson, coordinator of the Stanford Teacher Education Program.

Educators seeking to prepare for these positions find help at the summer Institute on Microcomputers in Education at Stanford University.

"I got the job!" says Meg Self, a former second grade teacher who attended the institute last year. She now teaches computer science at Bret Harte Middle School in San Jose.

"I wouldn't have been rehired if it hadn't been for my computer training. The administration is impressed with my knowledge. More important to me is the fantastic response from the kids."

When Joan Schreiner came to Stanford last summer, she had taught pre-school and kindergarten for 22 years and knew nothing about computers. After attending the institute's program she said, "I am suddenly viewed as an expert."

At the Stanford Institute, Schreiner had extensive hands-on experience with programming and word processing. She also learned how to set up and run a computer center and about the future of computers in education.

Now, besides using computers in her kindergarten class at the University of Chicago's Laboratory School, Schreiner conducts workshops for other teachers.

Schreiner and Self are typical of the graduates of the institute. Most institute attendees have no special background in computers or math.

Follow-up studies of those who attend the institute show that they have started innovative programs and teacher training programs all over California and the nation.

"Last summer's participants are a dynamite group," says Jeff Levinsky, one of the institute faculty. "They have been effective far beyond what any of us had even hoped for."

Ken Sakatani, an art teacher in San Mateo, views the institute as the "catalyst which got me involved with the uses of computers in my own field. It was more than just programming. Through field trips and guest speakers, it made me aware of the important overall issues of the educational uses of computers."

Another institute graduate, Jackie Meyer of San Francisco, has been appointed to the policy board of the San Francisco Teacher Education and Computer Center. The TEC Centers were established by Governor Brown in 1982 to improve the quality of instruction in math, science, and computers.

The institute receives major support from computer manufacturers including IBM, Apple, and Radio Shack. Lectures and tours by leading figures from California's "high tech" Silicon Valley and observation of programs in action at Computer Tutor camps complement the hands-on activities.

More information about the institute, which starts June 27, may be obtained through the Stanford School of Education, (415) 497-2102

Seaver summarizes review of interdisciplinary major in human biology

Following is a March 4, 1983 memo to the Faculty Senate from Prof. Paul Seaver, chairman of the Committee on Undergraduate Studies concerning the review of the Interdisciplinary Major in Human Biology:

The Ad Hoc Committee to Review the Interdisciplinary Major in Human Biology, chaired by Prof. William Clebsch, made its report to the Dean of Humanities and Sciences on June 22, 1982. Prof. William Chace, associate dean, forwarded to C-US the report with the dean's endorsement on December 15, 1982.

In the course of its discussion of the report and of the Dean's covering letter C-US met with Prof. Richard Thompson, chairman of the Interdisciplinary Program, and with both Profs. Clebsch and Chace.

The Ad Hoc Committee to Review the Interdisciplinary Major in Human Biology consisted of Prof. Albert Bandura, William Clebsch, chairman, Lincoln Moses, Saul Rosenberg, and Richard Simoni. It reviewed the structure of the faculty of the program, the manner in which the faculty was recruited, the curriculum, the system of advising, and the program space and staffing.

The Ad Hoc Review Committee in recording its high regard for the program and its participants and in recommending its continuation noted that, while "the program continued to meet the needs in undergraduate education at Stanford for which a dozen years ago it was designed by several distinguished professors," nevertheless "the number of students majoring in Human Biology and the number and variety of courses that the program currently undertakes to generate have far outstriped the resources in terms of faculty and funds that are available to the program."

On the assumption that the resources available on Human Biology "are, like those of the rest of Humanities and Sciences, in a steady state," and that the program "represents interdisciplinary innovation. . .rather than an emerging academic discipline, and therefore. . .should not be developed into a Department," the Ad Hoc Committee made seven recommendations for the strengthening and reviewing of the program in the coming years:

1) that the program regard as its faculty those members of the Stanford professoriate who are committed or obligated to the program for terms of no less than three years;

2) that the program refine and adopt current plans to increase its graduation requirements by making each of the three concentrations more rigorous, more extensive, and more dependent upon reliable departmental sequences of courses;

3) that the courses developed and sponsored on an ongoing basis by the program itself be restricted to the core courses and one or two foundational courses in each of the three areas of natural sciences, behavioral and social sciences, and public policy;

4) that courses taken by majors in these three areas beyond these foundational courses be regular, reliable offerings by departments, particularly their advanced sequences of courses;

5) that the program's advising continue to be done both by student advisers and by faculty advisers, the first concentrating upon study plans and the second providing supplemental advising on course programs but emphasizing graduate study and career advising (and recommending);

6) that as long as the Chairman of Human Biology must devote heavy energies to disciplinary research and to policy planning for the program (which strikes us as entirely appropriate), authority for day-to-day administration of the program be delegated to an administrative officer; and

7) that the Associate Dean of Humanities and Sciences who has charge of Human Biology schedule a detailed review of the program's needs for staff and space at a time after current revisions of the major's demands have had their impact.

The intention of the recommendations is to make the program more rigorous and more dependant on sequences regularly offered by departments and on faculty committed to teach in the program for at least three years at a time. The recommendations themselves are not seen as binding but rather as a basis for the next quinquennial review.

The deans of Humanities and Sciences in turn endorsed the nonbinding recommendations with the exception of that which recommended "that the courses developed and sponsored on an ongoing basis by the program itself be restricted to the core courses and one or two foundational courses in each of the three areas of natural sciences, behavioral and social science, and public policy."

This recommendation, it was noted, seemed too restrictive; instead it was suggested that "the program should be able to develop and solicit 'ongoing' courses, and should in particular, be encouraged to have courses within the program that would not otherwise be offered by members of the regular faculty."

C-US was concerned that the exigencies of budgetary limitations not lead to discriminatory treatment of this program. There was some fear that the statement that the program "cannot, and should not, expect to grow" implied that the program was to be subject to some kind of "freeze" of enrollments. However, Associate Dean Chace assured the Committee that such was not the intention and that the program would not be subject to restraints other than those common to all departments and programs in these difficult times.

In the course of our deliberations Prof. Richard Thompson informed us that reforms leading to a more rigorous program had already been instituted, although it was too early to tell whether the number of majors would decline in consequence. In the light of these clarifications C-US concurs in recommending to the Senate that the authorization for the major in the Interdisciplinary Program in Human Biology be extended for a further five years.

Copies of the report of the Ad Hoc Committee and of the Associate Deans' covering letter are available from the office of the Academic Secretary.

Summary of review of Humanities Special Programs

Following is a March 15, 1983 memo to the Faculty Senate from Prof. Paul Seaver, chairman of the Committee on Undergraduate Studies concerning the review of the Humanities Special Programs:

The Ad Hoc Committee to Review the Humanities Special Programs, chaired by Prof. Peter Stansky, made its report to the dean of Humanities and Sciences on Oct. 5, 1982. Prof. David Kennedy, associate dean, forwarded to C-US the report and the deans' endorsement on Oct. 29, 1982.

In the course of its discussion of the report and of the dean's covering letter C-US met with Prof. Lawrence Ryan, chairman of the Humanities Special Programs, and with Prof. Kennedy (Prof. Stansky was on leave).

The Ad Hoc Committee to Review the Humanities Special Programs consisted of Prof. Albert Elsen, Alex George, John Perry, Peter Stansky, chairman, and Albert Gelpi and David Kennedy, ex-officio. The committee met to interview Prof. Lawrence Ryan, chairman of the program since 1973, to interview a group of students majoring in the honors program, and to formulate the report.

In addition the committee solicited the views of faculty who had taught in the program, reports from Prof. Albert Gelpi, chairman of the American Studies Program, and Prof. Herbert Lindenberger, chairman of the Comparative Literature Program, and various memoranda issued by the Humanities Special Programs office.

The Review Committee believed that "the evidence available. . .indicates a strong and lively program" which provides "an important educational experience for its students." The program has been in existence since 1947 and during the years since has provided the "incubator" under which programs, such as Religious Studies, have sheltered while developing into departments or degree-granting programs.

At the moment Humanities Special Programs is serving that function for the programs in American Studies, Comparative Literature, and Modern Thought and Literature. In particular the Committee believed that the Honors Program procedures in Humanities Special Programs "might serve as an example to Honors programs in other majors, which are often far less formal and less rewarding."

The Review Committee did have two concerns, a major and a minor. Humanities students complained that they "scarcely know one another," and the Review Committee recommended that "the students be encouraged to establish a student organization."

More troubling to the Committee was the discovery of the anomaly by which premedical students enrolled in the Honors Program are permitted to substitute for the "concentration," consisting of 40 units of work in a humanistic sub-field—e.g., Comparative Literature or Medieval Studies—the course work they have done in the premedical area.

Although the Committee could come to no final agreement on the matter, the Committee "expressed some concern that the premedical students who are Humanities majors may not be receiving instruction in a body of knowledge that is defined with sufficient coherence to qualify as a major comparable with other majors in the University."

The Deans of Humanities and Sciences shared the Review Committee's concern about the anomalous premedical "concentration" and recommended that "the program's degree granting authority be renewed on condition that the program take immediate steps to insure that the future premedical students in the program have a major in a defined humanistic sub-field."

In the course of the discussion of the Review Committee report before C-US Prof. Ryan stated that the Humanities Special Programs committee is willing to rethink the premedical option, if so instructed.

With the understanding that the Humanities Special Programs committee is willing to rethink the premedical option, C-US concurred with the Review Committee and the Deans in recommending to the Senate that the degree granting authority of the Humanities Special Programs be extended for a further five years.

Copies of the report of the Ad Hoc Review Committee and of the Associate Dean's covering letter are available from the Office of the Academic Secretary.

Procedures outlined for review of graduate programs

Following are procedures for the establishment and review of graduate interdisciplinary programs approved by the Committee on Graduate Studies Feb. 11, 1983.

1) Interdisciplinary programs are initially presented to the Committee on Graduate Studies, after having been reviewed by the appropriate school Deans and Dean of Graduate Studies.

2) If CGS approves a new program, it will recommend it to the Senate of the Academic Council. The new recommendations will designate the Dean to whom the program reports.

3) Senate approval of a new program will normally be for a period of no longer than five years.

4) All programs will be subsequently reviewed early in the fourth year of the five-year term.

5) The review is to be conducted by an independent *ad hoc* committee appointed by the cognizant dean in consultation with the chair of the program. The responsibilities of this committee are: to study the history of the program including the Senate legislative history and previous reviews; to interview faculty, staff, and students who are actively involved in the program, as well as recent graduates; to submit a written report to the Dean, including a recommendation on renewal, and (if necessary) suggestions for program modification.

6) The report will be forwarded to the program for correction of fact and general written comment. This material will be forwarded to the Dean of Graduate Studies.

7) The dean will forward the *ad hoc* committee report and the program comments to CGS. CGS will then review the report, meet the program directors, the cognizant dean, and *ad hoc* committee chairmen and recommend for or against program renewal by the Senate of the Academic Council.

8) The Chairman of the Committee on Graduate Studies will forward a summary of the *ad hoc* committee report and CGS recommendation to the Senate for final approval. The Chair of the *ad hoc* committee and the Chair of the program will be present at the Senate meeting which will consider the program, to respond to any questions the Senate may raise.

9) It is recommended that all programs on the attached sheet should be reviewed on a regular basis by the appropriate dean. Each dean is requested to submit to CGS a suitable schedule for reviewing the programs within his jurisdiction.

Interdisciplinary programs in Engineering

SCHOOL OF ENGINEERING	Approved CGS	Approved Sen/Acad Council	Degree Recommended	Administered by	Reviewed CGS	By Sen.	Reports to
Engineering	3/71	4/71	M.S.	Sponsoring dept. & other Engineering depts.	0	0	Dean of School of Engineering
Engineering Science	First mentioned in Courses and Degrees in 1947-48		M.S.	Sponsoring dept. & other Engineering dept.	0	0	Dean of School of Engineering

Interdisciplinary programs in Medicine

SCHOOL OF MEDICINE	Approved CGS	Approved Sen/Acad Council	Degree Recommended	Administered by:	Reviewed by CGS	Reviewed by Senate	Next Review Date	Reports to
Cancer Biology	4/78	5/78	Ph.D.	Program under Chair/Director; Appt by Grad Dean	4/82	5/82	1984-85	Dean of Gr Studies &
Health Services Research (originally "Admin")	3/72	4/72	Terminal M.S.	(Div within Fam, Commun & Prevent. Med.) Faculty apptd by FCPM Dir. w/concurrence of Medical Dean.	C	O		Dean of Sci of Medicine
Medical Information Sciences	6/82	10/82	M.S. Ph.D.	Comm/Chair apptd by Dean of Sch of Medicine	C	C	Aut 85	Dean of Sci of Medicine
Neurosciences	8/62	9/62	Ph.D.	Comm Apptd by Dean of Grad Studies	5/82	10/82	Spr 86	Dean of Gra Studies & F

Interdisciplinary programs in Humanities and Sciences

SCHOOL of HUMANITIES and SCIENCES	Approved CGS	Approved Sen/Acad Council	Degree Recommended	Administered by	Reviewed by CGS	Reviewed by Senate	Next Review Date	Reports to:
Biophysics	5/59	5/59	Ph.D.	Comm. from Sch. of Med and H&S apptd by Grad Dean	11/81	10/82	Aut 1985	Dean of Grad Studies & Res
Comparative Literature	8/69	9/69	A.M. and Ph.D.	Comm. appointed by Dean of H&S under a chair	C	O		Dean of H&S
East Asian Studies	5/66	6/66	Terminal A.M	Center & Comm. on E.AsStudies (w/advice of CRIS) under Dir. appointed by Dean of H&S	O	O		Dean of H&S
International Policy Studies	5/82	9/82	Terminal A.M.	Comm. suggested CRIS Chair, apptd by Dean of H&S; Chair apptd by Dean of H&S	O	O	Aut 1986	Dean of H&S
Latin American Studies	1/65	3/69	Terminal A.M.	Center for Latin AmerStu and Comm under chair/dir. apptd by Dean of H&S	3-yr trial period recommended; Dean V. Whitaker reviewed 2/69; CGS approved 2/69 "without limit of time"			Dean of H&S
Modern Thought & Literature	11/69	12/69	A.M. and Ph.D.	Comm. Chair selects faculty; Dean of H&S appoints chair.	C	C		Dean of H&S
Russian & East European Studies	1/73	4/73	Terminal A.M.	Committee jointly appt'd by Robert Ward, Dir. Center for Research in Int'l Studies, and Dean of H&S.	C	O		Dean of H&S

Phillip McLean services today

Phillip P. McClean, librarian of the Hoover Institution for 45 years, died Wednesday, April 6, at his home in Menlo Park. He was 79 years old and had been in failing health for many months.

McClean came to Stanford soon after his graduation in 1925 from Pomona College in southern California and had lived in the Palo Alto area for almost 60 years.

He was well known in local music circles, a lover of opera, and sang in the All Saints Episcopal Church choir for many years. He was also an active singer in the Fortnightly Music Club of Palo Alto.

When McClean joined the Hoover staff, its collections were housed on the first floor and basement of the Old Main, now Green Library, and rapidly filling every space that could be allotted to them. He started as an assistant reference librarian, achieved the position of librarian in 1949 and held that post until his retirement in 1969.

His wife Nancy, a daughter, Allison Lamboglia, a son, Andrew McClean and four grandchildren survive him.

Memorial services at All Saints Church are scheduled for 2 p.m. Wednesday, April 13.

The family suggests that memorial gifts be sent to the Community Association for the Retarded (CAR) or to All Saints Episcopal Church.

TV network. . .

continued from page 1

Academically qualified employees of SITN member firms may enroll as fully matriculated graduate students in the honors cooperative program at Stanford. Alternatively, they can take courses as non-registered students or simply as auditors.

Largest users

At present, the largest users of SITN include Hewlett-Packard, NASA Ames, IBM, Lockheed, Lawrence Livermore, Sandia, and SRI International.

Hewlett-Packard President John Young, a Stanford trustee, says SITN is "the only case I know of where a top-flight university has been able to increase its productivity without in any way degrading the quality of its educational program."

Every fall, about 350 students are enrolled in the honors cooperative program, more than 400 in the non-registered option, and more than 1,000 as auditors. The HCP students average 4.5 academic units per quarter; those not registered or simply auditing take about 3 units each.

Organized in 1968, SITN has a full-time staff of 15 with 40 Stanford students as part-time camera and recorder operators. The TVI technique, pioneered by Stanford Prof. James Gibbons, electrical engineering, has been used for nearly a decade.

TVI classes usually range from three to 10 students, with the optimum about six or seven. The tutor may be well versed in the subject, but this is not essential. The tutor's main function is to foster class discussion, seeing that students are encouraged to stop the video playback every five or 10 minutes, if they have a question. Students are encouraged to resolve questions through discussion among themselves, using the tutor only when they are unable to do so. Questions the tutor cannot answer are referred back to the Stanford lecturer by phone, with the explanations discussed at the next TVI meeting.

All off-campus students registered for academic credit do the same homework and take the same tests as those on campus, with grading done by the same teaching assistants.

MIT experiments

Experiments conducted by the MIT Center for Advanced Engineering Study confirm that TVI students perform at least as well as comparable students attending the same class on campus and usually better than comparable students who view the instruction remotely by TV. They also perform better than students who view the same videotapes alone, with or without a tutor.

As an MIT report noted: "The TVI methodology offers a simple, economical way of providing instruction to a large number of students scattered at a great many locations. It permits flexible scheduling of classes and does not require special experience on the part of local tutors; they only need to be good discussion leaders and have a somewhat better technical preparation than their students.

"The educational style is more informal and participatory than that of traditional classes, and therefore is likely to better fit the needs and taste of older engineers. We strongly recommend its general adoption."

MIT "really publicized what we've been doing for 10 years," Allen said. A steady stream of visitors from other institutions has come to her offices in the Durand Building at Stanford.

"The companies most important to us would like to see a consortium of the best universities develop programs, including educational material from industry and from faculty research," she noted.

Stanford President Donald Kennedy met recently with MIT President Paul Grey, University of Michigan President Harold Shapiro, and executives from IBM, Bell Labs, GE, DEC, and Hewlett Packard to discuss these possibilities.

Allen believes the new Center for Integrated Systems (CIS) at Stanford, soon to start construction with support from 19 major firms, may provide another focal point for cooperative educational efforts using TV in computer science, electrical engineering, material science, and related fields.

She's also talking with Prof. Patrick Suppes, a national leader in computer-assisted instruction, on cooperative ways in which the two technologies might be used together.

Professorial improductivity

Several years ago, Suppes told a Stanford alumni audience that unless professors become more productive they will "continue their slow slide into genteel poverty around the world." Taking his own advice, Suppes teaches 15 courses—three seminars and 12 courses taught totally by computer, on subjects ranging from Armenian to logic to music.

While science, engineering, and "hi tech" fields have become increasingly involved in using new media to meet acute teacher shortages, Allen and her colleagues also have used their talents to help students prepare video programs on women's self-defense, career planning, and other non-technical topics.

Professors in applied earth sciences, biological sciences and education are among those who have expressed interest in televising courses.

The availability of new TV studios in the Communication Department and the prospect of cable TV service for the campus and surrounding communities may enhance future programming possibilities, Allen believes.

She's also exploring possible satellite transmission of Stanford educational materials to Colorado, Texas, Massachusetts, New York, and Washington state.

At present, two of her staff members drive to 75 different Silicon Valley companies a day with classroom materials. In the future, data transmission technology might reduce this load and permit faster distribution and feedback of information from students.

Faculty oversight for SITN comes from an advisory committee. Its members are Fabian Pease, Tom Hughes, Dan DeBra, Tom Kailath, Bill Nix, Bob Kincheloe, Tom Kane, and Ken Down, Allen's predecessor as head of SITN.

Well-done lectures

Writing in *The Chronicle of Higher Education* on "The Misfortune of College Courses on Television—or Why 'Big Bird Can't Teach Thermodynamics," Richard W. Smith of the Maryland Center for Public Broadcasting suggested that "It may well be that. . .the inexpensive, well-done lecture will, with proper campus support, be more effective and more acceptable to students than all of the hoopla television today.

"It doesn't sound very glamorous to say the future of national television instruction lies in efficient course registration forms and prompt and simple means of getting study guides and library materials to the student. It is not glamorous but it is necessary if television is ever to be more than the plaything of a few enthusiasts of audiovisuals.

"The colleges must take more of a role in producing television courses, and members of the standard academic disciplines must show more interest.

"Mistakes will still be made, and the next generation of TV courses will not be perfect. However, such courses do stand a chance of being better—and even cheaper—than those that have been produced to date."

Because SITN simply transmits and videotapes regular classroom presentations by professors, its production costs are extremely low by industry standards. SITN brings about $1 million to the University in tuition and provides $1.3 million more to academic departments. The rest goes for operations and capital equipment.

—Bob Beyers



Peter Coutts Hill eligibility expands to all Academic Council, senior staff

Eligibility to own a Peter Coutts Hill condominium has been extended temporarily to all those who are eligible to live on the campus (now including those who own houses within a 15-mile radius of Hoover Tower).

Furnished models of the units will be open for viewing from 10 a.m. to 4 p.m. Saturday, April 16, and 1-4 p.m. Sunday, April 17.

The Peter Coutts Hill community, designed by the architectural firm of Fisher Friedman, consists of 140 one- and two-story condominiums. There are six floor plans ranging in size from two bedrooms/two baths to three bedrooms/3½ baths, most with dens or study lofts.

Recreation facilities include pool, spa, and clubhouse.

Construction was completed March 1, and to date 44 units have been sold. Some will be retained as rentals to be sold in subsequent recruiting seasons.

For a short period all active members of the Academic Council and senior staff will be eligible to buy at Peter Coutts Hill, whether or not they own houses nearby.

For more information call the Peter Coutts Hill sales office at 497-3649 or the rental office, 493-1471.

Ph.D. oral exams

TUESDAY, APRIL 19

Sverre C. Munck, economics, "An Energy Policy Simulation Model of the Norwegian Economy," 10:15 a.m., 414 Encina Hall. **Georgea Mohlman Sparks**, education and psychology, "Inservice Education: Teacher Attitudes and Behavior Change," 9:30 a.m., 105 CERAS. **Darrell L. Tanelian**, neurosciences, "Neurobiology of the Rabbit Cornea," 2:15 p.m., Neurobiology Library D202.

THURSDAY, APRIL 21

Michael L. Hogan, statistics, 2:15 p.m., s120. **Allyn Lea Romanow**, sociology, "Performance and Promotion: A Stochastic Model of Decision Making by Performance Evaluation," 2:15 p.m., Rm. 010C, Bldg. 10. **Sandra H. Slivinsky**, applied earth sciences, "Selective Nitride Precipitation—Reprocessing Scheme for Thorium-Based Nuclear Fuel," 2:15 p.m., Mitchell Room 350.

FRIDAY, APRIL 22

Susan Lynn Aronstein, English, 2:15 p.m., Rm. 41-F. **Adam N. Rosenberg**, operations research, "Numerical Solution of Systems of Simultaneous Polynomial Equations Using a Continuous Homotopy Method," 3 p.m., Terman 453.

Former astronaut foresees settlements on the moon, Mars in a generation

It's only a matter of time until there is a permanent settlement on the moon, according to Harrison "Jack" Schmitt, former astronaut and lunar explorer, who lectured at Stanford University Monday, April 11. Schmitt predicted that the moon settlement will serve as a base for regular travel to Mars.

The moon will serve humankind as "the ultimate radio telescope facility" and as a source of valuable minerals, especially titanium, Schmitt said. Settlements on the moon and on Mars will "help to insure the preservation of the species."

Schmitt spoke to Earth Science faculty, students, and guests in the final lecture of the Harold W. Hoots visiting lectureship series for 1982-83.

"The rocks and soils of the moon are very rich in titanium," he said, "and since it has been pulverized by meteor impact, it is already mined." Also of potential value economically are gasses such as hydrogen and helium, which have accumulated on the moon as a result of the flow of protons from the sun.

Besides hastening the age of Titanium, settlement of the moon will increase scientific and technical options in such fields as bioengineering.

The Age of Titanium may be also the Age of Biomedicine, when humans will finally learn how to prevent disease. Schmitt, who serves on the board of a medical foundation, believes "we are well on the way to a breakthrough" in the actual cure and prevention of diseases.

The former astronaut predicted that some of the young children in the audience might be among the first people to land on Mars. "Some people alive today may permanently settle on the planet Mars. The issues that still need to be resolved are political, psychological, and economic. The technical problems are already solved."

As lunar module pilot for Apollo 17, Schmitt landed on the moon in 1972. He described the Valley of Taurus-Littrow, only 4½ miles wide, surrounded by 7,000-foot mountains, where the lunar landing party watched the "earthrise."

"Imagine a valley deeper than the Grand Canyon and a blacker-than-black sky, and hanging over the southwestern rim of the valley, the beautiful planet Earth!"

"Mankind has evolved to the point where humans could live in an environment that is wholly foreign—where we can actually decide whether to return to Earth or settle permanently on Mars or on the moon."

While he "remains an optimist," Schmitt has misgivings about the U.S. Congress, in which he served from 1976 to 1982 as a senator from New Mexico. "Congress has become increasingly illiterate about the sciences," in Schmitt's opinion. "Our school systems have failed to prepare the voter—or the Senators and Representatives—to make informed decisions on scientific issues."

Consequently, Americans have made some "terrible decisions." As an example, Schmitt cited the adaptation of nuclear submarine technology to the generation of power on land.

Land-base reactors should be cooled by gas, not by water, Schmitt said. Today we have "twenty-first century reactors in 19th century power plants," according to Schmitt, who organized and directed NASA's energy programs following his space flight.

Herpes on the limbs or trunk

Persons with recurrent herpes on the arms, legs, or trunk, but *not* on the lower face, around the eyes or genitals, are urgently needed to assist in medical research. Volunteers will be paid a fee. For more information please contact:

Tony Cunningham, M.D.
Division of Infectious Diseases
Stanford University
School of Medicine
(415) 497-5908
between 9 a.m. and 5 p.m.



SUZETTE CRAFT and JIM CADENA as the Queen and King in the play within the play in *Maskarade*, a new musical set in the mid-19th century during a Jamaican Jonkonnu Festival. Performances are at 8 p.m. Thursday through Saturday, April 14-16 at the Nitery theater. There is also a matinee performance on Sunday, April 17 at 3 p.m. Tickets are on sale at Tresidder Ticket Office and at the door. General admission $4; students and seniors $2.

Don Liebendorfer dies at 82

Private funeral services were held Tuesday, April 14, for Donald Liebendorfer, who served Stanford 45 years as the first full-time sports publicity director in the country.

Liebendorfer died Thursday. April 7, at Veterans Hospital in Palo Alto following a lengthy illness. He was 82.

Survivors include his wife, Catherine, and one son, Donald, a 1961 Stanford graduate who lives in Portland.

"His integrity and dedication won him the respect of all the sportswriters with whom he came in contact," sportswriter Jack McDonald once wrote of Liebendorfer. "Above all, his information was always accurate and unbiased."

Born in New Brighton, Pa. on Sept. 8, 1902, Liebendorfer grew up in Modesto. He entered Stanford as a freshman in 1920 and remained on the Farm from then on, except for 45 months service as a Navy officer in World War II.

He served part-time as a sports publicist in the spring of 1924, when he was a senior and editor of *The Stanford Daily*. Following his retirement in 1969, he became the Athletic Department's official historian.

His 350-page book, *The Color of Life is Red*, chronicled Stanford athletics events from the beginning through the 1972 Rose Bowl victory.

Liebendorfer's 1962 press guide was judged best in the U.S. by the Football Writers of America. He was a charter member of the Helms Athletic Foundation Hall of Fame for sports information directors.

Often asked his nomination for Stanford's most outstanding athlete, Liebendorfer consistently replied Hank Luisetti, the player who introduced one-handed shots to basketball at the Stanford Pavilion, now home of the Personnel Office. The Stanford All-American of 1935-38 "was to basketball what Babe Ruth was to baseball and Bobby Jones to golf," Liebendorfer told *The Palo Alto Times* when he retired.

When it came to football, "Without any question, Ernie Nevers (0f 1923-25) was the best." Liebendorfer served for many years on the Football Hall of Fame selection committee. He also was a driving force in the construction of the press box at Stanford Stadium.

Ogden to lecture on deaf children

Dr. Paul W. Ogden, author of *The Silent Garden: Understanding the Hearing Impaired*, will lecture on "Deaf Children/Hearing Parents: Communicating Better" at 7 p.m. Monday, April 18, in Bishop Auditorium at the Graduate School of Business.

His free public talk is sponsored by the Linguistics Department and the Office of Student Affairs.

Deaf himself, Ogden received a bachelor's degree in mathematics and computers from Antioch College in 1973. That same year he was research assistant to Prof. Patrick Suppes at Stanford's Institute for Mathematical Studies in the Social Sciences. He went on to receive his M.A. and Ph.D. degrees in psychology and deafness from the University of Illinois, and is currently an associate professor of communicative disorders at California State University in Fresno.

Among his achievements, he has organized a Deaf Awareness Week in Tulare, cofounded the Central California Association of the Hearing Impaired in Visalia, Calif., and established such organizations as Youth Affairs Committee and the Oral Deaf Adults Section of the Alexander Graham Bell Association of the Deaf. His play "Come Dance With Me" received its premiere performance in 1981 from California Theatre for the Deaf in Visalia, for which he won the Ford Foundation of New American Playwrights Award in 1978.



Paul Ogden and his wife Anne

Following his talk, there will be a reception where copies of his book will be available. An interpreter will be provided.

Jobs for undergrads

The half-time positions as codirectors of SWOPSI and SCIRE, described in the March 30 *Campus Report*, are open only to undergraduates, not all students, as the article indicated.

The undergraduates share the positions with a professional staff employee; the salary is in the administrative range.

Applications are due April 20; more information is available at 497-4504.

3081 Node weekend schedule changes

Users of the 3081 Node should be aware that installation of the new operating system described in the April 6 *Campus Report* will result in an altered weekend schedule, beginning Saturday, April 30.

Presently, the system is down for routine maintenance on Saturdays and Sundays from 6 a.m. to noon. As it is necessary to use large, contiguous blocks of time for installing the MVS/XA, the downtime hours have been extended on Sundays to 3 p.m. On Saturdays, however, the system will be available starting at 9 a.m. The total number of hours that the IBM 3081 will be unavailable to users will remain unchanged.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

33725-LL (JCC:2262) FIN/MGMT ANALYST II: 7:45-5pm; position is accountable for both Mgmt & proj respon in area of computer & manual sys analysis; as sys analysis mgr, position oversees the operations of Data Control & Credit Balance which currently has a combined staff of 12 employees; as sys analyst, the Sys Support Mgr will be assigned projs such as: Test & implement new FPP computerized billing sys; integration of FPP into SUH new admitting Computer sys, select & implement new Clinic Appt Computer Sys, Ongoing Account-ability for Modifications/Enhancements of several sys; QUALIFICATIONS: BS in Computer Sci or Sys Engrg or equiv combination of edu & exp; Math, Business or MBA bkground helpful; should have extensive exp and/or training in conceptual analysis of both manual & computer based paperwork sys; able to perform flow charting, needs assessment & design of control sys; functioned in supvry position & be familiar w/ related personnel practices; good interpersonal & coordinating skills.; C07; $2113-2724.

29335-JB (JCC:3972) A-V SPEC I: Performs videotape & edit lectures, conferences, & special projs, under the direction of Asst Dir, using portable 3/4" color video eqpt; plans all aspects of mat'l to be produced, such as location scouting, lighting, eqpt set-up, & titles; supvs 40 student employees who function as camera operators & recording assistants for Stanford's Instructional TV Network w/ aid of 2 assistants; QUALIFICATIONS: basic tech & mech skills needed; 1-2 yrs exp in all aspects of video production; requires knowl of scripting, lighting, & editng tech; supvry & organizational skills needed to manage a large workload; knowl of still photography helpful; AA or BA, Communications or equiv exp; available to work hrs other than 8-5.; C05; $1670-2086.

44408-PM (JCC:2094) ADMIN ASST II: Dept Administrator; respon for mgmt of Dept's financial operations, grant & contract admin, supvn & organization of Dept's non-exempt personnel & mgmt of bldg facilities; asst Chairman w/ faculty & student affairs; liaison w/ Dean's offc, Controller's offc, etc; involved in long-term budget planning & forecasting; QUALIFICATIONS: knowl of Stanford admin policies & procedures; exp in acctg, personnel mgmt & offc admin; work independently; make decisions; ability to work effectively w/ faculty & to respond to changing financial & personnel needs; prev supvry exp required; send appl/resume to Glenna Li, Math Dept, Bldg 380 Rm 381 R2, 497-2214.; C05; $1670-2086.

SLAC

91524-JM (JCC:6638) S&E TECH - ELECTRON: TMS Unit; asst engrs in development of specialized analog & digital circuits & sys for high energy physics data acquisition; breadboard prototypes, test utilizing standard bench instrumentation & computerized test eqpt; program firmware; test; asst w/ engrg sketches, instructions to shops, field related problems, etc; QUALIFICATIONS: AA degree in electronics or equiv; 1-2 yrs exp; strong interest in development work; demonstrated aptitude for electronics.; A28; $1647. APPLY AT SLAC

91523-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; asst engrg group in detailed design of new modulator, sub-booster & related sys components prior to fabrication; lab test of completed subchassis components & sys; field installaion & testing of on-line sys; field trouble-shooting; QUALIFICATIONS: AA degree in electronics or equiv; several yrs directly applicable exp on one or more of the following: high voltage, high power pulsed sys; high voltage, high power dc sys; instrumentation for precision measurement of pulsed & dc high voltage, control & protection interlocks, trigger devices, etc; exp in digital programmable controllers desirable; A34; $1901. APPLY AT SLAC

91600-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; asst engrg group in detailed design of new modulator, sub-booster & related sys components prior to fabrication; lab test of completed subchassis components & sys; field installaion & testing of on-line sys; field trouble-shooting; QUALIFICATIONS: AA degree in electronics or equiv; several yrs directly applicable exp on one or more of the following: high voltage, high power pulsed sys; high voltage, high power dc sys; instrumentation for precision measurement of pulsed & dc high voltage, control & protection interlocks, trigger devices, etc; exp in digital programmable controllers desirable; A34; $1901. APPLY AT SLAC

95059-JM (JCC:2070) ADMIN ASST II: Respon for administering grad student program at SLAC; coord students assignments; maintain liaison between SLAC & various Univ depts re stipends, tuition grants, etc; administer Summer Institute Program; supv institute staff; QUALIFICATIONS: excel written & verbal commu skills w/ broad range of people; ability to coord work of others; work w/ minimal supvn; use good judgment & exercise discretion; several yrs exp preferably in univ environ; tech typing exp desirable.; C05; $1670-2106. APPLY AT SLAC

95093-JM (JCC:2562) SECRETARY III: Genl & tech typing, dictation, schedule mtgs & appts; filing; prep reports & memos generated by engrs & supvrs; inventory control of klystrons; reconciliation of physical inventory; put klystron data into computer; keep attendance records, leaves of absence & time cards of dept personnel; QUALIFICATIONs: high sch'l & business training or equiv; several yrs related offc exp; familiarity w/ data processing & computer tech desirable; knowl of acctg methods desirable; typ 60-7 s/h of 80-100.; B14; $1440-1514. APPLY AT SLAC

94636-JM (JCC:6532) LAB MECH SUPT: Respon for overall planning, organizing & initiation of work to be performed for multi-shift operation; respon for activities of 18 to 35 machinists; apply current state-of-the-art tech for machining practices & advanced machine tools in market place incl CNC & EDM; respon for reviewing & interviewing employment applications & applicants incl selection in hiring; solve personnel problems; respon for recommendation for capital machine tool acquisitions & expendable tools; consult w/ engrs & physicists; perform spot inspection; give guidance to machinists; QUALIFICATIONS: AA engrg courses bkground or equiv; extensive exp in all phases of machine shop practices & proven exp in mgmt attributes; ability to teach, guide & train; ability to provide performance appraisals, & understand & implement AA goals when applicable.; S20; $2795-3750. APPLY AT SLAC

95441-JM (JCC:8880) Civil Engineer: Design, develop schedules, write specifications, make cost estimates & coord all phases of major construction projs; inspect field work; design & evaluate change order requests; QUALIFICATIONS: BS in Civil Engrg (Structural); several yrs related exp in civil/structural designing & proj engrg; must have demonstrated ability to coord all phases of a construction proj which incl mechanical, electrical, civil/structural, specifications, scheduling & cost estimating; prior exp as a drafter, designer & checker of civil/structural projs required; prior exp in inspection & change order negotiation desirable.; C99; $2800-3800. APPLY AT SLAC

93837-JM (JCC:2462) OFFICE ASST III: Respon for ensuring delivery schedules in contracts are met; advise requisitioners on status of orders; reconcile delivery receipts; prep shipping documents, discrepancy reports, etc; monitor rentals; type & perform other misc duties; QUALIFICATIONS: high sch'l or equiv plus some exp in purchasing environ, acctg or related; knowl of purchase orders, packing slips & shipping documents; ability to work effectively under pressure; legible handwriting; effective commu; accuracy in filing & other clerical duties essential; exp in detail work; typ 35-40.; B11; $1246-1310. APPLY AT SLAC

94933-JM (JCC:7886) LABORER: TMS Unit; genl labor serv such as moving furniture, eqpt, mat'ls, etc; operate eqpt for excavation & trenching, such as jack hammers, tampers, shovel, pick, etc; may drive trucks or forklifts; may be assigned to crafts group to help & cleanup; related exp required or willingness to be trained; ability to handle some heavy type work; able to qualify for gov't driver's license.; A16; $1241. APPLY AT SLAC

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, April 19, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Nonexempt

40378-BP (JCC:2562) SECRETARY III: Serv as sec to Dir; screen calls & visitors; screening requires an intimate knowl of the Lab; screen mail & handle complex appt calendar; heavy dictaphone & word processing; able to compose memos & answer simple corresp; editing skills & statistical ability; also serv as Conference Administrator for the Lab; handle all admin matters for annual Users Conf & over the next 2 yrs 3 important International Conf which will center around the Lab; QUALIFICATIONS: typ 60; good command of written & spoken English; knowl of word processing, Wylbur & spires helpful; excel typing & transcription abilities essential; send appl/resume to K. Cantwell, SSRL, SLAC Bldg 120.; B14; $1440-1514.

33200-PM (JCC:2596) SECY II-SPEC: 50%; receptionist/sec in Neurology Dept; answer phones; transcribe patient-related dictation & corresp; typ manuscripts; sort & distribute mail; order & maintain offc supplies; maintain files; act as a float to fill in for other secs in their absence; work in clinic on a relief basis; asst Admin Assistant as needed; QUALIFICATIONS: typ 65; accurate typing & proofing a must; ability to transcribe fr tape dictation in finished form; med terminology a must; familiarity w/ NBI word processing sys helpful; send appl/resume to Phyllis Friedman, Dept of Neurology, Med Ctr C338 (497-5072).; B12; $655-687.

27051-TC (JCC:6810) SOC SCI RES ASST I: Research & clerical assistance for Sr. Fellow writing books on Soviet foreign policy & East European gov'ts; library searches; reading for content & abstracting mat'l following search; compiling & presenting data in organized, usable, visually pleasing format; offc admin, incl corresp, filing, telephones; QUALIFICATIONS: typ 50; knowl of Russian & East European langs; research exp on politics of USSR & Eastern Europe; familiarity w/ word-processing sys or ability & willingness to learn (training provided); applying lib res & writing skills as well as knowl of genl offc procedures; ability to carry out assignment w/ a minimum of instruction.; B12; $1310-1373.

33724-PM (JCC:2562) SECRETARY III: 7:45-4:30; collects, organizes & reports statistical productivity data for FPP; makes appts for supvr & reminds him of appts or other matters; performs finished form typing on corresp & reports which may require a knowl of specialized computer terminology; participates in drafting, editing, writing, and/or layout of dept'l publications; respon for purchasing offc supplies; filing; sorting mail, etc; QUALIFICATIONS: typ 60; several yrs of sec'l exp, preferably in a med computer, or acctg environ; excel command of spelling, punctuation, syntax, etc; knowl of computerized billing sys & word processing is advantageous; accurate typing; send appl/resume to Mike Bass, 525 University Ave., Suite 400.; B14; $1440-1514.

42652-PM (JCC:1747) LIBRARY SPEC I: 50%; night/wkends flexible as needed; charges out reserve books & other circulating mat'ls; prov genl informa to lib users; issues lib cards; registers patrons; monitors eligibility of the public for access to lib & for borrowing; assts w/ circulation controls based on an electronic accurity sys; interprets & carries out lib policies & procedures; prepares mat'ls to be placed on & off reserve; send out notices; files & maintains records; answer phone inquiries; collects fees & fines & maintains cash records; collects & reports statistics; QUALIFICATIONS: typ 35; ability to work w/ public in an effecient, calm, mature & always courteous manner; exp in interpreting & carrying out detailed, written procedures; phone answering skills needed; able to remain on feet for better part of the day; legible writing & good commu skills nec; lib exp is a major advantage; send appl/resume to Karen Kieffer-Gillette, Jackson Lib - GSB, Room 119, 497-2162.; B10; $595-623.

31155-PM (JCC:1747) LIBRARY SPEC I: 50%, 8-12; performs duties in Filing Unit of Catalog Dept; files in Main Catalog; validates access points; does authority work for heading changes in SUL catalogs; files in Shelf Lists which are arranged alphabeto-numerically; files in Special Collections & Reference Room catalogs; QUALIFICATIONS: typ 30; ability to maintain accuracy & to master a complex set of filing rules; ability to master the file structures of a large, complex research lib catalog; ability to master guidelines for authority work; physical ability to lift heavy catalog trays; ability to remain standing for long periods of time; desirable: prev exp in proof-reading or editorial-type work; some bkground in non-English Western European langs; exp in working w/ lib card catalogs; send appl/resume to Bob Johnson, Green Library, Room 223 (497-3152).; B10; $595-623.

39352-PM (JCC:2078) ADMIN ASST I (N): Admin Asst for Div of Plastic & Reconstructive Surgery, w/ respon to Div Chief as his assistant & executive sec & w/ respon for interpretation & application of admin policies to divisional faculty members & staff; personnel admin, incl supvn of clerical staff; prep & monitoring of div'l budgets; analysis & control of expenditures; involvement in faculty affairs, incl prep of appt & promotion papers; QUALIFICATIONS: typ 65; knowl of Univ, Med Sch'l & Hospital policies & procedures & w/ Stanford acctg & payroll sys; supvry exp desirable; commu skills both verbal & written; college grad or equiv exp; send appl/resume to Lars Vistnes, M.D., NC104 Nurses' Cottage.; B16; $1593-1671.

41741-PM (JCC:2210) ACCOUNTING ASST III: Prov financial analysis & special funds coord for Financial mgr, monitoring & reviewing receivables & payables, assisting & training staff & students when nec; prepares financial reports w/ in-house computer sys; prov detail analysis of expense activity; monitors budgets; assts w/ internal acctg & related computer sys; coord internal records mgmt for operating budget, expense activity & fund activity; assuring accurate record-keeping for permanent repository of Law Sch'l financial records; QUALIFICATIONS: several yrs exp in finance, acctg or closely related field, degree desirable but not required; exp in data processing/personal computers (Apple III desirable); BASIC, VISIALC, SUPERCALC lang ability helpful; 10 key touch; send appl/resume to Emily Chatfield, Room 113 Crown Quad (497-0352).; B14; $1440-1514.

28278-BP (JCC:2454) OFFICE ASST II: Xerox, process mail, process P.O.'s, log in & follow up; receive items ordered, check them in & distribute; file & organize files; maintain offc supplies; maintain inventory control of lab supplies; answer phones & work w/ 7 or 8 sr. staff members & lab personnel; type & learn word processing; gather time sheets; do lib serarch; QUALIFICATIONS: typ 40-45; must be organized & able to deal w/ many people; be punctual & have some exp in offc procedures; send appl/resume to Beverly Yates, AEL 107.; B09; $1130-1189.

22829-BP (JCC:2462) OFFICE ASST III: Respon for Food Serv Dept's accts payable sys; partially respon for Food Serv Dept's Meal Ticket Sys; answer phones; open & distribute mail; some genl receptionist work, etc; QUALIFICATIONS: thorough knowl of standard offc & acctg procedures; requires effective verbal skills & ability to relate effectively to a variety of people; send appl/resume to Kay Gaskin, 765 Pampas Lane.; B11; $1246-1310.

Bargaining Unit

14288-TC (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; 11am-8pm; works fry station during lunch; broiler and/or saute station during dinner; grills steaks; prepares hot & cold food for table service; in afternoon helps preparation of a la carte & banquet foods; QUALIFICATIONS: cooking exp in restaurants, hotels, hospitals, or w/ a catering service required; usually associated w/ at least 2 yrs directly applicable, on-the-job exp.; A12; $6.54/HR.

24650-TC (JCC:5638) LIFE SCI TECH I: 50-75%; 4-5 days/wk; participate in proj analyzing the mitochondrial genome of maize; restriction enzyme digestion & analysis of fragments by gel electrophoresis; assist w/ prep of mitochondria for protein & nycleic acid extraction; characterize mitochondrial nucleic acids & proteins by gel electrophoresis; prep media & sterile supplies required for the above procedures for the mitochondrial working group; primary analytical procedures is gel electrophoresis using agarose of acrylamide gels; QUALIFICATIONS: genl biology-biochemistry lab exp; subcellular fractionation such as differential centrifugation; gel electrophoresis; black & white photography using a Polaroid or 35mm camera; knwol or interest in computers helpful.; A18; $7.50.

43544-AW (JCC:8890) MISC TECHNICIAN: TMS Unit; fixed term 6 mos fr date of hire; shift work; operate the tape station & all other associated peripherals under genl supvn of supvr and/or lead operator; monitor tape consoles for setup procedures; identify unusual problems; prov informa upon request; perform routine operational maintenance on all eqpt; maintain an adequate supply of computer supplies; QUALIFICATIONS: knowl of WYLBUR or an approp text editor; able to work on any of 3 shifts, & overtime as required; able to lift & carry boxes up to 50 lbs; 1 yr of direct operating exp on IBM sys running MVS JES 2; exp w/ tape lib mgmt sys preferred; high sch'l diploma or equiv edu or exp; proficient application & comprehension of English lang & arithmatic skills.; A21; $ 8.08.

43542-AW (JCC:8890) MISC TECHNICIAN: TMS Unit; fixed term 6 mos fr date of hire; shift work; operate the tape station & all other associated peripherals under genl supvn of supvr and/or lead operator; monitor tape consoles for setup procedures; identify unusual problems; prov informa upon request; perform routine operational maintenance on all eqpt; maintain an adequate supply of computer supplies; QUALIFICATIONS: knowl of WYLBUR or an approp text editor; able to work on any of 3 shifts, & overtime as required; able to lift & carry boxes up to 50 lbs; 1 yr of direct operating exp on IBM sys running MVS JES 2; exp w/ tape lib mgmt sys preferred; high sch'l diploma or equiv edu or exp; proficient application & comprehension of English lang & arithmatic skills.; A21; $ 8.08.

Seismic graphics—movies help computers change raw data into subsurface maps

On the screen it looks like a chunk of marbelized halvah, but this computer movie represents a two-mile cube of the earth's subsurface using more than a million bits of data.

As the movie penetrates deeper into the earth, the reflection lines from different types of rocks shift to reveal buried hills, rivers, and other features.

These can be interpreted to indicate niches where oil may accumulate and breaks where earthquake faults are likely to occur.

"We can slice through the three-dimensional data cube in any direction and make a 'movie of it," says Rick Ottolini, the Stanford geophysics graduate student who developed the method.

Ottolini is a member of Prof. Jon Claerbout's Stanford Exploration Project, which analyzes the data from reflection seismology. Geophysicists obtain this data by setting off explosions on the surface of the earth and sea and measuring the sound waves that reflect off underground structures.

Claerbout pioneered the use of computers to analyze the reflections and ascertain what used to be a matter of guesswork. Ottolini's technique animates the computer-processed data.

Movie machines are a timely invention because seismic surveys have collected tremendous amounts of data. Conventional paper plots of such data can be hundreds of feet long and hard to manage.

Scan or focus

The movie machine can rapidly scan the entire data set or focus on a small area of interest. It can compare data from different locations or from other geophysical measurements.

The movies also clarify how computers transform the raw data into subsurface maps. Sometimes a program for the same data is repeated several times with slight changes. A movie made of the results is like the focus knob on a camera and helps choose the sharpest program.

One of the unexpected features of these movies are flows of texture across the screen, like droplets from a waterfall. Previously these textures were considered to be random noise in unanimated seismic images. Now the moving patterns yield more information about the data set.

Seismic graphics is in its infancy. Future machines will provide higher resolution pictures and respond more quickly to the geophysicist's needs. They will make it even easier for the scientist to control the display of data and manipulate the computations that form the images.

As Ottolini says, "Exploring the earth's subsurface is as much fun as playing a video game."—**David Weissmann**

Rental housing

HOUSING AVAILABLE

□ **Beg. June '83:** Arlington, VA, 2BR apt. fully furn., in suburban home, priv. entr., kitchen, frpl, lndry, pool mbshp. Nr. parks, tennis, shops, pub. transp. Minutes to dwntwn D.C. Long or short term rental. Call (703) 524-1513.

□ **July 28 to Aug. 29:** Lovely London hse. fully furn., Chiswick area, nr. transp. Open flr plan, new ktchn, DR, W/D, 3BR/1BA, garden. $1200/mo. Write Mrs. Jack Abramsky, 13 Van Brugh Rd., London W41 DB, England, or call 011-441-995-2747 or (415) 649-6049.

□ **Beg. Aug. '83:** Fully furn. 3BR/2BA Crescent Park, Palo Alto hse. $900/mo. Call 328-2677 (eve).

□ **Jan. to June '84:** Peter Coutts condo, 2BR, study, fully furn., pool, gar., 1450 sq. ft. Bike to campus. $1050/mo. Call (415) 493-6273 (eve or wknd).

□ **Sept. 1, '83 to end Aug. '84:** Two fully furn. Palo Alto hses, 3BR/2BA, nr. Stanf., shops, schls. Children welcome, no pets. $975 & $1125 per mo. incl. water, gardener. Call Lindzey, (415) 948-9097.

□ **Aug. '83 to July '84:** Nicely furn. 3BR apt. in Jerusalem. Good location. EXCHANGE for similar in So. Palo Alto. Call Prof. Larry Cuban, 497-1483 (day), (415) 328-6540.

□ **May 13 to July 1:** Oak Creek apt. 1BR, quiet, fully furn. Gym, pools, tennis. Call 321-0771 (eve).

□ **April 18 thru June 18:** Furn. rm, share bath, lndry, ktchn. priv. Summer optional. $200/mo. Call 493-8338.

□ **June 18 to Aug. 28 (flex):** Fully furn. campus hse, 4BR/2½BA, FR, DR, piano. Lrg. fenced yd. $1500/mo. incl. util., water, cleaning, grdnr. Nonsmokers, no pets. Call 493-8874 (day or eve), (408) 279-5683 (day).

□ **NOW:** Rustic cabin, Arnold, Ca. Highway #4 nr. Bear Valley Ski. Wooded location, fully furn., sleeps 9. Inexpensive, short-term rentals. Call 493-0997.

□ **June 13 to Sept. 5:** Lrg. furn. 2-story hse, 3BR/2BA, LR, den, lrg. ktchn, W/D, enclsd yd., cov. patio, BBQ. Nr. park, tennis, shops. 10 min. bike to campus. $900/mo. + util. Call Dekker, 321-7963.

□ **Beg. Mid-April:** Furn. studio apt., Oak Creek. 5 pools, jacuzzi, sauna, steam, gym, tennis, view, cov. prkng. Very nr. campus. Call 497-4939 (day), 857-1885 (eve & wknds).

□ **Aug. to Dec. '83 (flex):** Fully furn. 4BR/3BA hse (1BR/BA w/sep. entr. & rentable), study, FR, 2 patios, 2 frpl, AEK, W/D. 5 min. walk to campus ctr. Call Nancy Packer, 857-0908.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, commun. ctr. Prof. going on sabbat. $1500/mo. Call 325-1709.

□ **May 30 thru June 24:** Campus hse, 2BR/2BA, pool. Low rent in exchange dog care. Nonsmokers. Call 857-9438, 497-2473 (day).

□ **June 18 to Aug. 28, '83:** Fully furn. campus hse, 4BR/2½BA, FR, DR, piano, lrg. fenced yd. Will EXCHANGE for London hse/flat or RENT for $1500/mo. incl. water, util, wkly clean, grdnr. Nonsmokers, no pets. Call 493-8874 (day or eve), (408) 279-5683 (day).

□ **June 20 to beg. Sept.:** Fully furn 4BR/3BA campus hse, lrg. study, FR, LR, pool, spa. $1500/mo. incl pool serv., grdnr. Call J. Evans, 493-3695.

□ **Beg. June (3 mos. to 1 yr.):** Fully furn. 2BR/2BA hse, W/D, DW, AEK, pool, grdnr. In Los Altos. $1000/mo. Call 968-7410.

□ **NOW:** Room in spacious 2BR Palo Alto apt. Piano, ktchn facil., W/D. $300/mo. Call Julie, 858-0887 (eve), (408) 252-1822 (day).

□ **Beg. May 1 to end Aug. (flex):** Fully furn. 1BR/1BA Pearce Mitchell adult condo, grnd flr. $675/mo. incl. util. (excpt phone). Call 857-9657.

□ **Early May to end July:** Dreamy studio cottage, fully furn., nr campus. Ideal for visit. female prof. or student. $200/mo. Call Ingrid, (415) 574-6151, 9 a.m. to 3 p.m.), 323-6201 (eves, wknds).

□ **June 14 to Sept. 15:** Old Palo Alto furn. 2BR/1½BA hse; secluded garden, bike to Stanf. $750/mo. incl. grdnr + water. Call 321-4614.

□ **July '83 to June 30, '84 (flex):** Berkeley hse, 5BR/3BA, LR, DR, library, frpl w/yr. of wood, piano, 1 acre, lush grdn, auto water, grdnr, sec. system. $1500/mo. Call (415) 483-8484 (day), (415) 548-1735, eve & wknd. Will also consider xchnge for Stanf. hse.

□ **Beg. Apr. 15:** Attrac., immac. 2BR/1BA hse, all appl., carpets, lge. fenced yd. Nr. Sunset mag., 3 mi. to campus. Nonsmokers, no pets, $800/mo. incl. water + dep. Call B. Lucas, 326-7195 (day), 321-0287 (eve).

□ **June, July, Aug.:** Portola Valley exec. 4BR/2BA fully furn. hse, nr. Stanf. Walk to tennis, pool. $2000/mo. Call (415) 326-5270, 9:30 to 3 p.m., M-F.

□ **Now:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **NOW:** Attrac. furn. hse, 2200 sq. ft., 4BR/2½BA, w/study, DR, FR, 3 car gar., patio. Incl. ktchn-ware, linens, 2 TV, grdnr. Yr. lease. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call (415) 965-1302 (eve).

□ **July 1 to Sept. 30:** Fully furn. 3BR/2BA hse, Crescent Pk, Palo Alto. Patio, grdn. Cul-de-sac. Walk to park, pool, tennis, schl. $1250/mo. Call 321-1142 or 497-4364 (day).

□ **June 15 to Aug. 15 (flex):** Fully furn. 1BR apt, piano, pool, sauna, sec. gate. 1 mi. to Stanf. Nonsmoker, female, no pets. Util. pd. $1100 for 2 mo. + refundable $200 sec. dep. Call Sheri at 858-0235.

□ **Beg. April 1:** Prof. woman or female student to SHARE furn. Sharon Hgts twnhse; patio, pool. Close to Stanf., #280. No pets, nonsmoker. $450/mo. Call 854-5893.

□ **May 30 thru June 24:** Campus hse, 2BR/2BA, pool. Low rent in xchng dog care. Nonsmokers. 857-9438, 497-2473.

□ **NOW:** Modern twnhse, Menlo Pk. 3BR/2½BA, AEK, air-cond, carpeted, lots of closet space. Walk to SRI, train, dwntwn. $1000/mo. Call 328-0606.

□ **June 7 to July 16:** Fully furn. 4BR/2BA hse in so. Palo Alto. Back yd. opens to Mitchell Pk. Call Bill, 497-1415 (day), or 494-1921 (eve).

□ **Sept. to June '84:** Sea & ski: S. of France nr. Cannes, Grasse. 16th c. 3BR stone hse, modern comforts. Call (415) 858-2590 or (415) 326-5521.

□ **July 27 to Aug. 31:** Spac. Victorian hse, 4BR/3BA, gourmet ktchn, DR, FR, lrg. yd. Nr. dwntwn P.A., Rinconada Pk, pool, tennis, libraries. Call (415) 328-6794 (eve).

□ **Sept. 1, '83 to July 1, '84:** On-campus furn. hse, 5BR/3BA, $1400/mo. or can be 3BR/2BA, $1200/mo. Nonsmokers, no pets; grdnr, water & cat incl. Call 326-3842 to 6 p.m.

□ **Late Aug. '83 to late March '84:** Campus hse, fully furn. 3BR/3½BA, guest/FR, DR, study. $1400/mo. incl. grdnr. Call 493-0777 or 497-1941 (day).

□ **Dec. 1, '83 to Aug. 1, '84:** Spacious 3BR/2BA hse; FR, new AEK, study, pool, spa; 1/3 acre in Los Altos. 20 min. to campus. $1400/mo. incl. grdnr. Call (415) 966-8242, eve.

□ **June 11 to Aug. 25, '83:** Fully furn. hse, 3BR/2BA, FR, baby grand, 2 car gar., no pets. $1500/mo., payable in advance + $200 clean. dep. Call Phoebe Rowles, 9415) 851-1940.

HOUSING NEEDED

□ **Academic Year '83-'84:** Visit. scholar, wife, nonsmokers seek medium size hse on campus. Poss. xchnge for hse in Bethesda, Md., 10 min. to NIH. Call Gurley, 857-0169.

□ **Aug. '83 to June '84:** Father and son (13) seek furn. hse or apt. while on sabbatical at SLAC. Prefer bike dist. to Stanf. Call COLLECT (602) 323-8283 (eve).

□ **Beg. June 1, 2 wks to 4 mos:** Resp. prof. cpl., married, will care for pets, plants & your home all or portion of stated period. Call Jim (415) 393-8688 (day), (415) 346-8122 (eve).

□ **NOW:** Stanf. MBA, female, seeks unfurn. 1BR apt. or cottage. Resp., nonsmoker. Secure nghbrhd. Refs. avail. Call B.J., 497-4473 (day), (408) 257-1379 eve).

NOW: Mature, prof. cpl. seek 3BR/2BA unfurn. hse within 5 mi. of Stanf. Lease for 1 yr. Nonsmoker, no children, no pets. Call 854-7162 (eve).

□ **Mid-June to mid-Aug.:** SLAC summer visitor, spouse, 2 girls (10 & 6) seek 2-3BR hse. Flex. time period. Nonsmokers. Call Lela Sarnat, 854-6805 or Meadows, (513) 871-7756 COLLECT.

□ **July to Dec. '83:** Visit. scholars + 2 children (11 & 14) seek furn. 3BR hse on or nr. campus. Call Dr. S. Levine, 497-5781 (day).

□ **Nov. 15, '83 to June '84:** Furn. hse. or apt. for cpl. with 2-yr-old girl & grandmother. Nr. shops, parks, etc. desirable. Call Gwen Bowen, SLAC Hsng. Offc, 854-3300, x3111.

□ **July, August:** 17-yr-old French woman, half way thru Baccalaureate, seeks July, Aug. home stay w/American family. Interested in exchange from American student to follow her Calif. visit. Call Gwen Bowen, 854-3300, x3111 or 321-3803 (eve).

□ **Summer '83:** Harvard Law student wants to hsesit or sublet San Francisco apt. for summer. Call Kathy, (415) 329-1136, eves & wknds.

□ **July 1 for 1 to 4 mos:** Reliable Stanf. staff seeks hsesit for summer, returning from east. Nonsmoking cpl, no children, will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write: David Mark, M.D., 20 Walnut Hill Rd., Chestnut Hill, MA 02167.

□ **Mid-June to mid-July '83:** Careful tenant English woman seeks rent or hsesit apt. or hse on or nr. campus. Staying longer than planned. Call H. Himmelweit, 321-2052 (day) or 321-8979 (eve).

□ **Beg. Aug. 1:** New Stanf. prof. seeks long term rental, 2BR apt. or hse., Palo Alto, Stanf. area. Excellent refs. Call COLLECT (617) 492-5154.

□ **June 1 to Sept. 30, '83 (flex):** English prof. on sabbat. seeks campus hse. RENT/EXCHANGE attrac hse. N. Oxford, Engl., 3BR, LR, grnd. piano, DR, fully equip. ktchn, grdn, 1 mi. to Univ. Owners at Caltech. Arr. Stanf. summer '83. Call Neville Robinson, (213) 356-4728 (day), (213) 449-0399 (eve).

□ **July 1 thru Aug. 18, '83 (flex):** Visit. prof, wife, child seek furn. 3+BR hse on or nr campus. Call Michelle or Susie, 497-2218 (day).

□ **June, July, Aug.:** Architect & wife, nonsmokers, responsible, owner of home in S.F. seek fully furn. hse in Palo Alto area. Architect. & maintenance serv. nego. for HOUSESIT. Call (415) 567-0722.

□ **Beg. Sept. 9 mos. to 1 yr.:** Stanf. Humanities Ctr. Fellow & wife seek furn. 1BR apt. nr. campus in secure, quiet nghbrhd. Call Sue Asch, 497-3054 (day).

□ **Beg. Aug. (flex.) for academic yr:** Visit. scholar, wife, 1 child seek 2-3BR furn. hse. or apt. nr campus. Nonsmokers, clean living, home-owners. Will care for plants & pets. Local refs. Call (314) 875-2858 COLLECT, eves.

□ **July & Aug.:** Resp. mature cpl, no pets, nonsmokers, former Burlingame homeowners, seek peninsula hsng. Excellent area refs. Hsesit or rent. Write Nappan, 9506 Granada Dr., Sun City, AZ. 85373 or call (602) 972-8730.

□ **Sept. 15 to Mar. 31:** German prof, wife, 15 yr. old son, nonsmokers, seek furn. hse, 2-3BR on or nr campus. Call History Dept. Chrman. James Sheehan, 497-2651 (day), 321-7536.

□ **June thru Aug.:** Visit. prof. needs 4BR/2BA furn. hse. Call Veinott, 497-4094 (day).

□ **Sept. '83 to Dec./Jan. '84:** Visit. prof. with 2BR hse in Rhode Is. seeks to rent or EXCHANGE furn. 1BR apt. or small hse. in Stanf. area. Write or call: R. Marsh, Sociology Dept., Brown Univ., Providence, RI 02912, (401) 272-0197, AM or after 6 PM.

□ **June 1 to Aug. 31 (flex):** Visit. profs. need 2BR furn. apts. or hses to rent or sit for 1 or 2 summer mos. Nonsmokers, Stanf. refs. Call COLLECT (201) 232-4913.

□ **May 7 to Aug. 1; June 17 to Aug. 21:** Institute for Humane Studies needs furn. apts. for visit. profs. Nr. Stanf. Call Pat Dunbar, 323-2464, 7 AM to 3:30 PM.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

New England Ragtime Ensemble to play works by Scott Joplin, Eubie Blake

The Grammy Award-winning New England Ragtime Ensemble will perform at 8 p.m. Saturday, April 23, in Memorial Auditorium under the auspices of the Lively Arts at Stanford.

The program will feature works by Scott Joplin, Eubie Blake, Jelly Roll Morton, and others.

Formed in 1972 at the New England Conservatory by then-president Gunther Schuller as part of a Romantic American Music Festival, the Ragtime Ensemble has been an instrumental part of the recent Ragtime revival.

Their repertory has expanded from the eight pieces by Scott Joplin originally recorded for the Festival, to include works by other ragtime masters and early jazz greats. The Ensemble now has three recordings and hundreds of performances to their credit.

The ensemble has played at the Tanglewood, Blossom, Ravinia, Ambler, Wolf Trap, Meadow Brook, and other summer festivals, at major universities and arts centers coast to coast, and at Lincoln Center, Carnegie Hall, and the Kennedy Center.

They have been featured in two public television specials, and have made two European tours, in addition to appearances at the White House and at the Inauguration of President Carter.

In 1978, they took a month-long State Department-sponsored tour of the Soviet Union.

The 17 ensemble members who will play at Stanford all have graduated from the Conservatory and are pursuing careers as freelance musicians.

For ticket information, call Tresidder Ticket Office, (415) 497-4317, BASS, and other Bay Area ticket agencies.

Bernstein to talk on industry ties

"The University and Knowledge: Who is Served? The Relationship of the University to Defense, Industry, and Economic Growth" is the subject of a lecture by Prof. Barton J. Bernstein, history, at noon Tuesday, April 19, at Bechtel International Center.

The talk is one of a series planned by the International Center, with those during spring quarter addressing the responsibilities of the academic sector toward world conflict and poverty, among other issues.

Bernstein received his bachelor's degree at Queens College in New York and his Ph.D. at Harvard. He taught at Queens College and at Bennington College before coming to Stanford, where he has received the Dean's Award for Excellence in Teaching.

Luncheon tickets are available at a cost of $2.50 one week before the event at the I-Center office or at the door as they last. Brown baggers are also welcome at no charge. For more information about this and other programs please call 497-1831 or stop by the I-Center.

Michels to open geothermal talks

The Stanford Geothermal Program seminars will be held at 1:15-2:30 p.m. Thursdays in Room 113, Mitchell Building. The schedule follows:

April 14—"Carbonate Chemistry in Geothermal Wellbores" by D. E. Michels of Republic Geothermal.

April 21—"Pressure Transient Analysis of Reservoirs with Linear or Internal Circular Boundaries" by A. Sageev of Stanford University.

April 28—"Reinjection Testing in 1982 in Svartsengi, Iceland" by J. S. Gudmundsson of Stanford.

May 5—"Production Decline Caused by Deposition in Wellbore" by E. E. Granados of Stanford.

May 12—"Volcanic and Seismic Hazards in Geothermal Areas" (tentative title) by C. G. Bufe of the U.S. Geological Survey.

May 19—"Deep Drilling into the Salton Sea Magma-Hydrothermal System" by W. A. Elders, UC-Riverside.

May 26—"Evolution of the Geothermal System in the Lassen Volcanic National Park Area" by S. Ingebritsen of Stanford and M. L. Sorey, U.S. Geological Survey.

Hart to deliver Zale lecture

U.S. Senator Gary Hart, Colorado Democrat, will give the third annual Zale lecture at 7:30 p.m. Friday, April 22, in Kresge Auditorium at Stanford.

Sponsored by the School of Humanities and Sciences, his free public talk will concern "Arms Control: The Ultimate Issue."

Founder and cochair of the Congressional Military Reform Caucus, Hart served as Congressional adviser to the SALT II negotiations. He is the author of policy initiatives on "The Case for Military Reform" and "A New Arms Control Agenda," among others.

He is a member of Senate Committees on Armed Services; Budget; and Environment and Public Works.

The Zale lectureship was created by gifts from a Dallas family in honor of Morris and Edna Zale, founders of the nationally known jewelry firm.

Tsongas speaks on arms race

Senator Paul Tsongas, D-Mass, member of the Senate Foreign Relations Committee, will speak on "The Importance of Public Involvement in Arms Control" at 12 noon Monday, April 18, in Terman Auditorium.

Tsongas is among the leaders of the opposition to the nomination of Kenneth adelman for director of the Arms Control and Disarmament Agency. Last year, Tsongas called for the resignation of Edward Rowney, U.S. ambassador to the START talks, and has successfully led the effort to have the Rowney memo released. He describes the INF talks on missles in Europe as a battle for the hearts and minds of the Europeans.

Tsongas was a vigorous proponent of the SALT II Treaty on the Senate floor. He was an original cosponsor of a freeze resolution in the Senate last year, and he calls for a negotiation to ban all weapons from space.



Student soloist award winners, l to r: Donna Lee, Chris Christensen, Cristina Ruotolo, and Eric Kujawsky.

Stanford Symphony, Chamber Orchestra concert features two student soloists

The Department of Music will present the Stanford Symphony and Chamber Orchestras, featuring two student soloist award-winners, at 8 p.m. Thursday, April 21, in Dinkelspiel Auditorium.

The Chamber Orchestra, under the direction of doctoral conducting candidate Eric Kujawsky, will perform Mozart's *Violin Concerto No. 4 in D Major* with violinist Cristina Ruotolo, and *Suite from Concertos 2 & 3 for double orchestra* by Handel arranged by Kujawsky.

The Symphony Orchestra, under the direction of doctoral conducting candidate Chris Christensen, will perform Chopin's *Piano Concerto in F minor* with pianist Donna Lee.

Andor Toth, director of the two orchestras, is on sabbatical this quarter.

Cristina Ruotolo is a sophomore at Stanford majoring in music. She soloed with the Palo Alto Chamber Orchestra when a senior at Gunn High School in Palo Alto, and has also soloed with the Junior Bach Festival and the Palo Alto Junior Chamber Orchestra. She studies violin at Stanford with Gennady Kleyman.

Donna Lee is a senior at Stanford majoring in Human Biology prior to entering medical school. She, too, has appeared with the Junior Bach Festival, and in 1976 was one of three winners of the San Francisco Conservatory concerto competition. In 1977 she soloed with the California Youth Symphony, and in 1976 and 1979 was the San Francisco finalist in the Young Musicians Awards Competitions. She studies piano at Stanford with Naomi Sparrow.

Kujawsky, a native of Los Angeles and a UCLA graduate, conducted the Los Angeles premiere of the *Berlin Requiem* by Kurt Weill, as well as concerts by the UCLA Symphony Orchestra and the UCLA Dance Company. Last quarter he conducted Bartok's *Violin Concerto* with soloist Andor Toth.

Christensen attended the San Francisco Conservatory and graduated from UC-Berkeley. He has conducted the San Francisco Ballet in performances of *The Nutcracker Suite*, including portions for this year's 50th anniversary gala performance. Christensen was formerly music director of the San Francisco Dance Theater and Peninsula Chamber Players.

Tickets for the April 21 concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door. Advance purchase of tickets is strongly advised. The Music Guild will serve refreshments.



Jerzy Grotowski, leading figure of avant-garde theater, will lecture on "Theater of Sources" at 4:30 p.m. Wednesday, April 13, in Little Theater. The lecture is open to the public without charge.

Students to give chamber concert

The Stanford Department of Music presents undergraduate and graduate students in a free program of chamber music at 8 p.m. Sunday, April 17, in Tresidder Lounge. Violin/viola teacher Gennady Kleyman, violist with the San Francisco Symphony, is coaching the students.

Their program will include a Trio Sonata by Bach; a Flute Quartet by Mozart; Beethoven's *Serenade* for flute, violin, and viola; a Schubert string trio; and Ibert's *Deux Interludes* for flute and harp.

Performers will be Dan Cher, violin; Shelley Whitehouse, flute; Alex Strong and Linda Schwetz, viola; Diane Harris, cello; Camilla Passarelli, harp; and David Achenbach, harpsichord.

Philip Glass Ensemble will feature *The Photographer* in April program

The Philip Glass Ensemble will perform at 2:30 p.m. Sunday, April 17, in Memorial Auditorium, Stanford.

The program will feature two pieces from Glass' new chamber opera, *The Photographer*, "A Gentleman's Honor" and Act III. *The Photographer* is a three-act music theatre piece about Eadweard Muybridge, a pioneer of modern photography. It debuted in June, 1982, at the Royal Palace in Amsterdam for the Queen of Holland. (A recording of *The Photographer* was recently released by CBS Masterworks.)

In addition, the program will also include "Rubric" and "Facades" from *Glassworks* (1981) and "No. 15" from *Koyaanisqatsi* (1982).

Glass, a pioneer in modern music, composes music for opera, theater, dance, film, chorus, and his own ensemble. He is a graduate of the Juilliard School in New York and has received numerous commissions and awards, including a composer-in-residence grant from the Ford Foundation, a Rockefeller Fellowship, and a Fulbright Scholarship which enabled him to study with Nadia Boulanger in Paris.

Glass' most celebrated collaboration was with noted American stage director/designer Robert Wilson on the opera *Einstein on the Beach*. *Einstein* premiered at the Avignon Festival in 1976 and went on to tour throughout Europe. In November 1976, two special performances of the work were given at the Metropolitan Opera in New York City.

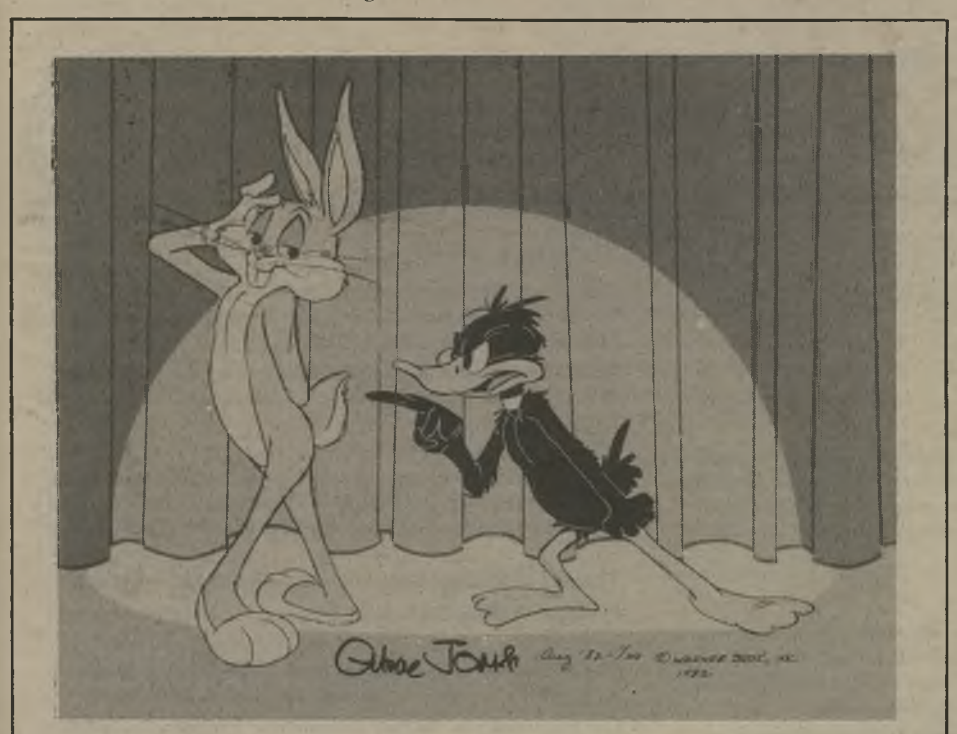
Glass is a CBS Masterworks recording artist, the first composer to be offered a contract since Aaron Copland.

Glass' first film score was *North Star*, for the film, *North Star: Mark Disuvero*. He also wrote a full score for the film, *Koyaanisqatsi* which premiered at Radio City Music Hall on October 4, 1982, as a New York Film Festival selection.

Members of the ensemble include Jon Gibson, flute, soprano saxophone; Philip Glass, synthesizer; Jack Kripl, flute, piccolo, soprano saxophone, baritone saxophone; and Kurt Munkacsi, live sound mix.

Dora Ohrenstein, soprano, emulator; Richard Peck, flute, alto saxophone, tenor saxophone; Michael Riesman, piano, keyboards, bass synthesizer; and Paul Suits, keyboards, are also members of the ensemble.

The Philip Glass Ensemble is presented by the Lively Arts at Stanford. For ticket information call Tresidder Ticket Office, (415) 497-4317.



Bugs Bunny and Daffy Duck.

Original cel paintings shown in April

Original animation cel paintings of cartoon characters will be the subject of an exhibit and sale Thursday and Friday, April 14-15, in the Tresidder second floor lobby.

The sale highlights the work of Academy Award winners Chuck Jones and Friz Freleng, both veterans of the golden era of cartoons at Warner Bros.—the 1940s. Included are characters like Bugs Bunny, Daffy Duck, Tweety, Sylvester, Yosemite Sam, Mickey Mouse, and others.

The cel paintings have become a popular item for collectors.

Accidents and injuries

Accidents and Injuries Occurring During Week of Apr. 4-8

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	1	0
Cut by sharp object	1	0
Pinched, squeezed, crushed	1	0
Lifting improperly	1	0



Raya Dunayevskaya

Rosa Luxemburg topic of lecture

Philosopher, feminist, and Marxist scholar Raya Dunayevskaya will lecture at 8 p.m. Thursday, April 21, in History Corner Room 2, on the occasion of the centenary of Karl Marx's death, and the publication of her latest book, *Rosa Luxemburg, Women's Liberation, and Marx's Philosophy of Revolution* (NJ: Humanities Press, 1982).

Her lecture on "Women as Thinkers and Revolutionaries: Rosa Luxemburg and Others," will explore the theories of Luxemburg, Sojourner Truth, as well as ideas emergent from historical events such as the 1929 Nigerian Igbo Women's War and the 1979 Iranian revolution.

Dunayevskaya, secretary to Leon Trotsky during his exile in Mexico, is the founder of Marxist-Humanist philosophy in the U.S. A microfilm edition of her Archives, "The Raya Dunayevskaya Collection," is held in the Hoover Institution. She has spoken to audiences as diverse as West Virginian coal miners and the Hegel Society of America.

The lecture, sponsored by the Stanford Program in Structured Liberal Education, is open to the public. For further information, please call 497-4205.

Raskidus Roots reggae opens STARTS series

Raskidus Roots Connection, a popular Bay Area reggae band, will open the STARTS (Student Arts at Stanford) spring series at 8 p.m. Saturday, April 16, in the Tresidder Union Lounge.

Jon "Raskidus" Cornelius drew the attention of Jamaican audiences with his hit single, "Exile Song," before charming the Bay Area several years ago with his nine-member group. Tickets are $5.

Alive!, the all-female jazz ensemble, will perform at 8 p.m. Saturday, April 23, in the Tresidder lounge.

The five women perform pop/jazz music with a feminist message on percussion, acoustic bass, piano, drums, and voice. The concert, cosponsored by STARTS and the Women's Center, will be $8.50 general admission ($6.50 with Stanford ID).

Rock guitarist **Jorma Kaukonen**, formerly of Jefferson Airplane and Hot Tuna, will appear in solo concert at 8 p.m. Saturday, April 30, in the Tresidder lounge.

Kaukonen left the Airplane in the early '70s and formed Hot Tuna with bassist Jack Cassady. After eight albums and years of performing, he launched his solo career. Tickets are $8.50 general admission ($6.50 with Stanford ID).

Tickets are available at the Tresidder Ticket Office or through BASS outlets. For more information on the series call Annie Mudge or Jean Martin, 497-9671

Baroque music concert April 16 in Annenberg

The Stanford Department of Music will present a free program of Baroque chamber music, featuring the recorder, at 8 p.m. Saturday, April 16, in Annenberg Auditorium.

Members of the trio are music graduate students Judith Linsenberg, recorder, and Patricia Halverson, viola da gamba. Accompanying them will be well-known local harpsichordist Jonathan Salzedo.

Their program will include sonatas by Bach, Handel, and Corelli; suites by Dieupart and De Lavigne; and *Daphne Variations* by Van Eyck.

Linsenberg is working toward her Ph.D. in musicology and early music. She graduated from Princeton with a degree in art history, then studied recorder in Holland with Jeannette van Wingerden and Ricardo Kanji, and baroque oboe with Bruce Haynes and George Houle.

Halverson graduated from Brandeis and is a doctoral candidate in early music. She has performed on viola da gamba, as well as a variety of renaissance and baroque wind instruments, throughout the U.S. and abroad.

Salzedo studied mathematics at Oxford and harpsichord with Valda Aveling at Trinity College in London. He was founder and director of the Albany Consort in London, where he also played with the Praetorius Consort, London Vivaldi Ensemble, Vincento Ensemble, and recorded for BBC. Currently he tunes, builds, and maintains harpsichords.

Glasgow, Dublin films at I-Center

The British Isles capital cities of Glasgow and Dublin will be featured in the Other Cultures Film Series at 7:30 p.m. Thursday, April 14, at the International Center. The two films are from the Cities of the World Film Series.

R. D. Laing, a noted psychiatrist and poet, narrates the film as he leads the viewers through "Glasgow," a city of stark, clashing contrasts of "commerce, industry, learning and people, violence and tenderness and great warmheartedness."

In "Dublin," the film director and raconteur John Huston serves as an entertaining and at times eccentric guide to the Irish capital. Says Huston of the citizens of Dublin. . . they "believe that the worst is inevitable and must be ignored."

The films are free to the public though a donation of 75 cents will be requested at the door to defray the cost of the films. Enjoy "Cafe" at the I-Center after the films for homemade pastry and coffee.

Sharp talk on reading

Dr. Stanley Sharp will address the Stanford Faculty Women's Club at 1 p.m. Tuesday, April 19, in the Meyer Library Forum Room on "Why Johnny Still Can't Read."

All members of the Stanford community are welcome.

Sharp has spent 10 years in research on various methods of teaching reading, culminating in a book on his ideas on the best method.

Lydian Ensemble to present 17th, 18th Century music Tuesday in Dinkelspiel

The Lydian Ensemble will perform vocal and instrumental music of the 17th and 18th centuries at 8 p.m. Tuesday, April 19, in Dinkelspiel Auditorium at Stanford.

The ensemble's program will include works by Roland de Lassus, three toccatas for lute by Kapsberger, canzona *L'Altera* by Frescobaldi, *Lagrime mie* and *Donna maesta* by Barbara Strozzi, and songs and instrumental pieces from Elizabethan-Jacobean England by Dowland, Lawes, Robinson, Hume, and Cutting. Also on the program will be three arias by J.S. Bach.

Members of the ensemble are Randall Wong, countertenor; Margaret Panofsky, viol; and Kent Underwood, lute and theorbo. The concert is presented by the Department of Music and the San Francisco Early Music Society.

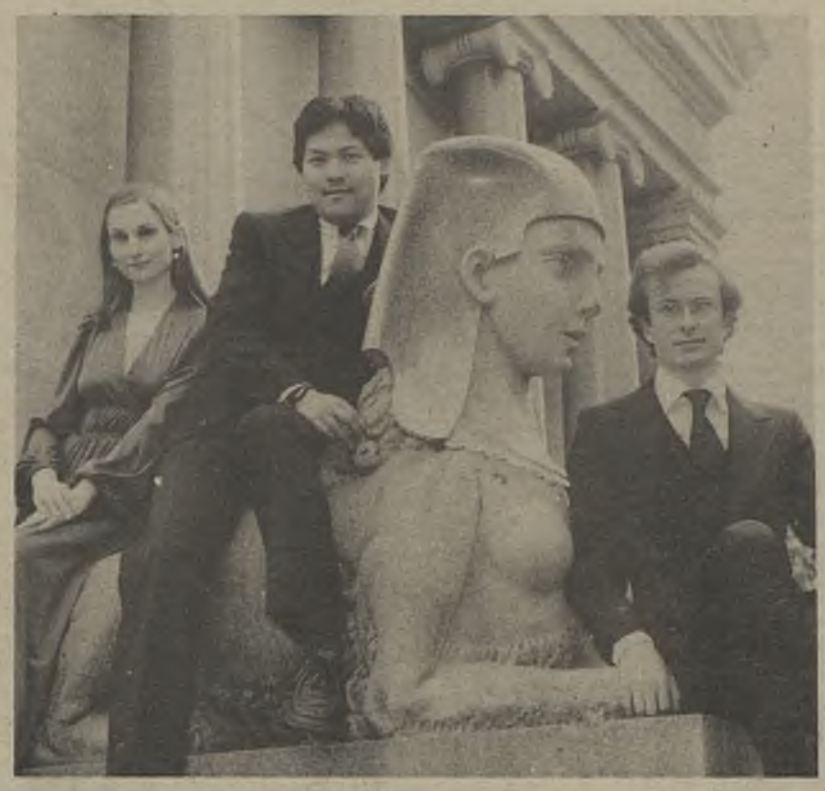
All three musicians are well-known virtuosos in the area. Wong is a founding member of the highly acclaimed vocal ensemble *Chanticleer*, which took one of the three prizes awarded to ensembles at the 1981 International Early Music Competition in Brugges, Belgium.

Robert Commanday, music critic for the *San Francisco Chronicle*, has called him "an exceptional male soprano." The *Peninsula Times-Tribune* said "his vocal control is unbelievable, covering the gamut from pure, lyric soprano to sobbing basso."

Panofsky received her B.A. in music from Stanford and an M.M. from the New England Conservatory. She has been a member of many early music groups, including the New England Consort of Viols, the San Francisco Baroque Ensemble, La Corte Musical, Consortium Antiquum, and the Arcadian Ensemble.

Underwood is currently completing his Ph.D. at Stanford in music. He graduated from the San Francisco Conservatory of Music, where he studied classical and baroque guitar with Michael Lorimer. Underwood has appeared in Italy and the U.S. with the Complesso Barocco under Alan Curtis, and also performed with the San Francisco Chamber Opera, California Bach Society, and San Francisco Contemporary Music Players. Last year he was a visiting artist at the Idyllwild School of Music and the Arts.

Tickets are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door.



Margaret Panofsky, viol, Randall Wong, countertenor, Kent Underwood, lute and theorbo

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., April 13, to cover the week of Mon., April 25, through Sun., May 1.

Wednesday, April 13

Department of Classics T.B.L. Webster Memorial Lecture: "Rhetoric and Passion in Latin Literature" by Michael Winterbottom of Worcester College, Oxford. 8:15 p.m. History Corner, Room 205.

MONDAY, APRIL 18

Biological Science Special Seminar: "Mechanism of Induced Synthesis of Colicin E1," by Dr. Atsushi Nakazawa, Dept. of Biochemistry, Yamaguchi University, Japan. Noon. Room T-175, Herrin Hall.

Numerical Analysis Seminar: "Calculation of Vibrational Energy Levels in H3," by Gregory Doherty, Univ. of Wollongong. 4:15 p.m. Room 380c, Math Corner.

Electrical Engineering Dept. Lecture: "Pulsar Observations Using High Speed Signal Processing," by Ivan Liscott of Stanford Univ. & NASA/AMES Research Center. 4:15 p.m. McCullough 134.

Biological Science Seminar: "Species Selection and Large-Scale Evolutionary Trends," by Dr. Steven M. Stanley, Dept. of Earth & Planetary Sciences, Johns Hopkins Univ., Baltimore, Md. 4:15 p.m. Room T-175, Herrin Hall.

CROW Symposium: "Sex, Pornography and Violence," with Susan Griffin, author of *Women and Nature* and *Pornography and Silence*; Deirdre English, editor of *Mother Jones*; and Zella Luria, visiting scholar at CROW. 8:00 to 10:00 p.m. Tresidder Union, Living Room. Free.

TUESDAY, APRIL 19

Learning About Racism Lunch Series: "Racism & the Media," by Don Gomez, former news reporter for San Jose TV and film producer. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Hall.

Stanford Art Museum Lunch Hour Tour: "American Indian Art". 12:15 p.m. Stanford Art Museum.

Music Dept. Concerts: Vocal & Insrumental Music of the 17th & 18th Centuries. Randall Wong, countertenor; Margaret Panofsky, viol; Kent Underwood, lute & theorbo. Works by Monteverdi, Rameau, Telemann, J.S. Bach, Barbara Strozzi, Piccinini. 8 p.m. Dinkelspiel Aud. $4/$2.

WEDNESDAY, APRIL 20

Stanford Art Museum Lunch Hour Tour: "American Indian Art". 12:15 p.m. Stanford Art Museum.

Biological Science Special Seminar: "Changes in Myosin Structure in Skeletal Muscle Differentiation," by Dr. Frank Stockdale, Div. of Onocology, Dept. of Surgery, Stanford Med. Center. 4:15 p.m. Room T-175, Herrin Hall, Dept. of Biological Sciences.

THURSDAY, APRIL 21

Theology & Natural Sciences Lunch Series: "Speculations on the Boundaries of Science," by Peter Sturrock, Professor of Applied Physics at Stanford. Bring a bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

Grads in Common presents: "Analysis and Interpretation: Truth, Proof and Prejudices of the Modern Mind". 3:30 p.m. Tresidder 281.

Cities in China Film Series: "Xian," a cultural history of the ancient Chinese Imperial city. 7:30 p.m. Bechtel International Center. 75 cents donation requested.

Nuclear Film Program Series: "The Leninist Peace Policy"(1982). 7:30 p.m. & 9:30 p.m. Meyer Forum Room. Free.

Music Dept. Concert: Stanford Symphony & Chamber Orchestras. Chopin - piano Concerto in F minor; Mozart - Violin Concerto No. 4 in D Major. 8 p.m. Dinkelspiel Aud. $4/$2.

FRIDAY, APRIL 22

Mathematics Dept. Lecture: "Stability of Circular Couette Flow with Variable Inner Cylinder Speed," by Prof. Paul Neitzel, Mech. and Aerospace Eng., Arizona State Univ. 3:15 p.m. Math 380-c.

Men's Volleyball: vs. Pepperdine. 7:30 p.m. Maples Pavilion.

SATURDAY, APRIL 23

STARTS & The Women's Center: "Alive," an all women's jazz quintet. 8 p.m. Tresidder Lounge. $6.50 with Stanford I.D., $8.50 general admission.

The Lively Arts at Stanford: The New England Ragtime Ensemble. Students $3 off regular price. 8 p.m. Memorial Aud. $10.50, $9.50, $8.50, $7.50.

SUNDAY, APRIL 24

The Lively Arts at Stanford: Charles Treger, violin & Andre Watts, piano. Students $3 off regular price. 2:30 p.m. Memorial Aud. $12.50, $11.50, $10.50, $9.50.

ASSU Sunday Flicks: National Lampoon's "Animal House". 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

The Prints of William Nicholson. Tues.- Friday 10 a.m.- 5 p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

Photos from the Barrio Assistance Program by Phillip Baca. Coffee House Gallery. April 1 - April 30.

R. Raffaello Dvorak, works on rice paper. I-Center. April 1 - April 30.

Photographs of Africa by Sylvie Cohen. Tresidder Upper Lobby, 2nd. Floor. April 1 - April 30.

Etchings by Seymour Haden. Faculty Club. April 3 May 3.

"China's Elders," PRC senior citizens photographed by members of the Stanford Community. Faculty Club. April 3 - May 3.

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

VISITORS FROM OTHER COUNTRIES

Apr. 18: Dr. Bodo Heimann, dept. head. Institute of Mechanics. East Berlin, East Germany.
Apr. 21: Dr. Hans Leussink, former minister and board member of the Alfried-Krupp von Bohlen and Halbach Foundation, West Germany.
Dr. Chen Li, president, Hangzhou University, People's Republic of China.
Apr. 25: Group of four French defense specialists.
Group of five cross-cultural training study team; preorientation in the People's Republic of China.

For further information please call 497-1984. Maria Bun, International Visitors.

CAMPUS REPORT

Volume XV, Number 29 | A publication for Stanford University faculty & staff | April 20, 1983

Long-term job outlook called bleak

The job outlook for college graduates "appears bleak" for the rest of this decade, says Russell W. Rumberger, research associate in the Institute for Research on Educational Finance and Governance at the Stanford School of Education.

"College graduates may continue to hold a competitive advantage in the labor market, but an increasing number will be forced to accept jobs incommensurate with their level of training," he declares in a new IFG report on "The Job Market for College Graduates, 1960-1990."

In 1960, four-year college graduates earned 65 percent more than workers who only completed high school, while those who completed only one to three years of college earned "essentially the same" as high school graduates, he notes.

"Over the last 20 years, the relative earnings of four-year college graduates changed very little, declining a mere seven percentage points" in comparison with high school graduates. Most of this decrease occurred during the 1960s.

During this 20-year interval, the relative earnings of black four-year college graduates increased somewhat, but earnings of whites did not. Black college graduates improved their earnings relative to white males, but white females did not.

By 1990, more than a quarter of the mature civilian labor force and close to a third of all young workers will have completed four years of college, Rumberger estimates.

Total employment is projected to increase by 22 million between 1978 and 1990. But the share of total growth in high-level professional jobs will be lower in the 1980s (28 percent) than either the 1960s (36 percent) or the 1970s (45 percent).

During the 1980s, clerical and service occupations will account for about 40 percent of the total job growth, about the same as in the previous two decades. The remainder of total job growth will come in other occupations.

"Although educational attainments will not rise as rapidly as they did in the 1970s, employment opportunities in high level occupations will increase much more slowly than they did in the 1970s," he adds.

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Frost Amphitheater will have firm, level tiers and new grass in time for Commencement in June, according to those in charge of the renovation. The old rotten wooden headers are being replaced with concrete ones which, in addition to being sturdier, will make mowing a breeze.

Faculty petition asks study of Hoover ties

Two Stanford faculty members concerned about alleged partisanship of the Hoover Institution are enlisting their colleagues' support to ask for an independent inquiry into its ties with the University by the Board of Trustees.

"The existence of a partisan research and policy organization, whether liberal or conservative, within the University raises serious questions concerning the academic independence, integrity and reputation of the University," Profs. John Manley, political science, and Ronald Rebholz, English, declare in petitions asking for the trustee inquiry and a public report.

Hoover Public Affairs Director George Marotta told *The Stanford Daily* that the Institution's "ideas are not all monolithic" and said its scholars reflect an increasing diversity of views.

Hoover Instiutution Director Glenn Campbell declined comment.

The Daily quoted Stanford President Donald Kennedy as saying the prominence of some individual Hoover fellows in the Reagan administration has created a "distorted impression of Hoover influence. . . .

"I don't think it's correct to say that somebody cannot get an appointment with Hoover unless their politics are Hoover politics."

Kennedy was out of town, so his comment could not be confirmed.

Manley and Rebholz said "the legitimacy and influence of the Hoover Institution and the causes for which it stands are immeasurably enhanced by sharing the prestige of a great university."

Rebholz seeks a Faculty Senate resolution urging an inquiry by the trustees, while Manley's petition is addressed directly to the board.

In a telephone interview Tuesday, April 19, Manley said the Hoover's "close ties" with the Reagan Administration "raise disturbing questions about whether the university is embroiled in political and partisan activities, direct or indirect,

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1,500 sign petition opposing nuclear weapons testing

More than 1,500 Stanford students, faculty, and staff have signed a petition opposing "any research explicitly dedicated to nuclear weapons testing instrumentation undertaken. . .anywhere on campus, even if unclassified."

The Student Senate will be asked to adopt a similar position at its regular meeting at 7 p.m. Tuesday in the Stanford Graduate School of Business, Room 83, according to Jon Adelstein, chief organizer of the petition drive.

"It's going to pass," he said Monday. "The only question is by what margin." The Senate has 20 voting members, five of whom already are cosponsors: Peter Spivack, of the newly elected Council of Presidents, David Porter, Al Tira, Nick Gault, and Jim Steyer. Adelstein, a junior political science major from Rapid City, S.D., is an alternate member.

More than 40 supporters of Stanford Against Nuclear Weapons Research, a newly formed voluntary organization, are circulating the petitions. "We're trying to bring back the climate of the 1960s," of concern and opposition to "institutionalized militarism," Adelstein said.

"We don't want Lawrence Livermore Laboratories to start using Stanford in the same way as they have Berkeley," he added. "It's very damaging. We want to stand up to them now before they get any further."

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People



Rev. David H.C. Read to deliver baccalaureate

The Rev. David H.C. Read, minister of the Madison Avenue Presbyterian Church in New York City, will deliver the baccalaureate sermon for Stanford's 92nd annual commencement.

Read, who also delivered the 1966 baccalaureate sermon here, will speak at 9:30 a.m. Saturday, June 11, on the Inner Quadrangle in front of Memorial Church.

One of America's leading preachers, Read's sermons have been published in *The Atlantic Monthly*, *The Scottish Journal of Theology*, *The 20th Century Pulpit*, *Best Sermons*, and other editions.

He is the author of 25 books, of which the latest include *The Faith is Still There* (Abingdon, 1980), *Unfinished Easter* (Harper and Row, 1978), and *Go and Make Disciples* (Abingdon, 1978).

Read has received honorary degrees from Yale, Edinburgh, Trinity, and the Japan International Christian University.

Ordained in the Church of Scotland in 1936, he served in churches there until he came to his present U.S. post in 1956. He has been the baccalaureate preacher at Princeton Seminary and at Duke University, as well as at Stanford.

The featured speaker at commencement exercises, scheduled for 10 a.m. Sunday, June 12, in Frost Amphitheater, will be Secretary of State George Shultz, on leave as professor in the Stanford Graduate School of Business.

Michelle Rosaldo Fund

Stanford undergraduates carrying out summer field research may apply for an annual award of about $500 from the Michelle Zimbalist Rosaldo Memorial Fund.

The fund honors the late Associate Prof. Michelle Zimbalist Rosaldo, who died in October 1981 in a hiking accident in the Philippines while doing field research with her husband.

The award will be granted by a committee including members of the Department of Anthropology and the Feminist Studies program at Stanford. Preference will be given to projects concerning issues in feminist thought or symbolic anthropology.

The head of the Anthropology Department will be responsible for organizing the selection committee and announcing how students may apply for the award.

Individuals desiring to contribute may send checks to the Michelle Zimbalist Rosaldo Fund, 301 Encina Hall, Stanford, Ca. 94305.



James R. Patterson

The Career Planning and Placement Center has appointed James R. Patterson coordinator of engineering and science advising.

Patterson comes to Stanford from Wentworth Institute of Technology in Boston, where he was executive director of the Massachusetts Pre-Engineering Program for Minority Students. Previously, he was department chief of human resource development for Western Electric Co., and coordinator of minority programs for the Office of Career Planning and Placement, Minority Programs, at the University of Michigan.

Patterson is a Ph.D. candidate at the University of Michigan School of Education, where he also received his master's degree. He earned his bachelor of science degree from Coppin State College in Baltimore.

He can be reached at the Career Center, 497-1782.

Renato Rosaldo

Associate Prof. Renato Rosaldo of the Stanford Department of Anthropology has received the $500 Harry J. Benda prize of the Association for Asian Studies.

Awarded biennially to an outstanding younger scholar in any field of Southeast Asian studies, the award cites Rosaldo's book, *Ilongot Headhunting 1883-1974*, as "certain to be a classic." It was published by Stanford University Press.

The award selection committee said "Rosaldo has produced among the best modern studies of hill peoples in Luzon," the Philippines. His book is "a work of literature as well as anthropology and history, beautifully written."

Rosaldo received his Ph.D. from Harvard in 1971 and conducted field research in the Philippines from 1967 to 1969, in 1974 and 1981.



Jed Dempsey

Jed Dempsey took a roundabout route to become Stanford's 23rd graduate to win a Marshall scholarship, the most prestigious academic award of the British government.

Dempsey, who in October will go to Cambridge University to study mathematics for two years, started off with the aim of becoming a tennis star.

The son of a professor of psychology at California State University, Sacramento, he was a very promising young tennis player. He persuaded his parents to allow him to go to high school in Newport Beach, where he had friends and tennis coaching contacts. They agreed reluctantly.

For much of the time in Newport Beach, Dempsey lived alone. He did well in tennis and was nationally rated in the Juniors ratings. When he entered Stanford he continued his tennis, but gradually his interests broadened. He found himself attracted to several academic disciplines, especially physics and math.

His first visit to Europe will come when he joins the other 29 Marshall winners from all across the U.S. in October for the trip to England. "They tell me Cambridge is the most beautiful university in the world" he says.

Dempsey thinks that he will eventually go into some areas of applied math or physics, or perhaps computer science. "What I am particularly interested in is extending math to systems where it is comparatively novel, such as biology."

Tennis? "Oh, I still play about once a week," he says, "but there are so many other things to do."

The successful Marshall Scholars for 1983-85, 20 men and 10 women, come from 21 American colleges or universities, and from 16 home states. Over a thousand of the outstanding students of America compete each year for the coveted awards.



Joel P. Smith

Joel P. Smith, former Stanford vice president for development, has announced his resignation as secretary of the Stanford Board of Trustees, effective June 30, for reasons of health.

President Donald Kennedy has accepted his resignation with the greatest regret.

"Stanford is deeply grateful for Joel's service, in each of its phases and in each of his roles," Kennedy said. "All of us will miss his extraordinary leadership and his grasp of the University's purposes, and we likewise all wish for his return to health."

Smith, 49, resigned as vice president for development in June, 1982. Under his leadership, private gift support for Stanford rose from $54 million in 1978 to $79 million in 1981, an all-time high.

A Marshall scholar, he joined the Stanford staff in 1965, becoming associate vice provost and dean of students in 1967. He was elected president of Denison University in 1969, but returned to Stanford in 1976 as special assistant to the vice president for development.

I.B.M. gives grants to two departments

The Stanford Departments of Chemistry and Applied Physics have received unsolicited grants of $25,000 each from I.B.M. Corp.

The grants recognize "outstanding efforts in science or engineering" of particular interest to the company. They reflect I.B.M.'s "concern about the importance of academic science and engineering to our nation and the burdensome restrictions which apply to many of the usual mechanisms for support of academic research," according to the company.

The funds may be used for the initiation of new research, the hiring of untenured faculty, the purchase of scientific equipment—except computer hardware or software—or for the development of new courses.

The grants are renewable for a maximum of two additional years.

The Applied Physics Department was chosen for the grant upon the basis of its "outstanding competence in laser optics and superconductivity research," while Chemistry was cited for its works in laser spectroscopy and molecular dynamics.

Prof. Robert L. Byer heads applied physics, Prof. John Brauman is chairman of chemistry at Stanford.

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Ted Hansch's team uses super-lasers to probe atomic theory

Stanford work could lead to discoveries affecting fundamental laws of physics

BY DONALD STOKES

Working in a Stanford physics laboratory with some of the most advanced lasers in the world, a tall German-born physicist is measuring the simple hydrogen atom more accurately than anyone has ever done before.

Prof. Ted Hansch and his team, continually improving their lasers, hope eventually to reach a line width of one part in a million billions. Their present lasers are far from reaching this goal, but when they do it could lead to discoveries which profoundly affect the known laws of physics.

"Our lasers are very exciting and intriguing tools," said Hansch. "As we improve resolution and frequency range we are entering new areas of exploration."

Long noted as a pioneer in the development of the widely tunable and highly monochromatic dye-lasers, Hansch has led an ever-changing team of graduate students and visiting scholars.

The team is looking for any weak links in the fundamental atomic theory called quantum electrodynamics, which permits very precise calculations of the spectrum of the simple hydrogen atom.

"More than once, seemingly minute discrepancies between observations and theory provided the impetus for revolutionary advances in our understanding of the microscopic world of atoms and electrons," said Hansch.

"Our work has made it possible to study the spectral lines of hydrogen with much higher resolution than could be achieved with classical methods, and dramatic further improvements appear feasible."

The importance of revealing the nature of the spectrum of light sent out by the hydrogen atom is that it has inspired the laws of quantum mechanics. These laws apply to all atoms and matter in bulk, they are the ultimate foundations of chemistry, of solid state physics and even of applied sciences such as electronics.

The new types of laser beams are able to find out more about the stable hydrogen atom, with its one solitary electron orbiting round a single proton.



The goal: Lasers that will reach a line width of one part in a million billion

Theodore Hansch

In the early 1970s the pulsed "Hansch-type" dye laser was unique. It was the first laser that was both widely tunable in wavelength or color, and at the same time highly monochromatic, with a line width of about one part in 10 millions. Today, there are hundreds of these lasers in use in laboratories throughout the world.

"The narrowest line-widths are achieved nowadays with continuous wave dye lasers," said Handsch. "However such sources are not yet readily available for the ultraviolet spectral region, where some of the most interesting atomic transitions are found.

"During the past year, our group has made some important advances in the development of a widely ultrawave continuous-wave source.

"In addition to the laser, other tools and tricks are needed before the spectral lines of atoms can be studied with extreme spectral resolution.

"A principal difficulty in classical spectroscopy has always been the Doppler effect; atoms that move toward an observer appear to emit or absorb light at higher frequencies than atoms at rest, and atoms moving away appear to emit or absorb at lower frequencies.

"In a gas, with atoms moving at random in all directions, the lines appear blurred and smeared out by Doppler broadening, and important details in the shape and structure are often obscured."

Hansch has been a pioneer in the development of a number of techniques which can overcome this troublesome Doppler broadening. For this work, he has just received the 1983 Herbert P. Broida Prize from the American Physical Society. He is also sharing, with another researcher, the 1983 $5,000 Cyrus B. Comstock prize, which is awarded every five years by the National Academy of Sciences.

Two conceptually different approaches to "Doppler-free" spectroscopy have so far been used successfully. The first is saturation spectroscopy. This technique is best illustrated with the popular "Hansch-Borde" method, in which the light from a laser is divided by a partial mirror into two beams which are sent through a gas sample in nearly opposite directions. Each beam is absorbed only by those atoms which have the right velocity to be Doppler-shifted into resonance.

If the laser frequency is tuned to the exact line center, both beams can be absorbed by the same atoms, those which are standing still or are moving only sideways. One beam can then bleach a path to the other, providing a signal that is free of Doppler-broadening.

The second is Doppler-free two-photon spectroscopy. With this, Doppler-broadening can be eliminated without any need to select slow atoms, if an atomic transition is excited by two photons or quanta of light, which together provide the necessary energy, but which come from opposite directions, so that their equal and opposite Doppler shifts cancel.

An interviewer asked where there is possibly a link between the world of the atom and the infinity of the universe. Is it possible that Hansch and the rest of the worldwide network of physicists delving into the mysteries of the atom may one day link matter, energy, and time into one master law of the universe?

Hansch shrugged his shoulders. "The first extended series of atomic-hydrogen lines was found not in the laboratory but in the spectra of stars, and that was over 100 years ago. Work with the latest lasers has revealed some of the subtler features of the hydrogen spectrum.

"Discoveries in the stars and in the laboratory are in tune. Measuring the position of the spectral lines remains a significant test of the predictions of the quantum theory. The laser has become a spectroscopic instrument of unprecedented resolution."

The Stanford physicists continue to peel away veil after veil from the atomic kernel of ultimate knowledge. Notable work has been done by Siu-An Lee, Carl Wieman, Richard Wallenstein, Gert Meisel, Jim Lawler, John Goldsmith, Erhard Weber, Augustin Siegel, Philip Dabkiewicz, Bernard Couillaud, and Harald Gerhardt.

Asked the practical uses of his discoveries, Hansch said that some basic research was worth pursuing for its own sake, even though there may not be at the time any applications that are easily recognized.

"In the past, many unexpected discoveries have led to important new technologies and applications which could not possibly have been foreseen or planned by their discoverers.

"For some time Stanford was the only place in the world that had the laser tools with which to explore the atomic world more accurately. We did

continued on next page

Grant Barnes, executive director of UC Press, to succeed Leon Seltzer here

Grant Barnes, 50, executive editor at the University of California Press in Berkeley, has been named director of the Stanford University Press, effective Aug. 1.

He will succeed Leon Seltzer, who has headed the Press since 1956. Seltzer plans to work in copyright law after reaching normal University retirement age.

Barnes currently is responsible for planning and directing a program of 70 new titles per year, concentrated mainly in history, social science, and science.

He has organized and directed copublications programs involving more than two dozen British and European commercial publishers.

"Book for book, Stanford Press is one of the best scholarly publishing houses in the world," Barnes said. "Its list is small, only just recently moving up to 50 books per year, and specialized in relatively few subject areas.

"Most of its books are solid, traditional scholarly monographs intended for the specialist scholar. But there is widespread desire for growth and change on the part of the faculty and administration.

"Whatever we decide to do in the future, publishing by its nature is a long-term proposition. Changes will come gradually.

"We will choose some books because we believe they will prove to be seminal for an academic discipline; some partly for the opportunities they provide for beautiful design and rich illustration;



Grant Barnes

some for the light they shed on a dark corner of political practice or public policy; some for their usefulness to the general public; and many for their sheer brilliance as works of scholarship.

"Publishing is an exciting enterprise, with tangible products that have lasting value. It is the best and only method we have for validating new ideas and original research. I would like to find ways to draw the Stanford community and alumni into our work."

At the University of California, Barnes initiated new programs in sociology, political science, and economics; physical, biological and medical sciences; Asian, Latin American and East European studies; history of science, public administration, social and political theory, women's studies, and urban studies.

Announcing Barnes' appointment at a Faculty Senate meeting April 14, Provost Albert Hastorf observed that Stanford "is a forgiving institution" in hiring talent from its traditional trans-Bay rival. He expressed "every expectation" that Barnes "will build on what Leon Seltzer created and extend vigorously" the publication program.

Hastorf said Seltzer has done "an absolutely superb job" in creating a first-class Press for Stanford. "He's a true institution builder," who served as president of the American Association of University Presses in 1968-69.

Prof. Robert Hofstader, Nobel laureate in physics, recalled his efforts to recruit Seltzer from Columbia. When the two met in a New York City bar "there was an immediate reaction. . .a chemical reaction," Hofstader said, drawing laughter from his colleagues. Herb Bailey, director of the Princeton University Press, who also is nearing retirement this year, was among those recommending Seltzer.

Hastorf praised Prof. Lee Bach of the Graduate School of Business for "a superb job" of heading the national search which culminated in Barnes' selection. Others on the committee included Profs. William M. Chace, English; Walter P. Falcon, Food Research Institute; James L. Gibbs, anthropology; Thomas Grey, law; Gerald J. Lieberman, operations research, vice provost and dean of graduate studies and research; and Patrick Suppes, philosophy.

Barnes was born Aug. 24, 1932, in Ukiah, graduated from Lowell High School in San Francisco, and received his bachelor's degree with honors in political science from Berkeley in 1961.

Before joining the UC Press, he worked with C.I.T. Corporation in San Francisco and Los Angeles during 1954-60 and was an administrative analyst in the Berkeley College of Letters and Sciences, University Extension, and President's Office during 1960-65.

A charter member-delegate to the International Association of Scholarly Publishers in 1972, he has served as a consultant to the Urban Institute in Washington, D.C., and continues in this capacity with the Wilderness Press in Berkeley.

His hobbies include mountain climbing, skiing, tennis, woodworking, and long-distance running.

He married Irina Mozoroff of Kobe, Japan, in 1954. She now is manager of the Storefront Museum, branch of the Oakland Museum. She has curated many exhibits of art and archaeology and worked on archaeological sites in Greece. They have three children.

Hansch. . .

continued from page 3

not have to go to the library to check whether anybody else had done a certain experiment before, because we knew that with our new laser we were entering a fresh area.

"Since the first simple laser in 1970 much more sophisticated versions have been developed. A full-fledged commercial system, including the pump laser, will easily cost more than $100,000."

Hansch speaks warmly of his senior colleague, Arthur Schawlow, who had to wait almost two decades for the Nobel Prize which he had widely been expected to receive back in the 1960s. Some of Schawlow's work was closely mingled with that of Hansch.

The two researchers recently discovered a fascinating fact: laser light may cool a gas to a low temperature. This may seem to be paradoxical, since an intense light usually supplies heat; but laser light, being coherent, represents a low state of entropy, or low disorder, and a state of low entropy can be made to yield a low temperature.

Hansch gave a hint as to the present line of research of the Stanford group. "We are studying what is perhaps the most intriguing transition in atomic hydrogen: that is the transition from the ground state to a metastable state, which can be observed by Doppler-free two-photon spectroscopy.

"This transition has an expected natural linewidth of less than one part in a million billions. Unfortunately, its observation requires ultraviolet laser light with a wave-length where there are still no good tunable lasers available.

"In early experiments, we employed a pulsed dye laser system with frequency doubler crystal, whose linewidth was about 100 million times broader than the atomic linewidth.

"However, during the past few months, we have made important progress toward the development of a much more monochromatic continuous wave source.

"We have kept on pursuing the hydrogen atom. It seems that there are challenging opportunities left for the next 20 years. We have made tremendous progress, but much remains to be done. One of our hopes is that as we keep improving the precision of our measurements, one day we shall again find a small discrepancy between theory and experiment.

"If that happens it will be very exciting, for nowadays physicists believe that they understand hydrogen very well, so if a discrepancy occurs, we shall all have to go back and revise the fundamental principles on which theory is built.

"It could be that we shall find quantum electrodynamics is not the ultimate answer. Maybe there is a better way of description. Of course, it is a long shot, and if it does happen there is nothing to say that the Stanford group will be the one to discover it."

Hansch was asked whether the team's work at Stanford had relevance to the ongoing research by physicists and mathematicians for a unified field theory, which will link together all the basic laws of physics into one that governs the entire structure of the universe.

"In one sense our work has relevance," Hansch replied, "because any discrepancy we may find would perhaps be a hint as to where we might look for a better unified field theory."

I never dreamed I would end up in California," says Hansch. He was born during the height of World War II in Heidelberg, Germany, and was reared in that well-known university city during the Gotterdammerung of the Third Reich. He gained his doctorate at Heidelberg, and taught there as an assistant professor till April 1970.

The following month, aged 28, he came to Stanford as NATO Fellow, to work with Schawlow.

"At that time, dye lasers, which had been discovered a few years earlier, looked as if they might become interesting tools for spectroscopy, because their color or wavelength was widely tunable, whereas earlier lasers could only operate at a few fixed wavelengths," said Hansch.

"Dye lasers pumped by a pulsed nitrogen laser appeared particularly intriguing, because they easily reached high efficiency. Unfortunately, it seemed difficult to obtain narrow line-widths from such lasers.

Hansch became convinced that it should be possible to obtain much higher spectral purity. Schawlow found Hansch's suggestions interesting and agreed to purchase a nitrogen laser for research. After months of work, the first highly monochromatic pulsed dye laser was working in time to be announced at a conference of the American Physical Society.

Hansch laughed: "I felt quite a bit of pressure because I had submitted an abstract before the conference. In effect, I had announced that I had done what I planned before all the results were in. You can imagine my anxiety!

"The successful results came in just before the conference opened. We were deeply relieved."

Only a year after being appointed associate professor of physics at Stanford, Hansch was named California Scientist of the Year. In 1975, at the age of 34, he was made full professor. In 1977 he was awarded an Humboldt Senior U.S. Scientist award. In 1980, he received the $17,000 Otto Klung Prize as an outstanding German physicist under the age of 40.

Hansch's new laser was soon adopted by many laboratories, and it has made possible numerous pioneering experiments in laser spectroscopy. It has also been incorporated into more sophisticated laser systems.

Hansch explained the significance of these new developments: "By these means you can tune the wavelength of the laser so that it is in resonance with some transition in an atom or molecule, and you can study the energy levels in much better detail."

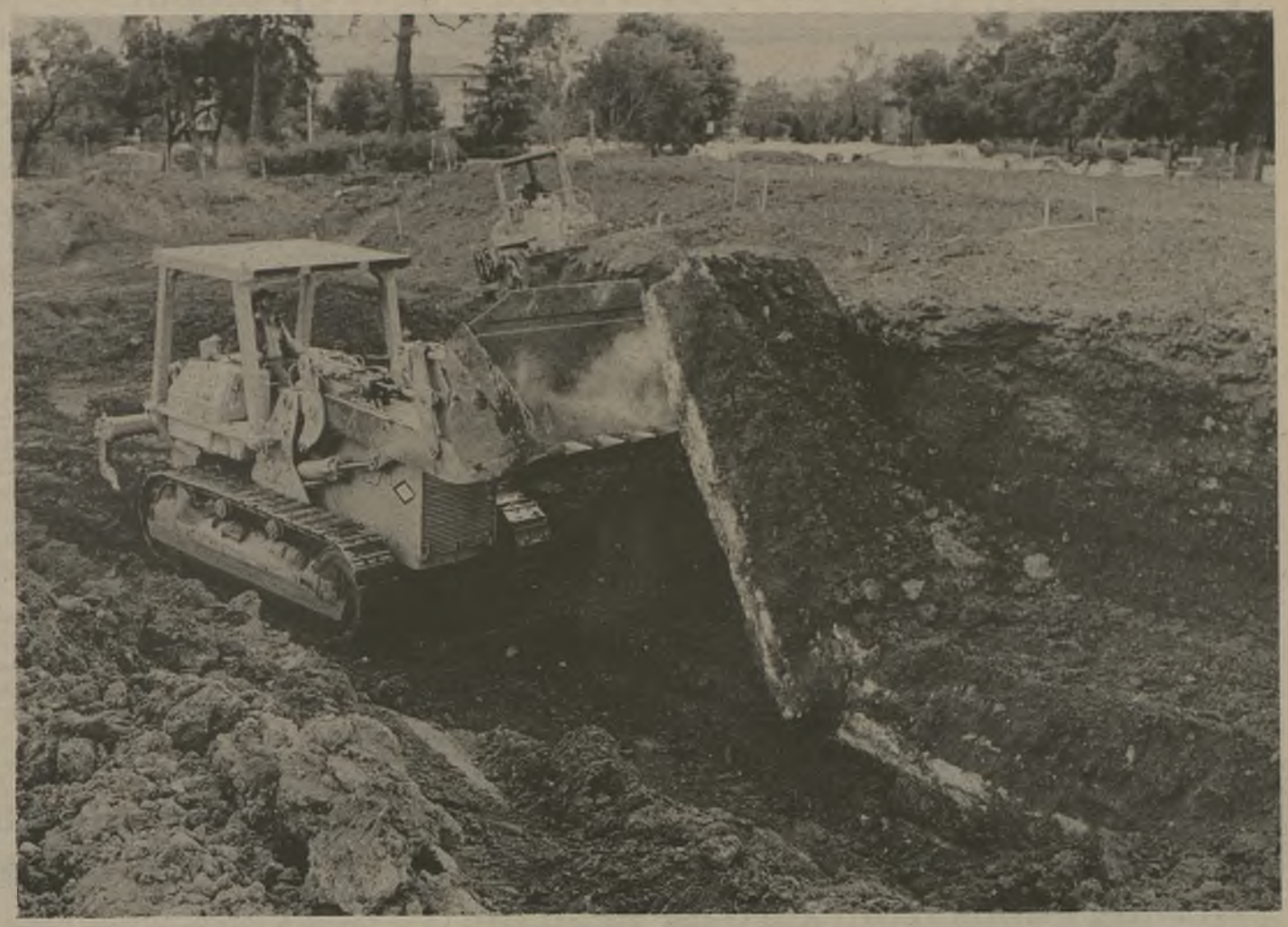
Hansch predicts that the exploration of the hydrogen spectrum will continue for decades, because of the vast amount of work that lies ahead. Probably the eventual tools to accomplish all the work have not yet been conceived.

"So far all the recent findings tend to confirm the predictions of theory. It is worth remembering, however, that several major upheavals in 20th century physics were instigated by the discovery of minute discrepancies between theory and observation in this very spectrum.

"The hydrogen atom may hold surprises yet to come. On the other hand, perhaps the greatest surprise would be none at all."

Buried foundation reveals unbuilt dorm the size of Encina

Stanford's historical sleuths quickly came up with the answers to the puzzle.



Bulldozer lifts piece of concrete foundation left from an 1891 women's dormitory that was never completed. Crews discovered the old foundation while excavating the site of the Center for Integrated Systems.

Construction crews excavating the site of the soon-to-be-built Center for Integrated Systems have uncovered a bit of Stanford history: the foundation of what would have been the first women's dormitory, abandoned in spring 1891 because it couldn't be completed before the University's October 1891 opening.

The find was made April 7, according to construction manager Don Price, while workers were excavating 12 to 14 feet for the CIS basement. Price expected all the concrete to be removed by Tuesday, April 19. Crews worked overtime two weekends so the project could stay on schedule.

CIS project manager Roger Cairns sought help from University archivist Roxanne Nilan identifying the concrete bulldozers had run into.

Using 1889-91 architectural drawings by University Planner Frederick Law Olmstead, Nilan determined that contractor Howard J. White had discovered the foundation of a dormitory that would have been virtually identical in size and appearance to Encina Hall, which was the first men's dorm. The women's dorm, located near what is now Serra Street and Via Palou, would have been the same distance west from the center of the Oval as Encina Hall was to the east.

Price estimated removal of the dormitory foundation will add $15,000 to $30,000 to the cost of the CIS building. Only sections of the foundation that interfere with the new building will be removed, he added.

Knowing the size and shape of what they ran into has helped "appreciably" in its removal, Cairns said. "We never dreamed we'd run into something like this. Many oaks and redwoods were growing right on top of the foundation," which was six feet under the ground, Cairns said.

Building abandoned

The original dormitory, designed to house several hundred women, was planned with an 1892 completion date. It would have been about 300 feet by 70 feet in size.

Jane Stanford and the University's first president, David Starr Jordan agreed in April 1891 that construction of the original women's dormitory must be abandoned because it would not be finished in time to allow women to enter with the University's first class.

In his 1922 autobiography, "The Days of a Man," Jordan said, "It seemed to me that they (women) should be present from the beginning, so that their admittance might not appear in any sense an afterthought, or their relation that of an 'annex.' "

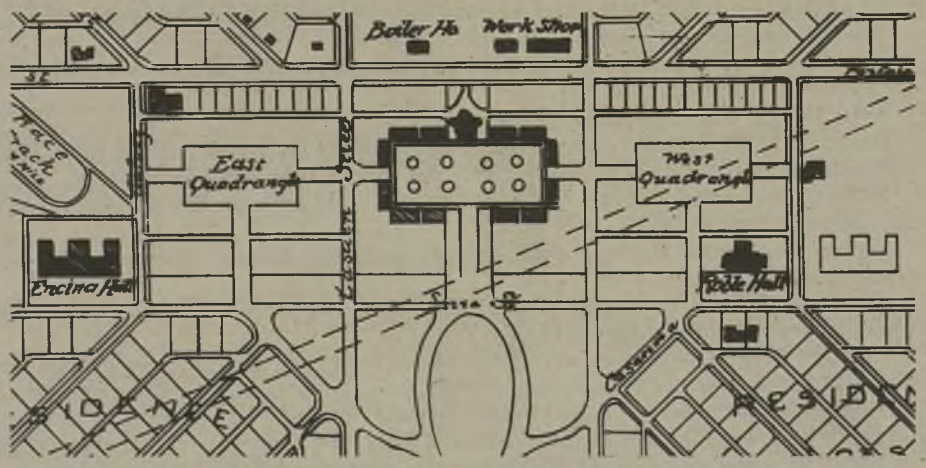
Thus construction began in May 1891 on a smaller women's dorm, the first Roble Hall. Because of the hurried timetable, it was built of reinforced concrete instead of sandstone. This dormitory, about one-third the size of the abandoned dorm nearby, housed many of the 142 women who, along with 417 men, attended the University in its first year.

By 1918 the number of women needing on-campus housing spurred the University into building the present Roble Hall near Lagunita. Old Roble, renamed Sequoia Hall, then became a men's dormitory. Today in a much altered form but still located on Serra Street, it houses the Statistics Department.

Construction of CIS has necessitated the move of two early University buildings. Ventura Hall, built around 1918 to house single male faculty members, is now at the corner of Campus Drive and Panama Street.

Serra House, home of the Center for Research on Women, will be moved Sunday, April 24, to be among the complex of houses on Salvatierra Street that divides the Law School parking lot. Serra House was built for $24,000 in 1923 as the retirement home of then-Chancellor Jordan. It was designed by Palo Alto Architect Birge Clark.

—Karen Bartholomew



Frederick Law Olmstead's 1889-91 plan for the University shows the Inner Quad, flanked by East and West Quadrangles that were never built. To the left is Encina Hall, the first men's dormitory, and to the right is Roble Hall, constructed quickly of reinforced concrete in the summer of 1891 so women could be admitted when the University opened in October. Next to Roble is the outline of the originally planned large women's dormitory, construction of which was abandoned in April 1891.

Ph.D. oral exams

WEDNESDAY, APRIL 20

Richard Gooch, electrical engineering, "Adaptive Pole-Zero Filtering: The Equation-Error Approach," 10 a.m., 191 Skilling.

THURSDAY, APRIL 21

Michael G. Ward, mechanical engineering, "Attitude Dynamics of the Galileo Spacecraft," 4 p.m., Applied Mechanics Seminar.

WEDNESDAY, APRIL 27

Martha S. Feldman, political science, "Information Use in Policy Making: A Case Study in the Department of Energy," 2:15 p.m., Political Science Faculty Lounge. **David Alan McCormick**, neurosciences, "Cerebellum and Learning: Essential Involvement in a Simple Learned Response," 2:30 p.m., Room D202 Fairchild.

THURSDAY, APRIL 28

Miguel Vasquez-Vega, Spanish and Portuguese, "Becquer in lo teoria y la practica e Marti en su *Ismaelillo* (1882)," 1:15 p.m., 274, Bldg. 260.

FRIDAY, APRIL 29

Robert McCutcheon, English, 2:15 p.m., 41-F. **Laura A. Wagner**, education, "Organizational Adaptations to a Control Policy: School Responses to Minimum Proficiency Legislation in California," 2:15 p.m., e114 (Education Bldg.—Cubberley).

Letters to the editor

Europe debates computers, humanities

Editor, *Campus Report*:

The campus polemic on computers and the humanities seems to have been conducted in total ignorance of the debate in European humanistic circles. Prof. Klaus Haefner of Bremen University recently published *Die Neue Bildungskrise* (The New Crisis in Education), promoting *homuter*, i.e., the humanities liberated from menial tasks by the computer.

Naturally Bremen is opposed by Hamburg, where Sigrid Muller questions the *homuter* idea. She respectfully summarizes it thus: "If our youth is to be prepared for a *homuter* society, schools must rid themselves of rational-intellectual subjects (which would be taken over by the computer) in favor of social, philosophical, and religious subjects, i.e., the humanities in general."

This does not necessarily make sense, but Stanford should be aware of this serious debate in Europe.

Ronald Hilton
Prof. of Humanities, Emeritus

. . .lift up your eyes unto the cloud

Editor, *Campus Report*:

I thoroughly enjoyed the first round of the Cohn/Barnett discourse and couldn't resist a comment.

Now the second round is completed and I think it's my turn again. . . .

Of course the two sides of this issue are so compelling because Cohn and Barnett come from two apparently diametrically opposed arenas. We'd all be much more interested in a conversation between Mae West and Pope Paul than one between Pope Paul and Billy Graham.

But what about those "two sides?" S. I. Hayakawa has chuckled at the Western mind for being so naive as to talk about the "two sides" of an issue, "as if that's all there were."

. . . This little discourse has been most entertaining to follow, but I fear we are much like children tossing firecrackers at each other in the shadow of a huge mushroom cloud which offers the ultimate challenge of the compatibility of Humanity and Technology.

I'd feel a lot better if I knew Prof. Cohn and Mr. Barnett were monitoring that cloud together.

Maggie Ranahan R.N.

Getting goods from abroad? Read on!

To import anything, Stanford must follow many rules and regulations. By following the procedures described in this article, departments can help ensure that their shipments will comply with all government requirements and will reach Stanford quickly.

Stanford has authorized an outside supplier to act as the institution's customs broker. This allows shipments to be imported without Stanford's having to pay duty or other fees on the spot. Customs charges are later charged to the ordering department's account. The Traffic Department, a part of Procurement, is the only Stanford office which deals directly with the customs broker.

Traffic can direct the customs broker to release a shipment to Stanford only after Traffic receives written departmental authorization to pay the charges. When a shipment arrives, the customs broker notifies Traffic, describing the shipment's contents. This description includes the number of pieces, country of origin, consignee's name and department, etc.

Traffic then calls the department, describes the shipment, and investigates whether the shipment may require unusual handling. Is it a rush delivery? Should a Customs inspection be done at Stanford instead of at the port of entry? Should the department pick up the shipment?

Traffic also requests authorization from the department to pay the charges. Departments which import only occasionally submit a purchase requisition, form *SU-10* to Traffic, showing the account number to be charged. Traffic recommends that the form be hand-carried to Traffic to prevent delays. Traffic then tells the customs broker to release the shipment the carrier Traffic designates.

If your department imports items frequently, please consider establishing a blanket order arrangement with Traffic. Then for each shipment, your department would hand carry a blanket order relase, form *SU-11*, to Traffic. This will simplify Stanford's, the customs broker's, and your department's accounting procedures, and avoid costly delays.

Importation of Organisms

Departments which import organisms, vectors, animal sera, etc., should be sure they have copies of the June 11, 1982, and September 30, 1982, memos from M. H. Geistlinger, director of procurement, to the Stanford community.

The memos concerned Department of Agriculture requirements that organizations importing such materials have a permit on file. Given the information needed on the permit application, only the requesting department can apply for a permit, and it should do so well in advance of ordering the material through Procurement.

If the requesting department has not obtained a permit for each shipment, or each series of substantially identical shipments, then the Department of Agriculture will hold the shipment pending inspection. This will cause delays, which would be of concern if perishable or other urgent shipments were involved.

For copies of these memos, and for any other information on imports in general, please call Traffic at 7-3002.

Committee on Research open meeting

The annual open meeting of the Committee on Research will be held 3-5 p.m. Wednesday, April 20, in the Bechtel International Center assembly room. All members of the University community are invited to attend.

The meeting will be devoted primarily to a discussion of disposition of intellectual property rights arising from research activities. A proposed revision to the copyright policy will be presented.

CIT publishes 90-page guidebook to computing, information resources

The Center for Information Technology has just published the 1983 edition of the booklet, *Computer and Information Technology Resources at Stanford*.

The 90-page guide describes the academic, research, and administrative projects that at present are using computers in their work. It is published as a community service by CIT as a means of sharing information about computing among members of the Stanford community.

Copies are available for $2.50 from CIT's Document Sales office in Forsythe Hall, 497-4877. Hours are 9:30 a.m.-12 noon and 1:30-4 p.m. (Copies have been mailed to University deans, department and division heads, the President's Office, University administrators, and heads of projects involving computers.)

There are 17 mainframes and almost 700 smaller computer systems in use at the University, including the Medical Center and SLAC. Individual descriptions are included for computing in the schools' departments, institutes, and laboratories, and in the library and bibliographic services. The University's management of computing—the committees, administration, and allocation of funds—also is described. References to other publications and names and phone numbers of resource people are included as well. Especially useful is the detailed section on text and word processing.

CIT publishes the brochure annually and already is seeking updated information for the next edition, which is projected for January 1984. Those wishing to submit new information or to update material that is already in the document should contact editor Jane Kingston, at Pine 127, 497-4807; or Judy Windt, Pine 145, 497-9793.

The booklet was published using the latest information technology available. Text was entered into CIT's IBM computer and formatted for transmission via telephone line to the phototypesetting system at Word Graphics, thus enabling efficient updating.

Starting Sept. 1, Library to charge $15 fee for processing film rentals

General funding for the Meyer Library film rental service will be eliminated as part of the University's 1983-84 budget reductions, according to Elizabeth M. Salzer, head librarian at Meyer.

Starting Sept. 1, in addition to the film rental fee, the library will charge a $15 fee for processing costs. This is about one half the actual cost. In September, 1984, the full cost will be charged.

"We realize that these charges may cause some difficulty for the few departments that use the film rental service frequently, but we assume that the majority of our users, who request films only once or twice a year, will be able to absorb these costs with little difficulty," Salzer said in a memo to campus departments.

Residential education, Anthropology, and Psychology account for half the total film rentals on campus from Meyer. Total rentals have risen from 360 in 1980 to an annual rate of more than 500 now.

The film rental service will operate 20 hours a week, effective in the fall. Salzer suggests that those with a scheduling preference—i.e., weekdays 9 a.m. to 1 p.m., or 1 to 5 p.m. weekdays, or all day on specified days—should let her know. Film rental forms can be mailed or dropped off at Meyer at any time.

Salzer emphasizes that the $15 processing fee will apply only to film rentals. Films owned by Meyer Library will continue to be circulated in the normal manner, without charge to users.

Auto rental discounts summarized

Auto rental discounts are available to all faculty and staff members for official travel, as well as personal, through the use of corporate rate Agreements negotiated by the Procurement Department.

The discounts are substantial and everyone is encouraged to take advantage of them.

The following are the *general* discounts:

American International: Subcompacts, $25; compacts, $28; intermediate, $30; full size two-door, $32; four-door, $34.

Avis: 30% off daily time and mileage rates.

Hertz: 10% off flat-rate daily, weekly, and monthly unlimited mileage rates. This will probably save you more than Avis's 30% discount on time and mileage rates.

Budget: Discounted flat-rate daily charge, unlimited mileage: $29 per day for any car, economy through full size.

Dollar: Discounted flat-rate daily charge, unlimited mileage: compact, $29; intermediate, $31; full size, $34.

American International and Dollar also have discounted weekly rates, with American's rate slightly lower than Dollar's.

Gasoline is not included in any of the above rates, nor are the extra charges for dropoffs. The American International, Budget, and Dollar rates normally are less than the other agencies' rates for daily charges. Special rates such as weekend or monthly rates may be lower than any of the discounted daily rates, and some of the above rates are higher in a few locations. Discounts are also offered in foreign countries, but vary among countries and rental companies.

To take advantage of auto rental discounts, the traveler must present to the rental company a sticker (which is attached to the traveler's charge card) with Stanford's corporate number. Stickers for the five companies are available from Procurement at 7-1751.

Director Grotowski moves toward a new form of theater

BY MILLICENT DILLON

The Jerzy Grotowski who lectured at Stanford last week was seemingly a much more moderate man than the radical director of the Polish Laboratory Theater, who so shook the international world of drama in the Sixties.

In fact, though more moderate in tone, he remains as intense as ever in his pursuit of the basic core and origins of drama, as he revealed in his lecture on "The Theater of Sources."

Speaking in a heavily accented English (occasionally requesting assistance from drama Prof. Martin Esslin for a more precise word) while pacing back and forth on the stage of the Little Theater, Grotowski described his current research as an attempt to discover the first fragments of old liturgy. With these rediscovered fragments—sounds and movements—he will arrive at a new form of theater.

Asked by Esslin if the eventual aim of his work was performance, he answered that he did not yet know.

Grotowski spoke of his own progression in the theater from his interest in subjective drama to his current preoccupation with objective drama. From 1959 to 1969 at the Laboratory Theater he created and directed what he called a "poor theater," one in which lighting, costume, and even the text were reduced in importance.

The basic element remaining was the relation between the actors and the spectators. The numbers of spectators who watched any production were severely limited. He worked to give the audience the maximum illusion of being in the play and in direct physical contact with the actors.

During those years he worked with each of his actors, using very specific physical techniques to get them to a point where their resistances were scraped away and the time between the felt impulse and the expression of that impulse was almost zero. He used the term "holy actor" to describe his aim, though he insisted he was not speaking in a traditional religious sense.

His productions, including *Akropolis* by Wyspianski and Byron's *Cain*, toured many countries in the West and established Grotowski as one of the main influences in contemporary avant-garde theater.

"Subjective drama is a very high art," Grotowski said. "The life of the stage director is in the work. The life of the actor is in the work, what he wanted to have, what he didn't have."

In 1969 Grotowski began to develop a form of participatory theater, a more objective form of drama, in which he worked with individuals from many countries, in many cases people who were untrained as actors.

From 1976 on he has been working on the "Theater of Sources," a transcultural experiment coming out of various cultural contexts, in Poland, Italy, Haiti, Nigeria, Mexico, and Bengal.

With a core group of people of diverse backgrounds he has moved from country to country, attempting to recognize the mind structure in the culture and to find the principle technical elements of movement and sound in the old rituals. He has carefully studied objective drama in these countries, including the Noh Drama and the Voodoo Theater of Haiti.

In his own culture he examined the elements of the Mass. "The very old Mass is an example of the objective drama. The ancient rituals were like a training session, for some a renewal of their knowledge, for others a reaffirmation of the community and its memories.

"At a precise moment a man kneels and touches his head to the floor, while uttering a series of phrases. Then he repeats the motion. You think he makes a symbolic action. Not at all.

"If you investigate you will discover the exactness of the movement—the centering of the body, the bracing of the spine, the impulse from the base of the spine that leads to the displacement of the center of gravity.

"The movement is done and then it is repeated. It begins to affect the breathing of the person who is moving. Inside of him some melody begins. The rhythm is felt throughout the body. All this by kneeling.

"Accompanying this motion are precise words, used not for significance but for their sonority, which affect the body-mind relationship of the participant and of the spectator.

"This I am calling objective drama.

"The place itself, the cathedral where this happens, is of crucial importance in focusing attention. Even the necessary dimensions of the cathedral are part of the old knowledge that has been lost."

According to Grotowski, watching the rituals, people see only symbolic action. "But the symbolic action is not primary."

It is what is primary, what is before symbols, that Grotowski wants to get to.

He is searching in each culture to find the simple actions, including the ways of breathing, and the movements of daily life that will elicit primary responses from the participant and the observer. His ultimate aim, he says, is not synthesis. He wants to find what existed "before differences."

In his research he works "by night, by day, in the open air, in the forests—walking, running, with eyes closed." He searches for precise actions, for the simplest possible movements "rooted in repose." And he seeks to find the connection between daily life and these movements.

"Like hidden roots of a tree. . . " he suggests.



Jerzy Grotowski

"I am not against the theater of performance or the theater of participation but for me this is what I do now."

Grotowski has been named professor of theater arts at Columbia University for the spring and summer of 1983. His lecture at Stanford was part of a West Coast tour, prior to his taking up residence at Columbia.

Asked by a student what he expected to find when he worked in the U.S., he said, "I think this work could be a bridge for the American culture.

"I see a potential here, but what I see is not yet working. You are at the point of a meeting of different cultures.

"For me, your chance is to make the bridge between the Judaeo-Christianity of the culture and the many other parts of the culture. To have both multiplicity and unity. Not to destroy the differences, but to make the connections clear."

The government employs one-third of all college graduates—Rumberger

continued from page 1

"Between 1960 and 1980, the educational attainments of the U.S. labor force grew phenomenally. The number of persons with four years or more of college increased 200 percent."

Even before this expansion, not all college graduates were assured high-level jobs. A third were employed outside professional and managerial occupations in 1960.

In retrospect, "the decade of the 1960s was a golden era" for college graduates, with a higher proportion finding high-level jobs despite the large gains in the numbers completing four years of college.

During the 1970s, "opportunities deteriorated greatly," Rumberger says. By 1980, new graduates faced a situation similar to their counterparts in 1960.

The rise and fall in opportunities was especially pronounced for women, who were much more dependent than men on changes in the teaching profession.

In a separate analysis of "Social Mobility and Public Sector Employment," Rumberger notes that the public sector currently employs one sixth of the U.S. work force and has generated a quarter of all new jobs in the economy over the past two decades.

"The type of jobs created by government is as important as the number of jobs created," Rumberger emphasizes. "The proportion of high-level jobs in the public sector is twice as large as in the private sector.

"One third of the growth in high-level positions over the last two decades has occurred in the public sector. The government also employs one-third of all college graduates."

The growth in public sector employment has particularly benefited women and minorities.

"The government employs larger proportions of these groups than white males," he notes. "More important, the government provides relatively more high-level opportunities for (women and minorities) than the private sector. The government employs from one third to two thirds of minority and female college graduates."

Moreover, while earnings of women and minorities are lower than white males in the public sector, this gap is generally smaller than in the private sector.

"In fact, minority males with similar characteristics actually earn as much as white males in the government sector, at least in high-level occupations," Rumberger says. "Yet this may simply reflect the lower earnings associated with high-level positions in government."

While some progress has been made in reducing earnings discrimination in the private sector over the past two decades, this has mainly benefited minority males in high-level occupations. Little progress can be noted in middle- and low-level occupations, where most workers are concentrated.

The relative economic position of women has changed very little over the past two decades. They continue to earn substantially less than white or minority males, even with the same qualifications.

While earnings vary widely within both the public and private sectors, the likely decline of the public sector in the near future "will curtail an important source of jobs for minorities and women and. . .may severely reduce social mobility for these groups."

Copies of Rumberger's reports may be ordered at $2 each from IFG, CERAS Building 402.

Medical Center MEMO

Research centers oppose pound animal bill

Proposed state legislation which would bar pound animals from medical research would be an enormous disservice to pet owners, the general public, as well as research, officials of two research-oriented California medical schools said Friday.

The protests against Senate Bill 883, scheduled for a hearing Tuesday (April 19) by the Senate Judiciary Committee, came from Lawrence Crowley, vice president for medical affairs at Stanford University; Dominick Purpura, dean of the Stanford School of Medicine; and Julius Krevans, chancellor of the University of California, San Francisco.

The bill, sponsored by Senate Majority Leader David Roberti, D-Los Angeles, would prohibit the selling of unclaimed pound animals—which are routinely euthanized—to research institutions and would instead require that such organizations buy animals especially bred for research.

The bill would do nothing to improve the humane treatment of animals, "a concept we are genuinely committed to," said Purpura. However, he added, the measure would dramatically increase the cost of most biomedical research, eliminate some research, result in the death of thousands of additional dogs and cats annually, as well as make it more difficult in some cases for pet owners to reclaim their animals from pounds.

The legislation "would be damaging to our institution and to research and scientific progress generally," Purpura said in a letter dated Friday (April 15) to Sen. Barry Keene, chairman of the judiciary committee.

"But it would be more realistic for you (committee members) to oppose this measure because of the very real disservice it does to all Californians. . .

"If the bill is adopted, you would be faced with even stronger outcries from supporters of animal rights after they discover that the real dilemmas of humane treatment to animals have been exacerbated by well-intentioned but ill-conceived legislation," Purpura added.

Supporters of the measure have contended that the bill would prevent animals which had been kept as pets from being used in research.

"The legislation creates a great irony by increasing the number of animals which each year will be euthanized instead of being transferred to research facilities.

"Meanwhile, other dogs and cats will be bred specifically for use in the laboratory. Surely this is a grotesque misuse of resources, an abomination to conservationists," Purpura wrote.

Millions of dogs annually are euthanized at pounds because they are not adopted or reclaimed by their owners. For example, a report by a committee of the Santa Clara County Board of Supervisors said that one humane society alone—The Humane Society of Santa Clara Valley—euthanized nearly 75 percent of the 39,736 animals brought to the shelter in 1982.

Purpura said that legislation prohibiting the humane use of animals in research will swell already overcrowded shelters, increasing the likelihood that humane societies will have to put to death animals sooner.

"We are disturbed that the proposed legislation ignores the fact that less than five percent of animals which are impounded annually nationwide are used in research and teaching while more than 95 percent are disposed of with no benefit whatsoever to life," Crowley said.

Crowley, Purpura and Krevans said they supported a measure backed by Assemblyman William Filante, R-Marin, which would require stringent standards of humane care for research institutions seeking to use pound animals. The measure, which has not yet been introduced in the legislature, would also establish a statewide identification system which would help persons locate stray animals at pounds.

The measure, titled the Pet Protection Identification Act, would also give the person turning in an animal the option of refusing to allow the pound to release the animal for research.

Crowley said if Stanford were required to purchase all of its dogs and cats from commercial suppliers, the cost of these animals would at least quadruple from current levels of about $65,000 per year to $260,000 annually. Such an increase, Purpura said, could jeopardize already tightly funded projects.

In addition, Crowley said breeders could not provide the institution with sufficient animals and those that were provided "could not meet the qualitative needs of the biomedical community as in fact much research necessitates a genetically-mixed animal model rather than a pure-bred strain."

Alternatives, such as tissue cultures and computer modeling, cannot substitute for all biomedical research, although modern methods have reduced the number of animals, particularly dogs and cats, which are needed each year in research, said Dr. James Dewson, director of the division of laboratory animal medicine at Stanford.

For example, 795 dogs were bought for research at Stanford in 1978, compared with 506 in 1982. The number of cats in the same period dropped from 206 in 1978 to a total of 109 last year.

Dewson said his division houses between 5,000 and 10,000 animals at any given time. In addition, between 15,000 and 70,000 mice are held in special colonies.

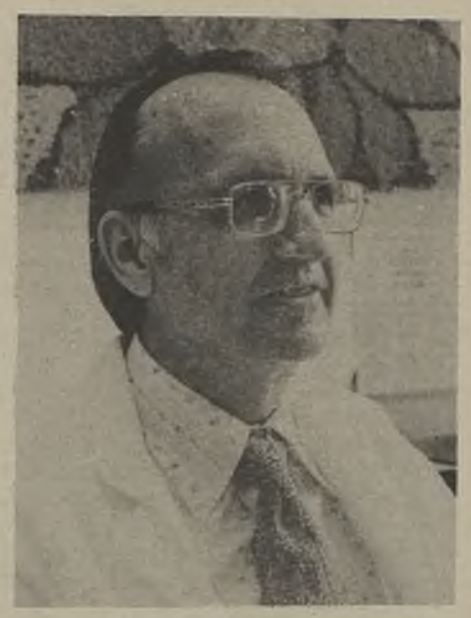
The officials of both research institutions reaffirmed that they were committed to the humane care of animals.

Stanford currently is completing a $10 to $12 million centralized animal research facility which Dewson said "will provide state of the art animal care" exceeding current standards which are nevertheless adequate or better.

"Our campus is extremely concerned about the humane use of all animals in our research program," Krevans said in an April 14 letter to Keene.

Krevans said SB 883 "would have the effect of terminating many important research projects because if it passed we would be unable to obtain an adequate supply of dogs—an essential model in many scientific investigations."

—Mike Goodkind



Roy Maffly

Maffly is new associate dean

Dr. Roy Maffly, professor of medicine (nephrology), has been appointed associate dean of student affairs at the Medical School.

Maffly succeeds Dr. Elizabeth Short, who is leaving Stanford to join the Association of American Medical Colleges in Washington, D.C.

In his new position, Maffly will be involved with the clinical education of Stanford's medical students. His responsibilities will include assigning students to clerkships and writing letters to support their applications for internships.

"I look forward to working with the students in a closer capacity," Maffly said. "I hope to continue teaching, which I feel will make me more effective as associate dean."

Maffly came to Stanford in 1961 as assistant professor of medicine. He was promoted to full professor in 1970. He has co-headed the nephrology division since 1971, and was acting chairman of the department of medicine from 1977-78. He is a staff physician and chief of the renal service at the Veterans Administration Hospital in Palo Alto.

Maffly also directs StanMed, the School's computer system for medical education.

Maffly is actively involved with student affairs. He is a member of the National Board of Medical Examiners Part II Medicine Test Committee. He has chaired Stanford Medical School's Minority Admissions Committee, Faculty Senate, and Committee on Courses and Curriculum. He has been director of admissions since 1981.

A new director of admissions has yet to be named.

Maffly has been often honored for his teaching. He has received the Henry J. Kaiser Award for excellence in teaching three times, the Henry J. Kaiser Award for outstanding and innovative contributions to medical education, the Arthur L. Bloomfield Award for excellence in teaching, the Walter J. Gores faculty achievement award for excellence in teaching, and the Award for Outstanding Teaching from the medical school class of 1971.

Study needs agoraphobic volunteers

Women presently suffering from agoraphobia are needed to participate in a study of a program designed to alleviate the phobia symptoms and actively involve the woman's spouse or partner in her progress.

Agoraphobia is a fear of going out in public places, especially unaccompanied.

Principal researchers in the study are Drs. C. Barr Taylor, assistant professor, and Stewart Agras, professor, both in the Department of Psychiatry.

The initial phase will require a four-week treatment aimed at overcoming the woman's fears. During this time, her partner must be willing to help her practice confronting feared situations, with the help of a therapist.

In the second phase, both partners will participate in a weekly program to help them cope with changes that occur in their relationship as a result of the woman's treatment. This part of the study lasts eight weeks.

Psychiatry intern Bruce Arnow, who is coordinating the study, said the agoraphobic's success in overcoming his or her fears "constitutes a major life change" and often affects marriages. For this reason, the researchers have designed a continued support program which reinforces the positive effects of success by involving spouses actively. They hope to assess the long-term effectiveness of this "two-pronged" approach.

Participants will be charged a modest fee for the program. For further information or to apply to the program, call Arnow at 497-7871.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Edgar Engelman

SMASH of the week

This Friday's S*M*A*S*H lecture will be given by Dr. Edgar Engelman, assistant professor of medicine and pathology, and medical director of the Stanford Blood Bank.

Engelman will discuss "T-lymphocytes and their function in man," 4:30 p.m. April 22 in the Fairchild Auditorium. A TGIF gathering will follow the presentation, to which all interested members of the Medical Center community are invited.



All invited to med school play

Stanford Medical School faculty and members of the class of 1983 will present a musical play, *The Hypocritic Oaf*, 8:30 p.m., April 29, in Dinkelspiel Auditorium.

Produced by the Medical Alumni Association and directed by students Laura Esserman and Joe Sachs, the musical features songs written, composed, and performed by students and faculty.

The two-act play follows a medical student through his education and training, according to Esserman. "In the beginning, God created the medical student, and indoctrinated him to the culture, and he matured, and he differentiated, and he reached the top!," reads the story line.

The play includes the scores: "I Hope I Can Get In," "A Day In The Life Of Dr. Paul Berg Nobelovitch," "This National Bored Test," "My Heart Belongs To Shumway," "Leukemia Rag," "Matchmaker," and "I've Grown Accustomed To This Place."

Tickets will be sold in the medical student lounge from noon to I p.m. April 22, and are available at the Medical Alumni Association Office, 800 Welch Rd., Suite 221. Commemorative T-shirts are available as well.

A complimentary happy hour will be held before the show, from 6:30 to 8 p.m. at the Stanford Faculty Club. For further information, call 497-6389, or 497-5064.

Medical faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The pharmacology department of Stanford University School of Medicine invites applications for a position at the assistant or associate professor level. Applicants are expected to have strong orientation to modern biochemistry and molecular biology and the application of these disciplines to pharmacological investigations.

Applicants should send curriculum vitae, summary of research interests, and names of three references to: Dr. Tag E. Mansour, Chairman, Department of Pharmacology, Stanford University School of Medicine, Stanford, CA, 94305.

News Notes

Norma Varon has been appointed executive secretary in the office of Dr. Lawrence Crowley, vice president for medical affairs.

Varon was most recently a secretary in the department of psychiatry and brings to her new post extensive experience at both Stanford and UCLA. She will replace Lynda Schrotenboer who, after playing a vital role in the office for the past 15 months, is leaving to pursue other interests.

* * * *

Three Medical Center professionals have authored chapters in the recently released third edition of **Applied Therapeutics: The Clinical Use of Drugs**.

- *Dr. Richard Mangini, research associate in clinical pharmacology, wrote the section on "Kidney Diseases."*
- *Dr. Charles Depew, pharmacist in the medical and surgical intensive care units, contributed "Intensive Care Therapeutics."*
- *Dr. Lawrence Witt, a Hospital pharmacist, wrote "Alcohol Abuse" for the textbook.*

Previously called **Applied Therapeutics for Clinical Pharmacists**, *the book is published by Applied Therapeutics, Inc. of Spokane, Wash.*

* * * *

Tom Connelly, manager of general accounting, has announced plans to retire after 18 years at Stanford Medical Center. He served in the audit department, as the Clinics business manager, and in budgeting, before assuming his general accounting post in 1971.

He will spend some time consulting in accounting and plans to travel and play more golf.

* * * *

Hospital employees are eligible for discounts on various amusement and recreation attractions, including Golfland, the Red and White Fleet, Ripley's Believe It or Not, Happy Hollow Park and Baby Zoo, Great America and Marine World Africa USA.

These and many other discounts are regularly available at Employee Relations, in Room E009 of the Hospital. For further information, contact Susan Cabral of SUH personnel, at 497-6251.

* * * *

As of April 15, the ground floor corridor on the west side of the "P" wing is being closed off at night, according to Ron Kepner, director of Materials Management.

The walkway, which extends from C003 at the gray double doors, past the hospital storage area and around almost to the receiving dock, is secured by a locked gate just past the exterior stairwell leading to the first floor of the "P" wing. The lock remains from 6 p.m. till 6:30 a.m. and around the clock on weekends and holidays. During these times, employees exiting in this area will have to take the stairwell to the first floor to reach the parking lots.

Security and safety considerations due to ongoing construction have led to installation of the gate, in order to restrict access to only those employees who must work in the area. In addition, Kepner emphasized that use of the stairwell is encouraged at all hours.



SUH employees to be honored at 25th annual service awards banquet

Invitations are in the mail to those Stanford University Hospital employees who will be honored at the hospital's 25th annual employee service awards banquet May 10.

The banquet honors all hospital employees receiving awards for five, 10, 15, 20, 25 and 30 years of service, and all other employees and retirees who have served more than 20 years.

The banquet will begin with no-host cocktails at 6:30 p.m., followed by dinner at 7:30 p.m., at Rickey's Hyatt House. The Tony Davis Trio will provide the evening's music.

Dan Robinson, acting director of Personnel, will be master of ceremonies. Guest speakers will be Sheldon King, executive vice president and director of the hospital; Dr. Donald Kennedy, chairman of the Hospital Board and president of Stanford University; Dr. Lawrence Crowley, vice president for medical affairs and president of the hospital; and Dr. James Silverman, chief of staff.

A highlight of the banquet each year since 1976 has been the naming of the winner of the Thomas A. Gonda Award. The award honors a hospital staff member who has been employed for at least five years and has given dedicated and exemplary service at SUH. The award is named for the present chairman of the Department of Psychiatry, who served as hospital director from 1968 to 1974.

Traditionally, five additional employees are selected for special awards for their outstanding contributions and achievement, as recognized by their coworkers, supervisors and patients.

Banquet invitations have been sent to employees receiving awards, to the hospital administrative staff and to department heads with eligible employees. Employees being honored may bring guests to the event. A separate fee will be charged for guests.

The award recipients will be presented with SUH pins. Those serving 20 years or more will receive their choice of accessories—such as a watchband, a key ring or a bracelet—on which the pin has been mounted.

Approximately 350 employees are eligible to receive service pins this year. In addition, 78 employees who have served more than 20 years at the hospital have been invited to attend the event.

In an effort to maintain the traditional program for awardees while also reducing expenditures, a reception will not be held this year for employees whose years of service fall between the five-year increments.

For reservations or more information about the awards banquet, call Susan Cabral at 497-6251.

*News Notes/*continued

Rhea Priest, R.N., M.S., was appointed clinical nursing coordinator of pediatrics/pediatric intensive care effective March 28, said Judy Lanigan, assistant director of Nursing/medical and pediatric region.

Priest, who graduated from Stanford's School of Nursing in 1964 and has been a staff nurse in pediatrics in the past, returns to SUH from a post as clinical nurse specialist and program director in the East Midlands Health District for the state of South Carolina.



Rhea Priest

Reference librarian draws on rich science background

Gloria Linder briefly considered becoming a chemist during her freshman year in college, but a laboratory chemistry class dissuaded her.

"You spend a lot of time in the lab standing in line, waiting for chemicals," she said, laughing. "I did well in the sciences but—you know how it is when you're young. I soon dropped science and became interested in history and liberal arts."

A decade later, with a master's degree in biology, a graduate degree in library science, and several summers of laboratory research behind her, Linder draws often on her mixed scientific and liberal arts education, as chief sleuth in Lane Medical Library.

As head reference librarian, Linder spends much of her time guiding physicians and researchers through the labyrinth of computerized medical literature to help them pinpoint tough diagnoses or complicated therapies.

It helps to be able to speak their language.

"Recently a student came in who wanted information on 'southern and northern blots,' " Linder said. Though a novice might think he was talking about a remote spot in the Antarctic, Linder knew the scientist was referring to a technique used in recombinant DNA research.

And that's just the beginning. As she searches deeper and deeper into the computer's file of books and journal articles, Linder needs to be familiar with the rich vocabulary of the field, and to be able to think not only like the researcher, but like the person who indexed the articles.

In part to aid her work, but primarily because she loves learning, Linder began in 1969 to supplement her full-time job with course work at Stanford in fields ranging from biochemistry, immunology and genetics to microbiology, physiology and ecology—more than 150 units in all.

"I wasn't finished learning, by any means, when I finished my undergraduate work," Linder said. "I knew that." But when she began her graduate science courses, she had no plans to earn a third degree. "I didn't want to be in a program where I had to follow other people's requirements," she said. "I wanted to be able to take just the classes I was interested in."

But after several years of part-time course work, Linder soon realized that she had the makings of a master's degree. She wasn't satisfied with simply taking classes, and sought to delve a layer deeper into the inner workings of the scientific process.

Intrigued especially by studies of the brain, Linder worked part-time for credit in the laboratory of Dr. Karl Pribram, professor of psychology, where she gained a first-hand glimpse of neuropsychological research. She followed up the experience with another two summers of directed readings and lab work under the guidance of Dr. Klaus Bensch, professor of pathology.

Despite her enthusiasm for her research experience, Linder said that she enjoys her current career niche as a professional generalist.

"Most people don't expect librarians to know anything about science," said Linder. "They ask me, 'Why aren't you using your biology degree?' I am using it, but it's hard for people to understand how. In reference work, particularly in computer searches, I use it for nearly every question.

"Having a question, and trying to figure out what the answer is—that's the really interesting part of library work. That's what I like about reference work, and that's what I like about research."

—Deborah Franklin



"Having a question, and trying to figure out what the answer is—that's the really interesting part of library work."

—Gloria Linder

Construction Corner



Boswell Clinics Renovation Update: The demolition phase of the first floor, south side, has been completed, and reconstruction of that area is proceeding on schedule. (*See photo above.*)

Preparation for renovation of the third floor is currently in progress, under the direction of Langston Trigg, Jr., assistant director of SUMC facilities/projects.

Lane Library Renovation: Peter Stangl, director of Lane Library, and two members of his staff have been relocated from the first floor to the ground floor of the library, into a newly constructed office suite. The copying machines were also moved to an alcove by the staircase on the ground floor. The project was coordinated by Christina Anaya and Norm Berge of the SUMC Facilities Projects Office.

Edwards Deck: Now that the rains have subsided, the contractor has been able to seal the roof on the Edwards Deck and proceed with the interior construction as planned. According to project manager Wells Hoeltje of SUMC facilities, the inclement weather created some delay in the schedule, and completion is now expected in mid-August. However, the dishwashing area should be available for occupancy sooner.

Medical Center Parking Lots Expansion: John Lerry of the University Facilities Project Management Office reports that construction for the south parking lot project is scheduled to begin April 25. The first phase, which will provide a temporary parking lot during the other phases, should be completed and ready for use May 12.

The next four phases will involve the sealing, striping and signing of lots as noted on the illustration below. Lot SE-1 should be completed May 22, lot SE-2 May 29, lot SW-1 June 12, and lot SW-2 June 19. The entire project is scheduled for completion June 24. Access to the temporary lot will be maintained for the duration of the project.





Tim Foley (center with glasses), a nurse in the Hospital's emergency department, demonstrates MAST (military anti-shock trousers) which are used to counteract low blood pressure suffered by victims of shock. The trousers are inflated with air, which increases venous return to the heart. The device was among a variety of equipment on display during the April 5-8 Fourth Annual Conference on Critical Care Transport, sponsored by the department of critical care transport at SUH. The symposium was intended to provide information about issues in critical care transport and their practical application. SUH coordinates hundreds of such transports of critically ill patients each year from other hospitals to this regional facility where highly specialized care is available 24 hours a day. Janet Mohs, field operations supervisor for critical care transport, said 270 health professionals from around the nation and several foreign countries attended the symposium.

Social Work offers series of events

Stanford University Hospital's department of clinical social work is sponsoring a conference April 29 entitled "Oncology Social Work and Clinical Research."

The event is one in a series planned as part of the continuing 70th anniversary celebration of social work at Stanford. These events are free of charge, and the public is invited.

Licensed clinical social workers Isabel Walker, Patricia Fobair, Sherry Feld, Jill Lehman, and Susan Weisberg will take part in the day-long conference, which is geared primarily toward other professionals in social work or related fields. It will take place from 9 a.m. to 4 p.m. at Fairchild Auditorium in the Medical Center.

Among the topics to be addressed are "The Value of Clinical Research in a Medical Setting," "Studying the Silent Majority," and "Medical Ethics in Research Design." Part of the afternoon will be devoted to small group workshops addressing more specialized topics.

Other events planned by the department are:

- April 27—Rose Grobstein, C.S.W., will lead a seminar entitled "Genetic Counseling and Prenatal Diagnosis," from 2:30 to 3:30 p.m. in Faber Auditorium at Children's Hospital at Stanford.
- May 20—Elizabeth Garifalos, L.C.S.W., Dr. Alan Ringold, and Pam Simmons, R.N., will conduct a workshop on "Adaptation to Hemodialysis," from 10 a.m. to noon in the Nursing Cottage at Hoover Pavilion; and
- June 24—"Approaches to Psychotherapy With Borderline Patients" will be addressed by Sandra Bacon, L.C.S.W. and Dr. Richard Laude, from 1 to 3 p.m. in TE-110 of Stanford's Psychiatry Building.

For further information on any of these events, call 497-5091.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, APRIL 20

Medical Center Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call 497-6636.

Dept. of Pathology Surgical Pathology Conference: "Chromosomal Abnormalities IV"—Dr. Jeffrey Sklar. 8 a.m., L201.

Basic Science Research Colloquium: "Exploring Gene Expression and Protein Structure in Heterologous Cells"—Dr. Laurence Kedes. 5 p.m., Fairchild Auditorium.

THURSDAY, APRIL 21

Dept. of Pathology Research Seminar: "The SOS Signal Generated by Miscarriage of mini F Plasmid"—Dr. Raymond Devoret (Gif Sur Yvette, France). 4 p.m., M104.

Div. of Otolaryngology/Head and Neck Surgery: "Conservation of Hearing in Acoustic Neuromas 'State of the Art' "—Dr. Mansfield Smith. 6 p.m., R117.

Dept. of Medicine Grand Rounds: "Newer Agents in Acute Gastroenteritis"—Dr. John Mills. 8:30 a.m., Fairchild Auditorium.

FRIDAY, APRIL 22

Registration deadline: for Nursing Educational Services Critical Care Course Level I: "Intra-Aortic Balloon Pump—Current Concepts," to be held May 3 from 8 a.m. till 4:15 p.m. at 900 Welch Road, Suite 15. The course will describe normal cardiac physiology and explain the indications, contraindications and complications of intra-aortic balloon pumping. A fee is charged and continuing education credit is available. For further information or to register, call Carole Kidder at 497-6366.

Tickets on sale: for the Stanford Medical Alumni Association musical program **The Hypocritic Oaf**, to be presented 8:30 p.m., Friday, April 29 in Dinkelspiel Auditorium. Tickets may be purchased from noon till 1 p.m. in the Medical Student Lounge. A "Hypocritic Oaf" T-shirt will be available through the Alumni Association and at the performance. For further information, call 497-5064 or 497-6389.

SMASH lecture: "T-lymphocytes and their Function in Man"—Dr. Edgar Engelman. 4:30 p.m., Fairchild Auditorium. Second in a three-part spring series.

Div. of Child Psychiatry Grand Rounds: "Age Changes in Children's Modesty"—Dr. Alvin Rosenfeld. 11 a.m., Faber Auditorium, Children's Hospital at Stanford.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Abusive Images of Women in Mass Media and Pornography"—presentation by WAVPM (Women Against Violence in Pornography and Media). Noon, M114.

Dept. of Pediatrics Grand Rounds: "Peptic Ulcer Disease in Children"—Dr. John Kerner. Case Presentation by Dr. Lawrence Mathers. 8 a.m., M106.

Dept. of Gynecology and Obstetrics Grand Rounds: "Clinical and Basic Approach to the Hirsute Female"—Dr. George Mikhail (prof. and chairman, dept. of ob/gyn, St. Louis University). 8 a.m., A336.

Div. of Otolaryngology/Head and Neck Surgery Resident Lecture Series: "Referral Sources for the Hard of Hearing/Communications with the Hearing Impaired"—Sally Johnson, M.A. and Cheryl Runge, M.S. 7:30 a.m., R117.

MONDAY, APRIL 25

Dept. of Medical Microbiology Seminar: "Studies on the Mechanism of Splicing in Yeast"—Dr. John Abelson (UCSD). 1:15 p.m., M114.

TUESDAY, APRIL 26

Registration deadline: for Nursing Educational Services Critical Care Course Level I. This four-part course, to take place all day May 10, 17, 24 and 31, is intended to instruct nurses already working in a critical care setting on the theoretical base for nursing care of critically ill patients, expanding knowledge of the special anatomy, physiology, and pathophysiology of such patients. It is not intended as an entry level crtical care program. A fee is charged, and continuing education credit is available. For further information or to register, call Carole Kidder at 497-6366.

Dept. of Pathology and Medical Scientist Training Program Seminar: "An Internal Transcriptional Control Region in Adenovirus EIA and Evidence for Activation of Early Transcription by the Assembly of Stable Transcriptional Complexes"—Dr. Arnold Berk (UCLA). 4:15 p.m., M114.

Dept. of Dermatology Grand Rounds: "Leukocyte Hormones that Modify Cellular Response to Glucocorticoids"—Dr. Robert Mischelle. 10 a.m., Dermatology Library R136.

Palo Alto Medical Research Foundation Tuesday luncheon seminar: "Hepatitis B Virus and Liver Cancer"—Dr. William Robinson (SUMC dept. of medicine), 12:15 p.m. (seminar begins 12:45 p.m.), 860 Bryant St., Palo Alto. For further information, call 326-8120.

WEDNESDAY, APRIL 27

Registration deadline for Dept. of Clinical Social Work course: "I Can Cope," on living with cancer, intended for cancer patients and their families. For further information or to register, call 497-5091.

Dept. of Clinical Social Work: "Genetic Counseling and Prenatal Diagnosis"—Rose Grobstein, C.S.W. 2:30 till 3:30 p.m., Faber Auditorium, Children's Hospital at Stanford. For further information on this and other upcoming social services programs offered as part of the department's 70th anniversary celebration, call 497-5091.

Div. of Orthopedic Surgery Grand Rounds: "Nerve Entrapment Syndromes"—Dr. Jeffrey Saal. 8:30 a.m., M114.

THURSDAY, APRIL 29

Dept. of Clinical Social Work lecture: "Oncology Social Work and Clinical Research"—with Isabel Walker, Patricia Fobair, Sherry Feld, Jill Lehman and Susan Weisberg, all licensed clinical social workers. 9 a.m. till 4 p.m., Fairchild Auditorium. For further information, call 497-5091.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



A mother duck shows off her clan as welcome sign of spring

A brand new family was born at SUH last week, but this time not in the delivery room. Attracting much attention and even some offers of bread from passers-by, the ducklings had hatched in one of the planters near the fountains facing the hospital. They were about two days old when this photo was taken Friday, and about to leave the premises so as not to be harmed by chlorine and other substances in the water.

PHOTO BY ED SOUZA

Manley, Rebholz seek Trustee inquiry on Hoover, University relationship

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which it should not do."

"The Institution's annual report, its publications, and its extensive ties with national and international networks that comprise conservatism. . .(support) at least a *prima facie* case that the Hoover has a discernable political bent. To the extent that it does, there's a problem. . . .

"Predominantly, the institution is conservative. They don't all see the world the same way. There might even be some liberals there. . . .

"In recent years, Hoover has diversified itself, thus enhancing its own reputation and academic respectability."

But while it draws on Stanford's reputation, it follows its own hiring and retention practices, he added. It is not subject to the same checks and balances as regular academic departments.

Several years ago, President Richard W. Lyman appointed an informal faculty group to review and advise him on proposed appointments of senior fellows at the Hoover Institution. Search committees for curators at the Hoover include two Stanford faculty or administrators chosen after consultation with the University president as well as three selected by the Institution itself.

Manley said he discussed his concerns two or three weeks ago with University Provost Albert Hastorf as well as Humanities and Sciences Dean Norman Wessells. He expressed confidence that President Kennedy would greet the petition as "a serious, concerned effort" to learn more about the present relationship.

"If the results of debate and inquiry show that the Hoover Institution is in fact a politically partisan organization of researchers who advance disproportionately and overwhelmingly one viewpoint on a range of public policies. . .then we should discuss severance of its research organization from the University.

"The library is an important asset. The research organization is, I think, the issue."

Controls on Hoover

In a separate interview, Rebholz said he personally favors the alternative of bringing the Hoover budgets and appointments "directly under the control of the Provost," the same as other departments. But there's no reason why the Institution might not pay rent and become completely independent of the University, he added.

A Board of Trustees statement adopted May 21, 1969 states in part: "The Hoover Institution is an independent institution within the frame (sic) of Stanford University. Its relation to the University is that the President of the University will propose all appointments, promotions, and budget directly to the Board of Trustees. There will be no reference to any faculty committee between the President and the Board of Trustees."

The Institution received about $4 million of its $8.4 million budget this year from the University. This includes about $1.3 million from earnings on endowment restricted to the Hoover Institution and nearly $2.8 million in general funds to support its library and archives.

About 40 percent of the total Hoover budget comes from corporate and individual gifts made directly to the Institution.

Asked what triggered his interest in having a trustee inquiry, Manley said it stemmed "from a growing body of evidence suggesting that Hoover was, intentionally or not, blurring or obscuring the lines that separate it from the University through joint appointments, the national fellows program, requests to departments to open curricula to Hoover scholars—a whole variety of things.

"They increasingly made their presence clear in my department and in others. It's a two-way street: people go to Hoover, too.

"The general impression for a long time was that it was separate, in its own building, with a library.

"As Hoover has gotten more prosperous and well-endowed, financially as well as politically, it can no longer be put out of your mind.

"It's now too prominent in its connections with the University. It's not just a separate thing—if it ever was."

Correction

Philip T. McLean's name was spelled wrong in the notice of his death in the April 13 *Campus Report*.

We apologize to those who were offended by the mistake.

Over-50 Fun Run set this Saturday

The Fun Run for runners 50 years of age or more, announced in the March 30 *Campus Report*, will start at 9 a.m. Saturday, April 23, not on April 24 as originally reported.

The run begins at the south end of Stanford Stadium near El Camino Real and covers a four-mile course (twice around the two-mile Peterson loop).

The event is sponsored by Fifty-Plus Runners Association, which has its headquarters at the Stanford Heart Disease Prevention Program.

For more information call Don Carpenter evenings at 327-8043.

Health and safety report

Accidents and Injuries Occurring During Week of Apr. 11-15

Type of Accident or Injury	Number of Incidents	Days Lost
Animal/insect contact	2	(0, 0)
Impact with object	2	(0, 0)
Cut by sharp object	1	(2)
Fall from height (incl. stairs)	1	(2)
Fall from same level	1	(0)
Stress	1	(15)
Temperature extreme	1	(0)

Faculty Senate considers self-study, expansion, and reapportionment

The Stanford Faculty Senate, formed in September, 1968, may conduct a self-study and review of its own operations next year.

The Senate Steering Committee is "seriously considering" appointing an ad hoc committee for this purpose, according to Prof. Alexander Fetter, Senate chairman.

"Whether any changes should be made is not clear," Fetter told the Senate April 14. Any comments and suggestions should be directed to the Steering Committee, which plans to discuss this issue at its regular meeting Wednesday, April 20.

One purpose of the self-study might be to "consider the possibility of expanding the Senate," Fetter said. Since its creation, the size of the entire Academic Council has grown 30 percent, to about 1,100 members.

The Senate has 53 voting representatives from 12 electoral units. It also has 12 ex-officio members, serving without vote, including the president, provost, deans of the seven schools, vice provosts overseeing graduate and undergraduate education, and the academic secretary.

At its April 14 meeting, the Senate voted unanimously to retain the current appointment of seats for one more year. Following further study, a reapportionment plan will be considered by the Senate next year for implementation in elections held during 1983-84.

The Senate's action followed a report, based on past apportionment procedures, which would have reduced the seats allocated to the School of Humanities and Sciences by two and increased Engineering and Medicine by one each.

Required every five years under the Senate's constitution, the proposed changes were based on faculty size and student enrollments. Students without declared majors were allocated in exact proportion to those with declared majors. Postdoctoral fellows were added to the Medical School tally as students for the first time.

Several faculty representatives questionned the proposed reapportionment, including the manner in which the present system "rounds" data up or down to determine the number of seats allocated by school. Fetter suggested that another basis for apportioning seats might be the number of course units taken by students in addition to the number of faculty by field.

Presumably, these questions and suggestions would be included in a study of the Senate's method for apportioning seats.

A key policy-making group within the University, the Senate was carefully planned by the late Prof. Herbert Packer and approved by vote of the entire faculty. Its creation was quickly followed by a series of major decisions on curricular reform, classified research, and academic credit for ROTC, among other topics.

Since its creation, no policy decision of the Senate has been reversed by vote of the full faculty.

Unlike many other representative bodies created on other campuses in the late 1960s and early 1970s, the Senate's basic structure has not undergone any major change since its inception.

Letters to the editor

Western Culture courses found lacking

Editor, *Campus Report*:

We, Kusema Ukweli (the African History Committee of the Black Student Union), strongly object to the manner in which the current Western Culture program is taught. By teaching from a Euro-centric perspective and concentrating exclusively on European civilization, the program makes two fallacious assumptions.

First, the inordinate emphasis (i.e. 15 units and 3 quarters) on Western Culture implies that the study of non-European cultures and people is insignificant. This attitude insults those not of European background.

Second, most tracks start their study with the Greeks and imply that western civilization developed independently and free from outside influences. This is simply not true. Humanity, civilization, religion, and science first developed in Africa and then spread to Greece and the rest of the world. As it now stands, the Western Culture program does more distorting of the truth than educating students.

We were encouraged, however, to hear that President Kennedy recognized the shortcomings of the program and that Carolyn Lougee had called a meeting to discuss improving the program. We sincerely hope that out of this meeting comes the first positive steps to correct the biases and misrepresentations in the Western Culture program. Furthermore, we hope that this meeting marks the beginning of a serious effort to include the study of the cultures of *all* Stanford students within the mainstream of the undergraduate curriculum.

Having the benefit of experience in the present Western Culture program coupled with extensive education in African history, we would like to offer a few suggestions for improvement. One immediate step is revision of the syllabus to include different reference materials instead of the current book, *Western Civilizations*. One particularly useful book is George James' *Stolen Legacy* which explains the African origin of many European ideas.

Another constructive improvement is the installation of a new track. This track could retain its European flavor but also examine the influences on and evolution of European society. This track should explain that Pythagoras, Democritus, and Socrates got their ideas from African thinkers. It should show that the Greek gods were imitations of African gods. It should teach that Asian and African religions had a virgin mother and divine child long before the birth of Christ. It should detail how Christianity first flourished in Africa. This new track should also illustrate how Europe's economic growth in the Industrial Age was directly linked to its exploitation of African resources and people.

Since this knowledge unfortunately is not acquired through the traditional routes of education and is missing from the backgrounds of most Stanford students and faculty, the University should hire an expert in this field if it wishes to provide the superior quality education that it claims to offer. Dr. Artee Young of the University of Washington presently teaches a very successful world literature course which highlights the African origins of the classics. Other experts that the University should contact are Asa Hilliard of Morehouse College, Dr. Richard King of San Francisco State, and Yosef ben-Jochanon of Cornell University.

While the above changes would improve the present program they still fail to reach the very heart of the problem: the unwarranted and unfounded glorification of one culture over another. Ultimately, the Western Culture program should become a program in North American Cultures and study the contributions and interrelationships between the cultures of Native American, Euro-Americans, Chicanos, Asian-Americans, and African-Americans. The mutual study of one's own and other cultures is the first step toward eliminating the misunderstanding between cultures that spawns racism.

In order to create changes of a lasting and effective nature, a faculty-student committee should be established to examine the program's deficiencies from all viewpoints. Student input will be crucial to a successful reformation of Western Culture. Experienced in this area where the University is lacking, we are most eager to meet with a representation of faculty members and to begin the task of pointing the curriculum toward teaching the truth about the development of mankind.

Kusema Ukweli (To speak the truth)
Steve Phillips
Simon Jones
Jendayi Ayodele
Mandisa Oliver
Vincent Johnson
Tamara Lewis
Carol Watson
David Walker
Trey Ellis

Senate reviews undergrad programs

The Faculty Senate at Stanford has renewed the degree-granting authority of undergraduate programs in human biology and humanities special programs for five years each.

After extensive discussion, the Senate ended the special treatment now given premed students in the honors program in humanities special programs. This has permitted students to substitute premed courses for 40 units of work in a humanistic subfield, such as comparative literature or Medieval studies.

Prof. Paul Seaver, history, who heads the Committee on Undergraduate Studies, called the honors program "a model of its kind." The "anomalous situation" of those few premed students enrolled has existed since 1961. The change will not affect those currently in the program.

Humanities and Sciences Dean Norman Wessells noted that premed course requirements now are "not that heavy." Prof. Leon Rosenberg, medical microbiology, said it was "very important to maintain a core of humanistically-oriented premed students," including the top talent attracted to the honors program.

Associate Prof. Craig Heller, biology, saw "no justification for treating premeds differently" from other students.

Provost Albert Hastorf opposed the tendency to "over label and stereotype premeds. It might be better to call them science students. We don't label students prelaw the same way."

Prof. Kenneth Melmon, chairman of medicine, agreed with Wessells that premed requirements are "very minimal."

"A premed needs no coddling," he said. "It's prejudice—not fact" that students with humanities majors have a tougher time earning admission to medical schools.

Admissions committees "can spot a cheap (i.e., easy) degree," he added. Ending the special treatment of premeds in the honors program may attract more students, not less.

"Anything that looks cheap attracts the wrong people," he declared.

The ad hoc committee which reviewed humanities special programs said "the evidence available. . .indicates a strong and lively program." It has been headed by Prof. Lawrence Ryan since 1973. Prof. Peter Stansky, history, headed the review group.

Prof. Richard Thompson, head of the interdisciplinary program in human biology, noted that the number of academic majors in this field has grown from 244 in 1979-80 to 403 currently.

The review committee, headed by Prof. William Clebsch, religious studies, expressed support for current efforts to make the program even more rigorous. It expressed "enthusiastic endorsement" in recommending a five-year renewal.

Anti-weapons research feeling grows

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The new petition supports 280 Stanford Linear Accelerator Center staffers, who have opposed unclassified weapons-related research proposed by Lawrence Livermore, Sandia, and Los Alamos national laboratories at the Stanford Synchrotron Radiation Laboratory, which depends on electron beams from SLAC. "They would be unwilling collaborators in a program they find unacceptable and of a kind they understood would not be undertaken at SLAC," the petition declares.

The national laboratories proposal was not included in President Reagan's budget for fiscal 1984. It is still being reviewed by SSRL's scientific advisory panel, a group of 10 scientists outside Stanford. SLAC Director Wolfgang Panofsky has assured SSRL that SLAC will "cooperate fully" if the project is approved.

On April 1, Stanford President Donald Kennedy said he planned no change in present Stanford research policy, which imposes no end-use restrictions on research that is unclassified. On March 31, the Faculty Senate asked its committee on research to examine "the character and volume of weapons-related research" at Stanford but deleted a request for study of possible end-use criteria which might reduce the volume of such research.

Time Management

Mary Leigh Burke, local freelance writer and health educator, will teach a Time Management class at Escondido Village, beginning Wednesday, April 20.

The class, which will run from 7-8:30 p.m., will explore ways to enhance self-awareness and personal well-being, as well as practical time-creating techniques.

The fee for the six-week course is $15; for more information, call 7-1101.

Senate report

Senate approves extension of human biology, humanities special programs

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 11

Summary of actions taken by the Senate
April 14, 1983

At its meeting of April 14, 1983, the Senate took the following actions:

1. On the recommendation of the Committee on Undergraduate Studies, the Senate, by unanimous voice vote, extended the degree-nominating authority of the Program in Human Biology for a further five years, effective with the autumn of 1984.

2. On the recommendation of the Committee on Undergraduate Studies, the Senate, by divided voice vote, extended the degree-nominating authority of the Humanities Special Programs for a further five years effective with the autumn of 1983, but without the exceptional treatment of pre-medical students.

3. On the recommendation of the Committee on Graduate Studies, the Senate, by unanimous voice vote, approved an amended version of *Procedures for the Establishment and Review of Graduate Non-Departmental Degree-Nominating Programs* (formerly titled *Procedures for the Establishment and Review of Graduate Interdisciplinary Programs*).

4. The Senate, by unanimous voice vote, approved a recommendation of the Committee on Graduate Studies that the program in Latin American Studies be subject to regular review by the Senate, like all other non-departmental degree-nominating graduate programs.

5. On a motion made by A. Hastorf, seconded by G. Gillespie, the Senate voted unanimously to retain the present Senate apportionment of representatives for one more year, so that a more appropriate procedure for reapportionment may be adopted and implemented prior to the 1983-84 elections.

MINUTES OF THE FIFTEENTH SENATE
OF THE ACADEMIC COUNCIL
April 14, 1983

A meeting of the Fifteenth Senate of the Academic Council was held on 4/14/83, beginning at 3:18 p.m. in Room 180 of the School of Law with A.L. Fetter, chair, presiding. Present were 33 representatives, 6 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting of the Fifteenth Senate held on 3/31/83 (SenD#2488) were approved as submitted.

Report of the Steering Committee

In the report from the Steering Committee, A.L. Fetter, chair, reported that the committee is currently considering the possibility that it might now be appropriate for the Senate to appoint an *ad hoc* committee to review its own organization and procedures, to determine how well it has been performing its task and what changes, if any, need to be made. The Senate was organized in 1967, and now represents an Academic Council approximately 30 percent larger than it was when the Senate was founded. Many of the Senate's founders are currently available for consultation on the rationale for the original organizational decisions and on whether that rationale is equally valid today. The Steering Committee will consider proposing the establishment of such a review committee, and welcomes any comments or suggestions to members of the Steering Committee.

He also called attention to two new items on the forthcoming agenda: a review of the Freshman/Sophomore Seminar Programs and a preliminary report from the Committee on Research on the study of weapons-related research at Stanford.

Report from the Committee on Committees

A. Mellor, chair, reported that the Committee on Committees is currently considering the revision of the charge to the Committee on Computing and Information Technology to bring that charge more into line with the charges to other Council committees. In last week's meeting, the CoC was joined by four guests (C. R. Dickens, A. L. Fetter, J. R. Miller, Jr., and A. E. Siegman) who were extremely helpful in giving the CoC an idea of what some of the issues facing that committee are. The CoC will be reporting back to the Senate later this quarter with recommendations for changes in the C-CIT charge.

Report of the Provost

The Provost reported first that the Film Rental Service in Meyer Library will continue to be available at least 20 hours per week, with only a small increase in fees for outside rentals.

Secondly, he reported that nine Guggenheim Fellowships had been awarded to Stanford faculty, adding that the following awards had also been made: Cornell 11, Harvard (like Stanford) 9, UC-Berkeley 8, and Yale 7. He specifically congratulated Senate representatives E. Traugott and A. Mellor, who were two of Stanford's nine awardees.

His third report reminded the Senate that a search committee had been seeking a replacement for Leon Seltzer, Director of Stanford University Press, who will retire in June. Seltzer came to Stanford as the new Director of the Stanford Press on April 14, 1956. He did a superb job in creating a first-class university press, now publishing some 40-45 titles per year. The new incoming director of Stanford Press has described Seltzer as one of the clear and obvious institution-builders among university press directors in this country. He came to Stanford from Columbia University Press, and received a law degree from Stanford in 1974. After his retirement, he plans to work in copyright law.

The new director of the Stanford Press as of August 1, 1983 will be Grant Barnes, now executive editor of the University of California Press. He has 18 years of distinguished service in scholarly publishing, primarily at UC-Berkeley.

The provost expressed warm thanks to the search committee and its incomparable chair, G. L. Bach. The other committee members included Professors W. Chace, J. Gibbs, Jr., T. Grey, G. Lieberman, and P. Suppes.

C-US Report on the Program in Human Biology

P. Seaver (chair of the Committee on Undergraduate Programs) presented the committee's report on the review of the Program in Human BIology (SenD#2489). The review committee praised the program and recommended its continuation, but expressed concern that the number of majors and variety of courses offered were beyond the resources of the program. It made seven non-binding recommendations intended to guide and strengthen the program over the next five years. The Dean of Humanities and Sciences endorsed all but one recommendation, considering that one too restrictive. The program is to be encouraged to have courses that would not otherwise be offered by members of the regular faculty, and will not be subject to budgetary constraints other than those common to all departments and programs. Since program was reviewed in its third year of the current five-year period, this five-year renewal, if approved, would become effective in autumn of 1984.

R. Thompson, the new director of the Program in Human Biology, commented that earlier concerns about possible restrictions on advanced courses have now been resolved. The rigor of the program has been increased significantly. The budget in actual dollars has gone up about 7 percent a year, which means at best holding even; the number of majors has gone up 15 percent. In 1979-80, there were 244 Human Biology majors; in 1980-81, 273; in 1981-82, 365; and this year, 403. The number of majors has increased significantly even though the rigor of the major has also significantly increased. He concluded by adding that the recommendations from every level of the review were extremely helpful.

W. Clebsch pointed out that the review took place in 1981-82 with the assumption and charge that the renewal was to take effect in autumn of 1983. Nevertheless, he expressed the enthusiastic endorsement of his committee that the program be renewed for a five-year period, effective autumn 1984.

The Senate unanimously approved a five-year extension of the Program in Human Biology effective autumn 1984.

C-US Report on the Humanities Special Programs

In presenting the report on the Humanities Special Programs (SenD#2490) P. Seaver (chair of C-US) pointed out that the program, in existence since 1947, has performed a valuable function in sheltering emerging majors as they developed. It offers a model honors program. The only major concern at all levels of the review was the anamolous situation which permits pre-medical students to substitute an equivalent amount of pre-medical course work for the 40 units of work in a humanities subfield which is required of other majors in the program. The deans of Humanities and Sciences were prepared to recommend that "the program's degree-granting authority be renewed on condition that the program take immediate steps to insure that the future pre-medical students in the program have a major in a defined humanistic subfield." With the understanding that the program faculty was willing to reconsider the pre-medical option, C-US recommended that the program be extended for another five years.

L. Ryan, currently director of the Humanities Special Programs, reviewed the history of the B.A. in Humanities with a pre-medical concentration from 1961. At that time, it required 30 units of predominantly advanced work in a single humanistic department. Since 1963, no such requirement has been made. After that time, recommendations were made about acquiring substantial background for the prospective senior essay, but even these had disappeared from Courses and Degrees by 1971. Ryan speculated on what factors might have created this situation, but there is no clear explanation for the change.

With the reinstitution of a Western Culture requirement, the Humanities Special Programs faculty has been concerned that the major for pre-medical students currently requires only 27 units of concentration beyond the Western Culture requirement, plus a foreign language requirement equal to five quarters of instruction (instead of the University requirement of three). While the program has few pre-medical majors, graduating only 3 or 4 per year, the feeling now is that the program should require of them a four-course major concentration in a single humanistic department.

The faculty believes that the program provides valuable flexibility to pre-med students, enabling them to go overseas or to explore other courses in the University. They would like to preserve some of that flexibility, but themselves see the need to increase the requirements for the pre-medical students.

Dean Wessells remarked that pre-medical requirements in the sciences are not all that heavy. A very significant number of students come in with enough advanced work that they need take very few of those courses. These are some of our brightest students. At the very least those four additional required courses should be 5 unit courses.

Ryan indicated that the courses normally required would be five units or very substantive four-unit courses; even so, this program would be easier than other majors within Humanities Special Programs, and would give greater flexibility for pre-medical students than for others in the program.

Associate Dean Lougee expressed a preference for the conditional approval recommended by the deans rather than the less specific reservation expressed by C-US. She commented, however, that to meet the Senate-mandated requirements for a major, the program would be obligated to increase significantly the requirements of the pre-medical option.

It was pointed out that this program has never before been reviewed and that if approved (conditionally or not) the five-year renewal period would begin with autumn 1983. Ryan expressed the hope that the program itself, about which there has been only this one major reservation expressed, might be approved for fall 1983, with the pre-medical option considered as a separate issue.

L. Rosenberg spoke in support of retaining as much flexibility as reasonable in order to encourage pre-medical students to follow a humanities program. We need to encourage a core of humanistically-focused pre-medical students, and such students must take more than the minimal science requirements as well or they won't get into the best medical schools.

Both C. Heller and C . Degler objected to the practice of treating pre-med students differently from others in the requirements for a given degree. Dean Wessells pointed out that these bright students do take much more course work than is required; the thing they lack is focus—a concentration, which they don't get in their pre-medical studies. The message is that this program doesn't require enough of them.

Vice Provost Katchadourian pointed out that we have no formal pre-medical program, and that the statement of intent to apply to medical schools is taken as the fact. In effect, this amounts to permitting the substitution of a certain number of science units for the same number of

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humanities units. Other science students would logically be just as eligible for this option.

On request, L. Ryan summarized the types of programs which Humanities Special Programs offers. These include 1) an Humanities honors program, open to any B.A. degree candidate whatever his or her major; 2) a major program, with honors required, for the B.A. degree in Humanities, and 3) an individual 40-unit concentration, beyond the 27 required units in the humanities, which integrates an interdepartmental set of courses into a unified program of study. The pre-medical option falls in the third category, except that it exempts the student from the 40-unit concentration. The four-course requirement currently being considered by the Humanities Special Program faculty would impose roughly half the usual 40-unit requirement on pre-medical students. Imposing the entire requirement, it is felt, would eliminate pre-medical students from the program. They would not have sufficient units to spare for the program after satisfying all other requirements.

In discussing the inequity of treating pre-medical students differently on these degree requirements, several commented that it is not uncommon that the requirements for a given degree may be different, but comparable. This is not the same, as M. Bratman pointed out, as the difference between requirements for a degree and lack of those requirements. He emphasized that the humanities requirements are needed to prepare students to take best advantage of the honors level.

K. Melmon remarked that science requirements for admission to medical school are really very minimal. The prejudice that a full humanities program will prevent acceptance at a medical school is not supported by the facts. A harder track of study may attract even more good students.

J. Adams moved to amend the recommended program renewal to exclude the exceptional treatment given to pre-medical students. C. Degler seconded the motion. The amendment passed on a divided voice vote.

If passed, the amended recommendation would mean that future pre-medical applicants for a B.A. in Humanities would have the same status as all other candidates, i.e., would have to meet the same requirements. The understanding is that an exception to standard requirements could be proposed for Senate approval anytime within the five-year period if it had the support of the Associate Dean of Humanities and Sciences for Undergraduate Programs and the Committee on Undergraduate Studies.

At the close of the discussion, the Senate, on a divided voice vote, approved the five-year renewal of the Humanities Special Programs degree-nominating authority without exceptional treatment of pre-medical students, effective autumn 1983.

C-GS Report on Procedures for the Establishment and Review of Graduate Interdisciplinary Programs (See revised title in Senate Report No. 11)

P. Robinson, chair of the Committee on Graduate Studies, presented the *procedures for the Establishment* and Review of Graduate Interdisciplinary Programs (SenD#2493), which had been developed by C-GS at the request of the Senate.

The procedures were outlined in nine steps from the inception of a new program through its approval and subsequent review and renewal by the Senate. Attached was a list of graduate programs to which the procedures were intended to apply. By consensus, the Senate divided the procedures and the attached list of programs for separate consideration, and discussion was opened on the procedures.

Associate Dean Lougee inquired if the procedures should not include specific mention of a cognizant dean's responsibility to comment on the financial impact of a program, in conformance with the instructions of the Senate in spring 1982.

Dean Lieberman and P. Robinson both responded that the Procedures document does not specify the nature of the cognizant dean's comments and that financial impact could be expected to be only one of a number of such decanal comments.

There being no further discussion, the document was accepted by unanimous voice vote.

As discussion opened on the attached list of programs to be reviewed, Dean Kays pointed out that the two programs listed in Engineering were intradepartmental programs and thus not appropriate for Senate review. He moved that those two programs be deleted from the list. Dean Lieberman seconded the motion. E. Cohen agreed with Dean Kays and pointed out that the term "interdisciplinary," if interpreted literally, would designate many such programs, including one of her own in the School of Education.

P. Robinson explained that the programs at issue were those not attached to a single department (or a School which has no departments, like Education), programs lacking a single faculty with continuing responsibility for the quality of that program.

Dean Lougee commented that it was her understanding that the Senate has the sole authority to grant degrees and to approve degree-nominating entities. The point of the list is to capture for cyclical review all the non-departmental programs which nominate degree candidates to the Senate for the awarding of degrees. The Senate grants such degree-nominating rights to departments without limit of time. This document attempts to capture all graduate-level degree-nominating entities which are not departments. For that reason, she questioned the omission of the Graduate Special Programs from this list, pointing out that the parallel undergraduate program (the individually-designed major program) is subject to five-year review by the Senate and was approved for a further five-year period by the Senate last April.

J. Adams questioned the commonality of the programs on the list and asked that their common attributes be indicated by a descriptor. Dean Lougee and P. Robinson agreed that the list is intended to include all and only those graduate programs which are non-departmental degree-nominating programs. The procedures document should be retitled with those more appropriate terms. That's why the two School of Engineering programs don't belong on this list.

Dean Lieberman commented that Graduate Special Programs differs from those on the list in a different way. Since there is no single curriculum, there is some question what is to be reviewed. It might be appropriate for C-GS to report to the Senate on the activities of that program, but it is not clear that program review and renewal is appropriate in the way that it is with the other programs.

When urged to return to the question of deleting the two engineering programs from the list, Chairman Fetter suggested an alternative. The Senate could consider that the approved *Procedures* satisfied the basic request, and that this list is in preliminary form and subject to change. Subtracting or adding programs would demand more information than is immediately available to the Senate, and a Senate vote now would be premature. The list should be put in final form before approval is asked of the Senate. In light of this discussion, Dean Kays withdrew his motion.

R. Hofstader enquired whether information about program enrollments could be made available. P. Robinson pointed out that those figures are reported with each program review.

There was consensus that the more appropriate terms suggested by Dean Lougee would replace the word "interdisciplinary" in reporting these procedures.

In closing his report, Chairman Robinson called attention to the fact that C-GS has proposed that the Senate pass a motion recommended by C-GS that Latin American Studies, like all other non-departmental degree-nominating programs, be subject to regular review (SenD#2487). The recommendation was approved without dissent.

Reapportionment of Senate Representation Within the Academic Council

In presenting the proposal for reapportionment, the Academic Secretary pointed out that the proposed resolution (SenD#2492) recommends a reallocation of Senate seats based on autumn 1982 Academic Council and student populations within constituencies. It would also mandate the appropriate changes in Senate Rule VIII to reflect the Senate decisions on reapportionment and any subsequent decisions within constituencies regarding changes in Electoral Units.

The base figures and allotment ratios were given, together with the method traditionally used for assigning student-based seats. It was pointed out that these calculations for the third reapportionment of the Senate were based upon historical precedent, following assumptions and methods used in the original apportionment and in the first and second reapportionments. If the Senate does establish a review committee, there are many questions and assumptions about reapportionment which may well bear scrutiny, among them the relative sizes of the Senate and Academic Council, the method of assigning students to constituencies, the criteria for major constituency status, the question of minimal and proportional representation, and many other related questions.

Attention was also called to the fact that in the allotment proposed, all three of the biggest schools are adversely affected in the sense that, by the system used, all "earn" more seats than have been assigned: Engineering and Humanities and Sciences 1 more each, and Medicine, 2 more. The constraints of a fixed Senate size and mandated minimal representation for smaller major constituencies forces hard decisions and prompts many questions about the appropriateness of a given allocation.

The proposal is late because of the change in the Academic Secretary's office this year. If passed, and possible to implement at this late date, the reapportionment would become effective with the Sixteenth Senate, which might be organized as scheduled on May 5th if there are no major changes within the schools, or could be organized as late as June 2 if necessary. If major changes are to be made in electoral units, those cannot be implemented for the Sixteenth Senate but would be put into effect for the 1983-84 elections for the Seventeenth Senate. It was pointed out that certain types of changes in Senate electoral units can have a complicated secondary effect on Advisory Board units as well.

The reapportionment data regarding subsections of the two multi section schools goes directly to the schools, since that reallocation is an intraschool affair.

The question was asked how decisions were made about rounding totals to determine seat allotments, since the results appeared inconsistent. Some allotments are dictated by Charter-mandated minimal representation per major constituency. Others were the result of arbitrary decisions, influenced by factors regarding the composition of both Academic Council and student populations, e.g., proportion of post-doctoral or research fellows in the total student population within a constituency.

K. Melmon remarked that the use of double-decimal figures to present data interpreted in that way was totally unjustifed.

J. Gere commented that, given a fixed number of seats, rounding upward to ensure Charter-mandated representation for the smaller constituencies would necessitate rounding downward for the larger electoral units.

R. Street suggested that, if precedent must be followed, it would be more logical to round down the totals for all four of the larger schools, after satisfying the minimal representation requirement for the small constituencies. This would give a more fair distribution of the remaining seats in the fixed pool.

Dean Wessells asked why the figure for Medical School students doubled between 1977 and 1983. Dean Lieberman responded that it was the result of an administrative reclassification of post-doctoral fellows to student status during that period. This had a more profound effect upon the Medical School student population than on any other single constituency.

The manner of assigning undeclared majors was mentioned, as was the possibility that students might be assigned to major constituencies in some relationship to numbers of course registrations, rather than by declared major with undeclared majors proportionately assigned. E. Webb expressed the hope that the pattern of representation in the Senate could be determined on the basis of less equivocal figures and a more considered analysis. G. Gillespie questioned the propriety of applying new allocation figures to an election already completed, even if that proves possible to do.

A. Hastorf proposed that the Senate might vote to retain the current apportionment of the Senate for one more year since, because of a change in Academic Secretary, the proposal had come too late to implement for the Sixteenth Senate. The present apportionment of seats would be kept in place for the Sixteenth Senate, and whatever review the Senate decides to put into place should at least determine a more careful procedure with regard to reapportionment. The proposal was seconded by G. Gillespie.

A vote was taken on the modified motion that the present Senate apportionment of representatives be retained for one more year for the Sixteenth Senate so that a more appropriate procedure for reapportionment may be adopted and implemented prior to the 1983-84 elections. The motion passed unanimously.

The meeting adjourned at approximately 5:20 p.m.

Clara N. Bush
Academic Secretary

School of Education numero uno again

Stanford's School of Education has again been ranked first nationally for research.

UCLA ranks second, followed by Illinois, Wisconsin, and Berkeley.

The new rankings were published in the spring issue of the American Education Research Journal by Maurice Easch, professor of urban education research at the University of Illinois-Chicago.

According to *The Chronicle of Higher Education*, the study ranked schools of education by a formula that included the number of articles published by faculty in leading education research journals between 1975 and 1981 and the extent of faculty participation in the program of the American Educational Research Association's annual meetings, among other factors.

The University of Illinois at Chicago ranked sixth, followed by Minnesota, Harvard, Penn State, and Ohio State. UC-Santa Barbara ranked 11th.

Staff employment opportunities

Exempt

29680-JB (JCC:7650) CUSTODIAN WKG SUPVR: 7:30-4pm; supv the cleaning, training & other duties of the custodians assigned to you; create & maintain a clean, safe, 'home-like' atmosphere for residents; daily check of bldgs/grounds & promptly report security, damages, maintenance & housekeeping problems to approp offc; submit monthly bldg maintenance & housekeeping report; order supplies & maintain inventory control over mat'ls & keys; attend approp classes; work & commu effectively w/ students, Residential/Edu, Resident Fellows & co-workers; QUALIFICATIONS: flexible performing job, can accept organizational changes fr outside depts; good supvry skills; demonstrated admin skills; ability to acquire exp & knowl regarding employee relations & USE contract; supvry exp rquired; excel commu skills a must; prev custodial skills desirable but not essential.; S09; $1632-2046.

15595-BP (JCC:2070) ADMIN ASST II: Acts as Personnel Officer, Offc Mgr, & Staff Assistant to Dir of CPPC; prov supporting analysis for budget planning; reviews monthly budget, projs trends & expenditure patterns; assists in cost control; assists in drafting annual budget letter; manages CPPC fee acct; trains unit heads & supvrs in personnel policies; coord all hires; prov informa to staff about Univ policies, benefits, promotional opportunities; coord annual Career Faire; prov CPPC orientation to all new employees; supv purchase & maintenance of supplies & eqpt; QUALIFICATIONS: knowl & work exp in personnel, budgeting, & supvn; ability to plan, organize, proj, & implement; ability to win coop fr diverse group of clients; write clearly & effectively; familiarity w/ Stanford policies & procedures; contact: Ruth Schneider/Deborah Duncan, 497-3963.; C05; $1670-2086.

14256-LL (JCC:3732) GRAPHICS ARTIST II: 75%; design & prep of exhibit (full scale design & prep); design & prep of camera ready art for Brochures & Pamphlets, Logos, Poster Presentations, Posters & Signs; biological drawings & diagrams for slides & publication; illustration as required for brochures & pamphlets: in line, color separated or w/ applied color; line, bar & flow graphs for publication in books & journals, for lecture slides in color or black & white; QUALIFICATIONS: BAF or BA in Art preferred; all skills required related to prep for press incl color separation, knowl & use of stat camera & typesetting products, photographic sizing, composition, etc; proficiency in drawing, inking, color theory & applied design; good commu skills.; C04; $1133-1410.

20475-AW (JCC:4084/4092) Programmer/Analyst III/IV: Work effectively w/ computing professionals, hospital administrators, dept heads, med & supervisory staff; interface w/ SUMC users to identify services & understand & resolve problems; data base mgmt exp essential (CICS/DL1); QUALIFICATIONS: min of approx 5 yrs (PA III) or 8 yrs (PA IV), programming w/ emphasis on hospital applications; exp in a serv oriented, production shop, serving health care institution; exp w/ CICS/DL1; knowl of ADS, DCL coding, & at least one of the following langs COBOL, PL1 or Assembler; must have med information sys exp & able to work w/ large multiprocessors in both centralized & distributed environments.; C07/C08; $2113-3344/2464-3848.

29445-LL (JCC:5042/5050) Sys Programmer II/III: Asst in sys programming, applications programming, & facilities support; primary emphasis is on software, but consulting for users, hardware repair & supvn of vendor-provided hardware repair, & the writing of sys documentation also important; update, modify, maintain, rewrite, & redesign portions of TOPS-2 operating sys, RSX-20F operating sys, & various other sys programs for all GSB computing eqpt, incl peripherals; write utility programs as needed; in the absence of mgr, perform admin duties as required; QUALIFICATIONS: prev TOPS-20/TOPS-10 sys software internals exp required w/ substantial exp in MACRO assembly lang in non-trivial applications; exp in PDP-11 & other large-scale programs assembly lang & exp in a consulting environ essential; exp in several high-level langs, incl FORTRAN, C, Pascal; knowl of microcomputer architecture & assembly lang programming helpful; non-smoking area.; C06/C07; $1854-2733/2113-3344.

41657-AW (JCC:5042/5050) Sys Programmer II/III: Coterminous to 12/31/83; team member w/ respon for implementing & maintaining commu software written in Pascal & PDP-11 Macro Assembler for DEC PDP11 minicomputers acting as commu processors in RLIN; detailed program specification & documentation, program development sys integration, testing, & maintenance; initial assignment will be development of program-to-program commu between remote large scale host computers in support of Linked Sys Proj/Standard Network Interconnection using emerging state-of-the-art data commu procedures; QUALIFICATIONS: knowl & understanding of PDP11 minicomputers, RSX11M operating sys, & Pascal programming lang; commu effectively in clear, concise & complete written & oral reports; thorough working knowl of PDP11 programming w/ 2 yrs exp; 2-3 yrs of exp w/ PDP11 minicomputers for SP II & 3-5 yrs of exp for SP III.; C06/C07; $1854-2733/2113-3344.

16406-AW (JCC:8880) MISC PROFESSIONAL: Coordinator, Western Regional Program on Japan; w/ guidance, coordinator is responsible for planning/execution of workshops for teachers, participation/presentation s at professional conferences & coordination of periodic network mtgs/conferences; mgmt of proj planning, budget/expenditures & corresp; exploration of funding opportunities & preparations of proposals, reports; QUALIFICATIONS: ability to coord/admin; ability to make formal presentations to various audiences; living exp and/or coursework on Japan.; C05; $1670-2086.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, April 26, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

28219-LL (JCC:4076) PROGR/ANALYST GEN II: 50% or 100% depending on funding; Programmer/Analyst for Data Bank Network (17 US & Canadian data banks) which use to TQD (Time-Oriented Database) Software Sys; write TOD programs in PL/I on IBM 3081 computer, incl editing, debugging, & documenting (using Script & Wylbur); maintain TOD schemas for data banks, check & transpose data, & maintain user-specified coding & compute routines; transfer & convert data fr other sys to TOD; troubleshoot hardware & data commu problems; QUALIFICATIONS: BA w/ emphasis on applications programming & sys analysis skills or a combination of edu & exp in computer programming area; required to work flexible hrs (evenings and/or wkends); commu skills (oral & written) commensurate w/ facilitating instruc of users; ability to develop effective work methods & work thru projs to their completion.; C06; $927-1156/1854-2312.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

41745-PM (JCC:2596) SECY II-SPEC: Work for various faculty members as assigned; heavy course work preparation incl typing, cut & paste & handling of all classwork needs; handle corresp; make nec arrangements for expense reports, travel, etc; cover phone calls & faculty scheduling of appts, if preferred by faculty member; QUALIFICATIONS: typ 75+; excel sec'l skills mandatory; familiarity w/ offc eqpt & standard offc procedure extremely helpful; knowl of IBM-PC (or other word processing eqpt) helpful; willingness to learn; some legal bkground helpful but not required; send appl/resume to Emily Chatfield, Room 113, Law School, (497-0352).; B12; $1310-1373.

28280-BP (JCC:2462) OFFICE ASST III: Process reqs, typing contract & acct numbers, requestor's name & delivery point, mat'ls and/or services ordered & estimated cost & deliver for approval; resolve problems; reconcile budget statements; file reqs, purchase orders, & mat'l received records into commitment books by contract, proj & numerical sequence; answer phones; respon for safe file, respon for filing invoices, etc; QUALIFICATIONS: 2-3 yrs offc exp; exp w/ adding machine, calculator helpful; send appl/resume to Beverly Yates, AEL 107.; B11; $1246-1310.

31501-BP (JCC:2462) OFFICE ASST III: Fixed term to 8/31/83; act as Research Assistant in Offc of Med Development; use of a variety of reference files, lib resource mat'ls & other misc records; development of informa & prep of res worksheets on Individuals, corporations & foundations w/ a demonstrated interest in supporting the work of SUMC; prepare or assist w/ prep of, special reports as required by fundraising staff & related officers, etc; QUALIFICATIONS: typ 45; able to compose written text; basic understanding of simple financial reports; able to type, proofread & correct one's own errors; good memory for names & familiarity w/ Offc of develop't helpful; send appl/resume to Liz Trujillo, 301 Encina Hall.; B11; $1246-1310.

41742-PM (JCC:2478) OFFICE ASST IV: Act as Law Placement Recruitment Coordinator; oversees all aspects of employer recruitment process at Law Sch'l incl primary contact w/ employers, publication of recruiting mat'ls, & the orientation of students to interviewing program; interacts w/ legal employers; interprets & enforces guidelines for recruiting; coord schedules; maintains computerized records; compiles statistics on recruiting; oversees all written & telephone commu regarding job openings for students & alumni; QUALIFICATIONS: typ 50; evidence of ability to work well w/ people; supvry or clerical admin exp helpful; excel written & oral skills; able to work under pressure; ability to handle sensitive & delicate matters; either exp in entering data on CRT or willingness to learn Wylbur & Word Star; send appl/resume to Emily Chatfield, Room 113, Crown Quad.; B14; $1440-1514.

6625-PM (JCC:2554) SECRETARY II: 50%, 1-5pm; typ corresp, forms & manuscripts for professor & members of group fr dictaphone & rough drafts using dictaphone, typewriter & word processing sys; handle dept mail; make travel arrangements for professor; act as bkup when needed for other members of offc staff; answer phones; xeroxing; genl offc duties; QUALIFICATIONS: typ 55-60; good typing skills; exp w/ word processor preferred (Wordstar on Apple II); use of dictaphone; good phone answering skills; good interpersonal skills; ability to meet deadlines; send appl/resume to Gweneth Wood, Physiology, Room 2.; B11; $623-655.

29339-BP (JCC:2554) SECRETARY II: Sec/receptionist for busy, hectic TV Network Office; extensive typing (NBI word processor); heavy phone calls; performs accurate finished-form typing & proofreading on corresp, manuscripts & forms & proposals; makes appts for Dir; picks up & delivers US & ID mail; helps to arrange dept mtgs; sets up, revises & maintains a variety of files; respon for processing & maintaining records of grades for 1,800 students, entering them & maintaining a Wylbur file; respon for petty cash & dispersing of money; order offc supplies; prepares all purchase reqs, I.D. reqs & expense reports; QUALIFICATIONS: typ 60; excel phone skills required; accurate finished typing; requires comprehensive knowl of TV Network; compose corresp & reports; send appl/resume to Anne Benker, Durand 345.; B11; $1246-1310.

31631-PM (JCC:2562) SECRETARY III: Sec to Dir of Lab of Developmental Neurochemistry; respon for dept'l residency selection, & Chairman of Faculty Senate; must deal effectively w/ faculty, residents & lab personnel in a busy environ where deadlines are commonplace; typing grants & manuscripts; initiating & processing orders, purchase reqs, etc; budget & authorize fr several funding sources; handle day to day programs efficiently; QUALIFICATIONS: typ 60-80; s/h preferred; superior organizational skills & able to handle multitude of complex respon; familiar w/ Wordprocessing & dictating eqpt; some acctg skills helpful but not mandatory; knowl of univ rules, regulations & acctg sys & working knowl of Med Sch'l operations very helpful but not essential; contact: Dea Eisner, S253 Med Ctr, 497-6049.; B14; $1440-1514.

28279-BP (JCC:2562) SECRETARY III: Sec for Solar Terrestrial Physics Group of Institute for Plasma Research; prov support for growing group of 11 people; screen visitors & phone calls; schedule appts, arrange mtgs, schedule seminars, etc; maintain extensive mailing list & see to the timely distribution of tech reports & journal publications; extensive travel arrangements for group & visiting scientists; type corresp, notes, tech articles & report quickly & accurately; prep class work for Astronomy course & Freshman Seminar, etc; QUALIFICATIONS: typ 65; 5 yrs exp in basic skills, equiv to an executive sec; heavy dictaphone use; strong tech typist; initiative, judgment, maturity & tact needed; send appl/resume to Beverly Yates, AEL 107.; B14; $1440-1514.

27149-PM (JCC:2562) SECRETARY III: Work for 4 sr. anesthesiologists; scheduling appts, mtgs, travel arrangements; typing manuscripts (tables) & grant applications; ability to follow through on problems & assignments during periodic absence of faculty on business trips; make decisions independently; exercise good judgment & deal w/ people at all levels; familiar w/ dictating eqpt; med terminology; word processing (Apple II/Wordstar available & willing to train); QUALIFICATIONS: typ 70; several yrs sec'l exp, preferably in a med environment; training or exp working w/ word processors; contact: Adena Goodart, 497-7555.; B14; $1440-1514.

Watch electricity use on Sunday—PG&E to do routine maintenance

The campus electric power load must be reduced by approximately 20 percent from 6 a.m. to 5 p.m., Sunday, April 24, to allow PG&E distribution equipment to be taken out of service for maintenance.

All nonessential uses of electricity must be deferred during this time.

Curtailment is especially important in the following areas: electric cooking, heating, space conditioning, and lighting. Scheduled activities need not be postponed, although air conditioning and ventilation should be reduced.

It is anticipated that voluntary efforts will be adequate but emergency load shedding will be implemented by the Utilities Department if overloading occurs.

The following areas will not be affected: faculty/staff housing, new student housing at Governor's Corner, Biology greenhouses, main Medical Center (Stone buildings and Phase I), Hoover Pavilion (hospital), and Carnegie Institute.

This curtailment was requested by PG&E to allow routine maintenance on the large substation transformers without a complete shutdown. It has been scheduled at this time to coincide with relatively light loads and availability of substation personnel.

For information and assistance please contact your building energy manager or the Utilities Department at ext. 7-3765.

Carpools

Ongoing carpool needs another partner. Leaves Oakland at 8 a.m., leaves Stanford at 6 p.m., M-F. Call Dan Crump, ext. 7-4433.

Ongoing carpool needs another partner. Leaves Oakland at 8:30 a.m. Leaves Stanford at 6 p.m. M-F. Call John Bundor at 7-4480.

Carpoolers wanted. Dublin/San Ramon/Pleasanton to Med Ctr. Hours 9-5:30, M-F. Call Ed at 7-5569.

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

DIETETICS SUPVR: Dietetics—#8163—(C-31); responsibilities: under direct supvn of Food Svc Mgr is respon for one or more of following sections: trayline, traycarrier, or sanitation; respon for scheduling, training, discipline, & evaluation of employees assigned to section; respon for efficient preparation of patient trays, & for timely serving of same; maintains standards of sanitation estabi by Dietetics Dept; qualifications: high schl grad or equiv reqd; demonstrated supv ability reqd; 3 or more yrs of experience in food preparation of service preferred; copmletion of food svc supvy course preferred; permanent, part-time; hours & days off varied; $7.63-$10.29 hrly

Education School plans public conference Saturday on history, outlook

Crisis or opportunity?

The Stanford School of Education will hold a public conference on "Education Faces the Future: Crisis of Confidence or Dynamic Opportunity?" starting at 1:30 p.m. Saturday, April 23, in Annenberg Auditorium on campus.

Prof. David Tyack will give the keynote address on "The Embeddedness of Public Education: A Different View." He holds the Vida Jacks professorship in education and also is a member of the history faculty at Stanford.

Two panels on the history and outlook for education will follow. Education Profs. Hans Weiler, Nell Noddings, and Larry Cuban will consider "The Issues and Values in Historical Perspective," with Prof. Myra Strober as moderator.

"New Barriers or New Pathways: Assessments of Current Policies in Education" will be discussed by Profs. Michael Kirst, Robert Calfee, and Marianne Amarel, visiting lecturer from Educational Testing Service. Prof. Elizabeth Cohen will moderate.

Coordinated by Mollie S. Rosenhan, director of special projects in the School of Education, the conference was planned in conjunction with several professional educators. It reflects a concern that education is becoming an "illegitimate" social institution, suffering from a crisis of confidence.

Conference registration fee is $12 in advance or $15 at the door.

Advance registration is required for those desiring to participate in a cocktail party and cabaret dinner at the Faculty Club following the conference ($21).

Further information may be obtained by calling Rosenhan at (415) 497-4465, Shirley Stein at 497-0127 or the School of Education at 497-2111.

Research seminars held Friday noon

Friday noon hour research seminars sponsored by the School of Education are continuing in Cubberley Building, Room 114. The seminars are meant to provide a forum for faculty, academic research staff, and visiting scholars in the School of Education, but all members of the academic community are welcome.

The remaining seminars are:

April 22—Jack Nelson, School of Education, Rutgers University; "Teacher Self-Censorship and Academic Freedom";

April 29—Ed Bridges, School of Education, Stanford; "The Management of Incompetence";

May 6—Vincent Tinto, School of Education, Syracuse University; "Patterns of Departure from Higher Education";

May 13—David Ragosa, School of Education, Stanford; "Analysis of Change and Stability";

May 20—Martin Carnoy, School of Education, Stanford; "Education and Theories of the State";

May 27—Roberto Jarry, School of Education, University of Paraiba, Brazil; "Rural Educational Services: The Case of Brazil";

June 3—Denis Phillips, School of Education, Stanford; "Tender-Mindedness in Educational Thought and Social Science Research Methodologies."

Rental housing

HOUSING AVAILABLE

□ **Sept. '83 to Aug. '84 or longer:** Architect designed campus hse, 4BR/3BA, study, frpl, pool, jacuzzi. Sep. rent. unit w/frpl, BA. Partly furn. $1550/mo. incl. all serv. Call 497-3992 (day), 857-0476, 5-9 pm & wknds.

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto. 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, commun. ctr. Prof. going on sabbat. $1500/mo. Call 325-1709.

□ **July '83 to June 30, '84 (flex):** Berkeley hse: 5BR/3BA, LR, DR, library, frpl w/yr of wood, piano. 1 acre, lush grdn, auto water, grdnr, sec. system. $1500/mo. Call (4154) 483-8484 (day), (415) 548-1735 (eve & wknd). Will also consider exchange for Stanf. hse.

□ **Regularly Avail.:** 1 & 2BR furn & unfurn apts & twnhses, & 3BR/2BA hses; in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, 856-6049 or June, 968-4957.

□ **July '83 to July '84:** Unfurn. 2BR/2BA hse, 2 car gar., pool, tennis, frpl, hot tub, W/D, in quiet hsng develop, 15 min. to Stanf. Poss. furn. Prefer non-smoker, no pets. Call 497-7001 (day), lv message for Dr. Kulick.

□ **Late June to early Aug.:** Quiet, cool, furn. West Menlo 3½BR/2BA hse, deck, fenced yd, bike to campus. $900/mo. All terms nego. Call 854-0344.

□ **Beg. Sept. 1:** Fully furn. 2BR/2BA Pearce Mitchell condo on campus. Yr-round pool, jacuzzi, rec. ctr. Adults, no pets. $850/mo. Call 497-1745 (day), 522-4917.

□ **NOW:** Furn. 4BR/2½BA hse, 2200 sq. ft., study, DR, FR, 3 car gar., patio, w/yr lease. Incl. kitchenware, linens, 2 TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call 965-1302 (eve).

□ **Beg. May 1:** Designer's hse, Menlo Pk, 2BR/1BA, den, patio w/priv. fenced yd. AEK, dbl oven, W/D, gar., frpl. Prefer no children or pets. $1100/mo. incl. grdnr & water. Call 854-2727.

□ **Aug. 15 to Dec. 1:** Decorator's hse, 3BR/3BA, fully equipped. Pool. 20 min. to campus. $1200/mo. or nego for caring people. Call Virginia Owen, (415) 349-1828.

□ **Mid-June to end Aug. (flex):** Fully furn hse, 5BR/3½BA, FR, study, pool, jacuzzi, on campus. $1800/mo. incl. grdnr. Call 494-9401.

□ **Beg. May 15:** Twnhse in Sunnyvale, 2BR/2BA loft, frpl, W/D, 2 car gar. (attached). Nr. schls, & 280. Priv. w/extensive common grnds. Pool. Call (408) 733-[illegible] (eve).

□ **June thru Aug.:** 1BR apt in Boston/Cambridge area. Fully furn. in sec. complex. Walk to Harvard Sq. & pub. transp. Will sublet or trade for your attrac. apt. or hse for summer. Nonsmokers. Call COLLECT (617) 876-1232.

□ **Sept., yr. lease:** Fully furn. hse, 4BR/2BA, spacious, elegant, all appl., piano, garden, patio, gar., 10 min. to Stanf. $1050/mo. incl. grdnr. Call 322-0189 (eve).

□ **June 20 to Aug. 30:** Attrac. furn. hse. 3BR/2BA, lrg. grdn, in No. Palo Alto, nr. prk, pool, library, shops. Children welcome. $950/mo. Call 497-6878 (day), 328-4681 (eve).

□ **Late Ju ne thru July, Aug. (flex):** Fully furn campus hse, 3BR/2BA, garden, view. For careful tenant. $1200/mo. Call Feferman, 857-0323, 497-2349, or 497-1978.

□ **Beg. May 13:** Oak Creek apt., fully furn., 1BR, twin beds, pools, tennis, Call 328-4180.

□ **Mid-May to Sept.-Oct. (flex):** Fully furn. hse, 2BR/2BA, den, all appl., 10 min. bike to Stanf. Non-smokers, no pets. $800/mo. Call 326-1799.

□ **July-Aug.:** Attrac. summer rent, dwntwn Palo Alto, 1BR/2BA fully furn. condo, suitable for cpl., lib. w/spiral staircase, balc, pool, security. 18th C. European. $1200/mo. Call 324-1624 (eve) 327-3505.

□ **Beg. June 1:** Summer rent and/or 1 yr: High Portola Val. (Ladera). 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis. 7 min. to Stanf. $1300/mo. Call 324-1624 (eve), 327-3505.

□ **Sept. 1 to Dec. 28, '83:** Fully furn 2BR/2BA hse, LR, DR, study, frpl., W/D, DW. 10 min. to campus in Redwd City. Piano, above-grnd pool, patio. Must be willing to share yd w/in-laws lvng in back cottage. $700/mo. incl. yd care. Call 497-3285 (day), 363-1658.

□ **June 16 to Sept. 5:** Fully furn hse, classic Spanish, 5BR/5BA, remodelled ktchn, spiral staircase, crtyd, pool, jacuzzi w/dress. rms. Creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Dec. 1, '83 to Aug. '84:** Spacious 3BR/2BA hse, FR, new AEK, study, pool, spa, in Los Altos, 20 min. to Stanf. $1400/mo. incl grdnr. Call 966-8242 (eve).

□ **June thru Aug.:** Portola Valley exec. hse fully furn 4BR/2BA. Walk to tennis, pool. $2000/mo. Call 326-5270, 9:30 to 3 p.m. M-F.

□ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Natl forest, walk to lake, Tahoe Keys. $120/wknd, $200 wk (5 days). Call Janine, 497-2501, (408) 739-3141 (eve).

□ **June 14 to Sept. 15:** Old Palo Alto furn. 2BR/1½BA hse; secluded garden, bike to Stanf. $750/mo. incl. grdnr, + water. Call 321-4614.

□ **Beg. July 15:** Oak Creek apt. fully furn, 2BR/1-1/3 BA, gar, pools, sauna, foothills view. Call Melanie, 327-4800, x228.

□ **Aug. '83 to July '84:** Nicely furn. 3BR apt. in Jerusalem. Good location. EXCHANGE for similar in So. Palo Alto. Call Prof. Larry Cuban, 497-1483 (day), (415) 328-6540.

□ **May 13 to July 1:** Oak Creek apt. 1BR, quiet, fully furn. Gym, pools, tennis. Call 321-0771 (eve).

□ **April 18 thru June 18:** Furn. rm, share bath, lndry, ktchn. priv. Summer optional. $200/mo. Call 493-8338.

□ **June 18 to Aug. 28 (flex):** Fully furn. campus hse, 4BR/2½BA, FR, DR, piano. Lrg. fenced yd. $1500/mo. incl. util., water, cleaning, grdnr. Nonsmokers, no pets. Call 493-8874 (day or eve), (408) 279-5683 (day).

□ **NOW:** Rustic cabin, Arnold, Ca. Highway #4 nr. Bear Valley Ski. Wooded location, fully furn., sleeps 9. Inexpensive, short-term rentals. Call 493-0997.

□ **June 13 to Sept. 5:** Lrg. furn. 2-story hse, 3BR/2BA, LR, den, lrg. ktchn, W/D, enclsd yd., cov. patio, BBQ. Nr. park, tennis, shops. 10 min. bike to campus. $900/mo. + util. Call Dekker, 321-7963.

□ **Beg. Mid-April:** Furn. studio apt., Oak Creek. 5 pools, jacuzzi, sauna, steam, gym, tennis, view, cov. prkng. Very nr. campus. Call 497-4939 (day), 857-1885 (eve & wknds).

□ **Beg. June '83:** Arlington, VA, 2BR apt. fully furn., in suburban home, priv. entr., kitchen, frpl, lndry, pool mbshp. Nr. parks, tennis, shops, pub. transp. Minutes to dwntwn D.C. Long or short term rental. Call (703) 524-1513.

□ **July 28 to Aug. 29:** Lovely London hse. fully furn., Chiswick area, nr. transp. Open flr plan, new ktchn, DR, W/D, 3BR/1BA, garden. $1200/mo. Write Mrs. Jack Abramsky, 13 Van Brugh Rd., London W41 DB, England, or call 011-441-995-2747 or (415) 649-6049.

□ **Beg. Aug. '83:** Fully furn. 3BR/2BA Crescent Park, Palo Alto hse. $900/mo. Call 328-2677 (eve).

□ **Jan. to June '84:** Peter Coutts condo, 2BR, study, fully furn., pool, gar., 1450 sq. ft. Bike to campus. $1050/mo. Call (415) 493-6273 (eve or wknd).

HOUSING NEEDED

□ **June 1 to Sept. 30, '83 (flex):** English prof. on sabbat. seeks campus hse. RENT/EXCHANGE attrac hse. N. Oxford, Engl., 3BR, LR, grnd. piano, DR, fully equip. ktchn, grdn, 1 mi. to Univ. Owners at Caltech. Arr. Stanf. summer '83. Call Neville Robinson, (213) 356-4728 (day), (213) 449-0399 (eve).

□ **July 1 thru Aug. 18, '83 (flex):** Visit. prof, wife, child seek furn. 3+BR hse on or nr campus. Call Michelle or Susie, 497-2218 (day).

□ **June, July, Aug.:** Architect & wife, nonsmokers, responsible, owner of home in S.F. seek fully furn. hse in Palo Alto area. Architect. & maintenance serv. nego. for HOUSESIT. Call (415) 567-0722.

□ **Beg. Sept. 9 mos. to 1 yr.:** Stanf. Humanities Ctr. Fellow & wife seek furn. 1BR apt. nr. campus in secure, quiet nghbrhd. Call Sue Asch, 497-3054 (day).

□ **Beg. Aug. (flex.) for academic yr:** Visit. scholar, wife, 1 child seek 2-3BR furn. hse. or apt. nr campus. Nonsmokers, clean living, home-owners. Will care for plants & pets. Local refs. Call (314) 875-2858 COLLECT, eves.

□ **July & Aug.:** Resp. mature cpl, no pets, nonsmokers, former Burlingame homeowners, seek peninsula hsng. Excellent area refs. Hsesit or rent. Write Nappan, 9506 Granada Dr., Sun City, AZ. 85373 or call (602) 972-8730.

□ **Sept. 15 to Mar. 31:** German prof, wife, 15 yr. old son, nonsmokers, seek furn. hse, 2-3BR on or nr campus. Call History Dept. Chrman. James Sheehan, 497-2651 (day). 321-7536.

□ **June thru Aug.:** Visit. prof. needs 4BR/2BA furn. hse. Call Veinott, 497-4094 (day).

□ **Sept. '83 to Dec./Jan. '84:** Visit. prof. with 2BR hse in Rhode Is. seeks to rent or EXCHANGE furn. 1BR apt. or small hse. in Stanf. area. Write or call: R. Marsh, Sociology Dept., Brown Univ., Providence, RI 02912, (401) 272-0197, AM or after 6 PM.

□ **June 1 to Aug. 31 (flex):** Visit. profs. need 2BR furn. apts. or hses to rent or sit for 1 or 2 summer mos. Nonsmokers, Stanf. refs. Call COLLECT (201) 232-4913.

□ **May 7 to Aug. 1; June 17 to Aug. 21:** Institute for Humane Studies needs furn. apts. for visit. profs. Nr. Stanf. Call Pat Dunbar, 323-2464, 7 AM to 3:30 PM.

□ **Beg. Aug. 1:** New Stanf. prof. seeks long-term rent. 2BR apt. or hse in Palo Alto, Menlo Pk, Stanf. area. Excellent refs. Call COLLECT (617) 492-5154.

□ **July 15 to Aug. 15:** Furn. 2BR hse or apt needed on campus for visit prof from Nigeria. Call Dr. Gann, 497-2072 (day).

□ **June to Sept.:** Mature 3rd yr law student w/12-yr-old seeks home to caretake. Local refs. avail. Call 854-5270 (eve).

□ **Beg. mid-June for 1 yr. min:** M.D., wife (no children, no pets) seek 2 or 3BR unfurn hse in Palo Alto area. Refs. avail. Will pay to $1000/mo. Call (313) 996-1800 or write: Stuart Flynn, MD, 1810 Virnankay, Ann Arbor, MI 48103.

□ **July 10 to Sept. 10:** Visit Canadian prof. w/wife & 2 daughters (5 & 7) seeks furn. campus hse. Stanf. refs, exceilent tenants. Call COLLECT (514) 484-1965, 6 to 7 p.m. Calif. time.

□ **Aug. '83 thru June '84:** Visit. law prof. w/wife & 3 children seeks hse w/3BR on or nr campus. Furn or unfurn, apt. or hse. Call Kaltenbach, 497-3574.

□ **NOW:** As soon as possible, for approx. 12 mos., family seeks unfurn. hse in Gunn High Schl. Dist. Time per. nego. Nonsmokers. Call 857-0753 or (415) 793-7918.

□ **NOW to Sept. 1 or longer:** Stanf. staff w/Univ & local refs wants caretake (Palo Alto area only). Will give loving care to your home, business, yd, pets. Will consider signing contract and/or paying minimal rent. Call Donna, 497-3967 (day).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Hanratty to deliver Mason lectures

Thomas J. Hanratty, Shell professor of chemical engineering at the University of Illinois, will give the David M. Mason lectures in chemical engineering at Stanford Tuesday and Thursday, April 26 and 28.

The first lecture will cover "Interfacial Instabilities Caused by Air Flow over a Liquid," and the second "Mechanism of Turbulent Mass Transfer." Both will be given at 4:15 p.m. in Carl F. Braun Lecture Hall of the Seeley G. Mudd Chemistry Building.

A member of the National Academy of Engineering, Hanratty has taught and done research at Illinois since 1953. He has developed new electrochemical techniques to study flow fields, new theoretical understanding of turbulent mass transfer, and improved methods for the design of gas-liquid flows, among other advances.

The first chemical engineer awarded a Shell distinguished chair, he has received three major awards from the American Institute for Chemical Engineers and two from the American Society for Engineering Education.

Initiated by a grant from the Atlantic-Richfield Company in 1975, the lectures are sponsored by a gift from the David and Lucile Packard Foundation and by contributions from alumni and friends.

Altmann to give talk on Judaism

Prof. Alexander Altmann of Brandeis and Harvard will discuss "Moses Mendelssohn's Conception of Judaism" in the 1983 Aaron-Roland lecture at 8 p.m. Tuesday, April 26, in the Tresidder Memorial Union lounge at Stanford.

His free public talk will be followed by a reception at the Faculty Club.

An associate at Harvard's Center for Jewish Studies, Altmann is the emeritus Philip W. Lown professor of Jewish philosophy and history of ideas at Brandeis.

Rabbi of the Berlin Jewish community during 1931-38, he founded the Institute of Jewish Studies in Manchester, England, and later edited the *Journal of Jewish Studies* and *Scripta Judaica*.

After emigrating to the U.S. in 1959, he edited a four-volume *Studies and Texts*, published by Harvard University Press. He is the author of *Moses Mendelssohn: A Biographical Study*, published by the University of Alabama Press in 1973. The University of New England Press published his *Essays in Jewish Intellectual History* in 1981.

Sharp, Sher set concert Friday

Irene Sharp, cello, and Bonnie Sher, piano, will present a concert at 8 p.m. Friday, April 22, at Tresidder Union.

The program will include the Sonata for Arpeggione and Piano by Franz Schubert, the Sonata, Op. 6, by Samuel Barber, Gestures and Interludes Two by David Bates, and the Sonata in e minor, Op. 38, by Johannes Brahms.

Sharp has given concerts throughout the U.S. and in Europe. Her repertoire includes works ranging from the baroque to contemporary.

Sharp is instructor in cello at the San Francisco Conservatory of Music and also teaches privately at her studio in Palo Alto.

Sher studied in New York at the Metropolitan Music School and the Third Street Settlement and later with Aube Tzerko and Adolph Baller.

She received her master's degree in music performance from San Jose State University as a student of Aiko Onishi.

Sher has given many chamber music concerts in the Bay Area and teaches privately at her studio on the campus.

Journalist to talk on German outlook

"Germany—Where is it Heading? Germany After the Election and before the Missile Deployment" will be discussed by Wolfgang Borgmann, foreign political writer for the *Stuttgarter Zeitung*, and currently a Professional Journalism Fellow at Stanford in the Department of Communication, at noon Tuesday, April 26, at Bechtel International Center.

Borgmann earned a diploma in political science, economics, and sociology from Hamburg University and then spent a year at the London School of Economics. He specializes in international affairs, arms control, and East-West relations, having covered major international and summit meetings such as the SALT II negotiations for his paper.

Luncheon tickets are available at a cost of $2.50 one week before each event at the I-Center office or at the door as they last. Brown baggers are also welcome at no charge. For more information please call 497-1831 or stop by the I-Center to explore opportunities for multi-cultural experiences.

I-Center showing of film on Xian

"Xian," a new and much acclaimed documentary about China's ancient imperial city, will be featured at the International Center's Other Cultures Film Series at 7:30 p.m. Thursday, April 21, in the International Center.

Once the greatest capital in the world and the Eastern terminus of the famed Silk Road, Xian is the locale of one of the world's most spectacular archaeological sites, the tomb of China's first emperor, Qin Shi Huang Di.

The highlight of the film is its extensive and unique footage of the Emperor's immense underground army vault, which is larger than a football field and filled with a life-sized pottery army numbering some 6,000 startlingly lifelike warriors, plus horses, chariots, and weapons.

The film is free to the public, but a donation of 75 cents is requested at the door to help defray costs of the program. The I-Center weekly cafe is open after the film, featuring homemade pastry and hot beverages.

Hammond plans talk

Michael Hammond of the University of Toronto will speak on "A History of Bioconstraint Theory: Interesting Failures and a New Proposal" at 3:30 p.m. Friday, April 22, in Building 120, Room 021/059, Department of Sociology.

All members of the campus community are invited to attend.



ALIVE!, the all-female jazz ensemble, will perform pop/jazz music with a feminist message at 8 p.m. Saturday, April 23, in the Tresidder lounge. The concert, sponsored by STARTS and the Women's Center, costs $8.50 ($6.50 with Stanford ID).

Chilaquiles plan poetry reading, dramatic presentation April 28

Chilaquiles, a newly formed student organization, will present "Visiones Poeticas Chicana," a free poetry reading, and dramatic presentation of contemporary Chicana political poetry, on Thursday, April 28.

Chicana poets Lorna Dee Cervantes, Bernice Zamora, Margarita Robles-Segura, and Patricia Montenegro will read from their work at 7 p.m. in Skilling Auditorium.

Marta Carrillo, a Stanford drama student, will adapt poetry written by herself, Cervantes, and Chicago poet Sandra Cisneros to dramatic performance at 6 p.m. at El Centro Chicano, the Nitery, before the poetry reading.

Entitled "Visiones," her performance choreographs lyric and dramatic verse that evokes major preoccupations of Chicana artistic vision.

Cervantes, whose book *Emplumada* was published in 1981 by the University of Pittsburgh Press in the Pitt Poetry Series, is editor and publisher of Mango Press of San Jose. She was a recipient of a 1978 National Endowment to the Arts grant and a Walker E. Hudson fellow. Her work has appeared in numerous magazines, journals, and anthologies including *Poetry*, *Antaeus*, *Latin American Review*, *Third Woman*, and *Fiesta in Aztlan*.

Zamora has taught expository and creative writing at UC-Berkeley and at Stanford. The author of *Restless Serpents*, Zamora is a major figure in Chicano literature today. She resides in the Bay Area.

Robles-Segura, a San Jose poet, has published widely in North American and Latin American publications. She writes both poetry and fiction.

Montenegro is a Stanford graduate student in Spanish from El Paso, Texas. Montenegro's first collection of poetry will be published this year by a major editorial house in Mexico City.

SWOPSI sponsors three films on Gays

Three classic films dealing with Gay topics will be shown on Thursday evenings in April and May under the sponsorship of SWOPSI.

Entitled "The Celluloid Closet: Gays in Film," the free series is being offered in conjunction with SWOPSI 169, "Supressed Perspectives: A Literary and Historical Analysis of Gay Experience."

The films are:

April 28—"The Damned" (Goetterdammerung, 1969), directed by Lucio Visconti, starring Dirk Bogard, Helmut Berger, and Ingrid Thulin. An analogy of the Krupp family in Nazi Germany, concerning the coup which destroyed Ernest Roehm, the Nazi homosexual who headed the SA corps, in the "Night of the Long Knives." Showing at 8:30 p.m. in History 205.

May 11—"Teorema" (1968) directed by Pier Paolo Pasolini, starring Terence Stamp, Silvana Mangano, and Massimo Girotti. An ambisexual Eros enters the lives of an upper-class Italian family and then vanishes abruptly, leaving the seduced family members to reformulate their lives. A beautiful modern version of Greek allegory. Showing at 7:30 p.m. in Casa Italiana.

May 19—"Boys in the Band" (1970) directed by William Friedkin, starring Laurence Luckinbill, Keith Prentice, and Leonard Frey. Hollywood's first film in which all the principal characters are Gay, and which coincided with the Stonewall riots. "Band" begins as a 60s cocktail party and grows into a witty and vituperative examination of pretensions, a tragicomedy of love. Showing at 8:30 in History 205.

WISE to discuss industry research

Science and Engineering Research in Industry will be the topic of discussion at 4:15 p.m. Thursday, April 28, in Room 420-041 (basement of Mathematics Department) for the next in lecture series sponsored by Stanford Women in Science and Engineering (WISE).

Participants in the discussion are: Jane Gitschier, postdoctoral scientist at Genentech; Adele Goldberg, manager of the Software Concepts Group at Xerox; and Barbara Grant, manager of exploratory optics at IBM.

All members of the Stanford community are welcome. Refreshments will be served after the presentation.

Oberlin dancers come to Stanford Friday, April 29

The Lively Arts at Stanford will present the Oberlin Dance Collective in concert at 8 p.m. Friday, April 29, in Memorial Auditorium.

The San Francisco-based troupe will perform: "Plane of Change," "Course of Time," "Ocean," "Diminishing Returns," and "In One Ear."

In addition, they will give a free lecture-demonstration at 8 p.m., Wednesday, April 27, also in Memorial Auditorium.

The Oberlin Dance Collective was founded in 1971 by Brenda Way as a touring outlet for performance work that had been developing at Oberlin College and Conservatory of Music in Ohio.

The company's dancers and choreographers shared a desire to explore new and provocative ideas. Calling upon a wide range of performing skills, the ODC created a repertory that runs the gamut from rigorous formalism and comic theater to pure kinetics.

In 1976, the company relocated to San Francisco to establish permanent residence.

The ODC is under the coartistic direction of choreographers Brenda Way, Kimi Okada, Pam Quinn, and Kate Nelson. Eight dancers and one apprentice complete the full troupe of 13.

The company is committed to developing the diverse skills required for each choreographer's work.

The ODC has performed extensively in the Bay Area and California through the Young Audiences program and the California Arts Council Dance Touring Program (DTP), and has toured the US under the aegis of the National Endowment for the Arts DTP. Along with the Margaret Jenkins Dance Company, they are permanent residents of New Performance Gallery in San Francisco.

For ticket information, call Tresidder ticket office, 497-4317.

Canadian films shown this spring

The Stanford Department of Communication is offering a series of free screenings of films produced by the National Film Board of Canada.

All films will begin at 3:30 p.m. in the Department of Communication subbasement screening room.

The schedule is:

April 20: "Sad Song of Yellow Skin"—A film about the ordinary people trying to live ordinary lives in wartime Saigon. (60 mins.)

April 27: "A Scream from Silence"—A docu-drama which attempts to touch upon the many aspects of rape—physical, emotional, spiritual, and legal. (95 mins.)

May 4: "Grierson"—A portrait of John Grierson, the man who saw in films a means to realize social responsibility. (57 mins.)

May 11: "Les Beaux Souvenirs"—A feature film about two women and their father. (90 mins.)

May 18: "The Dionne Quintuplets"—This film follows the quints through 21 years of a very strange upbringing, growing up as prize exhibits, living in a hospital-cum-exhibition hall built to house and display them. (87 mins.)



Left to right: Pianist Jodi Gandolfi; William Ramsey, baritone; Lila Stuart, soprano; Wendy Hillhouse, mezzo; and Gregory Wait, tenor. (Pianist Naomi Sparrow is missing.)

Hillhouse joins faculty musicians for Brahms, Schubert

The Stanford Department of Music will present faculty singers Lila Stuart, soprano; Gregory Wait, tenor; and William Ramsey, baritone, in concert at 8 p.m. Tuesday, April 26, in Dinkelspiel Auditorium.

They will be joined by well-known mezzo-soprano Wendy Hillhouse and faculty pianists Naomi Sparrow and Jodi Gandolfi.

Their program of duets and quartets will feature *Liebeslieder Walzer* by Brahms for vocal quartet and two pianos. Hillhouse and Ramsey will also perform *Vier Duette* by Brahms.

The remainder of the program will be Schumann lieder: Two Quartets from *Spanisches Liederspiel*, *Liebhabers Standchen*, *Vier Duette* (sung by Stuart and Wait), *Die tausend Grusse*, *Ich bin dein Baum*, *o Gartner*, and *Blaue Augen hat das Madchen*.

Stuart joined the voice faculty at Stanford this year, giving her first recital April 5 with pianist Gandolfi.

Hillhouse has performed with the San Francisco Opera Center, Pocket Opera, and recently with the San Francisco Concert Orchestra in *Le Bourgeois Gentilhomme*. In 1981 she participated in the Merola Opera Program, winning the Kent Family award. The same year she won the Puccini award while a member of the San Diego Opera Program.

Wait teaches voice at Stanford and is a well-known tenor soloist in the Bay Area and beyond. He conducts the Memorial Church Choir.

Ramsey is director of choral activities at Stanford, and conducts the Chorus and Chorale. An active soloist around the country, Stanford audiences don't often get a chance to hear him.

Tickets for the concert are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and at the door.

Foreign policy conference set for this weekend

Stanford alumni Walter Stoessel, recently retired as undersecretary of state for political affairs, and John Steinbruner, director of foreign policy studies at the Brookings Institution, will be among the featured speakers at a Stanford conference on U.S. foreign policy Thursday through Saturday, April 21-23.

Sponsored by the University's Program in International Relations, the free public session also will include talks by Prof. Ronald I. McKinnon, Stanford economist, and Prof. John S. Nye of the John F. Kennedy School of Government at Harvard.

Stoessel, who has served as U.S. ambassador to Moscow, Warsaw, and Bonn, will discuss U.S. relations with the Soviet Union at 7:30 p.m. Thursday, April 21, in Room 281 of Tresidder Memorial Union.

Commenting on his remarks will be Strobe Talbott, diplomatic correspondent of *Time* magazine and author of several books on Soviet-American relations; Coit Blacker, associate director of the Stanford Arms Control Program; and Assistant Prof. Condoleezza Rice, political science.

Steinbruner will speak on "Foreign Policy: The Relation of Academy to Policy" at 1 p.m. Friday, April 22, in Tresidder 281. He is a noted analyst of military and international affairs.

McKinnon will discuss "U.S. Economic Policy Abroad" at 2:15 p.m. Friday, April 22, in the Forum Room at Meyer Undergraduate Library.

Prof. Harry Harding, political science, vice-chairman of the Program in International Relations, will chair a panel discussion at 3:45 p.m. Friday, April 22, in the Forum Room.

Panelists will include:

Richard H. Solomon, who has served on the staff of the National Security Council and is currently director of international security policy research at the Rand Corporation, who will discuss U.S. relations with China and Japan;

Helga Haftenforn, professor of international relations at the Free University of Berlin, currently a visiting professor in political science at Stanford, who will discuss U.S.-European relations; and

Assistant Prof. Judith Goldstein of the Stanford Political Science Department, who will consider Israeli-American relations.

Nye will discuss "Domestic Constraints on U.S. Foreign Policy" at 10 a.m. Saturday, April 23, in the Meyer Forum Room. A Rhodes scholar, he formerly served as deputy assistant secretary of state for security assistance, science and technology. The session will be chaired by Prof. Alexander George, Stanford political scientist.

Further information concerning the conference may be obtained from Barbara Gaerlan at (415) 497-4547.

Pianist Fukui to give recital

The Department of Music presents pianist Ikuko Fukui in a free concert at 8 p.m. Friday, April 29, in Tresidder Lounge.

Fukui is an M.A. candidate in music from Osaka, Japan. This will be her first recital at Stanford, where she studies with Naomi Sparrow.

Her program will include: J.S. Bach—Toccata in E Minor; Beethoven—Sonata "Das Lebewohl"; Chopin—Barcarolle, op. 60; Debussy—Preludes, l'Isle Joyeuse; and Rachmaninoff—Prelude, op. 23, Nos. 5 and 6.

Charles Treger, Andre Watts perform Sunday

Soloists Charles Treger, violin, and Andre Watts, piano, will perform together at 2:30 p.m. Sunday, April 24, in Memorial Auditorium at Stanford.

The program will include Mozart's "Sonata in E flat Major, K. 380," Beethoven's "Sonata in G Major, Op. 36" and Saint-Saens' "Sonata in D minor, Op. 75."

Treger and Watts first collaborated in May of 1978 to commemorate the 150th anniversary of Schubert's death in a series of special concerts and, as a result, a rare and unique musical partnership was born. They found their musical union so satisfying that they tour together part of each year, and in the past few seasons, the Treger/Watts Duo has presented joint concerts throughout the country.

The Treger/Watts Duo is presented by the Lively Arts at Stanford.

For ticket information call Tresidder Ticket Office, (415) 497-4317.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., April 20, to cover the week of Mon., May 2, through Sun., May 8.

MONDAY, APRIL 25

Medical Microbiology Seminar: Studies of the Mechanism of Splicing in Yeast. 1:15 p.m. M114, Medical Center.

Numerical Analysis Seminar: "Charge Simulation Method and Its Application to Boundary Value Problems," by Saduyuki Murashima, Kagoshima Univ. 4:15 p.m. Room 380c, Math Corner.

EE 350, Radioscience Seminar: "NASA and the Space Science," by Erwin Scherling of NASA. 4:15 p.m. McCullough Bldg. 134.

Creative Writing Program: E.L. Doctorow reading from his works for the Jean and Bill Lane Lecture Series. 8 p.m. Kresge Aud. Free.

TUESDAY, APRIL 26

Bechtel International Center Lecture: "Germany - Where is it Heading? After the Election and before the Missile Deployment," by Wolfgang Borgman, Journalism Fellow. Noon. I-Center. $2.50 for lunch, brownbaggers free.

Men's Tennis: vs. Pepperdine. 1:30 p.m. Varsity Courts.

Stanford Art Museum Tour: Pre-Columbian Collection. 12:15 p.m. Stanford Art Museum.

Seminar in Fluid Mechanics: "Unique Design Details of Airplanes," with Mr. W.T. Hamilton, Vice President(retired) of Boeing Airplane Co. 4:15 p.m. Material Science Room 550a.

The Eighth Annual David M. Mason Lectures: "Interfacial Instabilities Caused by Air Flow over a Liquid," by Professor Thomas J. Hanratty, University of Illinois. 4:15 p.m. Carl F. Braun Lecture Hall, Seeley G. Mudd Chem. Bldg.

1983 Aaron-Roland Lecture in Jewish Studies: "Moses Mendelsson's Conception of Judaism," by Professor Alexander Altmann, Brandeis Univ. Reception in the Faculty Club follows lecture. 8 p.m. Tresidder Union Lounge. Free.

Music Dept. Concert: Faculty Voice Recital. Lila Stuart, soprano; William Ramsey, baritone; Gregory Wait, tenor, with Wendy Hillhouse, mezzo-soprano. 8 p.m. Dinkelspiel Aud. $4/$2.

WEDNESDAY, APRIL 27

Learning about Racism Lunch Series: "The Failure of Inter-Racialism in the Civil Rights Movement," by Clay Carson, Assoc. Professor of History at Stanford. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Room.

CROW Lecture: "Female Sexuality in the Nineteenth Century," by Estelle Freedman, Asst. Professor of History, Stanford. Noon. Terman Aud. Free.

Center for Latin American Studies Lecture: "Ideology and the Corporatist State in Mexico under Cardenas," with Dr. Alma Garcia-Marsh, University of Santa Clara. Noon. Bolivar House.

Stanford Art Museum Museum Tour: Pre-Columbian Collection. 12:15 p.m. Stanford Art Museum.

THURSDAY, APRIL 28

Theology & Natural Sciences Lunch Series: "What Is Life from an Evolutionary Perspective?," by Craig Heller, Assoc. Professor of Biological Sciences, Stanford. Bring a bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

Men's Tennis: vs Cal. 1:30 p.m. Varsity Courts.

Condensed Matter Physics Lecture: "Chemisorption of Oxygen and Nitrogen onto Metals such as Aluminum or Silicon," by Prof. C. Boiziau, Institute de Recherche Fondamental C.E.A. Service de Physique des atomics et des surfaces, Gif-sur-Yvette, France. 2 p.m. Applied Physics 200.

Center for Teaching and Learning Panel Discussion: "Creativity and Problem-Solving: Can Scientists, Humanists, and Engineers Teach Each Other Anything about the Process". 3:30 p.m. Tresidder Union, Room 281.

Applied Mechanics Division Seminar: "Current Issues in Impact Printing," with Dr. Ferdinand Hendriks, IBM General Products Division, San Jose. 4:15 p.m. Skilling Aud.

Industrial Engineering Symposium: "Human Reliability and Risk Assessment," with Ms. Barbara Bell, Battelle, Columbus. 4:15 p.m. Terman Aud.

Biological Science Seminar: "Cell Surface Proteins of *Drosophila*: Morphogenesis and Cellular Communication," by Dr. Cliff Poodry, UC Santa Cruz & Program Director of the National Science Foundation. 4:15 p.m. Room T-175, Herrin Hall.

Stanford Women in Science and Engineering Lecture: "Science & Engineering Research in Industry," by panel of speakers: Jane Gitscher, Postdoctoral Scientist, Genetech; Adele Goldberg, manager of Software Concepts Group, Xerox; Barbara Grant, manager, Exploratory Optics, IBM. 4:15 p.m. Building 420, Rm. 041.

Condensed Matter Physics Seminar: "Superconducting and Transport Properties of Amorphous Mo-Si Films," Alan Edelstein, Naval Research Laboratories, Washington, D.C. 4:15 p.m. Applied Physics 200.

Center For East Asian Studies: "Environmental Control—The Japanese Experience and Approach," by Prof. Koichiro Fujikura, on the law faculty at University of Tokyo and a visting professor at U.C. Berkeley Law School. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

The Eighth Annual David M. Mason Lectures in Chemical Engineering: "Mechanism of Turbulent Mass Transfer," by Professor Thomas J. Hanratty, University of Illinois. 4:15 p.m.

VISITORS FROM OTHER COUNTRIES

Apr. 25: Group of four French defense specialists.
Group of 5 Cross-Cultural Training Study Team; preorientation in the People's Republic of China.
Apr. 27: European Regional Program on American Studies. Group of 8. Seminar "American Exceptionalism—Is America Still Different?"
Group of 5 Cross-Cultural Training Study Team; preorientation in the People's Republic of China.
Apr. 28: Group of 10—Multi-Regional. Seminar on "Women and the Family."
May 2: Group of 10—Francophone Africa. Seminar on "The Formulation of United States Africa Policy."
Group of 6—French industrialists from "Union Laitiere Normande."

For further information please call 497-1984, Maria Bun, International Visitors.

Novelist Doctorow to give Lane lecture

Novelist E. L. Doctorow will speak at 8 p.m. Monday, April 25, in Kresge Auditorium at Stanford University as part of the Jean and Bill Lane lecture series.

Doctorow is a highly regarded writer known for his serious philosophical probings, the subtlety and variety of his prose style, and his unusual use of historical figures in fictional works.

His novels include *Welcome to Hard Times*, *The Book of Daniel* (a nominee for a National Book Award), *Ragtime* (winner of both the National Book Critics Circle Award and Arts and Letters Award), and *Loon Lake*.

His most recent book, *American Anthem*, is a pictorial tribute to America with photographs selected by J. C. Saures. Doctorow has also written a play, *Drinks Before Dinner* which was first produced Off-Broadway in 1978.

The *Washington Post Book World* has said of Doctorow: "(He) turns history into myth and myth into history. . . . He continually teases our suspicion of literary artifice with apparently true historical description. . . ."

Doctorow has taught at Sarah Lawrence College, Yale, the University of Utah, and Princeton. He received a Guggenheim fellowship in 1972 and a Creative Artists Service fellowship in 1973.

In 1983-84 the Lane Lecture Series, sponsored by the Creative Writing Program, will host lectures by Eudora Welty, Maxine Kumin, and Toni Morrison. All lectures are free of charge. For more information call the Creative Writing Program at 497-2637.

Carl F. Braun Lecture Hall, Seeley G. Mudd Chem . Bldg.

Bechtel International Center's "Other Cultures" Film Series: "60 Millions: The Germans and Their Country Encounter: Impressions of Germany". A new documentary film depicting German lifestyles as their landscapes and towns. *Encounter* shows the diversity of cultural, economic, social and political elements that comprise the country. 7:30 p.m. I-Center. 75 cent donation requested.

La Casa Italiana Lecture: Italian architect, Roberto Pirzio-Biroli. Slide lecture about his reconstruction of several historical towns in the Friuli Region destroyed by the earthqake in the late 70's. 7:30 p.m. La Casa Italiana.

SWOPSI Film Series: "The Damned," (Gotterdamerung) directed by Lucio Visconti. 8:30 p.m. History Corner, Rm. 25.

FRIDAY, APRIL 29

Baseball: vs. University of Arizona. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

Materials Science and Engineering: "Recent Advances in Martensitic Transformations," by Morris Cohen, Professor of Material Sciences at MIT. 3:30. Room 550a, Peterson Laboratory, Bldg. 550.

The Lively Arts at Stanford: The Oberlin Dance Collective. 8 p.m. Memorial Aud. $10.50, $9.50, $8.50, $7.50; students $3 off.

Music Dept. Concert: Ikuko Fukui, piano. Bach-Toccata in E minor; Beethoven-Sonata "Das Lebewohl"; Rachmaninoff-Preludes; Chopin-Barcarolle; Debussy-L'isle joyeuse. 8 p.m. Tresidder Lounge. Free.

STARTS Great Directors Film Series: "Beyond a Reasonable Doubt," by Fritz Lang, starring Lee Martin and Glenn Ford. 8 p.m. Geology Corner, Room 320. $2.50.

Stanford Society of the Archaeological Institute of America: "Greek and Roman Jewelry," by Reynold A. Higgins of the British Museum. 8:15 p.m. Room 370.

STARTS/Coffee House: Bill Susman and Chuck Israels. 9-12 p.m. Coffee House. Free.

SATURDAY, APRIL 30

Women's Tennis: vs. USC. Noon. Varsity Courts.

Baseball: vs. University of Arizona. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

STARTS: Jorma Kaukonen, solo guitar concert. Kaukonen was formerly with the groups Jefferson Airplane and Hot Tuna. 8 p.m. Tresidder Lounge. $6.50 with Stanford I.D., $8.50 w/o.

SUNDAY, MAY 1

Baseball: vs. University of Arizona. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

Stanford Alumni Association: Young Alumni Barbecue. Members of the classes of 1976-82 are invited to a barbecue before the Stanford - University of Arizona baseball game which starts at 1 p.m.. 11 a.m. Masters Grove, behind the Sunken Diamond. $8.50.

University Public Worship: Preacher: Ernle W.D. Young, Associate Dean of the Chapel. 11 a.m. Memorial Church.

ASSU Sunday Flicks: Peter Sellers in "The Return of the Pink Panther". 7 & 9:30 p.m. Memorial Aud. $1.50.

Music Dept. Concert: Sharon Paul & Nancy Kass, sopranos. with Camilla Passarelli, piano; Solos and duets by Handel, Brahms, Nicolai, Mozart, Chausson. 8 p.m. Tresidder Lounge. Free.

EXHIBITS

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

Photographs of Africa by Sylvie Cohen. Tresidder Upper Lobby, 2nd. Floor. April 1 - April 30.

R. Raffaello Dvorak, works on rice paper. I-Center. April 1 - April 30.

Photos from the Barrio Assistance Program by Phillip Baca. Coffee House Gallery. April 1 - April 30.

Etchings by Seymour Haden. Faculty Club. April 3 May 3.

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

CAMPUS REPORT

Volume XV, Number 30 | A publication for Stanford University faculty & staff | April 27, 1983



Photographer Chuck Painter used a fisheye lens to create this interesting effect of the grand staircase and gallery near Special Collections in Green Library. Lurie Rotunda is in the background.

Ely suggests ways to improve law teaching

A scholar's scholar who heads the Stanford Law School has some down to earth suggestions for improving legal teaching.

Dean John Hart Ely says "teaching by terror" may make "The Paper Chase" memorable, but it probably harms educational effectiveness.

"When I went to Yale, I was as cocky as an entering student as any in the class," he recalls.

"But I was scared to death, especially when I didn't have much respect for the teacher. No matter what you said, you'd be belittled.

"Constant fear (of being called on in class) got in the way of learning. It lead to thinking strategically instead of mastering the material.

"The anxiety was so great, you'd laugh when someone else made a mistake."

While this technique may be romanticized by its survivors, "I've heard people say that about basic military training, too," he observes.

One of the nation's leading constitutional scholars, Ely was highly regarded as a teacher at Harvard before

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NAS elects Davis, Purpura

Two members of the Stanford University School of Medicine faculty have been elected to the National Academy of Sciences (NAS), the academy announced Tuesday (April 26).

They are Ronald W. Davis, professor of biochemistry, and Dominick P. Purpura, a noted neuroscientist and dean of the School of Medicine.

Davis' research has dealt with gene manipulation, and he is a widely-recognized electron microscopist. While at the California Institute of Technology, he developed the electron microscope heteroduplex method of investigating the sequence of nucleic acids, and analysis which has had significant uses in mapping sequences of DNA molecules.

He came to Stanford in 1972 where his research has been on yeast genetics and gene manipulation.

Purpura became dean in 1982, coming from the Albert Einstein College of Medicine. He is the holder of the Carol and Elizabeth Naumann endowed chair as well as professor in the departments of Neurobiology and Neurology. He is noted for research in human cortical development using basic data and techniques of neuroscience.

He has been among the first to observe that the brains of children who are mentally retarded with no known chromosomal aberrations, had structural abnormalities in their nerve cells.

Their election brings to 80 the number of Stanford faculty elected to the prestigious NAS membership. Sixteen of these are in the School of Medicine.

SPECIAL PULL-OUT SECTION
Evaluation of Teaching, pp. 11-24

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Plaza rally on SSRL set

Opponents of a proposed weapons-related research project at the Stanford Synchrotron Radiation Laboratory (SSRL) plan a White Plaza rally Thursday noon, followed by a march to the President's Office on the Inner Quadrangle.

Posters announcing the event said the principal speakers will be John Harris, deputy director of operations at the Stanford Linear Accelerator Center (SLAC) and Diane Thomas, cofounder of

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Change asked in teacher evaluations

Students generally give high marks to their undergraduate courses at Stanford, but many faculty would like to see the present system of evaluation improved, a new study indicates.

Recommended changes will be discussed by the Faculty Senate at its next regular meeting May 12. These point toward an extensive but independent revamping of the Associated Students *Course Guide*.

Developed by the Committee on Academic Appraisal and Achievement following extensive surveys of faculty and student opinion by its Subcommittee on the Evaluation and Improvement of Teaching, the proposed changes include:

1) Greatly simplifying the basic form used for this purpose;

2) Separating information gathered for the administration and improvement of teaching from that designed to aid students in course selection; and,

3) Eliminating comparisons to norms when reporting the distribution of student opinion about individual courses.

Asked to rate their overall course satisfaction on a seven-point scale, 30 percent of the undergraduates rated their class a "7," 33 percent a "6," and 21 percent a "5" last spring. Only six percent chose the lowest three categories combined.

Whether these generally favorable results reflect leniency on the part of students or genuinely good teaching cannot be determined, the committee report noted. But the average level of student satisfaction has remained stable for the past three years,

The student course ratings parallel results from the University's annual surveys of graduating seniors. Four out of five rate the faculty high as teachers but even more regard professors as outstanding in research.

The committee report to the Senate notes there may be some degree of student "burn out" in filling out forms. Reducing the number of questions from 32 to 7 could encourage broader participation and more individually written comments.

The right to release this data would rest solely with individual faculty, except when used for administrative review on a confidential basis.

Student evaluation of courses "must be seen as but one component in the total assessment" of teaching, the committee report said. "We strongly recommend that many sources be used in the evaluation process."

Since 1979, the Faculty Senate has mandated student evaluation in most courses taught at Stanford. But

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People

Applebee, Langer named co-editors

Associate Prof. Arthur N. Applebee of the Stanford School of Education and Senior Researcher Judith A. Langer of Berkeley and Stanford have been named coeditors of *Research in the Teaching of English*, an official quarterly bulletin of the National Council of Teachers of English.

Appointed by the NCTE Executive Committee, the editors will serve a four-year term beginning with the winter 1984 issue. They succeed Roy C. O'Donnell, University of Georgia, who has edited the publication since 1978.

Applebee is director of the National Study of Secondary School Writing. Langer is a senior researcher in education at Stanford and UC and serves as research consultant to the Bay Area Writing Project.

The future coeditors "hope to stress the interdisciplinary directions that important research in our field is taking. We will be looking for more comprehensive and more theoretically grounded reports. We hope to encourage articles that discuss a body of work or that suggest major reconceptualizations of work in the field, rather than simply reporting single studies."

Applebee earned his M.A.T. in language and literature from Harvard and his Ph.D. from the University of London, where he worked in James Britton's Writing Research Unit. Among his publications are *Writing in the Secondary School: Current Practice in English and the Content Areas* (NCTE, 1981), *The Child's Concept of Story: Ages Two to Seventeen* (University of Chicago Press, 1978), and *Tradition and Reform in the Teaching of English: A History* (NCTE, 1974).

He is a coauthor of *Reading, Thinking, and Writing: Results from the 1979-80 National Assessment of Reading and Literature* (Education Commission of the States, 1981). Applebee has written numerous articles for education journals. Before joining the Stanford faculty, he was associate director of the ERIC Clearinghouse on Reading and Communication Skills.

Langer is principal investigator for two studies examining cognitive interrelationships between reading and writing strategies. She earned her M.S. from the City University of New York and her Ph.D. from Hofstra.

She has taught and served as language arts specialist, as director of reading, writing, and English programs (pre-K-12) and as acting superintendent for instruction in school districts on Long Island. Her previous college faculty appointments have been at C.W. Post College of Long Island University and at New York University.

She is coeditor of *Reader Meets Author/Bridging the Gap: A Psycholinguistic and Sociolinguistic Perspective* (IRA, 1982), coauthor of *Understanding Research in Reading, Writing, and Language* (in preparation) and author of numerous articles on reading and writing for professional journals.

Editorial offices for *Research in the Teaching of English* will be on the Berkeley campus. Address: Judith Langer, Research in the Teaching of English, School of Education, University of California, Berkeley, Calif. 94720. Phone:

Faculty join in bipartisan appeal

Stanford President Donald Kennedy and economists Michael Boskin, Walter Hoadley, and Ezra Solomon are among hundreds of individual supporters of a bipartisan appeal for a lower federal deficit and slower defense buildup.

In a joint statement published in *The New York Times*, they said "There is widespread concern that the Administration's call for a second three-year round of sweeping defense increases, which would raise the defense budget authority by another $118 billion by 1986—or nearly 30 percent in constant dollars—is not sustainable economically or politically with current federal revenues. . . .

"We strongly urge the President and the Congressional leadership to join together in supporting a bipartisan resolution that commmits the nation to a more gradual but significant and sustained increases in the defense budget for the next several years."

Other signers with Stanford ties include Richard Lyman, Rockefeller Foundation president and president emeritus of Stanford; David Packard, former Deputy Secretary of Defense and former Stanford trustee; Richard E. Guggenhime, San Francisco attorney and former Stanford trustee; and John A. Young, president of Hewlett-Packard and a Stanford trustee. A majority of those signing are corporate chief executive officers.

Boskin is a professor of economics and senior fellow (by courtesy) at the Hoover Institution; Hoadley is former chief economist for Bank of America and a senior research fellow at Hoover; and Solomon, a former member of the President's Council of Economic Advisers, is Dean Witter professor of finance in the Graduate School of Business.



Lee Shulman

Prof. Lee Shulman of the Stanford School of Education is the new president-elect of the American Education Research Association. AERA has about 14,000 members.

Profs. Lee Cronbach, Nate Gage, and Pat Suppes of Stanford have been AERA presidents in the past.

President-elect from April 1983 to April 1984, Shulman will become president from April 1984 to April 1985.



Philip Zimbardo

Fresh from his victory in Stanford's "ugly man" contest, Prof. Philip Zimbardo will deliver the president address of the Western Psychological Association on "Maling Sense of Madness" at 3 p.m. Friday, April 29, at the San Francisco Hilton.

Other Stanford speakers at the April 27-30 meeting will include John Kaplan, Amos Tversky, Ernest Hilgard, Lee Ross, Mark Lepper, Phoebe Ellsworth, Samuel Gross, Robert Calfee, and James Milojkovic, among others.



Sylvia Castillo

Sylvia Castillo, assistant dean for student affairs, has been appointed to the Alumni Board of UC-Santa Barbara.

The UCSB Alumni Board is one of the wealthiest and most highly endowed Boards of the nine UC campuses. The appointment is for four years and will involve advising the Chancellor and Regents on financial matters; fundraising; and creating a corporate liaison relationship with the Alumni Board and UC Regents.

Castillo is a 1973 UCSB alumna and has a graduate degree (1976) from the School of Social Welfare at UC-Berkeley. She has also been a member of the Commission on Postsecondary Education Advisory Committee on Student Affirmative Action since 1981.

Hispanic women plan a higher education meet

Hispanic Women in Higher Education, a state and national organization founded and chaired by Sylvia Castillo and Assistant Provost Cecilia Burciaga, will host Chancellor Ann Reynolds of the California State & University Colleges at a reception on Friday, May 6, at the Century Plaza Hotel in Los Angeles.

The welcome reception will introduce Chancellor Reynolds to California's prominent faculty, senior administrators and presidents from the Hispanic higher education faculty.

Gerry Weitz

CIT manager Gerry Weitz has been appointed as acting assistant director of AIS for financial information systems, effective April 25, according to David Ernst, CIT's director for administrative information systems.

Weitz will take responsibility for management of the programming group serving the Controller's Office, as well as actively representing AIS on the Core Accounting Project Team.

Weitz joined Stanford in 1974 as a programmer/analyst for the hospital with a first assignment to convert to the Inpatient Accounting System from the hospital's computer to the IBM 3081's predecessor. Since then he has had several technical and managerial roles for the University.

He has spent the last few years concentrating on SPIRES Database Systems, microcomputers, and administrative systems architecture. Weitz replaces Dan Jaskolski, who will leave Stanford at the end of April.

Changes for 3081 node

Users of the 3081 Node should be aware that the installation of the new operating system described in the April 6 *Campus Report* will result in an altered weekend schedule, beginning Saturday, April 30.

Presently, the system is down for routine maintenance on Saturdays and Sundays from 6 a.m. to noon. As it is necessary to use large blocks of time for installing the MVS/XA, the downtime hours have been extended on Sundays to 3 p.m. On Saturdays, however, the system will be available starting at 9 a.m. The total number of hours that the IBM 3081 will be unavailable to users will remain unchanged.

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Williams warns of legal time bomb in Supreme Court

Verdict could cost U.S. billions, new inflation

BY DONALD STOKES

A legal time bomb is nearing the end of its fuse in the waiting dockets of the U.S. Supreme Court.

Sometime this summer the Court will decide the case of *Ptasynski vs. United States* in which the Federal District Court in Wyoming decreed that the crude oil windfall profits tax is illegal.

If the Supreme Court upholds that decision it will mean that the U.S. government will have to repay as much as $100 billion to oil companies and royalty owners across the nation.

This enormous sum would come out of the pockets of the taxpayers. Added to the expected $200 billion shortfall in the projected U.S. budget for next year it could mean the return of double-digit inflation.

Emeritus Prof. Howard R. Williams, the leading academic authority on oil and gas law, explained the situation in a Stanford campus interview.

Williams is Lillick professor of law emeritus at Stanford, and in September will become the Paradise professor of natural resources law. He is co-author, with Charles Meyers, former dean of Stanford Law School, of the definitive seven-volume treatise *Oil and Gas Law*, with annual supplements since 1964.

"When oil prices in this country were largely deregulated, a crude oil profits tax was instituted which came into effect in March 1980," said Williams.

"This enabled the government to realize, by an excise tax, a great deal of the difference between the regulated price and the world price. In effect, there was a hidden tax on the consumer, and Congress loves hidden taxes.

"This is still going on. Deregulation is proceeding and so are its effects.

"The windfall profits tax was held to be unconstitutional by the Federal District Court in Wyoming, because of a special provision in it relating to Alaska.

"The Supreme Court has ordered a review of that case but has not yet heard it. If the Supreme Court agrees with the District Federal Court, then the U.S. government will have to pay back a very great deal of money to the oil companies and royalty owners. Those taxes have always been paid under protest, by those in their right minds.

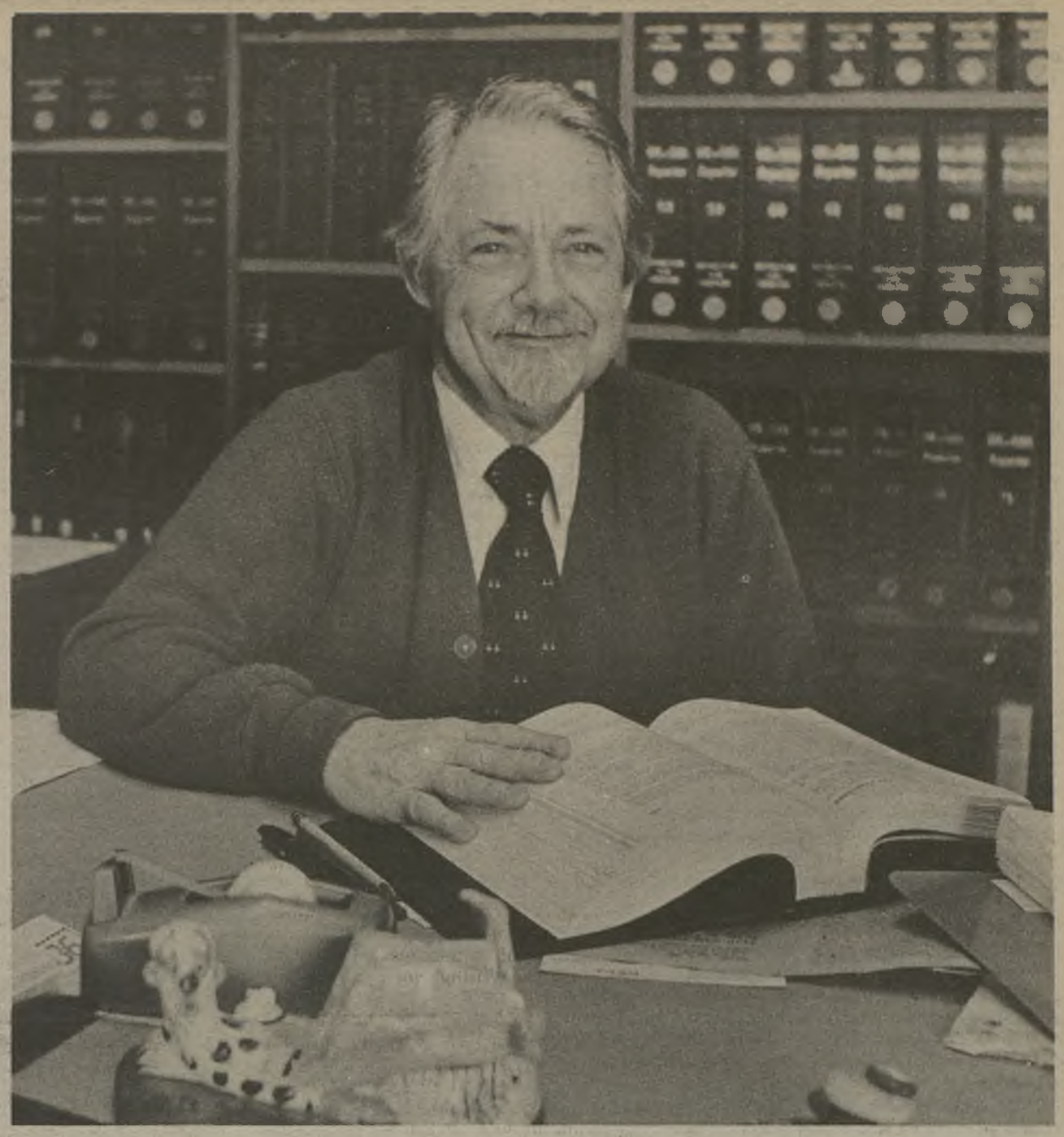
"If the Supreme Court holds that the tax is unconstitutional, because it treats Alaska differently from the other states, the decision will of course be retroactive, and the amount of repayment, plus interest, will run into many billions of dollars.

"I believe the windfall profits tax is scheduled to continue until $285 billion has been realized. How much has been brought in by the tax up to this moment I do not know, but I assume that the contingent liability of the federal government, should the tax be held unconstitutional, would be well in excess of $100 billion.

"I can't think where all that money would come from, except the federal printing presses. That in turn could mean huge inflation.

The Supreme Court has agreed to hear the case this term, so a decision can be expected by mid-July. Meanwhile the windfall profits tax is being collected all the time, and therefore the contingent liability is going up."

Asked whether the government was likely to win the case, Williams replied, "The famous humorous character, Mr. Dooley, once said that the Supreme Court follows the election returns. The Supreme Court is affected by the flow of public opinion and the changing mores of the people.



Howard Williams

"This will be a very hard case to decide. There is a strong constitutional argument against the windfall profits tax."

On the other hand, an interviewer noted, the public outrage could be enormous if the tax were outlawed.

"We shall see," said Williams. "I have a feeling that the tax may be upheld."

The heart of the matter is the special provision made for Alaska under the Windfall Profits Tax. Why was that provision made?

"Alaskan oil is extremely expensive to produce and refine. First, it comes all the way down the Alaska pipeline. Then it is transported thousands of miles—in expensive American tankers, under U.S. law—to Panama, through which it has to be trans-shipped in smaller tankers, then trans-shipped to the other side, and carried all the way to Houston for refining.

"All this makes it far more costly than any other oil."

Surely it would make far more sense to sell the Alaskan oil direct to nearby Japan and cut out most of the expensive journey?

"U.S. law prohibits Alaskan oil from being sold in its natural market, which is Japan. It could go to Yokohama for about 75 cents a barrel. Instead, it goes all the way to Houston and ends up costing about $3.50 a barrel for transportation."

Williams stressed that he is not an economist ("I studied my economics before Keynes published!") and could only talk authoritatively about about oil and gas law.

But he noted that "the situation does seem economically crazy. Super-tankers can bring Middle East oil to the U.S. at less cost than it takes to bring Alaskan oil to Houston.

"And of course the profits in selling Alaskan oil to Japan would be far greater than taking it all the way to Houston.

The reasons for what is happening are many. Part of it is due to successful pressures by the U.S. shipping interests and unions. Part is based on the feeling that we want to depend on our own oil instead of foreign oil. Yet in wartime the tankers bringing Alaskan oil all the way to Texas would be just as vulnerable as oil coming from the Middle East."

Williams turned to the deregulation of natural gas, which poses another set of delicate problems.

"There are serious political hurdles in this area," he said. "We have maintained a regulated price for natural gas which is far below its heating value as compared to oil.

"The heating value of gas has a ratio of roughly six to one as compared to oil. Six thousand cubic feet of gas has the British Thermal Units of one barrel of oil. On that basis gas ought to be priced at about one-sixth that of a barrel of oil.

"When the world price of oil reached $34 a barrel the price of U.S. gas was regulated, and is still being regulated, at a price far below that.

"This produced a shortage of gas, because it reduced the incentive to drill for gas. It also increased the demand for gas, because it was the more efficient fuel. So we underpriced the more

continued on next page

Williams/ continued from page 3

efficient fuel and encouraged people to change, for home heating purposes, from oil or coal to gas."

But everybody is complaining that their gas bills are going up out of sight!

"Natural gas will continue to increase in price, under deregulation, until we increase the incentive to drill for gas. Nobody knows how much gas we have in this country. It requires deep production, it is expensive to find, and so long as there is a threat of renewed regulation there is little incentive to drill.

"If gas is completely deregulated it may well go up for a while and then gradually come down as more gas is found and put on the market.

"There is partial gas deregulation now, but much of the gas remains regulated—the so-called 'old gas' from wells drilled earlier and from which gas was sold at a lower price. We are 'rolling in' this low price for old gas with the higher price for regulated gas. If we deregulate all gas, and the price of old gas thereby goes up, there will be an increase in costs for the local utilities.

"I think that could be handled by a tax modelled on the windfall profits tax which would enable the federal government to get back some of that increase. This is always supposing we can correct the deficiencies of the existing withholding tax.

"A few years ago during the gas shortage a number of utilities entered into what were called 'take or pay' contracts, in order to be assured of regular supplies of gas. These contracts stipulated in effect, 'I will take your gas at X dollars a cubic foot or pay you for it.'

"After the contracts were signed the demand for gas declined as additional supplies came on the market. While the price of gas declined many large utilities found themselves burdened with contracts to purchase gas that was above the market price.

"For example, PG&E could use cheap California gas, but it has contracted to buy dearer Canadian gas. So if it used the California gas it would still have to pay the Canadians. The California gas therefore remains in the ground.

"Many of these 'take or pay' contracts will last for another 15 or 20 years. The public is having to foot higher bills for its natural gas because business decisions by the utilities went sour."

P.G.&E. could use cheap California gas, but it has contracted to buy dearer Canadian gas. So if it used the Canadian gas it would still have to pay the Canadians.

Williams has long urged that oil and gas depletion allowances should be phased out and natural gas prices deregulated as rapidly as possible. "They have become an albatross, causing more harm by way of criticism of tax favoritism to industry than the value of the benefits derived.

"The cost of these deductions probably exceeds one billion dollars annually, but it is doubtful whether they have materially increased exploration.

"We are now basically in a worldwide position of deregulation of oil prices. Now OPEC is beginning to fall apart because of the inherent divisions within the organizations. The various OPEC countries have been cheating on each other—all of them in one form or another.

"I do not believe that the OPEC countries will be able to keep to the production cutbacks they have labored over.

"A number of other producers, in and out of the cartel, have committed themselves so heavily for various expenditures that they simply have to keep up a certain level of cash flow, and they would not be able to manage to do that on the allocated production.

"If Britain reduces the price of oil further, as it probably will, Nigeria will reduce its price and increase its production. Many other oil producers are in a similar position.

"The Soviet Union is shipping more and more oil at cut-rate prices, because it needs the hard currency. The Soviets tell OPEC that the U.S. is responsible for the weakening of OPEC, while at the same time the Soviets are selling over a million barrels of oil a day *at cut prices* to Western countries—and that does not include its satellites.

"OPEC is so divided on religious and economic grounds that I see no way in which its members can agree on production controls.

"This is a very different situation from that which prevailed for years in the U.S. when all 22 oil-producing states of the Union informally maintained prices by reducing overall production. Texas acted as the balance-wheel which controlled production in all the States. At one time Texas and Oklahoma voluntarily reduced their output to one-third of their capacity.

"That was the model OPEC tried to copy. Saudi Arabia and Kuwait were to have been the balance-wheel, and the other Arab oil-producers would produce and sell in ratio to them.

"But Nigeria and Iran refused to limit their production.

"I foresee more substantial cuts in oil prices. I would not be surprised to see the price drop down to the $15-$20 range per barrel, in other words up to 50 percent lower than the current posted prices.

"If the price of oil falls to the $15-20 range it will have an immediate effect on the international banking system, and the huge foreign loans owed to us. There will be repercussions on many of our public institutions.

"However, in the long run a fall in the price of oil to a more realistic level will benefit most of the world, especially developing nations such as India.

All the OPEC countries have been competing against each other for a long time in the black market for oil. That will almost certainly continue. There are many ways to shade prices, the most obvious one being to keep to the posted price but to accept payment over a significant period of time. That is equivalent to a cut in price.

"The history of all cartels is that sooner or later they break up. OPEC was never a true cartel, as it never did have the power to control production.

"Too many countries of the world are now outside OPEC. None of the 'outside' countries, such as the Soviet Union, the U.S., Britain, Norway, or Mexico, has any reason to allow OPEC to dictate prices.

"The countries which have suffered the worst because of OPEC are the developing nations. They have had to pay the high prices and have not had enough to sell in order to meet the payments."

What would Williams recommend as our energy policy for the future?

"To complete the deregulation of oil and gas. To buy foreign oil as needed. To encourage the further decline of OPEC as an influence on world prices. We would end up paying the economic cost of energy.

"The U.S. has a long-term energy problem. When our oil and natural gas reserves decline we shall have to find other energy sources. We do have very large deposits of oil shale, but we have not yet discovered the way to extract the oil economically.

"The cost of producing oil from shale is always higher than pumping it out of the ground. An added difficulty is that even if, after spending immense sums on research and development, a way were found to produce oil from shale economically, all that OPEC would have to do would be to open its spigots a bit and lower its prices a little and thereby make useless all the years of expense and research."

Other major countries such as the Soviet Union, Britain, and France are pushing ahead with nuclear energy and overcoming its difficulties, in fact there are 234 nuclear reactors at work in the world. Isn't that the energy way of the future, in spite of much of the current nervousness?

"We have come to a virtual halt in nuclear reactor construction in this country. Undoubtedly in the long run there will be further nuclear development, but not in the immediate future. Rightly or wrongly, we are scared of nuclear power.

"We are a frightened people. Since World War II the world has had one state of fright after another. The optimism which marked America up till World War II has disappeared completely today.

"I feel sorry for our young people. They are growing up in an atmosphere of fright and hysteria. It is bound to affect everything they do."

Depletion allowances have become an albatross, causing more harm by way of criticism of tax favoritism to industry than the value of the benefits obtained.

Williams was born in Indiana in 1915 and was brought up in east Tennessee, where his family lived until he was 12, and St. Louis. He went to Washington University, from which he graduated in 1937. He took a scholarship at Columbia and after getting his LLB in 1940 he joined a leading law firm in New York City.

He was one of the first called by the draft in April 1941. He trained at Fort Bragg with wooden machine guns and French 75s made in 1897. He landed with his field artillery battalion in Normandy and saw active service all the way into Germany.

After Germany's defeat his company was put in charge of one of the prisoner of war camps which had been formed by the Germans. Most of the prisoners were Poles and Russians, who were only too ready to break out and forage off the Germany countryside. The Americans were always having to round them up and bring them back to camp.

When Williams was demobilized he was a major, having started as a private who shovelled horse's muck. He had spent just under five years in the Army.

He accepted an associate professorship of law at the University of Texas. During his five years there A. W. Walker, Jr., who was the "father" of oil and gas law in Texas, decided to go into private practice after 25 years of teaching.

"I fought with all my might to get his course," recalled Williams, "and succeeded after about a year. I have been studying and teaching oil and gas law ever since, some 35 years."

When Williams went to Columbia in 1951 his course was taken over by his friend and associate Charles Meyers. Williams and Meyers have had a lifelong association. Together they have published not only the seven volumes of the standard *Oil and Gas Law* but also other important publications.

During the last four of his 12 years at Columbia Williams held the Dwight chair of law.

In 1963 he joined the Stanford law faculty and five years later became Lillick professor. He was named an emeritus professor on his nominal retirement in August 1982, but was immediately recalled to teach his specialty of oil and gas law. In September he will become the first holder of the Robert E. Paradise chair in natural resources law.

Williams will then have held a total of four endowed chairs at universities (the Dwight at Columbia, a visiting chair at Colorado, and the two at Stanford). "Enough for a bridge table," he smiles.

He has served in the highest councils at Stanford and Columbia universities. He has written six different course books on various aspects of the law.

He and his wife, the former Virginia Merle Thompson, were married in 1942, and have a son.

Why women's self-worries grow as they get better off

Normal sexual development makes most teen-age women unhappy with their body fatness, according to a new analysis of national data by Stanford scholars.

This dissatisfaction increases with social class. It reduces self-esteem among normal young women and increases the risk of anorexia nervosa.

The thinner the woman, the greater the impact of social class on the desire for thinness. Among those whose body fat measured in the thinnest 10 percent among higher income families, one in nine still wanted to be thinner. This was true for only one in 45 similarly skinny women from low-income families.

Results of the national study were reported Thursday night, April 21, by Prof. Sanford M. Dornbusch, at the Society for Research in Child Development meeting in Detroit. Financial support came from the Stanford Center for the Study of Youth Development and the Robert Wood Johnson Foundation.

In 1899, Thorstein Veblen's iconoclastic book, *The Theory of the Leisure Class*, hypothesized that "conspicuous leisure" would require an ideal woman to have "delicate and diminutive hands and feet and a slender waist. . .to show that the person. . .is incapable of useful effort and therefore must be supported in idleness by her owner."

Veblen thought this ideal would diminish when industrialization made leisure so widespread that it would no longer serve as a mark of elite status.

"Our results indicate a surprising persistence of the standard that Veblen thought was doomed by industrialization," Dornbusch and his colleagues reported.

"We now have a more egalitarian ideology, with women attempting to be less dependent on men, participating more actively in the labor market, and asserting their equality. Yet implicit norms may persist well after the originating forces have disappeared.

"New meanings may be associated with the cultural categories of thinness and fatness. The original image of thin women as non-producing objects of beauty may have given way to an association of thinness with productivity and activity, while fatness may be linked to inactivity and lack of self control. . . .

Veblen's standard

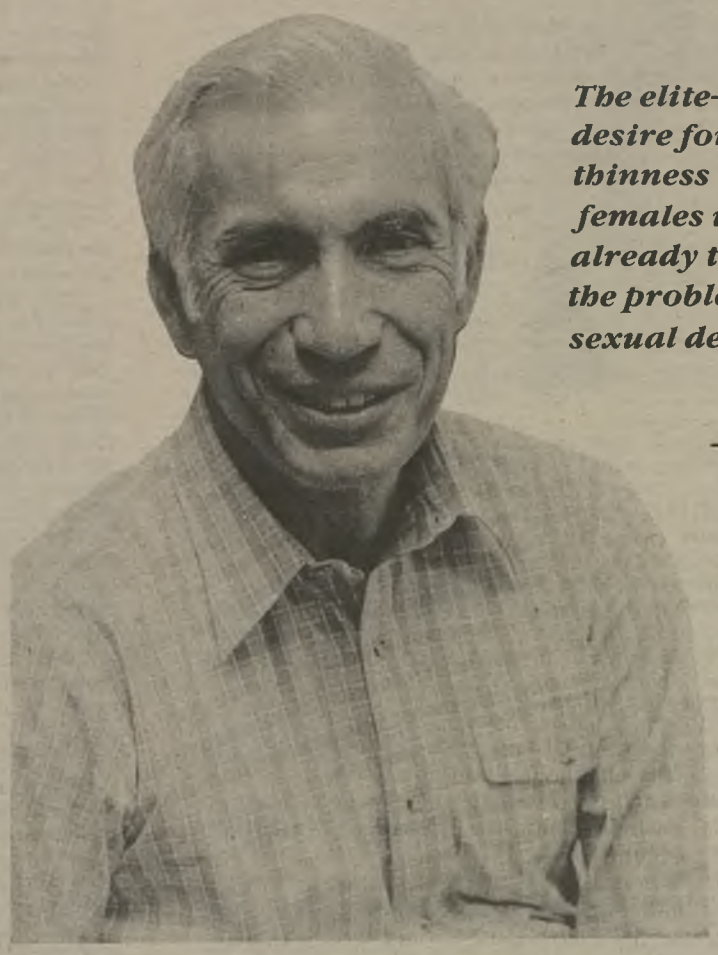
"The standard of thinness that Veblen associated with the elite has come to be accepted by a majority of all fully developed adolescent females in our sample.

"Social class differences in the emphasis on feminine thinness still persist, but the lower socio-economic groups also show a negative evaluation of normal levels of fatness.

"Perhaps mass media of communication, have helped an elite-engendered standard to diffuse throughout the American female population. . . .

"Calling attention to the existence of the norms and to their origin may hasten the demise of social standards that not only reduce self-esteem, but also can be biologically dysfunctional.

"The elite—engendered desire for further thinness among females who are already thin increases the problems of sexual development and the risk of anorexia nervosa, a pathological struggle to be very thin.



The elite-engendered desire for further thinness among females who are already thin increases the problems of sexual development.

—Sandy Dornbusch and colleagues

Sandy Dornbusch

"Anorectic patients remain thin only through self-inflicted starvation, excessive exercise, vomiting, or purgation. The anorectics are female by a 19:1 ratio, are relatively affluent, and develop the syndrome during adolescence in 8 out of 10 cases. . . .

"Our study shows how inappropriate standards of thinness among young women from middle and upper income families may contribute to this risk. The incidence of the syndrome appears to be increasing."

Besides Dornbusch, who is the Reed-Hodgson professor of human biology and a professor of sociology and education, the Stanford researchers were Prof. J. Merrill Carlsmith, psychology, director of the Stanford Center for the Study of Youth Development; Assistant Prof. Paula M. Duke, pediatrics; Ruth T. Gross, the Katharine Dexter and Stanley McCormick memorial professor of pediatrics; John A. Martin, research associate in pediatrics and psychology; Philip L. Ritter, research associate at the SCSYD; and Bryna Siegel-Gorelick, research associate in child psychiatry.

Data for the study came from the third cycle of the U.S. National Health Examination Survey. In 1966-70, a nationwide probability sample was drawn of 6,710 youths age 12 to 17.

Each examining physician conducted an extensive physical examination of the participants, recording measurements of sexual maturation, heaviness, and body fatness. Social class was measured by both family income and parental education. The adolescents were asked whether they would like to be "heavier than you are, thinner than you are, or about the same?"

"Females toward the top of the class hierarchy are more likely to want to conform to the decorative body style that Veblen associated in 1899 with the consumption of leisure, with each comparison between family income groups statistically significant," the researchers said. "Among males, there were negligible differences between family income groups in the desire for thinness." This shows that class differences for women did not result from differences in health information.

Among women, the relationship between family income and the desire for thinness was more powerful for those already below the median in fatness than for those above the median.

Among those below the median in measured fatness, 30 percent of the high family income women wanted to be thinner. Among middle income, the proportion was 22 percent, and for lower-income only 12 percent.

Adolescent maturation

"As adolescent boys and girls mature physically, both sexes increase in heaviness," the researchers noted. But this sexual maturation leads to greater fatness in adolescent women and greater muscularity in adolescent men.

The physicians measured fatness by subscapular (below shoulder blade) and triceps (back of upper arm) skinfold thickness. The average of these two measures rose from 72.5 for those women who were least mature in measured sexual development to 163.5 for those who were most mature, based on pubic hair and breast development.

For young men, measured fatness declined slightly from 97.2 to 91.6. Their stages of sexual development were based on the physicians' observation of pubic hair and genital development.

"Female adolescents are dissatisfied with their heaviness because it represents fatness and most male adolescents are satisfied with their heaviness because it represents muscularity," the researchers noted. (Heaviness was expressed by Quetelet's index-weight in grams divided by the square of height in centimeters.) When boys become fat, they too desire to be thinner. But since this is not the usual development, there is no general tendency for them to want to be thinner as they mature sexually.

Among those in the top 25 percent of their age group in fatness, 70 percent of the 12-year-old boys expressed a desire to be thinner. Among 13-year-old boys, this proportion fell to 60 percent.

"Among females, within each family income group, as sexual maturity increases, the proportion of females wishing to be thinner increases," the researchers found.

Sexual maturity

"At each level of sexual maturity, females in the higher family income groups show a strong tendency to desire to be thinner.

"Analyses using parental education as the measure of social class provide further support for these two relationships.

"In each of the three social class groupings, by either measure of social status, the majority of females who have finished their physical maturation are desirous of being thinner.

"Normal sexual development produces dissatisfaction with their bodies for most adolescent females.

"While the increased muscularity associated with maturation among boys brings them satisfaction, the increased fatness necessary for the menstrual cycle and normal sexual development makes girls dissatisfied with their bodies."

In a campus interview, Dornbusch said "cultural standards of beauty are deeply imbedded and very difficult to shift." Studies by Paul Duke show that simply informing adolescents that body fat accompanies normal sexual development in young women so "they won't be so hard on themselves" has "virtually no impact," he said.

Numerous studies have shown that negative attitudes toward body fat "goes with a high standard of living" in industrialized nations, he added. In the U.S. women want to be thinner than men except at high levels of fatness even when measured fatness is the same.

Dornbusch read *The Theory of the Leisure Class* at age 21 and "knew what Veblen would say" about women's desire for thinness. "His barbaric style sticks with you," Dornbusch noted.

"Stanford was one of many universities that fired Veblen. But he must have liked this area, because he returned here to die."

When Veblen's theory was put to a scientific test more than three quarters of a century after it was published, the results "came through beautifully," even though Veblen himself had forecast that more widely shared leisure would lead to a change in social attitudes toward fatness.

"Social perceptions have direct effects on human behavior, even when the perceptions are neither rational nor functional," Dornbusch and his colleagues observed.

"Inappropriate standards used by women for judging their bodies do them and society a lot of harm."

Wessells discusses information overload, role of humanities in education

Following are comments delivered by Norman K. Wessells, dean of the Stanford School of Humanities and Sciences, at the Los Angeles conference April 24, together with excerpts from the questions and answer period which followed.

I have a very close fly fishing, drinking, and arguing companion, Colin Pittendrigh, director of Stanford's Hopkins Marine Station. Colin and I often talk and argue about biological and cultural evolution, the forces that have shaped modern man and our society. Colin proposed to me a few weeks ago an interesting analogy that I would like to share with you, since it provides a context for much of what we want to do at Stanford University.

Biologists recognize a phenomenon called genetic "load." The term refers to the sum-total of the potentially deleterious mutations that a given species carries. Sickle cell anemia, Tay Sach's disease, albinism, subtle hereditary tendencies toward cardio-vascular disease, breast cancer, or other things, are part of the genetic load of *Homo sapiens*. To the extent that more and more such mutations accumulate in the hereditary material of the species, its vigor and capacity to survive are reduced.

If we turn to cultural evolution, Pittendrigh proposes that there is an information "load." This information load today puts undue stress on personal values and our societal/political processes.

In good part, the information load stems from technology. With communication satellites, with sophisticated, mobile audio and visual equipment, and with the economic realities that drive the business of news gathering by the communications industry, so that entertainment, rather than enlightenment, becomes a prominent part of the process. The individual in Western society becomes potentially subject to an unending barrage that can fill a consciousness and distract from useful pursuits.

TV and communications can bring any spot on the globe into our living rooms in the nightly news and to our breakfast table via the morning newspaper. All of us can participate vicariously as events unfold in the Watergate White House, the Falklands, Jonestown, or the city grocery after a holdup.

We are literally exposed to the "toing" and "froing" that in other places, other times, rarely reached the citizenry at large (and, I argue, that mankind did not suffer in our relative ignorance).

And the information load brings with it challenges to the social fabric of family and local society. Violence, vulgarity, glamour, and the utterly different world of a New York City or a Chicago are brought into the living rooms of Dillon, Mont., or Modesto, Calif. And such things strike at the core of personal, familial, and societal values and mores.

Our political system was designed when communication was slow, when news of the events in Washington or the State Capitols might take days, weeks, or even months to reach the populace, and when the rest of the world was even farther away in time.

Then, it was what the political leaders said and wrote that determined their public image. Now it seems the personality of a public figure, carefully shaped by the advertising industry and presented by the communications industry, determines the results of elections.

Our American political process was protected then, I suspect, by the very slowness of communication networks. Now there is so little time, indeed no time in many instances, to let things cool off.

On occasion, I am sure many of you in management intentionally allow something to sit on your desk until an apparent crisis or grave problem simmers down or "goes away." That strategy is usually not an option for our leaders, because they are forever in the spotlight of the industry that helps generate our information load.

Feeding into this information load is the subtle perception most of us share that a newer, higher-tech world is coming, with a home computer in every pot, and with nearly every aspect of our lives a bit more automated and less controllable by each of us as individuals.

What can we do abut this information load with its stress upon both personal values and the way that we interact and govern ourselves? Do we stop deliveries of the newspaper, avoid the evening news on television, take it all in despair, or consciously acknowledge what is happening and behave accordingly.

I think, in fact, the way each of us responds to the information load depends on what we are and how we were educated. That is why I discuss this subject with you, for it is our responsibility in the University to provide our students with the personal base that will allow them to cope well with what will confront all citizens in the decades ahead.

Those students must learn to discriminate and to see the significance of events and the truth about people. They must develop a sense of when to care and become involved, when to ignore and remain apart.



Norman Wessells

They will need inner strength and value systems to sustain them as the burdens of the information load worsen. That inner strength must stem from a secure, ever-evolving personal philosophy, that can be shaped in good part by the university years. An important reason we can be so prominent in that shaping is the stage in the lives of our students. At 17 ot 18 years of age, when they first come to Palo Alto, they are imbued with the culture of parents, siblings, school, but they know it is time to become an adult.

So we have them at an ideal time—what do we do?

First, I think, we intentionally challenge them as people. The social milieu at a Stanford is something not found in any home, any public or private school. New types of people, new challenges to family, religious, political, and personal values, are the rule.

These things are not "book learning"—they are "life learning," learning that forces development of character and new perspective. So WASPS and blacks, poor and wealthy, jocks and nerds, gays and straights, are mixed with books and laboratories and professors—and what comes out the end at graduation? Maturing, thoughtful persons, we trust, ones much better able to cope with the information load and the high-tech society of the 21st century.

But the social milieu we provide is not the core of the University experience. The core, of course, is academics. So let me say a few general things on academics, and then give you some specifics.

If I had a short shopping list of skills to gain in college for one of my student advisees I might include: thinking, writing, speaking, values, and aesthetics.

By thinking, I mean the development of analytical skills. By writing and speaking, the ability to express oneself with facility, logic, and skill whether on paper or while on one's feet. By values, I mean a sense of ethics, morality, and concern for others, from family to co-workers, from community to country to world.

And finally by aesthetics, I mean an appreciation for the finest in our human culture. I do not mean, necessarily, eschewing Monday night football or the beauty of the Beatles. But I do mean intolerance of the vulgar and violent, impatience with the self-serving and unprincipled, and that private, personal appreciation of a well written book, a painting, or a play. It is attaining what the greeks termed "the consolations of philosophy."

David Starr Jordan spoke on this topic in 1892 when he toured California, urging the young to attend college. Jordan said, "To turn from the petty troubles of the day to the thoughts of the masters, is to go from the noise of the street through the door of a cathedral. If you learn to unlock these portals, no power on earth can take from you the key. The whole of your life must be spent in your own company, and only the educated man is good company for himself. The uneducated man looks out on life through narrow windows, and thinks the world is small." To turn from the petty troubles of the day—is not that itself a recipe for survival from the information load?

But there are probably 1,200 courses undergraduates can take at Stanford. How to choose among such richness? That is where our new structured curricular requirements come in.

Those courses expose students to diversity and alternate views of our roots in Western Culture, our philosophy, ethics, personality, and so on. We mix with it technology, the natural sciences, and the mathematical parts of human knowledge.

We say, for instance, that quantitation is important, that no graduate of today can hope to feel at ease in the new society if she or he does not have at least some awareness that quantitation is our servant, not our master, and why? Indeed already there is a hyper-awareness among nearly all our undergraduates, be they in English or Classics or Chemistry, that contact with computers and numbers is now a part of becoming educated.

But these words may seem out of date when we think of the real world of unemployment and the problems for our work force as we turn from an industrial economy to a service economy. What of preprofessionalism, arising more forcefully than even during Depression days, from worries about the economy, jobs, future security, and personal independence?

Well, at Stanford we do not have formal undergraduate curricula in business, in accounting, in computer science, in pre-medical or pre-law studies, in other disciplines best left, we believe, for later years. We do our best to instill in the minds of freshmen and their parents that studying what one enjoys is the best route to prepare for later life.

What "good" is a French major? A Classics major? says the financially aggrieved parent? The answers are clear and not just wishful thinking.

Over the past few years, we have invited alumni who majored in the humanities as undergraduates to return to Stanford and talk about their careers to undergraduates in their departments. As the experiences of those alumni unfold, the potential history or English major hears firsthand: of the values of having been a philosophy major to a young woman who is the field operations manager of the San Francisco Municipal Railway; of the "utility" of a religious studies major to a computer software engineer; of the importance of a history major to a dentist.

The reasons why such majors have proved valuable, these alumni say, are those I ennumerated above: method, thinking, learning to write, and exposure to ethics. All are part of every major at a great liberal arts University. It isn't important whether the classes are in French literature, or art history, or developmental psychology. It is what goes on in such courses. . . what is in the minds of the takers. . . that counts.

What deans do

Today you are listening to deans of Stanford's seven schools. Several weeks ago someone asked me "What on earth does a dean do?" In fact, I've been telling you little by little. Deans worry about what a university is in society, what it should do for its students, and how it can do it.

In a few words, a dean tries to create an environment for two things: ideas and people—the special types of ideas that are part of research and teaching; the special type of people represented by our marvelous faculty and our select, intellectually gifted students.

What is the setting of that environment? Practically, for me, it is my School. Humanities and Sciences at Stanford is an immense organism. We are talking about some 457 professors, 185 other professional teachers, 4,000 majors, 75,000 total course enrollments, 500 secretaries, laboratory technicians, business managers—and on and on.

We are responsible for a marine station, an art gallery, an art museum, three theaters, and a music program consisting of more than 100 concerts and recitals each year. The enterprise involves administering a budget this year of 35 million dollars in Stanford funds and 20 million dollars in research grants. We are labor intensive, which of course, means that our problems and opportunities are human ones.

Our Humanities and Sciences hallmark is breadth; we are artists and writers, economists and computer scientists, and chemists and classicists—we are scholars of Rome and Caeser, of leptons and steroids.

That we are this broad an amalgamation is a statement to ourselves and to our students. We value the vast diversity of human knowledge and would know that we are part of it, and much of it can be part of us. And that statement goes forcefully to our students as we require them to sample across the spectrum.

Perhaps some specifics can give you an idea of what we deans do. Part of creating an environment is building, with planning, luck, and hard work, this great faculty that makes the University's name.

This year, suddenly, unexpectedly, Stanford has become the number one place in the world for the formal study of language. That sounds esoteric, no doubt, but it really isn't.

For formal linguistics, as it is called, begins to give us a precise, logical, indeed mathematical, description of words, sentences, semantics. And the result will have a profound impact upon the new super-computers, upon Artificial Intelligence, robotics, and the world that is coming, like it or not.

But also, formal linguistics relates to psychology and the study of the mind. We think, after all, in words. Learning how we describe and perceive our world, how our speech center works, indeed how the brain functions. Stanford's group in cognitive science was already number one—now an even stronger, broader alliance has been welded.

So what did deans do? We had the task of sensing the opportunity and then helping to assure the successful wooing of three senior "stars"—one from MIT, one from Texas, one from Wisconsin. Finding three senior billets in these days of budget reductions wasn't easy.

But that was only a beginning: next came salaries,

continued on next page

Wessells/ continued from page 6

a wonderful gift of 150 Personal Computers—one computer for each new member of the humanities faculty who wants one and a machine for each humanities department office. Our project includes a training program designed specifically for our humanist "technical aborignees" and already the productivity and morale of our humanities faculty is climbing to new heights.

In addition to simply word processing, the faculty will soon have the capability of being linked to computer networks that will provide access to many of the nation's great research libraries as well as Stanford's own collections. I suspect the work habits of many of those faculty quite literally will be transformed by these new tools.

You can be assured that though our financial belt will be tight, we will be reallocating, pruning back the weak, sustaining the strong, and artfully, I hope, striking out in new directions.

Another component of an academic environment is the equipment or the tools, of doing research. The tools of scientific research change with advances in technology, and a modern lab in biology, chemistry, or physics looks vastly different from labs even just 10 years ago.

The tools of the humanist, however, until recently, have been pen, paper, and books. During the last two years several deans and administrators have been involved in winning a major grant from the Pew Foundation of Philadelphia to provide our humanities faculty with word processing equipment. IBM has expanded our project with equipment, office and laboratory space. And these days, real estate is a big question. With houses on campus listed for $295,000—$430,000, you can imagine that we, like our neighbors at Hewlett-Packard or Varian, spend much time on questions of housing allowances, equity loans, and the like.

But, it is worth it, for a new spire of excellence will mark Stanford's horizon, and other new faculty, graduate students, and undergraduates will all benefit. And by bringing together such diverse intellectual leaders, we facilitate the ferment that generates new knowledge. That indeed makes deaning worthwhile.

You will perhaps hear of other new areas being added over these next years. We are planning now, for instance, to greatly expand the undergraduate writing experience, to add enrichment to programs for juniors and seniors, and to foster other new areas of scholarship and teaching.

But how do such abstractions relate to the real nuts and bolts of an education, the course and the major fields of study? Is there a simple route to follow that leads to guaranteed Nirvana? I fear not. The best route is to concentrate upon ideas, people, history, process.

Let me give you brief descriptions of three undergraduate courses:

Classics 11, The Age of Heroes, studies the heroic epics of Greece, Mesopotamia, England, and France, their common features, style, and ethical values.

History 110, The Age of the Reformation, relates the Reformation to the urban setting and the economic and social forces of the rising national states.

Biology 130H, Biological Clocks, examines the physiology of innate daily, tidal, monthly, and annual rhythms that govern the basic activities of most organisms, including humans.

Why study the Age of Heroes, the Reformation, Biological Clocks? Not for the facts. Instead, for the experience of study. To think about those things, to be forced to organize, to analyze, to establish one's own way of looking at things—that is what it's really about. It is training in method, indeed training for an effective life.

Individual student achievements

We deans are people and some of our most pleasant times come from opportunities to do small things for individuals. One day last Autumn an undergraduate came to me to describe his desire to do research in corrosion of bronze sculptures.

He had studied a great deal of art history and chemistry. He had already made contacts at Stanford and in France to work on his project. I was impressed with his knowledge, his drive, and with the unique nature of his project; his is a perfect example of the beautiful way two disciplines sometimes fit together.

So the School used gift funds from an alumnus to give him a research grant to enable him to purchase supplies and to carry out the project this summer. I would bet that he will not be the only beneficiary of his work. Prof. Albert Elsen of Art is already worrying about potential corrosion of the spectacular Rodin sculptures that will soon grace our campus thanks to Mr. and Mrs. B. Gerald Cantor.

I could list many other seemingly small things: sending students to Washington, D.C., the Aegean Sea, or Latin America for summer projects; getting a student together with the one "right" faculty person who can make the difference in the student's education. In reality, however, these are among the most important services a dean can provide, for the impact on each individual is profound and long-lasting. And that makes it very worthwhile for us.

It has been a pleasure to talk to you today about Humanities and Sciences and how what we do relates to our students. Those wonderful young people will not live in an easy world.

The horrendous consequences of the population explosion are beginning to be seen in Central and South America—much worse is yet to come. The information load I alluded to, and even the tragedies of burgeoning populations, differ in one enormous way from the genetic load of *Homo sapiens* and all other species.

The genetic load is biological, chemical in nature—it is part of our very fabric.

But that is not the case with the information load and all that is included with it. Such things are, potentially at least, under human control—*they are not inevitable*. With education, with strength of character, with will and realization that the individual can make a difference, even on a world scale, the graduate need not merely survive but may make some real contribution to the public good.

We have an obligation at Stanford to prepare young citizens for the real world. Our buildings, our collections, our faculty, are vehicles to that end.

You, as alumni, are part of the history, and a testimony to what has been accomplished in the past. And much of what we do is only possible because of your generosity and sacrifice. For that we thank you. We appreciate your trust.

Wessells' Q&A: Humanities majors shouldn't do graduate work just for a job

Following are questions and answers following Wessells' talk:

Q. Please comment on the nature of incoming students at Stanford today.

A. I really haven't seen that much difference in students since 1962, when I began teaching. I'm speaking mainly about the students I see in class, because they're the ones I get to know the best. I get to know them fairly well.

I think the student body has changed somewhat, mainly because of our social consciousness about the kinds of students who should be allowed to go to a major research university. So we have many more Chicano students and black students than was even contemplated as even possible in the early part of the 1960s.

I think we're over a big hump there—at least, the Stanfords, the Harvards, and the Cal Techs are. That important ingredient of the community is secure. Not that enough people are coming, but I think the most qualified are getting to the major research institutions.

Q. What's the status of the Stanford Honor System?

A. It's a system that has been working reasonably well, I think. Many students take it very seriously indeed. I think there is a degree of cheating which goes on which students know is happening but are not willing to do anything about.

I suspect that's happened for many, many years. I don't know about Stanford prior to the early 1960s. But I've talked to a lot of students about it—I teach in a fairly high pressure area, with premed students in their junior and senior years and it's recognized that there are some difficulties. But I think the majority of students and the vast majority of faculty think the honor system and the whole code of conduct is so important—such a wonderful good for the university, as opposed to the alternative—that what we have to do is try and figure out if there's a way to close down those loopholes so that we can keep the basic pattern.

I would say there's a little bit of stress and we'll probably be hearing and reading a little bit about it in the student newspaper. . . .

Q. To what extent do you feel that humanities students ought to pursue graduate study to find useful ultimate work in society?

A. I don't. And I don't because of having talked and heard of these alumni who come back to Stanford from the Bay Area. Some of them went on to graduate school, but many did not.

I don't think that means they stopped their education. I suspect that. . .a classics major or a philosophy major who winds up in some quasi-technical or business area will have found other ways to continue their education.

Our kind of university produces a graduating class most of whom aspire to professional school, sooner or later. Five or eight years ago, the commonest pattern was right out of college and into graduate or professional school.

Now a most significant percentage are "stopping out." Places like Stanford and Harvard Business School tend to take in people as MBA students who've been out working for a while. I think that's sound.

Q. Do many students actually do research abroad?

A. Well, our students in anthropology, international relations, Food Research Institute—quite a few parts of Humanities and Sciences—spend significant amounts of time overseas.

Most of them are graduate students. However, we have various programs for advanced undergraduates and we'll send 'em over for three months or six months. I would not say the number was very large. . . .

Q. How many?

A. It's in the hundreds.

Q. Is there any chance Stanford will establish a separate department of archaeology in the near future?

A. I think not. What we've been doing is endeavoring to build our Classics Department. This was started by my predecessor as dean (Halsey Royden) who was a mathematician but more than an amateur classicist. He recognized our department was not as strong as it should have been. So in the reallocation of faculty billets in the past few years, several have been to the Classics Department. It has grown by about one third.

We had a search committee for archaeology, in fact, and are appointing a new person for next September, but I don't envision that we would ever have the resources that would allow us to set up a separate department.

A department really isn't viable unless it's got at least eight to 10 faculty persons. In terms of the needs of the students and the competing opportunities that we have for intellectual advancement, I don't think archaeology is quite that high on the list.

Q. How's the Philosophy Department?

A. They're breaking us. The person who's coming from Wisconsin to join the formal linguistics program is in philosophy. (The department) is just concluding a search for a senior person in ethics for an endowed chair.

Philosophy at Stanford is exceedingly strong and represents the hottest in philosophy right now, which tends to be very oriented toward logic and formal ways of arriving at conclusions, and even over into ethics, questions of morality.

In part, it becomes a little esoteric for most of us, who perhaps are not quite that ethical or moral. *(Laughter)*

But there's no danger that Philosophy or Classics or other departments in that area—religious studies—giving up the ghost. We're supporting them.

Q. Can you tell me a little more about your formal linguistics program?

A. Yes. What we're doing here is bringing a person, Joan Bresnan, from MIT, and a mathematician, Stanley Peters, from Texas, and John Barwise, formerly of Stanford, to this program.

The objective is to put together a group who are interested in the way that we really interpret words, put them together, and generate meaning by combinations of words—and describing that in theoretical terms, ultimately, mathematical terms.

I suppose, decades from now, we we're heading toward an ultimate understanding or attempt to understand the way in which neurons can interact with one another in the brain in different kinds of electrical networks, depending on their biological properties.

We're so far from there now we can't even frame the questions. That's where this kind of attack, coming from a non-biological angle, is ultimately aimed, I suspect.

Q. Is there any coordination between the Admissions Office and Humanities and Sciences?

A. I have never, ever talked with Fred Hargadon (admissions dean) about an individual applicant and he has never asked a question of our office.

What we do talk about are. . .(problems like the fact) that we don't have a computer science major (for undergraduates) for what I think are very good intellectual reasons. But Fred says now the absolute cream of the crop nationally—of people who are just off the curve in mathematical skills, individuals who a decade ago would have gone into a mathematics department or a physics department—are, in fact, going into computer science.

And Fred says, "well, they're going to MIT," because MIT has computer science as an undergraduate major. That's the kind of intercourse we have with Hargadon.

He's causing us and the faculty to rethink just how we label things and exactly what we're doing on an educational basis. Fred is just an extraordinary person to be in contact with what's happening in the secondary school world and in assessing the quality of the applicant pool to our university.

Q. Could you tell us more about the writing program?

A. Right now, of course, the entering freshman either has to have done very well on the national tests. . .or take freshman English.

Those courses are given on several different levels. They tend to concentrate on specific topics that the student would like to know about, so that they're actually getting experience writing about something that's enjoyable.

Unfortunately, there isn't any sustained and regular

continued on next page

Decision-time approaches on unclassified weapons-related research at SSRL

continued from page 1

the UC Nuclear Weapons Conversion Project.

Other speakers will include Prof. Charles Drekmeier, political science, and Mary James, SLAC engineering physicist, according to Jon Adelstein, rally organizer.

Adelstein said a small delegation will ask Kennedy to agree to discuss his views with the Stanford community and with SLAC faculty and staff who signed petitions against the proposal in mid-January.

In an April 1 talk to the Stanford Academic Council, Kennedy said: "Many of us here believe that the direction of our national effort is tragically wrong. Our dependence on large stockpiles of nuclear weapons, and on deployment measures and countermeasures with great destructive potential, have placed us all in collective jeopardy."

But Kennedy strongly opposed end-use limitation on unclassified research, saying that "today's benign restriction might become tomorrow's suffocation. . . .

"Once you begin making value judgments about the possible outcomes of scientific research, there is no place to stop."

He said he plans no change in present research policy "nor do I think my colleagues should wish to do so.

"I would hold that view even if the project under consideration were much more heavily involved than it is to end-uses with which I am personally uncomfortable."

Adelstein hopes to make Kennedy "more sensitive" to the need to consider end-uses in nuclear weapons research. The potential consequences are "so disastrous and devastating they would undo all the other good works of universities."

When it comes to nuclear weapons "we have to draw the line," he said. "It's essential to stand up to Lawrence Livermore before they go further.

"There are certain types of research that have to be slowed down or stopped on campus."

On April 19, the Student Senate voted 14-3 to oppose the proposed research, after Adelstein and others obtained 1,572 signatures on petitions urging this action. Another 45 faculty and 76 staff members took a similar position.

Senators Paul Tsongas and Gary Hart and anti-nuclear activist Daniel Ellsberg all have drawn large and enthusiastic audiences at Stanford in the past 10 days.

The controversial research proposal involves research on high-speed x-ray detectors used in nuclear weapons testing. Developed by Lawrence Livermore, Sandia, and Los Alamos national laboratories, it was not included in President Reagan's recent budget proposal for fiscal 1984.

Prof. Arthur Bienenstock, SSRL's director, is expected to announce his decision on the project in the near future. SSRL research depends on electron beams from the two-mile Stanford linear accelerator. In mid-January, 280 SLAC employees signed petitions to SLAC Director Wolfgang Panofsky objecting to "involuntary servitude" in providing the beam for SSRL.

Panofsky has pledged that SLAC will "cooperate fully" if SSRL approves the proposal. A nationally prominent arms control expert, he has as an individual strongly opposed President Reagan's recent proposals for developing a comprehensive defense against nuclear weapons.

Panofsky, Wood to debate defense

The Stanford Arms Control and Disarmament Forum will sponsor a public forum at 7:30 p.m. May 4, at Kresge Auditorium.

Prof. Wolfgang Panofsky, director of SLAC, and Lowell L. Wood Jr., head of the special studies group at Lawrence Livermore Laboratory, and adviser to the Reagan administration, will discuss strategic defenses and nuclear deterence. Provost Albert H. Hastorf, will moderate.

Volunteers sought for herpes research

Persons with recurrent herpes on the arms, legs, or trunk, but *not* on the lower face, around the eyes or genitals, are urgently needed to assist in medical research. Volunteers will be paid a fee. For more information please contact: Tony Cunningham, M.D., Division of Infectious Diseases, Stanford University School of Medicine, (415) 497-5908 between 9 a.m. and 5 p.m.

Health and safety report

Accidents and Injuries Occurring During Week of Apr. 18-22

Type of Accident or Injury	Number of Incidents	Days Lost
Chemical inhalation	1	4
Impact with object	2	(0, 0)
Pinched, squeezed, crushed	1	0
Rubbed, scraped	1	0
Fall from height (incl. stairs)	2	(0, 10)
Foreign body (i.e., in eye)	2	(0, 0)
Lifting improperly	1	2
Temperature extreme	1	0
Other	1	+ 10



Wessells/ continued from page 7

follow through on that. Consequently, those students who go into the humanities probably get pretty good writing experience after that. But most of those who are in the social sciences or natural sciences don't. I can easily imagine they could go through those last few years and not write very many papers.

What our faculty study groups are working on right now is designing some small group writing instruction and experience for the senior year. It has to be small (classes); you just can't get very good criticism of papers unless the person has a small enough group they can really concentrate on and give the kind of feedback you need to qualitatively improve these students' performance.

So it's going to be a very expensive thing. That and the enriching of the entire junior and senior year probably will be the biggest thing we do in Humanities and Sciences over the next 15 years.

What we're talking about is buying out faculty time—getting good professors who've normally been teaching 100 students out of the classroom and into a seminar for six or eight or 10 students. And then having a replacement back there in the classroom. . . .

Q. Would you mention why you don't have a Computer Science Department?

A. Please don't misunderstand. We have the Number 1 Computer Science Department in the world. . . . It grew out of the Mathematics Department about 20 years ago. It has just an incredible faculty who, by and large, are interested in the theory which has grown into the discipline. . . .

Bill Kays, dean of electrical engineering, has a large number of electrical engineers who are also extraordinarily talented people on the hardware end of computer science.

Our Computer Science Department is a graduate department. . .with masters and Ph.D. students. To the extent that we teach computer science to undergraduates, it's been done through service courses, not in the form of a major.

The basic argument is that a good part of computer science is really almost like a trade.

So what we decided to do was to fold undergraduate teaching in computer science into something called mathematical science. The student has to take basic math, statistics, operations research, and computer science.

And I don't think there's a more successful major at Stanford. People come out of that and go to law school, business school, computer science graduate school, everything. It's a fantastic major—much better than anything they're doing at MIT. What we don't do is label it and package it well enough, and prospective super-stars aren't hearing about it.

Q. What are the major advantages and disadvantages of a major research university as compared to a liberal arts college?

A. The major reason that a person should come to Stanford is diversity. There's no other large college in the country or the world that's the foggiest imitation of a place like Stanford.

The great limiting thing, if you talk with Nan Keohane (former Stanford professor now president of Wellesly) or (other) liberal arts college presidents, is that you can go to them (as a student) for a couple of years and pretty soon you see that there's just not much (curricular) choice any more.

What we have as a research university is just unbelievable diversity. Stanford has it in spades, much more so than most other places.

There's nobody who tries to have the best engineering school at the same place with a great liberal arts college. It's like taking Harvard College and MIT and turning it into a university.

Harvard doesn't make it in engineering, MIT doesn't have much in the humanities, other than people they've hired from us *(Laughter)*.

So we just have a wonderful thing here. . .Hargadon accepts students for their undergraduate years. They can go to engineering, or humanities and sciences—wherever they want—or design their own majors.

Q. What about courses in ethics?

A. We're in an especially good place to look at ethics and morality because Stanford, like it or not, is perceived nationally as being Big Science. And Big Science creates that kind of problem, whether it's in the medical sphere, atomic energy. . . .

We're doing this already, but we should build more areas where we do examine values at the technical end of human knowledge.

Q. What about international relations?

A. Well, international relations has been an extradepartmental program going for, I guess, a decade now, in which political science, economics, history, sociology, and others have set up a program for both graduate and undergraduate students.

It's a program which we're just beginning to examine for the future. Leon Sloss (president of the Alumni Association) and several other very distinguished Americans were at Stanford last week as the first visiting committee for the international relations program.

The (Stanford) centennial is coming and what we want to talk about is what's really new, big, and important.

A number of us, and President Kennedy in particular, have the feeling that international relations has just got to be one of the areas where this university makes a big push in terms of faculty and training programs. . . . So things will be happening there, but I don't know what yet.

Q. When is the centennial year?

A. It begins in '85 and ends in '91. (Wide laughter)

Kennedy comments on SSRL, Band, ROTC, tuition, housing

At Stanford and elsewhere, "this is a spring of substantial controversy," Stanford President Donald Kennedy told an estimated 400 attending the Stanford conference in Los Angeles Sunday, April 24.

While many faculty and students have opposed an unclassified weapons-related research project proposed for the Stanford Synchrotron Radiation Laboratory, Kennedy said, it is "not desirable" to regulate research by its end use.

He noted that the controversial proposal is equally "strongly supported" by faculty members who emphasize "positive benefits of the vast majority of the proposed research program and who believe it is more important for the faculty to maintain an open stance on faculty research, as long as it is conducted in accord with the principles the university has adopted, and not to try to regulate it by some act of prediction with respect to its end use and some moral judgments made by others about that end use."

Kennedy told the Academic Council this spring he did not intend to ask the faculty to reexamine Stanford's research policy.

Questions and answers

Alumni quizzed Kennedy on a variety of topics.

Q. The band is a disgrace. It should not be called the Stanford Band. Who, if anyone has the authority to control it?

A. I emphatically deny that the band is a disgrace. *(Widespread applause)* I think the band went through a marvelously creative period, when it was unique and special. Three or four years ago it did sink into a kind of doldrums in which the same old things weren't as funny.

You know, there's nothing like having a reputation for humor, only you haven't heard any good jokes lately. . .that's the position the band got itself in.

This past fall there were signs of real improvement and then an unfortunate regression (A reference to the end of the Big Game.) *(Laughter)*

However, I had the moral fiber to invite them to perform for her Majesty. They showed up in absolutely spanking clean red coats. They labored hard and played a marvelous arrangement—which Art Barnes wrote himself—of "Rule Brittania."

You'll hear it some fall Saturday, I'm sure, because I told the band that they could get a whole lot of hauteur this fall "straight from their command performance, the Incomparable Leland Stanford. . . ." *(Laughter)* That's got a lot of class going for it. Maybe they'll become sort of British now *(More laughter)*

Anyway, the only thing the band did on that occasion you could consider the least bit bad was one of those chorus yells. And here's what it was: *(Pause)* Go Queen! *(Wide laughter)*

Q. Why is the cost of a Stanford education outpacing the general rate of inflation? Is there any evidence of recent tuition increases or the recession affecting applications for admission?

A. There isn't any immediate evidence. But you cannot simply judge on the number of applications. What you have to do is look at people who apply for financial aid but who just fall short of qualifying for it, and see whether those people who do not select you are going instead to the high quality public institutions in this state.

That's the ratio we look at. And even with that high grade of resolution we cannot detect an effect.

Does that make us complacent? It certainly does not. We're deeply troubled by what we've had to do to tuition.

But let me make clear what is really happening here. It is characteristic of labor-intensive service units in an inflationary economy not to go up with some consumer price index indicator of inflation but rather to move with the rather steeper curve of disposable income.

That is what the tuitions of all the major selective private colleges and universities have done. From 1967 until 1981, Stanford tuition was exactly the same percentage of disposable family income. It did not take a larger share of family budgets.

In 1982 and again in 1983 we did have to move tuition, as most colleges and universities did, somewhat faster than that line. We think we've got it back down and we hope to keep it back down.

But with a compound rate of rise in energy costs of between 20 and 25 percent a year, and items in our market basket inflating faster than those in the market basket in general, it's not surprising that we have to price in the way we do.

We really are not behaving differently from what classic economic predictions would say we would do. I hope that the economy will once again permit us to do something more reasonable.

Q. When will Stanford return to a full ROTC program?

A. When the services and we are able to agree on a proposal that either permits credit bearing courses required by those ROTC programs to be taught by Stanford-selected members of the Stanford faculty or, in the alternative, permit non-credit bearing military-taught courses to qualify for those requirements set by the. . .services.

The difficulty in that problem is a hang-up that's very widespread between university faculties and their insistence on some quality-control measures and the services desire to have their own people teach those courses.

Q. Can the University now guarantee undergraduate housing on campus for all four years? Is on-campus housing available on campus for graduate students?

A. On-campus housing is available on campus for about 75 percent of the graduate students who are married and have children, for 50 or 55 percent of those are married but don't have children, and less than 30 percent—say, 25 or 20 percent—of single graduate students.

That's rather better than any other institution of our kind. There's just been no tradition until lately of housing graduate students.

Our graduate students clearly want more housing. We've got to think hard about our own priorities. . .and competing land use requirements and see how much we can provide.

As to undergraduates, the new 800 spaces at Governor's Corner—the wonderful new undergraduate housing center by the golf driving range, Lagunita, and Lagunita Court—we think will remove the unguaranteed year at present levels of demand.

It won't house all our undergraduates; it will take us to 84 or 85 percent. But given the number that are on foreign campuses and the number that prefer to live off campus for their own reasons, we think it should be possible to satisfy existing demand.

But if tastes change, demand will change. So obviously we can't say "never" to the unguaranteed year—at least not now.

Q. (Paraphrased) Hope was expressed that Stanford will remain sensitive to national defense and national security needs, both with respect to student programs, research programs, and scientific exchange programs.

A. I think the institution, and students and faculty generally, may be a little more sensitive to those needs than you suppose them to be.

We've had some policy differences with the government, not only with regard to ROTC, but with respect to certain scientific exchanges and with respect to restriction that the government has sought to put on research.

But, by and large, those issues have been resolved quite successfully. We have had some differences over open access provisions put on research contracts with the Department of Defense. But our approach to that was that I agreed to serve with the Undersecretary of Defense for Research and Engineering (Richard DeLauer, a Stanford alumnus) to cochair a panel between the Department of Defense and the universities which has worked hard to try to resolve those problems. . so those programs could go forward on university campuses under conditions that are acceptable to the faculties and to the Department.

I think that what you would ask of the university is a responsible effort to be sensitive to those needs, but at the same time to represent vigorously the appropriateness of certain conditions under which we carry out the research work. I think we've done that responsibly and fairly.

We have made it possible for a number of undergraduates to enroll in ROTC programs by commutation elsewhere. We certainly have no desire to prevent them from doing so. The desire rather is that we are consistent with that principle, that we let them make that choice and we make that as convenient as we can for them.

Q. (Paraphrased) In your speech, you sounded optimistic about the outlook for support for scientific research by the federal government. What about the outlook for the humanities and social sciences?

A. The social sciences. . .are in a difficult kind of intermediate position.

They've become used to a fairly significant amount of federal support but cuts made in the last three years have been rather selective there.

So I'm a little worried about the social sciences although in certain fields, like economics, Stanford has been able to shift its base of support a little and pick up some private help, and I think maintain themselves quite nicely.

There's no question that the social science disciplines are intellectually lively and that much of Stanford's strength lies in them: our increasingly good position in sociology, a very strong position in economics, in psychology our department has for 20 years been ranked very clearly as the best in the country. I think we have a good record there and will continue that strength.

The humanities are quite clearly the chief worry. As happens sometimes in a period of economic stress, it's a little difficult to persuade undergraduates it's still worth concentrating on the timeless.

We're trying to do that. Norm Wessells, as dean of humanities and scineces, has been very active in trying to find ways of helping humanities faculty become more productive in a scholarly way, to use some foundation money to improve our opportunities to appoint young faculty members in the humanities.

Then, of course, we have funded for the first two years of its operation, a Humanities Center which we hope will attract distinguished visiting scholars, both younger and more senior.

I'm hopeful about all that, but I think it's going to be a multi-year proposition measuring the effect of those interventions.

Letters to the editor

Consumption and flat taxes: a rebuttal

Editor, *Campus Report*:

How about equal time? I ask this question as a Stanford grad (Class of '82) who has read a number of stories in the *Campus Report* that I disagree with. . . .

The stories I am referring to involve Professor Michael Boskin and Professors Alvin Rabushka and Robert Hall. You have given their arguments in favor of a consumption tax a great deal of space with little discussion of the serious problems that would result from adopting their proposals.

Simply stated, a consumption tax, which the Hall-Rabushka proposal is, would shift the tax burden from the wealthy to low- and middle-income taxpayers. Even if you don't think this is unfair, then you should at least be wary—after all President Reagan's "trickle-down" economic policies have contributed to record deficits and deepened the recession.

I have sent you the April issue of *People & Taxes*, the newspaper I am editor of. It includes an article by Bob McIntyre, which examines the question: Does the economic recovery that seems to be underway indicate that President Reagan's supply-side economic program is working? McIntyre's answer is no. He says that only after Congress raised taxes in 1982 has the economy improved.

I have also sent you the March issue of *People & Taxes*. It includes an article by George Guttman that exposes the fallacy behind the Hall-Rabushka supply-side tax program. Going back to my original question, let me suggest that you reprint the Guttman article so you readers can know the other side.

Tyler Bridges
Tax Reform Research Group
215 Pennsylvania Ave., S.E.
Washington, D.C. 20003

Editor's note: We cannot reprint the article in Campus Report, *so we've included the address for those who are interested.*

Ely/continued from page 1

coming to Stanford as dean last year. He's taken time to visit several Business School classes at Stanford, talk with fellow educators here in education and medicine, and think hard about better ways of combatting classroom boredom.

Some of his suggestions, in brief:

1) Try reintroducing Socratic dialogue.

Eliminate the ridicule. Tell a few students a day in advance that they'll be questionned in class. Pitch the ensuing dialog at a level high enough so that other students may have trouble following the discussion if they haven't read the material.

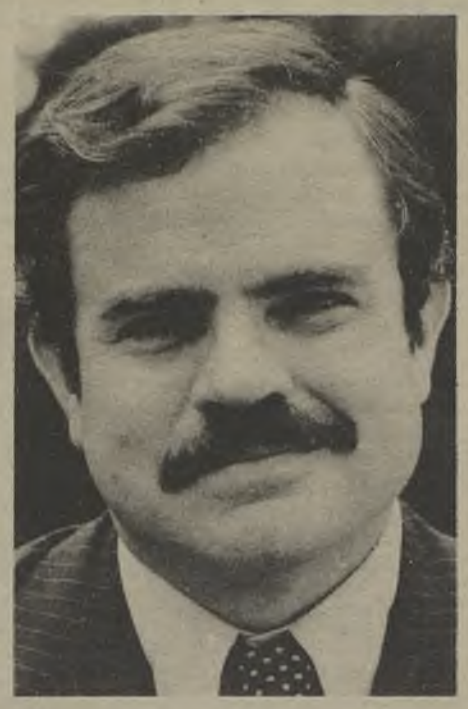
2) Consider injecting very short assignments to generate day-to-day classroom activity.

Some law teachers may think this is a "Mickey Mouse" approach, but it left business students "a lot less bored." Those enrolled in the joint MBA-J.D. program at Stanford said they liked brief but demanding activity.

3) Stage client interviews, mediation, and other legal activity in the class.

"It's a very rare case when this can't be done," says Ely. "It's work for the faculty, but we're doing more of it here."

4) Develop clinical teaching through extensive use of videotape recordings and other simulation of what practitioners actually do.



John Hart Ely

This kind of clinical teaching is exhausting and expensive, since the student-faculty ratio has to be low. But it has several advantages over conventional clinical education in law:

A) It can follow the regular class schedule and normal academic calendar;

B) It can be carefully designed to complement reading and other curricular materials;

C) It can be as simple or complex as the teacher desires; and

D) It avoids genuine ethical conflicts.

"Nobody's going to get hurt if the student makes a mistake," Ely comments.

Initiated at Stanford years ago by Prof. Anthony Amsterdam (now at New York University) and several other faculty, the use of videotapes to simulate and critique cases has proven an effective teaching tool.

Stanford now is "way ahead" of its major competitors in using these techniques, Ely believes. Northeastern University in Boston has done even more experimentation along these lines.

As resources permit, the Stanford dean hopes more professors will be able to combine clinical teaching and classroom lecturing.

He "learned an enormous amount" from watching lectures by Business School faculty.

"They know how to say a short sentence and stop," he observes. "You almost never see that in law school. . .too much can be said about too little."

In business school, "Stanford very cleverly lets the drones at Harvard write out most of their cases," he adds. Lawyers have free short cases that aren't copyrighted—in appelate court opinions.

Classroom lectures

In classroom lectures, he believes the time may be ripe for a return to a more humanized version of the Socratic method. Instead of putting down students who make mistakes, a professor can simply say "I don't think that idea's going to work—and here's why."

"Much of the old Socratic method was simply marching students through doctrine," he notes. This can be boring to teachers as well as students.

To add interest, some of the old teaching scripts included wild goose chases down blind alleys. But this reduced time available to cover other material, Ely notes.

After the changes of the late 1960s, some teachers resorted to "Socratic solitaire"—asking and then answering their own questions.

Ten or 15 years ago, "it looked as though law school might be reduced to two years," he comments. Now professionals want a renewed emphasis on teaching a wide range of doctrine and training students to function within the legal system.

Ely's primary focus is on the faculty, the classroom and the curriculum. But he supports several efforts to expose students to a range of "real world" opportunities before graduation.

These include:

1) Creation of a legal services clinic in East Palo Alto independent of the School by "quite energetic, admirable" students. Such clinics "probably help people, on balance" and provide students a chance to apply what they've learned in courses in poverty law, housing law, etc. Ely will help the students seek ear-marked funding.

2) Expansion of externship programs. These give law students a chance to work off campus for a semester with judges, government agencies, or public interest groups. They should be academically rigorous, with supervision by the sponsoring organization.

3) Greater variety in summer employment. It's "very sensible" for students to work in large firms for one summer, and many choose to repeat this experience the following year. To foster greater variety, the School now offers about 10 students market rate loans if they decide instead to work with government agencies, non-profit organizations, or charities. If they later work full-time for these organizations, the summer loans may be forgiven over several years.

"It's not really our business to mess much with what people do after graduation," Ely says. But this kind of modest incentive may encourage a few more students to follow the handful who now start their careers outside large private firms.

Yale ties some loan repayments to future earnings, while Harvard may forgive loan repayments for those who earn less than a specified figure. The Stanford incentive applies only to loans during summer employment as students.

The Stanford curriculum already is "very rich" in courses dealing with non-business law, he notes.

Ely's views were developed in an hour-long talk at the Stanford conference in Los Angeles April 24.

—Bob Beyers

GSB would like to expand faculty 10-12%, Jaedicke says

Rapid curricular changes and continued national shortages of faculty are among the major challenges facing the Stanford Graduate School of Business, Dean Robert Jaedicke told a Stanford conference in Los Angeles April 24.

Stanford currently offers 110 elective courses, compared to 50 in 1970. And at least 25 of those 50 earlier electives are no longer in the catalog, Jaedicke said.



Robert Jaedicke

Where the Business School had only three courses in organizational behavior in 1970, it now offers four or five times that many, he added.

The School would like to expand its faculty by 10 or 12 percent to permit more faculty research, the dean said. "The big problem is the national shortage of business faculty."

During 1982-83, American business schools graduated approximately 750 Ph.D.s but had 3,000 unfilled positions. Current signs are this shortage will get worse rather than better, as the number entering teaching has declined 15 percent recently.

Besides supporting Ph.D. students, faculty research in business provides a steady flow of new material for improving curricula, he said.

Jaedicke reported that 5,000 students now apply for 320 spaces in the Stanford MBA program annually. Asked if the School could expand its enrollment, Jaedicke said such a move could severely affect quality.

While several polls have ranked Stanford first nationally among business schools, Jaedicke said "they did us a disservice" by straining relations among academic institutions.

"Education is a cooperative venture," he said. "We don't all do the same thing. The variety helps students."

Regardless of the rankings, they provide no grounds for complacency in the School, he said, since nearly 45 percent of the present faculty wasn't here in 1976, when the last poll was done.

Gay, Lesbian Alliance wins approval on scholarship fund

Stanford University has accepted gifts totaling $2,040 to establish a scholarship for a Medical School student who has shown a commitment to serving the gay community.

The gifts are the result of a fundraising campaign conducted by the Gay and Lesbian Alliance at Stanford (G.L.A.S.).

In a letter accompanying the gifts, the G.L.A.S. Steering Committee noted that the needs of gay people have historically not been adequately provided by mainstream health care institutions.

They noted that in most areas of the country there is a shortage of heatlh care professionals with the skills and commitment needed to serve the gay community, and that there has also been little research specifically directed at the health care needs of gay men and lesbians.

The G.L.A.S. scholarship was designed to meet the University's objections to an earlier gift offer, from a Florida physician, of $500 to establish a scholarship for an openly gay medical student.

University President Donald Kennedy objected to that proposal arguing that the University should not be awarding scholarships based on "declarations of faith." The G.L.A.S. scholarship is completely separate from the earlier offer, and does not require the recipient to be a gay person.

In their letter, the G.L.A.S. Steering Committee suggested several possible ways the University could identify a student with a commitment to serving the gay community:

* The student could be involved in an organization serving the gay community;
* The student could be pursuing a course of study directed towad preparing him/her for service to the gay community; or
* the student could be involved in research which would improve health care for gay men or lesbians.

In a letter to the members of G.L.A.S., Kennedy stated: "Your understanding of the University's position is appreciated, and your energy and innovation in expanding upon the idea of a scholarship for someone who is performing, or has performed, service directed toward the gay community is commendable."

Thirty-five individuals contributed to the scholarship campaign. Many of these are believed to be first-time donors to the University. The students were aided in their campaign by members of the recently organized Stanford Gay and Lesbian Alumni Club in San Francisco.

C-AAA recommends changes in teacher evaluation; Senate to discuss May 12

Following is the report and recommendation of the Committee on Academic Appraisal and Achievement:

I. INTRODUCTION

Under the Senate resolutions of March 15, 1979, the Committee on Academic Appraisal and Achievement was charged to conduct an evaluation of the Stanford program of course evaluation and teaching improvement to be presented to the Senate during the spring quarter of 1982-83.

During the academic year 1980-81 C-AAA and the subcommittee on the Evaluation and Improvement of Teaching (C-AAA-EIT) discussed plans for this evaluation, resulting in a formal charge to C-AAA-EIT to evaluate the Stanford program of course evaluation and teaching improvement in two ways:

1. Through a major study of the current system of evaluation by students.

2. Through an overview of other sources of evaluation of teaching, incentives for good teaching, and resources now available to instructors.

The final draft of this report was presented by C-AAA-EIT to C-AAA on January 14, 1983. The report provides the basis for C-AAA's recommendations, and is available from the Academic Secretary's Office. A brief synopsis of the subcommittee's report is provided as an appendix.

The subcommittee's report identifies certain problems in the current system and recommends significant changes to that system. C-AAA has reviewed the subcommittee's report at length, a task which proved to be both complex and time-consuming.

The system of student evaluation of teaching at Stanford is a matter of vital concern to almost all members of the Stanford community: students, faculty, and administrators. Naturally opinions about its uses, reliability, and effectiveness vary widely. C-AAA feels that the subcommittee's report does much to dispel the misinformation and myths surrounding the present system.

Although C-AAA's final recommendations differ somewhat from the specific recommendations made by the subcommittee, (**see text below**) C-AAA's revised recommendations are entirely in accord with the empirical findings of the report and with the spirit of the subcommittee's suggestions.

The major difference is that C-AAA recommends an important, but somewhat less extensive revision of the current system. Some of the differences are detailed in the discussion below of our proposals for legislative action. Finally, a deep feeling of unanimity obtains between parent and subcommittee in their commitment to excellence in teaching. C-AAA acknowledges with gratitude the efforts of C-AAA-EIT and the exceptional value of their work.

II. THREE PURPOSES OF EVALUATION

The evaluation of teaching in colleges and universities has three purposes:

1. To help faculty members improve their teaching.

2. To help administrative bodies make decisions about the appointment, reappointment, promotion, and salary of faculty.

3. To help students choose their courses.

The advantages and disadvantages of various methods for the evaluation of teaching differ according to these three purposes. No system of evaluation serves all three equally well. Some of the most difficult problems of the current system arise from a lack of differentiation of these three purposes.

Although we are not recommending the establishment of three totally separate procedures, our recommendations evolved through a process of addressing the three functions individually. We proposed that the present system of evaluation undergo certain modifications which are designed to differentiate the three functions clearly and to perform each of them efficiently. Our specific legislative proposals are presented with amplifications below in section III. In sections IV-VI, we provide separate discussion of each of the three purposes of evaluation.

III. C-AAA PROPOSALS FOR STUDENT EVALUATION OF TEACHING

1) There shall continue to be Senate-mandated student evaluation of teaching in all courses in a pool of courses defined below.

Here our proposal is to continue in the spirit of the present system. We attempt to provide a better, more refined definition of courses to be evaluated. Where the subcommittee proposed that faculty members have only one course a year mandated for student evaluation, C-AAA has concluded it better to continue to require evaluation generally within an appropriately defined pool of courses.

II. All courses are subject to mandatory evaluation except those of the following type:

1. Courses of an individual/independent study nature (e.g., independent study courses, special research projects, thesis enrollments, etc.);

2. Courses considered practical (e.g., studio art and music practice courses);

3. Laboratory courses (i.e., those which carry separate course numbers and units of credit);

4. Physical Education activity courses;

5. Courses taught by first-year instructors;

6. Courses of an experimental nature;

7. Courses with enrollments of 7 or fewer.

Points 1-4 are C-AAA's refinements to the present pool; points 5-7 have been retained from the present system. We encourage individual faculty members to find methods of evaluation suitable for use in evaluating excluded courses.

For those courses which need not be evaluated, forms would not routinely be provided by the Registrar, but would be sent in response to a general department or school request or in response to an individual instructor's request.

III. There shall continue to be a standard form for this purpose.

IV. This standard form—the University Dual Form—shall consist of two parts:

1. The first part shall serve the purposes of administrative review and improvement of teaching. In contrast to the standard form presently in use, it will

a. be simpler;

b. have the uses to which it will be put printed clearly on the form itself;

c. have the method of administration printed clearly on the form itself.

2. The second part of the form will be designed by the ASSU, or other authorized student organization, to provide it with information to assist students in course selection.

C-AAA recommends that the present form be replaced with a greatly simplified form. The new form will be divided into two parts, either by printing on two sheets or by the use of a large perforated sheet. In this way, we make it possible through one procedure for different parts to be put to different uses. Page (or part) one will be for the use of faculty and administration alone, while the second section or page will be designed by the ASSU, or other authorized student organization, for their own exclusive use.

The revised form will include a printed explanation of the manner in which the form is to be administered and the uses to which each part of the form will be put. The subcommittee's report shows that only 27 percent of the students and 49 percent of the faculty surveyed knew that student evaluations are used for decisions about promotion, tenure, and salary. One-quarter of both groups responded that they did not know the uses to which evaluations were put (25 percent of the students and 24 percent of the faculty surveyed). C-AAA hopes that greater awareness among all concerned of the mandated procedure for filling out the forms and mandated uses of the results will serve to increase participation and assure the seriousness of responses.

As mandated in the present system as well, the forms shall be collected by a student in the class and taken directly to the Registrar's Office for statistical tabulation. At that office the second page (or part) shall be removed and passed on directly to the appropriate student organization. After tabulation part one of the forms shall be returned to the faculty.

V. The University Dual Form

The number of specific questions included is reduced from the current 32 to 7. Each of the new questions is relatively general, and space is provided after each question with a request for student comments to amplify answers. Through a restructuring of the multiple-choice responses, the new form now permits the evaluation of most team-taught courses, thus answering a need often expressed by both faculty and students. As in the present form, there is also space for the instructor to specify additional questions calling for comments in response.

The new form replaces numerical ratings with a scale of descriptive adjectives, i.e. "Excellent," "Very Good," "Good," etc.

Responses to the subcommittee questionnaires indicate some degree of student "burn-out" in filling out the forms. We have concluded that a smaller number of questions requiring scale-ranking responses will be less burdensome to answer, yet will not result in a decrease in the usefulness of the forms. It is hoped that more students will feel inclined to make comments along with their responses to scale questions on the shorter, revised form.

VI. Student answers to the multiple-response section of the first part of the standard form will be tabulated and reported only as a frequency distribution.

The results of tabulation of the answers should be presented in the form of a frequency chart, e.g. Answers to question one: 84 percent "Excellent," 12 percent "Very Good," 4 percent "Good." The present system reports both frequency distributions and norm-referenced means. The results of the survey found considerable faculty resistance to the second practice, and did not uncover significant positive argument for its retention.

VII. Where the University Dual Form is undesirable, a School, Department, or Program may devise its own substitute for purposes of satisfying the Senate mandate, provided that the part of the form to be used for administrative review in the evaluation of teaching is acceptable to the relevant Dean (in consultation with the provost and advisory board).

This is a continuation of the present policy which has not been adequately understood. Further elaboration can be found in section IV.

VIII. The first part of the standard form, or its approved substitute, is to be used in all courses in the described pool. Faculty use of the second part is strongly encouraged.

In this way, we differentiate clearly between information gathered for administration and improvement of teaching, and information gathered for aiding students in course selection. We do this in a way that avoids the necessity of multiple occasions of evaluation.

IX. The University Dual Form will be administered at the end of the quarter, usually during Dead Week. The timing of administration of substitute forms is a matter to be settled between the School, Department, or Program and the relevant Dean.

X. The data gathered from the first part of its substitute is not intended for public release, but is to be released only to the faculty member, department chairman, and other appropriate administrative officials for the purpose of confidential administrative review. The right to release this material for any other than confidential administrative purposes resides solely with the faculty member.

IV. ADMINISTRATIVE USES

In its resolution of March 15, 1979, the Senate stipulated that the SC-EIT/ASSU evaluation form be used by schools "where no adequate alternative exists." In practice, this meant that the SC-EIT/ASSU form was to be used in the Schools of Humanities and Sciences, Education, and Earth Sciences, since the Schools of Business, Engineering, Medicine, and Law already had acceptable formal systems in place.

The subcommittee's report reveals that the present system has not enjoyed "universal" use as mandated by the Senate. The report points out that in a significant number of courses evaluations did not occur where they should have occurred. For example, average participation over a three-year period was 61 percent in the School of Earth Sciences, 38 percent in the Humanities sub-section of H & S, 56 percent in the sub-section of Physical Sciences, and 63 percent in the sub-section of Social Sciences. Faculty objections and letters from some departmental chairmen indicate that there are strong feelings in some quarters that one form cannot be sensitive to all courses and instructional environments.

The subcommittee has recommended that "for purposes of administrative decision-making, evaluations of teaching by students should be obtained by methods determined by departmental option or, in the absence of any departmental preference, by responses to a general form to be made available by the dean of the school." C-AAA, however believes that this proposal, so stated as to seem to encourage total departmental autonomy, could lead to a dispersal of efforts which might be counter to effective and systematic evaluations and more costly in terms of time and resources to individual departments and the University as a whole.

Nevertheless, some may reasonably argue that the kinds of academic diversity found within the schools presently using the SC-EIT/ASSU form could still not be met by a single form, even the simplified one we have prepared. We wish to point out that the present mandated system includes a means of redress, the departmental option, although it is apparent that this fact had not been adequately understood.

To return to the original mandate, it is clear that the present form was developed to be used where no other adequate alternative existed. Although the mandate speaks only to the specific fact of schools developing their own instruments, two individual departments in H & S, Economics and Computer Science, were explicitly exempted from using the SC-EIT/ASSU form because they had acceptable systems of evaluation in place at that time.

Furthermore, in the progress report to the Senate of March 9, 1979, on which the present mandate is based, C-AAA-EIT specifically acknowledges the departmental option:

At Stanford the School is the academic unit of reference for a variety of decisions about policy, practice, and resource allocation. Further, while it is true that Stanford students have the freedom to select courses ranging across schools, it is also true that, by and large, students tend to concentrate their academic work within a school.

The Subcommittee proposes a common form throughout a School, so that the Dean has a basis for efforts toward

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teaching improvement. Further, the substitution by a department or program of an alternative form may be approved by the dean. (underlining ours.)

In light of the above history, C-AAA makes the following comments.

C-AAA expects that several of the steps described above in section III will help make the revised University Dual Form and system acceptable to a larger proportion of the faculty. The simplified, more general form should be suitable for use in a wider range of courses. The revised definition of courses requiring regular evaluation should make the match between courses and questions more appropriate. The clear explanation of form uses should help allay anxieties concerning the spirit in which most students fill out the forms.

All departments and units within the University should use the standard revised evaluation form presented above unless 1) they choose to continue using an approved alternate system or form already in place or 2) they choose to exercise the option of devising an alternate system of evaluation which is acceptable to the deans as meeting the criterion of providing sufficient information to allow appropriate administrative review. This system may be merely a partial change to the system C-AAA is proposing, where a substitute form may be used for very special courses, for example, advanced graduate seminars.

All faculty members within a given department or program must use the same system of evaluation. All individual faculty members have the responsibility to participate in the system of student evaluation of teaching selected for use in their department or program.

Department chairmen have the responsibility to provide to the appropriate deans the results of student evaluations.

Finally, we would like to draw attention to the fact that information gathered through the student evaluation of teaching is but one source appropriate for use in the total assessment of an instructor for administrative purposes.

The subcommittee's querying of individual faculty and departmental chairs found considerable concern that student evaluation may reflect other qualities than effective teaching. Arguments that high evaluations may reveal only popularity, the predominance of style over substance, or pandering to student opinion are legion. The study indicates that these opinions are still widely held, and we are doubtful that this uncertainty and uneasiness can be overcome entirely by strictly formal changes in the evaluation procedure. **Student evaluation ratings must be seen as but one component in the total assessment.** We are convinced that no single form of evaluation, be it student evaluation, peer evaluation, small group evaluations, classroom visitations, retrospective evaluation, solicitation of letters from former students, or from colleagues, or any other form should be seen as the *a priori* dominant factor in assessing effectiveness. Therefore, we strongly recommend that many sources be used in the evaluation process, and that departments seek to solicit this information actively throughout an individual instructor's term of appointment.

V. IMPROVEMENT OF TEACHING

On the one hand, the system of mandated course evaluations described above has certain weaknesses. In terms of providing useful feedback for instructors the problems are:

a) evaluation toward the end of the course does not allow improvement while the course is in progress;

b) evaluation before the final exam, or before the grading and return of end-quarter term papers does not allow these aspects of the course to be taken into consideration in evaluation, yet in a substantial range of courses, these are among the most important elements;

c) there is, inevitably, a considerable time lag before results are returned to the faculty.

On the other hand, C-AAA has concluded that it is inappropriate to mandate more than a single occasion per quarter when a standard system of evaluation must be used. According to our proposal, mandated evaluations will standardly be conducted during Dead Week, before the final exam. We recognize problems inherent in this timing, but have concluded that any other timing would have further drawbacks.

C-AAA encourages faculty members to seek additional information from students at any time in the quarter to aid them in the improvement of teaching. Faculty members are probably the best judges of what specific supplementary information from students concerning their teaching and courses would be most useful to them.

C-AAA recommends that faculty take the opportunity when administering the University Dual Form to include specific questions which they would find useful for future improvement of teaching.

C-AAA recommends that Stanford University encourage faculty members to collect information from students relatively early in the quarter, at least by mid-quarter, concerning aspects of courses that could be changed if, in the faculty member's judgment, such changes would be desirable.

C-AAA calls to the academic community's attention the resources of the Center for Teaching and Learning and other university offices which already provide some assistance for faculty members seeking feedback concerning teaching.

In addition, C-AAA suggests that the Center for Teaching and Learning provide assistance to faculty members who request help in designing questionnaires or other techniques that will yield useful information from students or other sources.

While we wish to mandate the use of a standardized system of evaluation by students for purposes of acquiring feedback for the improvement of teaching, we recognize that there are several limits on the information obtainable from any form and encourage instructors to use supplemental means to aid in improvement where appropriate and as individually desired.

VI. THE ASSU COURSE GUIDE

Although the Guide for the student selection of courses is primarily the responsibility of the ASSU itself, C-AAA concluded that there should continue to be close cooperation between the ASSU and the University for the gathering of information. Our proposal provides for a "California Marriage" between the two: a friendly, intimate relationship allowing a certain autonomy to each party. The two-part form is a product of close consultation between the ASSU and C-AAA.

According to our proposal, faculty participation in the use of the second part of the form (or its approved substitute) will be optional, but encouraged. This is also true under the present system.

The subcommittee's report found that only 43 percent of the faculty members surveyed were "satisfied" or "very satisfied" with the ASSU Course Guide's use of the qualitative results, while 22 percent indicated they were "dissatisfied" or "somewhat dissatisfied."

The report concludes, "Overall, satisfaction with the ASSU Course Guide is not strong among faculty." C-AAA hopes that the revised system we propose will encourage a greater percentage of the faculty to cooperate with the ASSU's efforts to gain information helpful for students in selecting their courses. Secondly, as a consequence, we hope that the utility of the ASSU Course Guide itself will be increased.

SC-EIT survey summary and recommendations

Following are the Summary and Recommendations of the Subcommittee on Evaluation and Improvement of Teaching, submitted to the Committee on Academic Appraisal and Achievment:

The evaluation of teaching in colleges and universities has three separate purposes:

1. To help individual faculty members improve their teaching;
2. To help administrative bodies make decisions about the appointment, reappointment, tenure, and salary of faculty;
3. To help students choose their courses.

The advantages and disadvantages of various methods for the evaluation of teaching differ according to these three purposes. No system of evaluation serves all three equally well. The basic recommendation of the committee is that these three purposes be separated and that different procedures for the evaluation of teaching be established for serving each of them.

1. Evaluation of Teaching as Feedback to Instructors for Use in the Improvement of Teaching

The evaluation of teaching can serve as feedback to improve effectiveness of instruction. Efforts to improve teaching can often be aided by knowledge concerning the effectiveness of specific aspects of teaching. Information concerning that effectiveness can be obtained from various sources: student questionnaires and letters, observations by colleagues, examination of course materials by colleagues, test results, questions and reactions of students in class, and analyses of videotape records.

Evidence from students has long been regarded as particularly useful and practicable because students typically observe and experience teaching for long periods, at regular intervals, with great personal concern for its effectiveness, and in numbers sufficient to make their collective judgment highly reliable.

The vast majority (84 percent) of the Stanford faculty, among those who responded to the questionnaire distributed to determine faculty opinion, reported that they do use teaching evaluations by students to improve their teaching. This majority prevailed in all of the schools and sub-areas surveyed.

Similarly, the high level of use of student evaluations to improve teaching characterized faculty members at all academic ranks, although associate and assistant professors reported substantially higher frequencies of use of student responses as bases for change in their teaching.

Further, of the two principal parts of the student evaluation form, the written comments were regarded as more useful for the improvement of teaching. Written comments indicate student ideas concerning both desirable and undesirable aspects of a course, and these ideas can assist instructors in determining both what should be left unchanged and what should be changed.

Nevertheless, experience at Stanford suggests several ways in which changes in the nature of the information provided by students and the ways in which the information is collected could make it more useful as feedback to instructors.

First, we recommend that faculty members and departments at Stanford University be given complete autonomy in the collection of information from students to be used as feedback for the improvement of instruction. Faculty members are probably the best judges of what specific information from students concerning their teaching and courses would be most useful to them. In any event, faculty members are more likely to make use of information about matters in which they are interested, in formats they can understand, from sources they respect.

Second, we recommend that Stanford University offer help to faculty members in obtaning feedback concerning teaching. Not all faculty members have the interests and competencies needed to design questionnaires and other techniques that will yield information from students or other sources in the ways that the faculty members will find most useful.

Accordingly, the University should offer technical assistance in designing the questionnaires and facilitate as much as possible (but only at the request of the faculty member) the printing, distribution, collection, and analysis of student responses. As is noted in the body of this report, the Center for Teaching and Learning and other University offices already provide some assistance, but the University should make a more extensive and more visible commitment to providing faculty members with such assistance.

A considerable body of technical literature has emerged from the efforts of the nation's corps of professional workers in the field of instructional improvement in higher education. Stanford University ought to make fuller use of the knowledge contained in that literature and the kinds of expertise that could help faculty members use it.

Third, we recommend that Stanford University encourage faculty members to collect information from students relatively early in the quarter, at least by midquarter, concerning aspects of courses that could be changed if, in the faculty member's judgment, such changes would be desirable. Such early feedback should be collected by faculty members on a voluntary basis with no obligation to share the information with University officials. One consequence of collecting such midquarter feedback would be the encouragement of student participation in the evaluation of teaching. Student participation has been disappointingly low, and one reason given for this condition is that students feel that the effects of any evaluation from them come too late to affect the courses they have been asked to evaluate.

As was noted above, in addition to questionaires from students, other sources of feedback to improve instruction are available. These include interviews with students, letters from students, letters or questionnnaires from former students, videotaping, colleagues' reviews of course materials, colleagues' visits to classes, and in a variety of respects, assistance from the Center for Teaching and Learning.

In short, the proposed approach would place the responsibility for the improvement of teaching on the faculty member and, perhaps, his or her department. When the faculty member wants help in the improvement of teaching, the University ought to give it. This will no doubt entail increased costs—part of which may be met from reallocation of funds now used for the present evaluation system—but which in any event should be specifically budgeted for.

2. Administrative Uses of Evaluation of Teaching

Information concerning the quality of teaching has long been recognized as essential to administrative decisions concerning faculty members, but it has also been difficult to obtain. Faculty members and administrators at Stanford University indicated, in the discussions in the Senate and elsewhere leading up to the installation of the present system for the evaluation of teaching, that greater weight should be attached to teaching in administrative decision-making. They also indicated that student evaluations should be an important component of the total evaluation of teaching.

The information obtained from department chairs, deans, the advisory board, and the provost showed that increased importance was being attached to the evaluation of teaching in administrative decision-making. The provost, the advisory board and the deans reported that the present

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system for collecting student evaluations of teaching is helpful. But department chairs differed among themselves as to the relative usefulness of information from the widely used SC-EIT/ASSU form for student evaluation of teaching; in the opinion of some department chairs, other sources of information concerning teaching were more valid and useful.

Four years ago the Senate mandated a "universal" system for the student evaluation of teaching. The system was to be universal in the sense that one evaluation form was to be used for all courses (with a few carefully defined exceptions) every time the course was offered. That kind of universality has not been achieved. In 41 percent of the courses for which the questionnaire should have been administered, the questionnaire has not been administered. Furthermore, 30 percent of the students have failed to fill out questionnaires in courses where the questionnaire was administered.

The failure to come close to universality requires some explanation. In responses from faculty, department chairs, and deans there is strong support for universal evaluation of teaching in the sense of evaluating the teaching of all faculty members, but there are numerous legitimate objections to the notion that one form (presently the SC-EIT/ASSU Teaching Evaluation form) can be used to evaluate courses of widely different character and size taught to diverse students in widely different disciplines. It is our opinion that universal student evaluation of teaching is more likely to be achieved by allowing greater flexibility in method than by arguing for more strict enforcement by department chairs and deans.

Accordingly, *we recommend that, for purposes of administrative decision-making, evaluations of teaching by students should be obtained by methods determined by departmental option or, in the absence of any departmental preference, by responses to a general form to be made available by the dean of the school.* Departments should have full access to technically competent assistance in considering, choosing, and analyzing the data and in determining the forms of questions to be given to students in obtaining judgments of teaching to be used for administrative decision-making.

We are aware that much greater costs are entailed in designing and using forms custom-tailored to each department than those resulting from a universal form to be administered in the same way in all departments. These greater costs, especially those involved in reading and interpreting large numbers of student responses to open-ended questions, should not necessarily be considered excessive in relation to their worth and importance. The evaluation of teaching may well be worth the much greater costs of using open-ended forms designed to be suitable for each department as against the much lower costs involved in the present system of machine-analyzable and statistically summarized ratings. No one argues in favor of exclusive reliance on closed-ended student ratings; even now, such ratings are accompanied by student responses to open-ended questions. But the rejection of the closed-ended and standard questions is a matter on which reasonable persons can differ. The Committee's position is that such differences of opinion should be respected within the University and that the departments should make their own choices after full consideration of the costs and benefits of the alternatives.

As to which faculty members should have which of their courses evaluated by students for the purposes of administrative decision-making, *the Committee recommends that every faculty member be encouraged to have all courses evaluated by students and be required to submit to his or her department chair the evaluation results on at least one course per year of academic duty.*

Additional evaluative material could of course be used if the individual faculty member so desires. This recommendation is intended to ease the burden of obtaining such evaluations for administrative purposes while at the same time obtaining information that, over the course of several years, would accumulate into evidence sufficient for administrative purposes.

To insure greater compliance with the directions for administering the forms on which student evaluations would be collected and with the directions for transmitting the forms, the Committee recommends that these directions be printed on the form itself. Then, both faculty members and students would know whether the faculty member should remain in the room while the evaluation forms were being filled out, who should take the forms where, and what explanations should be given to the students concerning the purposes of the evaluation. The many difficulties reported in these aspects of the present system could thereby be greatly reduced or eliminated.

We come now to the content of the evaluations to be made by students and used for administrative purposes. Here, *we recommend that only a small number of relatively general questions be asked.* If the department chooses to design its own form or alternative means of soliciting student opinion, it would be free to do so, provided the form or alternative method was approved by the dean of the school.

For departments that elect to use a standard form, to be made available by the dean of the school, we recommend the two questions already contained in the present SC-EIT/ASSU form: "What were the best things about this course?" and "What improvements, if any, would you suggest if this instructor were to give this course again?"

Then, for departments that elect to use rating scales—after consideration of the costs and benefits of such scales—we recommend that only general, overall evaluations be used for administrative purposes. The items should be general in the sense that they would be meaningful for all courses, whatever the subject matter, teaching method, or class size.

Such rating-scale items would provide information concerning the overall value and effectiveness of an instructor's teaching as seen by his or her students. Although, in this report, we do not recommend specific questions, we offer the following for purposes of illustration:

1. Assume you are considering taking another course in this department, one which your present instructor(s) is (are) well qualified to teach. The fact that he/she/they would be teaching it would

—Influence you very —Influence you somewhat — Make no favorably toward it. favorably toward it. Difference.

—Influence you somewhat —Influence you very Unfavorably toward it. unfavorably toward it.

2. Overall, the teaching in this course was

—Excellent. —Very good. —Good. —Fair. —Poor. — Very Poor.

Only a few, not more than five, items of this kind are recommended. Users of the results should be urged to refer to the labels—the defining words—of the scale points and not calculate means or medians for purposes of comparisons with other persons or groups.

3. Use of Evaluations of Teaching for Selection of Courses by Students

It is the ASSU Course Guide that makes available to students the results of evaluations of teaching by students—both summaries of the "qualitative" responses of students and of selected "quantitative" dimensions.

Only 44 percent of the students responding to the student questionnaire indicated that they use the Course Guide when selecting courses. And only 15 percent said that they "usually/always" use the Course Guide. These results make the Course Guide the second lowest ranking source of information concerning courses; only resident fellows are used less frequently.

Among those students who do use the Course Guide, the Course Guide's graphs are considered valuable/very valuable by only 9 percent, and the written reviews are considered valuable/very valuable by 32 percent of the students. Yet it is the written reviews that the faculty members consider most questionable. It is this faculty view of the written comments that underlies the present arrangement whereby the faculty member's active approval is required before the written comments are made available to the Course Guide's editors.

Faculty opinion of the Course Guide is unenthusiastic. Ninety-two faculty members made comments. The bulk of the suggestions were concerned with making the Course Guide more accurate, less biased, more consistent in its reporting, and less capricious in selecting courses for review.

Some favored eliminating the Course Guide. Of the faculty members responding to the questionnaire, 77 percent report that they usually or always give their quantitative results to the Course Guide and 68 percent report that they usually or always give the qualitative or written comments to the Course Guide.

About one-fifth of the faculty respondents have no opinion concerning the Course Guide's use of evaluation results; this outcome perhaps reflects the small number of courses reviewed each quarter or the ways in which the Course Guide is distributed. Half or fewer of the faculty respondents reported themselves satisfied or very satisfied with the Course Guide's use of evaluation results.

The lack of satisfaction among faculty, combined with student reports of the relative lack of use of the Course Guide, suggests reconsideration of current practice. The way in which the Course Guide presents its quantitative findings is exactly opposed to the spirit of our recommendations with respect to quantitative ratings. The quality of the comments on each course continues to be a source of concern.

The ASSU Course Guide could perform a major function for students selecting courses, but it is not adequately fulfilling that task. Perhaps it would do a better job if it were no longer a passive participant in the evaluation system run by the University. Perhaps its financial support should be reconsidered. Perhaps staff should be more rigorously selected and trained. Perhaps the basic questions of the relationship between a student-operated enterprise—serving an educational function of great potential significance to the faculty—and the University as a whole ought to be reconsidered. Perhaps experience at other universities similar to Stanford ought to be studied.

Accordingly, *the Committee recommends that the ASSU, with the assistance of the Dean of Student Affairs appoint a task force consisting of faculty, staff, and students to study and make recommendations concerning the improvement of the ASSU Course Guide.* This task force should take into consideration the broad set of issues related to the task of developing a more valid and useful guide for students in the selection of courses.

C-AAA Members

The Committee on Academic Appraisal and Achievement is headed by Prof. Susan Matisoff, Asian languages. Faculty members include Profs. Michael Bratman, philosophy; William Durham, anthropology; John G. Gurley, economics; Gilbert M. Masters, civil engineering; Thomas C. Moser, English; and Irwin Remson, applied earth sciences; students are C. Therese Ford, undeclared; Michael Resnick, human biology; and David Youmans, undeclared; and ex-officio members Carolyn C. Lougee, associate dean of humanities and sciences for undergraduate education, and Sally Mahoney, registrar. Anita Bravman is secretary.

Evaluation...

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the study showed average participation varied, widely. In the School of Humanities and Sciences, which handles the largest share of undergraduate courses, only 38 percent were evaluated over the past three years in the humanities. This compares with 56 percent in the physical sciences and 63 percent in the social sciences.

The committee said there should be continued close cooperation between the University and the Associated Students in gathering information students might use for course selection.

"Our proposal calls for a 'California marriage'. . .a friendly, intimate relationship allowing a certain autonomy to each party," the committee said.

Faculty participation would be "optional but encouraged" in providing information for this purpose through a second portion of the simplified form.

Faculty opinion of the present Associated Students *Course Guide* is "unenthusiastic," the subcommittee report noted, even though 77 percent said they usually or always gave their quantitative results to the *Guide*.

When asked what information they used in selecting courses, only 15 percent of the students surveyed said they "usually or always" used the *Guide*. This compared to 78 percent who usually or always consulted the official *Courses and Degrees*, 55 percent other students, 38 percent individual course abstracts, 17 percent faculty advisers, and 6 percent resident fellows.

The subcommittee report recommended that faculty members and departments "be given complete autonomy in the collection of information from students to be used as feedback for the improvement of instruction."

(The full committee instead recommended use of the simplified form at the end of each quarter, pointing out that faculty remain free to collect any additional information desired to help them improve their teaching.)

The subcommittee noted that the present questionnaire was not administered in 41 percent of the courses where it should have been used. Even when it was distributed, 30 percent of the students failed to fill out the questionnaire.

Information obtained from department heads, deans, the Advisory Board, and the Provost "showed that increased attention (is) being paid to evaluation of teaching in administrative decision making," the subcommittee said.

Associate Prof. Susan Matisoff, Asian languages, heads the full committee, while Prof. Walter Lohnes, German studies, heads the subcommittee. Both groups include student members.

The major portion of the survey findings and recommendations from the committee appears in the center section of *Campus Report*. The complete text is available at the Academic Secretary's Office.

Subcommittee survey shows most courses rated highly by undergraduates

Following are excerpts from the report of the Subcommittee on the Evaluation and Improvement of Teaching at Stanford to the Committee on Academic Appraisal and Achievement. Several sections dealing with procedure are among the portions omitted. The numbering used in tables and other parts of these excerpts conforms with the complete copy, which is available at the Academic Secretary's Office:

I. INTRODUCTION

A. History

The quality of teaching has long been of deep concern to all members of the Stanford community. During the last decade, the Senate of the Academic Council passed a number of resolutions reflecting its commitment to excellence in teaching. On November 29, 1973, the Senate resolved

> *That for considerations of long-term reappointment or promotion every department should use some formal procedure of teaching evaluation approved by the Dean of the School, and that this formal procedure should include several means of evaluation, including evaluation by students. . . .*

On May 12, 1977, in response to the Report of the ASSU Task Force on Tenure and Teaching Quality the Senate endorsed the principle of universal course evaluation by students and urged its prompt implementation. The motion passed at that Senate meeting reads as follows:

> *The Ninth Senate of the Academic Council endorses the principle of universal course evaluation by students and urges its prompt implementation. The Committee on Academic Appraisal and Achievement is requested to present a detailed proposal to the Tenth Senate by the end of autumn quarter, 1977-78.*

The Senate requested that the Committee on Academic Achievement and Appraisal (C-AAA) present a detailed proposal to the Senate in the 1977-1978 academic year. The proposal was to address two major questions:

1) Should there be universal course evaluation, and

2) How widely should such evaluation data be made public?

During the 1977-1978 academic year, C-AAA's Subcommittee on the Evaluation and Improvement of Teaching (C-AAA-EIT) developed a student rating form that would be useful to instructors, administrators, and students. The form was tested on a small scale during the winter and spring quarters. This testing led to a large-scale tryout during the 1978-1979 academic year.

On March 15, 1979, the Senate of the Academic Council adopted the following set of procedures for the universal evaluation of teaching by students.

1. The use of the University Student Evaluation Rating Form, developed by the C-AAA Subcommittee on the Evaluation and Improvement of Teaching, shall be used by Schools where no adequate alternative exists. The same form or set of forms shall be used for all courses in a School or, within the School of Humanities and Sciences, for all courses in each of the three customary groupings, namely, humanities, social sciences, and natural sciences. Any School which has developed, or develops, a form suitable for its own needs may use that form if it chooses.

2. Subject to the exceptions provided in 3 below, all information, including the original forms and a summary of the quantitative ratings, shall be provided by the Registrar to the instructor. The summary of quantitative ratings shall be provided to the department chairman or interdepartmental program head, and made available to the School Dean, the Provost, and the Advisory Board, any of whom may request the original forms from the instructor. The summaries of quantitative information shall be publicly released, e.g. to the ASSU Course Guide, unless the instructor requests that they be withheld. Qualitative information, i.e. student commentaries, shall be so released only if the instructor explicitly grants permission.

3. A course shall be exempted from the requirement of student evaluation using a standard form if fewer than eight students are enrolled: nevertheless forms shall be provided at the request of instructors in such courses. Experimental courses, courses by first-year instructors, and special courses of similar character shall be evaluated, but the information shall be released only to the instructor and the information shall be released to others only and entirely at the discretion of the instructor. Courses comprising special categories of instruction shall have methods of evaluation specifically adapted to them.

4. Summary statistics shall be made available to the instructors from appropriate groups, such as: a) the University as a whole; b) the specific School or, in Humanities and Sciences, the sub-School grouping, i.e. Humanities, Social Sciences, Natural Sciences; c) courses of similar size; and d) courses of similar type (e.g. lecture, seminar, practicum, independent study).

5. At the beginning of each autumn quarter the Registrar shall provide the Provost with a summary of the extent of participation in Schools using the standard form prepared by the C-AAA Subcommittee on the Evaluation and Improvement of Teaching. In Schools not using the form the Registrar shall send a short questionnaire to all instructors of nonexempt courses who have not used the course evaluation, asking their reasons for not participating. In Schools not using the standard form prepared by the C-AAA Subcommittee on the Evaluation and Improvement of Teaching, the Dean of the School shall prepare for the Provost in autumn quarter a report summarizing the extent of the faculty in the School's internal evaluation program.

6. Departments and Schools shall explore a variety of other methods for evaluation of teaching, to complement the information obtained from student evaluation.

7. Once every three years on a staggered schedule the Dean of each School shall present to the provost a report on a) an assessment by the dean of the quality of teaching in each department of the School and b) activities within the School designed to enhance the quality of teaching.

8. The Dean of Graduate Studies, the Dean of Undergraduate Studies, and the Dean of Humanities and Sciences are asked to encourage the Center for Teaching and Learning to extend its program to support teaching improvement by instructors at all ranks.

B. Mandate for Evaluation of the Stanford Evaluation System

Item 9 of "Procedures for the Universal Evaluation of Teaching by Students" states that:

> The Committee on Academic Appraisal and Achievement (C-AAA) shall, through its Subcommittee on the Evaluation and Improvement of Teaching, evaluate the Stanford program of course evaluation and teaching improvement over the next three years, and shall present a report thereon to the Senate during the spring quarter of the academic year 1982-83.

During the 1980-81 academic year, C-AAA-EIT and C-AAA discussed plans for such an evaluation. In January 1981, C-AAA sent a formal charge to C-AAA—EIT, excerpts from which follow. This charge called upon C-AAA-EIT to evaluate the Stanford program of course evaluation and teaching improvement in two ways:

1) through a major study of the current system of evaluation by students;

2) through an overview of other sources of evaluation of teaching, incentives for good teaching, and resources now available to instructors.

According to the charge, the study of the current system should include:

a) "an evaluation of the SC-EIT/ASSU form itself"—its validity, reliability, and usefulness.

b) "a study of actual use of student evaluations in the evaluation and improvement of teaching at the level of students, instructors, chairmen, and deans"—the usefulness of the evaluations for course selection, improvement of teaching, and decisions about promotion, tenure, and salary.

c) "recommendations for improvement of the existing evaluation instrument and procedure."

During the 1981-82 autumn quarter, the professional staff and resources for the task force were put in place. In January 1982, the project to evaluate the teaching evaluation system was formally launched.

II. STUDY DESIGN

During the 1981-82 winter quarter, a subgroup of C-AAA-EIT members, with resources and support from the Registrar's office and the advice of C-AAA-EIT, developed the details of the plan, the instruments for the evaluation, and plans for sampling, data collection, and data analysis.

The study of student evaluation of teaching at Stanford has several parts:

1) A study of student ratings over the past three years.

2) A survey of faculty in the three schools using the SC-EIT/ASSU form (Humanities and Sciences, Earth Sciences, and Education) seeking comment about the rating system. This survey was administered in May 1982.

3) A survey of a representative sample of students excluding those in schools not using the SC-EIT/ASSU form, seeking opinion about and experience with the rating system. This survey was administered in May 1982.

4) Interviews with or letters from Deans in the three Schools using the SC-EIT/ASSU form about use of the evaluation results. These interviews or letters were obtained in November 1982.

5) A letter to Deans in the Schools not using the SC-EIT/ASSU form inviting comment about use of student evaluation of teaching. This letter was sent in November 1982.

6) An interview with the current Advisory Board about the use of student evaluations in decisions about reappointment, promotion, and tenure. This interview was held in December 1982.

7) A letter to past Advisory Board members and department chairs inviting comment about their use of the SC-EIT/ASSU evaluation results. This letter was sent in November 1982.

8) Solicitations of comment from the Stanford community through the *Campus Report* and the *Stanford Daily* in May 1982.

9) A report from the Provost on how the SC-EIT/ASSU teaching evaluations are used in making decisions about reappointment, promotion, and tenure.

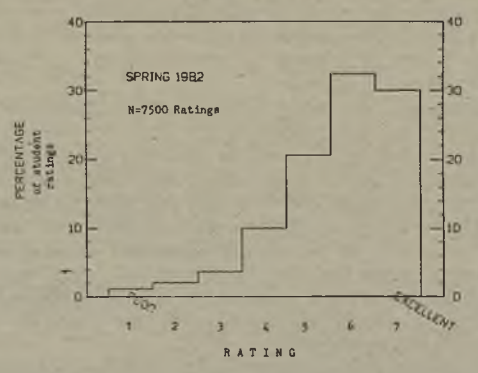
10) A report from the Center for Teaching and Learing (CTL) about teaching improvement efforts on campus.

11) A cost analysis of the SC-EIT/ASSU evaluation system, conducted by the Registrar's Office, which is responsible for implementing the evaluation system.

F. Trends in Student Ratings

Figure 1 presents a frequency distribution of approximately 7,500 student ratings on Overall Course Satisfaction at the end of the spring quarter 1982. The negative skew, or "pile up" of ratings at the upper end of the scale, is typical of all of the overall items and has characterized the SC-EIT ratings since the form has been used. Whether this generally favorable evaluation reflects leniency on the part of students or genuinely good teaching cannot of course, be determined from the data available.

Figure 1



To determine whether there has been any trend over the quarters and years in those classes that use the SC-EIT form regularly, a sample of 140 courses was selected—courses for which student rating data were available over several quarters and years. That is, the sample for this analysis consisted of courses that have been taught, and rated by students, repeatedly during the academic years 1979-80, 1980-81, and 1981-82. The mean rating on the Overall Course Satisfaction item for these courses has remained stable across the nine quarters.

Another sample consisted of 158 courses taught by the same instructor during two different quarters. The differences between mean overall satisfaction ratings for these courses were distributed normally with a mean of .04 (and a standard deviation of .65). Some courses showed gains as high as 2.4 while the mean ratings in other courses decreased as much as 2.4.

Evidence that the SC-EIT ratings measure relatively enduring characteristics of courses and professors was revealed by the Spearman rank-order correlation between mean ratings on Overall Course Satisfaction in the sample of 158 "matched courses" taught by the same professor. This correlation was .62, compared to a correlation of .37 for 150 "matched courses" with different professors.

This difference between .62 and .37 suggests that the SC-EIT form measures stable differences across professors and not only across courses. When the same course is taught twice by the same professor, it is evaluated much more similarly than when the same course is taught by two different professors.

Further analysis was performed on approximately 4,000 courses that used the SC-EIT form over the nine quarters during 1979-80 through 1981-82. Mean ratings on the Overall Course Satisfaction item remained stable across these nine quarters and years.

In addition, there were some consistent differences across the nine quarters in mean ratings of Overall Course Satisfaction as a function of academic area. Humanities courses were consistently associated with higher ratings (mean in 1981-82 = 5.9) than were Physical Sciences courses (mean in 1981-82 = 5.3).

Lastly, the "clustering" of the SC-EIT form's items was examined through a factor analysis of the SC-EIT ratings collected during the spring quarter of 1982. Factor analysis is a statistical technique that determines the nature of clusters of related items by considering their intercorrelations or "overlap."

The SC-EIT form was developed to reflect a four-factor conception of teaching. (The four factors correspond to the four clusters of items on the form that precedes the first four overall items.) Since factor analytic techniques were employed during the development of the SC-EIT form, it is

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reasonable to ask whether the initial four-factor structure still provides a valid clustering of the ratings.

This analysis generally showed that the four factors or dimensions that emerged in the spring 1982 data corresponded closely to the original factors that guided the development of the form.

G. Summary

Possibly the best single summary statistic that can be used to describe the rate of participation with the SC-EIT form is computed by dividing the number of forms returned during the academic years 1978-79 through 1980-81 by the total number of forms printed for eligible courses. This rate was 64 percent and has remained stable over the three-year period. There are wide differences across departments, however, in participation rates.

The reliability of mean ratings generated by the SC-EIT form has been consistently high even with classes as small as eight. No trends in reliability were observed across quarters, years, or academic areas.

The most reliably rated overall item is Overall Course Satisfaction, and the least reliably rated overall item is Overall Instructor Relationship. All overall items, however, yield highly reliable mean ratings when the means are based on numbers of students larger than 15.

Analyses were made to determine how ratings varied with professor rank, class size, course level, and proportion of returned forms. The relationships that were statistically significant were so weak that their influence may be considered practically negligible.

Analyses were also made to determine possible "biasing" factors at the student level: the grade expected by the student, the student's using the course to meet the student's major requirement, the student's attendance, the class level of the student, and the amount of time spent on the course by the student. Those correlations that were statistically significant (those with expected grade and time spent) were so low that their influence may be considered negligible.

Student ratings on the overall SC-EIT items tend strongly to pile up at the positive, or favorable, end of the scale. There appears to be no overall trend toward higher or lower mean ratings over the past three years.

There are, however, some differences in mean ratings across academic areas. Other analyses showed that SC-EIT ratings of the same courses taught by the same professor remain fairly stable over time (r = .62) and that the rating items cluster into the same factors or dimensions as those on which the form was originally based.

IV. FACULTY SURVEY

A. Purpose

During the winter quarter 1981-82, a questionnaire was developed to collect faculty comment on the SC-EIT/ASSU course evaluation system. Specifically, the questionnaire was designed to collect information about 1) the extent of use of the SC-EIT/ASSU Evaluation Form, 2) the extent of variation in the procedures for administering the form, 3) the release of information to the ASSU Course guide and views about Course Guide Practice, 4) use of the SC-EIT/ASSU course evaluation results, and 5) the perceived appropriateness of the SC-EIT/ASSU Evaluation Form.

TABLE 4

Faculty Respondents by Area and Instructor Rank

Area	Number Mailed	Number Responding	Response Rate
Humanities	164	78	46%
Social Sciences	137	75	55%
Math/Natural Sci	125	49	39%
Earth Sciences	31	21	68%
Education	40	19	48%
Medicine	4	2	50%
Rank			
Professors	304	154	51%
Associate Professors	75	36	48%
Assistant Professors	96	41	43%
Lecturers and Senior Lecturers	26	11	42%

Of the faculty respondents, 80 percent were male and 17 percent female, with 3 percent giving no gender designation. The corresponding percentages in the entire faculty sampled are 91 percent male and 9 percent female.

D. Results

This section summarizes the responses of the 244 responding faculty members. Area differences are examined for these respondents in the areas of Humanities, Social Science, Math/Natural Science, Earth Sciences, and Education. (Since there were only two responses from the faculty in the Medical School, they were excluded from the analyses.) Instructor rank differences are also examined for the 232 Academic Council respondents (Professors, Associate Professors, and Assistant Professors).

C. Faculty Members Invited to Respond

The questionnaire was sent to all Academic Council members (professors, associate professors, assistant professors) in Earth Sciences, Education, and Humanities and Sciences (excluding the departments of Economics and Computer Science), to lecturers and senior lecturers in foreign languages, and to a few faculty members in departments in the School of Medicine that use the form.

Of the 501 faculty members invited, 244 or 49 percent responded. (In most surveys such a percentage of responses is regarded as fairly high.) **Table 4** describes the respondents in more detail.

1. Extent of Teacher Evaluation

Most (94 percent) of the faculty respondents reported some use of the SC-EIT/ASSU Evaluation Form: 3 percent "never" use the form, 7 percent "occasionally," 5 percent "half the time," and 81 percent "usually/always." The pattern of use is shown in **Table 5**. While extent of use varies somewhat among the five areas, use varies little among faculty of different academic rank.

Faculty members gave a variety of reasons why they do not always use the form. Some mentioned that some of their courses were exempt under the evaluation policies. Some mentioned a dislike of the system—perceived lack of usefulness of the forms, and philosophical disagreement with the premises of the evaluations. Some mentioned student attitudes—a lack of seriousness on the part of students, and poor student participation.

While these responses indicate substantial use of the system, it is important to remember that more than half the faculty did not respond to the questionnaire; thus the response sample may overrepresent actual use of the form. . . .

At the same time, responses to other questions on the questionnaire are, it would appear, based on substantial experience with the SC-EIT/ASSU form, giving a good picture of what users think.

Somewhat over half (56 percent) of the faculty respondents reported at least some ("sometimes," "usually" and "always") use of other methods of evaluation in addition to, or in place of, the SC-EIT/ASSU Evaluation Form.

Somehwat more faculty in Education (68 percent) and the Social Sciences (61 percent) reported use of other methods than in the other three areas: 53 percent in Humanities, 53 percent in Math/Natural Sciences, and 48 percent in Earth Sciences. Several faculty members sent copies of other evaluation forms used.

Of the 184 faculty who say they use other forms of evaluation, 7 percent reported using other forms of evaluation during the first 4 weeks, 30 percent at mid-quarter, 8 percent between the 6th and 9th weeks, 32 percent during the 10th week, and 28 percent at some other time.

In sum, among the respondents, there appears to be heavy use of both the SC-EIT/ASSU system and other methods of evaluation. How close such use comes to "universality" remains an issue. Several open-ended comments indicate that lack of universality is a serious shortcoming of the SC-EIT/ASSU evaluation system.

The issue of universality is important only insofar as the results are to be interpreted on a "norm-referenced" basis—that is, on the basis of how evaluations of one instructor by his or her students compare with those of other instructors by their students.

But if "criterion-referenced" interpretations are made—interpretations that refer to the designations and meanings assigned to the points on the 7-point scale for each of the items on the form, then the nonuniversity of use of the system becomes irrelevant to the interpretability of the ratings, or evaluations, made by the students.

2. Rate of Student Participation

Valid use of the evaluation results in either a norm-referenced or a criterion-referenced way requires both high student participation and uniform procedures in the administration of the forms. Ratings obtained with substantially different administration procedures are likely to be relatively uninterpretable.

The intent of the wording in the Instructor Reply Form was to encourage (not dictate) a high student response rate and uniform practices in the administration of the form (i.e., uniformity in how it is distributed, in the conditions under which the form is filled out, and in the conditions of instructor access to the unsummarized results.)

Obtaining a high rate of participation is clearly a problem for the SC-EIT/ASSU system. In the summer of 1981, the Registrar's office completed a three-year study of faculty and student participation in the system. Participation rates (% of eligible classes in each department and % of students in each class) were calculated for the years 1978-79, 1979-80, and 1980-81. Over the three years, course participation remained at about 60 percent; student participation in evaluated courses remained at about 70 percent.

3. Giving Purposes of the Evaluation

Clearly many factors influence the rate of student participation.

One important factor is the context provided by the instructor—setting aside class time for such activity and explaining the purposes of the evaluations to students, beyond saying that the evaluations are to be done to meet a Faculty senate requirement.

This study does not permit linking participation rates directly to the reported procedures used in administering the forms. Yet it seems plausible that certain practices will increase response rates. Thus, setting aside class time for this specific purpose probably connotes seriousness on the part of the instructor about student evaluations.

Of the 174 faculty who report that they "usually" or "always" have students fill out the form during scheduled class time, 74 percent say that they "usually/always" suspend other activities for the purpose of letting students fill out the evaluation forms.

There is, however, considerable variation in the amount of time allowed for this purpose. Faculty members who report suspending class activities allow from 5 to 45 minutes for the purpose of course evaluation. The mode is 15 minutes, and 74 percent allow from 10 to 20 minutes.

do faculty members explain the purposes of the SC-EIT/ASSU system to their students? Less than a third of the faculty (31 percent) reported that they did so on a regular basis ("usually" or "always"): 20 percent reported that they did so only "rarely" or "sometimes," 20 percent reported that they never did, and 32 percent did not respond to the question.

Explanation of purpose varies only slightly by instructor rank. Purpose is regularly ("usually" or "always") explained by fewer faculty members in Math/Natural Sciences (18 percent) than in the other areas (27 percent in Humanities, 35 percent in Social Sciences, 43 percent in Earth Sciences, and 45 percent in Education). And a higher percentage of the Math/Natural Science faculty than those in the other areas reported "never" providing explanation of purpose.

The purpose most often mentioned (by 77 percent of the faculty who explain the purpose) to students for the ratings is to guide the improvement of teaching. Only 10 percent of the faculty mention to their students that one of the purposes is to guide decisions about promotion, tenure, and salary; 20 percent mention student course selection and 18 percent mention the Faculty Senate requirement.

On the average, more purposes are mentioned by faculty in the Humanities, Social Sciences, and Education than by faculty in Math/Natural Science and Earth Sciences. Fewer

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TABLE 5

Question 5. How often have you used the SC-EIT/ASSU Evaluation Form?

Area	N	Never	Occa-sionally	Half the Time	Usually/ Always	No Response
Humanities	78	0%	18%	6%	72%	4%
Social Sciences	75	4%	1%	3%	91%	1%
Math/Natural Sciences	49	4%	4%	4%	82%	6%
Earth Sciences	21	0%	5%	10	76%	9%
Education	19	5%	0%	5%	90%	0%
Rank						
Professors	154	2%	8%	5%	82%	
Associate Professors	36	8%	8%	3%	78%	
Assistant Professors	42	0%	2%	2%	81%	

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assistant professors (2 percent) mentioned the evaluation purpose as that of meeting a requirement than associate professors (18 percent) or professors (18 percent). And fewer professors (4 percent) mention the evaluation purpose as that of guiding decisions about promotion, tenure, and salary than do associate professors (18 percent) and assistant professors (19 percent).

In brief, the purposes for which the evaluations are solicited are not given regularly by two-thirds of the faculty, nor are they given equal weight in instructors' communications to students.

4. Procedures for Administering the Forms

Uniform procedures are essential for valid use of the results. **Table 6** shows the pattern of how forms get distributed and filled out.

As these figures show, there is clearly no uniform procedure used to administer the forms. This study cannot empirically determine whether having students fill out the form in class is more or less effective for increasing participation than having students fill out the form outside of scheduled class time. It seems likely, however, that having the forms filed out in class is likely to produce higher response rates than letting students take the forms out of the classroom.

The evaluation procedure was designed to discourage faculty members from examining the student ratings before they are sent to the Registrar's Office for summary. The underlying purpose was to assure students of the freedom to respond frankly before examinations were graded, and to prevent selective deletion of low evaluations from the packet sent to the Registrar.

Clearly the procedure has not been followed uniformly. Only 52 percent of the faculty respondents reported that they do not look at the forms before they are sent to the Registrar; another 9 percent said they "rarely" do, and 35 percent said they "sometimes," "usually" or "always" do. Responses varied both by area and academic rank as shown in **Table 7**.

Faculty members said that they do not look at the form primarily for ethical reasons. These respondents were largely concerned with preserving student confidentiality and noted that looking at the forms before sending them to the Registrar's Office was against the rules.

Several noted that a student assumes responsibility for the forms so there is no opportunity to look at them. A few commented that they were just too busy to look at the forms.

But the instruction not to look at the forms before they are summarized by the Registrar seems to subvert other purposes of the system. For the 35 percent who do look at them, the reason most often given is to get immediate feedback when experience with the course is still fresh and when it can best help in planning for the next quarter's course. Several said they were simply "curious."

The problem is that while immediacy of feedback is important for those wanting to improve their teaching, it could influence grading in unwanted and undesirable ways. It could also jeopardize representatives of student views by providing opportunity for selective elimination of evaluations from the packet that gets sent to the Registrar. And, if the practice of looking at the forms were common, it could influence the ratings themselves by reducing student confidence in their own anonymity, and thus lower the validity of the evaluation results.

5. Use of the SC-EIT/ASSU Evaluation Results to Improve Teaching

The main justification for an extensive evaluation system such as that introduced at Stanford is that the results serve their intended purposes. Do the evaluations guide the improvement of teaching? Are they used in decisions about promotion, reappointment, tenure, and salary? Do they help students select courses?

For faculty members a key question is whether they use the evaluation results to improve teaching, and if so, what kinds of changes they make as a result of the information they receive from the evaluations. Most (84 percent) of the faculty report that they do use the evaluation results to improve their teaching. The extent of such use varies by area, ranging from 76 percent in Math/Natural Science to 100 percent in Education, 80 percent, in Humanities, 88 percent in Social Sciences, and 90 percent in Earth Sciences. Reported use is slightly higher among associate professors (91 percent) than among professors (83 percent) or assistant professors (83 percent).

The improvement of teaching referred to in these responses is still an informal affair. Half (47 percent) the faculty reported that they discuss evaluation results with colleagues, only a few (1 percent) reported discussing their evaluation results with the Center for Teaching and Learning, and one person mentioned discussing the evaluation results with the Emeriti Undergraduate Council.

How best to translate evaluation results into improvement strategies, in other words, is still a matter of individual faculty initiative. Faculty members might benefit from knowing more about available ways of making this translation.

How much change in teaching do faculty members report having made on the basis of the SC-EIT/ASSU evaluation results? Most (71 percent) of the faculty respondents reported having made minor changes in teaching on the basis of the SC-EIT/ASSU evaluation results. Another 16 percent reported having made major changes. And 7 percent reported having made no changes. **Table 8** shows the pattern of reported changes by area.

The extent of reported change did not vary appreciably for different academic ranks.

Change was reported in various aspects of the instructional process: 41 percent reported changes in teaching methods, 50 percent in course content, 31 percent in progression of topics, 38 percent in syllabus, 54 percent in reading assignments, 24 percent in other assignments, 15 percent in assessment methods, 15 percent in relationships with students, and 10 percent in other matters.

There were area and instructor rank differences in kinds of changes reported. **Table 9** shows changes by area and by instructor rank.

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TABLE 6
Methods Most Often Used to Administer the Forms

Distribute	Fill Out	Number	Percent
At the last class	In class, remain in the room	50	20%
	In class, leave the room	43	18%
	Outside class	10	4%
	No routine method	8	3%
During dead week	In class, remain in the room	26	10%
	In class, leave the room	22	9%
	Outside class	9	4%
	No routine method	5	2%
Before dead week	In class, remain in the room	7	3%
	In class, leave the room	5	2%
	Outside class	2	1%
	No routine method	2	1%
Final exam day	During the exam period	13	6%
	Outside class	3	1%
No routine method	In class, remain in the room	10	4%
	In class, leave the room	7	3%
	Outside class	3	1%
	No routine method	19	8%

TABLE 7

Question 13. Do you look at the completed forms before they are sent to the Registrar?

Area	N	Never	Sometimes Always	No Response
Humanities	78	55%	32%	13%
Social Sciences	74	53	37	10
Math/Natural Science	49	33	51	16
Earth Sciences	21	57	29	14
Education	18	83	11	6
Rank				
Professors	154	51	34	15
Associate Professors	36	38	50	12
Assistant Professors	41	64	29	7

TABLE 8

Question 26. What changes in your teaching have you made as a result of the information you have received in the report on your course evaluation?

Area	N	No Change	Minor Change	Major Change	No Response
Humanities	78	5%	81%	6%	8%
Social Science	74	3%	70	23	4
Math/Natural Science	49	20	65	6	9
Earth Sciences	21	—	52	38	10
Education	18	—	72	28	0

TABLE 9

Question 27. What types of changes have you made as a result of the SC-EIT/ASSU evaluations?

Kind of change	Hum (N = 78)	SS (N = 74)	M/NS (M = 49)	ES (N = 21)	Ed (N = 18)
Teaching methods	32%	49%	31%	57%	50%
Course Content	44	64	31	57	72
Progression of topics	28	35	18	48	50
Syllabus	37	45	18	48	67
Reading assignments	47	77	33	48	56
Other assignments	15	31	14	38	39
Assessment methods	9	24	4	14	22
Relationship with students	15	14	8	33	17
Other changes	8	10	10	5	17

	Professor (N = 154)	Associate Professor (N = 34)	Assistant Professor (N = 42)
Teaching methods	36%	38%	62%
Course content	48	65	59
Progression of topics	28	47	41
Syllabus	33	50	55
Reading assignments	46	79	74
Other assignments	23	29	26
Assessment methods	10	21	29
Relationship with students	11	15	29
Other changes	8	15	10

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The percentages of faculty making the various kinds of changes are always lowest for professors. This result probably reflects their greater job security or greater degree of being "set in their ways" or both. Whether this greater stability among professors also reflects greater satisfaction or more favorable ratings on the part of their students is shown in Section V, which deals with analyses of student ratings over the past three years.

In sum, most faculty members reported using the evaluation results to improve teaching. That outcome could mean leaving things as they are. Nonetheless, two basic questions remain: Has teaching improved in the three schools in recent years? If so, has improvement come as a result of the introduction of the SC-EIT/ASSU system? Part of the answer to the first of these questions emerged in Section III, which reports on trends in student ratings during the past three years. And it appeared there that no such improvement is evident in the mean ratings.

Use of the form is presumably related to perceived usefulness of the form's content. **Table 10** describes faculty views about the usefulness of each of the rating categories and the written comments for the improvement of teaching.

Written comments are perceived as more useful than the rating categories. Yet only a slight majority (58 percent) of the faculty reported that they "usually" or "always" remind students to answer the open-ended questions on the back of the form. (An additional 17 percent said they "sometimes" do.) "Course Contribution" and "Course Satisfaction" are viewed as not useful by somewhat more faculty than the other rating categories.

But the form was originally developed to be flexible, and space was provided on the back so that instructors could, to a certain extent, tailor the form to their special circumstances.

Thus the form offers the NA (nonapplicable) response option for the rating items on the front, and it provides space for more appropriate questions—to be furnished by the faculty member—on the back.

Yet only 19 percent of the faculty respondents reported that they "usually" or "always" add their own questions to the back. Another 27 percent said they "sometimes" do, and almost half (47 percent) said they "never" or "rarely" do.

6. Perceived Uses of the Evaluation Results for Administrative Decisions and Students' Course Selections

When asked about how the course evaluation results are used, only half (49 percent) of the faculty indicated that the results are used for decisions about promotion, tenure, and salary.

Somehwat more than half (60 percent) indicated that results are used to guide student selection of courses.

Some (15 percent) mentioned other uses. A handful think the results are not used. And a quarter (25 percent) said they did not know how the results are used.

Faculty members can comment from first-hand knowledge on their own use of the form for guiding the improvement of teaching. They can know about student use insofar as they talk to students about such things. Nearly one third (29 percent) of the faculty indicated that they discuss evaluation results with their students, although these discussions may or may not deal with students' use of the evaluation results. They can get some indication of use of the results for personnel decisions from those with whom they have discussed the results and from knowledge about the identity of those who have asked to see their evaluation results.

Discussion of the evaluation by faculty members with school deans is clearly very limited, at least as reported by faculty. Only 5 percent of the faculty respondents reported that they have discussed their evaluation results with their school dean. Only 7 percent reported that their school dean had asked to see the qualitative information (written comments) from the forms.

Discussion of the evaluations by faculty members with department chairs occurs somewhat more often; nearly one third (31 percent) of the faculty reported that they have had such discussions, and 20 percent indicated that their department chair had asked to see the written comments on the forms.

Requests by either the Provost or Advisory Board members to see these comments have been rare. Nearly two thirds of the faculty (61 percent) reported that no one had asked to see their comments. One third (33 percent) reported that they had not discussed their evaluation results with anyone.

In sum, given the small amount of discussion about the evaluations and the rarity with which the student comments are read by others, it is not surprising that so many (51 percent) of the faculty do not think the results are used for personnel decisions.

7. Views about the Evaluation of Teaching

Use of the evaluation results to guide the improvement of teaching and support of their use in decisions about promotion, reappointment, tenure, and salary are presumably influenced by faculty views about various aspects of the evaluation of teaching.

One question is whether faculty members view students as a valid source of information (irrespective of how information is collected from the students) about an instructor's effectiveness in helping the students learn.

Another question is whether faculty members think the ratings (i.e., SC-EIT/ASSU evaluation results) provide a fair evaluation of teaching effectiveness.

And a third question is whether the form's content is perceived as appropriate.

Are students viewed by faculty as a valid source of information about an instructor's effectiveness in helping them learn? It is clear that a large majority of the faculty (76 percent) accept students as a valid source of information about a faculty member's effectiveness; only 4 percent indicated that they felt students were not a valid source. The pattern of responses varied only slightly by area and academic rank.

But the comments made by faculty members indicate an uneasiness that student evaluations reflect things other than teaching effectiveness, such as teaching style, popularity, course materials, student interest and motivation, student expectations, and student's lack of adequate perspective.

Faculty members also commented on the limitations of student evaluations in general and rating items in particular: students lack criteria for judging teaching effectiveness; instructors often do not know when or why students do not understand; and students are not serious about evaluation.

For many faculty members, students are one source but not the only source. Several faculty members thought that retrospective evaluations by former students for evaluation would be more useful. A few mentioned that a combination of student evaluations and student performance would be a better indicator of effective teaching.

Some indirect data bear on the question. Faculty members were asked whether there were other preferred methods of evaluation to substitute for the present system.

Nearly two-thirds of their suggestions about evaluation for guiding the improvement of teaching and for guiding decisions about promotion, tenure, and salary were ones involving students. Less than a third of their suggestions involved evaluation by other people or other methods.

The pattern was reversed for suggestions about ways to supplement the present system of evaluation. Students are evidently seen by most as a valid source of evaluation information even if a substitute for the current system were being considered. **Table 11** summarizes faculty members' suggestions concerning other methods to substitute for or to supplement the current system.

Do faculty members think the SC-EIT/ASSU ratings provide a fair evaluation of teaching ability? A large majority of the faculty (70 percent) responded that they felt the SC-EIT/ASSU evaluations were "fair" or "very fair."

continued on next page

TABLE 10

Question 25. How useful for guiding the improvement of your teaching is the information you receive in the report on each of the rating categories?

Rating Categories	Not Useful	Useful	Very Useful	No Response
Instructor Performance	22%	50%	17%	11%
Course Contribution	35	42	10	13
Relationship with Students	22	51	17	10
Course Planning	23	48	19	10
Course Satisfaction	33	44	11	12
Written Comments	8	38	44	10

TABLE 11

Faculty Members' Suggestions of other Methods of Evaluation of Teaching for the Improvement of Teaching

	Substitutes for Current System	Supplements to Current System
Other Methods Involving Students' Judgments	Direct communication (e.g., letters, essays, discussions)	Direct communication
	Retroactive evaluation	Retroactive evaluation
	Change form (e.g., add more written comments, shorten form, individualize forms)	Small Group Evaluation
	Mid-quarter evaluation	Mid-quarter evaluation
	Take-home evaluations	Department-specific forms
Other Methods Not Involving Students' Judgments	Peer evaluation	Peer evaluation
	Evaluation by Department Chair	Review by Department Chair
	Student performance	Center for Teaching and Learning
		Videotaping
	For Personnel Decisions	
Other Methods Involving Students'	Direct communication	Direct communication
	Retroactive evaluation	Retroactive evaluation
	Change form (e.g., shorten)	
	Take home evaluation	
Other Methods Not Involving Students' Judgments	Peer evaluation	Peer review
	Student work	Student work
		Course review
		Professional qualifications

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Perceived fairness varied by area but not by academic rank. **Table 12** summarizes area differences.

Of the comments made, nearly half expressed the belief that evaluations are biased and measure things other than teaching effectiveness (e.g., personality differences, popularity, entertainment level, course difficulty and instructor demands, student displeasure with required courses).

Several faculty members commented on problems with the form (e.g., that the form is unsuited to all but language and structured courses, that the form underemphasizes the individual course context, that it focuses on style rather than content, that questions are generally inappropriate, and that the form yields an inadequate measure of teaching effectiveness. A few stated that students and faculty do not take the form seriously and that students are not qualified to evaluate instructors.

But while 70 percent felt that the ratings provide a fair evaluation of teaching ability, there was less agreement about the uses to which the evaluation results should be put.

Most (85 percent) of the faculty feel the evaluation results as currently collected should be used to guide the improvement of teaching. Approximately one half (55 percent) indicated support for use of the SC-EIT/ASSU evaluation results in decisions about promotion, tenure, and salary. Two thirds (64 percent) supported use of the results as a guide to student course selection. A small number (five percent) suggested other uses.

In sum, saying that ratings are fair is not equivalent to supporting their use for all purposes. Indeed, a large number of comments were made about the unfairness or inappropriateness of using the results for personnel decisions.

A common criticism of student ratings is that they exert pressure on faculty members to teach in ways which they may not consider desirable, but which may produce more favorable ratings.

If, indeed, this view was pervasive among Stanford faculty, then continuation of the evaluation system would need serious reconsideration. No one would support any kind of pandering to student preferences at the expense of good teaching.

In fact, most (66 percent) of the faculty reported that they felt no such undesirable pressure; some (15 percent) felt unsure; some (14 percent) felt that ratings do produce pressure to teach in undesirable ways; and 5 percent did not respond.

In the group that did feel such pressure, most comments focused on the point that evaluations exert pressure to be less demanding. Several faculty members remarked that evaluations foster more emphasis on entertainment, and a few commented that evaluations may foster a negative environment (e.g., competition between instructors and tolerance of undesirable student behavior).

On the other hand, there were those who said that the pressure can be resisted. If all of the one-third of the faculty who failed to respond that they felt no undesirable pressure are considered together, they constitute a sizeable minority who raise a serious question about this effect of student evaluations.

Is the form appropriate for the various types of courses taught in the University? This question refers to the form itself—its content as distinct from the purposes for which it might be used. **Table 13** summarizes responses to the question of the form's appropriateness.

A large percentage of the faculty at each professorial level (92 percent each of professors and assistant professors and 84 percent of associate professors) indicated that the form was "appropriate" or "very appropriate for lectures.

The pattern of response was generally similar across areas although a smaller proportion of the Humanities faculty (79 percent) considered the form to be "appropriate" or "very appropriate" for lectures than faculty in the other areas; the percentages were 99 percent in Social Science, 83 percent, in Math/Natural Science, 88 percent in Earth Science, and 94 percent in Education.

The highest level of disagreement arose over the appropriateness of the SC—EIT/ASSU form for evaluating seminars/colloquia. While the form was considered "appropriate" or "very appropriate" by most of the faculty in Humanities (56 percent), Social Science (61 percent) and Education (71 percent), it was viewed as "appropriate" or "very appropriate" by only a minority of the faculty in Math/Natural Science (38 percent) and Earth Science (45 percent).

Such area differences seem to reflect the nature of the subject matter and the likelihood that seminars in Math/Natural Science and Earth Sciences differ greatly in form from seminars in the Humanities, Social Science, and Education. Faculty members of different academic ranks also disagree about the appropriateness of the SC-EIT/ASSU form for seminars/colloquia.

While the form was considered "appropriate" or "very appropriate" by most of the professors (60 percent) and assistant professors (74 percent), it was viewed as "appropriate" or "very appropriate" by only a minority of the associate professors (29 percent).

Only a few of the respondents gave reasons for the perceived inappropriateness of the form for different types of courses. Two faculty members commented that the form called for too many judgments, and a handful mentioned that the structure of the form precludes thoughtful responses.

In sum, the SC-EIT/ASSU form is apparently viewed as well-suited to lecture courses. There is far less acceptance of its appropriateness for seminar/colloquium and lab/studio courses. This result suggests that the appropriateness of the form needs to be reconsidered for these two types of courses.

The majority of those responding about P.E. and Basic Foreign Language courses attested to the form's appropriateness. Again the comments about the form's original designed are apt. While the form was design to be flexible and easily adapted to different circumstances, surprisingly few faculty members capitalize on this feature to improve its appropriateness for different types of courses.

8. System Refinements

Questions were asked about the Instructor Reply Form, the "Stanford Course Evaluation" Report, and the Evaluation Form so that guidance as to modifications of each of these components might be obtained.

The Instructor Reply Form. The Instructor Reply Form is to be used by the faculty member to give permission for release of information to the ASSU Course Guide. Most faculty members (81 percent) reported that the Instructor Reply Form is "easy" or "very easy" to understand. A small number (10 percent) report that it is "hard" or "very hard" to understand. Several suggestions were made for modifications of the form. Most had to do with simplifying the form and making it more aesthetically pleasing.

The "Stanford Course Evaluation" Report. The "Stanford Course Evaluation" Report contains summary statistics for the rating of the faculty member and the course. Most faculty members (80 percent) reported that the evaluation report is "easy" or "very easy" to understand. A small number (9 percent) reported that it is "hard" or "very hard" to understand.

Questions were raised about the meaning of the words "statistical range" and the "xx's" in the Graphic comparisons on side one and of the words "administrative assumption" on side two of the summary report. Concern was voiced about the desirability of reporting means: medians or "trimmed" means were suggested as more appropriate (less dependent on extreme values).

For the graphic comparisons with other courses suggestions were made to include the "average for instructors of this level" (lecturers, assistant professors, associate professors, and full professors), the department (rather than the School or subschool) average, and to delete the comparison with courses of different levels (lower, upper-division, etc.) since it was felt that the distinction does not apply at Stanford.

The SC-EIT/ASSU Evaluation Form. Faculty were asked for suggestions for changing the SC-EIT/ASSU Evaluation Form so that it would be more appropriate for 1) guiding the improvement of teaching, or 2) guiding decisions about promotion, tenure, and salary. Not surprisingly, there was no clear mandate for any particular change in the form for either purpose: only a few mentions of any particular change were made.

The five form changes for guiding the improvement of teaching suggested most often called for a) more free-response questions, b) clarification of the scale, c) reduction of the number of questions, d) placing the overall questions first, and e) more questions pertaining to content. A few suggestions mentioned the need for new forms for seminars, language courses, and team-taught courses.

The six suggestions made most often in regard to guiding decisions about promotion, tenure, and salary called for a) discontinuing such administrative uses, b) standardizing and universalizing use of the forms, c) excluding comparisons with other courses, d) encouraging more written comments, e) eliminating anonymity, and f) clarifying the scales.

9. The ASSU Course Guide

Most (77 percent) faculty members reported that they "usually" or "always" release their quantitative results to the ASSU Course Guide. A few (10 percent) "sometimes" or "rarely" do so, and still fewer (5 percent) reported that they "never" do so.

Most, but somewhat fewer (67 percent), faculty members reported that they "usually" or "always" release the qualitative results to the ASSU Course Guide. Some (13 percent) reported that they "sometimes" or "rarely" do so, and a few (6 percent) reported that they "never" do so.

Half (50 percent) of the faculty respondents indicated that they were "satisfied" or "very satisfied" with the ASSU Course Guide's use of the quantitative results. Some (14 percent) indicated that they were "dissatisfied" or "very dissatisfied," the remainder (36 percent) having "no opinion" or giving "no response." Somewhat fewer (43 percent) indicated that they were "satisfied" or "very satisfied" with the ASSU Course Guide's use of qualitative results. Some (22 percent) indicated that they were "dissatisfied" or "very dissatisfied" with the ASSU Course Guide's use of qualitative results, the remainder (35 percent) having "no opinion" or giving no response.

Most of the suggestions for improving the ASSU Course Guide had to do with making the Guide more accurate—less biased in its reporting, more consistent in its reporting, and less selective as to courses reviewed and comments made.

Suggestions for achieving more accurate and representative reporting included a) having students who took the course write the summaries, b) having summaries reviewed by the instructor before they are published, c) including team-taught courses in the Course Guide, and d) publishing results only if the same teacher is teaching the course. Some spoke of the undesirability of publishing results in courses that had low participation rates.

A few faculty members favored elimination of the ASSU Course Guide on the grounds that student feelings should not be the basis for other students' course selection and that-comparisons between departments were not advisable.

Faculty members were asked for their opinions about whether the quantitative results should be published even if not accompanied by written reviews. Half (51 percent) said "probably"/"definitely" yes, some (18 percent) said "probably/definitely" no, and some (18 percent) were "not sure."

Overall, satisfaction with the ASSU Course Guide is not strong among faculty. These results, when combined with student reports of the relative lack of usefulness of the Course Guide ought to inspire reconsideration of Course Guide practices and policies.

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TABLE 12

Question 30. In your opinion do the ratings provide a fair evaluation of your teaching ability?

Area	N	Unfair/ Very unfair	Fair/ Very fair	No Response
Humanities	78	17%	69%	14%
Social Science	74	14	73	13
Math/Natural Science	41	16	67	17
Earth Sciences	21	24	57	19
Education	18	6	89	5

TABLE 13

Question 29. How appropriate do you feel the SC-EIT/ASSU Evaluation Form is for the types of courses you teach (excluding team-taught courses)?

Course Type	N	Very Inappropriate/ Inappropriate	Very Appropriate/ Appropriate
Lectures	204	9%	91%
Seminars/Colloquium	157	43	57
Lab/Studio	42	60	40
P.E.	11	36	64
Basic Foreign Language	26	35	65

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10. Recommendations

What recommendations do faculty members think should be made to the Faculty Senate regarding the evaluation and improvement of teaching? (Question 35) Only a small number of responses called for, or implied, discontinuing the present system of course evaluation. Most comments called for, or implied, continuing the system in some form.

Faculty recommendations fell roughly into the following categories:

1) The need for supplemental evaluation (e.g., peer review, retrospective evaluation, letters from students, discussion with students, review of students' work, and more individualized evaluation).

2) The need to standardize and universalize the evaluation system (i.e., announcing the purpose of evaluation, alloting adequate time).

3) The need to change the form (i.e., shortening the form, using more written comments, developing a different form, for seminars, labs, and team-taught courses, improving the scales, and eliminating anonymity).

4) The need to facilitate improvement of teaching (i.e., instituting teacher training procedures such as workshops and discussion groups, providing incentives for developing innovative courses or improving teaching.

5) Review of the ASSU Course Guide reporting policies and practices (e.g., allowing instructors to edit course reviews, not reporting when student response rate is too low).

6) Discontinuation of use of the results for decisions about promotion and tenure.

7) Reducing the frequency of evaluation.

8) Moving the time of evaluation to mid-quarter.

V. STUDENT SURVEY

A. Purpose

During the 1981-82 winter quarter, C-AAA-EIT developed a questionnaire to obtain student reaction to the SC-EIT/ASSU course evaluation system. The questionnaire contained some questions which paralleled those in the Faculty Questionnaire so that the responses of these two groups could be compared. Specifically, the Student Questionnaire was designed to collect information about a) student experience with the SC-EIT/ASSU Evaluation Form, b) the amount of variation experienced in the procedural aspects of the form's administration, c) the usefulness of the ASSU Course Guide, and d) students' views about the SC-EIT/ASSU evaluation system.

B. Procedures

On May 5, 1982, the Student Questionnaire was sent to a sample of students in the three schools using the SC-EIT/ASSU Evaluation Form.

Of the 1,524 students surveyed, 556 (36 percent) responded. . .the response rates within the various categories of students varied widely—from 70 percent for sophomores in Math/Natural Sciences to 20 percent, 13 percent, and 10 percent for seniors in humanities, seniors in earth sciences, and undeclared sophomores, respectively.

D. Results

For our analyses appropriate weights have been used so that estimates representing the total population or subpopulations of interest could be obtained. The following discussion summarizes the weighted student responses.

1. Experience with the SC-EIT/ASSU Evaluation Form

The respondents varied in the extent of experience with the SC-EIT/ASSU Evaluation Form: 7 percent reported no use, 37 percent reported having filled out from 1-10 forms, 31 percent reported having filled out 11-20 forms, and 24 percent reported having filled out over 20 forms while at Stanford.

Experience with the form is, not surprisingly, related to class level. Because of this relationship, differences in responses between classes may reflect differences in amounts of experience with the form—a confounding of class and rating experience.

2. Obtaining Valid Responses

As was noted above, valid use of the evaluation results, for comparing one faculty member or course with another requires a high student participation rate and uniform procedures in the administration of the form.

The variation in participation rates is evident from the participation study described above. Practices that probably affect participation rates are suspending other class activities, allowing sufficient time, and explaining the purpose of the student ratings. All of these connote seriousness on the part of the instructor about student evaluation and are likely to enhance student participation rates and thoughtfulness of student response.

Most (71 percent) of the students reported that their instructors "usually"/"always" suspend other activities for the purpose of evaluation. Some (20 percent) said that this "rarely" or "sometimes" occurs, and a few (1 percent) claimed that this "never" happens.

While the reported time allowed (2 to 60 minutes) varies considerably for the evaluations, most (70 percent) students said that they are given between 10 to 20 minutes. The modal time reported is 10 minutes, or 5 minutes less than the modal time reported by the faculty.

Slightly over half (54 percent) said that they are "usually"/"always" given sufficient time to fill out the form thoughtfully: 21 percent said that this happens only "sometimes," and 19 percent said that this happens "rarely"/"never." Most (75 percent) said they need 10 to 20 minutes to fill out the form in a thoughtful manner, and most of these students reported needing upward of 13 minutes to fill out the form thoughtfully. . . .

Only half (52 percent) of the students reported having a #2 pencil "usually"/"always" available for filling out the form, and half (53 percent) said they "usually/always" fill out the form even when they do not have a #2 pencil available. It could be, then, that response rates suffer for want of #2 pencils. Students should be encouraged to fill out forms even if they have no #2 pencils.

There is little disagreement between students and faculty about the fact that purpose is not regularly communicated to students. Only 22 percent of the students reported that faculty "usually"/"always" explain the purposes of the SC-EIT/ASSU evaluations; one fourth (25 percent) said purpose is "sometimes" explained, and one half (50 percent) said it is "rarely" or "never" explained.

While valid use depends on obtaining a high student response rate, other factors are essential as well. Variation in rating conditions is one factor that can jeopardize the valid use of evaluation results. **Table 17** shows the pattern of student responses about how forms are distributed and filled out.

As can be seen, there is no clear pattern in the timing of the forms' distribution or the conditions under which the form is filled out.

More important, valid use of student ratings depends on the thoughtfulness of student responses. One criticism of student ratings at Stanford and elsewhere is that students give little thought to their ratings and comments because they have little idea of the serious uses to which their evaluations may be put.

Undoubtedly, thoughtfulness is in large part in the eye of the beholder. In this response group, most students said they give thoughtful answers to the rating items (75 percent) and the open-ended questions (60 percent). But respondents to the questionnaire may have been the most thoughtful ones themselves, so the answer about thoughtfulness remains elusive.

The reasons given by the approximately 20 percent who said they did not provide very thoughtful responses to the rating items or the open-ended questions, or both, were lack of sufficient time (the major theme), other pressures during dead week, lack of incentives to be thoughtful (a feeling that instructors do not take the ratings seriously).

Some students stated that the written comments section was the most meaningful, though the questions are hard to answer. They felt that instructors need suggestions, not ratings. One student observed that when the instructor shows he or she really cares about the evaluations, students are more thoughtful in their responses and comments.

While most students reported being thoughtful, care in judgements and comments is variously affected as students fill out increasingly more evaluations: 42 percent said they become less careful, the more evaluations they fill out, while another 42 percent reported that they did not become less careful. Some (11 percent) were not sure.

Another frequently made criticism of student ratings is that ratings are nothing more than a reflection of the grades students receive or expect to receive in a course and hence are not a valid indication of the quality of teaching.

The issue is complex and has been extensively debated in the literature. An empirical answer can be formulated from the rating data by examining the relationship between expected grades and ratings. As was noted in Section III, the average correlation was close to zero ($r = .11$) within classes for about 4,000 classes on the four overall items, the range of these coefficients being .08 to .16. When students were asked directly, 43 percent said their expected grade "never"/"rarely" influences their evaluations of a course or instructor, 33 percent said it sometimes does, and 17 percent said it "usually"/"always" does. A major theme of the student comments is that they try to be sincere and objective without conscious consideration of grades.

When there is a relationship between grades and ratings, it is explained by students as a valid one. For many students it is natural that a well-taught course stimulates interest and effort which result in high grades and hence high ratings.

3. Perceptions of Uses of the Evaluation Results

How do students think evaluation results are used? **Table 18** shows how students (compared to faculty) think evaluation results are used.

In addition to the fourth of the students who do not know how evaluation results are used, large numbers of students do not think the results are being used for each of the purposes the system was originally designed to serve.

4. Views about the SC-EIT/ASSU Evaluation System

It is important to note some general feelings of students about the SC-EIT/ASSU evaluation system and other methods of evaluating Stanford courses and instructors.

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TABLE 17

Student description about how forms are distributed and filled out.

When Forms are Distributed	Never/ Rarely	Some-Times	Usually/ Always	No Response
On the day of the final exam	64%	16%	4%	16%
At the last class meeting	6	28	57	9
During dead week (other than the last class)	23	34	25	8
Before dead week	63	11	7	19
When Forms are Filled Out				
During class time while the instructor is in the room	23	30	35	8
During class time while the instructor leaves the room	27	33	29	11
Outside of scheduled class time	56	29	8	7
During the final exam	74	5	1	20

TABLE 18

Student and Faculty Perceptions of the Uses of the Evaluation Results

Use	Percents Perceiving the Various Uses Students	Faculty
To guide the improvement of teaching	50%	84%
For decisions about promotion, tenure and salary	27	49
To guide student selection	60	60
Don't know	24	25
Other uses	10	15

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Do students feel that the SC-EIT/ASSU evaluations affect teaching? A small number (11 percent) felt the evaluations have no effect, 53 percent felt they have "some" effect, 2 percent felt they have "a lot" of effect, and 30 percent were "not sure" about the effects.

While students commented that evaluations have had an effect in some cases, these results indicate a widespread sense that evaluations go unheeded. Many students pointed out that they had little way of knowing whether or not there is an effect on teaching since they do not take the same course twice and may never have the same instructor again.

Some students mentioned that many instructors seemed indifferent to the evaluations, that evaluations come too late in the course, that there are not enough incentives to teach well, that only the good teachers really care about their teaching, that the rating items do not tell teachers how to improve, and that instructors rarely, if ever, say that evaluations help.

Do students feel that it is worth their time and effort to evaluate courses as often as they do? The response again is mixed: 18 percent felt it is "probably"/"definitely" not worthwhile, 20 percent were "not sure," and 58 percent felt it is "probably"/"definitely" worthwhile.

So, while a majority of the students indicated that evaluations are worth the time and effort as often as they occur, the feeling was far from unanimous.

Many students commented that the course evaluation system is worthwhile if the results are taken seriously and used to improve teaching. Many expressed the view that a student evaluation system is necessary, even if only a few faculty members use the results and improve as a consequence.

But students from all class levels expressed considerable skepticism that the results were being taken seriously. Again the theme that faculty need feedback, not ratings, was expressed. Some students felt that there had been definite changes in some faculty members, but that these seem to happen most among the good and conscientious instructors and not among those who really need to improve.

What do students like about the SC-EIT/ASSU system or form? Most students remarked that they like the open-ended questions on the back of the form. A majority of the students like the rating items for their simplicity, conciseness, organization, variety, and comprehensiveness.

Questions were raised, nonetheless, about the meaningfulness of the numbers. Some expressed a preference for a battery of simpler questions that yield short answers rather than the quantitative scales.

What students dislike about the SC-EIT/ASSU system or form relates most to the front of the form. The most frequently stated criticisms were that there were too many questions and that there was not enough time to complete the forms.

Some find the rating scale arbitrary, calling for too much subjectivity. Others noted the problem about having a #2 pencil, the lack of universality, the difficulty in quantifying teaching, the flaw in anonymous ratings, the lack of knowledge about how evaluations are used, the uneven (at times poor) administration of the forms, and the nuisance of filling out forms so often.

What other methods do students feel would be desirable for evaluating Stanford courses and instructors? Most of the suggestions called for more personal student evaluations either through individualized or group interviews/discussions or the student small-group evaluation procedures administered by the Center for Teaching and Learning.

Visits by faculty members to classes, student panels at the department level to discuss course improvement, and installation of opinion or suggestion boxes were other alternatives mentioned. Mid-quarter evaluation was recommended. One suggestion called for a process of random selection such that each student would have to fill out fewer forms.

5. Selection of Courses and Views about the ASSU Course Guide

Three-fifths (60 percent) of the respondents said that they believe the results of the SC-EIT/ASSU evaluations are used to guide students' course selection. Yet, when asked about the actual information sources they themselves use when selecting courses, they drew a slightly different picture. (See Table 19.)

The ASSU Course Guide does not appear to be used regularly by most of the student respondents. *Courses and Degrees* and other students are apparently the information sources most regularly used by most of the students, followed by Course Abstracts. Least used by students are Resident Fellows, the ASSU Course Guide, and Advisers.

What, if anything, do students value about the ASSU Course Guide?

For those who use the Course Guide at all, the written reviews are seen as "valuable"/"very valuable" by more of the students (32 percent) than the graphs (9 percent). Indeed, perceived usefulness of the statistical scores, even if not accompanied by written reviews (Question 22), was relatively low: 26 percent felt they would not be useful, 27 percent felt they would be moderately useful, 17 percent felt they would be "useful"/"very useful," and 12 percent had no opinion.

For the most part, students reported that the ASSU Course Guide information tends to agree with other sources of information and their own experience.

	Agreement with Other sources	Agreement with Own Experimence
Never/rarely	7%	7%
Sometimes	24	34
Usually	38	27
Always	1	1
No response	30	31

In sum, there is no strong indication that the ASSU Course Guide is very useful. More students who use the Course guide often prefer the written reviews to graphs of statistical scores—a preference which coincides with faculty preference for written comments **(see Table 8)**.

6. Recommendations

What recommendations do students think should be made to the Faculty Senate regarding the evaluation and improvement of teaching? (Question 31) There was almost unanimous agreement that an evaluation system which permits student contributions should be continued.

Suggested improvements in the present system included: a) allowing more time for filling out the form, b) giving students a better explanation of the use and the importance of the evaluation information to enhance student awareness of the system and to encourage more well thought-out responses, c) evaluating all courses so that the system is universal, and d) standardizing the administration of the system. As an alternative to the current system, many students mentioned a desire for a more personal system—individual or group interviews or discussions conducted by someone involved in the improvement of teaching.

Students want to feel that faculty members take the evaluation results seriously, though there is widespread skepticism among students concerning whether faculty members do so. Students see evaluations as a valuable source of information for the improvement of teaching and hope that the results will be used to improve teaching. But they perceive a lack of incentives for good teaching in a predominantly research-oriented institution. Many expressed the hope that this situation could change and that there could be some way to hold faculty accountable for their teaching.

Students also expressed the hope that the administration recognizes the system as an important source of information for the evaluation of courses and faculty when used in conjunction with other sources, such as peer evaluation.

They hope the administration recognizes the system's value as a mechanism for improving the flow of information between undergraduates and faculty in a large university like Stanford. And they hope the administration sees the system's potential value as a source of information for the improvement of teaching.

TABLE 19

Question 17. Do you use the following sources of information when selecting courses?

	Frequency of Use		
Source of Information	Rarely Never	Sometimes	Usually/ Always
ASSU Course Guide	50%	29%	15%
Other students	7	32	55
Resident Fellows	76	11	6
Advisers	46	30	17
Course Abstracts	36	16	38
Courses and Degrees	6	11	78
Other	3	3	6

TABLE 20

Question 18: In the ASSU Course Guide, how valuable do you find the graphs of statistical scores? Question 19. In the ASSU Course Guide how valuable do you find the written reviews?

	Value the Graphs	Value the Written Reviews
Don't use Course Guide	31%	30%
Not valuable	18	4
Moderately valuable	34	25
Valuable	8	28
Very valuable	1	4
No Response	8	9

VII. RESPONSES OF DEPARTMENT CHAIRS

In early November 1982, letters were sent to department chairs (4 in Earth Sciences and 27 in Humanities and Sciences) in schools using the SC-EIT/ASSU Evaluation Forms to invite their comment on the following topics:

1) Sources of information used to evaluate teaching;

2) Ways in which the SC-EIT/ASSU evaluation results are used;

3) The importance, usefulness, and appropriateness of student evaluations, in general, and the SC-EIT/ASSU evaluations, in particular;

4) The extent of resistance to student evaluation of teaching, in general, and the SC-EIT/ASSU evaluation system, in particular;

5) Recommendations to the Faculty Senate regarding the evaluation of teaching and the SC-EIT/ASSU system.

The following summarizes the comments made by the 18 department chairs who responded to this inquiry.

A. Sources of Information Used to Evaluate Teaching

All but one of the department chairs reported that they use the SC-EIT/ASSU evaluation results as one source of information in evaluating teaching. One department chair spoke of the SC-EIT/ASSU system as a necessary evil, and one uses the results only when instructed to do so by the Dean.

But the SC-EIT/ASSU evaluation results are not used alone; all of the department chairs reported that they gather other information about teaching. Almost all of the department chairs reported that they solicit letters from current students, former students, advisees, graduates, or all of these, to complement the SC-EIT/ASSU evaluations.

Five departments mentioned using some kind of peer evaluation—classroom visits (mentioned most), solicited letters, evaluation by co-teachers, faculty review of course materials—to supplement the SC-EIT/ASSU results. Other sources mentioned were "the grapevine," trends in course enrollments, use of special department forms, and outside advice.

In sum, student evaluation of teaching (whether in the form of the SC-EIT/ASSU results or in the form of letters) appears to be a major source of information about teaching. Only five departments mentioned engaging in any form of peer evaluation.

B. How the SC-EIT/ASSU Evaluation Results Are Used

Use of the SC-EIT/ASSU evaluation results varies. Results are monitored to guide the improvement of teaching, to inform decisions about reappointment, promotion, tenure, salary, and teaching awards, to guide curriculum planning and staffing decisions, and to "keep track of the pulse" of the department.

Most of the chairs reported that they regularly (quarterly and yearly) review the evaluation results. Most again indicated that the SC-EIT/ASSU evaluation results are among several pieces of evidence used to evaluate teaching.

C. Importance, Usefulness, and Appropriateness of Student Evaluation

A majority of the department chairs indicated that they felt the SC-EIT/ASSU evaluations were one important source of evidence on teaching when used in conjunction

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with other evidence. But opinion varied widely on the importance of the results. Views on importance even varied among individual faculty members. Several department chairs mentioned that more qualitative evaluations (letters to students soliciting detailed and searching comments, anecdotal remarks) were more important and useful than the SC-EIT/ASSU ratings.

The chairs perceived benefits of the SC-EIT/ASSU evaluations to include a) the written comments, b) good indication of student satisfaction, c) usefulness as a quick check, and d) value for sensing major successes and failures.

The chairs perceived the drawbacks of the SC-EIT/ASSU evaluations to include:

a) their excessive focus on teaching and insufficient focus on learning;
b) their lack of validity as indicators of the quality of teaching;
c) the lack of usefulness or meaningfulness of the statistical summaries:
d) the inappropriateness for workshop-type courses;
e) their inappropriateness for evaluation of TAs;
f) their inappropriateness for evaluating team-taught courses;
g) their inappropriateness for evaluating field courses;
h) their failure to indicate lasting impact;
i) the limitedness of what they measure;
j) their lack of discrimination at the high end (ceiling effect);
k) they are not universally used;
l) general lack of student awareness of the purposes of the evaluations and the uses to which they will be put;
m) the inappropriateness of reporting means;
n) the lack of clarity of the bases of comparison (norms);
o) the inopportune time (before exams and final assignments) of the evaluations and their consequent neglect of important parts of the instructional strategy;
p) the patent assumption that student knowledge is superior to that of the instructor;
q) the low student participation rate;
r) the low faculty participation rate;
s) the failure of the statistical evidence to indicate the academic quality or depth of conviction of the respondent or the reasons for the response;
t) the distortion of the original intention of the evaluation—to help the teacher;
u) the fact that forms are filled out at a time that does not encourage the most profound reflection by students;
y) the fact that thoughtless responses carry the same weight as thoughtful responses;
w) the disregard of the principle that quality of teaching is not quantifiable, and
x) the fact that the results do not reflect whether a course is required or optional, although required courses are invariably rated lower than optional courses.

In the department most opposed to the SC-EIT/ASSU system, the perception is that for students the evaluation process has become a trivial exercise, performed perfunctorily. For faculty members it is felt in this department that the process is more of a nuisance than a help, an end rather than a means and a process that can have pernicious consequences. For the administration, it is felt in this department that the SC-EIT/ASSU form is no more than a crude tool for measuring teaching effectiveness, one vastly inferior to informed gossip.

D. Resistance to the Use of the SC-EIT/ASSU Form and to Student Evaluation

Most department chairs reported no known resistance to the SC-EIT/ASSU evaluation system. (One department chair indicated that there was no strong support either.)

Two of the chairs commented that their faculty's opinion was mixed, varying from vehement rejection through interested skepticism to interested acceptance. It was noted by these chairs that those faculty members who received favorable evaluations accept the system, and that those who do not receive favorable evaluations dislike the system.

Two chairs mentioned the "p.r. value" of the ratings, especially if they are published in the ASSU Course Guide. In one department there is compliance only because the system is required.

E. Recommendations

Almost all of the department chair respondents favored some kind of student evaluation of teaching. Recommendations about the SC-EIT/ASSU system in particular ran the gamut from calling for its abolition to calling for its mandatory universal implementation. The variation in responses precludes a succinct summary. The following recommendations were made by more than one respondent:

a) Simplify the form;
b) Enforce full compliance of the faculty;
c) Develop special forms for different kinds of courses (workshops, labs, studios, fieldwork, etc.);
d) Encourage faculty members to obtain feedback (formal or informal) on teaching throughout the course, not just at the end;
e) Mandate evaluation of teaching in some form;
f) Encourage obtaining supplemental information from students and colleagues;
g) Develop a more flexible system which provides local option in obtaining evaluation information.

Other suggestions called upon the Faculty Senate to:

a) Engage in a serious examination of what is meant by teaching, of whether the SC-EIT/ASSU form is a good instrument for measuring the effectiveness of what is meant by teaching, and of the relationship between teaching and learning;
b) Move more toward an essay form;
c) Ask each department to appoint a teaching officer with responsibility for consulting and advising to make the evaluation system more personalized and flexible;
d) Arrange for evaluations to be done during the quarter following a course;
e) Encourage students to take evaluations more seriously;
f) Make students better aware of the uses to which the SC-EIT/ASSU evaluation results are put;
g) Discontinue tabulation of results where the student response rate is less than 60 percent;
h) Reduce the number of questions dealing with course organization and increase the number of questions dealing with independent or changed thinking;
i) Encourage students to make positive suggestions to help instructors improve (the current forms do not provide information on how to improve);
j) Discontinue use of the forms as a basis for reappointment, promotion, and tenure decisions;
k) Eliminate statistical means and figures (they are indefensible and not meaningful);
l) Gather more information on the students who are the evaluators (otherwise evaluations are useless).

Earth Sciences: Form provide early warning

Following is a letter to Walter F. W. Lohnes from Dean Allan Cox of the School of Earth Sciences, on Student Evaluation of Teaching.

The evaluation of teaching is done on several levels. Informally, all of our faculty learn from their own advisees about the style and effectiveness of the teaching of their colleagues. This is a very important source of information.

In some cases, departments and programs within departments conduct surveys of courses and curricula in addition to the SC-EIT/ASSU evaluation. Many of us give guest lectures in our colleagues' classes, which gives us a window on the classes. All of these sources of information provide a basis for peer evaluation of teaching.

In preparing papers for reappointment or promotion, we use evaluation by faculty peers, solicited letters from students, and the SC-EIT/ASSU evaluations. The latter is only one component of the basis for evaluation.

The setting of salaries is based on assessments by department chairmen and the dean of research, teaching effectiveness, and other contributions to the university. Again, the SC-EIT evaluations play a significant but subordinate role in this process.

For our more effective teachers, the SC-EIT evaluations have little to offer. Since these teachers wouldn't be as good as they are if their empathy with students didn't provide them with constant feedback from their classes, the evaluations are largely redundant.

However, in the case of ineffective teachers, the evaluations are extremely useful in two ways. First, they let the teacher know that *something* is wrong, and they give him some notion about possible corrective action.

Second and most important, the evaluations serve to keep the issue of teaching quality on everyone's agenda. When evaluations are consistently bad, we discuss the reasons for this in our departments. This in turn, stimulates the instructor to give greater priority to teaching.

SC-EIT evaluations have been extremely useful in providing both an early warning of ineffective teaching and a stimulus for its improvement.

Several of our faculty of 30 are probably not strongly in favor of student evaluations. However, this is not a burning issue for our faculty. As an aside, on the rare occasions when faculty have expressed negative views, I have challenged them to identify one course with consistently bad ratings that they themselves regard as being well taught. So far, we haven't found one.

I recommend strongly: a) that the SC-EIT evaluations be retained essentially in their present form, b) that the evaluations be used as one of several measures of teaching effectiveness in matters of promotion, and c) that a somewhat more specific procedure be used in conducting the evaluations.

We would have more complete returns if all instructors would, during dead week, flag the importance of the evaluations, allow 20 minutes or so of class time for completing the forms, appoint a student to collect the completed forms and turn them in, and then leave the classroom.

Engineering: Evaluation helps improve teaching

Following is a letter from Dean William M. Kays, School of Engineering, on student evaluation of teaching at Stanford.

The School of Engineering specifically requires that all papers recommending reappointment and/or promotion contain actual scores on student teaching evaluations for a number of courses. I believe we do take these fairly seriously and have had reason to question the papers when the scores were weak. Occasionally, other pieces of information such as letters from students and other people are used in support of promotion recommendations, but I think that we have increasingly tended to rely upon the student evaluations.

We have long since become very suspicious of letters extolling the virtues of a particular teacher when the student evaluations are negative, and most of the department chairmen in the School no longer seriously attempt to do this. To answer specifically one of your questions, we simply have not been able to find any other sources of information about teaching effectiveness which has any credibility.

The faculty resistance to our particular procedures is not very great and is confined primarily to some of the older profesors who have always had sort of a take-it or leave-it attitude about their classroom performance. We don't take them very seriously.

Despite the fact that we do use student evaluations of teaching extensively in the appointment, reappointment, and promotion process, you would still probably find that there is not a close correlation between our salary scale and the student evaluation of teaching.

It is perfectly possible to be a very mediocre classroom teacher and have a high salary because of research and national stature. And in fact, it is probably possible to have a salary in the top decile on the basis of teaching alone without eminence in research.

In that sense we are undoubtedly skewed a bit in the direction of research eminence and it is probably not fair to say that we reward teaching with the same way that we reward research. But I do believe that we take teaching into consideration, based primarily on student evaluation of teaching.

The big change in the School of Engineering in this regard has taken place in the last five or six years when we started allowing the results of student evaluations of teaching to be more generally known.

In fact, our Student Honor Society, Tau Beta Pi, publishes each quarter a book containing student quotes concerning the Professor the last time he taught a particular course. All of the scores on the evaluations are made available to Department Chairmen.

The result of all of this is that we have managed to focus much more attention upon good classroom teaching and I do believe that we are now seeing a considerable improvement on the average. I don't believe that our best teachers are doing any better, but I do believe that a lot of the people at the lower end on the teaching effectiveness scale are putting a lot more attention into teaching simply because they are exposed publicly if they do not.

Education: Ratings high

Following is a letter from Dean J. Myron Atkin, School of Education, on student evaluation of teaching.

Faculty are required in the School of Education to use the student evaluation forms. This source provides our primary information about the quality of teaching in the School, though we rely as well on information acquired informally, such as the remarks that students volunteer about the quality of their instruction. Once in a while, we learn about teaching quality because a student complains.

The student evaluation results are reviewed carefully when faculty are considered for reappointment. I also use them as an element in decisions about salary raises. Ratings of teaching tend to be quite high in the School of Education, but in those instances where there seems to be a problem with the quality of instruction, I try to arrange for assistance to the professor.

To my knowledge, there is very little resistance on the part of our faculty to the use of the evaluation forms. We do, however, continue the practice of giving the instructor the option of not making the evaluations public for an ex-

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perimental course or for one being taught for the first time.

A quicker turn-around time in returning the summary analyses of the evaluations to the individual instructors and to the School would be helpful. It often takes several months before we get copies of the results.

GSB: Local option?

Following is a letter from Charles A. Holloway, associate dean of GSB, on student evaluation of teaching at Stanford.

The information we use on teaching for faculty reviews includes the student course evaluations (ranked against others in the quarter in which they were collected); statements by the faculty on course development activities; an evaluation of the course materials by other faculty in the field (mainly internal to the GSB but in some cases also external reviews); statements from the Director of the Doctoral Program about participation in the Doctoral Program; statements from the Director of the Executive Education Program about participation in Executive Education activities; and statements from the Directors of our Master Degree Programs (the MBA and Sloan Master of Science degrees); information requested from former doctoral students, and statements from others in the School about any new programs that have been developed by the faculty member.

Student evaluations are one of the inputs that we use in making recommendations on our faculty. They are important, and since they are quantitative evaluations they receive significant attention by our faculty. The benefits of using these evaluations has been an increase in faculty attention to their duties as teachers.

Although we do not have any comparative data, it's my belief that the amount of effort put into teaching by our faculty has increased since we have instituted the teaching evaluations. Many of our faculty supplement the regular teaching evaluations with requests for feedback on their own. The totality of these evaluations helps our faculty in redesigning their courses so that they can present the material more effectively.

There are drawbacks to using this system. In the first place, there is a question about the amount of resources that are devoted to teaching by our faculty. It is argued by some that because of the institution of the teaching evaluations more resources than are desirable in the long run are being put into the teaching program.

My own view is that there are in fact instances of excessive concentration on teaching by our faculty. There are also instances in which these evaluations have spurred on our faculty to needed improvements in their courses. I think that we devote somewhat more resources to teaching than would be optimal for our school. I think that part of this has been driven by the teaching evaluations. Our teaching evaluations in the elective courses become a matter of public record. Obviously, if a faculty member receives poor evaluations it can affect his or her attitude toward the School and the students, and ultimately can affect the faculty member's productivity.

In some cases students have been rather vicious in their personal criticisms on the student evaluation forms. These cases obviously can be very disfunctional for the faculty member involved. One is always tempted to list as a drawback that student evaluations provide pressure to improve the form rather than the substance of the classroom activities. No doubt this is true in some cases. However, the casual evidence that we have suggests that our students are sensitive to the tradeoff between form and substance. Both high and low ratings have been given to professors with very different classroom styles, ranging from "entertaining" to "militaristic."

As you would expect, the faculty attitude toward these student evaluations varies. Most of us are uncomfortable being measured in this manner. Some faculty feel that the evaluations have had a detrimental effect on the school. Others feel that they are demeaning. Some feel they are unnecessary. Others feel that they are of very little value to them. Although this sounds like the faculty is against the formal evaluations, my guess is that as a group they are not. I believe that they would feel that the institutional benefits outweigh the personal costs associated with student evaluations. From an operational standpoint, there is no resistance to the evaluations. We have virtually 100 percent compliance by our faculty who are requested to pass out the evaluation forms.

I believe the recommendation of the Faculty Senate should provide for local option. I would personally be reluctant to force student evaluations on other schools and departments in which the teaching setting might be very different from that here in the Graduate School of Business. Similarly, I would not like to have other schools or departments force on the GSB a particular policy toward evaluation.

As I indicated above, there are both costs and benefits associated with these kinds of evaluations. At this point in the Graduate School of Business, I am convinced that the benefits outweigh the costs. At some point in the future we may change this belief. If we do, I believe we should be free to modify, revise, or even eliminate the student evaluations.

Good teaching requires a commitment on the part of the school and department involved. In the absence of such a commitment, I'm not sure that student evaluations would make much difference. If such a commitment exists, it is entirely possible that student evaluations are unnecessary or perhaps they might even be dysfunctional.

Medicine: Try pluralism

Following is a letter from Dominick P. Purpura, dean and associate vice-president for medical affairs, on student evaluation of teaching.

For your information, I am enclosing a copy of the statement entitled "Evaluation of Faculty Teaching Performance in the School of Medicine" taken from the Medical School Faculty Handbook.

You will note that we do expect department chairmen to provide, wherever possible, summary information evaluating teaching performance at the time of making recommendations for faculty reappointments and promotions. This information is also used in counseling faculty regarding improvement of their teaching skills.

In the pre-clinical years (usually in the first two years of Medical School training) the students attend lectures, primarily in the areas of basic science, and participate in group discussions.

In the later, or clinical years, and in the advanced training programs which follow, they are taught in very small groups or even on a one-to-one basis.

I have enclosed several samples of the questionnaire forms used in student evaluations of teaching in the pre-clinical years and samples of forms used in student evaluation of teaching in the clinical and housestaff programs.

In addition, in preparing documentation for reappointment or promotion, the Department Chairmen normally contact a number of students, trainees, or former trainees, asking for an objective evaluation (by letter) of the candidate's teaching abilities.

In my view and in that of many of my colleagues, the importance of student evaluations is limited by the sporadic manner in which the students tend to respond to questionnaires regarding evaluation of teaching, and, more importantly, by their general lack of experience.

Clearly the benefits of these evaluations are to reward excellent teaching and to provide the basis for counseling faculty in cases where this is needed. On the other hand, such evaluations often tend, it seems to me, to value entertainment and charisma on the part of the teacher over substance.

While we do note a considerable resistance on the part of the Medical School Department Chairmen to give major weight to student evaluations of teaching, I believe that most of our faculty members are willing to accept the evaluations as one of a number of contributing factors in making judgments about reappointment and promotion.

In conclusion, it would be my recommendation that your Subcommittee recognize the need for a pluralistic system of teaching evaluation, weighing carefully the maturity of the students and the nature of the teaching experience(s) which they are being asked to evaluate.

(A letter from Humanities and Sciences describing how evaluations are used will be published next week-*Editor*)

Advisory Board likes both student, faculty comments

Following is a report on a Dec. 12, 1982, meeting of the Advisory Board of Stanford University with Prof. Lohnes, Prof. Gage, and Dr. Porteus concerning the ASSU/SC-EIT Teaching Evaluation System, written by Gage:

Prof. Adams said that there is no consensus within the Advisory Board on the question of the ASSU/SC-EIT Teaching Evaluation System. The Board always uses the ratings in looking at teaching when it is making decisions about appointments unless the appointment involves no teaching duties at all.

If an evaluation system exists in a school, the Board uses it and wants the forms. The Board likes to have both student and faculty comments concerning teaching.

There is no formal opinion concerning the weighing of teaching and research, according to Provost Hastorf. There are probably more cases in which brilliant research wins than those in which brilliant teaching wins. In some cases, bad teaching has been outweighed by brilliant research. If the Board did not have the rating forms, it would definitely miss them. The use of the forms should be mandatory. The poor returns of the forms is annoying.

Prof. Knuth said that, if an outsider comes up for appointment, the Board may want just casual comment, but the department chairman is then required to get evidence and data concerning teaching.

Prof. Chase said that Engineering, Law, and Medicine have had universal systems for evaluation of teaching in all courses for a long time.

Prof. Arrow said that the forms are not clear, but they do have the right information.

Prof. Adams said that, as a Board, we want all the data we can get, including data on the norms—the averages and spreads—of the ratings. The Board likes the average and wants to know what it is based on. The form is a catalyst that calls forth comment in detail on teaching, especially if someone is way down in the ratings of teaching. That function in itself is valuable.

Prof. Lohnes said that the deans do not like the quantitative data.

Prof. Webb said that an asymmetry between research and teaching definitely does exist and that research does carry more weight. So the Board gets many excuses when research is good or great and teaching is poor. Departments often say things like "He does well with this kind of student or that kind of student, such as graduate students or beginners, and so on."

Prof. Arrow asked what the ratings mean when they are very positive and reported his knowledge of two studies in which the correlations between average ratings and student achievement in multisection courses were negative. Prof. Gage corrected his information on this by referring to the meta-analysis of approximately 40 such studies done by Peter Cohen in a paper that has been distributed to SC-EIT.

Provost: Forms remind others of concern for teaching

Following is a letter to Walter Lohnes, chairman of Subcommittee on Evaluation and Improvement of Teaching from Provost Albert H. Hastorf concerning teaching evaluation forms.

I understand that you and your subcommittee are interested in having some specific data on the role that the SC-EIT forms play in the faculty reappointment process. To gather "scientifically" the information you requested would require rereading many faculty personnel files, some of which have already been sent to the University Archives because the individuals were either terminated or have resigned.

Although I understand that Noel Kolak indicated a willingness to take on this task if the information was really crucial to the work of your committee, I'm afraid that we are somewhat short-staffed this summer so we cannot really afford anyone's time to be spent in that way. Jerry Lieberman and I have discussed your questions in some detail, however, so I would like to try to respond on the basis of our experience and our collective memory.

I realize that the use of the SC-EIT form is confined to the Schools of Earth Science, Humanities and Sciences, and Education, but the general comments I'm about to make really are applicable University-wide. Where SC-EIT forms are not used, some other standardized form is employed in its place.

I think it is fair to say that in the past three years, there has hardly been a single case in which there wasn't some information garnered from the SC-EIT forms in the Schools and Departments that don't use an alternative form of their own.

On the relatively few occasions that we receive reappointment or promotion papers that lack SC-EIT forms or summary sheets, we go back to the deans' offices and ask that they be forwarded to us. I estimate that we have to make a special effort to get the information between six and 10 times per year.

In most cases, the forms will be immediately forthcoming, often having been omitted due to oversight more than anything else. Occasionally we run into a situation in which a department believes strongly that the forms should not be used for purposes of evaluation by a third party.

Individuals in those departments believe that the sole purpose of the SC-EIT forms should be to provide feedback to the faculty member about how his or her teaching might be improved. Nevertheless, the forms are ultimately forwarded to us. Occasionally, just the summaries are provided, but usually the forms themselves are included. These are normally returned to the department at the conclusion of the review process.

Jerry and I believe that the SC-EIT forms are important beyond the data that they provide. The fact that deans and department chairmen are aware that the Provost's Office and the Advisory Board are concerned with evidence of teaching effectiveness permeates down.

It is very important to understand, however, that neither the Provost's Office nor the Advisory Board begin their respective review processes with assigned "weights" in mind about the value of teaching vs. research. It's a judgmental process in which an opinion is formed during the reading of an individual's file.

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Decisions on reappointment or promotion are really never made on the basis of either good teaching or good research; it's always some combination of the two. We apply the standard that the individual must be outstanding in either teaching or research and at least very good in the other. Those measures are not readily quantifiable, of course, but the use of standardized teaching evaluation forms helps us a great deal in coming to grips with the teaching side of the equation.

I know you would like to know how many favorable decisions were based primarily on teaching (i.e., "outstanding in teaching and at least very good in research"). Jerry's and my impression is that more positive decisions are based on outstanding research than on outstanding teaching, but that the ratio is not as great as people believe.

In other words, there are many favorable decisions based on outstanding teaching. Similarly, in the case of negative decisions, more are based on poor scholarship than on poor teaching, but there have been cases where an individual's research was judged to meet the necessary requirements, but the teaching performance was considered so marginal that the research alone could not swing the case.

The course evaluation forms really do play an important role in assessing the teaching part of the equation; there is really no question about that in my mind. Letters from students and peer evaluations are an important supplement to the forms.

If you want my opinion on how the use of the forms could be improved, I'd make the following suggestions. I'd like to see a shorter, simpler form. There should be a greater emphasis on getting a higher return rate from the students; this is statistically important. Class time should definitely be allocated to permit the students to fill them out. There should be more encouragement given to students to write a paragraph or two of comments.

I hope you find this information helpful. I also encourage you to talk to the deans and/or department chairmen to obtain their opinions as well.

Here's a roundup of programs designed to help evaluate, improve teaching

A Report on Teaching Evaluation and Improvement Efforts on Campus

(Drafted by Michelle Fisher)

In the 1981 charge to its Subcommittee on the Evaluation and Improvement of Teaching "to evaluate the Stanford program of course evaluation and teaching improvement," C-AAA specified that the principal focus should be on "a study of the current system of evaluation by students." C-AAA also requested, however, an overview of "additional resources for the evaluation and improvement of teaching." The following report, therefore, aims to give a sense of the variety and scope of evaluation and teaching improvement activities at Stanford in recent years. Inevitably it has left out some efforts that should have been mentioned, but this is unavoidable when many are done in the quiet, small-scale, or short-term manner that does not gain the attention of outsiders.

Center for Teaching and Learning (CTL)

Established in 1975 through a grant from the Danforth Foundation, the Center for Teaching and Learning three years later became a University office offering training, evaluation, and improvement programs to Stanford teaching assistants and teaching fellows.

The following year, as a result of a Senate recommendation that the courses of faculty be evaluated at the end of every quarter by students, CTL was requested by its cognizant deans to offer its services to faculty as well.

If faculty members were to be routinely evaluated, it was felt that they should also have an office to assist in interpreting the evaluations, supplementing student end-of-course ratings with other types of evaluation, and developing appropriate changes or innovations in their teaching. CTL therefore opened to faculty its already established programs including a fall teaching orientation, a teaching handbook, public lectures and workshops on teaching, videotaping and consultation, and a library of materials on teaching improvement.

It also introduced features aimed specifically at the needs of faculty, such as mid-term student small group evaluation, a guide to audiovisual and instructional resources on campus, and a workshop on grantsmanship in the humanities. Several of these are described in greater detail below:

- **Videotaping or classroom observation and consultation:**
  Faculty who would like to watch and evaluate their teaching for themselves can request that CTL make a videotape of their class in their usual room; there is no fee for the service. The director of the Center is available to review the tape with the faculty member and help analyze what, if any, changes are indicated. Subsequent tapings can be arranged so that faculty can check on their progress.

If faculty members prefer for one reason or another not to be taped but would still like their teaching observed, the Center director will make a classroom visit and discuss her observations with the faculty member afterward. In 1981-82, 15 faculty and 57 TAs chose videotaping and consultation, nine faculty and six TAs classroom observation and consultation.

- **Student small group evaluation:**
  This technique is meant to supplement the written end-quarter student evaluation since it is done mid-quarter—while there is still time to change a course—and there is an emphasis on obtaining very specific comments from the students. At the faculty member's request, a consultant enters a class and, once the professor leaves, divides the students into groups of six or less. In their groups, the students are given 10 minutes to choose a spokesperson and to decide on what they like about the class, what needs improvement, and what changes they would suggest. When the time is up, the consultant asks the groups for their responses, clarifies any contradictions, helps to make vague responses more specific, and checks out a summary of their remarks with the class. This all takes 20 minutes or less. The consultant gives the results to the faculty member later in a private session when the two of them also discuss how to put the information gathered to use in improving the course. Twenty-two faculty and 36 TAs requested such evaluations in 1981-82.

- **Guide to audiovisual and instructional resources:**
  The guide has been initiated to make it easier for faculty to become acquainted with and use a wide variety of resources from computer programs to instructional videotapes that can enhance or supplement their usual course materials. The result of collaboration among three offices besides the CTL, the first edition of the guide will be distributed to all faculty and departments in October, 1982.

The aim of this variety of activities, it should be emphasized, is to enable faculty and TAs to work on their teaching in the manner most comfortable and effective for their individual situation, be it the low stress and convenient approach of attending a public lecture on a certain teaching technique or the more anxiety arousing but more powerful strategy of videotaping and consultation. Faculty seem to have appreciated the variety of approaches since their use of the Center has increased each year since 1979.

Dr. Kelly Skeff and the Improvement of Clinical Teaching

Dr. Kelly Skeff of the Stanford Medical School, who also has a Ph.D. from the Stanford School of Education, conducts research on the theoretical and practical aspects of evaluating and improving clinical teaching.

He has done several experiments on different types of instructor feedback which indicate that clinical teachers who receive intensive feedback (a combination of a one-on-one conference with a consultant in which the teacher reviews a videotape of their teaching and discusses the results of student and house staff written evaluation questionnaires) valued the experience and exhibited a positive change in teaching behavior that could be detected by outside raters.

Because intensive feedback is so time-consuming, however, Dr. Skeff is now developing a seminar approach to improvements. Groups of clinical teachers will together view and then talk about videotapes which re-enact real clinical teaching problems. If this is successful, Dr. Skeff plans to produce a library of videotapes for such seminars and a book that explores the educational issues and principles illustrated by the tapes.

Emeriti Undergraduate Council

Through the efforts of the then Dean of Undergraduate Studies, Herant Katchadourian, several of Stanford's most distinguished emeriti teachers were invited in 1979 to form a council of advisors on undergraduate education. In particular, they were made available (and remain available) as consultants to departments and individual faculty members of TAs as well as administrators in matters regarding the improvement of undergraduate teaching.

At present, 10 emeriti are serving:
Antony Raubitschek, classics, coordinator
Harold Bacon, mathematics
Gordon Craig, history
John Goheen, philosophy
Konrad Krauskopf, applied earth sciences
John Mothershead, philosophy
Philip Rhinelander, philosophy
George Spindler, anthropology
David Tuttle, electrical engineering
Wayne Vucinich, history
Other members may be added in the future.

Graduate School of Business

In addition to an intensive study of its curriculum, in 1981-82 the GSB gave concentrated attention to the support of teaching in the School, particularly at the MBA level. Morris Eson, a psychologist from SUNY Albany, was hired to advise.

After several weeks in residence, Eson produced a document "Teaching in the MBA Program: A Brief Analysis and Some Recommendations" outlining several steps to help new faculty orient themselves successfully to the School and to encourage MBA students to take a more active role as classroom participants and constructive critics of their teachers.

Specifically, Eson recommended the production of a library of videotape vignettes of classes in the GSB, tapes that would be viewed and discussed by new faculty and students alike. The tapes would not be models but would allow both students and faculty to sample beforehand the situations they would be in and talk over how the teaching/learning process could be maximized.

New professors would also have the opportunity of discussing the vignettes with faculty who had been in the tapes or had long experience as effective teachers. Eson further recommended that other opportunities for senior-junior faculty interaction be increased and that the Center for Teaching and Learning be more fully utilized.

Over the summer of 1982, Tracy Berka, a new Ph.D. student in the GSB, is working on the implementation of Eson's ideas.

Instructional media

Instructional media is a self-supporting provisioner of AV and other graphic and media services to the Stanford Hospital and Medical Center and, to a lesser extent, the rest of the campus.

For two reasons, it also has a role in teaching improvement at Stanford. First, it runs the Fleischmann Learning Resource Center, a highly rated media library for medical students of course-related and supplementary materials, and second, it advises faculty on the proper utilization of such media. While such advice does not guarantee greater teaching effectiveness, it can have that result when effective design and usage requires care and thoroughness in pedagogical approach. As Dr. Maffly, who developed the highly popular StanMed program at Fleischmann has put it, "The computers have caused me to become more specific, to think more about what I want to teach and how I want to teach it." Similarly, Dr. Kelly Skeff, whose work has been described earlier in this report, emphasizes the role of Instructional Media in helping him to design "trigger" videotapes on improving the quality of instruction in clinical settings.

Instructional Media also offers videotaping and a booklet to guide self-evaluation of the tape to all faculty. Because this is a self-supporting service, however, the charge is considerable and has discouraged all but a handful of faculty from using it.

Mathematics Department Teaching Improvement Project

In both 1980-81 and 1981-82, the Mathematics Department funded Nira Hativa, a Ph.D. graduate of the Stanford School of Education, to develop training programs for those of its teaching assistants desiring help. The format of the training differed somewhat in the two years, but it basically consisted of several meetings to discuss teaching practices that make lessons organized and clear, show a videotape illustrating effective techniques, and distribute and explain hand-outs (ultimately a handbook) to facilitate lesson preparation and the introduction of new material.

Although the number of TAs participating each year was relatively small (seven in 1981), those taking part rated most of the training as useful and helpful. More importantly, pre/post tests on the trained TAs showed that they did indeed gain more in mean ratings from the students over the quarter than did a control group that did not receive any training. On the basis of such findings, Dr. Hativa has concluded that the program can serve as a model for the components of a successful TA training effort.

Western Culture Workshops

A major goal of the Western Culture requirement since its reinception has been the provision of high quality small group teaching to students just beginning their undergraduate education at Stanford.

To this end, for the past two years a one-week symposium has been held for Western Culture instructors directly before the beginning of school. Presentations are

continued on next page

SC-EIT/ continued from page 23

made at the symposium on the major works or genres that will be covered over the course of the year; expert speakers present not only their own insights and the latest research on the topics but suggest how to handle expectable problems in teaching the material. Western culture instructors emerge with a considerable head start in how to plan for and lead discussions on the enormous amount of material that must be covered.

Another symposium, of three days this time, was held September 20-22, 1982; approximately 40 instructors attended.

Workshops on the Teaching of Ethics

During September 1981, the Philosophy Department conducted a two-week workshop aimed at improving the quality of its two main introductory courses in value theory and its TAs' contribution to these courses.

Three faculty and six graduate students met daily for approximately three hours. By going through all the materials to be used in the courses and by examining the philosophical literature for anything else that should be included, they were able to significantly strengthen the courses being examined. The TAs also benefited from opportunities to talk with each other, a former student from the classes, and the director of the Center for Teaching and Learning about how to lead effective discussions in section. Finally, Michael Bratman and Arnold Davidson, organizers of the workshop and teachers of the value theory courses, felt they had gained considerably from the chance to talk over curriculum with "a friendly, but critical and informed audience."

Writing Workshops

The writing workshops, being sponsored by the Freshman English program for the third time in the fall of 1982, aim to improve undergraduate teaching at Stanford in a very specific aspect: the ability of TAs in departments other than English to criticize their students' writing in a helpful and effective way. Approximately 50 TAs are invited and paid to attend these two-hour sessions in which they practice identifying the elements of good prose, spotting problems in ineffective writing, and making comments that will help students improve.

As mentioned in the beginning, no doubt other significant efforts to improve teaching have been or are being conducted on the campus. Now that a *Guide to Audiovisual and Instructional Resources at Stanford* exists, perhaps such activities will be uncovered and publicized on a more systematic basis. In closing, however, we would like to briefly record certain improvement efforts which are known to us but did not seem to require lengthy description:

The Humanities and Sciences annual dean's awards for teaching excellence

Departmental teaching or TA awards in such departments as Computer Science, Mathematics, and Electrical Engineering

Departmental teaching methods courses such as Physics 299 and English 397A

Faculty interdisciplinary seminars on such topics as "American Studies," "Interpretation," and "Feminist Studies."

SC-EIT Members

The Sub-Committee on the Evaluation and Improvement of Teaching is headed by Prof. Walter Lohnes, German studies. Faculty members include Profs. Helen Blood, physical therapy; Richard Cottle, operations research; Sandy Dornbusch, sociology; Nate Gage, education; Edward Haertel, education; Thomas Moser, English; and Alan Schwettman, physics; students are Rick Naimark, public policy, and Jeannette Martello, biological sciences and psychology (who did not participate in this study); coopted members are Michele Fisher, director of the Center for Teaching and Learning, and Carolyn Walker, director of the Learning Assistance Center; ex-officio members include Carolyn Lougee, associate dean of humanities and sciences for undergraduate education, and Sally Mahoney, registrar. Staff included Anita Bravman, Ann Porteus, Ellen Stevens, and Newton Suter.

Mosher files appeal with H&S following dismissal as graduate student

Steven Westley Mosher, former Stanford graduate student whose field work in China generated international controversy, has filed an internal appeal against his dismissal from the University.

Mosher, 34, was dismissed by an 11-0 vote of the anthropology faculty Feb. 24. One of the first American anthropologists permitted to do extended field work on a rural Chinese commune, he blamed his expulsion on a popular Taiwan press article he wrote as "Steven Westley" documenting forced abortions late in pregnancy and on "slanderous" allegations by his former wife.

On March 7, the anthropology faculty responded that Mosher was dismissed for "illegal and seriously unethical conduct" in China that "endangered his research subjects."

The faculty concurred with an investigating committee report, given Mosher last fall, which said in part: "'We feel that although the Chinese are clearly linking Mosher's article to the restrictions they are imposing on foreign scholars, we cannot hold Mosher responsible for the actions the Chinese are taking.

"Although we believe that Mosher was unwise to publish his article in a popular Taiwan weekly, where it would be read as a political attack on the PRC, we cannot judge this act to be misconduct, both because we are not convinced that Mosher fully understood the implications of his choice of publishing medium and because we believe that Mosher's right to publish what he chooses is protected to the right of freedom of speech."

The faculty said its finding that Mosher committed "illegal and seriously unethical acts" is based on "persuasive evidence that cannot be revealed without endangering innocent persons."

"The innocent persons in question are not Chinese officials or Mr. Mosher's former wife.

"Mr. Mosher is on record as stating that the crucial evidence against him would physically endanger innocent persons and appropriately he has not released that critical information."

"Mr. Mosher has in his possession all of the evidence against him and the 47-page page report drawn up by the (investigating) committee. He has had every opportunity to refute it.

"No findings were based on uncorroborated statements of interested parties, or on statements of persons unrevealed to Mr. Mosher. At the outset of the investigation, the committee agreed to consider only evidence whose source could be made known to Mr. Mosher and the full anthropology faculty.

"Mr. Mosher asked that any other allegations about his conduct, coming from sources whose identity could not be disclosed to him, be destroyed—and this was done. The information was never released to the faculty."

At a news conference immediately after the Feb. 24 decision, Mosher showed a copy of the report to journalists, but refused to make it public, saying this would "undermine" future legal action against the University. He said "the only innocent person harmed was myself."

In subsequent news interviews, Barnett pointed out that Mosher had confirmed his authorship of the Taiwan article and had apologized for it in writing to the department before the investigating committee was formed. Had this been the basis for dismissal, no investigation was needed, because the facts were clearly establihsed, Barnett said.

Mosher filed his appeal with Dean Norman K. Wessells of the School of Humanities and Sciences. Investigations of appeals normally are completed witnin 30 days. Further appeal is possible to the vice-provost and dean of graduate studies and research, Gerald Lieberman. After that, students may request President Kennedy to review the case.



Steven Mosher

New members elected to 16th Senate

Twenty-six representatives have been elected to the 16th Senate of the Academic Council, according to Academic Secretary Clara Bush.

Total participation in the election was nearly 39 percent of those eligible. A total of 1,283 ballots were mailed, 495 returned and counted, and six ruled invalid, according to the Committee of Tellers, headed by H. D. Winbigler, Stanford's first academic secretary, now emeritus.

The new Senate will have an organizational meeting at 3:15 p.m. Thursday, May 5, in Room 180 of the Law School.

Those elected, alternates (in order), and the ballots mailed, ballots returned and counted, and those ruled invalid by electoral unit were as follows:

Business: E. J. Webb and H. J. Leavitt, elected; J. Pfeffer, J. C. Van Hirne, D. P. Baron, and D. B. Montgomery, alternates; 59 mailed, 25 counted.

Earth Sciences: S. A. Graham, elected; G. A. Mahood, T. H. van Andel, and A. G. Journel, alternates; 32 mailed, 16 counted.

Education (including Physical Education): D. C. Phillips, elected; L. S. Shulman, H. N. Weiler, and E. G. Cohen, alternates; 39 mailed, 26 counted, 1 invalid.

Engineering: R. W. Cottle, J. L. Adams, R. H. Eustis, and P. L. McCarty, elected; W. C. Reynolds, C. H. Kruger, Jr., J. D. Meindl, D. M. Mason, H. E. Riggs, and M. D. Van Dyke, alternates; 189 mailed, 63 counted, 3 invalid.

Humanities and Sciences, Section A: P. P. Jones, J. D. Walecka, J. McCarthy, and R. N. Zare, elected; J. I. Brauman, A. L. Fetter, E. A. Feigenbaum, P. R. Ehrlich, P. A. Sturrock, and T. H. Geballe, alternates; 153 mailed, 51 counted.

Humanities and Sciences, Section B: G. H. Bower, S. M. Dornbusch, J. L. Gibbs, Jr., and S. M. Lipset, elected; A. Tversky, W. P. Falcon, J. J. Sheehan, D. B. Abernethy, B. G. Hickman, and J. G. Gurley, alternates; 167 mailed, 57 counted.

Humanities and Sciences, Section C: V. A. Harvey, J. B. Bender, W. M. Chace, and T. M. Andersson, elected; J. M. Evans, R. M. Polhemus, M. H. McCall, Jr., H. S. Lindenberger, M. W. Edwards, and A. Cohen, alternates, 161 mailed, 62 counted.

Law: J. H. Merryman, elected; A. M. Polinsky, R. J. Gilson, and J. Kaplan, alternates; 37 mailed, 9 counted, 1 invalid.

Special Group: R. F. Bacchetti, elected; W. F. Massy, S. Mahoney, and F. A. Hargadon, alternates; 19 mailed, 11 counted, 1 invalid.

Medicine, Section A: D. A. Clayton, elected; E. M. Shooter, A. Kornberg, and M. E. Billingham, alternates; 79 mailed, 35 counted.

Medicine, Section B: F. Murad, R. A. Chase, and R. L. Jamison, elected; K. B. Taylor, S. A. Rosenberg, R. W. P. Cutler, L. M. Zatz, and F. K. Conley, alternates; 316 mailed, 123 counted.

Carpools

Need ride: San Jose (No. Capitol) to Stanford (ERL) and back, 8:30 and 5, M-F. Call Maria at (408) 280-2568 (day) or (408) 926-5328 (night).

Carpoolers wanted for existing carpool. Marin County to Stanford University. M-F, 8-5. Contact Kyle at 7-5602.

Carpoolers wanted. Dublin/San Ramon/Pleasanton to Med Ctr. Hours 9-5:30, M-F. Call Ed at 7-5569.

Ongoing carpool needs another partner. Leaves Oakland at 8:30 a.m. Leaves Stanford at 6 p.m. M-F. Call John Bundor at 7-4480.

Ongoing carpool needs another partner. Leaves Oakland at 8 a.m., leaves Stanford at 6 p.m., M-F. Call Dan Crump, ext. 7-4433.

Medical Center MEMO

Grossman receives award

Dr. Maurice Grossman, clinical professor emeritus of psychiatry and behavioral sciences, has received the Outstanding Achievement Award for 1983 of the Northern California Psychiatric Society (NCPS).

The award honors members of NCPS, a branch of the American Psychiatric Association (APA), in recognition of exceptional contributions to psychiatry and the greater community.

The presentation was made at an Asilomar ceremony earlier this month by Dr. Thomas Gonda, professor and chairman of Stanford's department of psychiatry.

An internationally recognized authority on problems of confidentiality, Grossman played an increasingly important role throughout the 1960s in legislation related to psychiatry, beginning with his presidency of NCPS in 1960. He has continued this activity in various capacities in organized medicine.

Specifically, Grossman has worked with insurance industries, the California Medical Association, and the American Medical Association on issues of protection for patient confidentiality.

Earlier, he developed innovative occupational, hospital-wide treatment programs for the chronic psychiatric patients of Veterans Administration hospitals.

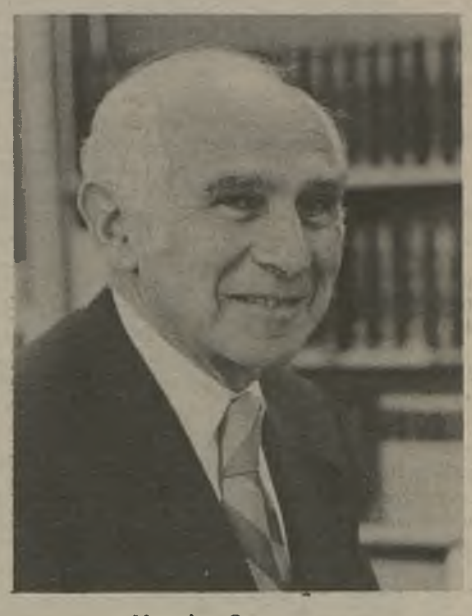
An offshoot of this work was Grossman's recognition of the psychodynamics of chronicity, and the application of this knowledge in rehabilitation to problems of chronic illness in general. Grossman's activity on the federal and European scene began with this field of medicine.

Grossman received his M.D. in Philadelphia, the city of his birth, from the Jefferson School of Medicine in 1931.

Already trained in surgical pathology and experienced in general practice, he took psychiatric training at the VA Hospital in Palo Alto.

During the 1950s Grossman held simultaneous appointments on the clinical faculties of two medical schools: at the University of California, San Francisco, in psychiatry; and at Stanford in physical therapy. At that time he taught psychological medicine to physical therapy students.

When Stanford Medical School moved to the Palo Alto campus, Grossman, who was in private practice there, joined the school's department of psychiatry. He has been recognized for exceptional teaching



Maurice Grossman

by his students and former psychiatric residents.

Listed in *Who's Who in the West*, Grossman is the author of numerous articles and is currently preparing a summation of trends in American psychiatry, at the request of his colleagues in France, that encompasses developments in the 1900s which explain the situation today.

Patient needs bone marrow transplant

An effort to help identify potential bone marrow transplant donors was announced yesterday by the Stanford Medical School Blood Bank in the wake of an appeal by two Long Island businessmen.

Dr. F. Carl Grumet, associate medical director of the blood center, said informational letters would be sent, probably within the next several weeks, to a select group of donors who have undergone extensive blood typing.

Grumet spoke at a news conference with David Kolatch and David Welner, who came from New York to Stanford in search of a blood donor for a friend, whose only chance of survival from leukemia is a bone marrow transplant.

Dr. Edgar Frenkel, 34, a psychiatrist, has chronic mylogenous leukemia. His doctors estimate that he probably has only a few months to live without the transplant, Kolatch said.

A precise match of blood type is required to ensure a successful marrow transplant, and only about one person in a million would qualify, said Grumet.

Stanford is not unique but is one of only a few centers nationally where precise blood typing of characteristics called HLA antigens have been done on about 1,000 blood donors.

Grumet said a cursory check has not disclosed any donors where each of six potential factors match, but he would send letters informing all of his donors who have been typed of the need for Frenkel, and the potential to donate marrow for other leukemia sufferers.

Grumet said he ruled out attempting to identify and contact a specific donor for Frenkel from among his lists, "because it is unfair to ask people who have agreed to donate blood for purpose A to have their name added to a list for purpose B."

Stanford runs HLA tests on a group of volunteers who agree to donate blood platelets on a frequent basis for patients who need a tailor-made match of blood types.

"These donors are really special people who are already giving quite a bit. We do not want to put them under undo pressure," Grumet said.

Ironically, Grumet said that the closest match he has found from a cursory screening is himself, with four out of six of the HLA factors matching. Two matches with five out of six factors matching have been found in other searches around the country, Kolatch said, but most transplant centers insist on a six out of six match before they will operate.

Until very recently, Grumet said bone marrow transplants would not be performed on matches of donors from outside the patient's family. While only a few cases currently come to the attention of blood banks annually, Grumet said medical progress will increase the need for unrelated bone marrow donors in the future.

Grumet, as well as Kolatch and Welner, are hopeful the current effort will initiate, in collaboration with other blood and transplantations centers, a national registry of potential volunteer bone marrow donors.

Obtaining marrow from the donor causes temporary discomfort but involves essentially no risk for the donor, he added.

"We're hopeful that as we pursue this, we will be able to find a donor (for Frenkel). But even if we can't, we hope that what we do will be of lasting use to society," said Kolatch.

Finding a suitable donor for a bone marrow transplant outside a patient's immediate family is always difficult, because of the complicated tissue matching that must be done.

But Frenkel has several rare factors that decrease the chance for finding a perfect match among people who have been HLA tested to about one in several hundred thousand, Grumet said. (Although the odds in the world population are one in a million, a larger number of persons of European ancestry increase the odds somewhat, Grumet said.)

Frenkel's problem is compounded further by the fact that, while many people know whether they have A or B type blood, few have been tested for HLA type. The sophisticated typing procedure costs several hundred dollars per person, and is performed by only a few dozen laboratories around the country.

Because of the expense of the extended HLA typing procedure, the "Emergency Support Fund, " set up by Frenkel's friends, has asked that only persons who have been previously HLA tissue typed contact them. Inquiries from potential donors can be addressed to Bone Marrow Transplant Search Center, P.O. Box 600, Cedarhurst, New York, 11516.

Kolatch said an offer of $25,000 made in New York earlier was still in effect for the donor.

HLA stands for "Human Leukocyte Antigens"—proteins that appear on the membrane of white blood cells. While every human being can be divided into the four familiar A, B, AB, and O blood groups according to their red cell type, the number of distinct HLA blood types possible runs into the thousands.

In addition to its use in research, HLA typing is most often performed to identify uniquely compatible donors who can provide custom-tailored blood products, such as platelets, for patients whose blood disease prevents them from being helped by blood transfusions from random donors.

—Deborah Franklin

Symposium on molecular genetics

The promise of "new genetics" now shaking the very foundations of modern medicine will be the topic of a day-long symposium Friday, May 13 at Stanford University School of Medicine.

The symposium, which will begin at 8:15 a.m. in Sherman Fairchild Auditorium, is part of a series of meetings at Stanford on the subject of molecular and genetic medicine.

According to Dean Dominick Purpura, Stanford is now formalizing a broadly based program in molecular and genetic medicine involving faculty from both the basic and clinical sciences.

"The purpose of the academic program," Purpura said, "is to provide the scientific and intellectual framework necessary to speed the pace of anticipated research advances and their translation into revolutionary methods of diagnosis and therapy of human disease."

Collectively, the techniques of molecular genetics are known as genetic engineering—a term that captures the skill and precision with which human DNA can be inserted into the genetic machinery of bacterial and yeast cells and made to function.

Bacteria with human gene transplants can churn out vast quantities of man's own body chemicals expected to be used to treat disease. By peering into human genes, scientists can now predict with uncanny accuracy which individuals are likely to be afflicted with *what* diseases over the entire course of their lives. And attempts to cure patients of hereditary defects are contemplated in the not far-distant future.

"The excitement and promise of the 'new genetics' both as a research tool and as applied to the study and treatment of diseases, have deep roots at Stanford," Purpura noted.

Among the speakers will be leaders in molecular genetics from the Carnegie Institution in Washington, Columbia, Harvard, Stanford, University of California in San Francisco, and University of Texas.

Topics will include "Viruses, genes and cancer," "Oncogenes among antibody genes and implications for human cancer," "Transposable elements and their use as genetic tools," "Lipoprotein receptors: genetic defense against heart attacks," and "Steps toward a molecular grammar of learning."

The symposium is open to invited guests and faculty, students, fellows, interns, residents, and staff.

Copies of the program can be obtained from the Office of Public Events, Stanford University School of Medicine, 800 Welch Road, Suite 221, 497-6389.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6011.

SUMEX-AIM: exploring computer possibilities in medicine

The man at the other end of the telephone was irate.

His illness had thwarted all attempts by his physician at diagnosis, and he wanted to go one step "higher": he wanted to talk to "INTERNIST," a computer program designed to simulate medical judgments.

The program is just one project being developed by researchers using SUMEX-AIM—a Stanford-based national computer network devoted to researching the uses of artificial intelligence in biology and medicine.

"He really didn't understand when I told him that it wouldn't be possible (for him to consult the computer)," said Dr. Roy Maffly, the Stanford professor of medicine who serves as liaison between potential users and the computer network. "He figured that he paid taxes, and it is a federally-funded program, so he should have access to any program on SUMEX."

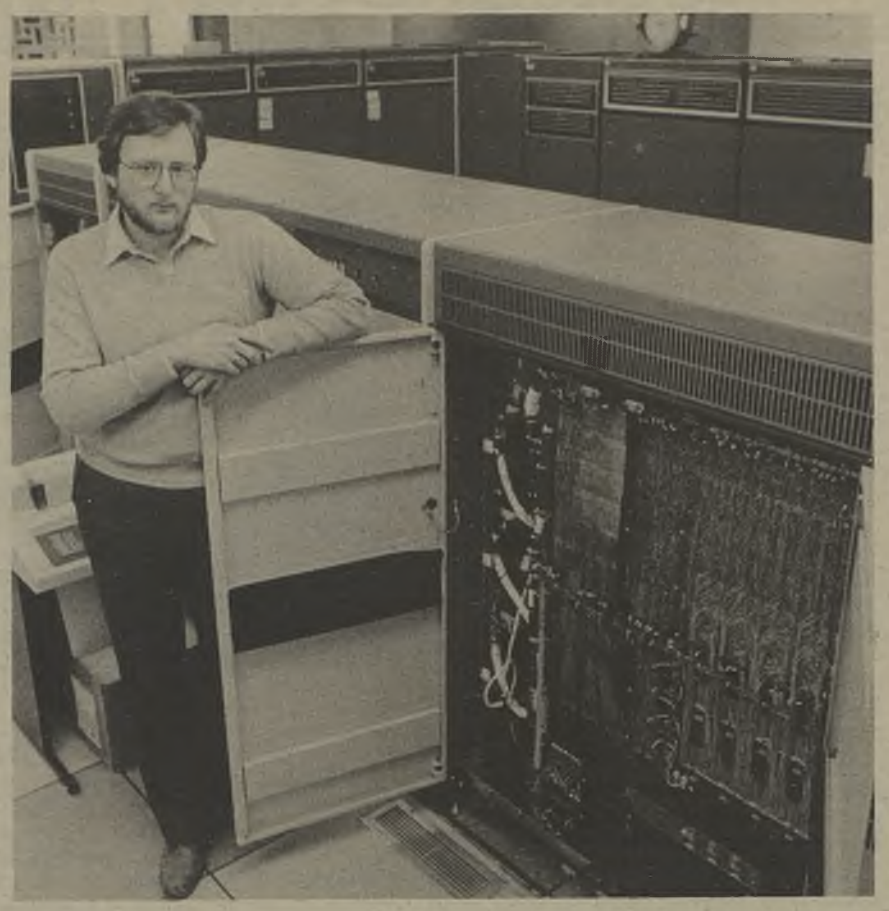
Though the question was unusual, confusion about what SUMEX can and cannot do is widespread, even in the medical center where it makes its home.

"Most people think that this is a data bank of every disease that anyone's ever come down with," said Edward Pattermann, SUMEX director. "They may be looking for information on a certain disease or a specific chemical compound, and they don't realize that we're a research center—not a data bank."

SUMEX-AIM stands for "Stanford University Medical Experimental Computer for Artificial Intelligence in Medicine." Like the Heuristic Programming Project (HPP), a 50-person laboratory in Stanford's computer science department, SUMEX is a workshop for testing new techniques in artificial intelligence, rather than a showcase of market-ready products.

Unlike the HPP, which is strictly a Stanford program, SUMEX provides computer support to researchers internationally.

Born in 1973 with a grant from the National Institutes of Health, SUMEX is the only network of its kind in the world—designed to serve as a computing resource for a new breed of scientists eager to apply artificial intelligence to problems in biology and medicine. Fifty percent of the computer's time and energy is devoted to Stanford projects, while the remaining time is divided among scientists throughout the United States and in several foreign countries.



SUMEX-AIM director Pattermann proudly displays the project's new computer system. In operation a couple of months now, the system is considered better and more efficient than the former SUMEX computer.

"Part of the appeal of SUMEX originally was that it would act as a link between researchers all over the country," explained Dr. Edward Shortliffe. He is assistant professor of medicine and a co-principal investigator for medicine of the $1.5 million SUMEX project with Dr. Edward Feigenbaum, professor of computer science. The network makes possible research requiring expensive facilities that are bigger than any single institution could support alone, Shortliffe said.

The 15 projects currently using the system range from a program designed to coordinate and interpret 30 separate measurements of body function that summarize a patient's status in the intensive care unit, to a computer consultation service for the detection and diagnosis of rheumatic diseases.

One collaboration between scientists at Stanford and the University of New Mexico is being developed to advise geneticists in the design of their experiments to manipulate DNA, while a model developed at Carnegie-Mellon University is designed to help psychologists understand how humans make decisions.

Though the community of projects tied to the SUMEX facility is far-flung, both geographically and in application, common threads bind the projects together. Each project seeks to codify the information and rules that human experts use to make decisions. Each is in the developmental stage—once a project is ready to be useful clinically or in industry, it is moved off the SUMEX system, to make way for new experimental projects. And each project is tied by phone to computers and programs unique to the SUMEX system.

A DEC-2060, a large mainframe computer tucked into a 2,000 square-feet glass room in the medical center, and a similar machine at Rutgers University in New Jersey, provide most of the "brainpower" for all SUMEX-AIM projects. Though useful for experimental purposes, the system whereby users share computing time on a large centralized computer would be impractical for a physician's office. The fifteen programmers, administrators and support staff at SUMEX are already working on the problem.

"The trend (of artificial intelligence in medicine) in the 1980s will be to move from the model of the large scale, $800,000 computer to small, powerful workstations," said Shortliffe. "Within a few years you'll be able to buy a computer like that for $10-15,000—perhaps even for less. Ultimately the same computer could handle a physician's billing and offer patient advice.

"SUMEX is trying to lead the research in this area," he said. Though none of the medical diagnostic systems at SUMEX is ready yet for widespread distribution, several are being tested in hospitals around the country.

"ONCOCIN," a system that weighs the good and bad side effects of complex chemotherapy and radiation treatments in cancer patients, has been used on a limited basis in Stanford's oncology clinic for two years. Research in the next three years will be geared towards moving the system onto independent workstations in the clinic and beyond, said Shortliffe.

—Deborah Franklin

Psychiatrists study narcolepsy in dogs under NIH grant

A major study into the mechanisms and causes of narcolepsy has been launched by Stanford University psychiatrists under a grant from the National Institutes of Health.

Narcolepsy is a neurological condition that causes irresistible sleep attacks in its victims. Originally, the disease was thought to be rare, but research has shown it to be more widespread, now afflicting about 250,000 Americans.

The disorder is characterized by excessive daytime sleepiness, cataplexy (abrupt attacks of muscular weakness), and sudden attacks of or desire for sleep. REM (rapid eye movement) sleep, at uncontrollable intervals, results.

Under a $100,000 a year grant for the next three years, researchers headed by Dr. William Dement will study narcoleptic dogs that manifest the same symptoms as in the human condition. The research is expected to provide important clues to causes and treatments.

Dement, professor of psychiatry and behavioral sciences, is director of Stanford's Sleep Disorders Center and a recognized leader in the field.

"People have suffered from narcolepsy for hundreds, probably thousands of years," he said. "Only in the last few years has it become widely recognized as a distinct medical disorder, and the object of major research."

The study will include new technical advances such as development of a system which can take long-term neurophysiological recordings in unrestrained dogs.

With the only population of narcoleptic dogs in the world, investigators contend, Stanford is in a unique position to conduct comprehensive research on neurochemical, anatomical, and physiological aspects of the disorder.

"Studies in humans are difficult, expensive, and necessarily limited in scope," said Dr. Theodore Baker, the research associate directing the new project.

According to Dement, none of the drugs thus far used to treat the symptoms of narcolepsy have offered a cure. They are often habit-forming, provide only temporary relief, and can be accompanied by detrimental side effects.

A severe, debilitating, chronic condition, narcolepsy often leads to visual and memory problems, poor driving, home and work problems, headaches, nightmares, and the risk of drowning or other fatal accidents.

"Constant suffering is the companion to those with narcolepsy," said Dement.

In previous studies with dogs, Dement and his colleagues found a strong genetic basis for narcolepsy, and uncovered a variety of scientific facts relating to the neurochemical imbalance which causes it. The present study aims to expand research already begun in Stanford laboratories.

"We hope that this canine research will lead to an understanding of the basic defect underlying narcolepsy. This could lead in turn to more effective treatments aimed at correcting the defect," Baker said.

Investigators, besides Dement and Baker, include Drs. Jack Barchas, professor of psychiatry and director of the Laboratory of Behavioral Neurochemistry; Roland Ciaranello, associate professor of psychiatry and director of the Laboratory of Developmental Neurochemistry; Craig Heller, associate professor of biological sciences; and James Meindl, professor of electrical engineering, and director of both Stanford Electronics Laboratories and the Center for Integrated Systems. —Lisa Ames



William Dement

Health care not immune to effects of cultural diversity

A young Vietnamese woman gives birth to a healthy baby. Her physician gives her post-delivery instructions, to which she smiles and nods in agreement. But the nurses note on her records that she resists all medication and baths.

The physician is concerned about her apparent noncompliance. But in reality, the mother, in accordance with her cultural beliefs, is simply trying to gain back the heat she lost during childbirth. She cannot understand why the nurses want her to take showers, which may chill her, and give her cold water with which to take her medication.

Cultural differences in health beliefs and practices such as these often interfere with the effectiveness of treatments, said Dr. Elois Ann Berlin, a medical anthropologist. This is especially important in areas in which large numbers of immigrants settle.

For example, she said, a federally-funded study of California's population growth during the past decade reports a total increase of 10 percent. While the white population increased only .7 percent, according to the *West Bay Area Health Systems Agency* report, the Hispanic population increased 33.3 percent and the Asian population increased 41.1 percent.

Berlin, who is working through the South Bay Area Health Education Center at Stanford University School of Medicine, has developed a multi-cultural clinical teaching program for health care providers. With her guidelines, which she teaches to residents at the Family Practice Residency Program, Stanford medical students as a guest lecturer in internal medicine, pediatrics, and family medicine, and community physicians at special workshops, they can more effectively treat members of the various cultures that have settled in the Bay Area.

"The fundamental concept to teach physicians is attitude," Berlin said. "They have to be receptive to their patients, and must realize the patients do have an explanation of the illness they're experiencing and that it may not fit in the biomedical model."

The key to more effective treatment, she said, is to incorporate the patient's treatment according to cultural beliefs with biomedical treatments.



Dr. Francis Curry (left), who graduated from Stanford Medical School in 1946, employs methods in his daily practice which are similar to those advocated by medical anthropologist Berlin. Curry treats new Asian immigrants who have settled in San Francisco's Tenderloin District.

Many cultures, including Hispanic and Asian that are the Bay Area's most prevalent minorities, derive their health beliefs from humoral pathology, an ancient theory that good health is the result of a balance of the body's four humors: blood, phlegm, yellow bile, and black bile.

There must also be a balance between hot and cold substances in the body, the theory prescribes. Chinese traditional medicine, Yin/yang, which specifically influences Asian health beliefs, prescribes the same concept. So in the case of the new mother, she was not resisting her physician's treatment, but merely trying to restore the balance that had been disrupted by childbirth.

Physicians should let patients say what they are experiencing, rather than ask them if they have specific symptoms, Berlin said. In many cultures it is considered impolite to disagree, she explained, so they would agree with every symptom their physician mentioned.

After listening to patients' perceptions of their ailment, physicians should try to explain the biomedical reasons for the ailment. This can be especially difficult, Berlin added, because many cultures have differing perceptions of anatomy or pathology.

After acknowledging the similarities and differences of the perceptions, physicians should recommend and negotiate treatment. The mother's physician, for example, might have agreed to allow her to take sponge baths, or perhaps have told the nurses to give the mother warm water with which to take her medication.

Berlin has also accumulated information about the various cultures for physicians, which includes many idiosyncrasies that may indirectly affect treatments. For example, in Asian cultures the soul resides in the head. The common practice of patting a child on the head could startle the soul and cause it to run away, Berlin explained. In order to avoid this, she said, physicians should always ask permission to touch patients' heads during a clinical examination.

Among Hispanics, on the other hand, blood is considered to be in limited supply, and is equated with strength and virility. Patients may resist blood tests for this reason, Berlin explained, and physicians must quell their concerns.

Berlin is making videotapes of role play between physicians and patients to supplement the written material. She hopes to disseminate both as a package to medical schools throughout the country.

"The combination of medicine and anthropology in making treatment of culturally-diverse populations more effective is rare," she said.

"Our goal is to give physicians an awareness of the types of differences they may encounter, how to elicit those differences, and alternative ways to deal with them without antagonizing the patients or hampering the effectiveness of the treatment."

—Shirley Kraus

Medical Center Calendar

PUBLIC EVENTS

WEDNESDAY, APRIL 27

Registration deadline for Dept. of Clinical Social Work course: "I Can Cope," on living with cancer, intended for cancer patients and their families. For further information or to register, call 497-5091.

Basic Science Research Colloquium: "Anchoring of Cells to Their Matrix by an Integral Membrane Proteoglycan"—Dr. Merton Bernfield. 5 p.m., Fairchild Auditorium.

Dept. of Clinical Social Work: "Genetic Counseling and Prenatal Diagnosis"—Rose Grobstein, C.S.W. 2:30 till 3:30 p.m., Faber Auditorium, Children's Hospital at Stanford. For further information on this and other upcoming social services programs offered as part of the department's 70th anniversary celebration, call 497-5091.

Div. of Orthopedic Surgery Grand Rounds: "Nerve Entrapment Syndromes"—Dr. Jeffrey Saal. 8:30 a.m., M114.

THURSDAY, APRIL 28

Dept. of Medicine Grand Rounds: "Temporal Arteritis and PMR"—Dr. Jeffrey Fessel. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology Seminar: "Glucocorticoid Regulation of Protein Processing and Compartmentalization"—Dr. Gary Firestone (UC-Berkeley). 4:15 p.m., Pharmacology Library R358.

FRIDAY, APRIL 29

Dept. of Clinical Social Work lecture: "Oncology Social Work and Clinical Research"—with Isabel Walker, Patricia Fobair, Sherry Feld, Jill Lehman and Susan Weisberg, all licensed clinical social workers. 9 a.m. till 4 p.m., Fairchild Auditorium. For further information, call 497-5091.

Stanford Medical Alumni Association presents: "The Hypocritic Oaf," a musical featuring the Medical School class of '83 and faculty. 8:30 p.m., Dinkelspiel Auditorium.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Women and Women's Health Care—Legal and Professional Barriers"—Rosemary Mann, C.N.M. (teacher of women's health care and law student). Noon, M114.

Div. of Child Psychiatry Grand Rounds: "Problems in the Psychotherapy of Children Who are Incest Victims"—Dr. Penelope Garrison (UC-Davis). 11 a.m. till 12:15 p.m., Faber Auditorium, Children's Hospital at Stanford.

Dept. of Dermatology Lecture: "Systemic Steroids: Taming the Monster"—Dr. Werner Ju. 8 a.m., Dermatology Library R136.

Dept. of Pathology Surgical Pathology Conference: "Gene Rearrangement in Lymphoma"—Dr. Michael Cleary. 8 a.m., L201.

Dept. of Pediatrics Grand Rounds: "Management of Chronic Active Hepatitis"—Dr. Peter Gregory. Case presentation by Dr. Cynthia Thornton. 8 a.m., M106.

MONDAY, MAY 2

Dept. of Medical Microbiology Seminar: "Regulation of *E. coli* Envelope Protein Composition by Local Anesthetics"—Dr. Merna Villarejo (UC-Davis). 1:15 p.m., M114.

Friends of Nursing and Nursing Educational Services: "Ethical Issues in Clinical Practice." An all-day program at Rickey's Hyatt House, Palo Alto. For further information call Carole Kidder at 497-6366.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

...News Notes...

The Dietary Safety Committee and the department of dietetics celebrated last week the accomplishment of 100 accident-free days in dietetics, said Ruben Perez, assistant director of safety/security services.

The committee has worked diligently with the department to make dietetics a safer working environment, and specifically to minimize "lost-time injuries." Perez said he hopes that other departments will follow suit.

The accomplishment in dietetics is no minor feat, Perez said, when one remembers the many hazards in a food production area, including hot and sharp items, and heavy objects.

The safety committee is chaired by Randy Wilson, senior dietary worker, and includes representatives of the seven dietetics divisions, as well as management representative Lori Riewerts. It was formed in 1980 to develop safety strategies.

The celebration included committee and department members, and cake and punch were served.

* * * *

The 1983 Stanford Album Quilt, hand-stitched by members of the Stanford Medical Faculty Women's Association, is now on display in the front lobby of the hospital, across from the cafeteria.

Chances to win the quilt at a May 13 drawing are on sale this week, and will again be available the week of May 9. Proceeds of the annual fund raising event benefit the Medical Student Scholarship Fund.

Chances sell for $1 apiece, or $5 for six, or $10 for 12. They will also be available from Ann Chase, 494-7821, the week of May 1.

Medical faculty, housestaff and their guests may call Sylvia Witcher, 321-0146, to make reservations for attendance at the drawing, a wine-tasting party to be hosted at Hoover House, the home of President and Jeanne Kennedy. Ticket holders do not have to be present at the drawing, however. The winner of the quilt will be notified later.

* * * *

Two long-time staff members in the Hospital, Mary Pickthorn and Ella Rush, have recently retired.

Pickthorn, supervisor of transcription in radiation therapy, leaves after 10 years at SUH and will stay in touch by becoming an Auxiliary member in the north intensive care unit. She will also act as a relief transcriptionist in her department when staff shortages occur.

Rush, formerly in the cashier's office, plans to move to Half Moon Bay and may pursue part-time employment there in the fall.

* * * *

As mentioned in a recent "news note," the Palo Alto Medical Research Foundation is sponsoring a Tuesday lunch seminar series which includes several SUMC speakers.

Upcoming lectures include:

- *May 3, Dr. Vernon Oi, research associate in the department of genetics, speaking on "Immunoglobulin Gene Expression in Transformed Lymphoid Cells;"*
- *May 10, Dr. James Whitlock, Jr., associate professor of pharmacology, speaking on "Molecular Mechanisms of Microsomal Enzyme Induction;" and*
- *May 24, Dr. Eckard Weber, research associate in the department of psychiatry, speaking on "Brain Distribution of Opioid Peptides and Their Precursors."*

All lectures take place 12:45, preceded by a 12:15 p.m. lunch, and will be held at the Palo Alto Research Institute, 860 Bryant Street.

For further information, call the office of Dr. Marcus Krupp at 326-8120.

* * * *

Robert Demers, R.R.T., has been appointed chief respiratory therapist in the Department of Respiratory Therapy, announced Antonius Van Kessel, technical director in the department.

Demers was formerly a special pulmonary staff associate and instructor in the department of medicine at the University of Massachusetts Medical Center in Worcester, Mass.

He serves on the board of directors of the American Association for Respiratory Therapy and is a member of the editorial board of the **Respiratory Care Journal**.

* * * *

Linda Gifford-Saenz has been appointed a senior employee/labor relations specialist in Hospital Personnel, said Dan Robinson, acting director of personnel management.

Gifford-Saenz has over nine years of experience in personnel management and was most recently a senior employee relations representative at National Semiconductor Corporation.

She will be located in room E009 of the hospital, and can be reached at 497-6251.

* * * *

Dr. James French, associate professor of pediatrics, spoke yesterday at the monthly meeting of **Parents for Heart**, *a support group for parents of children with heart disorders. His topic was "Activity Restriction and Exercise Tolerance in Patients with Congenital Heart Disease."*

The group is sponsored by the Santa Clara County Chapter of the American Heart Association. Those interested in joining or finding out more about the organization may call the AHA at (408) 247-8555.

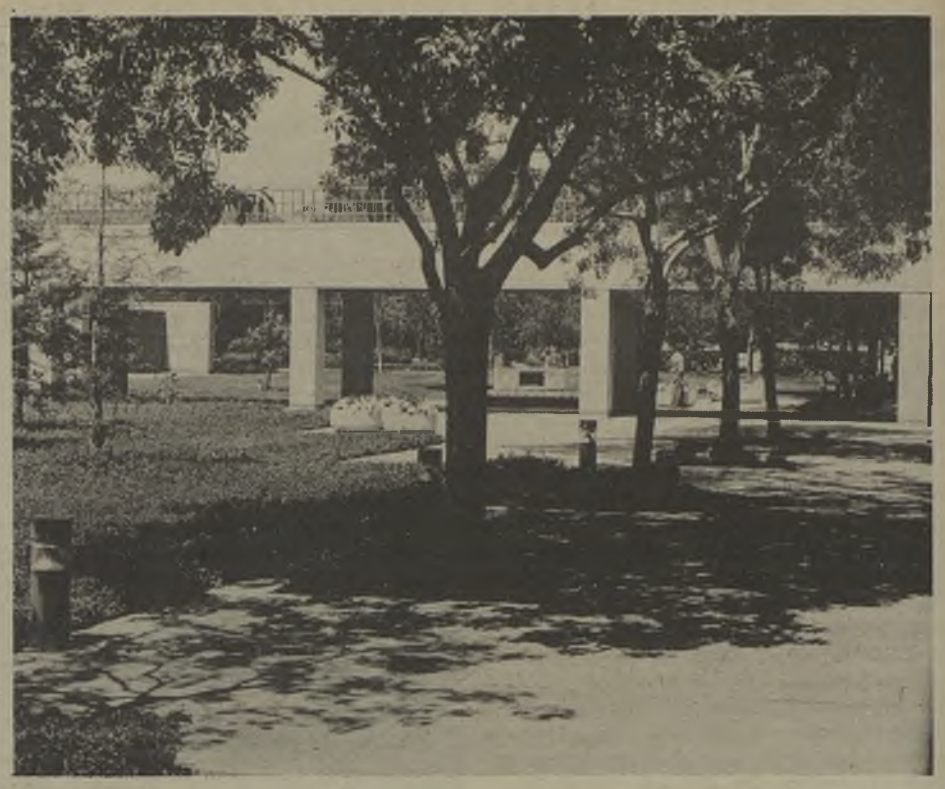
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As of Monday, April 25, construction to connect utilities in the cardiovascular research building has necessitated changes in nearby traffic, said Hilary Ryniewicz, director of Safety/Security Services.

Excavations extending from outside the East 1A wing, past the emergency entrance, and around to the loading dock area are taking place to connect utilities for the CV research building.

For approximately three weeks, no access will be possible on foot from the emergency entrance sidewalk to the loading dock. Pedestrian traffic from the Quarry Road area will be directed down through the loading dock into the hospital.

One-way street traffic will be necessary in this area, and during this time, the Hoover Shuttle bus will operate from the doctors' parking lot near the cafeteria entrance.



Its springtime popularity belies this tranquil peek through the pillars at Alumni Green, especially on nice days when groups of students gather there at lunchtime to bask in the sun.

Noted virologist gives Schultz talk

The sixth Edwin W. Schultz Memorial Lecture, given this year by Dr. Jesse Summers of the Philadelphia Institute for Cancer Research, will take place Monday, May 9, at Stanford Medical Center.

Summers, a senior member of the Institute, will discuss "Molecular Studies on the Replication and Pathogenesis of Hepatitis B-Like Viruses Using Animal Models" at 5:15 p.m., in Fairchild Auditorium. The public is invited, and there is no admission charge.

The noted virologist is researching viral replication and pathogenesis of hepatitis B and related animal viruses. His research offers a chance to study diseases in animals resembling those caused by the hepatitis B virus in humans, including liver infections and liver cancers.

Summers received his graduate training in microbiology at the University of Texas at Austin and later studied at the Salk Institute in San Diego, before joing the Institute for Cancer Research.

The Schultz lectureship honors Dr. Edwin W. Schultz, who served as chairman of medical microbiology at Stanford for 33 years. The memorial lectureship was established at his death in 1971 by his family and friends. The lecture is hosted by the department's graduate students.

For further information, call Shayne Frankel at 497-9202.

Wanted: Research Volunteers

Men and women suffering from herpes are needed to participate in a study being conducted by the division of infectious diseases at Stanford University Medical Center.

Persons with either type of herpes (HSV-I or HSV-II) are eligible to participate, but volunteers must experience outbreaks on the arms, legs or trunk, and *not* around the eyes, lower face or genitals, said Dr. Tony Cunningham, an investigator in the study being conducted by Dr. Thomas Merigan, head of the division.

When the volunteer has a recurrence, researchers will take two tiny, painless tissue samples from the affected area to test for the presence of certain types of cells which fight off the virus. Cunningham said they hope the results of the study will help lead to the development of a treatment to prevent recurrences once the virus has been contracted.

Volunteers will be paid a fee for their participation.

For further information or to volunteer for the study, call Cunningham at 497-5908 between 9 a.m. and 5 p.m.

* * * * * * * *

The Sleep Disorders Research Center at Stanford University Medical Center is once again seeking volunteers to test the daytime alertness of persons taking sleep medication.

Sue Cohen, a research assistant, said about 25 volunteers are needed, and should be men or women aged 21 to 60 who are suffering from insomnia. They must be willing to take sleep medication during a 21-day period and spend 11 nights and six weekend days at the Sleep Center's lab in Palo Alto.

Three separate starting dates will be available through June, Cohen said.

Some volunteers will receive medication while others will get a placebo.

Participants will be electronically monitored in the lab at night and perform skill tests during the day to test alertness.

Volunteers will be paid for their participation. They will also receive two free medical exams and lab workups. Meals will be provided free during the live-in phase. Private rooms and amenities—including free movies—will be furnished.

For further information, contact Cohen at 325-4697.

Hot water: solar system could meet 60% of Eating Club need

A solar water heating system could meet over 60 percent of the Stanford Eating Clubs' hot water demand, according to a study recently completed by two mechanical engineering undergraduates. Such a system could save the Club $600 annually in natural gas costs.

The students, David Luth and Ken Wilke, started work on the project last spring for the ME 275-Solar Energy course taught by Prof. Harry Whitehouse. After examining several design variations, they tailored a system to fit the needs of the Clubs.

Luth and Wilke also prepared economic analyses of the system and of various arrangements through which it might be financed. The study was completed in December and presented to the Eating Clubs for consideration.

"From a technical standpoint, this is a very solid project," noted Whitehouse. "It also makes good sense at a place like an eating club, where there is lots of regular water use."

Luth and Wilke chose an active system—that is, one that uses pumps to move water through the heat-collecting panels on the roof. The system would drain itself at night to minimize the danger of damage from freezing. Two 120-gallon tanks would store the solar-heated water and supply it to sinks and dishwashers through the five existing gas-fired water heaters.

Because the Eating Clubs are closed during the summer when there is the greatest potential for heat collection, Luth and Wilke adjusted the design by placing the solar panels at a slightly steeper angle to accommodate the lower winter sun.

Luth is confident that the system could be built by students. "We'd really like to turn this into a SWOPSI workshop next year, so that 15 or 20 students could actually do some hands-on work on an active solar system. That would also save about $8,000 in labor."

The drawback to the project is its initial cost. A student-built system would cost about $11,500, while one installed by a local solar contractor would cost $19,500. The feasibility study indicates that payback periods would vary from 10 years for a student-built system purchased with existing funds to 17 years for one that is contractor-installed and financed by a 15 percent loan.

The project may be able to receive some financial help from the Student Project Fund at the Housing Energy Conservation Center. According to HECC's Rich Hefter, any conservation undertaking designed and built by students is eligible for assistance. However, the initial cost of the project is so large that most of the outlay would have to come from the Eating Clubs.

"A solar system would be a substantial investment," says Randy Hazelton, the business manager of the Eating Clubs, "but it's a socially desirable thing and we want to look very closely at it. Because of the rather long payback period, we need to be sure that maintenance isn't going to be a problem six or eight years down the road."

Whitehouse commented that Stanford and the Eating Clubs would have more incentive to turn to solar if state and federal solar tax credits were more accessible to nonprofit institutions.

"It's regrettable since the tax credit is really a very minor subsidy compared to the tremendous federal subsidies given to fossil fuels and nuclear power," he said.

"There's a lot more involved here than just money," Luth concluded. "If solar energy is going to get going again, Stanford is a good place to start. Getting exposure and getting students involved are a big part of the process."

—Lyle Zimmerman

Alice Wells named Truman scholar

Alice Wells, 19-year-old sophomore, has helped Stanford maintain its leading position in winning a $20,000 Harry S. Truman Memorial Scholarship awarded annually.

Stanford students have won two of these scholarships in each of the last two years.

The 98 "Trumans" awarded annually go to the students who demonstrate outstanding leadership potential and a commitment to pursue a career in public service. The award consists of an annual stipend of $5,000 over the next four years.

Wells, a resident of Zapata house on campus, and one of the editors of *Approaching Stanford*, works 15 to 20 hours a week at DeGuerre Pool, and also does work at Stern Hall. She is a member of the Program Board and is chair of the ASSU Nominations Commission.

Wells, who comes from Bainbridge Island, Wash., expects to attend law school or graduate school in international relations.

"I'm very surprised I won," Wells said. "The interviews were tough, and I never thought I'd make it."

Political Science Prof. Hubert Marshall, chairman of the committee that selects Stanford's nominees for the competition said, "I am delighted Wells has won. She was an outstanding candidate."

Asked why Stanford wins so many "Trumans" Marshall said, "Probably because we take the scholarships seriously, try hard to get many candidates, and have superior candidates."

Computer teaching scholarships

The Packard Foundation has contributed $15,000 to as general fund offering scholarships for teachers and administrators attending the Institute on Microcomputers in Education at Stanford.

The fund, administered by Interactive Sciences Inc. (ISI), is targeted for those from school districts serving low-income and minority students.

Recipients, along with other educators from around the country, will attend the intensive five-week Institute cosponsored by the Stanford School of Education and ISI.

"There is a desperate need for teachers who can use computers effectively in the schools," says Joan Targ of ISI. "Low-income schools are especially hard-pressed to find teachers qualified to use computers and train others."

The Institute equips educators to act as resource teachers who can design and carry out solid programs in the schools to which they return. No special computer or math background is required.

In addition to hands-on computer experience, Institute participants will receive a broad background in computer education through presentations, field trips, and exposure to the most advanced computer equipment and applications available today.

Scholarship grants will be awarded as requests are received, so early application is advised. Further information on the scholarships and the Institute, which starts June 27, may be obtained from the Stanford School of Education at (415) 497-2102.

Ph.D. oral exams

THURSDAY, APRIL 28

Darryl W. Whiten, physics, "A Relativistic Quantum Field Theory Model, the Optical Potential, and Topics in Weak-Electromagnetic Gauge Theories," 3 p.m., Varian Conference Room.

MONDAY, MAY 2

Edna Christine Hardeman, biological sciences, "Regulation of HMG-CoA Reductase in Compactin Resistant Cell Lines," 2:15 p.m., Herrin Room T175. **Howard A. Zehker,** electrical engineering, "Modeling the Rings of Saturn: Particle Size, Number Density, and Vertical Dispersion," 4:15 p.m., McCullough 134.

TUESDAY, MAY 3

Rona Greenberg Giffard, structural biology, "Severin, Actin, and the Cell Cytoskeleton," 2:15 p.m., D 102 Fairchild Bldg. **Alan D. Lamont,** engineering-economic systems, "Strategies for Running Predictive Models," 2:30 p.m., Terman 332. **Toshimitsu G. Tanaka,** materials science and engineering, "A Unified Numerical Method for Integrating Stiff Time-Dependent Constitutive Equations for Elastic/Visco-Plastic Deformation of Metals and Alloys," 2:30 p.m., 450 Durand. **Paul F. Titchener,** electrical engineering, "Adaptive Spectral Analysis and Signal Modeling with Applications to Music and Speech," 3 p.m., AEL 109.

WEDNESDAY, MAY 4

Jen-Kou Chou, mechanical engineering, "Miniature Electro-Hydraulic Control System," 4:15 p.m., Skilling Auditorium. **Peter C. Cramton,** business, "Bargaining with Incomplete Information," 9:30 p.m., GSB 243.

THURSDAY, MAY 5

Jonathan W. Greene, electrical engineering, "Configuration of ULSI Arrays in the Presence of Defects," 4 p.m., Skilling 193. **Man Sung Co,** chemistry, "X-Ray Absorption of Hemocyanin and Hemerythrin," 2:15 p.m., Chemistry Gazebo. **Jose Alejandro Ramirez,** education, "The Potential of Elementary Schooling to Equalize Income from Labor Between the Rural and the Urban Populations in Mexico," 2:15 p.m., e114 Education Bldg. (Cubberley).

FRIDAY, MAY 6

Zephaniah T. Davis, education and linguistics, "Input in ESL: Instruction and Peer Discourse in the Acquisition of ESL by Elementary School Children," 2:15 p.m., e114 Education Bldg. (Cubberley). **John De Sollar,** English, 2:15 p.m., 41-F. **Kathryn L. C. Dimiduk,** applied physics, "Hg Loss, Annealing, and Ion Implantation in Mercury Cadmium Telluride," 2:15 p.m., Applied Physics 200. **Kathie Lee Krumm,** economics, "Investment During an Attempted Liberalization: Argentina 1976-1981," 2:15 p.m., Encina Hall 414.

Blood Bank at Human Biology Friday

The Stanford University Blood Bank will hold a blood drive from 11 a.m. to 3 p.m. Friday, April 29, in the Human Biology Seminar Room (Building 80, Inner Quad).

Another blood drive has been scheduled for 10 a.m. to 4 p.m. Tuesday, May 3, in the Law School student lounge.

Faculty and staff are urged to donate blood at one of these times and, whenever possible, to announce the drive to students and colleagues.

Stanford University Hospital and the Children's Hospital use more than 100 units of blood each day, and the Blood Bank appreciates blood donations to support this need.

ARCS scholarships won by 10 here

Ten Stanford students have recently been awarded scholarships of $2,000 to $5,000 from the Achievement Awards for College Scientists Foundation, Inc., a private corporation that seeks to "restore in this country the kind of dynamic that was here in the Sputnik era."

The Stanford recipients are: John S. Foster III and Joakim F. Lindblom, applied physics; Robert W. Bauman, Jr. and Diana C. Beebe, biology; Jonathan Raab and Gregory Mummy, civil engineering; Dean A. Mulla, electrical engineering; Alexander E. Koonce, mathematics; Martin E. Kernberg, medicine; and Mark T. Mueller, physics.

Stanford's winners are among the latest of 396 students who have been given ARCS grants since the local chapter was founded in 1972. Nationally, the foundation's 11 chapters have awarded more than $4 million in grants to 3,000 people since 1958.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

41656-AW (JCC:8880) MISC PROFESSIONAL: Position is located in Program Coord Div of Research Lib Group, supporting daily operation of Collection Mgmt, Preservation, & Shared Resources Programs of the corporation; analysis of data submitted to RLG Conspectus; design, formatting & analysis of collection develop't verification studies; consultation w/ members of the program committees; mgmt of conspectus worksheet production, the on-line data base & batch products; submission of tapes, & mgmt of input for ESTC & other special databases; analysis of institutional performance in RLG-ILL; mgmt of RLG's reference liaison program; staff support for grants admin; mgmt & analysis of statistical reports.; C06; $1854-2312.

41655-AW (JCC:8880) MISC PROFESSIONAL: Position is located in Program Coord Div of Research Lib Group, supporting daily operation of Collection Mgmt, Preservation, & Shared Resources Programs of the corporation; analysis of data submitted to RLG Conspectus; design, formatting & analysis of collection develop't verification studies; consultation w/ members of the program committees; mgmt of conspectus worksheet production, the on-line data base & batch products; submission of tapes, & mgmt of input for ESTC & other special databases; analysis of institutional performance in RLG-ILL; mgmt of RLG's reference liaison program; staff support for grants admin; mgmt & analysis of statistical reports.; C06; $1854-2312.

29682-JB (JCC:7650) CUSTODIAN WKG SUPVR: 7:30-4pm; Supv the cleaning, training & other duties of custodians assigned to you; create & maintain a clean, safe, 'home-like' atmosphere for residents; maintain a daily check of bldgs/grounds & promptly report security, damages, maintenance & housekeeping problems to approp office; submit monthly bldg maintenance & housekeeping report; order supplies & maintain inventory control over mat'ls & keys; attend approp classes; work & commu effectively w/ students, Residential/Edu, Resident Fellows & co-workers, etc; QUALIFICATIONS: good supvry skills; demonstrated admin skills, i.e., report writing, attendance records & memos; ability to acquire exp & knowl regarding employee relations & USW Contract; supvry exp required; excel commu skills a must.; S09; $1632-2046.

36210-DS (JCC:1472) STU SERV OFFICER II: Asst Dean respon for recruitment, grad student programs, & genl admin; recruiting Black applicants to Stanford's grad programs; develop't of academic support programs; provision of advice & info about Univ serv; conveying concerns & needs of Black grad students to Dean & his staff; participates in planning, development, coord & evaluation of Stanford's Affirmative Action Program for grad students; liaison between applicants & depts regarding admission of students; works closely w/ Univ community & national & regional organizations in area of minority student recruitment & advancement; drafts proposals to extramural agencies for funding programs relating to minority students; QUALIFICATIONS: understanding of current grad & professional edu in major univs; abllity to articulate issues relating to edu of Blacks in particular; effective commu, both oral & written; advanced degree required; prev admin exp in postsecondary edu highly desirable.; C06; $1854-2312.

39479-TC (JCC:5588) LIFE SCI RES ASST I: Involves working on animal models of human hepatitis B Virus; isolating viral DNA; carrying out DNA polymerase reactions; gel electrophoresis & Southern transfer; dot blot hybridizations; work w/ recombinant DNA clones of viruses; purifying virus & viral antigens fr plasma; separation of proteins by column chromatography & SDS-gel electrophoresis & cesium chloride gradients; production of monoclonal antibodies & testing by radioimmunoassay & ELISA immunoassay; QUALIFICATIONS: must understand theoretical basis for & biological implications of the research & the basic theory of methods to be used; expected to set up new methods fr information in literature & modify methods for specific applications; use initiative & independent judgment to plan approaches to research problems, interpret results & on this basis modify the approach until the research goals are achieved.; C05; $1670-2086.

26602-TC (JCC:6818) SOC SCI RES ASST II: 50%; work directly w/ Professor on advanced research in human color vision; involve in an ongoing experimental proj modeling human performance in color discrimination, color identification & color appearance; respon for collecting & analyzing data for a new proj constructing computational algorithms for assessing the color In a world scene; supvn & control of lab experiments; QUALIFICATIONS: knowl of UNIX, C or BASIC or willing & able to learn; ability to write computer programs for scientific data analysis required; some skills in statistics and/or electronics desirable; prior res exp highly preferred.; C04; $756-940.

Bargaining unit

36184-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 50% (2-1/2 consecutive days/wk); fixed term; 6 mos fr hire date; biochemical work in a lab in which several different projs are being conducted; concurrently (aging & hormonal studies on pancreas, steroidogenic tissues & liver); assistant to biochemist in charge; involve tisuue culture tech, subcellular fractionation of tissues, enzyme assays, thin layer chromatography, prep of gradients, columns, etc; handle radioisotopes & rats; QUALIFICATIONS: must have sufficient bkground & understanding of biochemical techniques; quick & accurate at following directions; making up solutions.; A18; $ 7.50.

44333-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; respon for most aspects of lymphoma tissue & cell collection, handling initial processing, & storage for lymphoma investigations at Stanford & at CH@S; entails basic data gathering & record keeping & technical skills involved in making imprints, fixing, freezing, & processing for electron microscopy,etc; may involve cell suspensions, washing procedures, differential density centrifugation, & cytospin techniques; maintenance of a tissue bank & file system; perform various immunologic staining procedures; QUALIFICATIONS: some exp in tissue section methods and/or familiarity w/ histochemical staining procedures desired; ability to interact w/ a variety of different physicians & technologists.; A24; $ 8.65.

19166-JB (JCC:6596) S&E TECH - ELECTRO MECH: TMS Unit; X-ray orientation of single crystal mat'l; polishing for flatness, parallelism, surface condition, radius of curvature; design & machine proper tooling for operations; develop & maintain proper standards for shop operations; asst sr. tech personnel in sophisticated processes, w/ the end in view of learning & mastering difficult processes; may receive work-orders & directions on different problems fr several sr. technicians, engrs & scientists & the ability to accept this form of direction is critical; QUALIFICATIONS: must exhibit a demonstrated interest in this or some form of related technology; willingness to learn; some exposure to physics & trigonometry.; A28; $ 9.50.

29337-JB (JCC:6604) SR S&E TECH - ELECTRO MEC: TMS Unit; 12-8:30pm; operation, maintenance, & repair of Stanford Instructional TV Network; respon for proper operation of network eqpt during his/her shift; relieve Master Control Operator for lunch & scheduled breaks; studio classrooms security; interface w/ faculty & SITN staff; QUALIFICATIONS: FCC First Class/General radio/telephone license; AA electronics; 2yrs of TV exp desired; able to climb antenna towers; lift or carry 100 lb boxes; valid drivers license (CA).; A34; $10.97.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, May 3, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Weich Rd., Suite 100.

MGR, PATIENT ACCTING DATA CONTROL—Patient Accting—#5158 (B-31): Responsibilities: Under genl supvn of Asst Directort of Finance-Pt Accting, is repson for Pt Accting Data Control, for ensuring reliable performance of hosp Patient Billing System, through the input, control repts & scheduling. Is also respon for dvlpmt, implementation & maint of deptl policies & proceds ensuring internal controls that are consistent w/ accepted accting principles. Coordinates w/ data processing of claims & billings. Qualifications: A Bachelor's degree or equiv work exper; additional studies &/or formal training ina cctng principles, or equiv, w/ 3-5 yrs related data processing or systems exper; supvy exper in administrative or financial environmt; must ahve ability to communicate, both orally & in writing, w/ all levels of mgmt staff; must be able to work in stressful situations; permanent, full-time, M-F, 8-5pm, $14.22-22.81 hrly

Nonexempt

33577-PM (JCC:2478) OFFICE ASST IV: 50%, 8:30-12:30; respon for reviewing, processing, & monitoring funding of short-term faculty appts & Physician Specialists; maintain & monitor salary files for all salaried faculty; serv as liaison w/ Med Sch'l Finance Offc & Depts for faculty salaries throughout the yr & for annual budget; prov annual Faculty Affirmative Action Reports & Special reports as required; supv part-time clerical assistant; QUALIFICATIONS: ability to work w/ financial info & data sheets; knowl of PAF completion helpful; knowl of Univ and/or Med Sch'l policies & procedures; prev supvry exp preferred; send appl/resume to Anna Bernanke, M121, Med Ctr.; B14; $720-757. 1

44335-PM (JCC:2504) OFFICE ASST II-SPEC: 50%; 8-12 or 9-1; heavy phone & reception; respon for keeping records of Cytolog cases & sending out final reports; typing stores & purchase requisitions & following up on problems; tissue correlation; fill requests for slides, etc; QUALIFICATIONS: typ 60; excel telephone skills & manner; organizational skills; accuracy; contact: Leslie Culligan, Med Ctr P-2020, 497-7211.; B10; $595-623.

41747-PM (JCC:2596) SECY II-SPEC: Respon in 3 areas: 1) 50% bkup for Admin Asst to Dean of Law Sch'l (incl substitution during absences); answer & screen phone calls; receive & screen visitors; typing & transcription support; asst in travel arranging & mtg scheduling; 2) 15% devoted in providing basic sec'l support for Asst Dean; 3) 35% devoted to sec'l support for Appts Committee; typing & distributing Committee memos, as well as scheduling candidate interviews w/ faculty members, collecting, analyzing & correlating candidate evaluation forms, etc; QUALIFICATIONS: typ 75+; excel typing & transcription skills; ability to use most offc eqpt; ability to commu w/ people at all levels; knowl of or willingness to learn word processing eqpt; send appl/resume to E. Chatfield, Room 113, Crown Quad.; B12; $1310-1373.

4711-PM (JCC:2058) ADMIN ASST I (N): Supv expenditures on Dept. operating, fellowship & gift accts; liaison for faculty & staff to Sch'l & Univ regarding interpretation & application of Univ policies & procedures; compile & organize data for reports, & budget control; maintain grad & undergrad records & progress reports; prep budgets; submission of proposals to granting agencies w/ sponsored projs offc; assist in interviewing & hiring of clerical staff, train staff; maintain records; supv 2 full-time employees; send appl/resume to Kim Ciardullo, AES, 305 Mitchell.; B16; $1593-1671.

23968-PM (JCC:2078) ADMIN ASST I (N): Assists Dir in managing active clinical, research & edu'l unit; interacts w/ faculty, students, patients, visitors, office, technical & research personnel; supv offc staff; respon for hiring, training, performance evaluations, monitoring work respon, establishing prior, discipline & dismissals; assists in prep of Univ & Hospital budgets, monitoring research grants & special funds; purchasing of supplies, eqpt & contracts; respon for Dir's corresp, appts calendar, travel arrangements, slide & course preparations; QUALIFICATIONS: must have admin & managerial exp; elementary acctg knowl essential; knowl of Hospital & Univ policies & procedures, personnel & finances, highly desirable; must be personable, skilled in commu, flexible & tactful; knowl of word processor, or desire to learn, highly desirable; contact: Carolyn Emmerson, Admin Asst, Med Ctr, C022, 497-6883.; B16; $1593-1671.

31157-PM (JCC:1747) LIBRARY SPEC I: Tues-Thurs, 9-6pm; Fri & Sat, 8-5, schedule changes during Intersession: M-F, 8-5; performs duties in Art Lib; staffs circulation desk; enforces Art Lib stack-access & circulation regulations; answers infor'l/dir'l questions; pages books; checks book mat'ls at lib exit point; files in card catalog, shelf list & circulation file; prep mat'l for binding; handles course reserves; check in new books & periodicals; searches book catalogs; respon for operation of Art Lib on Sat, & Tues-Thurs, 5-6pm; supv 1 student assistant; QUALIFICATIONS: typ 35; prev public serv exp; punctuality & dependability; reading knowl of 1 non-English Western European lang desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $1189-1246.

31159-PM (JCC:1755) LIBRARY SPEC II: 75%; Mon-Thurs, 4-11pm; Fri, 10am-5pm; during Summer Session & Intersession, M-F, 10am-5pm; performs duties in Swain Lib of Chemistry & Chemical Engrg; respon for the evening operations of the Lib; performs complex info'l & reference assistance using manual & automated sys (RLIN & SPIRES); respon for hiring/-dismissal, training, evaluating & scheduling of student assistants; respon for card catalog maintenance; respon for collection maintenance; maintains trade catalogs & journals files; QUALIFICATIONS: typ 40; requires prev lib exp; prev supvry exp; good clerical & organizational skills; prev public serv exp, preferably in a science lib; desirable: sci bkground; knowl of and/or exp w/ automated sys, preferably RLIN, SPIRES; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $983-1030.

31158-PM (JCC:1755) LIBRARY SPEC II: Performs duties in Catalog Dept; processes monographs online w/ LC printed & online & RLIN member copy; searches a variety of printed & online files, as well a card catalogs, to verify name headings & series treatment; types authority cards for personal, conference & corporate headings; creats & types series cards using AACR II format; files in SUL catalogs, incl the Main Catalog; inputs prepared copy into RLIN database; QUALIFICATIONS: typ 40; required: ability to work w/ good judgment based on good understanding of processing policies; exercise care in handling rare, valuable and/or fragile mat'ls; high degree of accuracy in typing; prev lib exp, preferably in tech processing; reading knowl of 1 non-English Western European lang, preferably German or Latin; ability to lift heavy catalog trays (15 lbs); desirable: add'l skills in Slavic lang or other major non-English, Western European langs; prev exp w/ RLIN or other automated sys; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $1310-1373.

SLAC

94262-JM (JCC:2554) SECRETARY II: Asst in providing sec'l serv for group of 15; typ letters, memos & genl admin forms; maintain records; arrange mtgs & appts; process internal forms; distribute mail; answer phones; perform related tasks as assigned; QUALIFICATIONS: high sch'l or equiv; sec'l exp & knowl of offc procedures; accurate typing of 60 wpm; good English syntax, grammar & spelling; knowl of offc machines; ability to work independently & under pressure.; B11; $1246-1310. APPLY AT SLAC

94260-JM (JCC:8880) Electronic Engineer: Participate in design, construction, installation & checkout of instrumentation & control sys for linear collider proj, which incl develop't of instrumentation & control sub-sys used for control & monitoring of complex accel. apparatus; design of digital, analog & micro-processor circuitry for application to various instrumentation & control projs; develop't of control & monitoring software for various instruments performed on a VAX computer or on micro-processors, etc; QUALIFICATIONS: MSEE or equiv; several yrs of practical exp relevant to computer control of particle accelerators; exp in detailed design of analog, digital & micro-processor circuitry; ability to work w/ diverse group; ability to supv others; ability to commu tech info both orally & in writing; C99; $3000-3800. APPLY AT SLAC

91525-JM (JCC:8880) Electronic Engineer: Design high speed digital electronics circuits, modules & sub-sys related to accelerator nanosecond precision timing sys; experimental physics modular electronics sys; configure & test completed sys; assume respon for all phases of electronics sybsys fr conceptual design to completed, etc; QUALIFICATIONS: MSEE or equiv; several yrs exp in high speed circuit tech, particularly involving ECL, Schottky TTL, programmable logic, gate arrays, & hybrid tech; knowl/exp in basic computer-aided testing tech, data acquisition sys (e.g. CAMAC & FASTBUS); demonstrated commu skills both orally & in writing.; C99; $2800-3600. APPLY AT SLAC

946840JM (JCC:8880) Electronic Engineer: Hardware & software sys design of computer control & monitoring sys for a linear accelerator; sys integration & fieid test of installed components; design, develop & test of analog & digital circuits for computer control & instrumentation sys; design, plan, document above sys & train field personnel in maintenance & troubleshooting; QUALIFICATIONS: BSEE (MSEE preferred) in electronics or computer sci; extensive exp in computer control sys; exp in analo & digital design, particle accelerator control sys desirable; knowl of FORTRAN essential; assembly lang, camac & multibus exp desirable; good oral & written commu skills; ability to effectively supv efforts of others.; C99; $3000-3800. APPLY AT SLAC

95094-JM (JCC:6680) S&E TECH MECH: TMS Unit; prov genl mechanical, vacuum & plumbing support for klystron test & operations; perform mechanical & electrical tests on high power klystrons; prepare & install klystrons for test or operation; fabricate, repair, maintain cooling sys; serv & repair liquid nitrogen storage tanks & sys; operate overhead bridge cranes & other eqpt; QUALIFICIATIONS: high sch'l, tech, or vocational training or equiv; proficient in use of hand tools & familiar w standard shop practices; ability to follow instructions; ability to move heavy objs; able to qualify for gov't driver's license; couple yrs exp in use of machine tools, soldering, brazing, welding; vacuum sys & equip utilizing mech forepumps, cryogenic pumps, ion pumps, etc.; A28; $1647. APPLY AT SLAC

95098-JM (JCC:6680) S&E TECH MECH: TMS Unit; Klystron processing to incl installing on bake station leak check, operate the bake station, pinch off after bake & prepare tube for test; bake station & vacuum eqpt maintenance; assemble & leak check klystron components; operate hydrogen furnaces; prep klystrons & subassemblies for brazing; heliarc welding of klystron sub-assemblies & related components; QUALIFICATIONS: high sch'l, specialized schooling in vacuum tech & microwave tube construction or equiv; some exp in microwave tube construction and/or construction of vacuum devices or sys; proficiency in use of hand & power tools; able to qualify for gov't driver's license; ability to do specialized heliarc welding on mat'ls such as stainless steel, copper, cupronickel & molydenum; able to understand & follow written & verbal instructions incl interpretation of blueprints.; A28; $1647. APPLY AT SLAC



Rental housing

HOUSING AVAILABLE

□ **June thru Aug.:** 1BR apt in Boston/Cambridge area. Fully furn. in sec. complex. Walk to Harvard Sq. & pub. transp. Will sublet or trade for your attrac. apt. or hse for summer. Nonsmokers. Call COLLECT (617) 876-1232.

□ **Sept., yr. lease:** Fully furn. hse, 4BR/2BA, spacious, elegant, all appl., piano, garden, patio, gar., 10 min. to Stanf. $1050/mo. incl. grdnr. Call 322-0189 (eve).

□ **June 20 to Aug. 30:** Attrac. furn. hse. 3BR/2BA, lrg. grdn, In No. Palo Alto, nr. prk, pool, library, shops. Children welcome. $950/mo. Call 497-6878 (day), 328-4681 (eve).

□ **Late Ju ne thru July, Aug. (flex):** Fully furn campus hse, 3BR/2BA, garden, view. For careful tenant. $1200/mo. Call Feferman, 857-0323, 497-2349, or 497-1978.

□ **Beg. May 13:** Oak Creek apt., fully furn., 1BR, twin beds, pools, tennis, $700/mo. Call 328-4180.

□ **Mid-May to Sept.-Oct. (flex):** Fully furn. hse, 2BR/2BA, den, all appl., 10 mln. bike to Stanf. Nonsmokers, no pets. $800/mo. Call 326-1799.

□ **July-Aug.:** Attrac. summer rent, dwntwn Palo Alto, 1BR/2BA fully furn. condo, suitable for cpl., lib. w/spiral staircase, balc, pool, security. 18th C. European. $1200/mo. Call 324-1624 (eve) 327-3505.

□ **Beg. June 1:** Summer rent and/or 1 yr: High Portola Val. (Ladera). 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis. 7 min. to Stanf. $1300/mo. Call 324-1624 (eve), 327-3505.

□ **Sept. 1 to Dec. 28, '83:** Fully furn 2BR/2BA hse, LR, DR, study, frpl., W/D, DW. 10 min. to campus in Redwd City. Piano, above-grnd pool, patio. Must be willing to share yd w/in-laws lvng in back cottage. $700/mo. incl. yd care. Call 497-3285 (day), 363-1658.

□ **June 16 to Sept. 5:** Fully furn hse, classic Spanish, 5BR/5BA, remodelled ktchn, spiral staircase, crtyd, pool, jacuzzi w/dress. rms. Creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Dec. 1, '83 to Aug. '84:** Spacious 3BR/2BA hse, FR, new AEK, study, pool, spa, in Los Altos, 20 min. to Stanf. $1400/mo. incl grdnr. Call 966-8242 (eve).

□ **June thru Aug.:** Portola Valley exec. hse fully furn 4BR/2BA. Walk to tennis, pool. $2000/mo. Call 326-5270, 9:30 to 3 p.m. M-F.

□ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Natl forest, walk to lake, Tahoe Keys. $120/wknd, $200 wk (5 days). Call Janine, 497-2501, (408) 739-3141 (eve).

□ **July 1 to Aug. 31, '83 (poss. longer):** Fuly furn. & equipt. Palo Alto hse, 3BR/2BA, AEK, study/guest, LR/DR combo, W/D, reflect. pool, deck, bike to Stanf. Walk to com. ctr, tennis, swim. $1250/mo. incl. grdnr. Call COLLECT (602) 886-7667 (Arizona).

□ **Beg. July 15:** Oak Creek apt. fully furn, 2BR/1-1/3 BA, gar, pools, sauna, foothills view. Call Melanie, 327-4800, x228.

□ **Mo. of Aug. only:** Fully furn. 3BR/2BA Crescent Park, Palo Alto hse. $900/mo. Call 328-2677 (eve).

□ **Sept. '83 to Aug. '84 or longer:** Architect designed campus hse, 4BR/3BA, study, frpl, pool, jacuzzi. Sep. rent. unit w/frpl, BA. Partly furn. $1550/mo. incl. all serv. Call 497-3992 (day), 857-0476, 5-9 pm & wknds.

□ **June 5 to July 9:** Furn. 2BR/2BA condo, Greenhse II. Pool. $750/mo. Call Bill, 497-1415 (day) or 494-1921 (eve).

□ **June to Aug (approx. 10 wks):** Charming, Los Altos Cape Cod, 3BR/2BA. Hot tub, lovely y d. Tennis & activities nrby. Call (415) 961-4218 (eve).

□ **Mo. of Aug.:** Apt. in Paris, furn, dbl LR, 1BR/1BA, kitchen, balc., 1 xtra rm. 6th (top) flr—no elevator. On quiet st. in 15th Arrondissement, few hundred meters to Institut Pasteur, nr Metro, Montparnasse. EXCHANGE for Stanf. apt. or RENT for $600/mo + util, $200 dep. (refundable). Write Dr. Maurice Hofnung, UPMTG Institut Pasteur, 28 Rue Dr. Roux, 75015 Paris, France, tel: (1) 306-19-19, x2156, or call Douglas Brutlag, 497-6161 (day).

□ **Late Aug. 83 to late Mar. '84:** Fully furn. campus hse, 3BR/3½BA, guest/FR, DR, study. $1400/mo. incl. grdnr. Call 497-1941 (day), 493-0777.

□ **June 13 to Sept. 5:** Lrg. furn. 2-story hse, 3BR/2BA, LR, den, lrg. ktchn, Indry rm, encl. yd, cov. patio, BBQ. Nr park, tennis, shops. 10 min. bike to inner quad. $900/mo + util. Cail Dekker, 321-7963.

□ **June, July, Aug.:** Rm w/priv. BA, Menlo Pk. Share hse w/single person. $325/mo. + ½ util. Call 325-2236.

□ **July & Aug.:** Lrg. furn. studio treehse; ktchn, BA. Bike to Stanf. Barron Pk area. $400/mo. Call 497-6352 (day), 493-7083 (eve).

□ **July:** Furn. studio, ktchn, BA. Russian Hill in S.F., 2 blks to No. Beach. Priv. gar. $675/mo. Call 497-6352 (day), 493-7083 (eve).

□ **June 22 to Sept. 3:** Summer rent, 2BR/2BA fully furn. hse on 3+ acres in Woodside. Office, frpl, 2 lrg. decks, hot tub, view, privacy, hike trails & trees. Incl. dishes, linens. $950/mo. incl. garb., water, clean. serv. Call Ann Holmes, (415) 588-3040, 8 am to 3 pm; after 5 pm call 851-2167.

□ **End June to end Sept. (flex):** Fully furn. hse in Crescent Pk, Palo Alto, 3BR/2BA, patio, garden. Cul-de-sac. Walk to park, pool, tennis, schls. Bike to Stanf. $1250/mo incl water, grdnr. Call 321-1142 or 497-4364 (day).

□ **Sept. to Nov. 15, '83:** Furn. 1 or 2BR apts. Olympic pool, sauna, jacuzzi, tennis, racq. ball. Adult complex. Dep. req. & refs. 1 apt. air-cnd. Rte 280 to campus. $600/mo. Call Prof. Arnold, (415) 968-0951.

□ **Beg. May 1:** SHARE 3BR/2½BA Old Mil Twnhse; spacious, nicely furn., patio, pool, jacuzzi, sauna, Indry, prkng. Prefer nonsmoker, jr. fac., grad. student, staff. $300-350/mo. Call John, 497-3944 (day), 949-3297, or Katerl, 949-3297.

□ **May 1 to Sept. 1 (flex):** Fully furn. 1BR/1BA grnd flr Pearce Mitchell adult condo. Pool. $675/mo. incl. util (except phone). Call 857-9657.

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501, (408) 739-3141 (eve).

□ **Beg. June '83:** Arlington, VA (minutes to dwntwn DC): 2BR apt, fully furn. spacious, in suburban home. Priv. entr., kitchn, frpl, W/D, pool mbshp. Nr. park, tennis, shops, pub. transp. Long or short term rent. Call (703) 524-1513.

□ **Beg. June 10:** Luxury 1BR furn. campus apt. Lrg closets, priv. patio. $875/mo. incl. util. Call 856-6049 or 968-4957.

□ **Aug. 15 to Dec. 1:** Decorator's hse, 3BR/3BA, fully equipped. Pool. 20 min. to campus. $1200/mo. or nego for caring people. Call Virginia Owen, (415) 349-1828.

□ **Mid-June to end Aug. (flex):** Fully furn hse, 5BA/3½BA, FR, study, pool, jacuzzi, on campus. $1800/mo. incl. grdnr. Call 494-9401.

□ **Beg. May 15:** Twnhse in Sunnyvale. 2BR/2BA, loft, frpl, W/D, 2 car gar. (attached). Nr. schls, & 280. Priv. w/extensive common grnds. Pool. Call (408) 733-9582 (eve).

□ **Aug. '83 to Jan. '84:** Fully furn Cape Cod Colonial hse in Palo Alto; 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr schls, shops, park, Com. Ctr. Prof going on sabbat. $1500/mo. Call 325-1709.

□ **June 2 to Sept. 30:** LONDON HOUSEBOAT. Lux. conversion, exclus., semi-rural Chiswick on Thames, nr city ctr. Fully furn., central heat, contin. hotwater, 2BA, W/D, dishw, freezer. $900/mo. Call Beard, 323-2755 or 497-5546 (day).

□ **Regularly Avail.:** 1 & 2BR furn & unfurn apts & twnhses, & 3BR/2BA hses; in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, 856-6049 or June, 968-4957.

□ **July '83 to July '84:** Unfurn. 2BR/2BA hse, 2 car gar., pool, tennis, frpl, hot tub, W/D, in quiet hsng develop, 15 min. to Stanf. Poss. furn. Prefer nonsmoker, no pets. Call 497-7001 (day), lv message for Dr. Kulick.

□ **Late June to early Aug.:** Quiet, cool, furn. West Menlo 3½BR/2BA hse, deck, fenced yd, bike to campus. $900/mo. All terms nego. Call 854-0344.

□ **Beg. Sept. 1:** Fully furn. 2BR/2BA Pearce Mitchell condo on campus. Yr-round pool, jacuzzi, rec. ctr. Adults, no pets. $850/mo. Call 497-1745 (day), 522-4917.

□ **NOW:** Furn. 4BR/2½BA hse, 2200 sq. ft., study, DR, FR, 3 car gar., patio, w/yr lease. Incl. kitchenware, linens, 2 TV, grdnr. Lrg. front & back yd. Quiet, safe nghbrhd. $1250/mo. Call 965-1302 (eve).

□ **Beg. May 1:** Designer's hse, Menlo Pk, 2BR/1BA, den, patio w/priv. fenced yd. AEK, dbl oven, W/D, gar., frpl. Prefer no children or pets. $1100/mo. incl. grdnr & water. Call 854-2727.

HOUSING NEEDED

□ **Sept. '83 to July '84:** Visit Scholar from U. of Chicago, spouse, children 11 & 13, seeks furn 3-4BR hse on or nr campus. Dates flex. Call (415) 856-1145 after 6 pm, (312) 624-6262 or (312) 962-8990 (day), Prof. Michael.

□ **Dec. '83 to Aug. '84:** Visit Profs and family seek large hse on or nr campus. Call 327-7953.

□ **June 24 to July 26, '83:** Swedish Prof, wife, 16 yr old daughter seek 2-3BR furn. hse or apt. Call 948-8058.

□ **Mid-June to Sept 1, '83:** Visit Scholar seeks furn 1BR apt. Pref. nr campus. Call Barbara, 497-2575 (day).

□ **Aug. '83 to July '84:** Visit Prof from Canada seeks to rent sabbatical hse in good sch. dist. Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

□ **1983-84 academic yr:** Responsible Stanf. Earth Sci. Grad students want to rent ASAP Portola Valley/-Ladera 3-4BR hse. Call office 497-4754, or Ralph: 948-5397; Jimmy: 964-6319; Ian: 857-0508. Will pay equitable mo. rent.

□ **Aug. '83 to Aug. '83:** Faculty family, 2 adults, 2 children seek 3 or 4BR hse or apt. Call Baltimore: (301) 366-0473 or (301) 338-7527.

□ **June 15 thru Aug. '83 (flex):** Harvard Prof, wife M.D., nonsmokers, no children or pets, seek fully furn 1-2BR apt/hse nr Stanf. for sabbat. Call COLLECT (617) 492-8299, eve or wknd, Boston time.

□ **Aug. 15 (flex) for 1 yr:** Univ of Ill. prof, wife, 2 well-behaved children (14 & 16) need 3BR furn. hse. Palo Alto Sch. Dist. Careful, considerate, nonsmokers, no pets. Local refs avail. Call COLLECT (217) 351-9881.

□ **Beg. July 1 thru Aug. (flex):** Mature female med stud. doing unpaid summer research at Stanf. needs hsesit. Nonsmoker, will give excel. care to hse, garden. Call Dr. Burge, (408) 727-3944, wkdays.

□ **Beg. mid-June for min. 1 yr:** M.D. & wife (no children/pets) seek 2-3BR unfurn. hse in Palo Alto area. Refs. avail. Call (313) 996-1800 or write: Stuart Flynn, M.D., 1810 Virnankay, Ann Arbor, MI 48103.

□ **Beg. Aug. (flex) for academic yr:** Visit. Scholar, wife, 1 child, seek 2-3BR furn. hse or apt nr campus. Nonsmoking, clean living, homeowners, will watch pets & plants. Local refs. Call COLLECT (314) 875-2858 (eve).

□ **July & Aug.:** Former Burlingame homeowners seek Peninsula hsng. Resp. mature cpl, nonsmokers, no pets. Excl. area refs. Call or write: Nappan, 9506 Granada Dr., Sun City, AZ 85373, (612) 972-8730.

□ **Mid-June to mid-July '83:** Careful tenant Englishwoman seeks rent or hsesit; or hse on or nr campus. Staying longer than planned. Call Himmelweit, 321-2052 (day) or 321-8979 (eve).

□ **Sept. '83 to May '84:** Visit. prof, on sabbat. at Stanf. & spouse, w/dog, seek furn. 2BR hse in P.A., Menlo Pk, Stanf. Nonsmokers. Call COLLECT (413) 367-2286 (Amherst).

□ **June 20 to beg. Sept:** Fully furn campus hse, 4BR/3BA, lrg. study, FR, LR, pool, spa. $1500/mo. incl. pool serv., grdnr. Call Evans, 493-3695.

□ **Beg. Aug. 1:** New Stanf. prof. seeks long-term rent. 2BR apt. or hse in Palo Alto, Menlo Pk, Stanf. area. Excellent refs. Call COLLECT (617) 492-5154.

□ **July 15 to Aug. 15:** Furn. 2BR hse or apt needed on campus for visit prof from Nigeria. Call Dr. Gann, 497-2072 (day).

□ **June to Sept.:** Mature 3rd yr law student w/12-yr-old seeks home to caretake. Local refs. avail. Call 854-5270 (eve).

□ **Beg. mid-June for 1 yr. min:** M.D., wife (no children, no pets) seek 2 or 3BR unfurn hse in Palo Alto area. Refs. avail. Will pay to $1000/mo. Call (313) 996-1800 or write: Stuart Flynn, MD, 1810 Virnankay, Ann Arbor, MI 48103.

□ **July 10 to Sept. 10:** Visit Canadian prof. w/wife & 2 daughters (5 & 7) seeks furn. campus hse. Stanf. refs, excellent tenants. Call COLLECT (514) 484-1965, 6 to 7 p.m. Calif. time.

□ **Aug. '83 thru June '84:** Visit. law prof. w/wife & 3 children seeks hse w/3BR on or nr campus. Furn or unfurn, apt. or hse. Call Kaltenbach, 497-3574.

□ **NOW:** As soon as possible, for approx. 12 mos., family seeks unfurn. hse in Gunn High Schl. Dist. Time per. nego. Nonsmokers. Call 857-0753 or (415) 793-7918.

□ **NOW to Sept. 1 or longer:** Stanf. staff w/Univ & local refs wants caretake (Palo Alto area only). Will give loving care to your home, business, yd, pets. Will consider signing contract and/or paying minimal rent. Call Donna, 497-3967 (day).

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Profs perform at talent show

Student Arts at Stanford (STARTS) will present the fourth annual "Professors in Performance" at 8 p.m. Saturday, May 7, in the second floor lounge of Tresidder Union.

A showcase of faculty and staff talent, "Professors in Performance" includes a variety of acts. William Chace will be the master of ceremonies for this year's show which features the following: Gwendolyn Watson, cellist; Juan Valenzuela, dancer; Denis Phillips, magician; Richard Sogg, pianist, Jong Rho, juggler/mime; and Keith Archuleta, singer.

Following the performance, an informal reception will be held. The public is invited to attend.

Admission will be $3 general and $2 students/senior citizens.

Holland featured in travel series

"Holland and the Amazing Dutch," a travel documentary narrated in person by its producer, John Roberts, will be presented twice by Stanford University Events and Services on Monday, May 2.

The film will be shown at 2:30 p.m. in Kresge Auditorium, and 7:45 p.m. in Memorial Auditorium.

In his film, Roberts explores the culture and geography of a country in which half the population lives below sea level. By building huge dikes, they have created farmland and homesites on land reclaimed from the sea.

The film also includes the familiar sights of windmills, tulips, and cheese-making, as well as life on and along the canals, and the varied attractions in the cities of Amsterdam, The Hague, Rotterdam, Delft, and many more.

Tickets are $3 for the matinee and $4 for the evening showing, and are available at Tresidder Ticket Office (415) 497-4317, or at the door.



Ballet Folklorico de Stanford is directed by Susan Cashion

3 folkloric groups in May 1 concert

The Ballet Folklorico of Stanford, the Khadra International Folk Ballet, and the Balkan women's choir, Kitka, will perform at 1 p.m. Sunday, May 1, in Memorial Auditorium.

The folk concert, part of the annual day of workshops and parties in celebration of May Day at Stanford, is sponsored by the Athletics Department and the Dance Division. Tickets will be available at the door for $5 ($4 for students).

Khadra, under the direction of Lisa Codman, will present suites from Hungary, the Ukraine, and the Caucasus Mountains of the Soviet Union. The company is well known for its Caucasian dances in which the women glide ethereally across the stage and the men dance "en pointe" wearing soft leather boots.

The Ballet Folklorico de Stanford, under the direction of Susan Cashion, will present dances from the Mexican State of Nayarit, including the famous knife dance, "Los Machetes." In their Yucatan Suite, they will be joined by San Jose dance company Los Ninos de Aztlan, under the direction of Rudy Figueroa. This suite includes a beautiful Yucateco-Mayan wedding ceremony and a Vaqueria dance party.

Rounding out the program, Kitka will sing from its Balkan repertoire.

For information, please contact Lisa Codman at 497-1234.

Famous film pairs featured Mondays

Student Arts (STARTS) at Stanford will present "Fabulous Film Couples," on the first four Mondays in May at 7 p.m. and 9 p.m. in Tresidder Room 270. The couples include Bogart and Bacall; Stewart and Arthur; Astaire and Rogers; and Tracy and Hepburn. The film schedule follows:

May 2—The Big Sleep (1946-Howard Hawks) stars Humphrey Bogart and Lauren Bacall. He plays Philip Marlowe, a private eye hired to investigate the gambling debts of a wealthy man's younger daughter. She plays the older daughter who helps him.

May 9—You Can't Take it With You (1938-Frank Capra) features James Stewart and Jean Arthur as a young couple who come from two very different backgrounds. His family is a wealthy, uptight, Wall Street-executive type; hers is a zany group of nonconformists who spend their time pursuing their favorite hobbies. This comedy is based on the play by George S. Kaufman and Moss Hart.

May 16—The Gay Divorcee (1934-Mark Sandrich) a breezy musical comedy. A married woman tries to get a divorce, but falls in love with a dancer she mistakenly thinks is the gigolo she hired to help break up her marriage. Cole Porter tunes include "Night and Day" and "The Continental."

May 23—Adam's Rib (1949-George Cukor), stars in Spencer Tracy and Katharine Hepburn. They play a married pair of lawyers who work on the same case—but on opposing sides.

Admission is $2 for students and faculty and staff with ID and $3 for the general public. For more information call 497-9671.

Undergrad Special Program sponsors jazz saxophone concert Friday, May 6

The Undergraduate Special Program at Stanford University will present the ROVA Saxophone Quartet in concert at 8 p.m. Friday, May 6, in Stanford's Terman Auditorium.

The concert will be one of ROVA's last appearances before departing on a seven-city tour of the Soviet Union.

The San Francisco-based avant-garde jazz quartet will tour the Soviet Union, Rumania, and Yugoslavia this June, accompanied by writers and photographers to document the trip.

BBC broadcasts to Eastern Europe, and a successful concert last year in Hungary have created a sizable demand for ROVA's music in Eastern Europe. The readers of *Jazz Forum*, a jazz magazine published in Warsaw and read throughout Europe, recently voted ROVA, the Art Ensemble of Chicago, and Weather Report its top three groups.

A year ago, ROVA received an enthusiastic invitation from the Contemporary Music Club of Leningrad to perform in the USSR. Seeing it as "an opportunity to contribute to an exchange of art, feelings, ideas, and goodwill with the people of Russia," ROVA accepted despite the difficulty and expense. Through negotiations with the American and Soviet governments, ROVA has received permission—but, of course, no funding—to tour the USSR. Proceeds from this concert will help support the tour.

Tickets at $5.50 ($4.50 for students) are available at the Tresidder Ticket Office and all BASS outlets.

Cinderella: Gov. Corner

An adaptation of the original TV production of Rodgers and Hammerstein's *Cinderella* will be the first production of the Governor's Corner Company, a troupe of players from Stanford's newest living group.

The lighthearted fantasy will begin at 8:30 p.m. Thursday through Saturday, April 28-30, in the outdoor theater at the Orrin Elliott Program Center, Governor's Corner. It is free and open to the public.

This *Cinderella* will be a college version of the timeless classic, presented in a 1920s motif.

Those who need directions to Governor's Corner may call Bill Martin, 328-6664, between 1 and 4 p.m.

Trombonist to play with Jazz Band

Stanford's Jazz Band brings famous trombone player Bill Watrous to town Friday, May 6. Presented by the Music Department, Watrous will give a free trombone clinic at 2 p.m. in Dinkelspiel Rehearsal Hall and appear with the Band in concert at 8 p.m. in Dinkelspiel Auditorium.

Student director Jose Bowen will lead the Band for the first half of the show in modern arrangements of Big Band tunes, including *Nica's Dream*, *I Want a Little Girl*, and a special version of *Spain* by Chick Corea.

Watrous will take over after intermission, mainly playing tunes by Tom Kubis. Watrous is a mainstream-modern soloist of extraordinary skill. He has played with Quincy Jones, Woody Herman, Count Basie, and many other jazz stars. He was a member of Ten Wheel Drive in 1971, when he left to form his own band—Manhattan Wildlife Refuge.

Bowen is a junior at Stanford majoring in ancient history and chemistry. He has received two music awards from the Bell T. Richie Scholarship fund in Fresno: one for $1,000 to write a flute concerto, which he completed last summer, and another for $600 to write an orchestral work, which he will compose this summer.

Tickets for the Jazz Band concert May 6 are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door. The Band will give a preview of their concert at noon Wednesday, May 4, in front of Tresidder Union.

Israeli folk song, dance

An evening of Israeli Folk Song and Dance, benefiting ARMDI (the Israeli Red Cross), will be sponsored by the Stanford Israeli Student Organization starting at 7:30 p.m., Sunday, May 1, at the Cubberley High School Pavilion. The evening will feature live music by Eshkoliot, exhibition dancing, folk dance instruction, and refreshments. Admission is $5. The Pavilion is located at 4000 Middlefield Road in Palo Alto.

Music Department

Follow the pied piper to children's event

Crumhorns, sackbuts, curtals, shawms, and present day instruments will be the order of the day at the Pied Piper Concert at 2 p.m. Saturday, May 7, at 1701 Bryant Street in Palo Alto. This outdoor musical program for elementary school age children will feature Stanford's Renaissance Wind Band under the direction of Herb Myers. Myers is a lecturer in Early Winds and a former member of the New York Pro Musica.

The band will demonstrate the instruments and play early and modern music to contrast the music and the instruments. Admission is $5 per adult and $1 per child. All proceeds benefit The Music Guild at Stanford, which provides scholarships for Stanford music students. Call The Music Guild office at 497-1780 to make reservations or for further information. Tickets will be available at the gate.



Left to right:
Herbert Myers
Philip Schreur
Yvonne Kendall
Gina Balestracci
Alexander Rosenthal
Elizabeth Shinkman
Roland Hutchinson

Organist Decker in May 2 concert

Organist Pamela Decker will present a free recital of German, English, and French organ music at 8 p.m. Monday, May 2, in Memorial Church at Stanford.

Presented by the Department of Music, her program will include J.S. Bach's *Toccata and Fugue in D minor* (Dorian) and works by Walther, De Grigny, Howells, Alain, Dupre, and Distler. Anthony Antolini will join Decker for Distler's *Two Sacred Concertos*, op. 17, for tenor and organ.

Decker is organist at St. Bede's Episcopal Church in Menlo Park. She recently completed her doctorate in organ at Stanford, where she studied organ with Prof. Herbert Nanney and composition with Prof. Leland Smith.

In 1980-81 Decker studied organ and composition as a Fulbright Scholar in Germany. She has performed extensively, both in the U.S. and Europe, and while in Germany was invited to perform her *Passacaglia* for the North German Radio Network. Several of Decker's compositions have been accepted for publication.



Pamela Decker

Anthony Antolini, tenor, is on the music faculty of Cabrillo College in Aptos and is music director of St. Bede's Church. He holds graduate degrees in both music and Slavic Languages from Stanford, and has studied abroad at Moscow State University and the Sommerakademie J.S. Bach in Stuttgart, Germany.

This summer Antolini will conduct singers from the Cabrillo College Chorus and the St. Bede's Choral Society in a concert tour of Holland and Germany.

Paul, Kass recital May 1

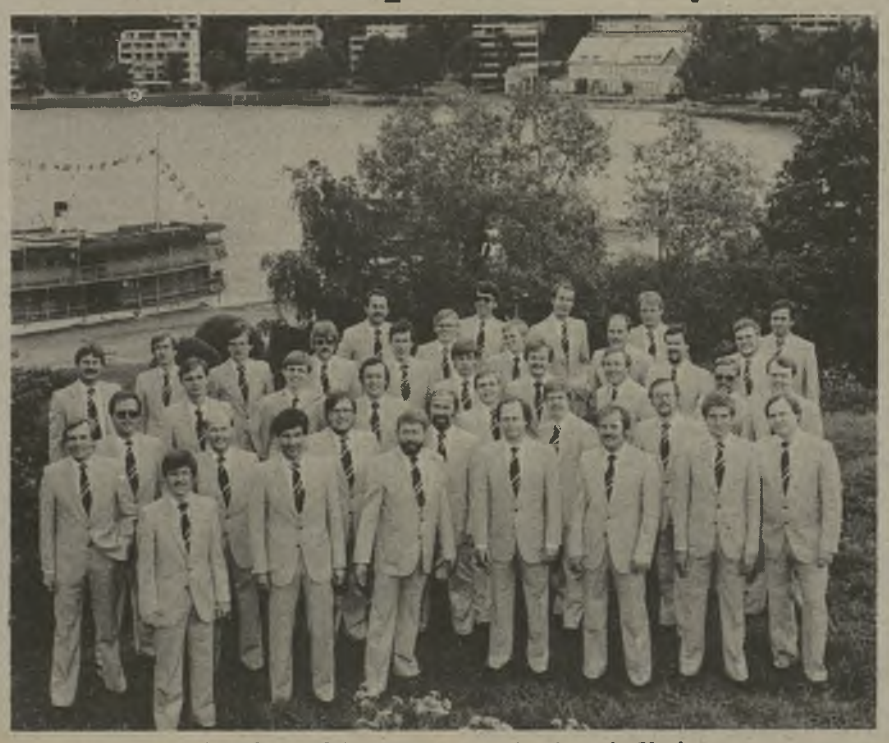
Sopranos Sharon Paul and Nancy Kass, accompanied by pianist Camilla Passarelli, will give a free recital at 8 p.m. Sunday, May 1, in Tresidder Lounge

Presented by the Department of Music, the two will perform solos and duets by Rossini, Faure, Handel, Brahms, Schumann, and Mozart. Graduate student in choral conducting Rob Campbell will conduct *Drei Geistliche Lieder* by Mendelssohn for solo mezzo-soprano and quartet.

Both Paul and Kass are students of voice teacher Lila Stuart. Kass is a senior human biology major and director of Counterpoint, a women's singing ensemble.

Paul is a D.M.A. candidate in choral conducting and T.A. for both the Memorial Church Choir and the Stanford Chorale.

West Coast premiere May 8 for top Finnish choir



Members of the Helsinki Academic Male Choir

The Helsinki Academic Male Choir will perform at 2:30 p.m. Sunday, May 8, in Dinkelspiel Auditorium, under the direction of Heikki Saari. Presented by the Music Department, this will be a rare opportunity to hear Finland's top male choir.

Their program will include romantic Finnish music from the turn of the century by Sibelius, Kuula, Palmgren, and others; contemporary Finnish choir music, including jazz works by Finnish composer Heikki Sarmanto; spirituals and folk songs.

In 1981 the Helsinki Male Choir won the Montreux choir contest in Switzerland, and last year placed first in the male choir division of the BBC's "Let the People Sing" contest in England.

The 50-voice choir was founded over 30 years ago at the Helsinki School of Economics. It has toured all over Europe and the Easter U.S.; this will be its first West Coast appearance.

Tickets for the May 8 concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

TMU flute concert May 3 with Ochoa

The Department of Music presents flutist Ellen Ochoa in a free concert at 8 p.m. Tuesday, May 3, in Tresidder Lounge. She will be accompanied by pianist Camilla Passarelli.

Ochoa, a Ph.D. candidate in electrical engineering at Stanford, studies flute with Music Department lecturer Alexandra Hawley. Her May 3 recital will include C.P.E. Bach's *Hamburger Sonata*, *Sonatine* by Dutilleux, Enesco's *Cantabile et Presto*, Bartok's *Suite Paysanne Hongroise*, and Schubert's *Introduction and Variations*.

Recital of flute, piano set May 8

The Music Department will present flutist Yuri Ito with pianist Dorian Ho in a free concert at 8 p.m. Sunday, May 8, in Dinkelspiel Auditorium.

Ito is a senior at Stanford majoring in Asian languages who plans to pursue a career in music. She studies flute at Stanford with Frances Blaisdell. In February she soloed with the Stanford Chamber Orchestra, and the *Peninsula Times-Tribune* commented: "Her flexibility is at the service of genuine musical feeling."

Ho received an M.M. from Juilliard and studied at the Vienna Academy of Music. She has soloed with the New Orleans and Atlanta Symphony Orchestra and the Texas Chamber Symphony.

Their program May 8 will include J. S. Bach's *Sonata No. 5 in e minor*, Schubert's *Introduktion and Variationen*, Chopin's *Ballade No. 1 in g minor*, Ibert's *Concerto pour Flute et Orchestre*, and *Three Preludes, op. 18* by Muczynski.

Bach Festival trip

The Music Guild at Stanford announces its second annual trip to the Carmel Bach Festival July 14-18, 1983. The tour includes transportation, accommodations, meals, admissions to concerts on the itinerary, cocktail parties at private residences, plus a special tour of the Monterey Bay Aquarium.

Major works at the Festival include Mozart's opera "Cosi fan tutte" and Bach's "The Passion According to St. John" with Greg Wait of the Stanford Music Department as soloist. For further information call The Guild office at 497-1780.



The Oberlin Dance Collective, shown here in "Diminishing Returns," will perform at 8 p.m. Friday, April 29, in Memorial Auditorium. The Collective originated at Oberlin College and Conservatory but has since made San Francisco its permanent headquarters. Tickets for the performance range from $10.50 to $7.50 ($3 off for students). The group also will give a free lecture-demonstration at 8 p.m. tonight (April 27) in Memorial Auditorium.

Watercolors on display at Fac Club

Watercolor landscapes by San Carlos artist Lorraine Schreiber will be on view at Stanford's International Center from May 4-30, with a reception for the artist from 5-7 p.m. Friday, May 6, at the Center.

Schreiber experiences painting as a one-to-one relationship between herself and nature and works directly from her subject matter. The forms in her strong compositions are derived from rocks, trees, mountains, and the sea. On many mornings the artst sets up her easel on the San Mateo County beaches or amongst the coastal rocks. Her watercolor paintings range from the representational work to abstract compositions.

Raised in New York, Schreiber has been active as an artist and art educator during most of her adult life. Undergraduate work was done at the Cooper Union Art School, and she received a master's degree in art education from Queens College in New York.

Schreiber studied with Barse Miller and Morris Kantor in the East before settling in San Carlos in 1970. Here she has worked with Millard Sheets, Morris Shubin, Rusty Walker, and Richard Heidsiek and has, herself, taught extensively.

She was one of the artists in residence at Yosemite National Park during the summer of 1982, and spent a weekend this April teaching advanced watercolor painting on location at the Mendocino Art Center. Her work has been widely exhibited in New York, New England, and in California.



"El Capitan" by Lorraine Schreiber

O&M conducting survey of faculty and staff

Operations and Maintenance, part of the Facilities and Services Organization, is interested in customers' opinions about how well the Operations and Maintenance staff is performing its job.

1,050 survey questionnaires were distributed in the campus mail last week to randomly selected members of the faculty and staff (463 faculty and 407 staff) and to 180 managers of academic buildings and student housing units on the central campus.

Operations and Maintenance will appreciate each recipient taking a few moments to fill out and return the form to Jack Albrecht, assistant director of facilities and services, 128 Encina Commons, before May 15.

Contemporary American Indian art to be featured

Two exhibits of contemporary art by American Plains Indians are coming to Stanford during the month of May.

One will be in the lobby of the Meyer Library for the whole month, the other will be in the Faculty Club for a shorter period.

Both are offered as part of Stanford's annual American Indian Festival.

The exhibits will include examples of porcupine quill weaving, bead work, sculptures, ceremonial dressed figures, leather crafts, paintings, and Morning Star quilts.

They are a small sampling from the collections of Florence Pulford of Los Altos Hills, probably the largest and most important private collection of contemporary Plains Indian art in the United States. She is the wife of Clinical Professor of Pediatrics Gurdon Pulford.

For years Mrs. Pulford has been traveling to the reservations in Montana, Saskatchewan, and the Dakotas to find and encourage latent talents among contemporary artists to recapture the arts and crafts of their ancestors, adding their own creative ideas to the traditional designs and styles of their tribes.

More than that, she has been helping these Indians to a growing public recognition of their work. The beauty, quality, and variety of the art in her own collection is proof enough of this indefatigable woman's success.

"People have no idea that among the Plains Indians there are such remarkable artists," Pulford enthuses. "We are accustomed to associating Indians and art with the Southwest, with the tribes of the Navajo, Hopi, Zuni, and Apache. . . ."

But as the first extensive U.S. tour of items from her collection moved from gallery to gallery, she noted that "There was a sense of discovery, after the viewers' first delight in the blazing colors and designs (in the quilts), that these creations were by Plains Indians—Assiniboin, Gros Ventres, Mandan-Hidatsa, Cree, and Sioux.

That sense of discovery seems to follow wherever some of her collection is shown, whether here or in Europe.

Staff ski weekend at Stanford Sierra camp

If you are ready for a final weekend of cross-country skiing in the Sierras, or just for a getaway there is space available this coming weekend (April 29-May 1) for the Stanford Sierra Camp's spring weekend for members of the Stanford faculty and staff.

The program arranged by the Stanford Alumni Association includes ski touring, hiking to Desolation Wilderness, a snow picnic, and guided nature tours. From arrival anytime after 3 p.m. Friday until departure after lunch on Sunday, participants will enjoy the camp's noted cuisine.

Cost of the weekend is $100 per adult, $50 per child 8-14, $40 per child 3-7, and $20 per child under three.

Late reservations may be made by calling Sue Cahn at the camp, (916) 514-1244.

Disabled athletes will gather May 21 for second annual Special Olympics

The second annual Stanford Special Olympics swim meet will be held from 8:30 a.m. to 4 p.m. Saturday, May 21, at DeGuerre pool.

Developmentally disabled athletes from all over the Bay Area will gather to compete in such swim events as freestyle, butterfly, inner tube races and inner tube water polo. Last year's meet was a huge success with more than 250 participants.

A group of about 40 Stanford students headed by Carol Jennings and Steve Elig is organizing and hosting the swim meet. The students are raising $3,000, recruiting volunteers and providing lunch, medals, and T-shirts for the athletes.

Besides high-spirited competition, jugglers, musicians, and games will provide entertainment throughout the day. The Stanford Band and Dollies will perform at 2 p.m. for the participants.

The organizing committee needs over 400 volunteers to help run the event smoothly. The many ways to become involved include chaperoning individual athletes for the day, helping at the entertainment area, lane swimming with the swimmers during races, helping with scores and many other jobs.

Prospective participants should contact Marie Alberry, Santa Clara County Special Olympics at (408) 578-2336.

Individuals interested in volunteering may contact Jennings at (415) 324-1808, Elig at 323-6412 or Beverly Bermudez at 327-4504 or send a note to Stanford Special Olympics Committee, P.O. Box 7801, Stanford, Calif. 94305.

Film on Germany set for April 28

Germany is the destination of the Other Cultures Film Series this week as "60 Millions: The Germans and their Country" and "Encounter: Impressions of Germany" are screened at the International Center. The films will be shown at 7:30 p.m., Thursday, April 28.

The Federal Republic of Germany—a land of contrasts, lying between the North Sea and the Alps—has about 60 million inhabitants. Who are these Germans and what are they like?

These films explore the German people and their lifestyles and customs that are as varied as the landscapes and towns that they live in. "60 Millions. . ." tries to answer some questions about how the Germans treat minorities, their politics, religions, work, and leisure. The focus is on the people.

"Encounter. . ." examines a variety of cultural, economic, social, and political elements of life in Germany. The diversity of the economy and culture within the nation needs to be understood before one can develop an accurate perspective on it.

Both films are free and open to the public. A donation of 75 cents will be requested, however, to help defray cost of the series. After the films, enjoy coffee and homemade pastries at Cafe, in the dining room of the I-Center.

Motion picture marker planned

Governor Leland Stanford's role in the development of motion pictures will be acknowledged by a State Historical Marker on Campus Drive West which is to be dedicated at 11 a.m. Saturday, April 30.

The marker commemorates the research in photography by Eadweard Muybridge on the Palo Alto Stock Farm in 1878-79 which resulted in his famous "horses in motion" series. It was the first



internationally recognized scientific research Stanford funded.

The base for the marker, constructed of pieces of sandstone retrieved from the 1906 earthquake rubble, has been built by volunteers from the Mountain Charlie Chapter No. 1850 of E Clampus Vitus. Delayed in their work by soggy ground and rainy weekends, the volunteers say the monument will be complete and the bronze plaque in place by Saturday morning.

The marker is located on a gravel turnout across from the driving range not far from Stanford's Red Barn.

The Stanford Historical Society, which shared the expense of the marker with E Clampus Vitus, will also share in the brief program. The public is invited to attend.

Lectures

Presidential candidate Stassen on tap April 28

Harold E. Stassen, America's most frequent Presidential aspirant, will speak at 4 p.m. Thursday, April 28, in the Branner Hall Lounge at Stanford.

He previously had been scheduled to speak April 14 as part of a Stanford Law Forum series featuring Presidential candidates.

Senator Eugene McCarthy will speak in Bishop Auditorium at the Graduate School of Business at 7 p.m. Monday, May 16. Congressman Morris Udall will speak in Kresge Auditorium at the Law School at 4 p.m., May 20.

Stassen's strongest bid for the Presidency was in 1948 when he lost the Republican nomination to New York Governor Thomas Dewey. Stassen also sought the Presidency in 1952, 1956, 1960, 1964, 1968, 1976, and 1980.

Palestinian lawyer

Dr. Jonathan Kuttab, a Palestinian lawyer from the West Bank, will discuss the legal problems arising from Israeli military administration of the occupied West Bank and Gaza territories at 12 noon Monday, May 2, at Bechtel International Center.

His talk is sponsored by the Stanford Committee for Justice in the Middle East and the Resource Center for Nonviolence of Santa Cruz.

Guatemalan religious, ethnic factions: May 3

"Ethnic and Religious Factions in Guatemala: Implications for Political Struggle" will be addressed by Tom Bogenschild during the lunch hour on Tuesday, May 3, at Bechtel International Center.

Bogenschild is program coordinator for the Stanford-Berkeley Joint Center for Latin American Studies at Stanford. He is a graduate student in anthropology at the University of Chicago, where he was involved in the administration of the Center for Latin American Studies. He lived in Guatemala in 1976.

Bogenschild's current research focuses on 400 years of history of the highland Guatemala indigenous population.

This year's Tuesday Luncheon/Lecture series at the I-Center concentrates on major world problems, including arms control and academic responsibility toward global conflict and poverty.

Luncheon tickets are available at a cost of $2.50 one week before each event and at the door as they last. Brown baggers are also welcome at no cost. For more information about this or other programs call 497-1831 or stop by the I-Center for international hospitality.

Women's literature

Ingeborg Drewitz, well-known Berlin novelist and literary and social critic who currently is writer-in-residence at the University of Texas, will speak at 4:15 p.m. Tuesday, May 3, in Room 203 of History Corner.

Her subject is "Literature of Women Writers Since 1945: To leave them like Nora—that's not the only way to be emancipated."

A reception will follow at the German Studies Department library.

Philosopher Gauthier presents Tanner lectures

David Gauthier, University of Pittsburg professor of philosophy, will give the Tanner lectures in human values at Stanford May 4 and 10.

He will discuss "The Incompleat Egoist: From Rational Choice to Moral Theory" in a series of two free public talks at 8 p.m. Wednesday, May 4, in Terman Auditorium and at 8 p.m. Tuesday, May 10, in Skilling Auditorium.

Former chairman of the Department of Philosophy at the University of Toronto, Gauthier is a distinguished moral and political philosopher. He has written many historical and systematic papers on value theory, as well as on the theory of rational choice.

He is the author of two books, *Practical Reasoning* and *The Logic of Leviathan*, one of the classic treatments of Thomas Hobbes' moral and political theory.

A forthcoming book, *Morals by Agreement*, defends a contractarian theory of morality as part of the theory of rational choice. Gauthier received a D.Phil. from Oxford University and is a fellow of the Royal Society of Canada.

Three discussants will respond to the lectures at seminars in the Philosophy Department during the weeks of the lectures. The discussants are Kenneth Arrow, Stanford economist; Allan Gibbard, Department of Philosophy, University of Michigan, now at the Center for Advanced Study in the Behavioral Sciences; and Gregory Kavka, of the Philosophy Department, at University of California, Irvine.

The lectures are supported by the Tanner Foundation, established by Obert Clark Tanner, a former doctoral student and dean of the Chapel at Stanford, as a contribution to "the intellectual and moral life of mankind."

For further information contact the Philosophy Department at 497-2547.

Breitrose on advent of sound in films May 5

Prof. Henry Breitrose, chairman of the Department of Communications, will give the Stanford Drama Forum lecture "The Coming of the Sound Film" at 4:30 p.m. Thursday, May 5, in the Forum Room of Meyer Library.

Breitrose is an authority on film and the history of the industry. In his popular course, Film Aesthetics, he examines the nature of the film medium with emphasis on the problems of aesthetics and communication from the viewpoint of the practitioner, the critic, and the audience. He has travelled extensively, lecturing at film schools throughout the world.

The Drama Forum lecture is sponsored by the Department of Drama and is presented in connection with the production of Kaufman and Hart's *Once in a Lifetime* opening on May 11 in Little Theater. The plot of this classic American comedy deals with the beginnings of sound movies in 1927 and its effect on everyone connected with the industry.

Admission to the lecture is free.

Gay, lesbian awareness week starts Monday

The Gay and Lesbian Alliance has designated May 2 to May 8 as Gay and Lesbian Awareness week (GALA Week) for 1983.

The annual event will offer more than a dozen speakers and events representing different facets of the lesbian and gay community.

Monday, May 2

GALA Week will begin with a public rally in support of lesbian and gay rights at noon in White Plaza. Featured speakers include lesbian-activist Del Martin; Stanford Assistant Dean of the Chapel Reverend Donald Caughey; and for satirical entertainment, the hilarious group from Berkeley known as "Ladies Against Women."

A panel discussion entitled "Gays and Lesbians in the Professions" will be held at 7 p.m. in History Corner, Room 2.

Tuesday, May 3

A panel discussion entitled "Christianity and Homosexuality" will be held at 3 p.m. in Meyer Library Forum Room. Speakers include Jack Pantaleo, Kevin Gordon, Mary Gaddis, and Caughey.

The Women's Collective of the Gay and Lesbian Alliance at Stanford will meet at 7:30 p.m. in the Old Firehouse for its weekly social. A surprise special guest will highlight the evening.

Wednesday, May 4

Arthur Lazere, president of the National Association of Business Councils will speak about "Lesbians and Gays in Business: The Tyranny of the Closet" at 7:30 p.m. in History Corner, Room 2.

Later that evening the Men's Social will begin at 9 p.m. in the Old Firehouse with refreshments available for a small cost.

Thursday, May 5

Margaret Cruikshank will lead a discussion about lesbian literature at 4 p.m. in the Women's Center.

An evening with Armistead Maupin, columnist and author of *Tales of the City*, is scheduled for 8 p.m. in Branner Hall Lounge. Refreshments will be provided.

Friday, May 6

A discussion of "Lesbian, Bisexual, and Heterosexual Women" will be held at noon in the Women's Center.

That evening the Coffee House will be alive with gay entertainment starting at 8:30 p.m. Performers include The Choral Majority, a blaspheming quartet of satirical performers; the musical duet of Romanovsky and Phillips; and comedian Tom Ammiano.

Saturday, May 7

Starting at noon, "Gay Family Day" entertainers will perform at Wilbur Field. Guests include The Gay Freedom Day Marching Band, the Barbary Coast Cloggers, the F.L.A.G. Corps, the San Francisco Pageantry Ensemble, the Hayward Raw Rahs, the Foggy City Squares, and others.

Admission is free, although donations are greatly appreciated. Gay people are encouraged to bring their friends and families, and a picnic lunch.

An exciting evening of dancing will begin at 8:30 p.m. with the opening of the Governor's Ball at the elegant Elliott Program Center Common Room in the Governor's Corner dormitory complex. The dance area looks out on the shores of Lake Lagunita, and refreshments will be served on a wooden deck by the lake. A $2.50 donation is requested to help cover expenses and to benefit Gay and Lesbian Awareness Week.

Sunday, May 8

Stanford Women in Music Collective will present The Alberta Jackson Band, Castleberry and Dupree, and other performers. The musical festivities will begin at 11 p.m. on Florence Moore Field, and will run until 6 p.m.

Gay and Lesbian Awareness Week activities are subject to change, so call the Campus Gay Events Tape, 497-1488 for up-to-date information. All events will be open to the public regardless of age, gender, race, sexual orientation, or Stanford affiliation. A map showing the location of all GALA Week events is available by calling the Gay and Lesbian Alliance and leaving your name and address.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., April 27, to cover the week of Mon., May 9, through Sun., May 15. Calendar items are entered into a SPIRES file called PUBLIC EVENTS in CIT's IBM computer. The file is accessible to anyone with a WYLBUR account.

LATE ANNOUNCEMENTS

Thursday, May 5. La Casa Italiana lecture: Italian architect Roberto Pirzio Biroli will present a slide-lecture on his reconstruction of several historic towns in the Friuli region destroyed by the earthquake in the late 1970s. (The event has been moved from its original date, April 28.)

MONDAY, MAY 2

Discovery Film Series: "Holland," with John Roberts. 2:30 p.m. Kresge Aud. $3.

EE 350, Radioscience Seminar: "Modeling of the Rings of Saturn: Particle Size, Number Density and Vertical Dispersion," by Howard Zebker, Stanford. 4:15 p.m. McCullough Bldg. 134.

Biological Sciences Seminar: "Cellular Processing of Damaged DNA," by Dr. Philip Hanawalt, Professor, Dept. of Biological Sciences. 4:15 p.m. Room T-175 Herrin Hall.

STARTS Fabulous Film Couples Film Series: "The Big Sleep," by Howard Hawks, starring Humphrey Bogart and Lauren Bacall. 7 p.m. Tresidder Union, Room 270. $2 students, faculty, staff; $3 general.

Discovery Film Series: "Holland," with John Roberts. 7:45 p.m. Memorial Aud. $4.

Music Dept. Concert: Pamela Decker, organ. 8 p.m. Memorial Church. Free.

TUESDAY, MAY 3

Learning About Racism Lunch Series: "Institutional Racism," by Mineo Katagiri, Conference Minister for Northern California Conference of United Church of Christ. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Hall.

Center For East Asian Studies Film: "Shinto: Nature, Gods, and Man in Japan" (1977). This film of extraordinary beauty features sacred ritual sites in Japan, some of which have never before been photographed. Noon. Room 241, Lou Henry Hoover Bldg.

Bechtel International Tuesday Luncheon Series: "Ethical & Religious Factors in Guatemala: Implications for National Struggle," by Tom Bogenschild, Program Coordinator for the Berkeley-Stanford Joint Center for Latin American Studies. Noon. I-Center. $2.50 for lunch; brown-baggers welcome.

Stanford Art Museum: Arts of Africa Lunch Hour Tour. 12:15 p.m. Stanford Arts Museum. Free.

German Studies Lecture: "Literature of Women Writers Since 1945," by Ingeborg Drewitz, the well-known Berlin novelist, literary & social critic from the University of Texas. 4:15 p.m. History Corner, Room 203.

Applied Mechanics Seminar: "A Study of Capillarity through Numerical Solution of the Navier-Stokes Equation," with Dr. Jacob E. Fromm, IBM Res. Lab., San Jose. 4:15 p.m. Material Science Room 550a.

Biological Sciences Seminar: "The Multiple Genetic Effects of a Mutant of Ustilago maydis Deficient in a recA-Type Protein," by Robin Holliday, National Institute for Medical Research, London, England. 4:15 p.m. Room T-175, Herrin Hall.

Music Dept. Concert: Ellen Ochoa, flute. C.P.E. BachHamburger Sonata; Dutilleux - Sonatine; Enesco - Cantabile et Presto; Bartok - Suite Paysanne Hongroise; Schubert - Introduction and Variations. 8 p.m. Tresidder Lounge. Free.

WEDNESDAY, MAY 4

Theology & Natural Sciences Lunch Series: "Evolution & Creation," by Michael Guinan, Professor of Old Testament at Franciscan School of Theology, Berkeley. Bring a bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

CROW Lecture: "Sexuality and Gender in Children's Daily Worlds," by Zella Luria, Prof. of Psychology, Tufts University, and Barrie Thorne, Associate Professor of Sociology, Michigan State. Noon. Terman Aud. Free.

Gifts and Exchange Division, Stanford Univ. Libraries: Book Sale. Books and Periodicals in many fields. Hardbounds $1.50 and up, paperbacks 25 cents and up, periodicals 10 cents. 11 a.m. to 1:30 p.m. Green Library, West Wing, First Floor, Room 101.

Stanford Art Museum: Arts of Africa Lunch Hour Tour. 12:15 p.m. Stanford Art Museum. Free.

Chemical Engineering Colloqium: "Plasma Etching of Metal Films for Microelectronic Devices," by Professor Dennis W. Hess, Univ. of California, Berkeley. 4:15 p.m. Chemical Engineering Conference Room.

Humanities Special Programs Lecture: "Apocalyptic Landscape and the Sublime in the English Romantic Art," by Professor Morton Paley, U.C. Berkeley. 4:15 p.m. Cummings Art Bldg., Rm. 2. Free.

Stanford Arms Control and Disarmanent Committee: Forum on Ballistic Missiles. A discussion of the direction of defense policy over the next decade. Moderated by Stanford Provost, Albert Hastorf. 7:30 p.m. Kresge Aud.

THURSDAY, MAY 5

"Perspectives on Twentieth Century Japan" Colloquim Series: "Japan's Wartime Labor Policy: The Search for Method," by Dr. Ernest Notar, Postdoctorate Fellow, Center for Japanese Studies, U.C. Berkeley. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

Applied Mechanics Division: "Constitutive Equations for Materials with Memory," with Prof. R.S. Rivlin, Center for the Appl. of Mechanics, Lehigh University. 4:15 p.m. Skilling Aud.

Nuclear Film Program Series: "George Kennan: A Crtical Voice"(1982). 7:30 & 9:30 p.m. Meyer Forum Room. Free.

"Other Cultures" Film Series: "Sons of Haji Omar" (Afghanistan). A small group of Afghanistan's Pashtoon nomads as they follow their annual traditional migration into the high mountain pastures of the Hindu Kush. Watching them during the spring lambing camp, the Narin bazaar and a climb to the Khawak Pass gives us an insight into their economy, family life, social customs and religion. 7:30 p.m. Bechtel International Center. 75 cent donation requested.

Center for East Asian Studies Film Series: "Twilight in Tokyo". Two women living with their father find out that their mother, whom they thought was dead, is alive and living with another man. This results in tragedy and dissolution of the family. 7:30 p.m. Room 40, Building 420 (Jordan Hall).

FRIDAY, MAY 6

Mathematics Dept. Lecture: "The Works of Pour-El and Richards on Non-Comutability in Analysis and Physics," by Prof. Solomon Feferman, Dept. of Math. 3:15 p.m. Math 380-c.

Materials Science and Engineering Colloquium: "Application of Synchrotron Radiation to Study Amorphous and Crystalline Solids," by Gordon Brown, Stanford. 3:30 p.m. Room 550a, Peterson Laboratory Bldg. 550.

Student Activities Office: "Leaders Training Leaders: A Workshop & Reception". Workshop on student organizational continuity and transition. Reception with President Kennedy follows. 4 p.m. Tresidder Union, Rm. 270-271.

Undergraduate Special Program: ROVA Saxophone Quartet. San Francisco based avant-garde sax quartet will perform an evening of composed as well as improvised music. 8 p.m. Terman Aud. $5.50 & $4.50.

Music Dept. Concert: Stanford Jazz Band. 8 p.m. Dinkelspiel Aud. $4/$2.

STARTS/Coffee House & The Gay People's Union: The Choral Majority. Political songs and satire co-sponsored by the Gay People's Union. 9-12 p.m. Coffee House. Free.

SATURDAY, MAY 7

Music Dept. Concert: Pied Piper Concert. Concert is for children 5-12 and their parents, featuring the Renaissance Wind Band. 2 p.m. Palo Alto. $5/$1.

Lively Arts Community Outreach Program: Brahms' Requiem Lecture by Leonard Ratner, Professor of Music. A lecture on Brahms' Requiem, which will be performed on the occasion of the composer's 150th birthday in Memorial Church at 8 p.m. by the California Bach Society. 4 p.m. Dinkelspiel Aud.

STARTS - Student Arts at Stanford: Professors in Performance. See the other side of your favorite professors as they perform in their own way. 8 p.m. Tresidder Upper Lounge. $3 general, $2 students.

SUNDAY, MAY 8

Stanford Hillel's "Books & Bagels" Discussion Group: Rabbi Ari Cartun will lead the discussion of *When Bad Things Happen to Good People* by Rabbi Harold S. Kushner. 10 a.m.. Hillel Library, ground floor Old Union Bldg.

University Public Worship: Preacher: R.G. Hamerton-Kelly, Dean of the Chapel. 11 a.m. Memorial Church.

Stanford Women in Music Collective: "In the Field of Music," a spring festival celebrating women in music. Featuring Mary Watkins, The Albert Jackson Band, Castleberry and Dupree, Swingshift, Z-axis, Counterpoint, & Stanford students. 11 a.m. to 6 p.m. Florence Moore Field. Free.

Music Dept. Concert: Helsinki Academic Male Choir KYL. Works by Finnish masters; traditional European and American choral music. 2:30 p.m. Dinkelspiel Aud. $4/$2.

ASSU Sunday Flicks: "Quest For Fire". 7 & 9:30 p.m. Memorial Aud. $1.50.

Music Dept. Concert: Yuri Ito, flute. C.P.E. Bach Sonata in A minor; Schubert - Introduction and Variations; Maczynski Sonata; Dutilleux - Sonata; Franck - Sonata; Telemann - Fantasies; Ibert - Concerto. 8 p.m. Dinkelspiel Aud. Free.

EXHIBITS

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

The Art of William Gropper. Art Gallery. March 8 May 8.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

The Prints of William Nicholson. Tues.- Friday 10 a.m.- 5 p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

"China's Elders," PRC senior citizens photographed by members of the Stanford Community. Faculty Club. April 3 -May 3.

Etchings by Seymour Haden. Faculty Club. April 3 May 3.

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

VISITORS FROM OTHER COUNTRIES

May 2: Dr. Antal Gyenes, Inst. of Sociology, Academy of Sciences, Eisenhower Fellow from Hungary.
Group of six executives from the "Union 'Laitiere Normande," France.
Group of 10—Francophone Africa. Seminar on the "Formulation of U.S. Africa Policy."
May 3: Mr. H. Cilliers, assist. dir., Council for Education Evaluation of South Africa.
May 6: Group of eight—Higher Education Delegation from Thailand.

For further information please call Maria Bun, International Visitors, 497-1984.

Buck estate tour

Stanford Staffers will hold a house and garden tour of the Buck estate along with their annual business meeting during the noon hour on Tuesday, May 10.

The house and lands were given to the University by the Bucks to serve as a place to gather, contemplate, and rejuvenate.

There will be a brief wrap-up of the year's activities and the presentation of the 1983-84 officers. Plenty of time will be given to touring the estate.

All Stanford staff members are welcome to come (bring your own lunch). Call Betty Hummer, ext. 7-3421, for transportation arrangements, as parking is limited.

On-line calendar improved

The computerized events calendar which was created last fall has been streamlined in order to facilitate searching and provide more timely information.

Date searches have been simplified. The command FIND DATE 5/10/83 will find not only all films, lectures, etc. being given on that day but also all exhibits that are current on that day.

In addition, the calendar uses a new SPIRES feature called immediate indexing to make new data instantly available to searchers.

The calendar may be used by anyone with an account and access to CIT's IBM timesharing system. Logon to your terminal and type ADMIN, then choose the INFO option and select the PUBLIC EVENTS database (or simply type ADMIN INFO PUBLIC EVENTS). ADMIN is the WYLBUR command developed by CIT's Departmental Information Systems (DIS) to provide administrative computing tools to the University community.

Contact DIS at 497-1415 for further information.

CAMPUS REPORT

Volume XV, Number 31 | A publication for Stanford University faculty & staff | May 4, 1983

Protest march opposes SSRL weapons work

About 120 members of the Stanford community met at White Plaza in the rain Thursday, April 28, to protest against the possibility of weapons-related research at the Stanford Synchrotron Radiation Laboratory (SSRL).

The demonstrators then marched to deliver two written protests to the office of Stanford President Donald Kennedy. A delegation was to meet with Kennedy later in the day to express their concern.

"We should be free to say, 'no', we don't want to do that kind of work," said John Harris, deputy director of operations at the Stanford Linear Accelerator Center, whose beam line provides the Synchrotron light source at SSRL.

The protest centers around proposals that SSRL do research that could lead to development of high-speed, x-ray detectors used in nuclear weapons tests. The research would be unclassified, but it would be the first directly weapons-related work involving SLAC.

SSRL Director Arthur Bienenstock is expected to make a decision in the near future on whether to accept the proposal made to the lab by the Lawrence Livermore Laboratory, Sandia Labs, and Los Alamos National Laboratory.

Synchrotron radiation is the by-product of linear accelerators like the one at SLAC, and the x-ray radiation has many scientific and technological uses.

"It is a proposal to SSRL to do a large body of work, of which 70 or 80 percent could be described as basic science that's not particularly mission oriented," Harris said. "I think we have no objection to that.

"On the other hand there is a body of that work that is specifically related to nuclear weapons work, and specifically related to a particular kind of nuclear weapons work which is a nuclear weapons x-ray laser which is part of this whole 'Star Wars' initiative."

Harris said that the routine procedures for approving experiments have been completed and he expects Bienenstock to agree to the research.

"We think that some of those procedures are not appropriate to this particular situation," he said. For one thing, no Stanford scientist is involved; the proposal came from the University of California and the three national laboratories.

Second, "to do this kind of work involves the active collaboration and the creative contributions of hundreds of people at SLAC and SSRL. All of us who work up there work collectively in order to make the facility available."

"The university and most of the senior

continued on page 12



It's rained more than enough, but without puddles there'd be no reflections.

Faculty Senate discussion likely on Hoover petition

About 1,500 persons, including more than 70 faculty members, have signed petitions seeking a Board of Trustee inquiry into relationships between the Hoover Institution and Stanford University.

The faculty petitions, initiated by Profs. John Manley, political science, and Ronald Rebholz, English, probably will be discussed at the Faculty Senate meeting Thursday, March 12.

Manley and Rebholz are scheduled to meet with University President Donald Kennedy Wednesday morning, March 11.

Their petitions state that "the existence of a partisan research and policy organization, whether liberal or conservative, within the University, raises serious questions concerning the academic independence, integrity and reputation of the University."

Rebholz seeks a Faculty Senate resolution urging an inquiry by the trustees, while Manley's is addressed directly to the board. The student petition uses the same language as Manley's.

"The Hoover Institution is not partisan and does not take positions on public policy issues," according to George Marotta, Hoover public affairs coordinator.

"There are about 70 scholars on the staff of the Institution and each is free to

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Official hits proposed regs on information

Proposed Department of Energy rules on unclassified controlled nuclear information (UCNI) could "seriously impair" Stanford's ability to perform basic research funded by this agency, University Vice Provost Gerald Lieberman warns.

As drafted, the proposal has "unlimited potential to chill research, teaching, and the general interchange of information," contrary to the intent of Congress, he adds.

"The regulation as proposed could chill or threaten the free interchange and propagation of information required for the success of fundamental research activities which are essential to our national and economic security."

The proposal "is so fatally flawed as to require its withdrawal or at least its complete redrafting," Lieberman declares on behalf of the University in an April 29 letter to Trisha Dedik Chico, assistant secretary for defense programs in the Department of Energy.

As a federal contractor, Stanford would be required "at a minimum" to see that unclassified controlled nuclear information is "protected and controlled in a manner similar to that customarily accorded proprietary business information," the proposal states.

"This directive is not reasonable, nor even meaningful, in a university context," Liberman declares. "Taken literally, it would even apply. . .to books published by commercial publishers, containing the results of research done at other institutions without indication that the work had previously been classified, and that are available on our library shelves."

Restrictions on previously classified material are "so inclusive as to permit application to all those basic and advanced courses in the fields of physics, electrical engineering, materials science and the like that teach the basic information discovered and classified before the early 1950s and since declassified," he adds.

The proposed rule is "completely contrary to the needs and practices of Stanford and similar institutions," he

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Task force on student computing set

Vice-Provost Gerald Lieberman, dean of graduate studies and research, has been named head of a new task force on student computing by Stanford President Donald Kennedy.

Other faculty on the committee include Profs. Pat Suppes, philosophy; Jeff Ullman, computer science; John Hennessy, electrical engineering and computer science; Ralph Gorin, computer science, director of the Low Overhead Timesharing System (LOTS); Jeff Moore, Graduate School of Business; and William Kays, dean of the School of Engineering. Pat Devaney provides staff support.

The task force held its initial meeting April 8 and plans semi-weekly meetings throughout spring quarter.

According to Lieberman, its purpose is to develop a comprehensive institutional approach to student computing needs and directions over the next three to 10 years.

It will review needs currently met by LOTS, the Center for Information Technology, and computing centers within the various schools and departments.

"We will look at both the configurations and amounts of resources needed for classroom computing, unsponsored graduate student research activities, and student word-processing needs," he notes.

"Underlying this review will be an attempt to determine desirable levels of computer literacy for our students and means to achieve that goal—technically, financially and administratively.

"In addition, we will discuss directions for a long-range strategy to acquire the resources needed, including possible combinations of gifts from computer vendors, University purchases of hardware and software, sponsored research and development projects involving various network configurations, and resources which might be appropriately charged directly to student users."

Because this is "an ambitious undertaking," he concedes, "the outcome could be considerably more modest that its goal."

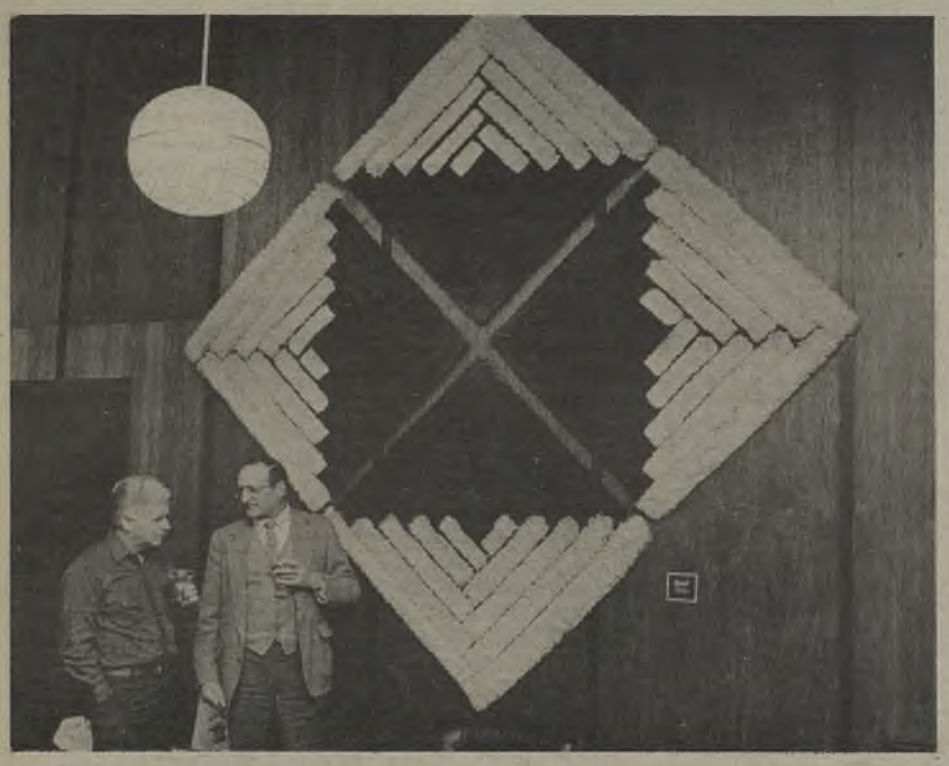
Carnegie Mellon and other universities already have announced plans to greatly expand computer availability to students.

Faculty seminar proposals sought

The Committee on Faculty Seminars, formed in 1978, has funds available to administer faculty seminars at Stanford for 1983-84. The Committee receives proposals for seminars intended to enrich the intellectual life of the academic community. Topics previously covered include American studies, interpretation, and feminist theory and research.

Each seminar is led, or co-led, by a member of the faculty. The seminar leader, who is normally responsible for recruiting and selecting the participants in his or her seminar, is given a modest budget to offset the cost of books, photocopying, and subsistence.

Deadline for proposals is Tuesday, May 31. Interested faculty members should contact Albert Gelpi, chairman of the Committee, at 497-2496 or Callie Elliston, program coordinator, at 497-0761.



"Quad" is the title of the large tapestry designed by Art Prof. Matt Kahn, recently hung in the Stanford Alumni Association on long-term loan from the artist. Above, Kahn chats with Leon Sloss, president of the Alumni Association, at the celebration party in Bowman House. The tapestry, made in Italy, is off-white and reds shading from deep to very dark.



Humanities and Sciences Dean Norman K. Wessells (left) presented a plaque to Prof. Robert Carlson, industrial engineering, as the outstanding faculty contributor to ARLO April 27. Francis Thomas Koch was honored for outstanding community service to the Action Research Liaison Office

Sibley Writing Prizes

Stanford's Creative Writing Program has announced the winners of the Dorit Sibley Writing Prizes. Curtis Horton and Robert Silva tied for first prize in poetry; Alan Liu and Dan Purtell tied for first prize in fiction. Each will receive an award of $250.

The Sibley Writing Prizes, made possible by a gift from John Merrit in memory of the late Dorit Sibley, are offered only to undergraduates and are awarded for the best poem and the best story written during autumn and winter quarters in any of the classes taught by the Creative Writing Program.

Judges for the contest are the current Stegner Fellows in the Graduate Writing Program. The Sibley Prizes will be awarded annually.

Jim Bouquin

The appointment of Jim Bouquin as coordinator of services to physically limited students has been announced by Acting Dean of Student Affairs Norman Robinson.

Bouquin has been involved with accessibility services for several Bay Area organizations, his most recent activity being the design and implementation of accessible recreation programs for Redwood City.

The Office of Services to Physically Limited Students offers campus accessibility information, and makes arrangements to meet the special needs of any student with a disability, handicap, or physical limitation.

In the past, SPLS has assisted students with campus housing, building access, readers, tutors, interpreters, Braille and recorded materials, mobility training, transportation, and special equipment and resources.

For information regarding services for physically limited students, contact Bouquin at 7-1039 or 7-2733. His office is located in Room 307 of the Old Union; hours are 11 a.m. to 5 p.m. Monday Wednesday, and Thursday.

Albert Bandura

Prof. Albert Bandura, psychology, will receive an honorary doctor of letters degree from the University of Lethbridge (Alberta, Canada) on May 21.

The degree recognizes Bandura for his contributions to social learning theory.

Bruno Bettelheim

Bruno Bettelheim, famed child psychologist and visiting professor emeritus in the Stanford School of Education, has received an honorary doctorate degree from Albion College in Michigan.

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Byer, Ginzton team develop revolutionary 'slab laser'

High peak power called key to major advance

BY DONALD STOKES

A revolutionary type of laser just perfected at Stanford is expected to be a pacemaker for new advances in industry and research.

Called the "Slab Laser" it is the result of three years of intensive work by a Stanford team.

Robert Byer, chairman of the Applied Physics Department in the famed Ginzton Laboratory, headed the team. Kelin Kuhn, a young woman graduate student, made basic discoveries that led to the breakthrough. Tom Kane, another graduate student, is a third member of the team.

The laser development involves international cooperation with a research group in Switzerland. "The motivation for studying and designing the slab laser came from a need to measure properties of a special form of hydrogen atom called muonic-hydrogen which is created for a very short time by an accelerator in Switzerland. However, the slab laser will find many other applications in addition to the scientific one," said Byer.

The slab laser works on an entirely new principle which makes it far more effective than present types.

Byer's team has just completed writing the scientific paper which gives full details of the research involved. The discovery has stirred great interest in the international world of the laser, and the breakthrough is being eagerly studied.

Byer was interviewed on the day that he finished the paper, which will be published at the end of the year. "We believe our work will mean a leap forward to the next generation of lasers," he said.

"Our new techniques allow us to build a laser with larger average powers and much better beam quality than in the past. This means we can use it in significantly better ways. This will open up new research avenues for us.

"The emphasis will not be on the tunability of the laser along the lines we pioneered at Stanford, but on the very high peak power that the slab laser can achieve.

"When we look down the line we see that we shall be working more in the area of generating laser plasmas, very hot sources of optical radiation that can be used as soft X-ray radiators.

"One of the projects we have just initiated is to use this slab laser as the driver of a soft X-ray plasma; that soft X-ray source becomes the input to an X-ray microscope. With my graduate student, John Trail, who came to Stanford from New Zealand, we plan to build a very high resolution X-ray microscope for biological applications.

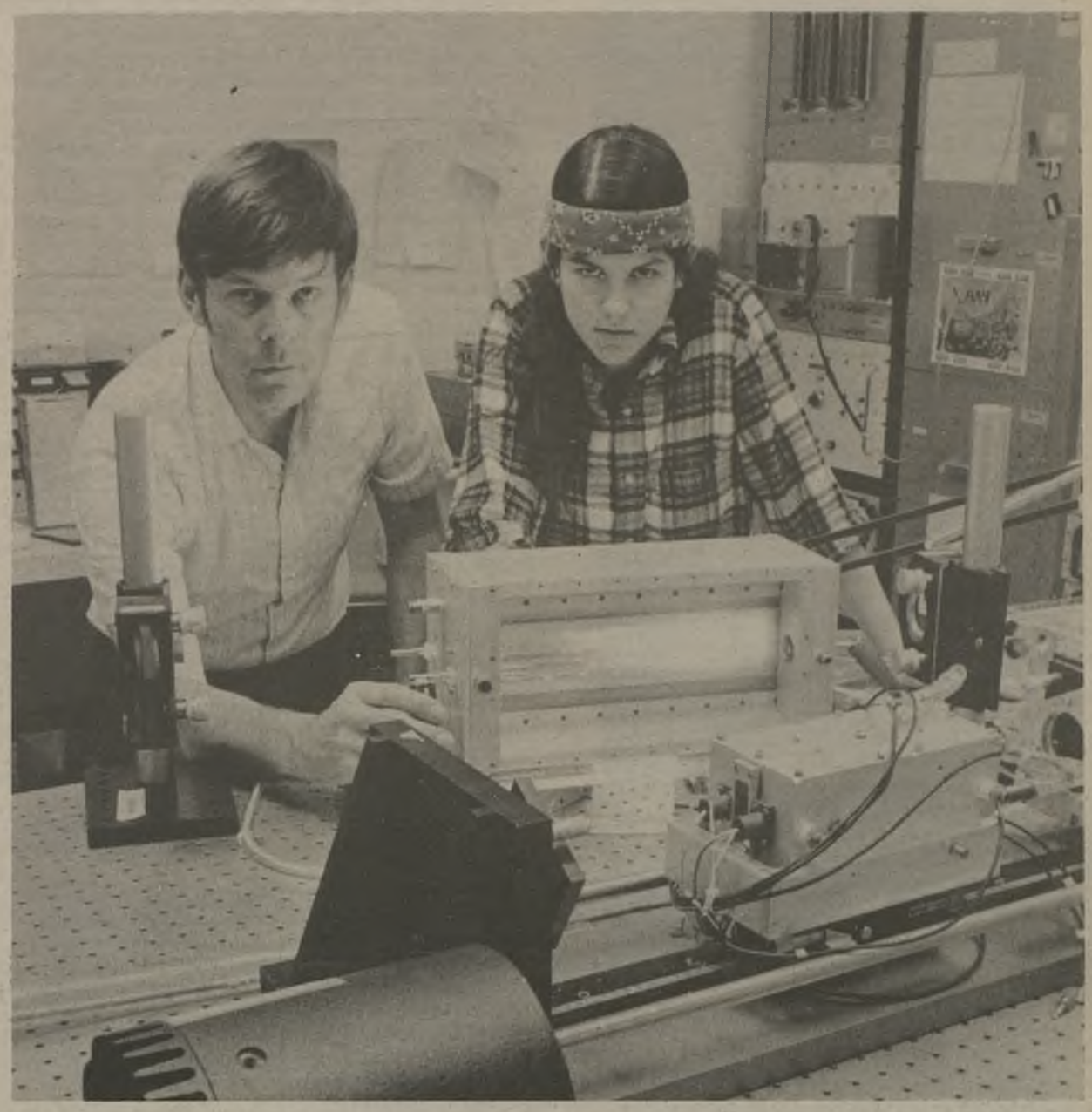
"Another area of great importance is to use this same point source of X-rays in lithography for the next generation in silicon circuits. Instead of using visible light or ultra-violet light, we should like to move all the way into the X-ray region so that we can make extremely fine lines on silicon surfaces. This area is of interest to Kelin Kuhn who is engineering the slab laser source.

"This would make possible higher density chips with greater memory. Our new laser has that potential."

As a result of other pioneer work by the Stanford team, tunable lasers, which can monitor air pollution, are now being widely used.

Byer and his graduate students have extensively studied tunable lasers. These have applications in fields such as laser spectroscopy, laser chemistry, and remote air pollution measurements. His tunable lasers can be used to detect pollutants such as carbon monoxide in the atmosphere.

Studies were carried out on campus using a telescope that stands above Byer's laboratory on a 30 ft. high aluminum pipe. Having a 750 lb. telescope mounted high above the laboratory was not the optimum solution, but it was the only choice and it did allow Byer to proceed with remote air pollution measurements.



Prof. Robert Byer, head of the team, with graduate student Kelin Kuhn.

So far three students have received their Ph.D. degrees through studying laser remote sensing, using that telescope. Byer has a constant worry about a large earthquake which would result in one heavy telescope falling through the roof into his laboratory.

Forty-year-old Byer has won a national reputation in nonlinear optics, tunable laser sources, and spectroscopy.

In a campus interview he explained in everyday terms the new techniques that make the tunable laser a device of enormous importance in weather forecasting, controlling pollution, industrial applications on an accelerating scale, and perhaps, of use in the military defense of the United States.

"In order to use lasers to monitor air pollution at very long distances we had to find a way to tune the laser wave length to the precise frequency to which a molecule or an atom responds," he said.

"The molecules have characteristic vibration and rotation frequencies, and we studied how to use the tunable lasers to probe molecules in the atmosphere.

"We found ways to achieve this with such accuracy that we could pinpoint not only the exact location of the molecules, but their chemical nature. We can even detect minute concentrations far up in the stratosphere.

For the first five years of this program we were supported by the National Science Foundation and we carried out joint work with S.R.I. International. It was common for us to be told that our sort of remote sensing would never become practical and that it would always be too costly. Today, all that has changed.

"It is generally recognized that although the laser source is expensive, and the apparatus needed to make the most accurate measurements of air pollution may cost from $100,000 to $500,000, it is a unique way to make measurements, and in the end it saves money.

"This is because only a few people are needed to run the laser apparatus, and they can make measurements over a very wide area. Using suitably equipped planes the entire surface of the United States can be monitored.

"Planes carrying tunable lasers have already monitored the eastern seaboard of the United States. They can look down on the inversion layers, or the ozone concentrations and identify their nature and course. They can also be pointed upward and measure gases in the stratosphere, and other atmospheric phenomena. All this is being done in a very practical way.

"Some of our team have recently come back from a conference of the Optical Society of America held at Lake Tahoe. People were no longer talking about the difficulty of making measurements, or the problems their lasers caused. All the talk was of exciting new ways of using lasers.

"The next step will be to have the tunable lasers aboard satellites, constantly monitoring the air we are breathing."

When the El Cajun volcano erupted in Mexico it spewed an enormous amount of dust into the stratosphere. Byer's laser has been the only instrument able to track adequately the huge cloud which drifted round the earth since then.

The laser instruments showed that the dust cloud

continued on next page

Byer/ continued from page 3

which started in the Mexican latitude was slowly diffusing across the northern hemisphere. The lasers disclosed that the dust was a barrier to sunlight, so that we should, therefore, prepare for cooler weather last summer and this winter.

Byer's group includes three students who have received their Ph.D.'s for research in remote sensing areas. Tom Kane, a graduate who is working with Byer, is very interested in achieving the laser technology needed in order to push through to new frontiers. The group aims at demonstrating the capability of measuring wind in the upper atmosphere.

The Stanford team has measured methane, carbon monoxide, and other chemicals in the stratosphere. It has also demonstrated that it is possible to measure accurately the temperature and humidity in the upper atmosphere.

There came a point when Byer asked himself. "What is the most important measurement we we can make, from a satellite, of an entire global phenomenon?" He and his team decided that the most vital factor which should be measured was the wind.

"The wind drives everything," says Byer. "If we can learn what the windfield is, then we have a tremendous advantage in predicting the weather.

"It is tremendously useful, for example, for us to be able to measure exactly how sulphur dioxide is emitted in particular areas of the U.S. and transmitted across Canada; how it is emitted in Great Britain and carried across to Scandinavia, thus causing 'acid lakes.'

"We need to do this on a global basis. So now we are working on the laser technology that will allow us to fly lasers in satellites, to make accurate soundings all the way from the stratosphere right down to the ground."

Are the beams of these super lasers harmless to those who come in contact with them—plane passengers, for example?

"In the remote sensing that we do, we have always been sensitive to what we call 'eye safety.' This is the only hazard that exists. So we are careful to design the laser transmitter systems so that there is no danger to the eyes of any observer who happens to be in the line of the beam.

"We in America are much more careful about the safety of the general public than any other country in the world, in regard to laser light transmission."

"Our early work in tunable laser sources was in part driven by our interest in studying the structure of molecules. We used our laser capability to make molecular measurements using a new technique called CARS spectroscopy.

"This acronym stands for Coherent Anti-Stokes Raman Spectroscopy. This branch of science has grown exponentially until it is a form of spectroscopy commonly used by physicists, biologists, and chemists all over the world.

"Our own effort has concentrated on achieving very high resolution or very precise measurements of molecular vibrations. To do this we have developed better tunable lasers and have found ways to cool molecules to very low temperatures to freeze out their motion. One way to cool molecules is to expand them in a jet-like nozzle. Using this approach we have recently made the higher resolution Raman measurements ever achieved.

"Where do we go from here? There are still new areas to be explored in the understanding of molecules that can only be probed at even higher resolution. We are working on better lasers and more advanced methods to measure the vibrations of molecules. Even though our work has been scientific in nature nad has led to Ph.D. theses for Mark Henesian, Mike Duncan, Jim McDaniel, and now, Eric Gustafson, the CARS spectroscopy has also evolved into a practical tool for measuring combustion processes.

"The practical application of our studies was an unforseen benefit. However, before applications could evolve such as temperature measurements in the jet aircraft engines, tunable laser sources had to be developed into reliable systems.

"We were fortunate to see our earlier tunable laser research lead to laser sources that are now widely used. This could only have happened at Stanford, where there is a strong cooperative atmosphere between research on campus and industrial and commercial companies in the area."

Are any military applications possible?

"One of the professors who played a key part in my education has said that it would be pointless to try to build an anti-missile weapon based on the laser. He said it was scientific fiction that it would be possible to build lasers with sufficient power to drill holes in missiles.

"I do not believe that. Since we have been working in the laser field we have gone from lasers whose power you could not feel with your hand to multiple-megawatt lasers that can quite readily drill holes in metal, do welding at high speed on production lines."

So it is probable that lasers will be used in defense against attacking missiles?

"Such defense is not here today, but it may be 20 years from now. There is no fundamental physics reason to prevent lasers from being made powerful enough to put out of commission such things as satellites, hundreds of miles away. There are rumors that the Soviets have used lasers as anti-satellite weapons, but this has never been verified."

Byer's interest is concentrated on the peaceful potential of lasers. "They are changing the way in which we do materials processing. It is now possible, for example, to weld steel at high speed. The laser also allows special surface treatment to stop rust or to harden the edge of a turbine blade.

"In the industrial nations a big drive is now underway to introduce lasers on the production line. I think these applications of high power lasers to welding will be much more widespread and have more economic impact than any potential military applications."

Byer agrees that although his work is concerned with remote sensing and combustion diagnostics, alternative applications could include radar-like adaptations, so that the laser would be used to measure the distance to an object with extreme accuracy.

"Our research is directed toward peaceful uses, such as measuring the gases in the atmosphere over the Los Angeles basin."

Byer grew up in an atmosphere of astronomy. His grandfather was chief machinist at the Astronomical Observatory of Mount Wilson. "He often took me there and also to Mount Palomar. He had been brought out of retirement to help design the mechanical drive system for the telescope at Palomar.

"I was interested in telescopes and astronomy as far back as I can remember. I built my first telescope when I was about 10. Soon after that I built a 12-inch reflector and other instruments. One of my most interesting projects was to try to determine the orbital periods of Jupiter's moons."

He pays warm tribute to his supportive parents, who always helped him with his equipment needs. He decided not to be become an astronomer, on the advice of a friend's father, who was an astronomer.

"He advised me to study physics and then consider astronomy as a graduate student." Byer took his advice and in 1964 gained his B.A. in physics at UC-Berkeley.

"As an undergraduate at Berkeley I wanted to work in the laboratory with optics. I asked around and found that I might be able to work for a rather strict spectroscopist, Prof. Sumner Davis.

"I made my request to Davis. His reply was to give me a book and tell me to come back when I had learned everything in the book on practical spectroscopy. I studied that book all spring and was finally able to gain enough courage to go back for what I knew was to be a very tough question session.

"Fortunately, I was allowed to work in the laboratory of Prof. Loeb, doing measurements on lightning sparks. Later I worked with Davis doing erbium atomic spectroscopy. The work was so exciting and I spent almost all of my time in the laboratory, to the dismay of my academic adviser, who thought optics was a dead field of physics. He advised me to go into cosmic ray physics and forget about optics."

"Fortunately, a chance to continue to work in optics after I graduated came about. Davis suggested that I visit a small company in Mountain View, Calif., to see if I might be interested in a very new invention called a laser.

"The day I visited Spectra Physics everybody in the small laboratory was excited and shouting, 'It's green! It's green!' Their researchers, Earl Bell and Arnold Bloom, had just made a major breakthrough in laser technology with the invention of the ion laser. At Spectra Physics I learned a tremendous amount about research and innovation and about the developing field of lasers."

His wife, Evi, whom he married in 1964, graduated from UC-Berkeley. The couple saved their money during the year spent at Spectra Physics and went on a three month camping tour of Europe, living in a tent the entire time.

Byer came to Stanford to study for his masters (1967) and doctorate (1969). His dissertation adviser was Prof. Stephen Harris. It turns out that Harris' adviser was Prof. Anthony Siegman, who is today director of the Ginzton Laboratories. "I had the good fortune to work with Prof. Harris, whose work has been widely honored," Byer said.

"That was an interesting time in the laser field. New inventions and devices were rapidly coming along. Our group worked on a new type of tunable laser called a parametric oscillator. After years of intensive work we were successful and found a way to change the color of laser radiation continuously.

"The competition in research was intense and we were able to make our device operate, on the weekend before an international conference. Harris and I, along with others in the group, including Dr. J. Young and Dr. K. Oshman, celebrated with a bottle of champagne.

"After working on the device for many nights and weekends Harris decided to invite our wives one early Sunday morning to see the new tunable laser before we left for the conference. Our elation and experimental success was put back into proper perspective when my wife, looking at the weak red beam asked, 'Is that all there is to see?' "

Tunable lasers have come far since that morning in May 1968. They will continue to find applications in a wide variety of fields in the future.

Byer loves to teach. Most of his students are graduates, but he also has taught undergraduates in a course called "Modern Technology and its Impact." Over the last 10 years he has evolved an advanced laser laboratory course in which the class does a series of experiments using laser devices.

"The laboratory course is continuously being updated as new advances are made. We get very bright students here and we try to keep them challenged."

Over the years Byer has had close and fruitful contacts with industry in solving problems with lasers.

As chairman of applied physics his duties will in the near future include the addition of a new wing to the Ginzton Laboratory.

Among his memories of amusing activities is the time he was faculty adviser for the Stanford Clean Air car race team in 1970 that won the MIT to Cal-Tech race with a car powered by alcohol.

Byer, an athletic man, is fond of body surfing, a legacy from his Southern California childhood. He and his family spend summer vacation time at the beach body surfing. Both Byer and his wife are players of soccer. "Evi is better than I," he says.

They have four children, three boys and a girl. Scott, 16, is keen on computers; Douglas, 13, is a "train nut" and swimmer; Mark, 9, is a fine swimmer; and Evi Lynn, 7, is learning to outdo her brothers.

In 1972 Byer received the Adolf Lomb Medal of the Optical Society of America, awarded biennially to a person who has made a noteworthy contribution to optics before the age of 30.

Byer is still only 40. Perhaps his most productive years are still ahead.

Getting a computer to play checkers was no easy feat, Arthur Samuel recalls

BY JOEL SHURKIN

Arthur Samuel can look a computer straight in the eye—or perhaps the tube—and know he was there at the beginning.

Samuel, now 81, who holds the rare title of adjunct professor emeritus in computer sciences, can remember the days when rooms full of "girls" and clanky machines were all the world had for computers, and he was one of those who did something about it.

Besides helping build one of the world's first computers, and helping IBM build its first computer, Samuel developed one of the earliest known programs to use artificial intelligence, a famous program that plays checkers and could actually learn by experience. Almost 40 years after he developed that program, he still has a copy working in a Stanford computer, and thinks he knows a way to improve it.

In the early 1960s, Samuel became the first person to predict home computers, projecting that they would be common by 1984.

"I first got interested in analog computers at MIT," he said. "I graduated from a college in the Midwest, a small school called College of Emporia (Kansas). It's no longer in existence." After a stint at General Electric, he entered MIT in 1923, and started working with Vannevar Bush and the differential analyzer.

Bush was pushing the state of mechanical computation as far as it would ever go. The differential analyzer was a cantankerous contraption of rotors, springs, gears, wheels, and straps. It was called an analog computer because it computed by measuring the relative physical relationship between parts. A slide rule is an analog computer.

Bush, a rising star in the science establishment (he would be responsible for the founding of of the National Science Foundation) gave Samuel the problem of figuring how to do problems of exterior ballistics on the analyzer.

Few more complex problems exist than ballistics, describing the flight of an artillery shell through the air. It can have a score of variables all of which affect the flight, including air pressure, wind speed, temperature, altitude, the spin of the earth.

"The problem was that you needed about a half of one percent of accuracy or better for exterior ballistics; the differential analyzer was only good for five percent," Samuel said.

He created a complex series of equations the machine could solve which broke the ballistics problem down to small parts. In modern computer jargon, Samuel "kludged" the problem.

(His method was used during the war, but the analyzer was still inadequate to the task, and when war broke out the Army, desperate for help, contracted with the University of Pennsylvania for the world's first electronic digital computer. The latter, ENIAC, was not finished in time to aid in the war effort.)

Samuel got his science degree from MIT and his attention shifted to vacuum tubes. He went to work for Bell Labs.

Computing, however, couldn't be far from his mind; he needed to solve problems in order to do his research. Most large laboratories had rooms full of young women with math training, who did computations mechanically, a frustrating arrangement.

At Bell, Samuel worked on the development of microwave tubes for radar.

"The usual assumption is that the British sprung (radar) on us unawares, but we had a radar system working in 1939. I made the vacuum tubes used for them down at Fort Monmouth (N.J.).

"When the war was over, I got an offer of a job at the University of Illinois, which I just couldn't turn down. . .to set up a vacuum tube laboratory."

The new lab immediately ran into the old problem: computing equations. Illinois did not have a room full of human computers.

The Army and Penn had recently announced ENIAC, which used 18,000 vacuum tubes and computed with what was then considered awesome speed. The Penn inventors, J. Presper Eckert and John Mauchly, were already working on an even faster model with a stored, programmable memory called EDVAC.

"I started agitating that we get a computer," Samuel said.

His work with the differential analyzer, and associations with Bell Labs made him the resident expert at Illinois. He was asked to form a committee and report back.

But the committee report got lost on the desk of the dean of graduate studies ("a typical bureaucrat") and nothing happened.

A new dean was named in the early fall of 1946, and he called the committee back into session and asked why they had not bought a computer. Money, Samuel responded. How much do you need? $90,000, Samuel thought.

The dean got $110,000 from the Board of Trustees. Samuel went shopping for a computer, visiting Penn and the Institute for Advanced Study, and became convinced Illinois had to build one. By and large, except for Penn no one had ever done that before.

"I got some people working on components. I had this tube laboratory which was an ideal place with the kind of facilities you needed to work on components."

He centered his work on what is called a Williams tube. It consisted of a cathode ray tube which held the computer's memory.

Samuel wanted the Illinois machine to be more reliable than ENIAC. All this research was expensive.

"It was perfectly evident that we weren't going to be able to build a computer for $110,000, because the money started going away like mad."

In order to get attention for the machine, and perhaps raise funds, the Illinois engineers decided they needed a publicity stunt. Samuel, who had been advocating non-scientific uses for computers, was nominated to think of something.

"I first thought of writing a program to play chess. Charles Babbage had suggested this in 1834 or '35, so it was an old idea. But Claude Shannon (developer of Information Theory) had been writing and giving talks around the country about having a computer play chess, and I thought maybe he had done the whole job."

It turned out Shannon had not; he was only suggesting it as a useful exercise in what would later be called artificial intelligence. Clearly the problem was too complicated for anyone to attempt at that stage.

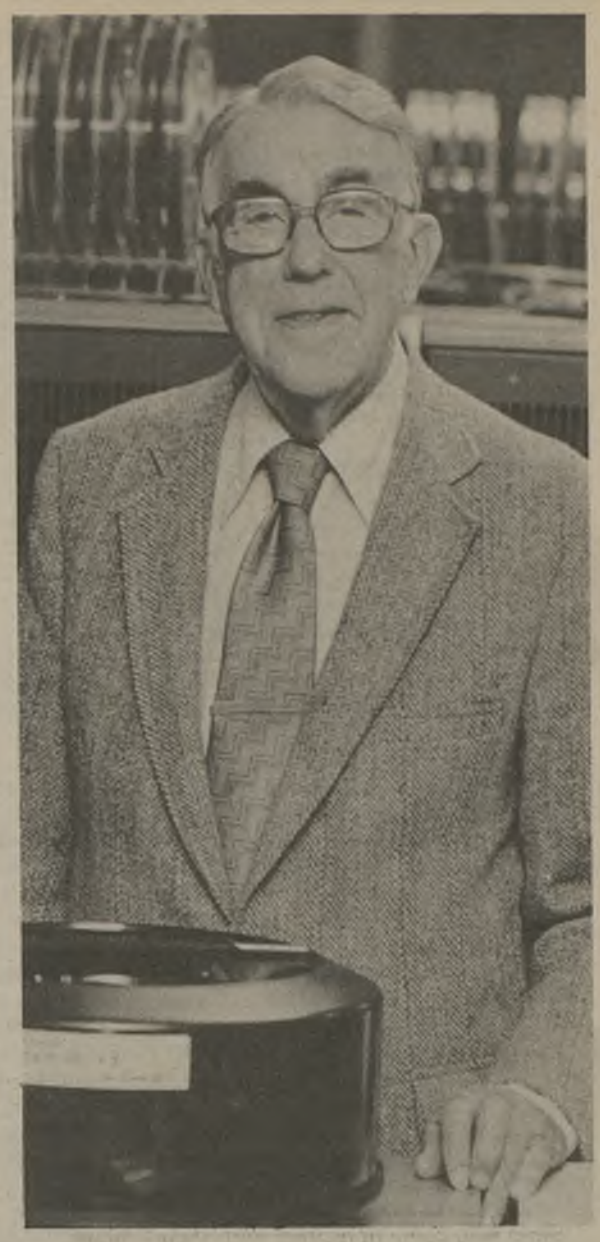
Samuel decided on checkers, yet even checkers is a gigantic problem.

"I once figured out that it would take 10^{21} centuries to make the first move if you tried to look at the end of the game with the fastest possible computer you could possibly build, subject to the speed of light," he said.

The solution—and the solution for most chess programs—is heuristics, the ability of a computer program to make judgments, and to weigh alternatives. It would take years to develop the capacity to insert heuristics in computer programs.

Samuel did not know that at the time.

"This shows how naive we were in those days: there was going to be a world checkers match in the neighboring town of Kankakee the next spring. We thought we could get the computer built, starting in the fall, and I could get the program written and we could challenge the world checker champion and beat him by the spring."



Arthur Samuel

Almost 40 years after developing a program to play checkers, he still has a copy on a Stanford computer—and thinks there's a way to improve it.

Hardly.

"Of course by the next spring we hadn't even settled on the order structure, the instruction set for this computer, and we were busy trying to develop components and trying to develop all the things you needed to build a computer."

No one had yet written an assembler language, the language in which a computer can be addressed using something resembling English. Samuel had to write his program in machine language, generally the 1s and 0s computers ultimately use.

(The Illinois computer became ILLIAC, one of the very early electronic computers in the world.)

All this gave him the idea that computers would be big business, and that universities would not be where the action was.

"I work best in an industrial environment, so I had to leave Illinois and go to work for some industrial concern," he said.

He went to IBM, which was considering getting into the computer business, and offered his services. They struck a deal.

IBM had found the tubes they were getting from their vendors were unreliable, and had quietly decided to convert a former pickle factory on the waterfront in Poughkeepsie, N.Y., to a vacuum tube

continued on next page

Want a Fulbright? I-Center hosts discussion of foreign fellowships

The annual competition for Fulbright and related fellowships for study and research overseas opens on May 1, according to Catherine Gamon of Stanford's Overseas Resource Center.

This year the program has expanded opportunities for non-Western countries of Southwest Asia, South Asia, and the Middle East. 653 awards have been announced in 73 different countries, in addition to the program of Fulbright Doctoral Dissertation fellowships administered through the U.S. Department of Education.

"This represents 127 more fellowships than were available last year," said Gamon.

An information meeting on Fulbright and related awards will be held at 7:30 p.m. Tuesday, May 10, at the International Center. All interested are encouraged to attend.

In addition to academic year study and research opportunities, there are new internships available in India in fields such as child care, hospital administration, marketing management and public health, as well as teaching assistantships in English available in France and Germany. New teaching opportunities in English are also announced for Sri Lanka and Sudan.

Pacific Island Fulbrights are now open in Fiji and Papua New Guinea. Awards for African countries have more than doubled in number—26 for this year's competition compared with 11 last year.

Applicants must be U.S. citizens at the time of application, who will generally hold a bachelor's degree or its equivalent before the beginning date of the grant and, in most cases, will be proficient in the language of the host country. Except for certain specific awards, candidates may not hold the Ph.D. at the time of application. Candidates for 1984-85 are ineligible for a grant to a country if they have been doing graduate work or conducting research in that country for six months or more during the academic year 1983-84.

Selection is based on the academic and/or professional record of the applicant, the validity and feasibility of the proposed study plan, the applicant's language preparation, and personal qualifications. Preference is given to candidates who have not had prior opportunity for extneded study or residence abroad.

Information and application material may be obtained from Catherine Gamon or Barbara Starr, Fulbright program advisers at the Overseas Resource Center, located on the second floor of the Bechtel International Center. Office hours are 8 to 12, and 1 to 5, Monday through Friday. The deadline for submission of applications to the advisers is October 10, 1983.

Letters to the editor

Keep twice a day campus mail service

Editor, *Campus Report*:

Is there a Parkinson's Law or Peter Principle that explains why, when budget cuts are mandated, they affect the lowest levels of administration and especially the constituents of the enterprise? It seems to me that everyone agrees at the planning phase that a good deal of fat could be cut from upper administrative levels. We all saw that happen when Prop. 13 effects were felt in closed fire stations and public libraries and curtailment of public school art and sports activities.

Now at Stanford we are budget-cutting. So we get one mail delivery a day because someone is sick. The memo I write after 8:15 in the morning gets delivered two days later. What do we do? We start delivering our own mail because we won't let this affect our constituents (faculty and students).

Then we find that because a relamper is sick, it will be two weeks before we can have burned out lights in a classroom replaced.

In looking around the campus at what seems to be serious inefficiency in some areas and exceptionally high standards of living in contrasting areas, there certainly must be more suitable areas for cutting back.

Barbara Wawrzynski
History Department

Forget prestige, save those ducklings

Editor, *Campus Report*:

The picture in the April 20th issue with caption, "A mother duck shows off her clan. . ." should have read: "Help, can anybody save these ducklings?"

The Humane Society had been called by the time I was attracted to the commotion of the rescue of the approximately two-hour-old ducklings, which were swimming for their lives, not being able to get back up on the high-walled planter boxes from which they'd jumped.

The security men had half of them in a box, shivering and scared, when I wrapped them in my jacket, and after being warned by them of the chemical content of the water being too dangerous to wade in and told that no one would cooperate from gardening with a plank or hip boots, I waded out to rescue the remainder of the brood.

One had drowned, and while the Humane Society rescue unit discussed why they were late with one of the security men who held the net he'd found, I reached the last one which was trapped under the foam from one of the fountains.

The only one which was "about to leave the premises" unaided was the mother, which I hope has the better instinct to hatch her next brood anywhere but at such a prestigious center which can't pull ducklings out of their own front yard!

Julie Wool
Secretary
Orthopaedic Surgery

Samuel. . .

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factory and set up a development laboratory in private house on the property. Samuel was put in charge, allegedly to make components for IBM's first computer. He was also let in on the secret that he was to run the vacuum tube operation in the pickle factory.

Samuel was in a quandry because the transistor had already been announced, and while he thought it was much too early for IBM to think of putting transistors in their computers, it was much too late for them to invest in a vacuum tube factory.

But the vacuum tube idea originated with Thomas Watson Sr., who had approved of Samuel's hiring. Samuel had never been told this. Naturally, Watson hit the ceiling when informed that Samuel thought it was a bad idea.

"So I was called down to New York to talk to Mr. Watson Sr., which I did, and I couldn't convince him. But he decided I had enough of a point that he told young Tom (Watson) that his priority for the next week was to get me and others to discuss this matter and decide what should be done."

The decision was to keep the equipment for the vacuum tube factory where people could see it, but to set up a solid-state research laboratory on the floor above the factory. When word of IBM's vacuum tube plant got back to RCA and the other tube vendors, they put in considerable effort improving their products, which suited IBM's purposes. Meanwhile, IBM was working on transistors.

Now another battle arose. Engineers at IBM, so taken with the transistor, pushed to have the new devices in the newer computers IBM was building. Samuel, who had backed the transistor technology, disagreed; he thought the technology was not reliable enough yet.

"We had to stall," he remembered. "In fact, the 701, 702, and 704—we made several computers, all vacuum tubes, and when a new design came up this battle came up all over again."

Meanwhile, Samuel decided to keep working on the checker program. He thought it would be useful to try to run the program on the 701 both as a test of the computer and of his program. He had to work on his own time; the program was considered frivolous and IBM is not a frivolous place.

His other problem was that the program had been written for ILLIAC and had to be completely rewritten for the 701. The technique he developed enabled IBM to rewrite all its existing programs for the new machine.

At this point Samuel did something dramatic to the program—he made it learn. The program learned from experience. The more checkers it played the better a player it became.

The Samuel Checker Program became possibly the first artificial intelligence program ever written. He has dabbled with it ever since. The program is quite capable of beating any amateur player and can give better players a good contest.

Samuel's little group at IBM grew to about 30 people and represented IBM's research department, although it was not called that. "I was responsible for the magnetic tape and magnetic core and the vacuum tubes," he said, "all the components.

"We decided we had to build a new research lab. I obviously was not a good manager. At the Bell Labs I had gotten kicked out of a managerial position and put back to work. . .so we decide we would have to hire somebody as a new director of research.

"For a year I was made resident manager of the Poughkeepsie laboratory; that's the biggest administrative job I ever had. I had about 300 people in the lab. But I did a terrible job managing; I'm sure I did.

"So finally they wanted to get me out of that job, and so they gave me a job of travelling in Europe to keep track of what was going on in research and development in all of Europe."

IBM had a rule that its executives had to travel first class. Watson Sr., who had lost some executives in a plane crash, ordered oceanliner travel for executives going overseas, so for several years Samuel and his wife crossed the ocean several times a year on the best and most luxurious liners of the time.

"It was a very nice job."

He taught for a while at MIT part-time, and was the editor of the MIT Journal of Research and Engineering.

While at MIT a graduate student made some suggestions for improving the checkers program and Samuel went back to work on it. When he reached retirement age he was encouraged by John McCarthy to come to Stanford, and rewrote the checker program for a DEC 20 on campus.

Samuel got involved with the artificial intelligence program here, working on SAIL (Stanford Artificial Intelligence Language) developed here for AI work.

But he still worked on the checkers program, bringing in an expert checkers player to help, but the expert didn't know enough about the mental processes involved in playing the game and Samuel got nowhere.

The program has beaten one champion, but he turned around and in six mail games, defeated the program.

Samuel says he is tempted to go back to work on the program but fears he may be reaching a point of diminishing return. He has written one commercial version of his program, and another program for the game Othello.

He is also working with Don Knuth's TEX 82.

Samuel technically works quarter time on campus but usually ends up working most of the day, sometimes more. He says whenever he thinks of easing off, someone comes up with something else they need him to do.

He doesn't seem to mind at all.

Toyota, 64K-RAM chip the moral equivalent of sputnik for schools—Kennedy

Toyota and the 64K-RAM chip may prove the moral equivalents of sputnik for America's schools, Stanford President Donald Kennedy told Stanford alumni Sunday, April 24, in Los Angeles.

The climate for education and research now is "the most encouraging. . .that we have seen since the late 1950s," he said.

While the traditional college-age cohort will decline in the coming decade, "the demographic signs are favorable" for institutions like Stanford, he said.

"Students entering college will be from significantly smaller families, a circumstance that favors intellectual development.

"At the peak of the baby boom, just before 1960, the proportion of white Americans who were first-born bropped from over 40 percent to around 27 percent. Now it is back up above 40.

"The proportion of children who were fourth-born or higher increased from 17 to 28 percent, and has now dropped back well below 17 percent.

"Parallel changes have occurred in minority families.

"Thus the cohort that will enter college now and in the next decade or so has experienced less crowding and less confusion in almost every dimension of its institutional life, including that in the schools.

"Although there may be something to worry about in terms of the quality of teachers and the level of public confidence in the schools, these may be less important than the fact that it is no longer rush hour in the classroom."

Public interest grows

There also has been a reawakening of public interest in children and the schools, he said. "That concern will intensify as more and more of that large baby-boom cohort become parents.

"Their own early experiences, with large families and crowded schools, are quite likely to make them more concerned and more troubled about the education of their children. And more of them will have had more school experience than that of any parent group in history."

Growing conviction that future gains in productivity will depend on human intellectual capital are reflected in concern for science education in the school and research support in the universities.

The National Science Foundation budget has increased 18 percent this year and other agencies' support has risen significantly.

But federal support for research not related to defense has fallen more than 40 percent since the late 1960s, he noted. Moreover, federal funding of scientific research facilities has plummeted and between $1 and $2 billion would be needed to bring university research equipment up to standard.

"It strikes me as ironic that although many academic scientists and scholars contribute heavily to science policy work in this country, not one of our academic institutions has been able to organize itself to contribute significantly as an institution to the formulation of natinal scientific policy," he observed.

Universities help

"A related opportunity for the distinguished universities—and I really do think it is an opportunity—is to lead a national movement that will restore confidence and interest in public service, including public education."

One of Kennedy's first moves after becoming president of Stanford was to initiate a cooperative study with local schools. He and Harvard President Derek Bok plan a small conference late this summer to discuss how selective research universities can further contribute to improvements in public education. But "the real test is whether we can change public attitudes enough to make some of our most able graduates once again interested in becoming teachers," Kennedy said.

While universities may look forward to improved science budgets in the near future, these may be less likely to include support for the indirect costs of research or related activities, such as graduate training.

The "oscillatory, unsteady character of



Donald Kennedy

public support for important social institutions" will make private support even more vital for universities.

Independence concern

"Independence will be one of the great issues during the last 15 years of this century," he predicted. "University science is now so capital intensive. . .that the public sector is the only fully adequate scource on which to depend in the future.

"But should we not *begin* to assert more decisive private responsibility for financing operations, student financial aid, and even some of the kinds of research that are not apt to be the subject of large public programs? I rather think that we should, and that will require a new level of support from our patrons."

"Particle physics and astronomy are not the only 'big sciences;' the list now includes organic chemistry, molecular biology, many parts of electrical engineering and computer science."

Next month, the university will formally break ground for its new Center for Integrated Systems, funded by 19 major firms providing $750,000 each toward its cost.

"When fat years are followed by lean (in federal support) the effects of compression are especially serious," he noted.

Where only 50 percent of Stanford's faculty was tenured during the height of the university's expansion in the late 1950s, now about 75 percent are tenured. Overall faculty growth has slowed from four percent to about one percent annually.

"That makes an enormous difference in our capacity to refresh and revitalize ourselves," he commented.

Deans would like to see more faculty interaction with students—L.A. panel

Stanford deans want faculty members to increase direct interaction with students, whether to instill in the students an appreciation for the intellectual life, to stimulate their minds, or to shake them from "laid back" attitudes.

These wishes were expressed when deans from Stanford's seven schools met in a panel session moderated by President Donald Kennedy at the Los Angeles alumni conference Sunday, April 24.

The deans were asked by an alumnus what changes they would like to see made in their schools, assuming necessary financial support would be met.

Rather than itemize concrete needs for equipment or facilities, the deans mainly addressed needs for quality improvement in teaching and faculty-student relationships.

"There's an extreme faculty shortage in business schools today," said Robert K. Jaedicke, dean of the Graduate School of Business. "We need to find more quality teachers." Jaedicke expressed a wish for smaller classes, resulting in closer student-professor ties.

Norman K. Wessells, dean of the School of Humanities and Sciences, wants "to create an atmosphere that will instill a greater appreciation for the intellectual life."

He noted that 78 percent of his faculty is tenured, with average age on the increase. "Remember," he said, "a teacher's main contact people are 17, 18 years old. We need younger faculty to provide a bridge to the older members."

John Hart Ely, dean of the Law School, said, "I'm concerned with the lack of intellectual engagement. Students are too laid back. We need to wake them up in various ways. One way would be with more individual instruction—teaching by simulation, role playing with video taping. We do some of this, but we should do more."

However, Allan V. Cox, dean of the School of Earth Sciences, finds that his students are not complacent. "They know they need jobs," he said.

Cox sees the need to develop strong programs in offshore and global teaching and research. "Technology is needed as we go offshore, and that means computers. We're at the forefront of this, but we need to build much better computer resources."

Robert W. P. Cutler, M.D., sitting in for Dominick P. Purpura, dean of the School of Medicine, commented, "Since I'm not the dean, but rather the associate dean, I can fantasize more freely.

"I'd like to have the ability to allow students and faculty to interact more freely, with not so many large lectures. We need to expand the Medical Scholars Program, to allow students to have close interactions with faculty that will mold their minds."

William M. Kays, dean of the School of Engineering, expressed a need to lower what he called "the excessive student-faculty ratio." In an aside to Kennedy, which he shared with the audience, he also wished for the abolishment of full indirect cost recovery to make research more competitive.

J. Myron Atkin, dean of the School of Education, said he would like to give financial support to students entering the field of public education in order to attract high quality applicants. He also seeks improved collaboration between Stanford, high schools and local school boards.

In summary, Kennedy said, "We are engaged in 'hand work' at Stanford. We need enough hands and enough programs to bring faculty and students together. I think we are only playing part of that keyboard."

—Mary Kroesche

Stassen backs bigger government role

Expanded government at all levels is needed for a full employment, free economy, long-time Presidential aspirant Harold Stassen said Thursday, April 28, at Stanford.

"The basic consequence of automation is that a very small percentage of the total population of a developed nation can produce and manufacture all of the food, goods, and materials for the entire population," he said. "This means that. . . the service side of the economy. . . must expand enormously."

Cities across the country need more teachers, police and firefighters, he said. "The highway to full employment cannot be found along the path of shrinking government."

To support a balanced budget, full employment, and no inflation, he advocated

1) "A minimum absolute tax which all corporations and individuals must pay on each year of above-minimum income";

2) A combined local, state, and national sales tax of 10 percent; and

3) A "world defense fund American import tax" to share the burden of global defense.

He also proposed an annual summit meeting between the U.S. and the Soviet Union and praised "those millions who advocate a mutual verifiable nuclear freeze. . . for assisting in lifting the world out of the deep rut of the arms race."

Stassen's remarks were prepared for a talk in the Branner lounge sponsored by the Stanford Law Forum. He noted that his daughter, Kathleen, author of a popular text on "The Developing Person," had been a Stanford undergraduate.



The Hoover petitions and their responses—debate background



Rebholz: Criticism stems from annual reports

Following is an April 12 statement by Prof. Ronald Rebholz, English, to his faculty colleagues:

I have just read the 1982 report of the Hoover Institution. As a result, I have signed the attached petition, initiated by Prof. John Manley of political science. I have also drawn up a comparable petition to secure the 50 signatures of members of the Academic Council necessary to get the issue debated in the Academic Senate. After I describe what I found in the Hoover report, I hope you, too, will sign both petitions.

The Hoover Institution is a part of Stanford University, it advocates a partisan political position, and it uses its relationship with the University and many of its faculty to enhance its prestige and respectability and thereby make its advocacy more effective.

These facts, which I will demonstrate from the report, render the Hoover Institution's relationship with Stanford University profoundly inappropriate. They also give the Trustees' consideration of the relationship between Hoover and Stanford an importance which many of us have long recognized but which is even more crucial now that Hoover's associates and policies are figuring so largely in the Reagan Administration.

The Hoover Institution's estimated budget for 1982-83 is $8.4 million. Of that sum 32 percent, or approximately $2.7 million, is coming from University funds (final page of the report). Glenn Campbell, the director of Hoover, describes Hoover's "many interrelationships with Stanford University."

They "include library cooperation, joint appointments, cosponsorship of seminars and lectures, and courses offered by Hoover Institution scholars," whom he then goes on to list (p. 20). He describes himself as the first chairman of the UC Board of Regents "to come from a private university," (p. 21) so he obviously thinks of himself and the Hoover Institution as integral parts of Stanford.

Hoover's partisan mission on behalf of conservative politics and politicians reveals itself proudly throughout the report. On January 11, 1982, at a White House reception "in honor of the Institution's Board of Overseers and their spouses," President Reagan thanked Glenn Campbell and the Hoover Institution for building "the knowledge base that made the changes now taking place in Washington possible" (pp. 25, 29).

He went on to say that "Dr. Campbell attracted some of the world's best scholars to the Hoover Institution. I'm glad he did, because we've borrowed some of them to serve in top spots in this administration. Glenn. . .to you a personal thanks" (p. 29). I count 25 Hoover people, listed in the back of the report (pp. 79-88), who claim some kind of connection with President Reagan and his administration.

There are no fewer than nine mentions and six pictures of President Reagan in the report; an elegantly printed transcript of remarks made by the President at that White House reception in January of 1982; and photographs of several members of the administration who are connected with Hoover, including Edwin Meese III, counselor to the President, Secretary of Defense Caspar W. Weinberger, Secretary of the Treasury Donald T. Regan, Attorney General William French Smith, Special Envoy to the Middle East Philip C. Habib, Deputy Secretary of Transportation Darrell M. Trent, and former Assistant to the President for Policy Development Martin Anderson, now returned to the Hoover Institution as a senior fellow. Indeed, the report looks like it might have been published by the Republican National Committee.

Much of the research and many of the publications listed in the report make it clear that the Hoover Institution is in fact a powerfully influential conservative think tank. Let me just list a few:

Anderson, Martin, *Welfare: The Political Economy of Welfare Reform in the U.S.*

Bunzel, John H. *New Force on the Left: Tom Hayden and the Campaign Against Corporate America.*

Duignan, Peter J. *The World Wide Threat of Soviet Communism. Journal of East asian Affairs, spring 1982.*

Duignan Peter J. *Arms Buildup Crucial to USA. Cleveland* (Tenn.) *Banner,* June 16, 1982.

Freeman, Rogert A. *The Wayward Welfare State.*

Nishiyama, Chiaki. *Human Capitalism.*

Rabushka, Alvin and Pauline Ryan. *The Tax Revolt.*

Starr, Richard F. *Communist Regimes in Eastern Europe.*

Starr, Richard F. *Terrorism by Soviet Design, Military Science and Technology, November/December 1981.*

Wesson, Robert (ed.). *Communism in Central America and the Caribbean.*

To ensure the dissemination of its views the Hoover Institution maintains a massive program of reprints, conferences, symposia, and appeals through the media. The Public Affairs Program, for example, "disseminates research results through magazine and newspaper articles; lectures and seminars; newspaper, radio, and television interviews; and press releases and journal reports. The appropriate mass medium is used to make public the products of research, in addition to traditional academic media" (p. 64). Six pages of the report (62-67) catalogue the parts of the Hoover progapanda machine.

Little wonder, then, that Glenn Campbell can make the following boast in the report:

Comments in the media include the July 20, 1981, issue of U.S. News & World Report, which described the Hoover Institution as the "dowager" of research institutions of its kind. In an Associated Press feature story, expansion of the Institution's research programs was described as prompting "some of the academic world's heaviest thinkers to move to California."

The **Reader's Digest** *commented that such gifted academicians as Nobel economist Milton Friedman, physicist Edward Teller, and philosopher Sidney Hook were turning out "trail-blazing papers and books." Most recently Newhouse News Service described the Institution as "the oldest and. . .one of the most influential of a dozen or so major U.S. research institutes known as think tanks" (p. 19).*

There surely can be no doubt that the Hoover Institution is a partisan organization bent on influencing national and international policy.

Likewise there can be no doubt that Hoover uses its connection with Stanford University to further its mission. Campbell's description of the interrelationships between Hoover and Stanford University and his list of eminent Stanford scholars associated with Hoover (pp.20-21) serve the Institution's purposes in two ways. They confer on Hoover the prestige of Stanford University, and, because the scholars have various political persuasions, they give Hoover and its list of publications a veneer of nonpartisanship.

On the second point we must not be fooled. Hoover is a two-tiered institution whose regular staff is now and always has been openly and proudly conservative. About the first point we must ask the question: Do we want the University's prestige to be used to further the mission of the Hoover Institution? I personally have no hesitation responding with a strong NO.

If Hoover's political bias were liberal, libertarian, or communist, the issue would remain the same. The existence of such a partisan organization within the University violates the University's traditional position that, while it takes stands on political questions bearing on its mission, it is and must always remain nonpartisan.

Indeed, any other position calls into question the University's tax-exempt status. But more important, the alliance between Stanford University and the Hoover Institution undermines the integrity and the reputation of the University, at least in the eyes of those who do not want a *Hoover* implicitly emblazoned on our masthead.

Ronald A. Rebholz

Rebholz petition text

Following is the petition initiated by Prof. Ronald Rebholz to request the Steering Committee of the Academic Senate the following resolution concerning the relationship of the Hoover Institution and Stanford University:

Whereas, the existence of a partisan organization, whether liberal or conservative, within the University raises grave questions concerning the academic independence, integrity, and national reputation of the University; and

Whereas, the legitimacy and influence of the Hoover Institution and the causes for which it stands are immeasurably enhanced by sharing in the prestige of a great University; and

Whereas, Stanford University provides approximately one-third (32 percent) of the Hoover Institution's annual budget, and this 2.7 million dollar support comes at a time of severe cuts in the University's budget;

Therefore, the undersigned members of the Academic Council request the Steering Committee of the Academic Senate to place on the agenda of the Senate the following resolution:

The Academic Senate urges the Board of Trustees to initiate an immediate and independent inquiry including a public report, on the relationship between the Hoover Institution and Stanford University.

Manley, student petition

Following is the text of a petition for the Board of Trustees' inquiry into the relationship between Hoover Institution and Stanford University originated by Prof. John Manley, political science:

The existence of a partisan research and policy organization, whether liberal or conservative, within the University raises serious questions concerning the academic independence, integrity, and national reputation of the University; and

The legitimacy and influence of the Hoover Institution and the causes for which it stands are immeasurably enhanced by sharing in the prestige of a great University; and

Stanford University provides approximately one-third (32 percent) of the Hoover Institution's annual budget, and this 2.7 million dollar support comes at a time of severe University funding cutbacks;

Therefore, we, the undersigned members of the Stanford Community urge the Board of Trustees to initiate an immediate inquiry, including a public report, on the relationship between the Hoover Institution and Stanford.

Manley compiles Report, news excerpts

The following data from the 1981 and 1982 Annual Reports *of the Hoover Institution are part of a compendium of materials on alleged partisan political activities by the Hoover Institution compiled by John F. Manley, professor of political science.*

Ronald Reagan, speaking at the January 6, 1981, winter meeting of the Institution's Board of Overseers:

"Indeed, in 1978, the *New York Times Magazine* called the Institution 'the brightest star in a small constellation of conservative think tanks. . . operating from a base of honorable conservatism, first-rate scholarship, sharp wits, acute perceptions, and clear reasoning.'

" . . . I've experienced this conservatism and scholarship, these wits and perceptions, and their reasoning personally through my association with the Institution as an honorary fellow.

"Moreover, during the recent campaign, I called on more people from the institution to help with my campaign than from any other institution. Some, such as Glenn and Rita Ricardo Campbell, served on my policy task forces. Others, such as Martin Anderson, Darrell Trent, and former Senior Fellow Dick Allen, work on my campaign staff. All are now assisting me in the transition to a new administration."

1981 *Annual Report,* pp. 24-25.

Hoover Director Glenn Campbell:

"A major strength of the Institution is its location at Stanford University. Its scholars can thereby conduct their analyses of major policy issues and provide their views to members of the legislative and executive branches of government from their perspective of residence at the Institution."

1981 *Annual Report,* p. 15.

continued on next page



Hoover Institution

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Reports...

Ronald Reagan, speaking at a January 11, 1982, White House reception for the Hoover Board of Overseers and their spouses:

"Under the leadership of your able director Glenn Campbell, and with hard work and diligence, you built the knowledge base that made the changes now taking place in Washington possible. Dr. Campbell attracted some of the world's best scholars to the Hoover Institution. I'm glad he did, because we've borrowed some of them to serve in top spots in this administration."

1982 *Annual Report*, p. 29.

Hoover Director Glenn Campbell:

"The many interrelationships with Stanford University include library cooperation, joint appointments, cosponsorship of seminars and lecturers, and courses offered by Hoover Institution scholars."

1982 *Annual Report*, p. 20.

Hoover Director Glenn Gampbell:

"The highlight of the past year was the election of honorary fellow Ronald W. Reagan as President of the United States. This development, together with the Institution's national and international reputation as a unique center for advanced study has continued to focus attention on the work of the Institution's scholars and on its library and archival collections."

1981 *Annual Report*, p. 11.

and continuing:

"Since President Reagan took office on January 20, 1981, more than 30 scholars and former fellows of the Hoover Institution have been requested to participate in public service and have been appointed to positions in the executive branch of the federal government or as members of boards and commissions."

1981 *Annual Report*, pp. 11-12.

The following quotations testify to the close connections between Stanford and Hoover and are presented in the 1981 *Annual Report* (pp. 57-58) as "representative samples of such comments":

Washington Star, November 16, 1980, Gavin Scott, Time-Life News Service:

"Some of the most forceful ideas advanced by the Reagan administration will come from a group of intellectuals ensconced at the Hoover Institution on War, Revolution, and Peace located on the Stanford University campus. . . . Quite clearly it will have an influence on post-Carter Washington policies far greater than its endowment of $35 million and present annual budget of $6.6 million would suggest."

Dun's Review, April 1981, T.J.M.:

"By his own admission, President Reagan has probably learned more about public policy issues from Stanford University's citadel for scholars, the Hoover Institution on War, Revolution, and Peace, than from any other source."

As to Hoover's policy connections with the Reagan Administration:

Los Angeles Times, November 18, 1980, William Endicott:

"Throughout this campaign year, Reagan turned to Hoover to provide intellectual substance for his conservative views on a broad range of domestic and international issues. Now, as he starts to shape a new administration, he is expected to lean heavily on the institution for both personnel and policy advice."

Boston Globe, November 23, 1980, Robert Levey:

"Now Reagan, the heavy thinkers from the Hoover Institution, and other like-minded experts have headed to Washington with full authority to test out their mandate in the field."

U.S. News and World Report, November 24, 1980, Stanley N. Willborn:

"In recent years, under the leadership of Director W. Glenn Campbell, another longtime Reagan adviser, Hoover has broadened its scope. Its research now carries substantial weight in Congress and in the executive branch of the U.S. government."

Newsweek, December 1, 1980:

". . . some of the best minds at Hoover will soon be helping to run the Reagan administration. . . . Ten of Hoover's 50 resident fellows are currently acting as advisers to Ronald Reagan, and a dozen of the President-elect's transition task forces include Hoover representatives. . . . Publishing up to 30 major works a year, Hoover has already begun to have an impact on national policy."

CBS/TV Network, "CBS Evening News," December 10, 1980, Walter Cronkite:

(Speaking about the Hoover Institution)"Many of the positions enunciated by Ronald Reagan during the campaign were developed by a West Coast think tank. . . ."

New York Times, December 22, 1980, Bernard Weinraub:

". . . The Hoover Institution. . . serve(s) as one of the dominant sources of personnel and policy advice in the new administration of Ronald Reagan."

Bacchetti clarifies Hoover budget status

Editor, *Campus Report*:

Recent stories in the campus press about the Hoover Institution drew a conclusion about its budget sources that might be misleading. The question concerns restricted funds.

Restricted funds, like unrestricted ones, are all the funds of Stanford University. The restrictions say where within the range of the University's purposes those funds are to be used.

The possible confusion attaches to the expression that $4 million of the $8.4 million total Hoover budget is "received from the University." It is more accurate to say that allocations of unrestricted funds ($2.6 million in 1982-83) are made in relation to program priorities and restricted fund availability. The unrestricted funds support the library division of Hoover Institution, which is also supported by $1.3 million in restricted funds.

Moreover, it's important to note that the securing of restricted funds is a complex task involving many people over long periods of time. In the case of the Hoover, none are involved more than the leadership of the Institution itself.

Raymond F. Bacchetti
Vice-Provost for Management and
Director of University Budgets

Marotta responds to *Stanford Daily*, describes Hoover appointment process

Following is a letter submitted to The Stanford Daily by George Marotta, public affairs coordinator of the Hoover Institution:

There are so many misleading statements, innuendoes, quotes by unidentified persons, character assassinations, and attempts at intimidation in the recent four-part story in the *Stanford Daily* (April 19-22) that I hardly know where to begin. I will only deal with a few for the record.

The first point that needs making is that the Hoover Institution is not partisan and does not take positions on public policy issues. There are about 70 scholars on the staff of the Institution and each is free to express his or her own conclusions based on their research and to present their views on issues.

Hoover fellows have commented previously in letters to the *Daily* on the charge that the Institution is partisan. For example, senior research fellow William Schneider wrote in the *Stanford Daily* on October 27, 1981: "I have not found the Hoover Institution to be monolithically conservative or Republican, and I have never been made to feel out of place here. There are, in fact, quite a few of us Democrats here at Hoover."

Also, Alexander Dallin, then a senior research fellow for over four years, wrote in the *Daily* on October 10, 1975: ". . .in my experience there has never been any attempt to influence or control the research or the findings of any scholar associated with the Institution."

Various actions of the Stanford University Board of Trustees, principally a May 21, 1959, Resolution, define the relationship between the Institution and the University. This document, which includes a several page statement on the status, purposes, management, and policies of the Institution, contains the often-quoted paragraph by Mr. Hoover on the "evils of the doctrines of Karl Marx." This resolution was adopted by the Board of Trustees "with the recommendation of the President of the University, the endorsement of the President of the Board and the Trustee Chairman of the Committee on the Hoover Institution, and the approval of Mr. Hoover."

In a later section, the Resolution notes that "The members of the staff must be free to publish statements or books of the results of their research work in which they give their 'interpretation' or opinion. If the writer of this type of publication wishes to state that he is a member of the Hoover Institution, the publication must carry a declaration that the Institution does not assume responsibility for statements in the publication."

Immediately following Mr. Hoover's much-quoted comment, the Resolution states that "The over-all mission of this Institution is, from its records, to recall the voice of experience against the making of war, and by the study of these records and their publication to recall man's endeavors to make and preserve peace and to sustain for America the safeguards of the American way of life."

The 1959 agreement was reaffirmed by the Trustees in May 1962 as a condition of Mr. Hoover's donating his archives to the Hoover Institution and again in the late 1970s when the Volker Fund was donated to the Hoover Institution.

The terms of a bequest by Mr. William Robertson Coe to Stanford University contains the following language: ". . .to establish and maintain a Program of American Studies designed as a positive and affirmative method of meeting the threat of Communist, Socialism, Collectivism, Totalitarianism and other Ideologies opposed to the preservation of our System of Free Enterprise." Three endowed Coe professorships exist at Stanford (in economics, history, and English). It is interesting to note that, to my knowledge, there has never been any similar objection expressed to the statement of purpose required by the Coe bequest.

Regarding the selection of the current Director, Dr. W. Glenn Campbell was invited to become director in November 1959 by Stanford University President J. E. Wallace Sterling. In a letter to Campbell, Sterling said, ". . .the Stanford Trustees have authorized me to finalize arrangements concerning your appointment as Director of the Hoover Institution, and I have discussed these arrangements with Mr. Hoover, who approved of them. With this letter, then, I formalize the offer to you of said directorship. . . ."

"Paragraph 3 of the 1959 resolution describes the relationships between the Institution and the University as follows: 'That the Hoover Institution on War, Revolution, and Peace is an independent Institution with the frame of Stanford University. Its relation to the University is that the President of the University will propose all appointments, promotions, and the budget of the Institution directly to the Board of Trustees. There will be no reference to any faculty committees between the President and the Trustees.' "

The *Daily* articles contain so many misstatements and half-truths about the appointment process for scholars at the Hoover Institution that instead of trying to comment on them, I will outline the various procedures briefly.

For Senior fellows who receive continuing appointments but not academic tenure, the President creates an *ad hoc* committee to review the nomination by the director (which is made after a nationwide search) before submitting it to the Trustees.

In the case of Senior Research Fellows who receive term appointments of five years or less, the director gives the president advance notice of his intention to recommend a particular person and provides background information.

In the case of certain senior Library Personnel, such as the Associate Director for Library Operations, Curators, and the Archivist, search committees composed of Institution staff as well as representatives of University faculty and administration are used. The latter representatives are selected by the Director in consultation with and with the concurrence of the President.

"The Director recommends one candidate to the President who reviews the candidate before submitting the recommendation to the Board of Trustees."

Junior members of the scholarly staff as well as other staff members are selected in accordance with procedures similar to those used by the rest of the University.

George Marotta
Public Affairs Coordinator

Marotta describes appointment process for Hoover Institution scholars

continued from page 1

express his or her own conclusions based on their research."

A May 21, 1959, resolution of the Board of Trustees states that "the Hoover Institution is an independent institution within the frame of Stanford University. . . .

"The members of the staff must be free to publish statements or books of the results of their research work in which they give their 'interpretation' or opinion. If the writer. . .wishes to state that he is a member of the Hoover Institution, the publication must carry a declaration that the Institution does not assume responsibility for statements in the publication."

Law students James Steyer and Daniel Cohen, who initiated the student petition, said "this effort is intended to spark much needed debate within the Stanford community regarding the proper role of the Hoover Institution in an academic setting. The purpose is not to engage in political debate in the national press."

Among the "complaints" listed by them and Prof. Martin Carnoy, education, in a release from Faculty and Academic Community for Truth in Scholarship (FACTS) are that:

"Hoover enjoys a hazy, quasi-independent status. Its research fellows are not subject to the University academic hiring process or to approval by the University's President, Donald Kennedy.

"Hoover is a two-tiered organization, comprising a 'conservative inner core' of policy advocates made respectable by an 'outer ring' of academics, most of whom are Stanford professors.

"Hoover is creating a 'two-class professoriat in the University social science departments—those who receive research funds and other benefits from Hoover, and those who do not.

"Hoover injects political criteria into the decisions to hire research fellows. It is the only part of the University not bound by the Academic Council's statement on academic freedom, which prohibits political discrimination in hiring.

"Hoover's widely recognized promotion of the Reagan candidacy and the Republican Party generally threatens its own tax-exempt status and that of the University."

In 1981, William Schneider, a Hoover senior research fellow, told *The Stanford Daily* "I have not found the Hoover Institution to be monolithically conservative or Republican, and I have never been made to feel out of place here. There are, in fact, quite a few of us Democrats here at Hoover."

In 1975, according to Marotta, Stanford Prof. Alexander Dallin wrote "in my experience, there has never been any attempt to influence or control the research or the findings of any scholar associated with the institution." At the time, Dallin had been a senior research fellow at Hoover for four years; he has since been one of the few faculty to criticize the Institution publicly.

So far as appointments are concerned, Marotta outlines the following procedures:

"For senior fellows, who receive continuing appointments, but not academic tenure, the (University) president creates an ad hoc committee to review the nomination by the director—which is made after a nationwide search—before submitting it to the (University Board of) Trustees.

"In the case of senior research fellows, who receive term appointments of five years or less, the (Institution) director gives the president advance notice of his intention to recommend a particular person and provides background information.

"In the case of certain senior library personnel, such as the associate director for library operations, curators and the archivist, search committees composed of institution staff as well as representatives of University faculty and administration are used. The latter representatives are selected by the director in consultation with and with the concurrence of the president. The director recommends one candidate, who reviews the candidate before submitting the recommendation to the Board of Trustees.

"Junior members of the scholarly staff as well as other staff members are selected in accordance with procedures similar to those used by the rest of the University."

In a recent letter to *The Stanford Daily*, Prof. Joseph Berger, chairman of sociology, said "as far as I know, there has been no 'political litmus test' applied" in appointing four of his colleagues to the Hoover Institution: Seymour Martin Lipset, Alex Inkeles, W.J. Goode, and James March.

"Is it conceivable that one political grouping actually contains so much academic talent?" Berger asked. "Furthermore, the acquisition of these scholars—and others in other social science departments—and the University's ability to keep them in the face of competing alternatives is dependent, to an important degree, on the resources for scholarship that have been made possible by their Hoover Institution appointments."



Campbell announces appointment of 12 new national, peace fellows

Twelve National and Peace Fellowships have been awarded for 1983-84 by the Hoover Institution, according to Institution Director Glenn Campbell.

The fellowships are awarded to outstanding younger scholars in political science, economics, history, law, sociology, literature, and philosophy from throughout the U.S. and Canada.

They provide scholars an opportunity to spend one year at the Institution doing independent research on current and historical issues of domestic and foreign policy.

During the year all fellows participate in regular afternoon discussions, weekly seminars and monthly dinners which are led and attended by the fellows themselves, the Institution's staff, Stanford faculty, visitors, and U.S. government officials.

According to Dr. Dennis L. Bark, Program Executive Secretary, the National Fellows Program "is designed to provide the fellows both a stimulating atmosphere for research and discussion and to afford scholars a unique opportunity to advance their professional careers by completing an original and significant research project in the form of a publishable manuscript."

Fellows, their topics and academic backgrounds are as follows:

NATIONAL FELLOWS

Bruce D. Berkowitz, "U.S. Nuclear Strategy in the Age of High Technology"; assistant professor, political science, University of Minnesota; Ph.D., political science, University of Rochester.

Jack Bielasiak, "Crises and Crisis—Management in the Socialist Bloc"; associate professor, political science, Indiana University; Ph.D., political science, Cornell University.

Malcolm R. Burns, "The Effects of Predatory Price Cutting and Mergers on the Acquisition Costs of Competitors"; assistant professor, economics, University of Kansas; Ph.D., economics, University of Minnesota, and J.D., law, University of Kansas.

Lorne H. Carmichael, "On the Role of Reputation and Public Policy in Competitive Labor Markets"; assistant professor, economics, Queen's University; Ph.D., economics, Stanford University.

John E. Chubb, "The Political Economy of Federalism"; assistant professor, political science, Stanford University; Ph.D., political science, University of Minnesota.

Lowell Dittmer, "Chinese Political Reform: A Comparative Analysis"; associate professor, political science, and chairman, Center for Chinese Studies, UC-Berkeley; Ph.D., political science, University of Chicago.

Don Fullerton, "Incentive Effects of Capital Income Taxation"; assistant professor, Woodrow Wilson School of Public and International Affairs, Princeton University; Ph.D., economics, UC-Berkeley.

Masanori Hashimoto, "A Comparative Study of U.S. and Japanese Labor Markets"; associate professor, economics, University of Washington; Ph.D., economics, Columbia University.

John McAdams, "The Rise of the New Class in Post-Industrial Society"; assistant professor, political science, Marquette University; Ph.D., political science, Harvard University.

Gale A. Norton, "Protecting the Environment Without the Bureaucracy: Legal Mechanisms for Encouraging Private Initiative, Decentralized Decision-Making, and Technological Innovation"; senior attorney, Mountain States Legal Foundation, Denver, Colo.; J.D., law, University of Denver.

Joel B. Slemrod, "Simplification and the Compliance Cost of the Individual Income Tax System"; assistant professor, economics, University of Minnesota; Ph.D., economics, Harvard University.

PEACE FELLOW

David Collier, "Opposition and Incorporation: Unions, Parties, and Regimes in Latin America"; associate professor, political science, and chairman, Center for Latin American Studies, UC-Berkeley; Ph.D., political science, University of Chicago.

Four freshman get Booth prize

Four winners of the Boothe prize for excellence in writing at Stanford have been chosen for winter quarter.

The prizes were established by a gift from Mr. and Mrs. D. Power Boothe, Jr. They are awarded for the best freshman essay, each quarter in Western culture and in freshman English. Each program uses a faculty selection committee.

The winners are: in Western culture, Greta Anderson, "Medieval Attitudes toward Literature"; in freshman English, Donna Anderson, "Gigi"; Bruce Bogle, "Amateurism—is the IOC Being Reasonable"; and Neil Kennedy, "Communism, Italian Style."

In addition, 10 finalists were selected from the two programs. Winners received a cash award of $250, and finalists receive a $25 gift certificate at the Stanford Bookstore. Recipients were honored at a reception in the Office of the Dean of Humanities and Sciences Tuesday, May 3.

CTL open house at new quarters

The Stanford Community is invited to an open house from 3 to 5:30 p.m. Wednesday, May 11, at 126 Encina Commons, to celebrate the new facilities of the Center for Teaching and Learning and the Program for Faculty Renewal.

The Center supports the teaching improvement efforts of Stanford faculty and TAs through workshops, orientations, evaluation, videotaping/consultation, reading materials, a handbook and handouts, and a variety of other resources.

Funded by the Mellon Foundation, the Program for Faculty Renewal organizes weekend and summer conferences for off-campus faculty from throughout the Pacific Coast region.

Stanford third in gift support

Among private universities, Stanford ranked third nationally in private gift support for 1981-82, a new national study shows.

Harvard was first, with $181 million, Yale second, $82 million, and Stanford third, $77 million.

The data come from the Council for Financial Aid to Education, which reported that total voluntary support for higher education rose almost 15 percent last year.

Other institutions in the top 10 nationally, in order, were UCLA, Washington University, USC, Minnesota, Cornell, Columbia, and Princeton.

The University of California state-wide system received $131 million and the University of Texas statewide system $91 million.





Despite record rainfall, Lagunita's drying up fast

Despite record-setting winter rains, Stanford's recreational lake, Lagunita, is drying up.

Lagunita probably will be empty by Commmencement, June 12, because breaks in its flume are preventing the University from filling the reservoir—as it does annually—with water from nearby San Francisquito Creek.

Landslides at the Stanford Golf Course in February damaged the flume—a pipeline used for the past 100 years to carry part of the creek runoff to the man-made lake. The section of flume between the creek and 15th fairway is broken, as is pipe near the 14th hole, according to Cheryl Jensen, manager of civil engineering, water/technical services, in the Utilities Department of Facilities and Services.

Heavy rains in January 1982 caused a serious slide near the 14th hole, which damaged the imbedded flume. The same hillside slid again this year, breaking the repaired pipe.

"We've had more rain this year than any other year we've been recording it at Stanford," Jensen says. The "extraordinary" rains caused the slides, she added.

Total rainfall measured 32.82 inches as of May 2. The previous high was 29.08 inches in 1957-58. The annual average is 15 to 16 inches, according to Jensen. University rainfall records date back to 1930.

Slightly more than 30 inches of rain was recorded in San Jose in 1889-90, and Jense speculates The Farm experienced similar high rainfall that year as construction on the soon-to-open University was underway.

Lagunita is an "infiltration pond," a reservoir that recharges the ground water. State regulations require the University to empty it every summer because it might otherwise become a stagnant breeding ground for mosquitos. The lake's source of water, San Francisquito Creek, is too low to provide water for summer filling.

Runoff from the hills across Junipero Serra Boulevard filled Lagunita ("little lake") after the flume broke this past winter, allowing students several weeks for windsurfing and other water sports. But the water now is evaporating rapidly from the top and leaking through the lake's bottom, which is not sealed.

Some water is being added through an irrigation line from Felt Lake, but Jensen says "we can't put in enough to make a difference in the lake level and still meet Golf Course irrigation demands.

Jensen is investigating other methods of getting water out of the creek and into the lake. Alternatively, two old University wells could be pressed into service, but it would cost a "prohibitive" 18 cents per minute in well-head tax and pumping costs to get the water, she says. Jensen believes the wells could produce only enough water to compensate for evaporation, not enough to compensate for the loss through the bottom.

A study of early maps indicates the 115-million-gallon reservoir was built in 1878 or 1879. It originally held irrigation water for crops grown on Leland Stanford's Palo Alto Stock Farm.

Police emergency alarms installed at 10 locations

Ten police emergency alarms have been installed at Stanford as part of the Department of Public Safety's continuing efforts in the area of personal safety.

The alarms were designed specifically for Stanford to tie in with the existing communication system of fire alarms. The police emergency alarms are located on the posts of existing fire alarm boxes. A blue light flashes continuously.

The alarms operate similarly to a fire alarm. When the blue lever is pulled, a signal is transmitted to a central dispatch communicator who initiates a police response. At the same time, a horn is activated at the site to attract attention.

The location for the first 10 boxes in this pilot program were determined based on the amount of use the area gets, lighting, nearness to suggested travel routes, and accessibility to 24-hour buildings, phones, and other alarm boxes.

The first 10 locations are:

1. At North East Corner of the Quad;
2. Stadium;
3. Santa Teresa/Duena Street;
4. Law School;
5. Food Service/Pampas Lane;
6. Stauffer Chemistry Gazebo—North West side;
7. Medical Center—South East side;
8. Physics Tank;
9. Maples Pavilion; and
10. Cowell Center.

Go roll up your sleeves at Roble

The Stanford University Blood Bank will hold a blood drive from 2 to 6 p.m. Friday, May 6, at Roble Gym.

Faculty and staff are urged to donate blood and, whenever possible, to announce the drive to students and colleagues.

The donated blood will help fill the needs of patients at Stanford Hospital and Children's Hospital.

SSRL/ continued from page 1

scientists here, have taken the position historically and today that any science research is good, and should be done. Any weapons system that can be developed, (from that research) should be developed, essentially.

"The problem we have is that we perceive. . .if the existing weapons policies, military policies of this country to say the least, and other countries as well, if those policies are extrapolated out to the future there in fact is no future."

Drekmeier, Miller speak

Political Science Prof. Charles Drekmeier said the research would permit the "deployment of orbiting platforms, perhaps dozens, perhaps as many as 50 of these nuclear powered lasers. These won't work in the atmosphere so what we're preparing for here is war in space."

He said a university cannot survive research that shuns responsibility "without becoming a kind of vocational school."

Roger Miller, a SLAC professor, said the proposal "is in conflict with the rules on research at Stanford," because SSRL cannot operate without the SLAC beam workers at SLAC would be forced to participate, even though indirectly.

"There's a few hundred workers at SLAC whose work directly contributes to the work that goes on at SSRL. It is impossible, as (President) Kennedy suggested in his talk to the faculty, to move people to places where their work would not contribute."

He said that by saying there was "good basic science" involved in the proposal, proponents are attempting to get research performed that would not normally be done at Stanford.

Implied threat

"There is the implied threat that other funding will be withdrawn if that work is not done," he said. "It's clear to me that Prof. Bienenstock feels that his laboratory's future will be threatened if he says 'no.'

"I think in that situation he has only one way of saving his laboratory, and that is to say 'no' to this research. Unless he does that he has already lost the freedom of inquiry that he prizes so highly at his laboratory." (The Department of Energy funds SLAC entirely and is the major funding source for SSRL. The national laboratories proposal seeks funding from DoE's Office of Military Applications.)

Mary James, a Stanford graduate student and engineering physicist at SLAC, said Bienenstock, "who is very concerned, by the way, about how the staff at SLAC and SSRL feel about this proposal," asked her how she feels.

"I said I feel that you are selling my work to the weapons establishment. You are selling it without my permission and without my approval, and I am upset that you are selling my work, and I don't want you to do it."

The demonstrators delivered two letters to Kennedy's office, one a petition signed by 2,000 students, 50 faculty members, and 200 staff, and another from over 300 people at SLAC, according to Jon Adelstein, student leader of the protest movement.

The letter from SLAC and SSRL said that the central issue in the dispute was that "as Stanford scientists and workers we have not only the right, but the responsibility to participate only in research programs that are consistent with our own judgment and conscience."

Adelstein said he felt the issue of "involuntary servitude" would be the most persuasive to Kennedy. He said people outside of Stanford are making decisions which are binding in effect on the people at SLAC and at Stanford. —Joel Shurkin



Demonstrators delivered written protests to Donald Kennedy's office last Thursday in an effort to keep weapons-related research out of SSRL.

Cinco de Mayo protest march to Shultz home

Latin America policy protesters will mark Cinco de Mayo with a noon rally in White Plaza at Stanford Thursday, May 5, followed by a march to the campus home of George Shultz.

The U.S. Secretary of State currently is in the Middle East. He remains on leave as a professor in the Stanford Graduate School of Business.

The protest has been organized by the Stanford Central American Action Network, a voluntary organization, and Stanford MECHA.

It will include an 11:45 a.m. appearance by Balet Folklorico de Estanford and a talk by Olga Talamente, a former political prisoner.

How H&S uses student evaluations

Following is a February letter to Chairman Walter Lohnes of the C-AAA Sub-Committee on the Evaluation and Improvement of Teaching from Norman K. Wessells, Dean of Humanities and Sciences, on Student Evaluation of Teaching in Humanities and Sciences.

Permit me to reiterate some of the points I made in talking to representatives of your subcommittee.

First, we believe that student evaluations of teaching are important data for use in reappointment and promotion proceedings. We, of course, supplement the data on the SCEIT-ASSU forms with various other sources of information about a professor's teaching, notably with assessments by professional peers and with letters from individual students.

However, these forms give us important information that is available through no other means. In particular, the statistical feature of the current forms has proven very useful to our Office and our Advisory Committee on Appointments and Promotions as a means for making across-the-board comparisons in a School with an exceptionally diverse faculty. We were therefore distressed to learn that low faculty and student participation in the current system call these statistics into question.

Faculty response to student evaluation of teaching varies widely in our many disciplines. I believe it's accurate to say that a strong majority of our 470 faculty take seriously the feedback they get from students. Though some worry that the popular or charismatic professor receives plaudits while the more retiring but substantive professor is down-graded, I think that is the minority view among those who have taken time to investigate the situation in more than a cursory manner.

Perhaps what is missing most from across-the-board student evaluation procedures is sampling of opinion of a course or a professor several years later, when time and further exposure to both general and major education, as well as to many more professors, give the student better objectivity.

In that regard, certain aspects of the Senior Survey provide feedback that can be very useful in distinguishing those few professors who are very, very good or very, very bad.

Our office would be distressed if some form of across-the-board student evaluation were not maintained. Undoubtedly the School would be forced to design one or more evaluation forms, and to set up and run the machinery for their use.

We are not convinced that completely separate departmental teaching evaluation procedures would be sufficient. Consequently, the costs and benefits to the full University community should be considered prior to discontinuing the current system.

Perhaps one thing that has discouraged student and faculty participation in the current forms is the Senate rule requiring that every course be evaluated every time it is taught. That is counterproductive in our opinion.

We would prefer a system in which major, large enrollment courses that are taught each year by a professor are reviewed using a School-wide form at least once every three years. Smaller courses and seminars should also be evaluated periodically.

We intend to lend some degree of "enforcement" to such procedures by *requiring* each winter that chairpersons bring at least one set of recent student teaching evaluation forms for each professor to the conferences where salaries are set. That procedure is being instituted during this academic quarter and will help to provide impetus for faculty use of some formal procedure in student evaluation of teaching.

In summary, high quality teaching characterizes many of our faculty. More must be helped to attain that ranking. Student evaluations are one means of providing direct feedback for that purpose. Equally important, those student evaluations provide a critical form of data for administrative purposes in reappointment and promotion.

We should not do anything that sends messages to students or faculty that student evaluation of teaching is unimportant or does not receive attention and weight in administrative decision-making.

Staff colleagues remember Meloni's energy, enthusiastic help at HEPL



Julio (Mel) Meloni

Julio (Mel) Meloni, 59, who spent more than 30 years working on tubes and accelerators at Stanford, died April 20 of a heart attack.

A man of great energy and enthusiasm, he was widely known for his great concern for fellow workers, especially struggling Ph.D. students.

"He was always there when you needed help—volunteering even before he was asked," said Ed Dillard, a close friend and co-worker in the Department of Physics.

"He helped others without interfering with his own work, of which he always seemed to have plenty.

"I always felt behind in returning favors, but that never bothered Mel. His comment when I would say something was, 'Who's counting?' "

His colleagues knew Meloni's strong desire to understand how things worked, how they were built and how to repair them.

"I was very fortunate to have been able to work with him," said Werner Wadensweiler of the High Energy Physics Laboratory, his co-worker for three years "He had so much experience in vacuum technology, and I gained a lot of knowledge."

A secretary in the Solid State Lab said: "Just ask him for a screwdriver and the next thing you knew he was repairing or putting together whatever needed to be done."

Another working associate said Meloni's accomplishments were those of someone who had lived for 160 years—he had started and finished so many projects at Stanford.

Born in San Francisco, he served in the South Pacific during World War II, then worked in local tube industry until 1949, when he came to the Hansen Labs at Stanford.

He helped construct the MKII and MKIII accelerators and later medical accelerators at the Stanford Medical School, then located in San Francisco, the University of Chicago, and Michael Reese Hospital in Chicago.

He also worked on early accelerator klystrons and guns, and with traveling wave tubes built at the Microwave Laboratory.

After a two-year stint in local industry, he returned to Stanford in 1958 to work in the klystron group at the Stanford Linear Accelerator Center.

He returned to the Hansen Labs in 1968. He worked part-time with students and faculty in the Solid State Electronics Laboratory, resuming full-time work last January. Several accelerators were obtained and refurbished for use in studies of implantation.

"Mel was eager to tackle any problem and usually found a solution," a colleague said. "Several generations of accelerators reflect his work. He was a wonderful, warm human being and a gentle man."

Mary Cloutier

Ph.D. oral exams

THURSDAY, MAY 5

Jonathan W. Greene, electrical engineering, "Configuration of VLSI Arrays in the Presence of Defects," 4 p.m., Skilling 191.

FRIDAY, MAY 6

Louis Bloomfield, physics, "High Resolution Ultraviolet Laser Spectroscopy of Mercury and Helium," 2:15 p.m., Physics Conference Room, Varian Bldg.

MONDAY, MAY 9

Gonzalo Edwards, engineering-economic systems, "An Analysis of Chilean Wheat Imports," 2:15 p.m., Terman 329. **Hung-chun Chang,** electrical engineering, "Scattering of Radiation Belt Electrons onto the Ionosphere by Whistler Mode Electromagnetic Waves Propagating in the Magnetosphere," 4:15 p.m., McCullough 134. **Lisa R. Kanter,** geology, "Paleomagnetic Constraints on the Movement History of Salinia," 9 a.m., 326 Geology Corner.

TUESDAY, MAY 10

Maria Teresa Garza, education and psychology, "A Study of Relationship of Mexican Teachers' Attitudes to the Mathematics Achievement of Their Pupils," 3:15 p.m., e114 Education Bldg. (Cubberley) **Robin O. Roundy,** operations research, "Effective Heuristics for Multi-Facility Economic-Lot-Size Problems," 1:30 p.m., Terman 217. **Ngai Chuen Wong,** applied physics, "Coherent Effects in Laser Spectroscopy," 2:15 p.m., Applied Physics 200.

WEDNESDAY, MAY 11

Malcolm B. Brown, German studies, "Knowledge as Fiction: An Investigation of Friedrich Nietzsche, Hans Vaihinger, and Carl Einstein," 2 p.m., Library, German Studies Department (240). **Ira David Hale,** geophysics, "Dip-Moveout by Fourier Transform," 2:15 p.m., Mitchell 372. **Yael Ilan,** industrial engineering, "Evaluation Model in a Dynamic Environment," 3:15 p.m., Terman 363. **Yoko Kawashima,** education, "Wage Differentials Between Women and Men in Japan," 2:15 p.m., e114 Education Bldg. (Cubberley). **Timothy John Stultz,** materials science and engineering, "Shaped Beam Laser and Arc Lamp Recrystallization of Silicon," 2:15 p.m., McCullough 240.

THURSDAY, MAY 12

David Goodman, geology, "Morphology, Taxonomy, and Paleoeconology of Cretaceous and Tertiary Organic-Walled Dinoflagellate Cysts," 2:15 p.m., Bldg. 320, Room 326 (Conference Room). **Katherine R. Jones,** education, "Determination of the Additional Costs Incurred by Patients in a Teaching Hospital Due to the Presence of Graduate Medical Education Programs," 2:15 p.m., e114 Education Bldg. (Cubberley). **Mee-Joo J. Kim,** civil engineering, "A Disaggregate Freight Demand Model for U.S. Freight Transportation: A Theory of the Firm Approach," 2:30 p.m., Room 259 Terman. **Patricia Ann Porter,** education, "Variations in the Conversations of Adult Learners of English as a Function of the Proficiency Level of the Interlocutor," 9 a.m., e114 Education Bldg. (Cubberley).

FRIDAY, MAY 13

Sevig Ayter, electrical engineering, "Scattering of Rayleigh Waves from Surface Breaking Cracks in the High Frequency Regime," 2:30 p.m., Applied Physics 202. **Robert Falster,** electrical engineering, "A Study of Extrinsic Gettering in Silicon: Laser Damage, Polysilicon Films, and Low Current Corona Discharges," 2:15 p.m., Applied Physics 200. **Jane Alison Hale,** French and Italian, "Perspective in the Theater of Samuel Beckett," 2:15 p.m., Room 274, Bldg. 260. **Ali Akbar Iranmanesh,** electrical engineering, 3:15 p.m., McCullough 240. **Hilary M. Schor,** English, "The Victorian Literary Imagination, 1835-1930," 2:15 p.m., Room 41-F, Bldg. 40.

Graham Stuart, 97, dies after surgery

Graham H. Stuart, emeritus professor of political science and authority on diplomacy and international relations, died Friday, April 29, at Stanford Hospital following surgery. He was 97 years old.

He was the second oldest faculty member prior to his death. Stuart joined the political science department in 1923 as its first international relations expert, retiring in 1952.

His name is spoken daily by faculty, staff, and students who use the departmental lounge named for him. Former students donated money to furnish a room in his honor when he retired.

An expert on the history and functions of the U.S. State Department, Stuart trained many students for work in the diplomatic service. He once counted seven ambassadors as former students.

The Stanford Board of Trustees honored Stuart in 1978 by establishing an endowed professorship in his name. Alexander George, named recipient of the chair, said Monday, May 2, that Stuart "was indeed a pioneer in the development of the study of international relations and certainly one of the most successful professors in training people to take important positions in the foreign service. His contribution was as much in training people, such as Ambassador Walter Stoessel, as in the very fine scholarly books he also produced."

Stuart is credited with launching the annual Stanford alumni conference, which grew from a casual conversation in 1933 with a group of former students.

Born in Cleveland in 1886, Stuart earned his bachelor's degree from Western Reserve University in 1908. He studied at Ecole Libre des Sciences Politiques in Paris in 1913-14, then returned to the U.S. to earn his doctorate in political science in 1919 at University of Wisconsin. He was awarded an honorary degree from Western Reserve in 1948.

Stuart wrote five books, including *French Foreign Policy*, *Latin America and the U.S.*, *American Diplomatic and Consular Practice*, *The Department of State*, and *The International City of Tangier*. In addition, he wrote more than 50 professional articles and edited the Stanford Books in World Politics.

Stuart served as chief economic analyst



Graham Stuart

of the Board of Economic Warfare and later head of the State Department's War History unit during World War II.

Stuart's interest in his field continued after his retirement. He opposed moves by the U.S. to return the Panama Canal to the Panamanians in 1975.

In 1960 he said, "We must face the fact that democracies are handicapped in the conduct of foreign relations; in fact, the peril is enhanced by our democratic procedures.

"A democracy like the U.S. is humane; therefore, it cannot undertake a preventative war—it must await attack, which in an atomic age is a serious liability.

"In today's world the USSR has substituted the balance of terror for the balance of power. Under these circumstances, where formerly our armed forces were our first line of defense, today diplomacy is our only safe line of defense."

Stuart is survived by his wife of 65 years, Agnes, and a daughter, Dr. Ann Orloff of La Jolla. Eight grandchildren and one great-grandchild also survive.

Services were held Sunday, May 1. The family prefers contributions to the Graham Stuart Fund, c/o 301 Encina Hall, Stanford 94305.

Medical advances slowed by lack of modern instruments

Technological advances to improve the practice of medicine are significantly slowed by a lack of modern instrumentation facilities, to the detriment of the public that could benefit, a Stanford University scientist told a Congressional subcommittee Friday.

In testimony prepared for delivery before the Labor-HHS-Education appropriations subcommittee in Washington, D.C., Dr. Oleg Jardetzky urged Congress to increase funding by a recommended $20 million per year in the budget of the National Institutes of Health for instrumentation programs.

Presently, the principal programs for instrumentation funding are in the Division of Research Resources of the NIH, with budgets of $27.7 million for fiscal 1983.

Jardetzky, a professor of pharmacology, directs the Stanford Nuclear Magnetic Resonance Laboratory. He testified before the subcommittee as president of the Association for Advanced Technology, a group composed of directors of publicly-supported laboratories that are national or regional centers of research.

The recommendation was part of a 1982 NIH report which acknowledged that the quality, quantity and development of scientific instruments available for research in the United States had rapidly declined. This threatened to diminish the leading position of the United States in research, the report concluded.

The report called for increased funding of research equipment and instrumentation "to replenish and maintain the adequacy of the biomedical research community's needs" for the next five years.

Because sophisticated instrumentation such as million-volt electron microscopes, nuclear magnetic resonance, synchrotrons, and computers programmed for graphics and artificial intelligence, for example, are costly—often running in the six figures—the report urged that advanced instruments be used through shared facilities.

However, the Congress had increased the budget for this purpose only by $12.5 million for fiscal 1983.

"This sum is far below the estimated need," Jardetzky told the subcommittee. "It is not adequate to meet the new needs generated by recent technological developments."

Among examples, Jardetzky cited his own field, nuclear magnetic resonance (NMR). This is a technique that can provide a glimpse inside the human body without scalpel, needle or hazardous X-rays, and more complete than anything obtained with CT scans.

Today 14 instrument manufacturers are developing NMR imaging equipment, Jardetzky noted, but funding sources for such instruments in universities and hospitals remain ill-defined.

"The hope that the costs of instrumentation—on the order of $2 million per unit—will be defrayed by income from patient care does not take into account that for the immediate future at least the technique must be used on an experimental basis and applications must be closely tied in with further development," he said.

The combination of NMR techniques has enormous potential as a tool for diagnosis and for evaluating the results of therapy in a number of diseases, Jardetzky said. Yet manufacturers are concentrating on simpler, more immediately marketable NMR imaging equipment while needed funding for more sophisticated developments cannot be identified.

Jardetzky argued that funding of shared facilities by the NIH since 1962 has demonstrated the validity of this concept.

"Ultrasophisticated instruments, the latest state-of-the-art methods, and expert support personnel in installations open to many users help life scientists in their efforts to decipher fundamental biological processes or combat human illness," he said.



Oleg Jardetzky

Stanford has five national facilities: the Stanford Nuclear Magnetic Resonance Laboratory, Stanford University Medical Experimental Computer for Artificial Intelligence in Medicine (SUMEX-AIM), Stanford Synchrotron Research Laboratory, Mass Spectroscopy Laboratory, and Stanford Electronics Laboratory (SEL).

—Spyros Andreopoulos



"Good evening, and welcome to Masseter-piece Theatre. I am your host, Deanopolis Purpuroides: physician, philosopher, and connoisseur of young sheep."
So began the presentation of The Hypocritic Oaf *to a sellout crowd in Dinkelspiel Auditorium last Friday. Staged by Medical School faculty and graduating students, the musical play followed a medical student's odyssey through Stanford. For those who missed it live, a video tape of the play will be shown on June 1, at 7:30 p.m., and on June 10, at 3:30 p.m., in Fairchild Auditorium. Commemorative T-shirts can still be ordered. Contact the Medical Alumni Association Office by May 27, at 497-5064.*

Lecture established

International society honors emeritus pathology professor

The establishment of the David Glick Lecture, to be given at the Congresses of the International Federation of Societies for Histochemistry and Cytochemistry, has been announced by Dr. Sidney Goldfischer, president of The Histochemical Society.

Glick is a Stanford professor of pathology emeritus, now active in the department of radiology's Cancer Biology Research Laboratory. He was one of the founders of The Histochemical Society and served twice as its president. He was president from 1972-76 of the International Committee for Histochemistry and Cytochemistry, now the International Federation named above.

Among his distinctions Glick has an honorary LL.D. degree from the University of Glasgow, Scotland. He is an honorary member of The Histochemical Society (U.S.), Finnish Histochemical Society, and the Royal Danish Academy of Sciences.

He was given the Van Slyke Medal and Award (1977) and the Ames Award (1980) by the American Association of Clinical Chemistry, for his basic research applicable to this field.

Glick earned his B.S. in chemistry at the University of Pittsburgh in 1929, and his Ph.D. in biochemistry there in 1932. After an already extensive and varied professional career, he joined the Stanford Medical School faculty in 1961.

He has served on several scientific journal editorial boards, and has published widely.

The David Glick Lecture is to be given every four years by an outstanding histochemist or cytochemist selected by the officers of the International Federation. Glick has been invited to give the first Lecture at the next Congress in Helsinki, August 5-11, 1984.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

MDs to undergrads: there is more to learn than science

A common belief among aspiring physicians is that in order to be accepted to medical school they have to spend their entire premedical education taking science classes, doing research, and working in hospitals and laboratories.

That's not so, say many accomplished physicians. And that's the message they plan to relay to undergraduate students during an upcoming panel discussion, "Reflections on Medicine: Education, Lifestyle, and Diversity."

The panel, scheduled for 7 to 9 p.m., May 9, in the Sherman Fairchild Auditorium, will discuss the pros and cons of choosing medicine as a career.

Panel members are Dr. Harvey Weinstien, clinical assistant professor of psychiatry; Dr. Elizabeth Short, associate dean of student affairs; Dr. Sarah Donaldson, associate professor of radiology; Dr. Bruce Parker, associate professor of clinical radiology; and Drs. Roger Peeks and Tom Fiene, both in private practice. Medical School Dean Dominick Purpura will chair the panel.

Medical students and housestaff will attend a reception following the panel. Together with the panel members, they will be available to talk with students about the various routes they took before entering medical school.

"Students should choose a major that interests them," said Audrey Bernfield, coordinator of departmental student services for humanities and sciences. "They should worry about medical school when they get to it. They shouldn't gear their whole life around it."

The School of Humanties and Sciences, the Academic Information Center, and the Medical School are co-sponsoring the panel. It is a kick-off for the Majors Event, May 10 in the Inner Quad, during which undergraduate students will have the opportunity to learn about all majors from faculty, graduate students, and alumni.

Nurses plan ethics conference

"Ethical Issues in Clinical Practice" is the focus of a day-long conference Thursday, May 5, sponsored by the Friends of Nursing and Nursing Educational Services.

Leah Curtin, R.N., M.S., M.A., is the featured speaker. Curtin recently coauthored a book, *Nursing Ethics, Theories and Pragmatics*, which was selected as a 1983 *American Journal of Nursing* Book of the Year. Curtin is also editor of *Nursing Management*.

The conference addresses ethical issues encountered in the acute care setting. The structure of an ethical problem will be outlined and strategies will be presented that can be used in the clinical setting. Afternoon sessions will examine case studies in small groups, with participants divided by clinical interests.

The meeting is scheduled from 8:15 a.m. to 4:30 p.m. at Rickey's Hyatt House in Palo Alto. A wine and cheese reception will follow, and the Friends of Nursing will meet for a brief business meeting.

Continuing education credit is available, and a registration fee will be charged. For more information, call Carole Kidder at 497-6366.



Regina Kriss

Post-mastectomy lecture, film

The film "No Less a Woman," on self-image and sexuality after mastectomy, will be the focus of the next public lecture in a series sponsored by the Friends of Psychiatry and Behavioral Sciences at Stanford.

Before the film, speaker Regina Kriss, Ph.D., family therapist and project director of post-mastectomy group therapy in the department of psychiatry, will describe her research on the effects of group therapy on breast loss and sexual adjustment of post-mastectomy women.

The lecture will take place 8 p.m., Thursday, May 12 in the Sherman Fairchild Auditorium, and will include a panel of women who have participated in post-mastectomy group therapy. They will discuss and answer questions about their experiences.

In 23 minutes, the dramatized documentary "No Less a Woman" will reveal how group therapy helps women deal with the emotional problems so common after mastectomy.

The outgrowth of a collaboration between Kriss and Marvin Silverman, professor of filmmaking at San Francisco State University, the film is based on the experiences of the women in Kriss' study.

"The film has tremendous power," said Kriss. "It leads viewers to experience for themselves what is happening in these women's lives. Because it communicates problems that are hard to describe, it has turned out to be a valuable teaching tool."

The film treats the reactions of both married and unmarried post-mastectomy women, both groups of whom experience profound changes in their sexual interactions, said Kriss, who has herself had two mastectomies.

Admission to the evening presentation is free, and there are no reserved seats. Dr. Thomas Gonda, professor and chairman of psychiatry and behavioral sciences, will serve as moderator.

For further information or to get on the Friends of Psychiatry and Behavioral Sciences mailing list, contact Karen Sortino at 497-6376.

Nurses to hand out attitude survey

Every M.D., R.N., and hospital administrator at SUH will soon be receiving a questionnaire regarding the perceptions these three groups have of one another.

The questionnaire is part of a Stanford study, developed and carried out by the department of nursing. "The interdependencies of decision making of health care professionals demands sharing of information and mutual respect," explained principal investigator Duane Walker, R.N., M.S., director of nursing.

Much has been written about conflict between nurses and physicians. Is this conflict real? What causes it? How can the relationship be improved? How do relationships with administrators fit in? These are some of the issues the study will explore.

Walker's coinvestigators include Dr. Lois Welches, R.N., associate director of nursing; Dr. Ann Baldwin, R.N., nurse consultant; and Dr. Michael Eliastam, associate chief of staff.

The questionnaire, to which respondents will remain anonymous, will be mailed the week of May 9.

According to Eliastam, "This study is part of an overall effort to improve communication among health care professionals, another example of which are the nurse-physician committees established in several hospital units. It is an early step in trying to identify aspects of these professional relatjonships which may require further scrutiny or action.

"Some questions on the survey may appear unusual at first," he said, "but we would appreciate it very much if people would make the effort to complete it and return it to us." The questionnaire is expected to take about 15 minutes to complete.

"What we do with the results," Eliastam said, "will depend on what we find out about how these groups feel towards one another. If we find it's necessary, we'll then look at what we might do to improve communication."

The data gathered by this study, Walker said, will allow correlation between the three groups of respondents with numerous other variables so that relevant related issues can also be explored: Is this a male-female issue? Is there better collaboration in some clinical areas than in others? How are economic pressures affecting these professional relationships, if at all?

"It is my hope," said Walker, "that the information elicited from this study will provide some hard data from which we can begin to plan a better collaborative effort. For I believe only through open communications and collaborative efforts can we plan for systems and decision making which achieve high quality patient care—our mutual goal."



Helping the dying to have a good death is the key behind hospice care. Here, Nurse Joan Armer talks with a terminal cancer patient in the hospice unit at the Veterans Administration Medical Center. "Hospice is why I'm in nursing," she said in an article in a recent issue of The Healing Arts *magazine. Hospice care provides medical and emotional support to cancer patients facing life-threatening illness, and to their families.*

News Notes

Appearing on the CBS Evening News with Dan Rather tonight (May 4) will be **Dr. Ronald Levy**, *associate professor of medicine (oncology) at Stanford University School of Medicine.*

The segment, in which Levy discusses his research on monoclonal antibodies, is being broadcast as part of a series this week on the topic of cancer. Tune in to channel 5 at 7 p.m. this evening.

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The Medical Center community is invited to **The Sock Hop**, *Friday evening, May 6 at the Palo Alto Elks Lodge, an event sponsored by the SUH department of respiratory therapy.*

The dance, with a '50s and '60s theme, will take place from 7:30 p.m. to midnight, and live entertainment will feature "Yakity Yak," said Mercy Moss of the department's festivities committee, **Jestingstock**.

Dance and dress contests will award those most in tune with the sock hop theme, but Moss emphasized that costumes are optional. No-host cocktails will be served.

Tickets are $5.50 per person and can be purchased in W014. For further information, call Moss or Sally Gibbs at 497-6941 or 497-5703.

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Stephanie Brown, Ph.D., *director of Stanford's Alcohol Clinic and acting assistant professor in the department of psychiatry, has been honored for her pioneering studies of the adult children of alcoholics.*

Brown, also a founding member of the National Association for Children of Alcoholics, was honored with the Bronze Key Award by the National Council on Alcoholism—Bay Area.

Brown's work includes such papers and presentations as "Alcoholism in the Family: A Family-Based Treatment Plan," "Group Psychotherapy With the Adult Children of Alcoholics," and "The Children of Alcoholics."

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Medical Center employees are encouraged to donate magazines, newspapers or books written in Spanish which could be distributed to waiting areas throughout the hospital, said Auxiliary member Gerry Cole.

While many periodicals in English are regularly given to the Auxiliary for the waiting areas, a real shortage of Spanish-language material exists. Donations can be dropped off at the Auxiliary office in W157, and will be greatly appreciated.

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The **SUH Translator Bank** *has extended its service to Children's Hospital at Stanford, said Misara Chan of the department of community relations, which originally organized the service in 1981.*

The bank, a group of about 70 hospital, university and community volunteers speaking 24 languages, provides translation services when patients cannot speak English. Volunteers speak languages ranging from Spanish, Chinese and French to Farsi (Persian), Haitian Creole, and Ukranian, to name a few.

Those interested in volunteering as translators may call Chan at 497-7167. She noted that presently, the bank especially needs a speaker of Arabic.



Carla Shatz

Neurobiologist to give SMASH lecture

This Friday's S*M*A*S*H lecture, "Order from chaos: Prenatal development of the mammalian visual system," will be given by Dr. Carla Shatz, assistant professor of neurobiology.

Open to all interested members of the Medical Center community, the presentation will take place 4:30 p.m., May 6, in the Fairchild Auditorium. A TGIF gathering in the lobby will follow.

HRP Open House

Medical School faculty, staff and students are invited to the Health Research and Policy Building Open House, to be held from 4 to 6 p.m. today, May 4.

Medical School departments now housed in the HRP building include Family, Community and Preventive Medicine, Biostatistics, Epidemiology, Family Medicine and Primary Care Associates, International Health, the Stanford Arthritis Center, the Clinical Scholars Program, the Heart Disease Prevention Program, and others.

The move took place primarily in January of this year. The building was formerly headquarters for the medical microbiology department, which has moved to the Fairchild Building.



Employee banquet

The Hospital's 1983 employee service awards banquet will be held 6:30 p.m., May 10, at Rickey's Hyatt House.

The event will honor employees receiving awards for five, 10, 15, 20, 25, and 30 years of service, and all other employees and retirees who have served more than 20 years. The winner of this year's Thomas A. Gonda Award will be announced.

Hospital employees who have received invitations to the event are asked to respond, if they have not already done so, to Susan Cabral in Personnel, at 497-6251.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MAY 4

Dept. of Biochemistry Seminar: "DNA Components and Chromatin Organization of the SV40 Early Promoter Region"—Dr. Pierre Chambon (Inst. of Chemical Biology, Strasbourg, France). Noon, M316.

Health Research and Policy Building Open House: All medical school faculty, staff and students are invited to help celebrate the new headquarters, former home of the medical microbiology department. 4 to 6 p.m.

THURSDAY, MAY 5

Dept. of Medicine Grand Rounds: "Drug Interactions with Warfarin"—Dr. Robert O'Reilly. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology Seminar: "Light Energy and Signal Transduction in *Halobacterium Halobium*"—Dr. Walther Stoeckenius (UCSF).

Div. of Otolaryngology/Head and Neck Surgery Grand Rounds: "Serous Otitis Media: Fact and Fiction"—Drs. Paul Levine, Judith Green, Pauline Lau, and Michael Glenn. 6 p.m., Wang Library R117.

Friends of Nursing and Nursing Educational Services presents: "Ethical Issues in Clinical Practice," a day-long conference with speaker Leah Curtin, R.N., M.S., M.A. 8:15 a.m. till 4:30 p.m., Rickey's Hyatt House, Palo Alto. Reception and business meeting to follow. Continuing education credit available; a fee will be charged. For more information call Carole Kidder at 497-6366.

FRIDAY, MAY 6

SMASH Lecture: "Order from Chaos: Prenatal Development of the Mammalian Visual System"—Dr. Carla Shatz. 4:30 p.m., Fairchild Auditorium.

Div. of Child Psychiatry Grand Rounds: "Cellular Pathobiology of Neurobehavioral Failure"—Dr. Dominick Purpura. 11 a.m. till 12:15 p.m., Faber Auditorium, Children's Hospital at Stanford.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Maternal Alcoholism and Family Life"—Genevieve Ames, Ph.D. (UC-Berkeley). Noon, M114.

SATURDAY, MAY 7

Hospital Auxiliary Volunteer Orientation: 9:45 a.m., W001. For further information, call the Auxiliary office at 497-6636.

MONDAY, MAY 9

Dept. of Medical Microbiology Seminar: "Antibodies of Predetermined Specificity in Biology of Medicine"—Dr. Richard Lerner (Research Institute of Scripps Clinic). 1:15 p.m., M114.

Dept. of Medical Microbiology Schultz Memorial Lecture: "Molecular Studies on the Replication and Pathogenesis of Hepatitis B-Like Virus Using Animal Models"—Jesse Summers, Ph.D. (Philadelphia Institute for Cancer Research). 5:15 p.m., Fairchild Auditorium.

TUESDAY, MAY 10

SUH Employee Service Awards Banquet: by invitation—RSVP. 6:30 p.m., Rickey's Hyatt House. For further information, call Susan Cabral in hospital personnel at 497-6251.

Dept. of Dermatology Special Lecture: "Chemical Peels"—Dr. Samuel Stegman. 10 a.m., A153.

Dept. of Biochemistry Colloquium: "General and Specific RNA polymerase II Transcription Factors from *Drosophila*"—Dr. Carl Parker (California Institute of Technology). Noon, M316.

Dept. of Psychiatry lecture: "What We Know About the Causes of Schizophrenia"—Dr. E. Fuller Torrey. 8 p.m., M106.

WEDNESDAY, MAY 11

Registration deadline: for Nursing Educational Services Basic EKG Interpretation Workshop to be held May 25, June 1, 8 and 15, from 7 till 9 p.m., 900 Welch Road, room 15. Intended for nurses with little or no experience in dysrhythmia interpretation. Basic instruction in cardiac anatomy, physiology and electrophysiology, and "hands-on" practice of interpretation with instructor guidance. A fee is charged, and continuing education credit is available. For further information, call Carole Kidder at 497-6366.

Div. of Hematology noon conference: "Drug cross resistance in cancer chemotherapy"—Dr. Branimir Sikic. Noon, L201.

Dept. of Neurology Grand Rounds: "Neuronal Substrates of Elementary Associative Learning"—Prof. Richard Thompson. 5 p.m., Palo Alto Veterans Administration Medical Center, building 7, room B108.

FRIDAY, MAY 13

First Annual Symposium of the Program in Molecular and Genetic Medicine. 8:15 a.m. till 5:30 p.m., Fairchild Auditorium. For information and to register, call the Office of Public Events at 497-6389.

MONDAY, MAY 16

Registration deadline: for Nursing Educational Services Legal Workshop to be held Monday, May 23, from 8:30 a.m. till 4:30 p.m., at the Palo Alto Holiday Inn. Open to all hospital personnel. Will address nursing practice according to state and federal regulations, professional and JCAH standards, etc. A fee is charged, and continuing education credit is available. For further information, call Carole Kidder at 497-6366.

THURSDAY, MAY 19

Registration deadline: for Nursing Educational Services workshop, to be held June 2, "Burnout: Treatment and Prevention," from 8:30 a.m. till 4 p.m., 701 Welch Road, suite 327. Course will focus on defining burnout, assessing individual levels, developing standardized and individualized care plans to counteract the problem, and identifying helpful responses to others' burnout. For further information or to register, call Carole Kidder at 497-6366.

SATURDAY, MAY 21

Dept. of Emergency Services Pre-Hospital Care Program: Sports Medicine for R.N.s, M.D.s, and allied health professionals. Goal is to teach development of personal exercise programs and identification and emergency management of sports-related injuries seen in various medical practices. 8:30 a.m. till 5 p.m., Fairchild Auditorium. Will also be offered June 4 at Letterman Army Medical Center in San Francisco. For further information, call 497-6017.

WEDNESDAY, MAY 25

Nursing Grand Rounds: "Career Development: New Directions for Job Joy." Guest speakers will describe various strategies for job expansion including lateral transfers, administrative opportunities, clinical nursing specialist research and combining nursing with other careers (such as medical law). 3:30 till 5 p.m., M104. For further information, call Karen Kawauchi days at 497-6923, or Kit Laird nights at 497-6377.

Giraud attacks reporting, treatment of research animals by University

Editor, *Campus Report*:

Often, when reading a press account of something of which I have firsthand knowledge, I am led to wonder if the reporter and I had indeed been at the same event. That feeling overcame me powerfully at seeing the two stories (April 6 and 13) by Mike Goodkind, initiated by a press conference we both attended about the wounded dog found collapsed in the doorway of an unattended lab at night and promptly put out of its misery by an outside veterinarian.

Since the case is likely to be the subject of legal action, any comment on the dog's condition or sequence of events is inadvisable.

This is frustrating, because Goodkind, who is running a poor second to *The National Enquirer* in accuracy in animal stories, puts quotes around the words "fact sheet" for a statement issued by the humane societies, but reports as holy gospel the whoppers pronounced by the Medical Center and VA authorities.

If, as Associate Dean of Administration David Mendelow states, that poor, sad animal really was considered to have received "proper care," one might well ask that Stanford promptly be enjoined from jurisdiction of any dog—indeed, any animal whatsoever. If not, some people in high places should get their mouths washed out for what they are trying to palm off on us.

Mendelow's statements that "constant monitoring by ourselves as well as the U.S. Department of Agriculture ensures that we will provide optimum care to our laboratory animals" is a highly fragmentary version of the facts. It is about the equivalent of someone who has just flunked out of school reporting to his parents that constant monitoring by himself and his professors ensures his being a model student.

For flunk Stanford did, and where was Mike Goodkind when we needed him to tell us so?

As it is, it has until quite recently been one of the best-kept Stanford family secrets that the University last year lost its accreditation for the care and housing of its laboratory animals. This, for an institution of Stanford's magnitude and opulence, is quite scandalous enough to be newsworthy, especially since we are unique in this disgrace among the institutions we normally compare ourselves to. Even UC-Berkeley, generally known as one of the local chambers of horror for animals, is accredited.

The accrediting agency is the American Association for the Accreditation of Laboratory Animal Care (AAALAC). Its task is to oversee compliance with the guidelines set down by the National Institute of Health (NIH), probably the chief source of federal funding for animal experimentation. In 1981, during which Stanford received $53,594,935 from the NIH alone, placing it No. 1 in funding levels for California, compliance with its standards was so poor that AAALAC put Stanford on probation.

During the same year, the U.S. Department of Agriculture (USDA), which is obliged under the Animal Welfare Act to make a minimal number of laboratory inspections for adherence to its quite minimal requirements, also came out with a long catalogue of violations, which ranged from general filth and decrepitude of animal runs and cages to rabbits getting sprayed with acid and monkeys housed in cages in which they could not even stand up.

But there is a lot more wrong with Stanford's husbandry of its animals than the proposed new underground (!) facility will cure. The priority accorded to the quality of veterinary care (whose existence is mandated by federal law) has been pitifully low. James Dewson III, Director of Laboratory Animal Medicine, with his pen still wet from signing his name to the reports damning his facilities, tells the press that, at Stanford, "nobody needs to have their consciousness raised" about the proper care of what he calls "the partners in research" (which they are in quite the way the chicken you eat is your dinner partner).

The USDA, for one, disagreed. Its April 13, 1981, report reads: "There appears to be a poorly defined line of responsibility for the veterinary care on this campus. . . . Lack of feedback or response by the researchers and management. . . severely compromises. . . disease control, prevention, and provision of adequate veterinary care."

In its June 5 follow-up report, the USDA expressed the hope that a new veterinarian would bring about substantial improvements. She, it turns out, is the one who, upon being informed by a medical student that a dog was suffering and dying, refused to bestir herself to help.

The attitude of the management is perhaps best summarized by a statement made by Dewson last September to a Mercury reporter concerned with laboratory animal welfare. "I mean come on," he said, "let's stop talking about poor little pussy."

There is, however, a good deal to be said about "pussy" and the other 80 million or so animals estimated to lose their lives in American laboratories each year, many under conditions that most people would, in this day and age, find unbelievable and many, with self-protective disbelief, reject hearing about.

Animal research is big business, with enormous vested interests. The federal government spends an estimated $5 billion a year on it, and it maintains an empire with more economic ramifications than meet the eye. It supports a whole industry, from breeders of laboratory animals through middlepeople, transporters, animal housing construction, and feed companies up to the researchers themselves and the institutions they are part of. It maintains one of the most powerful lobbies on earth, and representatives of Charles Rivers Breeding Laboratories for mice to university presidents hotfoot it to Washington and the state capitals to flex their muscle whenever a piece of animal protective legislation might cut into their hegemony looms on the horizon. They have been exceedingly successful so far.

One of their greatest achievements has been to bamboozle us into thinking that everything that is done for their benefit is also done for ours. That is a myth which we have helped maintain with our willing suspension of disbelief that science could do wrong or medical research not be wholly aimed at curing us of cancer and heart disease, or that the animals that serve these noble purposes are not suitably safeguarded.

In effect—and more and more serious scientists are saying so out loud—a huge amount of such research neither has, nor is often even intended to have, the slightest applicability to human use, or even scientific validity. An enormous amount replicates needlessly what has already been proved over and over again, or what is so obvious as to need no substantiation, or continues to use animals for what could more accurately and cheaply be done by some of the alternatives modern technology has begun to provide. The only beneficiary of such research, for which we, the taxpayers, are the unwitting sugar-daddies, is the researcher's career and ability to generate more grants with which to continue to do the same.

The suffering thus imposed upon an astronomical number of animals is gigantic. All too often they are the captive victims of all the cruelties, even if not of explicit intent, of callousness, negligence, clumsiness, and indifference.

The recent case of the Stanford dog is not, as Stanford authorities would have us believe, an isolated one, except in one respect—that of accidentally bringing to light what happens all too often behind hermetically closed doors, protected by people's fear of losing their jobs, by students' apprehension over damaging their careers, or researchers' reluctance to jeopardize their relations with colleagues or superiors. All this is supervised by some generally feeble in-house system of controls and perpetuated by a primal urge to cover up rather than correct.

What the animal rights movement—more and more, as its power is growing, the target of attacks by those who have a vested interest in defeating its purposes—is demanding is accountability from the scientific establishment for the lives in its power. Just as war is too important to be left to the generals, so sway over tens of millions of animals—the most powerless of creatures—is too important to be left to the biomedical industry.

We have a financial and, above all, an overwhelming moral right to demand public participation—until that millenium comes in which we no longer exploit animals for our own purposes—in drawing the line, however complex and tortuous that task may turn out to be, between the "legitimate" use of animals and the frivolous, self-serving, and useless.

We shall have to exercise the responsibility, so far all too imperfectly carried out by the biomedical establishment, to insure that those lives in our service receive all the protection science and humanity are capable of.

Isaac Bashevis Singer has said: "In their behavior toward animals, men are Nazis." We have a moral imperative no longer to be Good Germans.

Lise Giraud
Librarian, Green Library

Dewson replies...

'We have openly, unstintingly striven to meet, exceed USDA standards of care'

Editor, *Campus Report*:

Thank you for giving me the opportunity of replying to Lise Giraud's letter in this issue of your paper. Ms. Giraud is entitled to her opinions, but it ill-serves the Stanford community to allow her misconceptions to stand as fact. Specifically, we should all be aware of the following:

1) The Medical School's accreditation by the American Association for the Accreditation of Laboratory Animal Care (with whom we had a voluntary, fee-paying membership) was ended because of Stanford's choice *not to comply* with only a single recommendation.

The completion, next year, of a $12 million Research Animal Facility, will then meet the recommendation of physically separate areas permanently set aside and targeted solely for a) preoperative preparations, b) scrub, c) veterinary survival-surgical procedures, and d) postoperative intensive care for animals. In the meantime, strict attention to veterinary medical care and to aseptic surgical procedures continues to insure (as it has for the past 20 years at Stanford Medical School) that the standards set forth in the present NIH Guide are met.

Our loss of accreditation was based on the arrangement and use of available space, not on the quality of animal care nor on the nature of use of animals in the biomedical research projects at the Medical School. Stanford laboratory animal workers have long been compensating for admittedly insufficient and inappropriate facilities.

2) Ms. Giraud has noted that the U.S. Department of Agriculture criticized Stanford's animal facilities in a report filed in April 1981; she also cites a June 1981 follow-up report. Ms. Giraud fails, however, to mention anything from any of the eight USDA reports which have been filed since mid-1981 (and which are available to her under the Freedom of Information Act).

These reports present a situation entirely at odds with that put forth by the paraphrased and incomplete notations given in Giraud's letter. Since 1980-81, incidentally, we have spent more than $1 million to make extensive repairs and renovations to facilities which will soon be replaced by new ones; we have openly and unstintingly striven to meet—and to exceed—the standards promulgated by the USDA, which is the primary agency charged with the enforcement of the provisions of The Animal Welfare Act.

3) Particularly bothersome in Ms. Giraud's letter is a statement that a Stanford veterinarian " . . . refused to bestir herself to help. . . " an injured dog taken from the Palo Alto Veterans Administration Hospital. This comment is an injustice to a dedicated professional (board-certified in Laboratory Animal Medicine) who, in fact, demanded that the dog in question be brought immediately back to the VA for treatment. She refused only to go to the individual's apartment to treat the dog, or to return the stolen animal to the student after treatment.

Finally, I must say that, at least from my vantage point, the condition of Stanford's animal facilities and the many ramifications thereof has been neither a family secret nor a scandal. UC-Berkeley has no medical school, so Giraud's comparison is misleading. The Stanford community must rest assured that we are doing everything within our power to develop and maintain animal facilities and animal care at an unarguably first-rate level.

James H. Dewson, III, Ph.D.
Director, Division of Laboratory Animal Medicine

Humanistic understanding of thinness

Editor, *Campus Report*:

The cult of thinness in upper-class women, although certainly linked to the sociological factors reported by Professor Dornbusch, cannot be understood fully without a resort to depth psychology, literature, etc.

Culture itself arises through a rejection of the flesh, archetypally in the Oedipal crisis, which concerns women as well as men. Lacan further shows that this involves a traumatic encounter with nothingness. A sense of total loss ("castration" and a female equivalent) leads to a compulsive repetition of the crisis which is a later version of crises of birth, weaning, and so on, all coalescing complexly in the psyche. Food is very much a part of the picture at all stages.

The crisis of sexual maturation, in which death and nothingness are supremely encountered again (death of childhood, fear of the flow of instinctual life which leads to death and involves death in the procreative act) brings all this to a head.

Prime literary examples of this are Prince Hamlet: "to be or not to be" and his disgust with "sullied flesh," and Princess Herodiade ("I want nothing mortal"), both upper-class sensitives and thin, as we imagine them. Or Katherine Hepburn's role in *Philadelphia Story*.

Why the preponderance of women in anorexia nervosa? Probably because they have extra reasons to fear sexual maturation: the dangers in childbirth, the fear of being exploited by the race for that purpose (Simone de Beauvoir emphasizes this) and perhaps the dread of male *intervention* which is a dramatic and graphic version of the splits—nothingness, again—in Being which are the essence of Becoming (as in the ovum). *Integrity* of a sort is lost along with the childhood integrity of innocence.

Of course, this has to be overcome like all the other crises, but it sure isn't easy for the sensitive, as we in the university know from some of our most interesting students. Easier to jog a lot or even to starve at times. . . .

So the persistance of the pattern goes back much farther than the sociological fact of the leisure class. The same goes for the causes of shyness (obviously just as rooted in metapsychology and the reluctance to live at times). Growing up is a grave matter concerning the whole person and calls for holistic—humanistic—understanding.

Robert Greer Cohn
Professor of French

Wessells comments on essential qualities of undergraduate students

Reflecting staff fatigue, last week's Campus Report *seriously scrambled the last half of Humanities and Sciences Dean Norman Wessells' talk to alumni in Los Angeles. It is reprinted below in proper sequence.*

If I had a short shopping list of skills to gain in college for one of my student advisees I might include: thinking, writing, speaking, values, and aesthetics.

By thinking, I mean the development of analytical skills. By writing and speaking, the ability to express oneself with facility, logic, and skill whether on paper or while on one's feet. By values, I mean a sense of ethics, morality, and concern for others, from family to co-workers, from community to country to world.

And finally by aesthetics, I mean an appreciation for the finest in our human culture. I do not mean, necessarily, eschewing Monday night football or the beauty of the Beatles. But I do mean intolerance of the vulgar and violent, impatience with the self-serving and unprincipled, and that private, personal appreciation of a well written book, a painting, or a play. It is attaining what the greeks termed "the consolations of philosophy."

David Starr Jordan spoke on this topic in 1892 when he toured California, urging the young to attend college. Jordan said, "To turn from the petty troubles of the day to the thoughts of the masters, is to go from the noise of the street through the door of a cathedral. If you learn to unlock these portals, no power on earth can take from you the key. The whole of your life must be spent in your own company, and only the educated man is good company for himself. The uneducated man looks out on life through narrow windows, and thinks the world is small." To turn from the petty troubles of the day—is not that itself a recipe for survival from the information load?

But how do such abstractions relate to the real nuts and bolts of an education, the course and the major fields of study? Is there a simple route to follow that leads to guaranteed Nirvana? I fear not. The best route is to concentrate upon ideas, people, history, process.

Let me give you brief descriptions of three undergraduate courses:

Classics 11, The Age of Heroes, studies the heroic epics of Greece, Mesopotamia, England, and France, their common features, style, and ethical values.

History 110, The Age of the Reformation, relates the Reformation to the urban setting and the economic and social forces of the rising national states.

Biology 130H, Biological Clocks, examines the physiology of innate daily, tidal, monthly, and annual rhythms that govern the basic activities of most organisms, including humans.

Why study the Age of Heroes, the Reformation, Biological Clocks? Not for the facts. Instead, for the experience of study. To think about those things, to be forced to organize, to analyze, to establish one's own way of looking at things—that is what it's really about. It is training in method, indeed training for an effective life.

But there are probably 1,200 courses undergraduates can take at Stanford. How to choose among such richness? That is where our new structured curricular requirements come in.

Those courses expose students to diversity and alternate views of our roots in Western Culture, our philosophy, ethics, personality, and so on. We mix with it technology, the natural sciences, and the mathematical parts of human knowledge.

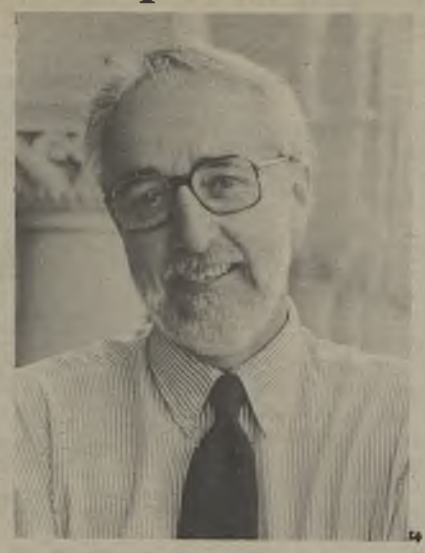
We say, for instance, that quantitation is important, that no graduate of today can hope to feel at ease in the new society if she or he does not have at least some awareness that quantitation is our servant, not our master, and why? Indeed already there is a hyper-awareness among nearly all our undergraduates, be they in English or Classics or Chemistry, that contact with computers and numbers is now a part of becoming educated.

But these words may seem out of date when we think of the real world of unemployment and the problems for our work force as we turn from an industrial economy to a service economy. What of preprofessionalism, arising more forcefully than even during Depression days, from worries about the economy, jobs, future security, and personal independence?

Well, at Stanford we do not have formal undergraduate curricula in business, in accounting, in computer science, in pre-medical or pre-law studies, in other disciplines best left, we believe, for later years. We do our best to instill in the minds of freshmen and their parents that studying what one enjoys is the best route to prepare for later life.

What "good" is a French major? A Classics major? says the financially aggrieved parent? The answers are clear and not just wishful thinking.

Over the past few years, we have invited alumni who majored in the humanities as undergraduates to return to Stanford and talk about their careers to undergraduates in their departments. As the experiences of those alumni unfold, the potential history or English major hears firsthand: of the values of having been a philosophy major to a young woman who is the field operations manager of the San Francisco Municipal Railway; of the "utility" of a



Norman Wessells

religious studies major to a computer software engineer; of the importance of a history major to a dentist.

The reasons why such majors have proved valuable, these alumni say, are those I ennumerated above: method, thinking, learning to write, and exposure to ethics. All are part of every major at a great liberal arts University. It isn't important whether the classes are in French literature, or art history, or developmental psychology. It is what goes on in such courses. . . what is in the minds of the takers. . . that counts.

What deans do

Today you are listening to deans of Stanford's seven schools. Several weeks ago someone asked me "What on earth does a dean do?" In fact, I've been telling you little by little. Deans worry about what a university is in society, what it should do for its students, and how it can do it.

In a few words, a dean tries to create an environment for two things: ideas and people—the special types of ideas that are part of research and teaching; the special type of people represented by our marvelous faculty and our select, intellectually gifted students.

What is the setting of that environment? Practically, for me, it is my School. Humanities and Sciences at Stanford is an immense organism. We are talking about some 457 professors, 185 other professional teachers, 4,000 majors, 75,000 total course enrollments, 500 secretaries, laboratory technicians, business managers—and on and on.

We are responsible for a marine station, an art gallery, an art museum, three theaters, and a music program consisting of more than 100 concerts and recitals each year. The enterprise involves administering a budget this year of 35 million dollars in Stanford funds and 20 million dollars in research grants. We are labor intensive, which of course, means that our problems and opportunities are human ones.

Our Humanities and Sciences hallmark is breadth; we are artists and writers, economists and computer scientists, and chemists and classicists—we are scholars of Rome and Caeser, of leptons and steroids.

That we are this broad an amalgamation is a statement to ourselves and to our students. We value the vast diversity of human knowledge and would know that we are part of it, and much of it can be part of us. And that statement goes forcefully to our students as we require them to sample across the spectrum.

Perhaps some specifics can give you an idea of what we deans do. Part of creating an environment is building, with planning, luck, and hard work, this great faculty that makes the University's name.

This year, suddenly, unexpectedly, Stanford has become the number one place in the world for the formal study of language. That sounds esoteric, no doubt, but it really isn't.

For formal linguistics, as it is called, begins to give us a precise, logical, indeed mathematical, description of words, sentences, semantics. And the result will have a profound impact upon the new super-computers, upon Artificial Intelligence, robotics, and the world that is coming, like it or not.

But also, formal linguistics relates to psychology and the study of the mind. We think, after all, in words. Learning how we describe and perceive our world, how our speech center works, indeed how the brain functions. Stanford's group in cognitive science was already number one—now an even stronger, broader alliance has been welded.

So what did deans do? We had the task of sensing the opportunity and then helping to assure the successful wooing of three senior "stars"—one from MIT, one from Texas, one from Wisconsin. Finding three senior billets in these days of budget reductions wasn't easy.

But that was only a beginning: next came salaries, equipment, office and laboratory space. And these days, real estate is a big question. With houses on campus listed for $295,000—$430,000, you can imagine that we, like our neighbors at Hewlett-Packard or Varian, spend much time on questions of housing allowances, equity loans, and the like.

But, it is worth it, for a new spire of excellence will mark Stanford's horizon, and other new faculty, graduate students, and undergraduates will all benefit. And by bringing together such diverse intellectual leaders, we facilitate the ferment that generates new knowledge. That indeed makes deaning worthwhile.

You will perhaps hear of other new areas being added over these next years. We are planning now, for instance, to greatly expand the undergraduate writing experience, to add enrichment to programs for juniors and seniors, and to foster other new areas of scholarship and teaching.

You can be assured that though our financial belt will be tight, we will be reallocating, pruning back the weak, sustaining the strong, and artfully, I hope, striking out in new directions.

Another component of an academic environment is the equipment or the tools, of doing research. The tools of scientific research change with advances in technology, and a modern lab in biology, chemistry, or physics looks vastly different from labs even just 10 years ago.

The tools of the humanist, however, until recently, have been pen, paper, and books. During the last two years several deans and administrators have been involved in winning a major grant from the Pew Foundation of Philadelphia to provide our humanities faculty with word processing equipment. IBM has expanded our project with a wonderful gift of 150 Personal Computers—one computer for each new member of the humanities faculty who wants one and a machine for each humanities department office. Our project includes a training program designed specifically for our humanist "technical aborignees" and already the productivity and morale of our humanities faculty is climbing to new heights.

In addition to simply word processing, the faculty will soon have the capability of being linked to computer networks that will provide access to many of the nation's great research libraries as well as Stanford's own collections. I suspect the work habits of many of those faculty quite literally will be transformed by these new tools.

Individual student achievements

We deans are people and some of our most pleasant times come from opportunities to do small things for individuals. One day last Autumn an undergraduate came to me to describe his desire to do research in corrosion of bronze sculptures.

He had studied a great deal of art history and chemistry. He had already made contacts at Stanford and in France to work on his project. I was impressed with his knowledge, his drive, and with the unique nature of his project; his is a perfect example of the beautiful way two disciplines sometimes fit together.

So the School used gift funds from an alumnus to give him a research grant to enable him to purchase supplies and to carry out the project this summer. I would bet that he will not be the only beneficiary of his work. Prof. Albert Elsen of Art is already worrying about potential corrosion of the spectacular Rodin sculptures that will soon grace our campus thanks to Mr. and Mrs. B. Gerald Cantor.

I could list many other seemingly small things: sending students to Washington, D.C., the Aegean Sea, or Latin America for summer projects; getting a student together with the one "right" faculty person who can make the difference in the student's education. In reality, however, these are among the most important services a dean can provide, for the impact on each individual is profound and long-lasting. And that makes it very worthwhile for us.

It has been a pleasure to talk to you today about Humanities and Sciences and how what we do relates to our students. Those wonderful young people will not live in an easy world.

The horrendous consequences of the population explosion are beginning to be seen in Central and South America—much worse is yet to come. The information load I alluded to, and even the tragedies of burgeoning populations, differ in one enormous way from the genetic load of *Homo sapiens* and all other species.

The genetic load is biological, chemical in nature—it is part of our very fabric.

But that is *not* the case with the information load and all that is included with it. Such things are, potentially at least, under human control—*they are not inevitable*. With education, with strength of character, with will and realization that the individual can make a difference, even on a world scale, the graduate need not merely survive but may make some real contribution to the public good.

We have an obligation at Stanford to prepare young citizens for the real world. Our buildings, our collections, our faculty, are vehicles to that end.

You, as alumni, are part of the history, and a testimony to what has been accomplished in the past. And much of what we do is only possible because of your generosity and sacrifice. For that we thank you. We appreciate your trust.

Capitalism, communism both 'wounded giants,' Gurley says

Armed to the teeth, both communism and capitalism are "wounded giants," says Stanford economics Prof. John G. Gurley.

"World communism now appears to be in the beginning stages of a long-term decline," he declares in a new book, *Challenges to Communism*, published in the Portable Stanford series (W.H. Freeman, $20 cloth, $10.95 paper).

Author of a 1975 Portable Stanford book on "Challengers to Capitalism: Marx, Lenin and Mao," Gurley notes that "communist countries have declined economically since the early 1970s, partly because of the slowing growth of the capitalist countries but largely because of their own internal problems."

While the owners and managers of capital have been weakened as the leading social class in capitalist countries, communist regimes have oppressed the working classes. In the Third World, the inability of any social class to attain dynamic political leadership has "contributed importantly to a weak economic base," he observes.

In capitalist countries, "contentious disunity" is likely to persist, he adds. "If programs to strengthen the capital-owning classes do not succeed. . .governments most likely will step in to bolster the unsteady owners of capital.

"These government incursions into the private sectors probably will occur sporadically—as with the U.S. government's involvement with Lockheed, Chrysler, savings and loan associations, steel imports, and so on—until an augmented government-business partnership has been formed, in which the government is the senior partner."

Bureaucratic deadweight

In communist countries "the growing deadweight of bureaucracies" poses a major barrier to further economic advances, he adds.

"If workers are sufficiently oppressed, they cannot ,or will not work hard and effectively, and economic progress cannot be achieved. In this case, the workers must overthrow their oppressors to open the way for an era of rapid socialist development. . . .

"If industrial progress continues for another few decades in Eastern Europe, the urban working classes will become not only numerically large but also mature in their understanding of their social needs. They will then be a potentially revolutionary force, a greater threat than they are now to the existing communist parties. In years to come, this situation may also arise in China and in other developing communist countries."

The main problem in many non-communist Third World countries is that their normal progress has been distorted by larger or more advanced nations.

Political vacuums have been filled "by weak and shifting coalitions of classes, by foreign capitalists or alien regimes, or by the domestic military forces," he comments.

This weak political structure has contributed to slow economic growth. According to the World Bank, the per capita gross national product of Third World countries averaged only 2.5 to 3 percent annually between 1960 and 1980, compared to more than 3.5 percent in the First World of predominantly capitalist countries and about 4.5 percent in the Second World of communist nations.

Third World view

"The Third World probably has little or no chance to catch up to the first two worlds," Gurley says. "Indeed, the most likely prospect is that it will fall farther and farther behind." While some countries may move up fairly rapidly, "the poorest of the poor would seem destined to sink, relatively speaking, into the abyss of economic misery. . . .

"Although Marxist-Leninist parties are potent revolutionary weapons, they have had little or no success in achieving rapid socialist development after the revolutions have occurred in the poor countries of the Third World."

On a long-term basis, he speculates, there may be a "Europeanization of Europe," as West Europeans have more disagreements with the U.S. and East Europeans forge closer economic and ideological ties with nearby Western regimes rather than the Soviet Union.

"If the populations of European nations become rather evenly split between those favoring various types of welfare capitalism and those favoring various types of socialism—as is now true in Britain, France, Scandinavia, Italy, Spain and elsewhere—there is likely to emerge. . .a damaging and dangerous fragmentation born of divisive swings of the political pendulum. . . .

"If satisfactory economic progress cannot be made, demands will develop and be heeded for some paring of democratic processes and institutions."

In other areas of the world, he speculates that "the Chinese and the Soviets have compelling reasons for seeking to rejoin hands. Whether the handclasp will be as firm as it was in the 1950s remains to be seen. . . .

"Marxist-Leninist revolutions in Latin America are less certain than in Asia and Africa, owing to the stake the U.S. has in maintaining private enterprise throughout the Americas, with economic and military



John Gurley

power to back up its desires. . . . The determination of the U.S. to turn back all threats to capitalism might even succeed, before too long, in reversing the revolutions in Cuba and Nicaragua."

Both the capitalist and communist systems "have grave internal weaknesses, and each has served to enfeeble the other," Gurley concludes. "When two wounded giants face each other, each armed to the teeth, it is fairly certain that love will be in short supply."

A 1942 Stanford graduate in economics, Gurley returned to the University as a professor of economics in 1961. From 1963 through 1968 he was managing editor of the *American Economic Review*, the official publication of the American Economic Association.

He teaches several hundred undergraduates a year in courses ranging from elementary economics and money and banking to Marxian economic theory and Chinese economic development.

He was the first recipient of the Walter J. Gores award for teaching in 1971 and has been selected by graduating seniors to speak at Class Day five times.

A former varsity tennis player, he still "serves and rushes the net, earns money on the side for opera tickets, runs the oval at Angell Field each day, and goes after mealy bugs, aphids, and snails in the garden."

His latest book is dedicated to Cynthia Gunn, who has edited and managed the Portable Stanford series for nearly a decade.

Panofsky to shed administrative role at SLAC in August, 1984 at age 65

Prof. Wolfgang Panofsky, director of the Stanford Linear Accelerator Center since 1961, plans to relinquish his administrative post Aug. 30, 1984.

His action follows a long established, informal agreement among top SLAC administrators to relinquish their administrative responsibilities soon after turning age 65.

An internationally acclaimed physicist and arms control expert, Panofsky will retain his tenured professorship at the University.

In President Donald Kennedy's absence from campus, Provost Albert Hastorf said Panofsky "has done an absolutely brillant job in providing both intellectual leadership and managerial skill to the development and operation of SLAC.

"His leadership continues to set extremely high standards, both nationally and internationally. We look forward to his continued energetic involvement in the intellectual life of this community."

In a Jan. 10 letter to Kennedy and Hastorf informing them of his decision, Panofksy noted that "the two-mile linear accelerator, the Stanford Positron Electron Accelerator Ring (SPEAR), and the Positron-Electron Project (PEP) have all been established as major productive research tools within the SLAC framework, and the SLAC linear collider (SLC) has been acknowledged as an exciting new step, both in collider technology and as a truly unique research tool by the scientific community and the Executive Branch of government.

"The SLAC faculty is recognized as second to none in experimental physics, particle theory, and collider technology. The SLAC administrators are highly capable and the staff has performed stably and creatively. Thus a directorial transition can take place with the prospect of a scientifically exceedingly promising but technically challenging future, in the absence of crises as to mission, scientific leadership, or personnel.

"Governmental support prospects look



Wolfgang Panofsky

excellent, but this is of course a matter subject to the vagaries with which you are only too familiar."

Panofsky's decision was made public May 3, following selection of a search committee for his successor. Headed by Hastorf, the committee will include SLAC Profs. Sid Drell, David Leith, Richard Neal, Stan Brodsky, and John Rees; Profs. Cal Quate, applied physics, and Stan Wojcicki, physics; Prof. Ned Goldwasser, of the University of Illinois, chairman of SLAC's Scientific Policy Committee, and one other outside scholar, whose acceptance is pending. Noel Kolak will provide staff support.

Appointment of the SLAC director is made by the Stanford Board of Trustees under the terms of the contract between the University and the Department of Energy, and is subject to Department of Energy approval.

SLAC has about 1,300 employees and an annual budget of $80 million, not including construction.

Campus crime report

Apr. 27-May 2

Burglary/residence	0	Phone harassment	0
Burglary/nonresidence	3	Controlled substance	0
Burglary/Vehicle	1	Felony arrest	0
Theft/under $400	6	Misdemeanor arrest	4
Theft/over $400	4	Adult booking	3
Bicycle theft	8	Adult cite/release	0
Vehicle accident	3	Juvenile booking	0
Bicycle accident	0	Juvenile citation	1
Indecent exposure	0	Warrants served	1
Assault	0	Driving under influence	2

The information report is based on campus crime reported to SUDPS during the stated time period, and may not necessarily reflect the current crime trends.

Nuclear information restrictions could disrupt research

Following is an April 29 letter to Ms. Trisha Dedik Chico from Gerald J. Lieberman, vice-provost and dean for graduate studies and research on the proposed rule of the Department of Energy for "Identification and Protection of Unclassified Controlled Nuclear Information." 10 CRF Part 1017, 48 FR 13988 et seq., April 1, 1983.

We write to comment on the proposed rule implementing Section 148 of the Atomic Energy Act of 1952, as amended. As a research university committed to the principle of openness in research, we fear that the breadth and vagueness of the regulation as proposed would both impair our ability to apply the principle and inhibit basic research activities.

As an institution maintaining research libraries of some five million volumes, we fear that the scope of the proposed regulation is so great that it might encompass an unknowable subset of our collection, which is available to all of our students, staff, faculty, and to other scholars. And as a teaching and research institution, we fear that the regulation as proposed could chill or threaten the free interchange and propagation of information required for the success of fundamental research activities which are essential to our national and economic security.

In light of the (following) comments. . .we submit that this proposed regulation is so fatally flawed as to require its withdrawal, or at least, its complete redrafting, before any thought is given to its issuance as a final rule.

COMMENTS BY STANFORD

Section 148 of the Atomic Energy Act of 1952 as amended directs the Secretary of Energy to prescribe regulations, if and to the minimum extent necessary, to prohibit unauthorized dissemination of certain unclassified information.

The information is generally referred to in the proposed rule as Unclassified Controlled Nuclear Information, or UCNI, and will sometimes be so referred to here.

The task of devising such regulations is obviously fraught with First Amendment problems. It may be possible to draft a rule sufficiently careful, narrow, and precise to avoid these problems, but the pending proposal does not even acknowledge, let alone avoid them.

All research institutions would be seriously infringed upon by the proposed regulation. Stanford's standing policy prohibiting secrecy in research makes our position particularly difficult.

(This) policy provides that all interested persons must have access to the underlying data, to the processes, and to the final results of research. Under this policy, classified research, for instance, is unacceptable.

Our problems with the regulation as proposed fall into two main classes:

First, as a federal contractor, we are apparently required to see that UCNI in our possession is *"[a]t a minimum. . .protected and controlled in a manner similar to* that customarily accorded proprietary business information in the organizational element concerned." Section 1017.4(a); emphasis added. This directive is not reasonable, or even meaningful, in a university context. It seems to apply to any information, no matter when produced or by whom, as long as it was ever "developed by or for" the United States Government. Section 1017.2(g).

Taken literally, it would even apply, for instance, to books published by commercial publishers, containing the results of research done at other institutions without indication that the work had previously been classified, and that are available on our library shelves. We doubt that this interpretation was intended, but regulations purporting to restrict the exchange of information must not leave the reader in doubt.

Again, section 1017.3(b), which deals with previously classified material, is so inclusive as to permit application to all those basic and advanced courses in fields of physics, electrical engineering, materials science and the like, that teach the basic information discovered and classified before the early 1950s and since declassified. Indeed, the language might be read to reach political sciences courses which include material on arms control.

In any event, we do not have the ability—nor, indeed would we be willing—to search our documents or censor our classes for material that might, under the very vague proposed standards, constitute UCNI, with the futile and repugnant object of making known and unclassified information secret.

Second, and perhaps more important to DOE, the regulation as proposed might seriously impair our ability to continue to do important basic research under contract or grant from the department.

As already indicated, the proposed application of business standards of protecting proprietary material to a university is highly inappropriate. Although we do occasionally deal with proprietary information, this is a very exceptional circumstance; we require that such data be specifically identified in advance so that we can be certain that its acceptance is consistent with its research guidelines.

In particular, while we will use our best efforts to keep that precisely identified data confidential if necessary, we insist that all research *results*—all *new* information developed in the course of the research—be publishable.

But the proposed rule is completely contrary to the needs and practices of Stanford and similar institutions. Not only is there no clear indication that UCNI *provided* by the government to a contractor will necessarily be identified, but worse, the rule provides no assurance that *results* will be distributable, or even that the contracting agency will signify in each case whether or not the results will be disseminable. That is, there is no provision that will enable a principal investigator interested in nuclear research to make an informed decision about whether the institutional policy against secrecy would be violated by any particular project.

Congressional intent

It was not the intention of the Congress that the authorization to the Secretary to promulgate rules about UCNI be exercised in a way that has this unlimited potential to chill research, teaching, and the general interchange of information.

On the contrary. Whatever may ultimately be decided about the constitutionality of regulations authorized by section 148, the Congress at least attempted to assure that they would be as little obtrusive upon freedom of communication as could be.

Section 148 originally (PL 97-90) directed the Secretary of Energy to prescribe such regulations as might be necessary to prohibit unauthorized dissemination of three categories of unclassified information, but only if and to the extent that the Secretary determines that unauthorized dissemination "could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of a) illegal production of nuclear weapons, or b) theft, diversion, or sabotage of nuclear materials, equipment, or facilities." 42 USC §2168 (a)(2).

A year later, the Congress amended the section (PL 97-415): it added the phrase "with respect to atomic energy defense programs," in order "to ensure that the authority conferred upon the Department of Energy under section 148 authorized only the withholding of information that 1) falls within one of the three categories specified in subsection 148 a. (1) (A)-(C), *and* (2) is related to the Department's atomic energy defense programs." Senate Report No. 97-113, p. 43, U.S. Code Congressional and Administrative News Advance Sheet No. 11, February 1983, p. 3613 (emphasis in original).

In addition, it provided that any determination by the Secretary shall be subject to judicial review pursuant to 5 USC §552 (a) (4) (b) (providing for equitable relief against the improper withholding of information by a federal agency).

Most important, it provided that the Secretary must prepare on a quarterly basis, and make available to any interested party, a report detailing the application of the regulation during the period, including the identity of the information "protected from disclosure," the specific justification for the determination to withhold, and a justification that the regulation has been applied "so as to protect from disclosure only the minimum amount of information necessary" to the purposes stated in the section. 42 USC 2168 (a), (d), and (e).

Neither when section 148 was added to the Atomic Energy Act, nor when it was subsequently amended, was there any indication that it was intended to repeal or modify any other Sections of the statute.

In particular, the concern to keep implementation of the section as narrow as possible is consistent with and indeed reinforces section 3.b, which states one of the basic purposes of the Act: to provide for. . . "a program *for the dissemination* of unclassified scientific and technical information and for the control, dissemination, and declassification of Restricted Data, subject to appropriate safeguards, so as to encourage scientific and industrial progress."

Again, section 141(b) sets forth, inter alia, the following principle for guidance of the DOE in fulfilling the statutory policy of controlling dissemination and declassification of restricted data in such a manner as to assure the common defense and security: *"The dissemination of scientific and technical information* relating to atomic energy *should be permitted and encouraged* so as to provide that free interchange of ideas and criticism which is essential to scientific and industrial progress and public understanding and to enlarge the fund of technical information." (Emphasis added.)

Statutory provisions

These statutory provisions have withstood the test of time, having remained untampered with by the Congress for over 30 years. Thus, there can be little doubt as to the precise intent of the Congress in limiting the Secretary's regulatory authority under section 148 to the *"minimum* restrictions needed to project the health and safety of the public or the common defense and security. . ." (emphasis added).

Whether by accident or design, the DOE in its proposed 10 CFR 1017 regulation has clearly overstepped the Congressional mandate to exercise *maximum restraint* in promulgating its restrictions. The proposed regulation is so vague, ambiguous, inconsistent, and couched in such general categorical terms as to be capable of interpretation as giving the Secretary *maximum flexibility* to prohibit dissemination of anything and everything he chooses, rather than following the statutory admonition to impose only minimum restrictions.

Neither the statutory nor the Constitutional requirements can be met by a regulation that does not provide certainty about what information is *not* UCNI: a producer or disseminator of material that may include "nuclear information"—that is, any college, university, library, publisher, bookstore—must be able to proceed with assurance in dealing freely with *any* information it may come by, unless that material is clearly designated on its face as restricted, or produced under a contract which affords notice that the results may not be transferred or revealed. That is a minimum requirement of freedom of speech. That is also the only way to implement the reporting requirements of the section (42 USC 2168[e]).

The proposed regulation at certain points seems to direct itself only to federal employees, agents, and contractors, see e.g. section 1017.4(a); this is nowhere clearly established, however. In any event, it is as a federal contractor that Stanford and other research universities are chiefly affected.

Reporting requirements

Those reporting requirements contemplate, as indeed the rest of the language of section 148 bears out, that the Congress envisioned UCNI as being only information in the control of the Department of Energy, so that the Department could screen it before release, and mark it as restricted if it is to be so.

In fact, section 1017.2(n) defines UCNI as "unclassified information protected against unauthorized dissemination pursuant to section 148 of the Atomic Energy Act, *(and is so designated)*. . ." (emphasis added). If that parenthetical is intended to mean that anyone may freely disseminate any material in his or her possession as long as that copy is not marked (or actually *known* to the possessor at the time of acquisition to be a copy of designated UCNI), some of the harm the rule would work could be alleviated by making this clear.

But such a reading is not suggested by the structure of the proposed regulation: for instance, it provides in section 1017.5(c) that "No government organization, including government contractors and subcontractors, shall release UCNI currently within its possession without consultation with the originating organization and then only upon the approval of the Secretary or his delegate."

Since no material is currently "designated" UCNI in the sense of being so marked, nor could any be prior to the issuance of a regulation or order, this seems to contradict the benign intent suggested above.

Again, with respect to previously classified information, the proposed regulation gives a number of examples of material to be protected against dissemination but nowhere suggests that material now freely available—in libraries, for instance—is *not* covered. It is ironic that the language employed by the Congress in an attempt to direct the Secretary to regulate narrowly and with specificity has, in the proposed rule, merely been repeated in various permutations and presented as "examples," illustrative and not exhaustive, of what the Secretary actually intends to control.

Even if all *existing* information that the Secretary considers UCNI were identified and marked, and the public were assured that it runs no risk in accepting, reading, discussing, and transmitting any unmarked information, the problem of *new* information, the production of which is so vital a part of the activities of a research university, would remain unresolved and disasterous.

The proposed regulation is completely devoid of any procedural guidance to enable an investigator doing federally funded research, and teaching in the area of his or her research, to ascertain whether or not information may fall within any of the proscribed categories.

The only safe route would be to request that the department censor all results prior to publication or even discussion with individuals not specifically involved in the funded research—a procedure so foreign to an institution committed to open research as to be completely unacceptable.

The regulation does not even utilize the most obvious means to limit the damage they can do. For example, while the proposed regulation purports to define "atomic energy defense programs" as anything utilized or engaged "in support of" certain activities involving or safeguarding

continued on next page

Huggins uses new process to convert coal to motor fuel

During the second World War, when Nazi Germany found itself cut off from much of the world's oil supplies, its scientists were able to produce motor fuels by synthesizing it from coal.

Now Stanford Prof. Robert Huggins has been able to speed up that somewhat cumbersome technique using a newly developed class of materials.

The technique is named the Fischer-Tropsch process after the two German scientists who developed it in the 1930s.

"It was very important to the Germans during World War II. They ran all their autos, trucks, and airplanes on fuels derived from coal without access to petroleum," said Huggins, professor of materials science and engineering.

Fifty years later dwindling oil reserves and the existence of extensive coal deposits in the U.S. have reawakened interest in the process as a long range alternative, not just to make motor fuels, but synthetic materials as well.

"Almost all artificial fibers are now made from petroleum. If this became scarce we would need other 'feedstocks' for fibers and plastics."

The first step in the conversation is called the steam gassification of coal. This is a simple chemical reaction between coal and steam which makes the gases carbon monoxide and hydrogen. The more complicated second step involves flowing these gases together across a catalyst.

All important catalysts come from a group of chemical elements called transition metals which are able to readily receive or donate electrons.

The Fischer-Tropsch process generally uses a nickel catalyst.

In the presence of the nickel many of the carbon monoxide and hydrogen molecules break apart and individual atoms of carbon, hydrogen, and oxygen attach to the surface of the catalyst. Normally these atoms then readily recombine to form hydrocarbons—the simplest being methane, a useful fuel—and water.

It was at this point that Huggins and his former student and associate Turgut Gur saw a way to increase the rate at which hydrocarbons were produced. They put their catalyst on top of a newly developed material called an "ionic conductor."

This is a solid with a very special crystal structure in which ions (atoms with an electric charge) are important for carrying electrical currents rather than the very much smaller electrons which carry them in metals and semiconductors.

Huggins applies a voltage across the



Robert Huggins

ionic conductor. In the presence of this, the atoms of oxygen attached to the surface of the nickel catalyst are given an electric charge before they have time to recombine with hydrogen atoms and form water.

They are now oxygen ions and can then be pulled off the nickel surface and driven through the ionic conductor by applying an electric voltage.

The ions are finally released as oxygen gas on the other side.

This continuous removal or "pumping" of the oxygen from the surface of the catalyst controls the rate of the overall reaction and by using modest voltages for the "ion pump" hydrocarbon production can be made very rapid.

One other advantage of using the ionic conductor is that the final product in addition to hydrocarbons is pure oxygen which has a much greater technological value than the water which was produced by the old process.

Huggins thinks that the process is still far from being commercially feasible. The main problem is that the ionic conductor they have used so far only performs well above 600 Celsius (1,100 Fahrenheit) while all hydrocarbons except methane are unstable above this temperature. Therefore, to make heavier products such as fuels, a new ionic conductor will have to be found which will operate at low temperatures.

Huggins says that this project evolved out of an earlier experiment using almost identical technology in which he and his student were catalytically decomposing nitric oxide.

"Nitric oxide is an important constituent of exhaust gases and using this approach we were able to change that rate (of decomposition) immensely."

He sees a bright future for this rather unique approach to catalysis.

"There are many possible reactions (it could be applied to) to accelerate, decelerate or shift them in this manner."

Part of the funding for this project came from the National Science Foundation in the form of a seed grant through Stanford's Center for Materials Research.—**S. J. Bending**

Lieberman assails proposed regs. . .

continued from page 1

added. "We insist that all research results—all new information developed in the course of the research—be publishable. . . .

"The (proposed) rule provides no assurance that results will be distributable, or even that the contracting agency will signify in each case whether or not the results will be disseminable.

"There is no provision that will enable a principal investigator interested in nuclear research to make an informed decision about whether the institutional policy against secrecy would be violated by any particular project."

Where the Atomic Energy Act of 1952 said "the dissemination of scientific and technical information relating to atomic energy should be permitted and encouraged," Lieberman observes, "the proposed regulation is so vague, ambiguous, inconsistent, and couched in such general categorical terms as to be capable of interpretation as giving the Secretary (of Energy) maximum flexibility to prohibit dissemination of anything and everything he chooses. . . .

"A university contractor engaged in purely basic high energy research into the nature and interrelationship of matter, such as the Stanford Linear Accelerator Center, or a mixed type facility, such as the Stanford Synchrotron Radiation Laboratory, is without any means of determining whether newly generated information, or information currently in its possession, is such that it cannot be disseminated under this proposed regulation, nor does it have any way to judge whether information it is receiving from others may be within a proscribed category.

"Our physicists, our electrical engineers, our computer scientists, and many other scholars in allied fields daily work with, produce, and teach material that may be covered by the proposed rule, which completely ignores one of the primary purposes of academic institutions—to develop, create, expand and disseminate the fund of scientific and technical knowledge."

Energy regs. . .

continued from page 20

atomic weapons, weapon components, or special nuclear material, there is no clue given as to what the phrase "in support of" is intended to mean in this context.

Clearly it is not synonomous with "is related to" which was the equally vague phraseology utilized in the legislative history as explanatory of the Senate's intent in amending section 148a. (PL 97-415) to narrow its intended application. If the phrase "in support of" is read as "in *direct* support of "Atomic Energy Defense Programs" (and such a construction would be consistent with the stated Congressional intent to constrict restrictions to a bare minimum) a modicum of reasonableness might possibly be attributed to this definition; but, there is no hint in the regulation that such is the intended construction.

Thus the generator, holder, or receiver of information of the general sort referenced in the statute is left in a complete quandary as to how to make an informed judgment as to whether dissemination of his particular information is or is not proscribed.

A university contractor engaged in purely basic high energy research into the nature and interrelationship of matter (such as SLAC), or a mixed type research facility (such as SSRL), is without any means of determining whether newly generated information, or information currently in its possession, is such that it cannot be disseminated under this proposed regulation, nor does it have any way to judge whether information it is receiving from others may be within a proscribed category.

Our physicists, our electrical engineers, our computer scientists, and many other scholars in allied fields daily work with, produce, and teach material that may be covered by the proposed rule, which completely ignores one of the primary purposes of academic institutions—to develop, create, expand and disseminate the fund of scientific and technical knowledge.

When it comes to raising teen-agers, having two adults at home helps a lot

Having an additional adult present significantly improves adolescent behavior in single-parent families, a new Stanford study shows.

Based on detailed analysis of national data, the study findings were reported Friday, April 8, by Prof. Sanford Dornbusch at the Pacific Sociological Association meeting in San Jose.

"The presence of any other adult in the household brings adolescent control levels closer to those found in two-parent families," he said.

"Within our system of social welfare, numerous agencies have attempted to reduce the likelihood that a single-parent household will include other adults, particularly unmarried partners.

"Our findings indicate that extended single-parent households have a positive impact upon social control of adolescents, and thus may have value in a fashion seldom considered in previous governmental formulations of policy. . . .

"We do not know whether it is the lack of surveillance, lack of appropriate teaching, or lack of support for the single parent that leads to a reduction in control of adolescent deviance.

"But the presence of any other adult in the household brings control levels closer to those found in two-parent families.

"This suggests that there are functional equivalents of two-parent families, nontraditional groupings that can do the job of parenting, and that raising of adolescents is not a task that can easily be borne by a lone parent.

"It may take two to raise an adolescent."

At present, half the U.S. families with incomes below the poverty level are headed by single parents.

Supported by the Stanford Center for the Study of Youth Development, the analysis was based on data from a national sample of youths aged 12-17 from the third cycle of the National Health Examination Survey, conducted in 1966-70.

While the data studied are more than a decade old, "unfortunately no such rich depository of information on family structure, family decision making, and adolescent deviance exists for a later period," the researchers noted.

Besides Dornbusch, who holds the Reed-Hodgson professorship of human biology and is a professor of sociology and education, the researchers included Prof. J. Merrill Carlsmith, psychology, director of the Center; Steven J. Bushwall, undergraduate who received his degree in sociology; Prof. Herbert Liederman, psychiatry; Prof. Albert H. Hastorf, Stanford's provost; Prof. Ruth T. Gross, the Dexter and McCormich professor of pediatrics; and Philip L. Ritter, research associate at the Center.

Staff employment opportunities

Exempt

41655-AW (JCC:8880) MISC PROFESSIONAL: Position is located in Program Coord Div of Research Lib Group, supporting daily operation of Collection Mgmt, Preservation, & Shared Resources Programs of the corporation; analysis of data submitted to RLG Conspectus; design, formatting & analysis of collection develop't verification studies; consultation w/ members of the program committees; submission of tapes, & mgmt of input for ESTC & other special databases; analysis of institutional performance in RLG-ILL; mgmt of RLG's reference liaison program; staff support for grants admin; mgmt & analysis of statistical reports; QUALIFICATIONS: MLS degree or equiv; strong bkground and/or training in an academic discipline sufficient to understand the relationships between academic res & lib collections; approx 3 yrs' exp as a reference librarian/bibliographer/cu rator and/or cataloger; familiarity w/ RLIN, SPIRES, SCRIPT, & WYLBUR; reading knowl of 1 or more foreign langs.; C06; $1854-2312.

41656-AW (JCC:8880) MISC PROFESSIONAL: Position is located in Program Coord Div of Research Lib Group, supporting daily operation of Collection Mgmt, Preservation, & Shared Resources Programs of the corporation; analysis of data submitted to RLG Conspectus; design, formatting & analysis of collection develop't verification studies; consultation w/ members of the program committees; submission of tapes, & mgmt of input for ESTC & other special databases; analysis of institutional performance in RLG-ILL; mgmt of RLG's reference liaison program; staff support for grants admin; mgmt & analysis of statistical reports; QUALIFICATIONS: MLS degree or equiv; strong bkground and/or training in an academic discipline sufficient to understand the relationships between academic res & lib collections; approx 3 yrs' exp as a reference librarian/bibliographer/cu rator and/or cataloger; familiarity w/ RLIN, SPIRES, SCRIPT, & WYLBUR; reading knowl of 1 or more foreign langs.; C06; $1854-2312.

32946-LL (JCC:5940) CLINICS STAFF NURSE IV: Research nurse will monitor several clinical res protocols for treatment of Hodgkin's disease & non-Hodgkin's lymphomas, studying primary chemotherapy & radiotherapy treatments & toxicity of treatments; involve patient care, patient interviews, review of chemotherapy records, assessment of treatment toxicity & mgmt of data, incl some computer entry & retrieval; clinical studies w/ interferon will incl Phase I-II testing of new products & a Phase III adjuvant study in nodular lymphoma; help to coord lymphoma teaching conferences & interface w/ several add'l res projs, incl monoclonal antibody studies for diagnostic & therapeutic use; QUALIFICATIONS: valid Calif Registered Nurse's License; prev exp w/ Oncology patients.; K04; $2061-2229.

28244-AW (JCC:5050/5058) Sys Programmer III/IV: Team member w/ respon for designing, implementing, & maintaining sys software for IBM 3081 mainframe in RLIN; program design; detailed specification & documentation, program develop't, sys integration, testing, & maintenance; developm't & maintenance of RLG Pascal runtime environ & related program develop't tools & develop't of mainframe sys support facilities for program-to-program commu between remote large-scale host computers in support of the Linked Sys Proj; QUALIFICATIONS: thorough knowl of Pascal programming lang, IBM 3081 computer, MVS operating sys & assembly lang; 3 yrs' working exp w/ IBM 3081; 3-5 yrs of directly applicable exp for SP III & 5 or more yrs for SP IV; knowl of RLG computing environ, incl MILTEN & ORVYL sys software desirable; exp in mgmt of vendor-supplied software also desirable.; C07/C08; $2113-3344/2464-3848.

39480-TC (JCC:5588) LIFE SCI RES ASST I: Work w/ immunology & chemotherapy of virus infections; major proj involves cell culture & biochemical studies of human cytomegalovirus, w/ an emphasis on immunogenic proteins as studied w/ murine monoclonal antibodies; participate in tissue culture studies w/ new antiviral drugs; involve develop't & analysis of monoclonal hybridoma cell lines & immunological reactions w/ viral proteins; QUALIFICATIONS: BA or BS in human biology or equiv exp; theoretical understanding of virology & exp w/ lab virology procedures & techniques.; C05; $1670-2086.

31981-TC (JCC:5596) LIFE SCI RES ASST II: Perform experiments to study interactions between hormones & human hemopoietic cells; radio-labelled hormone-receptor binding, processing & degradation by cells will be determined to assess regulatory mechanisms in human hemopoiesis; mathematical analyses of binding kinetics utilizing Scatchard plots will be evaluated; human leukemic cell lines grown in tissue culture & purified populations of normal hemopoietic cells obtained by density separation & immunologic tech will be used as target cells; work incl immunofluorescence & complement-mediated cytotoxicity studies of purified cells; some supvry respon for lab; QUALIFICATIONS: related degree or equiv exp in cell biology, tissue culture work & radioisotopic techniques preferred.; C06; $1854-2312.

24130-TC (JCC:6818) SOC SCI RES ASST II: Research Asst to a Prof & res staff of Social Ecology Lab, Dept of Psychiatry; involved in contacting & obtaining data fr subjs in ongoing studies thru phone, hospital-based, & possibly home interviews; analyze & interpret data using existing computer programs & hand calculators; res bibliographic mat'ls relevant to ongoing res projs & participate in writing manuscripts; short, local trips using personal transportation will be required to complete these activities; expected to develop new standards for measures; QUALIFICATIONS: MA in social sci or equiv exp; ability to conduct structured telephone or home interviews; computer data analysis skills.; C04; $1511-1880.

21689-JB (JCC:7534) FACIL ENGINEER/COORD II: Respon for planning, coord & execution of maintenance, repair & minor construc projs of an Architectural/Structural nature; prep plans, documents, drawings & specifications as nec to implement projs; performs inspection of facilities to ascertain mat'l condition & establish scope for corrective action; acts as a proj mgr; maintain contract files & process nec inspection reports, purchase reqs & payment certifications; respon for prep of reports which outline field conditions & operational problems; QUALIFICATIONS: knowl of Architectural/Structural maintenance & construction practices; finish schedules, bldg structural components & roofing sys; current bldg & fire codes; able to read plans & interpret specifi meet & interview people courteously & tactfully; excel commu skills, both oral & written.; C07; $2113-2724.

30567-LL (JCC:8880) MISC PROFESSIONAL: Language Lab Director; manage offc & lab facilities (102 student booths, each w/ Level III ER-840 Sony 4-track recorders); duplicate cassettes for students; prov maintenance of all audio & video eqpt; recruit, train & supv approx 10 student lab attendants; prov tech recommendations to Lang Lab Committee for improvements & long-term planning; QUALIFICATIONS: substantial exp in 'hand-on' operation of audio & video eqpt; knowl of computer sys; ability to manage lab facilities, eqpt & operating budget; abiii-ity to supv student assistants; prev exp in an academic institution desired.; C06; $1854-2312.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

SECRETARY III—Hospital Modernization Program — #3538 (R-16): Responsibilities: Under genl supvn of Deputy Director of HMP, provide administrative support to HMP staff as reqd, as well as primary sectl support to Deputy Director; position involves typing at corrected rate of 60 wpm, minute taking, scheduling of meetings, & making travel arrangemts; must be able to use or learn to use word processor, organize & maintain filing system; possess good grammatical/writing skills; good oral communication skills; Qualifications: Prefer min of 3 yrs' secretarial experience; permanent, full-time, M-F, 8-5pm, $8.31-$11.46 hrly

Carpools

Need ride: San Jose (No. Capitol) to Stanford (ERL) and back, 8:30 and 5, M-F. Call Maria at (408) 280-2568 (day) or (408) 926-5328 (night).

Riders needed for vanpool M-F. Leave Newark 7 a.m.; Leave Stanford 4:45 p.m. Call Mark, 7-4342.

Accidents and injuries

Accidents and Injuries Occurring During Week of Apr. 25-29

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	3	(0, 0, 0)
Fall from height (incl. stairs)	1	(0)
Fall from same level	1	(0)

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

20035-PM (JCC:2596) SECY II-SPEC: 75%, 8-3pm or flex time; formatting, editing & typing proposals, tech manuscripts using Greek letters & equations, & corresp fr longhand; answer phone; keep Lab journal lib current, xeroxing, sorting & routing mail, stocking offc supplies, assisting w/ Dept'l files & some occasional lib research & errand-running on campus; QUALIFICATIONS: typ 65 accurately; knowl of proper syntax; familiarity w/ math & tech symbols; formatting & editing reports & proper formatting of business letters; prior exp w/ tech typing preferred; good commu skills over phone & in offc; good organizational skills; send appl/resume to Robin Holbrook, SMRL 119 Organic.; B12; $983-1030.

24129-TC (JCC:6810) SOC SCI RES ASST I: Res Asst to a Prof & the res staff of Social Ecology Lab, Dept of psychiatry; involved in contacting & obtaining data fr subjs in ongoing studies thru phone, hospital-based, & possibly home interviews; may analyze data fr ongoing res proj using existing computer programs & hand calculators; collect & compile bibliographic mat'ls relevant to ongoing res projs & asst in prep of manuscripts short, local trips using personal transportation will be required to complete activities; QUALIFICATIONS: typ 40-50; BA in social sci or equiv exp; ability to conduct structured phone or home interviews; some computer data analysis skills helpful.; B12; $1310-1373.

32943-PM (JCC:2546) SECRETARY I: 50%, prefer 1-5pm; work in Oncology as support person for scientific team; filing; xeroxing; typing of forms; screening & routing telephone calls; sporadic typing of manuscripts, fellowships & grants proposals fr handwritten or rough typed copy; willing to learn Xerox 860 word processor; QUALIFICATIONS: typ 50; knowl of genl telephone & office procedures; contact: Shirley Coles, 497-7423.; B09; $565-595.

31161-PM (JCC:2554) SECRETARY II: 50%, 8-12; Fixed term 5/1/83-8/31/84; performs duties in offc of Assoc Dir for Public Services; typ corresp, reports, position papers & admin documents & forms on both typewriter & a word processor; maintains Public Serv databases online & enters lib publications into Wylbur sys &/or other automated sys; organizes Assoc Dir's time schedule & sets up mtgs; organizes & maintains a complex filing sys; receives & screens visitors & phone calls; sorting mail; handles travel arrangements, etc; QUALIFICATIONS: typ 75; prev sec'l exp; able to learn & use automated sys; commu well both orally & in writing; good spelling punctuation & English syntax skills; good interpersonal skills; ability to maintain confidentiality; prev lib exp; prev exp w/ WYLBUR &/or SPIRES: contact Bob Johnson, Green Lib, Rm 223 (497-3152).; B11; $623-655.

31162-PM (JCC:1763) LIBRARY SPEC III: Fixed term 6/1/83-5/31/84; performs duties in Serials Dept; catalogs serials w/ LC & RLG copy; compares mat'ls/photocopies; establishes correct entry form of corporate body entries & creates authority file records; establishes govt doc access point(s) according to SUL policy; prep data for keying by staff; recatalogs serials w/ title or main entry changes, etc; establishes catalog entry for series; supv Lib Spec I, etc; QUALIFICATIONS: typ 40; prev lib exp; ability to learn & apply AACR II cataloging rules & MARC-S format for serials bibliographic info; ability to meet production goals; learn to use RLIN catalog subsys; familiarity w/ LC schedules & subj headings; reading knowl of 1 foreign lang, preferably Spanish desirable; prev supvry exp; contact Bob Johnson,; B14; $1440-1514.

SLAC

94543-JM (JCC:8880) Mechanical Engineer: Mechanical design & analysis of components for the linear collider vacuum sys incl stress analysis, heat transfer analysis & ultra high vacuum design & analysis; follow-up of fabrication, procurement, assembly & installation of components & SYS; QUALIFICATIONS: BSME or equiv; several yrs exp in ultra high vacuum sys design; knowl of mechanical design, heat transfer, stress analysis & computer use required; familiarity w/ computer aided design, vibration analysis & shop practice desired.; C99; $2400-3000. APPLY AT SLAC

94542-JM (JCC:8880) Mechanical Engineer: Mechanical design & analysis of components & sys for the linear collider proj involving most of the following disciplines: stress, heat transfer, vibrations, electromagnets, vacuum & cryogenics; follow-up of fabrication, procurement, assembly & installation of components & sys; QUALIFICATIONS: BSME or equiv knowl of mech design, stress analysis & computer use required; familiarity w/ computer aided design, vibration analysis, heat transfer analysis & shop practice desired; will consider recent engr grad or one w/ a few yrs exp.; C99; $2000-2700. APPLY AT SLAC

94582-JM (JCC:6714) ACCELERATOR SYS OPR TR: TMS Unit; rotating shift; genl operation of complex sys to dir, tune & maintain electronic beam; perform corrective & preventive maintenance; fabricate, install, modify, etc. electronic & electro-mechanical components & sys; QUALIFICATIONS: AA in electronics or equiv; several yrs related exp incl digital electronics, fast electronics, etc.; A00; $1811. APPLY AT SLAC

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, May 10, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

33459-PM (JCC:2462) OFFICE ASST III: Book Order Clerk; 8-4:30; about 100 book orders daily fr booksellers & others, domestic & foreign (25% foreign); fr each order the coder extracts info & translates it into number codes according to book title & customer; precision & strict attention to detail are essential; all Sales Dept corresp is read daily, along w/ important journal articles & trade news dealing w/ book publishing; QUALIFICATIONS: typ 35; rudimentary reading knowl of a modern European lang desirable; neat, legible handwriting required; an acquaintance w/ organization of institutions of higher learning, & of libs, is essential; ease w/ titles & subtitles of esoteric scholarly works, & familiarity w/ bibliographical terms in lib & academic work; send appl/resume to Robert Lloyd,; B11; $1246-1310.

27292-PM (JCC:2462) OFFICE ASST III: Receptionist for Univ admin offc; greet visitors, faculty, staff & students; prov wide range of genl info & make referrals as approp; answer phones & handle 28-line switchboard; schedule use of conference rooms, offc car & signature matrices; distribute incoming mail; type corresp; handle petty cash; xerox billing; prep Univ acctg forms; respon for opening & closing offc, etc; QUALIFICATIONS: typ 55; good commu skills; use tact & good judgmt in dealing w/ people; accurate typist; prev exp in handling phone; have a record of good attendance & punctuality; send appl/resume to Elaine Gloystein, President's Office, Bldg 10; B11; $1246-1310

28282-BP (JCC:2562) SECRETARY III: 50%; serv as executive assistant & sec in organizing mtgs, travel schedules, & report prep; supvn, organization & direction of independent sec'l projs for principal investigator & group of grad students, undergrad student employees, & consultants & technicians; mgnt of sec'l, acctg, procurement & maintenance activities for Stanford Student Astronomical Observatory; handling of appt papers for student teaching assistants; respon for astronomy lecture courses ; QUALIFICATIONS: typ 60; able to compose corresp, edit reports & proposals for syntax, spelling & style; able to supv student employees; knowledgeable about Univ & dept, or able to learn the organization quickly; able to establish filing sys dealing w/ tech reports, procurement, proposals; send app/resume to beverly Yates, AEL 107.; B14; $720-757.

250 world class players

Ultimate Frisbee contest coming

About 250 world class frisbee players from all over the west will compete Saturday and Sunday, May 7-8, in the Ultimate Frisbee Invitational, to be held from 10 a.m. to 4 p.m. both days next to Stanford Stadium.

Ultimate Frisbee is a fast-paced game between two seven-player teams, with action similar to football, basketball, and soccer. The object is to score points by passing the disc to a teammate in the end zone.

Preliminaries and semifinals will be held Saturday, with the finals and awards slated for Sunday.

Included in the tournament will be frisbee golf, in which players follow an 18-"hole" course—the frisbee is thrown at targets, with each throw counting as a stroke as in regular golf.

The Frisbee Golf competition is open to the public along with free instructional clinics and demonstrations. Spectators are welcome at all the competitions.

Stanford's frisbee program is headed by Tom McRann, who holds the Guinness Book of World Records record for the greatest distance an object has been thrown purely by muscle power. To earn this title, McRann tossed Skyro, the long-distance flyer, 285.9 yards.

Dance Division set to present annual Spring Migration concert

The Stanford Dance Division will present its fifth annual "Spring Migration" concert at 8 p.m. May 11, 12, 13, and 14, in Roble Dance Studio.

This year's concert involves a large number of students, undergraduate and graduate, as performers and choreographers. Faculty members Susan Cashion, Diane Freccero, and Jancy Limpert will also present choreography performed by students.

"Spring Migration" is an example of the Dance Division's continuing efforts to provide the Stanford community with a center for dance and other performance activities.

This year the studio has been the scene of master classes with guest artists, end-of-quarter choreographic showings, an Invitational Dance Concert in the fall, and a Dance Week concert in the winter. "Spring Migration" is the single event sponsored by the Dance Division which draws exclusively on students as performers.

Tickets for "Spring Migration" are $4 general admission, $3 for students, and $2 for Dance Quorum members and will be available at the door. For further information contact Jancy Limpert at 497-1234.

Rental housing

HOUSING AVAILABLE

□ **June:** Tahoe hse, on water, 4BR w/tennis crt. No pets or sublet. $2000 for 2 wks, $3000/mo. Call Linda Catron, 921-3433 or Marilyn Yalom, 497-1994 (day).

□ **Aug. '83 to Jan. '84:** Fully furn Cape Cod Colonial hse in Palo Alto; 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr schls, shops, park, Com. Ctr. Prof going on sabbat. $1500/mo. Call 325-1709.

□ **June 2 to Sept. 30:** LONDON HOUSEBOAT. Lux. conversion, exclus., semi-rural Chiswick on Thames, nr city ctr. Fully furn., central heat, contin. hotwater, 2BA, W/D, dishw, freezer. $900/mo. Call Beard, 323-2755 or 497-5546 (day).

□ **June 5 to July 9:** Furn. 2BR/2BA condo, Greenhse II. Pool. $750/mo. Call Bill, 497-1415 (day) or 494-1921 (eve).

□ **June to Aug (approx. 10 wks):** Charming, Los Altos Cape Cod, 3BR/2BA. Hot tub, lovely y d. Tennis & activities nrby. Call (415) 961-4218 (eve).

□ **Mo. of Aug.:** Apt. in Paris, furn, dbl LR, 1BR/1BA, kitchen, balc., 1 xtra rm. 6th (top) flr—no elevator. On quiet st. in 15th Arrondissement, few hundred meters to Institut Pasteur, nr Metro, Montparnasse. EXCHANGE for Stanf. apt. or RENT for $600/mo + util, $200 dep. (refundable). Write Dr. Maurice Hofnung, UPMTG Institut Pasteur, 28 Rue Dr. Roux, 75015 Paris, France, tel: (1) 306-19-19, x2156, or call Douglas Brutlag, 497-6161 (day).

□ **Late Aug. 83 to late Mar. '84:** Fully furn. campus hse, 3BR/3½BA, guest/FR, DR, study. $1400/mo. incl. grdnr. Call 497-1941 (day), 493-0777.

□ **June 13 to Sept. 5:** Lrg. furn. 2-story hse, 3BR/2BA, LR, den, lrg. ktchn, lndry rm, encl. yd, cov. patio, BBQ. Nr park, tennis, shops. 10 min. bike to inner quad. $900/mo + util. Call Dekker, 321-7963.

□ **June, July, Aug.:** Rm w/priv. BA, Menlo Pk. Share hse w/single person. $325/mo. + ½ util. Call 325-2236.

□ **July & Aug.:** Lrg. furn. studio treehse; ktchn, BA. Bike to Stanf. Barron Pk area. $400/mo. Call 497-6352 (day), 493-7083 (eve).

□ **July:** Furn. studio, ktchn, BA. Russian Hill in S.F., 2 blks to No. Beach. Priv. gar. $675/mo. Call 497-6352 (day), 493-7083 (eve).

□ **June 22 to Sept. 3:** Summer rent, 2BR/2BA fully furn. hse on 3+ acres in Woodside. Office, frpl, 2 lrg. decks, hot tub, view, privacy, hike trails & trees. Incl. dishes, linens. $950/mo. incl. garb., water, clean. serv. Call Ann Holmes, (415) 588-3040, 8 am to 3 pm; after 5 pm call 851-2167.

□ **End June to end Sept. (flex):** Fully furn. hse in Crescent Pk, Palo Alto, 3BR/2BA, patio, garden. Cul-de-sac. Walk to park, pool, tennis, schls. Bike to Stanf. $1250/mo incl water, grdnr. Call 321-1142 or 497-4364 (day).

□ **Sept. to Nov. 15, '83:** Furn. 1 or 2BR apts. Olympic pool, sauna, jacuzzi, tennis, racq. ball. Adult complex. Dep. req. & refs. 1 apt. air-cnd. Rte 280 to campus. $600/mo. Call Prof. Arnold, (415) 968-0951.

□ **July 1 to July 23, 1983:** Furn. 3BR/3BA campus hse, LR, DR, 2 studies, spac. ktchn. No pets. $1000/mo. incl. grdnr. & garb. Call J. Keller, 497-0851 (day), 857-0409 (eve).

□ **Beg. July 1, '83:** Univ. owned rental hsng: unfurn. lrg. studio, w/frpl & pool, on campus, for Stanf. fac. & staff only. $500/mo. Call Marsha Lee, 326-7195.

□ **July 10 (flex) to April 1, '84 (flex):** Fully furn. lux. hse. w/pool, Steinway; 3BR/2BA, AEK, W/D, 2 studies, frpl, fenced yd. Nr. Med. Ctr., bike to campus. $1500/mo. (nego) incl. pool serv. Call 497-1348 (a.m.), 325-4533 (lv. message), 322-9866 (eve).

□ **Aug. 1 to mid-Sept. '84:** Portola Valley, hse, 3BR/2BA, 2 frpl, multi-level, spac. decks, scenic views. Rdwd. beams, stained glass, oriental rugs, sculpture, art. Lrg pool w/solar. On wooded hillside acre. Use of car nego. $1800/mo. Call 851-8743.

□ **June 1 to Aug. 1, '83:** Old Palo Alto hse, LR, DR, ktchn, 5BR/2BA, deck. 1 mi. to Stanf. Poss. rent from 6/1 to 6/1/84. Call 328-4395, between 4 & 5:30 p.m. or after 10 p.m.

□ **NOW:** Rm. in old Victorian hse, fully furn., ktchn. priv., lndry, walk to Stanf. & dwntwn. Short term rent pref. $400/mo. Summer rms. also avail. Call Peggy, 327-2510.

□ **Sept. '83 to May '85:** EVERGREEN, COLO. Denver suburb: BR/2½BA unfurn. hse, LR, DR, study, loft, AEK, frpl w/wood, W to W carpet, deck, cable TV, ath. club mbshp avail. 2 car gar. 4 levels, 1 acre, mtn views. $1400/mo. or EXCHANGE for hse nr. Stanf. Call (303) 674-2244.

□ **June '83 to June '84:** 2BR fullyl furn. hse, incl. linen, dishes. Det. gar., fully insul, easy maintain, fruit trees, nr San Jose Civic Ctr, #17 & #101, 20 mi. to Stanf. $600/mo. incl. water. Call (408) 275-1491.

□ **June 16 to Sept. 5:** Fully furn. classic Spanish-style hse, 5BR/5BA, new ktchn. w/microwv, encl. crtyd, jacuzzi w/dress. rms. Balc., spiral staircase. Full acre, trees, creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Regularly avail:** 1 & 2 BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses, in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **Beg. June 15:** Summer rent and/or 1 yr; high Portola Valley (Ladera); 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis, 7 min. to Stanf. $1300/mo. Call 324-1624 (eve), 327-3505.

□ **Aug.:** Attrac. summer rent, dwntwn Palo Alto, 2BR/2BA, fully furn condo, suitable for cpl., libr. w/spiral stair, balc, pool, security. 18th C. European. $1200/mo. Call 324-1624 (eve), 327-3505.

□ **July '83 to July '84 (poss. longer):** Paris apt., Foch-Victor Hugo area, furn. studio, in new condo, 2nd floor of 22 unit bldg. LR, BA, ktchn, balc., wood flr. Quiet, view of prk. Call (415) 540-6523 till May 10; after, call Paris, 011-331-707-0034 or 011-331-553-6253.

□ **May for 1 yr. (or longer):** Mt. View hse, 2BR/1BA, patio, yd, dog run, gar., roomy ktchn, stove, frig, W/D. 6 mi. to Stanf. Call 494-6135 or 962-8530.

□ **Beg. June 15:** Period nego. 1BR/1BA apt. on campus. Fully furn, lrg LR/DR, storage, lndry priv., all util. incl. $650/mo. Call 497-1486 (day), 493-3349 (day or even).

□ **July 1 to Aug. 31, '83 (poss. longer):** Fuly furn. & equipt. Palo Alto hse, 3BR/2BA, AEK, study/guest, LR/DR combo, W/D, reflect. pool, deck, bike to Stanf. Walk to com. ctr, tennis, swim. $1250/mo. incl. grdnr. Call COLLECT (602) 886-7667 (Arizona).

□ **May 1 to Sept. 1 (flex):** Fully furn. 1BR/1BA grnd flr Pearce Mitchell adult condo. Pool. $675/mo. incl. util (except phone). Call 857-9657.

□ **NOW:** Ski cabin, So. Lake Tahoe. 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501, (408) 739-3141 (eve).

□ **Beg. June '83:** Arlington, VA (minutes to dwntwn DC): 2BR apt, fully furn. spacious, in suburban home. Priv. entr., kitchn, frpl, W/D, pool mbshp. Nr. park, tennis, shops, pub. transp. Long or short term rent. Call (703) 524-1513.

□ **Beg. June 10:** Luxury 1BR furn. campus apt. Lrg closets, priv. patio. $875/mo. incl. util. Call 856-6049 or 968-4957.

HOUSING NEEDED

□ **Sept. '83 to July '84:** Visit Scholar from U. of Chicago, spouse, children 11 & 13, seeks furn 3-4BR hse on or nr campus. Dates flex. Call (415) 856-1145 after 6 pm, (312) 624-6262 or (312) 962-8990 (day), Prof. Michael.

□ **Dec. '83 to Aug. '84:** Visit Profs and family seek large hse on or nr campus. Call 327-7953.

□ **June 24 to July 26, '83:** Swedish Prof, wife, 16 yr old daughter seek 2-3BR furn. hse or apt. Call 948-8058.

□ **Mid-June to Sept 1, '83:** Visit Scholar seeks furn 1BR apt. Pref. nr campus. Call Barbara, 497-2575 (day).

□ **Aug. '83 to July '84:** Visit Prof from Canada seeks to rent sabbatical hse in good sch. dist. Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

□ **1983-84 academic yr:** Responsible Stanf. Earth Sci. Grad students want to rent ASAP Portola Valley/-Ladera 3-4BR hse. Call office 497-4754, or Ralph: 948-5397; Jimmy: 964-6319; Ian: 857-0508. Will pay equitable mo. rent.

□ **Aug. '83 to Aug. '83:** Faculty family, 2 adults, 2 children seek 3 or 4BR hse or apt. Call Baltimore: (301) 366-0473 or (301) 338-7527.

□ **June 15 thru Aug. '83 (flex):** Harvard Prof, wife M.D., nonsmokers, no children or pets, seek fully furn 1-2BR apt/hse nr Stanf. for sabbat. Call COLLECT (617) 492-8299, eve or wknd, Boston time.

□ **Aug. 15 (flex) for 1 yr:** Univ of Ill. prof, wife, 2 well-behaved children (14 & 16) need 3BR furn. hse. Palo Alto Sch. Dist. Careful, considerate, nonsmokers, no pets. Local refs avail. Call COLLECT (217) 351-9881.

□ **Beg. July 1 thru Aug. (flex):** Mature female med stud. doing unpaid summer research at Stanf. needs hsesit. Nonsmoker, will give excel. care to hse, garden. Call Dr. Burge, (408) 727-3944, wkdays.

□ **Beg. mid-June for min. 1 yr:** M.D. & wife (no children/pets) seek 2-3BR unfurn. hse in Palo Alto area. Refs. avail. Call (313) 996-1800 or write: Stuart Flynn, M.D., 1810 Virnankay, Ann Arbor, MI 48103.

□ **Beg. Aug. (flex) for academic yr:** Visit. Scholar, wife, 1 child, seek 2-3BR furn. hse or apt nr campus. Nonsmoking, clean living, homeowners, will watch pets & plants. Local refs. Call COLLECT (314) 875-2858 (eve).

□ **July & Aug.:** Former Burlingame homeowners seek Peninsula hsng. Resp. mature cpl, nonsmokers, no pets. Excl. area refs. Call or write: Nappan, 9506 Granada Dr., Sun City, AZ 85373, (612) 972-8730.

□ **Mid-June to mid-July '83:** Careful tenant Englishwoman seeks rent or hsesit; or hse on or nr campus. Staying longer than planned. Call Himmelweit, 321-2052 (day) or 321-8979 (eve).

□ **Sept. '83 to May '84:** Visit. prof, on sabbat. at Stanf. & spouse, w/dog, seek furn. 2BR hse in P.A., Menlo Pk, Stanf. Nonsmokers. Call COLLECT (413) 367-2286 (Amherst).

□ **June 20 to beg. Sept:** Fully furn campus hse, 4BR/3BA, lrg. study, FR, LR, pool, spa. $1500/mo. incl. pool serv., grdnr. Call Evans, 493-3695.

□ **Sept. '83 to mid-April '84:** Sabbatical physician, wife, son 15, dghtr 12, nonsmokers; seek hse nr Stanf. Rent or EXCHANGE our hse Portland, Ore., 4BR/3BA, study, FR, 1 acre, trees, view, easy access Portland, Med. Sch., Univ. Call COLLECT (503) 222-2464.

□ **July 12 to 28:** Visit. prof. seeks 2-3BR furn. hse or apt., quiet. Partly EXCHANGE travel trailer. Call 494-6492.

□ **Beg. July 1:** 5th yr. senior, Humanities Honors seeks 1 yr. rent. 1BR apt. in Stanf. area. Willing to hsesit, garden, + pay reduced rent. Refs. Call Tory Read, 322-8022.

□ **July 1, '83 to June 30, '84:** Visit. resrch. fellow, cardiology, seeks 2-3BR hse. access. to Med. Ctr. for family of 3. Stanf. refs. Write Dr. Dorian, 175 St. Clair Ave. E., Toronto, Ontario, M4T 1N9 Canada.

□ **June 8 to July 8, '83:** Prof. wife, son 17, seek campus hse or apt. Fellow at CASBS, local refs. Call Arthur Goldberger, Econ. Dept. U. Wisc., (608) 263-3876 (day) or (608) 238-6138; or Molly Agras, (415) 323-2829.

□ **Sept. 20, '83 to Mar. 25, '84:** Adult visit. German prof. & family needs furn. 3BR hse or apt. vicinity Stanf. Call 494-3347.

□ **Aug. '83 to June '85:** Stanf. MBA student, wife; nonsmokers, 3 children, seek 3BR/2BA hse, furn or unfurn. on or nr campus. Lease for 1 or pref. 2 yrs. Or EXCHANGE for Denver residence. Call (303) 674-2244.

□ **July & Aug. (2 mos):** Grad student, wife, 2 children seek local rental/caretake. Or EXCHANGE for 3BR apt. in NYC at Columbia U. Local refs. Call Delson, 855-2619 or 493-0404.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



U-Zulu Dance Theater will appear for Pan-African Cultural Night May 7

Africa Week program opens tonight with Toure talk on Pan-Africanism

"Building Pan-Africanism," a free public talk by Kwame Toure, formerly known as Stokeley Carmichael, will inaugurate Africa Week 83 at 7:30 p.m. Wednesday, May 4, in Annenberg Auditorium at Stanford.

Africa Week 83, built around the theme "Africa and the World," will continue from May 6 to 14. A film showing of "Ashes and Embers" by Haile Garima (Ethiopia) and "Free Namibia" is planned at 7:30 p.m. Friday, May 6, in Annenberg.

Pan-African Cultural Night with the Richmond Steel Band, the U-Zulu Dance Troupe from South Africa, and African folktales by Peter Harras will be held at 7:30 p.m. Saturday, May 7, in Dinkelspiel.

A rally on "U.S. Foreign Policy in Southern Africa" with the participation of the Pan-African Dance Troupe, will take place at noon Monday, May 9, in White Plaza.

Francis Moore Lappe will talk on "Political Economy of Hunger" at 7:30 p.m. Monday, May 9, at CERAS.

A symposium on "Africa and the World Economic System" with Cheryl Payer, author of *The World Bank: A Critical History*; the Hon. Ben Mkapa, Tanzanian Ambassador to the U.S.; and Prof. Raj Krishna of the University of New Delhi will take place at 7:30 p.m. Thursday, May 12, in Kresge Auditorium. Prof. Donald Harris will moderate and Prof. David Abernathy will serve as discussant.

Africa Night, featuring an African dinner and dance with the Hedzoleh Dance Ensemble from Africa, will be held at 6:30 p.m. Saturday, May 14, at Encina Station.

An intramural soccer tournament also is planned at 4:30 p.m. Friday at the soccer field.

Africa Week 83 is sponsored by the Stanford African Students Association.

GSB public managers to meet May 7

Some 150 Stanford Business School public management graduates are expected to be on hand for the tenth anniversary conference of the School's Public Management Program, Saturday, May 7.

The all-day conference will be open to the public on a space-available basis. There is a fee.

The conference is celebrating the School's pioneering Public Management Program, which was started in 1973 as the first-known program of its kind within a business school. Enrollment has increased from 19 students the first year to 50 students a year out of an entering class of 320 MBA candidates. A total of 396 persons have graduated from the Public Management Program since its beginning.

Keynote speaker at the conference will be Charles L. Schultze, former chairman of the Council of Economic Advisers under President Carter, who will discuss the topic, "Does America Need a New Industrial Policy?"

Also included will be a talk by former Dean of the Stanford Graduate School of Business Arjay Miller, who was instrumental in starting the Public Management Program; workshops led by members of the faculty; and a panel discussion on careers featuring public management graduates.

For more information on attending the conference, call (415) 497-2837.

Take your pick of these events:

Spring Faire opens Friday at White Plaza

The annual Stanford Spring Faire will fill White Plaza with art, crafts, and food booths from 10 a.m. to 6 p.m. Friday through Sunday, May 6-8.

The Faire will feature 150 craftspeople and artisans who have been screened from 600 applications. A wide variety of unusual, one-of-a-kind articles—ceramics, leather, handmade jewelry, and toys—will be on sale.

Gourmets will appreciate the wide selection of international food prepared at the Faire. Vietnamese, Japanese, Greek, Polish, and Mexican dishes will please almost any palate.

Musicians, puppeteers, magicians, jugglers, and folk dancers are among the wide variety of entertainment provided. Face-painting and handwriting analysis are also available.

The Spring Faire is an event sponsored by the Bridge, a peer counseling and personal growth center at Stanford offering drop-in counseling services, classes, and workshops. The Faire is the primary source of funds for the Bridge, a volunteer student organization whose programs and services are free and open to everyone.

Ceramist Couch at Governor's Corner

Menlo Park ceramist Christine (Pixie) Couch will show new works on Friday, May 13, from 1-6 p.m. at the new Program Center, Governor's Corner, Stanford campus.

Couch, a professional potter for 12 years, will show pieces which are individual free-form stoneware and function as a vehicle for her brushwork flowers. The technique involves pouring porcelain slip over stoneware forms while still damp. Colored slips are brushed over and through the porcelain and the brushwork added, lending a watercolor effect. Glaze is added only to detail certain areas of each piece in the final firing.

Couch has exhibited extensively locally including Los Robles Gallery and Leaf & Petal in Palo Alto, Horizon Gallery in Mill Valley, and Following Sea in Hawaii. She is a member of the Association of San Francisco Potters.

She also works on the Stanford staff in the Department of Applied Earth Sciences.



Campus Conference Saturday, May 14 features 15 faculty 'breakthroughs'

Breakthroughs is the theme of the 51st annual Stanford Conference to be held Saturday, May 14.

Fifteen faculty speakers who have made outstanding contributions in teaching and research will offer alumni and friends of the University attending the day-long academic program a wide variety of topics in three lecture periods.

Highlight of the program, sponsored by the Stanford Alumni Association, will be a noon address by President Donald Kennedy.

The day's activities will begin at 8:15 a.m. with the annual meeting of Alumni Association members. Lecture sessions will be at 9:30 a.m., 10:45 a.m., and 1:45 p.m. The speakers and their topics include:

First Session: Judith C. Brown, assistant professor of history, "Legacy of the Renaissance: The Myth of the Perfect Family"; Sharon A. Hunt, clinical assistant professor of medicine, "Heart Transplants"; Robert H. Mnookin, professor of law, "Children's Rights: Moving Beyond Kiddie Libbers and Child Savers"; Calvin F. Quate, professor of applied physics and electrical engineering, "Imaging and Images: Unconventional Ways of Viewing"; and Stanley G. Wojcicki, professor of physics, "Breakthroughs in Particle Physics."

Second Session: Charles Bigelow, assistant professor of computer sciences and art, "From Oral Literature to the Computer"; Victor R. Fuchs, professor of economics, "How We Live: Private Choices, Public Policies"; Andy Geiger, director of athletics, "Triumphs in Women's Athletics"; Michael L. Ray, professor of marketing, Stanford Graduate School of Business, "Zen and American Business"; and Lee S. Shulman, professor of education, "Practicing Professionals: The Management of Uncertainty."

Third Session: John M. Chowning, professor of music, "The Computer and the Nightingale"; Konrad B. Krauskopf, professor of applied earth sciences, emeritus, "Nuclear Waste Disposal"; Lynn W. Phillips, assistant professor of marketing, Graduate School of Business, "Analyzing Contemporary Marketing Strategy"; Arthur L. Schawlow, professor of physics, "Lasers and Their Lives"; and Haresh C. Shah, professor of civil engineering, "Planning for Earthquakes."

The final session, at 3 p.m., will be a panel discussion on "The Changing Face of Stanford" with Amy Blue, director of project management; Robin Hamill, director of housing programs; Robert Nerrie, manager of University projects; and Lynda Weisberg, assistant provost, Office of Planning and Management.

Members of the Glass of 1933 will be holding their golden anniversary reunion on campus that weekend and will be inducted into the Alumni Association's Half Century Club during the luncheon on Saturday.

The Campus Conference is open to all interested people. Tuition is $10 per person and box lunches are available for an additional $7. For further information, contact the continuing education staff at the Stanford Alumni Association, Bowman Alumni House; (415) 497-2021.

Duane to perform original songs

Stanford songwriter Tim Duane will give his final performance as a Stanford student in a free concert of original compositions from 7 to 9 p.m. Saturday, May 14, in the Tresidder Large Lounge.

The concert will feature a solo performance of acoustic guitar, piano, vocals, and harmonica. Several of his songs will be premiered at the concert which is sponsored by the campus group Stanford Talent for Original Productions.

Duane grew up in the tiny Sierra Nevada gold rush town of Nevada City, and he got his start as a performer there with four nights each week in a local restaurant. From there he entered the local county fair circuit, which lead to later contracts with the California and Nevada State Fairs.

Duane has completed a bachelor's degree in human biology and is presently finishing a master's degree in civil engineering. He will work in alternative energy next year after a summer of travel with his guitars throughout the western U.S. and Canada.



Charles Fuery

Pianist Fuery to give concert for DMA May 15

Pianist Charles Fuery will present his DMA (Doctor of Music Arts) recital at 8 p.m. Sunday, May 15, in Tresidder Lounge. Presented by the Department of Music, his concert is free.

Fuery will perform two preludes and fugues by Bach, Mozart's *Sonata in B-flat Major*, *Valses Nobles et Sentimentales* by Ravel, *Sonata in F-sharp Major* by Beethoven, and works by Chopin.

Fuery received his A.B. in music from UC-Berkeley, where he studied under a Regents Scholarship. He was awarded the Eisner Prize in 1975, a Hertz Traveling Fellowship to London in 1979, and a Stanford young artist award in 1980. In 1981 Fuery performed Beethoven's 4th Piano Concerto with the MIT Orchestra.

Fuery teaches piano at UC-Berkely, where he studies with Nathan Schwartz. He expects to receive his DMA degree from Stanford this year.



Kent Underwood

Summer Sports Camp opens June 20

The annual Stanford Summer Sports Camp will be held from 8 a.m. to noon Monday through Thursday, June 20-July 14, at the Roble Gym complex, with a possible afternoon extension. The varied program is designed especially for fun-loving children, ages 7-12.

Campers will have access to several of Stanford's athletic facilities including Roble Pool, DeGuerre Racquetball Courts, Encina Weight Room, and Roble Tennis Courts. Sports activities include badminton, basketball, bowling, dance, field hockey, fitness and exercise, football, frisbee, golf, New Games, softball, soccer, tennis, track and field, swimming, raquetball, and more. Campers will have daily special activities, such as guest appearances by sports celebrities.

A highly competent staff has been assembled from the Stanford Varsity and Club Sports coaches and the Stanford Teacher Education Program under the direction of Shirley Schoof of the Department of Athletics, Robert Garcia of the School of Education, Jackie Shannon of Bing School, and Tom McRann of the Department of Athletics.

The camp is a place where children can meet new friends and have a good time as a part of the Stanford community. The reasonable registration fees allow enrollment for the full four-week session, with sibling discounts, or enrollment per week.

The camp provides an exciting, fun atmosphere in a safe, fitness-oriented environment. Daily refreshments, T-shirts, and certificates of participation will be presented to all campers.

Fees range from $50 for one week for a Stanford-affiliated child to $150 for the four-week session for a non-Stanford-affiliated child. In addition, an afternoon session is being planned.

For more information or to register, call Shirley Schoof at 497-3089 or Bob Garcia, 497-2103.

Fabrizio slates multi-image show on Japan

"Images and Sounds of Traditional Japanese Culture and Arts," a multi-image and sound presentation by Margaret Fabrizio, senior lecturer in music, will be held at 8 p.m. Friday, May 13, in Annenberg Auditorium.

Fabrizio, a harpsichordist, spent a rewarding month as a student at the Oomoto Seminar for the study of the traditional arts of Japan where she gained insights into the processes of learning and teaching.

Her presentation will focus on visual and musical impressions of traditional Japanese drama, culture, and aesthetics through No drama, and the tea and rice planting ceremonies.

Sponsored by the Center for East Asian Studies and the Art Department, this program is open to the public free of charge.

Kent Underwood lute, guitar recital slated

The Stanford Music Department will present doctoral candidate Kent Underwood in a free lute and guitar recital at 8 p.m. Tuesday, May 10, in Dinkelspiel Auditorium.

Underwood will divide his concert between Renaissance music for lute and 20th-century works for classical guitar. Renaissance composers on the program will include Capirola, Luis Milan, and Dowland. Contemporary works for guitar will include *Suite* by Ernest Krenek, *Five Impromptus* by Richard Rodney Bennett, *La Espiral Eternal* by Leo Brouwer, and *Kaleidoscope II* by Robert Strizich.

Underwood is currently completing his Ph.D. in music at Stanford. He graduated from the San Francisco Conservatory of Music, where he studied classical and baroque guitar with Michael Lorimer. Underwood has appeared in Italy and the U.S. with the Complesso Barocco under Alan Curtis, and has performed with the San Francisco Chamber Opera, California Bach Society, and San Francisco Contemporary Music Players. Last year he was a visiting artist at the Idyllwild School of Music and the Arts.

Underwood appeared with the Lydian Ensemble at Stanford April 19.

Summer swimming schedule

Recreation coordinator Shirley Schoof has announced the summer swim hours in response to many requests for the information.

DeGUERRE POOLS—June 20 through September 23

Monday through Friday, noon to 2 p.m.: Faculty and staff with University ID, students with spring or summer quarter ID, Stanford Executive Program participants with swim cards, spouses with any of the above ID.

Monday through Friday, 2-6 p.m.; Saturday and Sunday, noon to 6 p.m.: All of those listed above plus all other summer conference participants and Summer Family Swim Card holders.

ROBLE POOL—June 20 through August 12

Monday through Friday, noon to 1 p.m.: Faculty and staff with University ID, Stanford Executive Program participants with swim cards, spouses of the above (no students).

Monday and Wednesday, 2-6 p.m.; Tuesday and Thursday, 3-6 p.m.; Friday, 1-6 p.m.; Saturday and Sunday, noon to 5 p.m.: Faculty and staff with University ID, students with spring or summer quarter ID, Stanford Executive Program participants with swim cards, spouses with the above ID, and all other summer conference participants (no children).

Faculty/staff family cards (for children) are $20; a daily swim card is $1.

For conference participants the fees are $42 for a family season ticket, $15 for an individual season ticket, and $4 for a weekly swim card.

Summer recreational swim cards will be available at the DeGuerre complex from noon to 6 p.m. Monday through Friday (noon to 5 p.m. on weekends).

Chorale to sing at Mem Chu Friday, May 13

The Stanford Chorale, under the direction of Prof. William Ramsey, will perform at 8 p.m. Friday, May 13, in Memorial Church. The 30-voice group is presented by the Stanford Department of Music.

Their program will include the following: *Laetatus sum* by Monteverdi, *Let Thy Hand Be Strengthened* by Handel, *Magnificat* by Durante, *Psalm 67* by Ives, *Four Part Songs* and *Two Motets* by Brahms, and works by Paul Chihara and Hindemith.

The Brahms works have been chosen in celebration of the 150th anniversary of his birth.

Doctoral student Sharon Paul will conduct the works by Ives, Chihara, and Hindemith in fulfillment of a Doctor of Musical Arts project.

Tickets for the May 13 concert are $4 general, $2 students and senior citizens.



'Pity the Sorrows of a Poor old Man' by Theodore Gericault.

Lithographs of Revolution, Romanticism on display?

On exhibition at the Stanford Museum are more than 50 prints and illustrated books from the Museum's Collection documenting the early development of lithography during the Age of Revolution and Romanticism.

Lithography is a relatively young member of the printmaking family; it differs in several important ways from its older, more established brothers of woodcut and engraving.

For one thing, we know who invented it, and when and where: Alois Senefelder, a student trying to publish a play, accidentally discovered its possibilities in Munich during the last two years of the 18th century.

For another, lithography is neither a relief nor an intaglio print. It is planographic; that is, it does not depend upon the difference in level between the worked and unworked portions of a stone, plate, or block. Simply stated, lithography is based upon the antipathy of grease and water, and many of its early practitioners called it "chemical printing."

From a practical standpoint, it was a faster and cheaper process, capable of withstanding larger editions. From an artistic standpoint, it did not reproduce, as much as multiply the original, and thus provided a new avenue for draftsmanship. Senefelder's discovery revolutionized the commercial and artistic aspects of printing. Lithography by 1830 had almost totally supplanted the more traditional techniques.

The Stanford exhibition offers an overview of the first quarter-century of its development. The earliest publications were issued in Germany, where the technique was seen as essentially reproductive. These lithographs of Old Master paintings and drawings were timid and conventional, little indicating the possibilities of the new technique. In England, on the other hand, artists such as Thomas Stothard and Benjamin West tried their hand as early as 1801-03 and their simple, but fluid and expressive, pen lithographs rank among the most original of the incunabula.

But it was in France that lithography truly came into its own. After the Napoleonic Wars, as life resumed a more normal tone, there was an outpouring of lithographs.

By 1820 Paris was taken over by a craze for lithography. Amateur and artist alike took up pen and chalk. New printing establishments appeared overnight, turning out a flood of topical prints, from politics to fashion.

Established artists—as well as caricaturists and illustrators—found lithography worth exploring. Some of the finest lithographs of the 1820s come from R. P. Bonington, Henri Delacroix, and Theodore Gericault.

Bonington's misty views of Normandy, Delacroix's illustrations of Goethe's *Faust*—termed by that author as "rough, but spirited. . . outdid my own imagining"—and Gericault's depictions of London's beggars as well as his magnificent work horses bring lithography to a technical and artistic peak that remained unequaled for more than half a century.

The Stanford Museum is open to the public Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday from I to 5 p.m. (closed on Mondays).

I-Center film show on Afghani nomads

The Other Cultures Film Series will explore a group of Afghani nomads in "Sons of Haji Omar" at 7:30 p.m. Thursday, May 5, at the International Center.

The film looks at a small group of Afganistan's Pashtoon nomads as they follow their annual traditional migration into the high mountain pastures of the Hindu Kush.

Watching them during the spring lambing camp, the Narin bazaar, and a climb to the Khawak Pass gives us an insight into their economy, family life, social customs, and religion.

A 75 cent donation will be requested at the door to help cover the cost of the film. For further information on the Other Cultures Film Series or other I-Center events, please call 497-1831.

I-Center watercolors

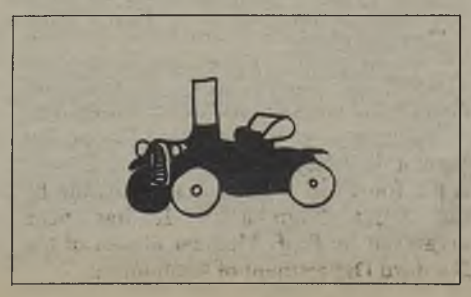
Watercolor landscapes by Lorraine Schreiber will be shown at the International Center through may 30, with a reception for the artist at 5 p.m. Friday, May 6, at the I-Center.

The headline last week mistakenly put the exhibit at the Faculty Club.

Le Barbier de Seville tonight at Dinkelspiel

The Alliance Francaise of San Francisco will perform in French the play, *Le Barbier de Seville*, a comedy by Beaumarchais at 7:30 p.m. this evening (Wednesday, May 4), in Dinkelspiel Auditorium.

The programs are in English. Tickets available at the door are $3 students; $6 general.



Lectures

NMR imaging systems

Dr. Joel Blank, vice-president marketing and general manager of Diasonics Inc., will speak on "Nuclear Magnetic Resonance Imaging Systems" at the general meeting of the Institute of Electrical and Electronic Engineers, 7:30-9:30 p.m. Wednesday, May 11, in Fairchild Auditorium.

Blank's lecture is open to all interested people without charge. An election of officers will follow the presentation.

Architectural history

Architectural historian and writer Sally Woodbridge will speak on "Architectural Legacy: The Splendid Survivors" at 8:15 p.m. Thursday, May 12, in Annenberg Auditorium.

Her lecture is one of a series on the architecture of San Francisco sponsored by the Committee for Art at Stanford. General admission is $4, students $1.

Money in politics

Dr. Thomas E. Mann, executive director of the American Political Science Association, will deliver the 1983 William Bennett Munroe Memorial Lecture at 4:15 p.m. Thursday, May 12, in Room 163B of the Political Science Department.

His topic will be "Money in Congressional Politics."

Mann is the author of several books and articles, including *Unsafe at any Margin: Interpreting Congressional Elections*. His talk is free and open to the public.

Third Republic France

Prof. Herman Lebovics of State University of New York, Stony Brook, will present a free public lecture on "The Alliance of Cotton and Wheat: The New Conservatism of Third Republic France, 1880-1900" at noon Thursday, May 12, in the History Corner, Student Lounge (Room 302) at Stanford.

Lebovics' specialty is modern European history. His research is in German social and intellectual history of the late 19th century and French social and intellectual history of the same period, and comparative history. His publications include *Agrarians vs. Industrializers* and *Social Conservatism and the Middle Classes in Germany 1914-1933*.

Henry Latrobe's U.S.

John Chamberlin Van Horne, associate editor of the American Philosophical Society Library in Philadelphia, will speak on "Portrait of the Early Republic: Benjamin Henry Latrobe's America, 1796—1820," at 3 p.m. Sunday, May 15, in Annenberg Auditorium.

Latrobe, America's first architect and engineer, arrived in this country from his native England in 1796 and is especially noted for his supervision of the rebuilding of the national Capitol in Washington after it was burned by the British in the War of 1812.

Van Horne is currently working on a documentary of Latrobe's professional drawings, journals, letters, sketches, and miscellaneous papers. His talk is sponsored by the Associates of the Stanford University Libraries.

A reception will follow in the Louis R. Lurie Rotunda, Cecil H. Green Library.



Laurence Maslon as Herman Glogauer, Christine Roum as May Daniels, and Celia Maurice as Helen Hobart in *Once in a Lifetime*, beginning next Wednesday, May 11.

Dramatists plan *Once in a Lifetime*, classic comedy by Kaufman, Hart

The Stanford Drama Department production of Kaufman and Hart's classic American comedy, *Once in a Lifetime*, will open at 8 p.m. Wednesday, May 11, in Little Theater.

Performances continue Thursday through Saturday, May 12-14, and the following week Wednesday through Saturday, May 18-21.

Once in a Lifetime, which opened on Broadway in 1930, marked the first collaboration of the most successful team of comic playwrights in American theatrical history, George S. Kaufman and Moss Hart. According to director Steven Vineberg, "The play is a prime example of a kind of peculiarly American genre that isn't written anymore: hard-boiled, wisecracking, screwball comedy."

Set in Hollywood during the "talkie" revolution—the very early days of sound movies—the play concerns the efforts of three down-and-out vaudevillians to cash in on the general confusion that reigned in Hollywood at the time by opening a voice school to teach movie actors how to talk.

Vineberg, who last year directed the Drama Department's highly successful production of *Moonchildren*, has been writing about movies since 1969 and has been the movie critic for *The Stanford Daily* since 1980.

He first became interested in the early sound period while a student at Brandeis University, where he wrote an honor thesis on early movie musicals. "Much of my research for that project focused on the beginning of sound in 1927, and from what I read, the chaos Kaufman and Hart portrayed in *Once in a Lifetime* is not an unreasonable exaggeration of the truth," Vineberg said.

The three unemployed vaudevillians are played by Tom Lindblade as the innocent, straight-man George Lewis: Sean Laughlin as the opportunistic con-man Jerry Hyland: and Christine Roum as the hard-boiled, wisecracking May Daniels. Laurence Maslon plays Herman Glogauer, head of the Hollywood Glogauer Studios, a character based on the late Samuel Goldwyn.

Celia Maurice is cast as Helen Hobart, a Louella Parsons-type gossip columnist; Graham Winton plays Rudolph Kammerling, a temperamental German director based on the early German film director F.W. Murnau. Stephen Weeks plays playwright Lawrence Vail, who is invited to Hollywood to write a play but is given nothing to do, a character probably based on Kaufman's own Hollywood experience and a part that he played in the original 1930 production.

The five sets in the production, which include a film studio and a pullman car, have been designed by Wendell Cole, who has also designed the 1927 flapper-period costumes. In the designs, Cole has relied on the art-deco style of the 1920s jazz age. The cinematic lighting is designed by undergraduate senior Nan Buck; and, the caricatures and special graphics by Laurence Maslon.

Tickets are available at Tresidder ticket office and major Bay Area agencies and by telephone, 497-4317 with major credit cards. General admission is $4; student and senior admission is $2. Because of the limited audience capacity of Little Theater early ticket purchase is advised.

Come celebrate the end of the rain on the Lagunita plain Sunday, May 15

Alea II, the Music Department's Ensemble for New Music, will present an afternoon of new music Sunday, May 15, to celebrate what they hope will be the end of the rainy season. The group is directed by Jonathan Berger.

Their "Rites of Spring" will begin with a free 1 p.m. concert at Lake Lagunita featuring the world premiere of *Colony*, a large-scale work for 4-channel computer-generated tape by William Schottstaedt. The work was composed at the Center for Computer Research in Music and Acoustics (CCRMA) over the last two years.

Also on the lake program will be *Pat the Hat* for 4-channel tape by Douglas Fulton and *Water Music* for instrumentalists and boat rowers by David Jaffe. Fulton and Jaffe are both DMA composition students at Stanford.

The audience is invited to join the composers and performers for a picnic after the concert. Please bring food and drink to share.

At 6 p.m. the second event, also free, will commence on the steps of Dinkelspiel Auditorium with the world premiere of Paul Nahay's *Carillon Piece* performed by University Carilloneur Prof. James Angell and the composer. Nahay is also a DMA candidate in composition.

The concert will continue inside the auditorium with a performance of *Octandre* by Edgard Varese, Stravinsky's *Octet*, the world premiere of Pierre Garriguenc's *Quintet for Wind Instruments*, *String Trio* by Michael Gandolfi, and *Entr'acte* for flute and piano by Jonathan Berger performed by Yvonne Kendall, flute, and Naomi Sparrow, director of Stanford's piano program.

Other performers on the program include Shelley Whitehouse, flute and piccolo; Peggy Bruggman, oboe; Terry Cross and Joseph Limacher, clarinet; Ruth Bonaparte, harp; Cristina Ruotolo, violin; Anne Witherell and Elwood Williams, trombone; among others.

DMA candidate Jeannine Wagar will conduct both Varese's *Octandre* and Stravinsky's *Octet*.

Thomson to give first Jordan lecture

Keith Stewart Thomson, professor of biology and dean of the Yale Graduate School, will give the first annual David Starr Jordan memorial lecture at Stanford Friday, May 6.

He will discuss "Theories of Vertebrate Evolution: Fossils and the Neural Crest" at 4 p.m. in Braun Auditorium of the Mudd Chemistry Building. A reception will follow.

A noted evolutionary biologist and fish paleontologist, Thomson received his BSc degree from the University of Birmingham and his Ph.D. degree from Harvard. He has been at Yale since 1965 where he has worked on the evolutionary origins of the major vertebrate groups, especially the evolution of terrestrial from aquatic forms.

In his lecture, Prof. Thomson will discuss the convergence of evolutionary biology, physiology, developmental and cell biology in studies of the vertebrate skeleton and how the results of those studies relate to theories of vertebrate evolution.

Soviet change ahead?

The prospects for significant changes in the Soviet Union are the subject of a lecture sponsored by the International Relations Program and the Center for Russian and East European Studies.

Timothy Colton, professor of political science at the University of Toronto, will speak on "The Prospects for Reform in the Soviet Union," at 11 a.m. Friday, May 6, in History Corner (Building 200), Room 34.

Colton, who is currently fellow at the Wilson center in Washington, D.C., is well-known as the author of *Commissars, Commanders, and Civilian Authority*, an authoritative study of civil-military relations in the Soviet Union. He is the author of a forthcoming book on Soviet politics.

Ball, Robertson talk on social security

Robert Ball, former commissioner of the Social Security Administration (SSA), and A. Haeworth Robertson, former chief actuary of SSA, will discuss "The Future of Social Security" at 8 p.m. Friday, May 6, in Bishop Auditorium of the Graduate School of Business at Stanford.

Ball currently serves on the National Commission on Social Security Reforms. Robertson called attention to the unsound financial condition of the social security funds. He is now managing director of William M. Mercer, Inc., an employee benefit and compensation consulting firm.

Sponsored by the Stanford Center for Economic Policy Research, the conference is the fourth in a series made possible by the Koret Foundation. It has been organized by Prof. Michael Boskin of the Stanford Department of Economics.

Sidney Drell to talk on arms control issue

"The Scientist's Dilemma in Facing Questions of Arms Control" is the subject of an address by Dr. Sidney Drell to be presented at noon Tuesday, May 10, at Bechtel International Center.

Drell is Lewis M. Terman professor of theoretical physics and deputy director of the Stanford Linear Accelerator Center. He received his A.M. and Ph.D. degrees from the University of Illinois after graduating from Princeton.

Drell has since used his expertise in theoretical physics to advise governmental and private organizations in such areas as arms control and energy policy. From 1973 to 1981 he served as consultant to the National Security Council and the U.S. Arms Control and Disarmament Agency. For two years, until 1980, he was a member of the Energy Research Advisory Board, U.S. Department of Energy. He is currently chairman of that department's High Energy Physics Advisory Panel.

The presentation is one of the regular Tuesday Luncheon/Lecture series at the I-Center. Luncheon tickets are available at a cost of $2.50 one week before the event at the Center office on the second floor, or at the door as they last. Brown baggers are also welcome at no charge.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., May 4, to cover the week of Mon., May 16, through Sun., May 22. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

MONDAY, MAY 9

Women's Golf: Cardinal Club Celebrity Tournament. All Day. Stanford Golf Course.

Biological Science Seminar: "Sexual Selection in Bowerbirds and Birds of Paradise," by Dr. Jared Diamond, Physiology Dept., U.C.L.A. 4:15 p.m. Room T-175, Herrin Hall.

Electrical Engineering/STARLAB class: "Scattering of Radiation-belt Electrons onto the Ionosphere by Whistler Mode Electromagnetic Waves Propagating in the Magnetosphere," by Hung-chun Chang. 4:15 p.m. McCullough 134.

Math Dept. lecture: "Rank and Nullspace Calculation Using Matrix Decomposition Without Column Interchanges," with Leslie Foster, San Jose State University. 4:15 p.m. Room 380c, Math Corner.

Edwin William Schultz Memorial Lectureship in Medical Microbiology: "Molecular Studies on Replication and Pathogenesis of Hepatitis B-like Viruses Using Animal Models," by Dr. Jesse Summers, Inst. for Cancer Research, Philadelphia. 5:15 p.m. Fairchild Aud.

STARTS Fabulous Film Couples Film Series: "You Can't Take It With you," starring James Stewart and Jean Arthur. 7 p.m. and 9 p.m. Tresidder Room 270. $2.00 students, faculty, staff; $3.00 general.

School of Medicine/ Office of Student Affairs Panel Discussion: Reflections on Medicine: "Education, Lifestyle, Diversity". A panel of physicians from academic and community situations speaking to undergraduates. Dean Purpura, moderator. 7-9 p.m. Fairchild Aud.

TUESDAY, MAY 10

Center for East Asian Studies Film: "Xian". 1980 documentary (videotaped) by Shirley Sun on Chinese archaeological discoveries from Xian. Shows army of artifacts from the tomb of the Ch'in Emperor and other priceless treasures. Noon. Room 216, Lou Henry Hoover. Free.

Learning About Racism Lunch Series: "Vision of a Non-Racist Society," by Sal Alverez of the National Farmworker Ministry; president of Hispanic Catholics of America. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Room.

Bechtel International Center Lecture: "The Scientist's Dilemma in Facing Questions of Arms Control," by Dr. Sidney Drell, Deputy Director of SLAC. $2.50 for hot lunch. Brown baggers welcome. Noon. I-Center.

School of Humanities & Sciences Conference: "A Major Event". An opportunity to gather information about all academic majors. Soapbox speakers, music, demonstration, food, alumni, faculty, & student participation. Giant Raffle- obtain tickets from dept. reps. 10 a.m. to 4:30 p.m. Inner Quad.

Stanford Museum of Art: William Nicholson Graphics Lunch Hour Tour. 12:15 p.m. Stanford Art Museum.

Tower Talks Presents: "Authoritarian and Totalitarian Regimes: A Tenable Distinction?," by Sidney Hook, Senior Research Fellow. 3:30 p.m. Lou Henry Hoover Room, Hoover Tower. Free.

Seminar in Fluid Mechanics: "Quantum Turbulence," with Prof. Russell J. Donnelly, University of Oregon. 4:15 p.m. Material Science, Room 550a.

Applied Physics Colloquium: "The Anomalous Quantum Hall Effect: An Incompressible Quantum Fluid with Fractional Excitations," by Dr. Robert Laughlin, Lawrence Livermore Nat'l. Lab. 4:15 p.m. Applied Physics 200.

Music Dept. Concert: Kent Underwood, lute & guitar. Music for Renaissance lute by Vincenzo Capirola, Luis Milian, & John Dowland. 20th-century music for guitar by Ernst Krenek, Richard Rodney Bennett, Peter Maxwell Davies. 8 p.m. Dinkelspiel Aud. Free.

1982-83 Tanner Lectures in Human Values: "The Incompleat Egoist: From Rational Choice to Moral Theory," by David Gauthier, Professor of Philosophy, University of Pittsburgh. 8 p.m. Skilling Aud.

The Committee for Art at Stanford: "Treasures from Shanghai Museum - 6000 Years of Chinese Art," by Professor Per-Olow Leijan, visiting lecturer in art from Stockholm, Sweden. Reception will follow lecture. 8:15 p.m. Annenberg Aud. Free.

WEDNESDAY, MAY 11

CROW Lecture: "Lesbian Sexuality." by Martha Kirkpatrick, psychiatrist, Los Angeles. Noon. Terman Aud. Free.

Stanford Museum of Art: William Nicholson Graphics Lunch Hour Tour. 12:15 p.m. Stanford Art Museum.

Chemical Engineering Colloquium: "Technology & Public Policy," by Dr. Ralph Landau, Consulting Professor, Dept. of Chemical Engineering and Economics. 4:15 p.m. Chemical Engineering Conference Room.

ASSU Sunday Flicks: "All That Jazz". 7 & 9:30 p.m. Memorial Aud. $1.50.

Stanford Hillel Lecture: Professor Shlomo Avineri of Hebrew University will speak on the topic of Israel and the Palestinians. Mr. Avineri is the author of the controversial book, *The Making of Modern Zionism*, and former director-general of Israel's Ministry of Foreign Affairs. 8 p.m. Kresge Aud.

Spring Migration '83: Dancers in performance, presenting works by students and faculty. 8 p.m. Roble Dance Studio. $4 general ; $3 students; $2 quorum.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

THURSDAY, MAY 12

Theology & Natural Sciences Lunch Series: "What is Intelligence - Ethical Use of Computers," by Brian Smith, lecturer, Computer Science, Stanford. Bring bag lunch or arrange to eat at Otero. Noon. Otero Dining Room, Wilbur Hall.

History Dept. Lecture: "The Alliance of Cotton and Wheat: The New Conservatism of Third Republic France, 1180-1900," by Prof. Herman Lebovics. Noon. History Corner, Bldg. 200, Student Lounge.

Drama Dept. & Casa Italiana Lecture: "Contemporary Italian Theatre," by Giuseppe Bartolucci. Video tapes on contemporary Italian theatre groups and lecture. 2:30 - 4:30 p.m. Memorial Hall, Room 129. Free.

Perspectives on Twentieth Century Japan Colloquia Series: "Japan's Defense: Remilitarization or Free Ride?" by Col. David Holt, United States Air Force. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

Solid Mechanics Seminar: "Application of Interactive Robotics in Rehabilitation," with Prof. Larry Leifer, Mechanical Engineering , Stanford. 4:15 p.m. Skilling Aud.

Condensed Matter Physics Seminar: "Microclusters: Magic Numbers and Coulombs Explosions," by K. Sattler, Faculty of Physics, University of Konstanz , West Germany. 4:15 p.m. Applied Physics 200.

Industrial Engineering Symposium: "On the Economics of the Risk to Life," with Prof. Brian Arthur, Stanford Univ. 4:15 p.m. Terman Aud.

"Other Cultures" Film Series: "Wet Earth & Warm People" (Indonesia). From rice paddy to village, filming fishermen, soldiers, two-wheeled carts, bamboo rafts, people at work and at play. In Djakarta pedicabs vie for street space with late model automobiles. 7:30 p.m. Bechtel International Center. 75 cent donation requested.

Spring Migration '83: Dancers in performance, presenting works by students and faculty. 8 p.m. Roble Dance Studio. $4 general ; $3 students; $2 quorum.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

Lecture on Architecture of San Francisco: "Architectural Legacy: The Splendid Survivors," by Sally Woodbridge, Architectural Historian. Members of Committee for Art $3; Non-members $4; students $1; Stanford students are free. 8:15 p.m. Annenberg Aud.

FRIDAY, MAY 13

Residential Education: Ceramics by Pixie Couch, discussion and show. Show and sale of her work. 4 p.m. discussion by the artist. 1-6 p.m. Orrin Elliott Program Center.

Medieval Studies Lecture: "Jews and Christians in and around the Synagogue of Rouen from 26 January 1096 to 1100," by Prof. Bernhard Blumenkranz. Reception after the lecture in the History Lounge. 2:15 p.m. Room 307, History Corner.

Baseball: vs. California. 2:30 p.m. Sunken Diamond. $2 general, Stanford students free.

Mathematics Dept. Lecture: "Existence and Regularity of Minimizers in the Calculus of Variations," by Prof. John Ball, Herior Watt Univ. 3:15 p.m. Bldg. 380-c.

Materials Science & Engineering Colloquium: "Role of Oxygen in Industrial Single Crystal Growth of Silicon," by William C. O'Mara, Rose Assoc.: management consultants, Los Altos. 3:30 p.m. Peterson Lab. , Room 550A.

Center for East Asian Studies Multi-Media Show: "Images and Sound of Traditional Japanese Culture & Arts". Margaret Fabrizio, senior lecturer in music, Stanford University, will give a multi-media presentation of impressions of traditional Japanese drama, culture, and aesthetics. 8 p.m. Annenberg Aud.

STARTS Great Directors Film Series: "Le Gai Savior," by Jean Luc Godard. 8 p.m. Geology Corner, Rm. 320. $2.50.

Spring Migration '83: Dancers in performance, presenting works by students and faculty. 8 p.m. Roble Dance Studio. $4 general ; $3 students; $2 quorum.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

Music Dept. Concert: Stanford Chorale. Monteverdi-Laetatus sum; Durante-Magnificat; Handel- Zadok the Priest; Haydn-Stabat Mater; Vaughan Williams- Valiant for Truth; Stravinsky-Anthem; Ives-Psalm 67. 8 p.m. Memorial Church. $4/$2.

STARTS/Coffee House: The Jimmy Nadel Quintet. An evening of jazz entertainment by the director of Stanford's Summer Jazz Workshop. 9-12 p.m. Coffee House. Free.

SATURDAY, MAY 14

Childcare Council of the Stanford Community: Escondido Spring Celebration Flea-Market Fair. Flea market and fair for children with face-painting, puppet shows, candle-dipping, balloons and a coffee house inside Pepper Tree. Fund-raiser for the scholarship fund of the Childcare Council. Flea Market from 10 a.m. to 2 p.m.; Square Dance 6:30 p.m. to 10 p.m. Pepper Tree yd. 859 Escondido Rd., Stanford. No admission charge; booths for sale at $10.

Classical Guitar Recital: Richard Mooney performs works by Bach, Barrios, Tansman, Villa-Lobos, & Lauro. 5/14/83. Bechtel International Center. $2.00.

Stanford Talent for Original Productions: Tim Duane, songwriter. Original music for acoustic guitar. piano, and vocals. 7-9 p.m. Tresidder Large Lounge. Free.

Music Dept. Concert: Stanford Glee Club. 8 p.m. Dinkelspiel Aud. $4/$2.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

Spring Migration '83: Dancers in performance, presenting works by students and faculty. 8 p.m. Roble Dance Studio. $4 general ; $3 students; $2 quorum.

SUNDAY, MAY 15

Baseball: vs. California. 1 p.m. Sunken Diamond. $2 general, Stanford students free.

University Public Worship: Preacher: Burton Mack, Claremont Graduate School. 11 a.m. Memorial Church.

Music Dept. Concert: Alea II-Contemporary Music Ensemble. 12-6 p.m. An afternoon of new music around the Stanford campus. Free.

Associates of the Stanford University Libraries: "Portrait of the Early Republic: Benjamin Henry Latrobe's America, 1796-1820," by John Chamberlin Van Horne, American Philosophical Society Library. Reception to follow in Lurie Rotunda, Green Library. 3 p.m. Annenberg Aud.

Music Dept. Concert: Charles Fuery, piano. Bach-Prelude & Fugue in B Major, Prelude & Fugue in B minor ; Mozart-Sonata in B-flat Major,K. 333; Ravel-Valses Nobles et Sentimentales; Beethoven-Sonata in F-sharp Major; Del TrediciFantasy Pieces; Chopin-Three Mazurkas; Nocturne in B Major, op. 62, No. 1; Polonaise-Fantaisie. 8 p.m. Tresidder Lounge. Free.

EXHIBITS

"City Views and Plans". A selection of city plans and views, maps and prints from 16th and 17th century Europe. Exhibits Gallery, Second Floor, West Wing, Green Library. Feb. 1 - May 13.

Prints of William Nicholson. Stanford Art Museum. March 20 - May 22.

The Prints of William Nicholson. Tues.- Friday 10 a.m.- 5 p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

Lorraine Schreiber, watercolor paintings. Reception on Friday, May 6th, 5 - 7 p.m. I-Center. May 4 - May 30.

VISITORS FROM OTHER COUNTRIES

May 9: Dr. Antonie Knoester, director, economic policy, Ministry of Economic Affairs, The Netherlands.

May 10: Dr. Tony van de Graaf, adviser to the prime minister on economic affairs. The Netherlands: Eisenhower Fellow.

May 13: Mr. Ian McLean, member of Parliament, New Zealand.

May 16: Mr. Joong-bae Kim, editor, *Dong-A Ilbo*, Seoul, Korea.

Mr. Kusuma Snitwongse, chairman, international relations, Chulalongkorn University, Thailand.

For further information, please call 497-1984. Maria Bun.

CAMPUS REPORT

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Counter-petition on Hoover starts; Senate debate May 26

A proposed inquiry into the Hoover Institution's relationship with Stanford University threatens academic freedom, three Stanford professors say in a petition circulated to their colleagues.

More than 70 of Stanford's 1,100 faculty members have signed petitions asking the Board of Trustees to conduct a public inquiry of the Hoover's alleged political partisanship.

It is "disingenuous" to claim that such an investigation would be sought if Hoover's orientation were liberal, says Prof. Alphonse Juilland, French and Italian. "Whoever believes that belongs in Disneyland.

"Our thrust is not to defend the Hoover Institution. They can take care of themselves. the petition (for the inquiry) represents a grave threat to academic freedom."

Joining Juilland in the counter-petition to the Faculty Senate, President Donald Kennedy, Provost Albert Hastorf, and the Board of Trustees were Profs. John McCarthy, computer science, and Oleg Sherby, materials science.

"Hoover's ties with the Reagan Administration disturb us no more than the preeminent role played by Harvard professors in the Kennedy Administration. . . .

"We are concerned by the dangerous precedent such an investigation would represent, both inside and outside the University. Since academic practices deemed improper at Hoover could not be acceptable in the University's schools, departments, and programs, similar investigations may be requested of Stanford departments which may appear too liberal or too conservative or too radical.

"Stanford's investigation of Hoover's politics could trigger similar investigations (elsewhere). . .resulting in a generalized witch-hunt with liberals trying to track down conservative bias while conservatives would strive to oppose liberal prejudice."

In an interview, Juilland said "the fire may spread from the Tower to the Quad. . . . It's ironic that petitioners who are liberal champions of academic freedom were so thoughtless and imprudent."

The Faculty Senate is scheduled to discuss the original petition May 26.

Supporters of the original petition

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The Bell Tower's noon-hour dedication attracted many passersby.

Mickey Mouse brightens new clock tower day

A bit of Stanford's earliest history was restored May 10 with the dedication of a new clock tower and bells.

The 45-foot tower, catercorner from Engineering Corner, is new, but the bells date from March, 1901, when they and a four-faced clock were installed atop Memorial Church's tower.

Now, because of thousands of hours of restoration work by dedicated volunteers, and a gift from the president of the Board of Trustees, William Kimball '41, and his wife, Collier '42, the mellow tones of the bells, sounding out the traditional "Westminster Quarters" and the hour, can be heard from the center of the campus.

Student humor being what it is, no one was particularly surprised to see, the morning of the dedication, that the west clock face had a colorful Mickey Mouse neatly inserted in the center. Mickey's hands were skillfully designed to be a part of the clock's hands.

"Leave Mickey there," said Kimball with a laugh, when he saw it.

Most viewers, without peering up through one of the big windows, won't find out something else unusual about the

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Senate considers simpler form for evaluations

Student evaluation of teaching should become simpler and more systematic, a key Stanford committee believes.

Recommendations from the Committee on Academic Appraisal and Achievement will be considered by the Faculty Senate Thursday, May 12.

Following surveys of student and faculty use of present evaluation forms, the committee suggests five basic questions be asked in most courses:

How would you evaluate the contribution of this course to your learning experience?

How would you evaluate this course overall?

How would you evaluate this instructor's teaching overall?

Considering such factors as course organization, readings and assignments, assessment methods, and teaching style, what were the best things about this course?

What improvements, if any, would you suggest if this instructor is to give this course again?

Finally, students would be asked to make any general comments they feel would be useful to the instructor. The teacher would have the option of adding additional items to the basic form.

The student replies would be tabulated and reported only as frequency distributions, rather than compared to norms for a broader group. Results would be released only to the faculty member, department chairmen, and others appropriate for administrative review. The right to release the information for other purposes would reside solely with the faculty member.

In a report to the committee based on a review of the professional literature, Prof. Nathaniel L. Gage, education and psychology, concludes that "student ratings are valid to a substantial degree as indices of instructor effectiveness in fostering achievement in multisection courses."

So far as improving teaching is concerned, "when instructors are left to their own resources, ratings provide little help," he adds.

"Augmented feedback, or more specifically expert consultation, seems to be the key element for making rating data

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People

Gordon Wright

French attitudes toward crime are examined in a new book by emeritus Prof. Gordon Wright of the Stanford History Department, *Between the Guillotine and Liberty* (Oxford University Press, $19.95).

Everywhere in the world, Wright observes, public disillusionment with crime "stimulates a visceral urge to abandon the reformist efforts of the past two centuries in favor of simple and extreme solutions," with some favoring harsh repression and others seeking social transformation and the abolition of prisons.

The Mitterand government's decision to abolish capital punishment and institute other reforms "stands in sharp contrast with the prevailing law-and-order trend in most Western nations," he notes. "That contrast may permit a more valid judgment of the relative effectiveness of these two approaches to the crime problem."

Buffeted between popular extremes in their own country, "French politicians and crime specialists are likely to cling to a



Gordon Wright

traditional zigzag middle course of moderate reformism," Wright believes.

"Past failures have had a sobering effect but have not destroyed the conviction of leading experts and of many citizens that the effort is worth pursuing.

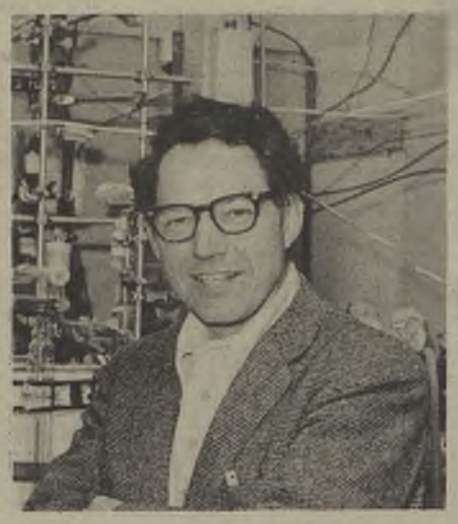
"Something, they believe, can be done to limit the growth of crime and to make the techniques of punishment at least marginally more humane.

"Although experience seems to prove that most lawbreakers have not been successfully rehabilitated by any methods so far tried, it also proves that a significant minority of first offenders, for whatever reason, manage to stay out of further trouble.

"For most reformers, this partial success justifies the continued effort to maintain and increase the size of the non-recidivist minority."

A leading American historian of France, Wright served as American cultural attache at the Embassy in Paris and is a former president of the American Historical Association.

He held the endowed William H. Bonsall professorship in history at Stanford. His other books include *France in Modern Times*, *Insiders and Outsiders*, and *The Ordeal of Total War, 1939-45*.



James Collman

Prof. James Collman, 50, of the Stanford Department of Chemistry has been named California scientist of the year, the California Museum of Science and Industry has announced.

The $5,000 award was made "in recognition of his design and synthesis of a new class of chemical catalyst, using knowledge from biological respiration.

"This achievement significantly advances. . . understanding of the reduction of oxygen in all living cells. (It also) offers great promise for the improvement of fuel cells and other energy converting" methods.

A Stanford faculty member since 1967, Collman holds the George and Hilda Daubert professorship in chemistry. A member of the National Academy of Sciences and the American Academy of Arts and Sciences, he received a dean's award for distinguished teaching from the School of Humanities and Sciences in 1981.

Collman was selected by a panel headed by Prof. Herbert Kaesz of UCLA. One of the nine members was Prof. Wolfgang Panofsky, director of the Stanford Linear Accelerator Center. The award was presented May 4 in Los Angeles.

Previous winners include Dr. Robert Hofstadter, Dr. Arthur L. Schawlow, and Dr. Theodor W. Hansch, all of Stanford University, and all of whom went on to win the Nobel Prize.

Sudipto Bhattacharya
Michael Gibbons

Stanford Business School professors have been awarded two of three faculty research fellowships for 1983-84 given by Batterymarch Financial Management, an investment advisory firm in Boston.

Recipients are Sudipto Bhattacharya, 31, associate professor of finance, and Michael R. Gibbons, 28, assistant professor of finance. The other recipient is a member of the New York University faculty.

The fellowships, which carry a stipend of $40,000 each, permit nontenured faculty members to take a year off from teaching to do basic research in investments and financial economics.

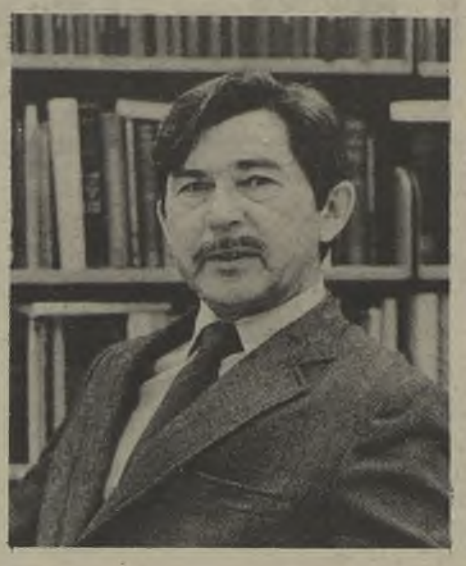
Bhattacharya, who joined the Stanford faculty in 1980, will devote his studies to the quantitative measurement of performance of investment portfolio managers, development of contracts to screen out lower quality portfolio managers, and to examining disclosure regulation in financial and product markets. Bhattacharya also intends to investigate the issue of optimal contracts for and role of intermediary firms, including venture capitalists.

Gibbons, a member of the Stanford faculty since 1980, is interested in studying the factors responsible for long- and short-term fluctuations in bond prices and interest rates, using month-by-month computer-based data for the last 55 years.

Stanford Business School professors have won four of the nine awards made since the Batterymarch faculty research fellowships were established three years ago.

Bhattacharya, born in India, holds a bachelor's degree in physics from the University of Delhi, a post-graduate diploma in operations research and economics from the Indian Institute of Management, and a doctorate in finance and economics from Massachusetts Institute of Technology.

Gibbons graduated summa cum laude from Butler University with a bachelor's degree in economics, and also holds master's and doctoral degrees in economics from the University of Chicago.



Henry Taube

Stanford chemistry Prof. Henry Taube has been selected to receive the 10th John C. Bailar Jr. Medal at the University of Illinois.

Taube was cited for "distinguished contributions to the advancement of inorganic chemistry, notably his investigations of electron transfer reactions."

He delivered the annual Bailar lectures May 2-3, at Illinois.

Taube has received both of the American Chemical Society's major inorganic chemistry awards and the National Medal of Science. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences.

The medal and lectures are named in honor of an emeritus professor of chemistry at the University of Illinois. Bailar was a member of the faculty from 1928 until he retired in 1972, when his former students established the medal.

Mauro Cappelletti

Stanford Law Prof. Mauro Cappelletti was recently named an Honorary Professor of the Universidad Externado de Colombia, in Bogota, on the occasion of a series of lectures he gave at a conference of lawyers, judges, and law professors held there in early April.

Cappelletti was the keynote speaker for three sessions of the conference, speaking on "Dimensions of Justice in the Contemporary World," "Judicial Responsibility," and "The Protection of Collective and Diffuse Interests."

Cappelletti has been a Stanford law professor since 1970, and holds a concurrent position as professor of law at the University of Florence.

Since 1976 he has been on leave from Florence and has been professor of law at the European University Institute, also in Florence, which is the graduate research institution of the European Economic Communities. At the Institute, where he is chairman of the Department of Law, Cappelletti has directed two large international comparative law projects: the first, "Access to Justice" and presently, "Methods, Tools, and Potential for European Legal Integration in Light of the American Federal Experience."

Seymour Martin Lipset

Prof. Seymour Martin Lipset, political science, sociology and Hoover Institution, was the first Phyllis and Milton Clark Distinguished International Lecturer April 28 at UC-San Diego.

His topic was "American Public Opinion and Middle East Policy."

The Clark lectureship was established by the family of Phyllis Clark, dean of international education and director of the International Center at UC-San Diego, and the late Milton Clark. It is intended to bring scholars from outside UCSD to foster international understanding and good will.

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Ann Swidler

Women's views of love are triumphing, says Ann Swidler after 3-year study

BY DONALD STOKES

Men and women of mainstream America are finding ingenious ways to adapt their concepts of love to the changing cycle of the sexual revolution.

They use the movies, soap operas, popular songs and novels, not as models for their own lives but as a means to express what they disagree with.

Nearly all Americans believe in love and marriage, more so than the people of any other nation. But there is growing anxiety about the fragility of modern marriage.

These are among the findings of Ann Swidler, assistant professor of sociology at Stanford, who for three years has been studying love in the American culture.

She and her assistants have chosen as their human test-tube the middle and upper working-class suburbanites in San Jose, Calif.

When Swidler decided to study how modern people find meaning in life she resolved to study not beliefs in a God who, for many people, is too far away to affect daily life, but instead to research a belief system that many people find intensely relevant in their daily lives.

"I chose to study the modern religion of love—not love relationships, who marries or divorces and why, but the beliefs of contemporary Americans about what love is, what makes a good love relationship, and in the end what makes a good life," she explained.

"I have found that love is an intensely important ideal for most Americans."

Swidler's team has interviewed about 100 suburbanites and also a number of specialists in the formulation of cultural ideas about love, such as marriage counselors, ministers, therapists and leaders of self-help groups of various kinds.

"My main aim is to find out what is happening to mainstream American culture. I examine how culture is actually used, when and under what circumstances people integrate cultural meanings into their life experience. Our research examines how myths, symbols, stories, and common wisdom about love shape person experience."

Swidler is writing a book that sets out her findings. It has the tentative title *Talk of Love: How Americans Use Their Culture.*

She finds that mainstream Americans are caught in a crossfire between traditional views of love, lifelong commitment, and the residue of the 1960s stress on the need for personal liberation. She finds, however, that these Americans are quite good at finding innovative ways to reconcile competing ideologies.

Swidler recounts her findings in a rapid, intense flow of intellectual enthusiasm, playing with ideas that occasionally go off into abstract flights of fancy. She also clearly enjoys what she refers to as "the nitty-gritty of real peoples' lives."

She loves to find out, for example, how each married couple tells the story of how they met, building it into a myth that supports their sense of uniqueness. She is also interested in consumption—from buying houses and clothes to eating in fast-food restaurants—as forms of cultural expression.

She throws herself into her research with an absorption that also dominates her teaching. Although she is now on sabbatical leave from Stanford with a Guggenheim fellowship, she visits her office regularly to guide those of her students who need it.

Swidler believes that one of the distinctive aspects of modern Western culture is what people believe about love. "In most cultures love is recognized as a passion, a dangerous appetite, of the kind that led Paris to get his people into a war over Helen of Troy.

"But the courtly love of the 11th and 12th centuries changed all that. For the first time people believed that loving someone made you more noble, more virtuous, that it brought out the highest side of your character. So knights who loved a lady were willing to perform heroic deeds for her.

In the modern period, that belief is very much alive. Our cultural ideals, whether about heroism in war, or moral courage, or social justice can usually be best expressed through an ideal of love.

"Look at the winners of this year's Academy awards. In *Gandhi*, the love interest was small, but for Americans it needed to be there. In *Sophie's Choice* or *Tootsie*, important social issues are explored in resolving a love relationship. Dustin Hoffman has to relearn American sex roles to be truly worthy of the woman he loves; Sophie's victimization could be felt only through the narrator's hopeless love for her, and her romantically doomed love for Nathan.

"Indeed, we have trouble seeing someone as a hero unless she or he loves someone. The fact that someone loves makes them sympathetic, even if in other ways they are relatively unappealing.

"So love is a really important cultural symbol for Americans, important in ways that go far beyond their practical need to have someone to share life with, to marry, or to have a family with.

"Some of the deepest social values often operate in cycles," she said. One generation may value free love and free sex, while another will value the family and think people should stay married all their lives.

"It has been hard to accept that some of what we regard as some of our most deep-seated values are subject to the same cycles as skirt-lengths or hair-styles.

"I think we are now entering another cycle, this time of conservatism.

"The latest paper I am working on deals with the tension in modern marriage between the desire on the one hand for commitment and permanence, and on the other hand for freedom and choice. The difficulty people have is that the two are really incompatible. The tension is between the belief that love is commitment as against love being a free choice.

"I have become aware of a great deal of anxiety in this area. The realization is common that marriage is a fragile institution these days. Very often people say to me 'I wish marriage was as secure as it was in my parent's generation.' Then often they pause and add 'But I wouldn't put up with the things they did. It was good enough for them, but I would not be willing to make the compromises they did.'

"In general, women want higher levels of personal communication than men do. The classic instance in most marriages is when the woman says 'Honey, why don't we talk more?' and the man replies 'Talk? Talk about what?'

What is happening today in the middle-class, I think, is that the women's view of love is triumphing. More men, as well as more women, are thinking of love and marriage as most women have thought for a long time; that love means primarily companionship and intimacy and sharing.

"Husbands, particularly those under 35, are tending to come around to the women's view that communication is vital in marriage. But among those who are older there is still the feeling that talking about emotions is either hard or unpleasant or too difficult.

"Movies play a prominent part in people's thinking about love and marriage, with novels and TV also frequent references. People mention these

continued on next page

Swidler/ continued from page 3

all the time, as a way of describing what they *do not* believe in.

"The view that Americans are suckers, that they believe in all the advertising and all the things they see and read for entertainment, is simply not true. All the time, people say to me 'Oh, the Hollywood idea of love is completely wrong. You can't expect bells to ring, or lightning to strike when you kiss your partner. You cannot expect the electricity to be there always. Loving somebody really means being understanding and caring and respecting and being willing to work out the problems together.

"The striking thing about the stereotype of love is that almost nobody believes it. People actually define that their own concept of love by their criticism of the standard ideology."

In response to the suggestion that the soap operas are a molding factor for millions of women today, and that in soap operas there is far more disaster and wrongdoing than love, Swidler said:

"My speculation is that people don't look on soap operas as a reflection of real life, but as something to use as negative pointers—like gossip. They don't think the stories are true, but instead they say 'Wasn't it terrible, what X did to Y.'

"People form their values not only by patterning themselves on cultural images, but by distancing themselves from them. It is rather like gossip. Do we gossip about people we admire? No. We gossip mostly about those we disapprove of, and we do that to establish a view of what is right. We define our moral values to each other by our gossiping, our views on soap operas, and so forth.

"I argue that Americans use their own culture critically. They use it to define their own attitude by critiquing the positions of others."

In addition to her own book in preparation, Swidler is one of the five coauthors of another work, to be called *Habits of the Heart* (a phrase from de Tocqueville) on the subject of the moral bases of social commitment in America. It will examine the way in which a set of American cultural traditions withers and dies, or is reappropriated and given new meanings by Americans in particular social locations.

The book will focus particularly on the relationship between private satisfactions, like love and family, and public commitments to community and nation.

Swidler's interviews with her subjects are unusual for a social scientist. She tries to engage people in active dialogue by asking difficult questions as well as easy ones.

To those who see love as a spontaneous choice she asks whether there is need for sacrifice in love relations, and whether obligation plays a part. The reply is usually 'Obligation is the wrong word. If you love somebody you enjoy doing things for them. It should not be a sacrifice.'

Swidler believes that this attitude places the love relationship on a very fragile base. "The way they talk about their relationship undermines any notion of real solidity. The language in which they describe their love relationship leaves them nothing to fall back on, if choice and spontaneous wanting to be together and being happy together fails them.

"Americans like to put the individual at the center of their thinking, and see him freely-choosing everything he does. That is a real problem for it allows you to describe things beautifully when things are going well, and it leaves you nothing to say when things go badly.

"People's confusions about love reflect wider cultural difficulties. People find it hard, for example, to work out how can one be devoted to the common good, in marriage or in public life, without endangering one's self-interest.

"They also feel that love, like other social commitments, is truly valid only if it is freely chosen. But this stress on spontaneous choice conflicts with the sense of love as a duty or an objectively valid moral commitment.

"The individuality love affirms remains in tension with the social interdependence it generates. The moral logic people employ in this central arena of experience provides a unique opportunity to analyze the dynamics of American culture in action."



The more modern view (of love is that). . .you may love one day and not the next. The self is always changing and unpredictable. There is never any sure resolution in which you ride off into the sunset and live happily ever after.

—Ann Swidler

Swidler emphasizes that Americans place a very high value on love. Research by various sociologists indicates that 95 percent of Americans believe that a stable marriage is the best way to live.

The attitudes of those couples who live together outside marriage are fundamentally similar to those who are married. About half the people she interviewed had been divorced, and almost all of them expressed the wish to have good love relationships and marriage. Only a few were permanently disillusioned with marriage.

"Peoples' standards are higher today," said Swidler. "People often compare themselves to their parent's generation and say 'It is a difficult problem, I believe in commitment, but my parents were willing to put up with troubles that modern people just won't put up with. If things get bad enough, you have to leave"

"Very often those we interviewed would say, about other people, 'They aren't willing to stick with it when the going gets rough, they are not willing to be patient through troubles—that's terrible!' At the same time people are only willing to compromise so far in meeting the high standards that a love relationship ought to have. They are much less willing to lead lives of quiet resignation.

"They are willing to sacrifice a lot, but they want their marriages to be very good. If they come to believe that their marriages are crummy they are not willing to stay tied together forever."

"The general view today is that it is important to be willing to make concessions, to work things out, but the goal should be to make a really close, happy marriage," said Swidler. "To stop halfway, and resign oneself to a bad marriage is moral failure. Many people regard somebody who does that as actually a bad person.

"People believe that it is up to you to make you life really good, that you should be engaged in a constant quest to make your life satisfactory. People do not believe in resignation.

"Middle-class people, in particular, believe that you can make your life good, and that it is up to you to do so.

"What is happening is that Americans' standards about what a love relationship should be have gone up."

Has all this made people happier?

"My personal belief is that we are happier. There is still a lot of nostalgia about the past. We tend to think that in those days there was no alienation and that relationships lasted. But we delude ourselves—there was a lot of misery in marriage in the 'good old days.' "

Swidler is very interested in how middle-class Americans make use of the culture in their environment, in such matters as how they reconcile conflicting beliefs.

"I have found that some of the stereotyped ideas turn out to be very different when you examine them closely. I went into this study thinking that people are torn between two conflicting ideologies. First is that when an individual becomes mature he falls in love and makes a commitment, and in doing so becomes an adult. From then on the task of living was to hang onto that commitment.

"The more modern view is that you never really know who you are, that life is never settled, and you are engaged in a perpetual quest for one thing after another, in which you can never resolve your problems.

"You may love one day and not the next. The self is always changing and unpredictable. There is never any sure resolution in which you ride off into the sunset and live happily ever after. You are constantly burdened with uncertainty, but you have all the excitement of growing and changing.

"In this second setting love becomes a constant challenge, a never-ending source of excitement, and it is never really decided in terms of a commitment.

"I find that people are worried by these cross-currents. But they have all sorts of ingenious ways of reconciling their misgivings.

"Generally, I found that people are extremely creative and active in reshaping the culture around them. When people told me, for example, that they were happily married, I questioned them about their thoughts on growing and changing.

"A frequent response was: 'The way to change is not to keep changing marriage partners all the time, to look for somebody more exciting. That is a way of simply trying to escape from yourself. The real challenge is to stay with one person, and to work out the problems and challenges in that relationship."

"The point is that people who are committed to their marriages find a way to reconcile the desire for commitment and the desire to keep growing and changing. You get a great many variations on that capacity to reinterpret the cultural influences around them."

Swidler has a research agenda that stretches beyond her current project on love. Her first book, *Organization Without Authority* (Harvard University Press, 1979) dealt with the role of ideology in the counter-culture organizations of the early 1970s. Now she hopes to use the theoretical insights gained from studying love to look again at how culture works in organizations.

Her hunch is that in modern society, large organizations are the key places where new cultural models are tried out and take root.

"People are shaped by social forces beyond their control. What we fundamentally value in life is not something we make up in our heads but what comes to us through the social world we inherit.

"That is an unAmerican way to view the world. Americans typically see the world as the individual being primary, and an individual's preferences as their own free choices, that essentially an individual creates his world for himself.

"What sets sociologists apart is that they don't really believe this. Sociologists believe that what individuals become is determined by their social circumstances."

Swidler is married to a sociologist at UC-Berkeley. They have a son, Abraham.

She grew up in a family that was very intellectual, she says, and also deeply concerned about public issues. Her father was a New Dealer, at one time general counsel of the Tennessee Valley Authority, and later chairman of the Federal Power Commission during the Kennedy and Johnson administration.

Her mother was a feminist "before it was fashionable."

Swidler grew up in stormy political times, and she was interested in politics and public life. She hopes her contribution will be to examine whether America as a culture has the resources to deal with the political challenges it faces.

Computing services to separate into academic and administrative areas

Stanford will separate academic and administrative computing, starting this summer.

This change has been approved by Provost Albert Hastorf and Vice-Presidents William Massy, business and finance, and Lawrence Crowley, medical affairs.

A faculty member will be appointed to the provost's staff to plan computer and information development involved in teaching and research, as well as networking for these functions.

The faculty member also will manage integration with Center for Information Technology (CIT) operations and related systems networks.

This person also will be responsible for the University's Low Overhead Time-Sharing Systems (LOTS), a computer facility dedicated to student computing for which students have free access to perform classroom assignments and unsponsored research tasks under the direction of the faculty.

Provost Hastorf intends this new member of his staff to provide leadership and advocacy for future directions for computing and information technology at Stanford.

Under the reorganization, the Center for Information Technology will operate the CIT based machines and deal with administrative computing and administrative systems including both operation and planning.

These services are extremely important to the University community and the changes are intended to strengthen and improve CIT's ability to provide them, Hastorf said. Edward E. Shaw will continue as director of the Center and will report to Massy.

Hastorf is now beginning the process of consulting with deans of schools and relevant faculty for suggestions with respect to current Stanford faculty members who might fill the new role on his staff.

Accidents and injuries

Accidents and Injuries Occurring During Week of May 2-6

Cause of Accident	Number	Number of Days Off
Contact with object:		
Impact with object	3	(3, 0, 0)
Cut by sharp object	3	(0, 0, 0)
Pinched, squeezed, crushed	1	0
Fall from height (incl. stairs)	1	2
Fall from same level	3	(0, 8, 0)
Lifting improperly	2	(5, 12 +)
Stress	1	14
Temperature extreme	2	(0, 0)

The way it was....

The good old days—smallpox at Encina, a day off to greet the fleet, a murder

75 YEARS AGO (1908)

When a case of smallpox in Encina Hall was confirmed, the University asked students who could not show vaccination certificates to refrain from attending classes for 10 days.

* * * *

The chairman of the Committee on Public Exercises, Prof. C. A. Duniway of the History Department, declared that the last day of instruction before final exams was to be a university holiday so that the student body might view the arrival of the fleet in San Francisco harbor. It was also arranged for 300 of the naval officers to visit Stanford.

50 YEARS AGO (1933)

Acting under the stress of strained economic conditions, the Board of Trustees shook the campus with a bombshell report that swept aside Stanford's famed "500."

Basing the validity of their revolutionary action on a statement made by Mrs. Stanford in 1903, just before her death, the trustees announced that beginning autumn quarter women would be admitted on a ratio roughly estimated to be 55 men to 45 women.

This proportion corresponded to that prevalent at the time Mrs. Stanford issued her official edict in May of 1899 limiting the women to 500. In 1899 Mrs. Stanford noted a steady increase in women attending universities throughout the state. To halt this movement at Stanford, the limiting restriction was read into the Founders' Grant, though with men and women placed on an equal standing.

President Wilbur said, "It seems clear that under the stringency which the University is facing, the paramount purpose of the founders 'to maintain the university at a high degree' can best be served by considering the limitations imposed by Mrs. Stanford as 'incidental and subordinate.' " Under the new system, Dean of Women Mary Yost explained, women would be admitted under the same acceptance regulations that govern men. In the past as many as four or five women had applied for every vacancy in the quota. This had created a rigid competitive system.

* * * *

Every Stanford School of Law graduate who took the California state bar examination passed it, according to word received by Prof. Marion R. Kirkwood, dean of the Law School. Stanford had maintained nearly a 100 percent record for several years. Over 500 law students from the state took the bar exam and 215 passed, 42 percent of the total.

* * * *

David Lamson, sales manager for the Stanford University Press, was indicted for the murder of his wife, Allene Thorpe Lamson, '26, who was found dead in a bathtub in their vine-covered home at 622 Salvatierra Street on campus.

25 YEARS AGO (1958)

President Wallace Sterling reported that the University's expenditures for the academic program had increased by 77.4 percent over the past five years. The endowment stood at $75.4 million. Income was divided among tuition and fees, $6.1 million; endowment income, $2.8 million; expendable gifts, $4.4 million; building funds, $1.9 million; government research, $5.8 million; and special funds and other income, $1 million.

Compiled by Catherine Peck
The Stanford Historical Society

Personnel update

Rules change for personal time off

Effective May 1, 1983, the University revised the guidelines on the use of paid personal time off as described in Guide Memo 22.7.

The new guidelines provide that regular full-time staff may schedule paid personal time off, with supervisory approval, in increments of up to eight hours but cannot exceed eight hours in a month. The maximum of 24 hours of paid personal time off in a 12-month period remains unchanged.

Part-time regular staff are eligible for paid personal time off in an amount proportionate to their work schedules.

Paid personal time off (PTO) is provided by the University in recognition of the fact that some personal matters may require attention during a staff member's normal work hours. The changes to the policy were established to further reduce the need for staff members to use accrued vacation time to maintain their pay while attending to personal matters.

Hundreds attend 'A Majors Event'

Fourty-four departments at Stanford joined in presenting A Majors Event, a promotion designed to guide students in making better choices of their majors.

Held all day on Tuesday May 10, and centered in the Inner Quad, the event was attended by hundreds of students. Each department had a stall managed by members, where explanatory material was handed out and questions answered. The interest shown was keen, and most stalls were kept busy.

The event was organized by Audrey Bernfield, director of career counseling in the Program on Human Biology. She had worked on it for five months.

Twelve speakers addressed the crowds during the day, drawing attention to the opportunities offered by their respective departments. Ancillary events, including film shows, conferences, discussions and receptions, were held in each of the participating departments.



More construction on Campus Drive

A sewer line installation will begin Thursday, May 12, from Via Palou to Panama Street in the eastbound lanes of Campus Drive.

Those lanes will be closed with a detour on the westbound lanes during construction, which is expected to last until the latter part of June.

The cross streets (Jordan, Via Palou, and Panama) will be open intermittently as required.

Notice to the Stanford Community

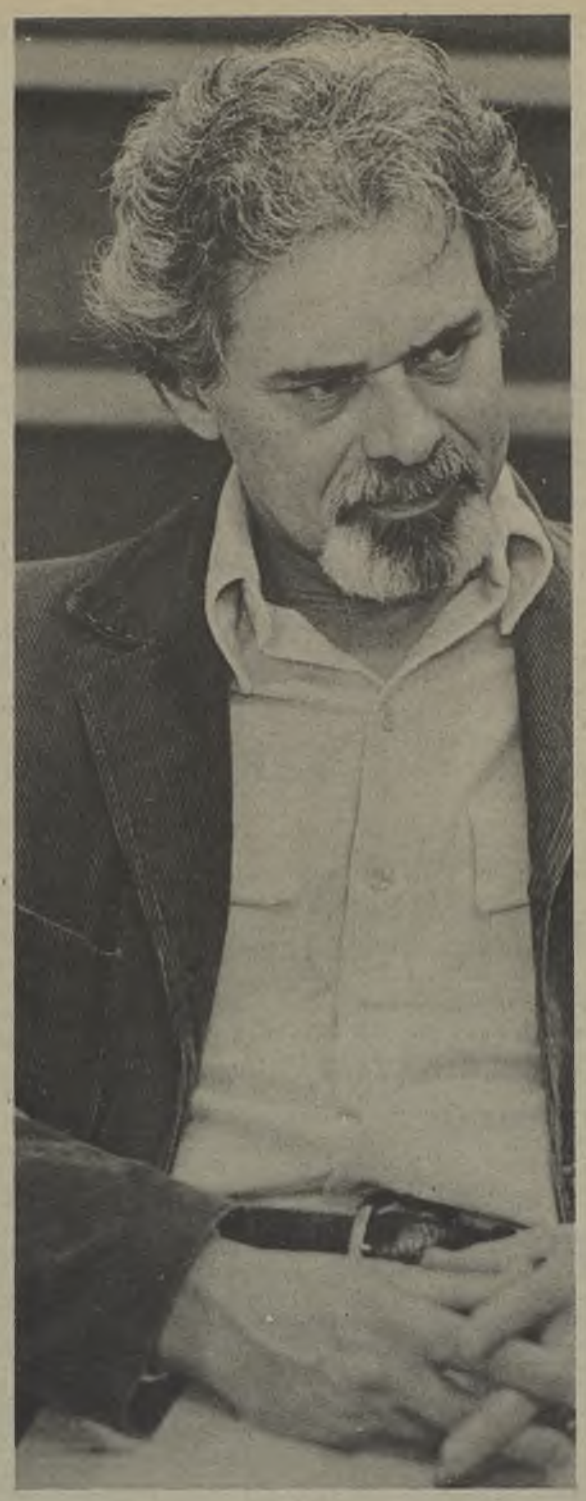
Stanford is applying to the Occupational Safety and Health Standards Board for a variance to install a Garaventa incline wheelchair lift on one of the two stairs that serve the Dinkelspiel Auditorium stage.

This lift will be for handicapped use. The mechanism is installed to one side of the stairway. The stair is partially encumbered when the lift platform is down and in use.

"You have the right to full party status in the variance proceedings and a right to petition the Standards Board for a hearing. For further information, contact the Cal/OSHA Standards Board at 1006 Fourth Street, Third Floor, Sacramento, Calif. 95814, phone (916) 322-3640. All pleadings relating to this variance request are available for inspection of Inspector's Job Site Office/Trailer for Braun Music Center."

Writer Gilbert Sorrentino talks about the novel and real life

BY MILLICENT DILLON



What the novel is not about: It is not about "real" life. It does not represent or imitate "real" life. It does not even necessarily refer to "real" life.

The novel is not about anything except itself, its language and its structure.

So says Gilbert Sorrentino, professor of creative writing at Stanford, and author of a number of highly praised—and unconventional—novels including *Mulligan Stew* and *Crystal Vision*.

In his current seminar on "Reading for Fiction Writers" Sorrentino focuses on modernism in literature, as exemplified in three crucial works, *Against Nature* by J.K. Huysmans, *At Swim-Two-Birds* by Flann O'Brien, and *Jealousy* by Alain Robbe-Grillet.

Sorrentino considers *Against Nature*, a novel of the Decadence published in France in 1884, to be crucial to the beginning of modernism in literature. An account of a man who leads a hermetic existence in which he drives out the natural and replaces it with the artificial, *Against Nature* is a work in which plot and character are subordinated to structure.

It is precisely this notion of the preeminence of structure that Sorrentino calls the essence of modernism, a movement that is still continuing.

"We have all been trained to read in terms of association with objective reality. Through structure, through making the reader aware of the structure of the work he is reading, he is forced to read differently," he says.

If causal-temporal sequences are shattered, if the usual devices of fiction are turned awry, the reader is forced to pay attention to the text. If the devices of fiction are revealed as devices, the reader can no longer go on reading as he always has, for escape, for comfort, and for information.

It is a revolt, but a revolt not without precedent, says Sorrentino. "*Tristram Shandy* by Sterne is nothing *but* the device laid bare. In that book the writer says, 'I'm going to show you how I made this book.' "

Sorrentino considers the modernist movement an outgrowth of and a reaction to the romanticism of the 19th century, and the first step in the modernist movement to be the Decadence. The decadents agreed with the romantics in their opposition to industrialization and its effects, in their loathing for the idea of progress, and in their disinclination for bourgeois life. But the decadents went much further. Where the romantics had worshipped nature, the decadents saw it as evil. They distrusted even the idea of nature, even the idea of attempting to imitate it in their work. This sense of artificiality, of the literary work as a discrete object is at the core of modernism.

Crucial to the revolt of the modernists was a rage at what had been done to language, how it had been robbed of its imaginative force.

"Writers from Huysmans on were saying to the world, 'You have taken our language away from us for your own uses. Michel Foucault has noted that in the 19th century language became a useful tool, a vector of ideas, a handmaiden to capitalism and its attendant disciplines."

What the modernists did, continues Sorrentino, was to redeem the language from usefulness, to disengage it from its function as a bearer of information. "They took language back from the sciences, back from politics and the market. They reduced the function of language as signifier. In that way language became its own subject—useless, if you will, but not valueless.

"We are now in the same position as Beckett, who says that he has nothing to say and no means to say it, but must say it anyway. It is a kind of writing out of silence into silence.

"In these novels there is no 'payoff' for the reader. The romantics were perhaps the last to provide a payoff: the hero scorned or the hero rewarded. The endings might have been bleak but they still gave emotional satisfaction or a reward to the reader.

"That was basically a kind of capitalistic attitude. You put 'money' (feeling) into the book as you read it and you got 'money' (feeling) back. The ending paid you interest on your investment.

"But in *Against Nature* there was no payoff, no ending. The hero was neither crushed nor triumphant. The reader invests his energies and gets 'paid' only in terms of the act of reading."

Huysmans' work was the beginning of the end of the general audience for literature, says Sorrentino. Huysmans spoke only to those few who knew what he was up to.

"But isn't that snobbery?" a student asks. "If it's snobbery, it's also self-defense," Sorrentino says, "to take the book away from people who would use it as something other than a book." And he quotes Pound, "It's an artist's privilege to write for a few intelligent people."

As for criticism in general: "Many critics of fiction are curiously uninterested in fiction in its formal terms. It's as if you asked someone, 'How do you like that dentist?' And he answered, 'I don't know, he was boring,' or 'I didn't like his fingers.' Then you might ask, 'But didn't he do a good job?' The answer might be, 'I don't like the pictures on his wall.'

"It's all based on a quite rigid misunderstanding of what art literally is. The true business of art is not 'communication,' though that may be a facet of it. The business of the artist is to *make*.

"The romantic artist of the 19th century was supposed to be the idiot savant, without intellect, working from 'inspiration.'

"But for the modernists elaborate planning and construction are essential—though many people still think an artist is doing something dirty by the use of conscious planning, especially when the construction is so overt as to become the work's entire content. The usual charge is that such work is cold, or mechanical, or anti-human."

He cites the critic Maurice Blanchot, who has argued that the popular novel can be read by anybody, since it has already been read by everybody. But the literary work is always read for the first time every time it is read.

"Gore Vidal, Truman Capote, Norman Mailer—there's really no need to read them; you know what they're going to say. But a writer like Flann O'Brien speaks out of a literary tradition that is clearly set against the habitualization of reader response."

Sorrentino is the author of six novels, *The Sky Changes*, *Steelwork*, *Imaginative Qualities of Actual Things*, *Aberration of Starlight*, *Mulligan Stew*, and *Crystal Vision*. He has also published a number of volumes of poetry. His *Selected Poems* were issued in 1981 by Black Sparrow Press.

A new novel, *Blue Pastoral* is about to be issued by North Point Press.

His work has been the subject of a complete issue of *The Review of Contemporary Fiction*.

Born in Brooklyn in 1929 of Irish-Italian parents, Sorrentino was raised as a Roman Catholic, going to public schools, but receiving religious instruction.

"If you're born and raised a Roman Catholic, you never quite get out from under it," he said in a recent campus interview. "Maybe that's where I get some of my feeling about structure. The learning of catechism, rite, and response is highly structured."

None of the members of his family had any interest in literature, though "my grandfather, my mother's father, told me marvelous stories. He was an Irishman of enormous wit and charm and funny as hell. He was sarcastic, cynical, irreverent, bawdy, and he told wonderful tales. I don't know if that has anything to do with my being a writer.

"My father's father would sit and talk to me by the hour as well. But he spoke only Sicilian. I never understood a thing he said. He was here for 75 years and never learned English. My father used to say to him, 'Pop, why don't you learn some English?' And he'd say, 'Why? I'm not an American.' "

Sorrentino grew up in the Bay Ridge neighborhood of Brooklyn. "It's just south of South Brooklyn. It had a true character: its own language, its own mores, its own sense of what was correct. There were constant references made to legendary characters who came out of the neighborhood, their adventures, feats, their specific insanities."

He knew from the time he was 12 that he wanted

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Sorrentino...

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to be a writer. "I didn't know exactly what it meant but I knew that whenever I wrote a composition I could make things come out as I wanted them to, insofar as my limited abilities allowed me."

When he got out of high school he did not go on to college. "What did I do? What didn't I do? I just worked. I had many jobs, as a clerk in an insurance company, as a clerk in a textile factoring house on Madison Avenue, as a counterman and a dishwasher in a restaurant.

"Then I went to Brooklyn College for a year and a half."

He left college to go into the army and served as a medic for two years. Once out of the army, he went back to school for two more years. "I never got a degree. I was there four years, but I never finished some of the requirements. I wasn't going to take political science or gym.

"I went back to school to learn about literary structure, particularly the structure used by writers of the 16th and 17th centuries. I loved—and still do—the work of the pastoral poets and Ben Jonson—he is one of my favorite writers, a thorough, conscious artist. I also studied Latin and Greek. But then I began to lose patience with school. I was beginning to write seriously and I was meeting a lot of other writers."

Among his peers were Robert Creeley, Ed Dorn, LeRoi Jones (now Amiri Baraka), and Hubert Selby. He found himself in a true community of writers on the lower east side in Manhattan.

"It simply happened. It all quite accidentally came together, one of those curious things. Black Mountain College, a very famous college of the arts, closed because of lack of funds. Most of the faculty and students went to either San Francisco or New York.

"At the same time I began to publish a little magazine called *Neon*, and LeRoi Jones began to publish a little magazine called *Yugen*.

"Many of the Beat writers—Ginsberg, Corso, Kerouac—returned to New York from California. John Ashbery, Kenneth Koch, James Schuyler, and Frank O'Hara were forming the nucleus of what would be called the 'New York School.' And many more writers were present. This all happened between 1954 and 1958.

"It was a renaissance of sorts, if that isn't too pompous a word.

"At the same time, of course, New York was the home of abstract expressionist painting, and the writers began to talk to the painters. We all hung out in the same bars and went to the same parties; we lived in the same neighborhood.

"In those days just about everyone in the arts came to New York either permanently or for a long stay. I don't think that's true any more."

For Sorrentino the conversations with the abstract expressionists had a profound influence. "The painters were doing something which writers had just begun to think they could do, which was to make an art divorced from what had been given us as the 'correct subject matter.'

"Painters had already begun to understand that it was possible to do something based very firmly in a European tradition—cubism and surrealism—but to paint in a new way, an American way, that way that had nothing to do with the figure.

"Writers at that time were trying to get away from a concern with acceptable subject matter, 'the great ideas of Western man.' We were trying to work our American experience into new forms.

"Faulkner was very present to us as well as Williams, Pound, Wallace Stevens, Djuna Barnes, Nathanael West, and we were enormously interested in poets like Rimbaud, Mallarme, and Apollinaire.

"The problem was that there was a generation of very conservative American writers who were thought of as the mainstream of writers in this country: in poetry, Robert Lowell, Richard Wilbur,

"Gore Vidal, Truman Capote, Norman Mailer—there's really no need to read them; you know what they're going to say.

—Gilbert Sorrentino

Richard Eberhart, for instance, working essentially out of an early 20th century English tradition.

"And the novel, despite the innovations of maligned and misunderstood writers, had settled into the conventional—strong on 'message' and totally devoid of formal interest.

"We chafed under that. It was contemporary painting and be-bop in an odd way, that suggested to us, by example, that what we were doing had some value even though it was mocked, or, if not mocked, efficiently smothered. I think of the reception given a writer like Jack Kerouac, who was deemed a barbarian who wrote nothing of value in his 'formless, structureless' novels.

"What that meant of course was that his form and structure didn't look like what the arbiters of taste 'knew' form and structure to be. In fact, Kerouac was a very remarkable and powerful writer.

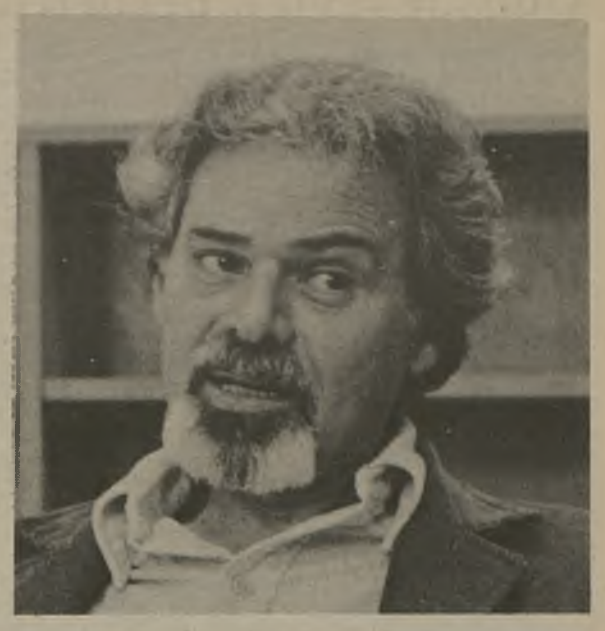
"Creeley has a wonderful quote concerning those years, something like 'To be a writer in the late '40s or '50s was difficult because those in positions of literary authority took form to be something extrinsic to the given instance.'

"His point being that a novel was a set of ideas placed in a ready-made form. Thomas Mann, the writings of Gide, that was form. Mailer, Hemingway. We all *new* what a novel was, didn't we, an intricate box that one studied, then imitated.

"If you did something that didn't look like what had been canonized, you were labeled. The kindly label was 'experimentalist,' which meant and still does that you really didn't know what you were doing, you were just fooling around.

"The unkind label, the one used for Kerouac, was that of barbarian, know-nothing, illiterate. As Truman Capote said, 'That's not writing, that's typing.'

"That was supposed to be a witty remark, but said by Capote all the wit is of course drained out of it. Whatever small talent Capote once had was exhausted years ago by the demands of the market."



To Sorrentino it was the sense of community among the artists and writers that made it possible for them to go on with their work. "When an artist is young he needs that kind of support. To be any kind of a decent artist is to come into your statement feeling that you've got the work of God, that you're carrying the 'truth.'

"The young must wish to wipe out what's stale and fake. Even though they don't know what they're doing.

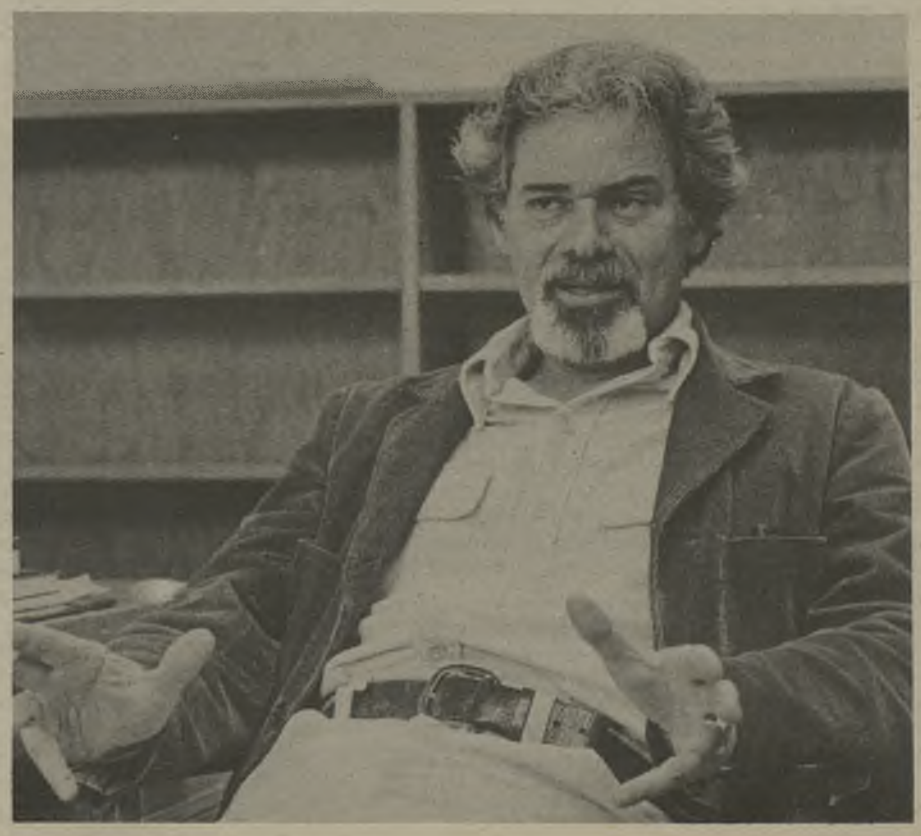
"The sense of having support from people who believe what you believe, even if they're all half-baked or half-crazy, is enormously important. You need someone to say, 'I saw your story last week and it was great,' and then you say, 'What do you think of that lousy story by So-and-So in Such-and-Such a magazine?' And then they say, 'That bum.' Young people need that.

"They must be outside the concerns of 'marketing' their work—they need the arrogance of a clique, a group. They must believe that they are *right* in an absolute sense."

But literary community of the kind Sorrentino had is not easy to come by these days. He believes one of the chief obstacles to such communities now is economic.

"Recently a friend of mine in New York was talking to a group of young students at the Art Students League. He told me afterward that he found himself saying to them the exact opposite of what people had said to him when he was young. Then older people would say how they envied the

continued on next page



Outside review needed to strengthen Stanford's stature in humanities—Cohn

Editor, *Campus Report*:

In a talk to L.A. alumni, Dean Norman Wessells (of Humanities and Sciences) echoed by President Donald Kennedy, claimed that work in the humanities was "climbing to new heights" because of the support given by his office, which so far consists mainly of word processors.

He exulted over the growing program in "mathematical" formal linguistics because it feeds into integrated circuits and the like. His praise of our philosophy department as "hot" ran along similar high-technological lines.

In short, he could not have demonstrated more clearly the folly of having scientists in charge of the humanities, especially in a time of severe peril to the latter (I refer partly to the drastic drop in our ratings recently).

It is not a question of attacking science *per se*, when I affirm along with many others that it is becoming a rampant cancer in our bailiwick. President Lyman expressed alarm precisely about this encroachment. In its own area, the more of it the merrier, I assume (though interesting questions can be raised, and have been raised, even there by imaginative scientists like Einstein, Heisenberg, Feynman). But in the humanities the *dosage* is all-important.

Let's make a comparison with the gender-proportions in "individuation": as long as the identifying sex keeps a determining lead over the other sex in the person, the more of both the better for culture. In an artist of genius like Leonardo one can sense that delicate situation: a bit more of his analytic propensity, which was enormous, and his masterpieces of painting would have leaned toward fussiness or a sort of pedantry of precision?

But the imbalance in the humanities (and also the social sciences) at Stanford has gone much farther than that and is threatening to go even farther.

It is not only a matter of methods; more gravely, it is one of the all-important *spirit*. C. P. Snow points to a vital difference: the humanities look back and all around, the science almost exclusively forward. You can't get much more different than that. . . .

How can we attract the leading humanists from elsewhere if they get wind of what Dean Wessells is saying and doing and realize the disastrous drift here? They have already gotten the smoke signals, many of them, and demonstrated a disheartening but fully understandable reluctance to come (and not just because of housing problems).

We are sick to the gills institutionally and need help. We need an outside review badly and immediately, by the very best humanists who can be persuaded to come here for a few days for that purpose.

Robert Greer Cohn
Professor of French

P.S. Just before he died, Charles McCabe wrote the following: " . . . cultivated men are a better choice to overlook the future of humanity than mechanics and technicians." George Will wrote recently: " . . . even more than we need persons conversant with new technologies, we need a citizenry acquainted with the ancient patrimony of our civilization."

A Soviet scholar visited Geophysics

Editor, *Campus Report*:

As a recent host of a Russian visitor to the Geophysics Department, I was particularly interested in the *Campus Report* article of Michael Taksar describing typical Russian visitors. Taksar may describe the "typical" situation, but our experience was more positive.

It may be that if you wait for the National Academy of Sciences to send you a Soviet visitor, they will send you a Russian of the type Taksar described. We had our own budget, identified a promising Soviet scholar, and invited him to Stanford. After waiting through Soviet bureaucratic churnings, including several false starts, more distressing to Boris than to us, he eventually came.

Boris took his work seriously. He approached many problems differently than we do. Naturally we also quizzed him on political matters. He said he was not a party member, but he religiously defended Pravda on philosophy and history. On the other hand, questions about daily life he answered candidly, mixing the good with the bad. He told us his concerns and those of his family. The many people he met here arranged sightseeing for him throughout California and even a short trip to Texas. He expressed many ideas, and must have brought some ideas back with him.

Jon F. Claerbout
Geophysics

Ducks' plight reveals our morality

Editor, *Campus Report*:

The trouble with Stanford is the trouble with the world. Tremendous strides in the medical, social, and physical sciences have not provided the spiritual growth necessary to free us from the bondage of self service.

Articles in the May 4 issue of the *Campus Report* pointed an accusing finger at us all. . . workers standing by watching baby ducks floundering in "dangerous water". . . animal rights and animal research defenders hurling personal insults at each other in print, but nothing really changes for the animals.

What is the matter with us? Where is our heart and where are our morals? The problem at Stanford is no different from the problem everywhere. . . but it is a serious moral issue. We have become bored observers of life, defending only our right to do nothing.

Name withheld
by request

Grads may lack IQ needed for top jobs

Editor, *Campus Report*:

I was a little bit startled by the article "Long-term job outlook called bleak" in the April 20 issue which summarized the research project by Russell W. Rumberger of the Institute for Research and Educational Finance and Governance at the Stanford School of Education.

His conclusion was that in the years to come college graduates will find their earnings advantage over high school graduates declining and that many graduates will face deteriorating opportunities.

It seems strange to me that with a lot of effort and research *a fundamental point is not discovered.*

One could start with the studies of Dr. Terman, who developed the Stanford-Binet test used to measure I.Q. One of his basic premises was that half the population had an I.Q. above 100 and half below.

In fact, he set the score a little bit high because his original test group was from California and when applied on a national basis the scores averaged slightly below California.

In any case, he found that approximately 35 percent of the population have an I.Q. between 85 and 100 and another 35 percent between 100 and 115; 13 percent fall between 70 and 85 and 13 percent fall between 115 and 130; and approximately two percent fall below 70 or above 130.

Once upon a time we thought of college as being the place to train *the minds of those who had greater capability than the average*. Yet that is not what college is doing. According to the 1980 Census, 44.7 percent of males of all races (a higher percentage if one counts only whites) had one or more years of college.

Now it is difficult for me to believe that the screening by colleges is so precise that this 44.7 percent represents the very top people and that absolutely none of these people had an I.Q. below 100.

Of course, if I am correct, one of the reasons why college graduates or persons completing more than one year of college may not get the kinds of income benefits that existed many years ago is because they may not have the intelligence needed on many jobs paying higher incomes.

I have heard educators say that in the not too distant future more than half of our population will have gone to college. To me that means that colleges are fighting to become trade schools in the great game of being bigger and having more students and generating more revenue.

We have heard a great deal about the long-term decline in test scores on the Scholastic Aptitude Test. I believe that it is part of the problem described above—more and more people, coming further and further down the I.Q. scale, are taking the Scholastic Aptitude Test. Since these tests are a test of both knowledge and intelligence, it seems natural that the median scores will decline. If we suddenly ordered every high school graduate to go to college and to take the S.A.T., then we would find a further decline in the median score.

What I believe is happening and will continue to happen between now and the end of this century is that people who formerly ended their schooling at high school—in many cases people with an I.Q. in the 95-105 range—will now spend four more years out of the work force completing an education which will adequately prepare them for the kind of jobs that were available in the past to high school graduates.

I do not think this is a matter of education; I think this is a matter of intelligence. No person should be blamed or praised because of his intelligence, since none of us have any significant control over our intelligence. Evidence seems to indicate that intelligence can be seriously damaged in the early years of life by an inadequate diet, but nothing has shown that a super diet can raise intelligence.

It is unfortunate that many people with a high I.Q. feel that it is something they should brag about. I have always wondered about that, because according to the law of filial regression slightly more than half should be less intelligent than their parents.

I think a parallel can be drawn in a more physical form. No one has yet been able to find a way to put two quarts of milk into a one-quart milk container.

Robert Kahn, CMC
Stanford 1938

Sorrentino. . .

continued from page 8

young artist, the freedom and all that. 'Now,' he said. 'I feel sorry for them. How will they do it, with things the way they are?'

"When I was a kid," Sorrentino goes on, "if you had a job for a hundred dollars a week and you got canned, you went on unemployment for $50 a week, one half of your salary.

"Maybe you could help somebody paint his apartment and pick up $10 or help somebody move and pick up $15 or $20 for a day's work. So over a period of a month you could make $300 in all. You paid $40 a month for rent, beer was 10 cents a glass, a reasonable meal was $2. You could be canned and still live.

"Now I don't know how you'd do it. Let's face it. If you have to come up with $50 rent and you have $30, you can always come up with the extra $20. But if you're paying $500 a month rent and you're short $350, how are you going to come up with that? It's a very different scene."

From 1965 to 1970 Sorrentino worked at Grove Press, first as an editorial assistant, then as an editor, and finally as a senior editor.

"Grove was a commercial house but it published real books. It was clearly the single most important publisher of modernists in the U.S. from 1960 to 1970. The list of writers published by them is a litany of modernism: Beckett, Burroughs, Ionesco, Adamov, Bataille, Robbe-Grillet, Duncan, Olson, and dozens more."

While he was at Grove, he wrote two novels, *Steelwork* and *Imaginative Qualities of Actual Things*. "I used to write every night for two hours."

In 1970 he left Grove and began to teach. "I taught at the New School and at Sarah Lawrence, not in any sense in a tenure-track position. I wasn't involved in faculty meetings. I was like a jobber. At the New Schpol, for instance, for X amount of dollars I taught two classes each semester.

"I didn't come to teaching until late. When I was young I resisted it. Rightly or wrongly, I felt that the academic milieu was not right for me. I am in no sense a scholar. Most of the things I know I learned by reading, thinking, working things out in my own mind."

In his wide-ranging reading the most interesting critical attitude he has found is in the work of the Russian Formalists, a group that worked in the Soviet Union just before the '20s and who were soon silenced by the Soviet regime.

"The reason I admire them so—Shklovsky, Eichenbaum, Roman Jakobson—is because of the way they view literature. They did not conceive Formalism as fixed. What they said one year could change the next.

"Their criticism was rooted in the literary work itself. They had no immutable set of theories that they applied to all works. Rather, their theories grew out of the idiosyncracies of the works they studied.

"It seems to me that's what criticism should be.

"Criticism that discusses literature in terms of other disciplines—sociology or psychology or what have you—may be valuable to sociology or psychology, but it doesn't teach you anything about the literary qualities of the work itself, what makes it that unique thing—literature.

"Talk about literature in extra-literary terms is simply an elevated bar-talk. Nothing wrong with it. It's delightful. Chit-chat to pass the time.

"But literature is a narrow proposition. Its medium is language and it must be dealt with in terms of its medium."

Latin American policy protest aims at Shultz, commencement

Protesting Latin American policy, more than 100 chanting demonstrators marched to the Stanford campus home of Secretary of State George Shultz Thursday, May 5.

More than 1,000 members of the campus community have signed petitions opposing U.S. policy toward El Salvador, Nicaragua, and Guatemala in the past two weeks. More names will be sought before June 12, when Shultz is scheduled to be featured speaker at Stanford's commencement, rally organizers said.

Now on leave as a professor in the Stanford Graduate School of Business, Shultz currently is in the Middle East. No one else was inside his home when the protesters arrived after a rain-soaked march from White Plaza. About a half dozen police watched the protesters, who remained outside light wooden barriers, well away from the house itself.

Dipping their hands in a red-colored solution, they symbolically smeared a large "Federal Reserve note" marked $1 billion for 40,000 lives lost in the region.

Charles Hale said Shultz would be sent a letter, demanding peace, national self-determination, and an end to military intervention. He said the petitions would be given to Shultz June 12.

These urge the following actions:

"In El Salvador: Stop all military aid until the government agrees to unconditional negotiations among all parties involved in the conflict, and to the prosecution of those responsible for civilian murders and human rights violations.

"In Nicaragua: End CIA covert action against the Nicaraguan government, thereby complying with the letter and the spirit of the Boland amendment, passed by Congress.

"In Guatemala: Comply with U.S. policy established under the Carter Administration, which suspended military aid to Guatemala because of persistent and massive human rights violations."



Hands soaked in red splattered large replica of dollar in last week's protest

At a White Plaza rally preceding the march, David Ayon accused Shultz of complicity in the continuing slaughter of civilians in El Salvador. Catholic sources estimate that an average of more than 100 civilians a week are being killed by security forces, he said.

"So far this year, nearly 1,500 Salvadoreans have been killed by U.S. bullets, fired from U.S. guns by soldiers trained in the U.S.," he added.

The Cinco de Mayo demonstration was organized by the Stanford Central American Action Network and MECHA.

Wood vigorously advocates strategic nuclear defense in debate with Panofsky

Both the U.S. and the Soviet Union should seek ways to drop the nuclear pistols now poised at each other's head and start to raise a defensive shield instead, Lowell L. Wood Jr. of Lawrence Livermore Laboratory said Wednesday night, May 4, at Stanford.

Special studies group leader at Livermore and an assistant to Edward Teller, Wood vigorously supported President Reagan's strategic nuclear defense proposal in a debate with Prof. Wolfgang Panofsky of the Stanford arms control faculty.

Both agreed that the continued buildup of nuclear offensive weapons was "more and more intolerable," in Panofsky's words.

"I'm not aware of a singly comprehensive study that maintains a defensive strategy has a high likelihood of working" against nuclear attack, he added.

Wood said that a "significantly reliable" strategic defense may be possible, although its economics "can only be settled by technological exploration."

Reliability claimed

The Lawrence Livermore expert said the likelihood of as many as 10 nuclear warheads penetrating a defense may prove "vanishingly small." While the effects of even one explosion would be devastating, "it's a harsh world out there," he said.

The present offensive buildup by both sides is "profoundly unstable. . .it will not continue," Wood added. The reaction times from a suspected nuclear launch have become so short that "computers, not political leaders" will be calling the shots.

"Strategic arms are either used early or they're lost," he said.

Press claims that President Reagan's proposal is simply "wishful thinking" with no technical basis simply are "untrue," he declared.

The militarization of space is "regrettably an accomplished fact," Wood said. "The Soviet Union is the only nation with an operational military capability in space," including a system for killing satellites in place since the late 1960s.

Just a vision

Panofsky responded that Reagan's hope for an impenetrable defense was "a vision." He said there simply is "no evidence" that any defensive system could prevent penetration of all but a few strategic weapons.

Panofsky emphasized that defensive systems have many points of vulnerability—satellite sensors can be jammed, delivery vehicles destroyed. "The problem is one of dynamics," he added: trying to create an effective defense can stimulate the other side to develop new offensive capabilities.

"The way to decrease nuclear weapons is to reduce nuclear weapons"—not


Wolfgang Panofsky

develop another layer of weaponry, he emphasized.

While there are "no difficulties" in continuing to spend $1 billion or more for research on such systems, Panofsky said it was a "great disservice" for the President to "hold out hope of a change of policy" without any indication of its feasibility.

"There is real, specific reason to believe (both sides) could move toward strategic defense" within a decade, Wood replied. An "effective" defense may be achieved in five years, a "very effective" one in 10.

Both the U.S. and the Soviets should stop the production and deployment of new offensive systems, Wood said. This would be "a very definite advantage" for the U.S., since the Soviets still maintain four ICBM production lines while the U.S. has none.

Space militarization

Wood said the militarization of space "appears irreversible," Then he added: "But if war comes anywhere, I'd prefer it far from the homes of man. . . . It's better in space than in the air, ground, and water of the biosphere."

Wood said research on strategic nuclear defensive systems "might very aptly be shared" by the U.S. with the Soviets. Development and deployment of such systems would be "more sensitive," he added. At present, the Soviet ballistic missile defense system is "quite a bit advanced," compared to the U.S.

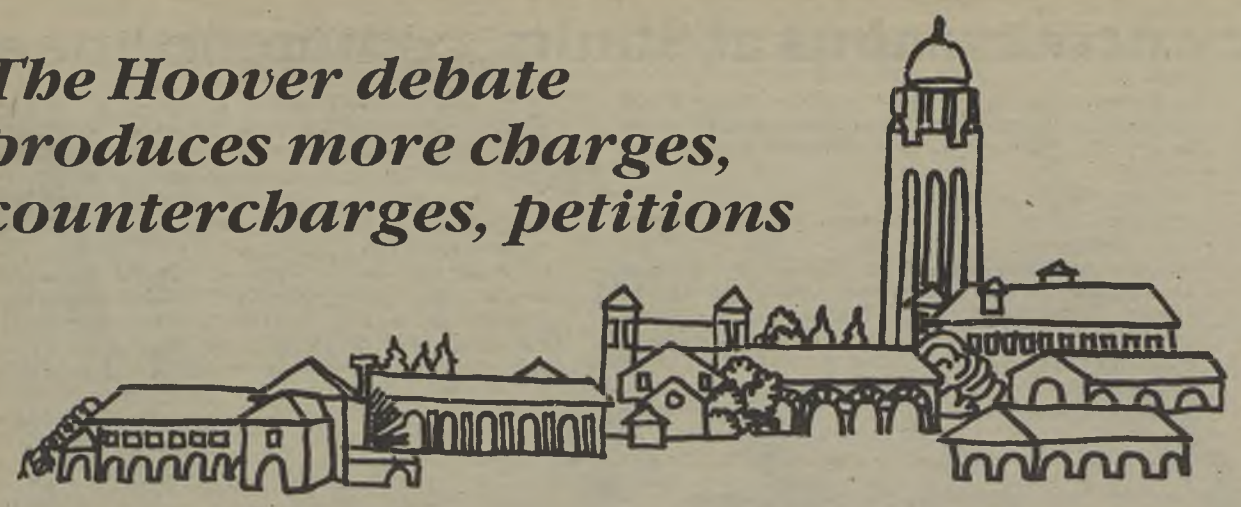
Using nuclear weapons would be "exceedingly odious," Wood argued. "Shields improve the likelihood there will be no war."

He said it was "exceedingly unfortunate" that classified information limits free public debate on this issue. Panofsky maintained that "classified work does not have a major impact on the debate."

Attended by a near capacity audience in Kresge Auditorium, the debate was sponsored by the Stanford Arms Control and Disarmament Forum. Provost Albert Hastorf served as moderator.

—Bob Beyers

The Hoover debate produces more charges, countercharges, petitions



Duignan: Petition has numerous misstatements

The faculty petition on the Hoover Institution contains many misstatements. Let us try to separate fact from fiction.

Fiction: Hoover received $4 million from Stanford this year—a 64 percent increase since last year.

Fact: The only funds Hoover received from Stanford is the $2.65 million assigned for its library and archives. The $4 million figure is inaccurate; the additional $1.3 million the petition claims Hoover gets is her own money! The University manages some of our endowment funds; it does not give us any endowment funds; it simply passes on to us income from our funds that the University manages.

Fiction: Hoover is a politically partisan organization within the University, which is inconsistent with traditional values of academic independence.

Fact: Hoover takes no political stand as an institution. Its individual scholars have many differing views and are not even all Republicans: 11 are Democrats, 10 are Republicans, and three are Independents. Many left-liberal Stanford faculty have received fellowships from Hoover, as have scholars of non-conservative persuasions from other universities.

Fiction: Hoover enjoys a hazy, quasi-independent status. Its research fellows are not subject to the University academic hiring process or to approval by the University's president, Donald Kennedy.

Fact: The appointment of *Senior Fellows* requires approval by a committee appointed by the president of the University to review nominations made after a nation-wide search has been made. The director of the Hoover Institution gives advance information to the president as to appointment of persons for *Senior Research Fellows* (appointed for limited periods only). *Senior library personnel* are selected by joint committees composed of Hoover and Library personnel; their recommendations are reviewed by the president. *Junior scholars and other staff members* are chosen in accordance with procedures similar to those used by the rest of the University.

Fiction: Hoover is a two-tiered organization, comprising a "conservative inner core" of policy advocates made respectable by an "outer ring" of professional academics, most of whom are Stanford professors.

Fact: Between them Hoover members contain five Nobel Laureates; 32 members of the American Academy of Arts nd Sciences, the American Association for the Advancement of Science, the National Academy of Science and the National Academy of Education.

In terms of publications, honors, and previous appointments at prestigious institutions, Hoover compares with any academic institution in this country. We have no need to be made respectable by an "outer ring" of Stanford academics. All joint or courtesy appointments were initiated by the faculty, not by Glenn Campbell.

Fiction: The mere perception that Hoover is politically partisan harms Stanford's reputation as a value-neutral center for higher learning.

Fact: The request for "value-neutral" scholarship comes with ill grace from critics who themselves lean heavily toward the liberal and left end of the political spectrum and who—in some cases—seek to impose their own value judgments as regards weapons research, sexism, racism, or elitism on the rest of the community. Far from harming Stanford's reputation, Hoover enhances it by providing a forum for alternative viewpoints.

Fiction: Hoover is creating a "two-class professoriat" in the University's social science departments—those who receive research funds and other benefits from Hoover, and those who do not.

Fact: Any Stanford professor is free to apply for Hoover grants. Many have in fact chosen to do so. Two-class professoriats exist everywhere in academe: some professors are smarter, earn more, win more awards, write more, etc. Hoover did not invent the system.

Fiction: Hoover's near total shift over the past decade from an archive and center for international studies to a think tank studying economic and regulatory policies constitutes a perversion of Hoover's original charter.

Fact: Hoover maintains both an international and domestic studies program of high repute. There is nothing in the Hoover charter that forbids the Institution to engage in domestic studies. The University president and the Board of Trustees approved the expansion of our interests and accept it each year when its work is reported to them.

Fiction: Hoover injects political criteria into the decisions to hire research fellows. It is the only part of the University not bound by the Academic Council's statement on academic freedom, which prohibits political discrimination in hiring.

Fact: Hoover's political composition more nearly corresponds to that of the American electorate as a whole than that of the social sciences and humanities departments at most major American universities that heavily incline toward the liberal and left. This creates the optical illusion that Hoover is nothing but a conservative haunt—notwithstanding the substantial number of Democrats (just over half) who serve on its senior staff. Hoover has more balance than any social science department at Stanford. We number not just Democrat but Republicans. We associate with our programs many left-liberal scholars. Yet

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Manley, Rebholz offer reflections on Hoover as a political organization

Following is a May 4 paper on "Reflections on Hoover as a Political Organization" by John F. Manley, professor of political science, and Ronald A. Rebholz, professor of English.

So far the tone of much of the Hoover Institution's response to the faculty-student petition has been set by Director W. Glenn Campbell when, as reported in the April 24, 1983, *Peninsula Times-Tribune*, he leveled the term "character assassination charges" at those who raised questions about partisan political activities by the Hoover Institution.

Normally we would ignore such rare displays of invective in a university community, but on at least one issue Hoover has a good point. The burden of proof is properly put on the initiator. That is why we have compiled and made available to the Faculty Senate a five-page compendium of materials on Hoover's alleged political activities. (For excerpts, see *Campus Report* May 4, p. 8-9.)

That is why we have also called the public's attention to Hoover's *Annual Reports* as an authoritative source on Hoover's activities. We believe readers of these documents will see that the issues raised in this debate cannot be reduced to "guilt by association" and a liberal "witch hunt."

No one expected Hoover to like the petition but in an academic community, when questions are raised for discussion, shouldn't some effort be made to discuss them as really presented? As we see it, the major concerns of those who have called for an inquiry include the following:

1) Does the Hoover Institution receive millions of dollars from private sources outside the University, and from private funds earmarked for Hoover but administered by the Univerity, and, if so, who gives this money, why do they give it, and who decides how it is used?

2) If only about one-third of Hoover's budget ($2.7 million) goes to the Hoover library, what sort of activities are funded by the remaining two thirds ($5.7 million)? And would those who supply this money continue to do so if Hoover were in fact nonpartisan?

3) Does the Hoover Institution, as suggested in its own 1981 and 1982 *Annual Reports*, engage in political and partisan activities of concern to the broader Stanford community?

4) Was the *New York Times Magazine* correct in July 1978 when, in an article by Kenneth Lamott, it was reported that: "Through its ties with the right wing of the Republican Party, the Hoover Institution is exerting increasing political influence. It is the brightest star in a small constellation of conservative think tanks that serve as workshops where out of office intellectuals can fabricate the underpinnings of domestic and foreign-policy positions for the Republicans."

5) Without denying the need of any political party for research and support, do we, as a community, want such activities (to the extent that they are shown to exist) centered at Stanford?

6) To the extent that Hoover, as an organization, engages in partisan political activities, does not Hoover, directly or indirectly, ensnare the University in such activities?

7) And, finally, to the extent that such activities are found, by objective investigation, to exist, are they compatible with Stanford's national reputation as a center of independent, nonpartisan, objective research?

Such legitimate questions are not an example of McCarthyism. They pose serious issues for this university. That is why many have asked for a public inquiry in a responsible and appropriate forum. These are controversial questions but let us not be deceived by the rhetoric: none of the real issues in this debate centers on the politics or activities on any individual member of the Hoover Institution or the Stanford faculty.

We do not believe that such questions can be answered by claiming that Hoover is just another part of Stanford and should not be singled out for special attention. Hoover is not like a regular department, and most members of Hoover's research staff are not recruited in the same way as Stanford faculty. Individual faculty members and members of Hoover obviously have full rights to engage in whatever political activities they please—as individuals.

But what about an institution that receives and dispenses millions of dollars? Just because that institution does not take formal positions on issues, does this make it nonpolitical? Perhaps. But we doubt it.

Experienced Stanford faculty members and a great deal of the media discern in Hoover a large and dominant core which sets the tone and tends to pursue overwhelmingly a fairly consistent political line. Is Hoover no more than a collection of diverse individuals who happen to congregate in one place? Are we to believe that because Hoover contains some Democrats—perhaps even some liberal Democrats—that it is a pluralist institution without any discernible political leaning?

Some people say Hoover is a valuable asset to the University. We agree. As a library and archive Hoover must and should be retained.

But what about the political side of Hoover? Is it not true that most of Hoover's budget supports research and publications rather than archival activities? Is it not true that to many observers Hoover's research and publications appear political? And is it not true that many of Hoover's activities appear partisan? Are these aspects of Hoover assets to Stanford University? We wonder. Many others wonder.

Are we to believe that Hoover, with its millions of dollars from outside sources, and its overt political connections, is nothing more than a tall archive? Hoover seems to claim and the press certainly reports that it is one of the leading conservative think tanks in the country. Do we want to be associated with such an organization? Does any other university accept such large funds and allow one of its parts to pursue such goals as Hoover? *Should* any university allow such activities?

These are the sort of questions that many faculty and students think should be discussed: in the Faculty Senate, among the student body, the President's Office, the Board of Trustees, and perhaps even by an objective board of scholars from outside the university. These substantive issues are too important to Stanford to get bogged down in an endless debate over who at Hoover is a Democrat or Republican, or how many members of Hoover are affiliated with radical left or radical right journals. Such a focus trivializes important questions and diverts attention to secondary issues.

These are questions that, in an academic community dedicated to reasoned discourse, should be considered dispassionately. We all know this is difficult. But a focused inquiry into the facts should help us sort out fact from rhetoric. Stanford now needs such an inquiry, and we believe that it is up to those most directly concerned with preserving the well-being and integrity of the University to provide it.

Duignan. . .

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some departments refuse to let some of our conservatives teach.

The problem of political imbalance lies outside Hoover.

Fiction: Hoover's widely recognized promotion of the Reagan candidacy and the Republican Party generally threatens its own tax-exempt status and that of the University.

Fact: Hoover as an institution does not support Reagan or any other presidential candidate. Hoover contains critics as well as supporters of President Reagan's policies.

A few members of Hoover's regular staff have served the Reagan administration—just as individual professors from Stanford, Harvard, and other prestigious universities have served the Kennedy and the Carter administrations, thereby providing a public service in which their parent institutions took pride. The Hoover staff has very little influence on the Reagan administration. Few of the Hoover staff went to Washington but most instead chose to remain here.

Fiction: The faculty would oppose a liberal or left institute or program as well if it appeared on campus. The faculty also claims to do only value-free research and teaching.

Fact: Some left-liberal faculty only oppose conservative activists; they do not oppose radicals, Marxists, communist groups or individuals. It is interesting that Hoover's most outspoken critics (Drekmeier, Carnoy, Levin, Rebholz, Roth, etc.) also supported the Maoist group led by Franklin when he rampaged around the campus intimidating and threatening conservatives and carrying on partisan political warfare. Indeed they signed a petition asking Stanford to reinstate this political partisan and pay his hearing expenses! So much for opposing the left on campus.

Consider the record of some militant Stanford faculty and student activists during and since the Vietnam War. Riots, sit-ins, demonstrations, occupation of the President's office, storming and firing of Hoover buildings, intimidation of conservatives, refusing to let invited guests speak, periodic calls for the U.S. out of El Salvador, support of the Sandanistas, a committee to investigate companies doing business in South Africa, but not one demonstration or sit-in over Cambodia, Cuban refugees, boat people, the Soviet invasion of Afghanistan, no petitions or letters to get the Soviets and Cubans out of Angola.

When was the last time you attended a Hoover-led demonstration, sit-in or teach-in? Have you ever seen Milton Friedman lead an army of screaming yahoos in an attack on the president's office? When did Glenn Campbell ever break up a meeting or interfere with faculty rights to speak?

Peter Duignan
Senior Fellow
Hoover Institution

Gann: Hoover helps deflect charges of political bias against University

A group of Stanford faculty, joined by a number of students, has petitioned for a review of Stanford University's ties to the Hoover Institution.

Among several issues raised, is the charge that Hoover is "partisan" because Hoover fellows have served in the Reagan administration.

The second charge concerns the quality of Hoover's permanent staff who are said to be academically inferior to those of their colleagues who have joint or courtesy appointments which refurbish Hoover's so-called tarnished image.

The third hinges on the selection process; a conservative political outlook is said to be among the factors taken into account in fellowship appointments at Hoover.

Hoover takes no political position as an institution; Hoover fellows, like faculty members, can take any political stands or serve in any administration they choose. Hence the first charge is without merit.

The second charge is equally easy to refute. In terms of publications, previous appointments at prestigious institutions, membership of prestigious academic bodies, Hoover's senior fellows compare fully with the quality of full professors at any major university.

The third accusation raises issues of a more complex kind. As Seymour Martin Lipset and Allan Ladd have established in numerous studies, the American professoriate in the humanities and social studies departments at prestige universities lean heavily toward the liberal and left end of the political spectrum.

The bias does not necessarily derive from the recruiting policies of the universities. Job seekers to some extent select themselves; those who aspire to an academic career tend to be more liberal in their views than those who seek careers in business or the armed services or similar occupations.

The fact remains, however, that most universities are politically biased toward the left. A socio-political survey of the Hoover Institution's personnel would show—not that they are all conservatives—but that the voting pattern of Hoover fellows probably roughly corresponds to that of the American electorate as a whole. This creates the optical illusion that Hoover is a Republican haunt—notwithstanding the substantial number of Democrats (just over half) who serve on its senior staff.

The charge of political partisanship in academe raises complex issues. It is a problem more for the left than the right. Throughout American prestige universities, conservatives are usually ill-represented in social studies and humanities departments. The leftist bias is even more pronounced in fields such as Chicano Studies, Ethnic Studies, African Studies, Black Studies, and Women's Studies. We are not aware of any conservative scholar who holds a teaching position in such subjects at the major universities.

How far does bias operate in the selection process? The question merits investigation. Could an Evangelical Christian opposed to the ERA be hired in any Women's or Feminist Studies program in any major university? Would a Cuban, anti-communist, a refugee from Castro's Cuba, now proud of his U.S. citizenship, get a fair shake when applying for a job in a Hispanic Studies program?

Would an applicant be acceptable to a School of Education, if he were to explain to his selection board that secular educators had something to learn from the Lubavitcher Rebbe or the Old Amish on the grounds that their followers suffer neither from drug addition, welfare dependency, prostitution, high suicide rates, or permissiveness toward homosexuality?

Would an Afrikaner known to be sympathetic to the present government in Pretoria ever even be considered for a position in African history? Merely to raise such questions—we believe—is to answer them mostly in the negative.

How does this affect the case of Hoover Institution? The Institution—we are convinced—is an asset to the university by reason of its vast holdings and its highly-qualified staff. Hoover is also an asset because its mere existence as part of Stanford University serves to deflect charges of political bias and excessive liberal-left wing representation on the faculty widely made in the community at large.

L. H. Gann
Senior Fellow
Hoover Institution

Hook: The test is always the quality, not quantity, of scholarly works

Following is a May 4 letter to President Donald Kennedy.

I have been reading with a growing sense of concern the orchestrated attacks against the Hoover Institution and its fellows on the ground that their alleged ideological bias compromise their academic integrity and violates the spirit, if not the letter, of the principles of academic freedom. Since I have spent the larger part of the last ten years as senior research fellow at the Hoover Institution, my observations and experience during this period are relevant in assessing the validity of the charges that are being aired on the campus.

Politically I am a life long Socialist, an old friend and admirer of Norman Thomas, currently a member of Social-Democrats, U.S.A., and vice-president of The League for Industrial Democracy. Philosophically I am an experimental naturalist who has applied the principles of pragmatic analysis, learned from my teacher, John Dewey, to the major social and political problems of our time.

My fields of intellectual inquiry have been critical metaphysics, social and political philosophy, the philosophy of law, history and education, with special interest in the thought of Karl Marx and the legacies of Marxism. I have published extensively in all of these areas.

When I retired, after reaching emeritus status as Professor of Philosophy at New York University, I received several offers to continue my research elsewhere but decided to accept Dr. Glenn Campbell's invitation to come to Hoover for several reasons. Among them were the excellence of its research and library facilities, the opportunity to engage in dialogue and critical exchange with reputable colleagues, and the salubrious climate at Stanford—all of which I had sampled during the year I spent at the Center for Advanced Study in the Behavioral Sciences when Ralph Tyler was its director.

My 10 years here have been very fruitful despite several setbacks to my health. Since 1973 I have published five major volumes: *Pragmatism and the Tragic Sense of Life*, *Education and the Taming of Power*, *Revolution, Reform, and Social Justice*, *Philosophy and Public Policy*, and this year on the 100th anniversary of Karl Marx's death, *Marxism and Beyond*, the first chapter of which is entitled "Karl Marx versus the Communist Movement" and the last "A Critique of Conservatism." In addition, I have completed a long intellectual and political autobiography which Simon and Shuster will publish next year.

Not only have my years here been productive, they have been intellectually stimulating—even more so than the longer period at New York University and other institutions at which I have taught as well as my year at the Center for Advanced Study.

The reason for this is primarily the continued challenge to my positions, the give and take with varied points of view, the stimulus to fresh thought provided by the discovery of new material. At New York University as well as at the Center there was too much of a sameness in social and political orientation.

Only in the arcane areas of epistemology and ontology did I find the bracing criticism of my first principles that is so provocative to second thought. To my surprise, despite Hoover's reputation for conservatism, I found a broader spectrum of thought among my colleagues at Hoover than I found among my colleagues at N.Y.U. and, from what I have been able to infer from reading and occasional meetings, at Stanford itself.

Having spent most of my adult life in the academy—I began to teach in 1927—with a varied educational experience that includes, amusingly enough, serving as External Examiner of Dr. Lyman and his wife when they were matriculating at Swarthmore, I believe I can distinguish the intellectually shoddy from the merely competent and the merely competent from the first-rate.

The test is always the quality and not the quantity of achievement. It is my considered judgment that my colleagues at Hoover taken as a group, regardless of the character and color of their beliefs, compare favorably with the standards of achievement reached by the faculties of our foremost institutions of higher education.

The accusation that there is a political test administered to those who are invited as fellows to Hoover calls into question the good faith of those who, without evidence, have leveled these slanderous charges.

To single out Hoover for investigation because of the *presence* of some outstanding conservative thinkers among its fellows could very well establish a precedent for investigation of other disciplines and departments at Stanford University because of the *absence* of conservative thinkers among them. Where the life of the mind is concerned such political epithets are irrelevant.

It seems to me that as the chief responsible officer of instruction at Stanford you have the authority and authentic knowledge to present the facts to the academic and general community and to cut short the campaign of harassment and innuendo against the scholars at Hoover who are no less dedicated to the pursuit of truth and clariy than you yourself.

Sidney Hook
Senior Research Fellow
Emeritus Professor of Philosophy—
New York University

Lipset: Survey shows 11 Democrats, 10 GOPs

The following letter to the Stanford Daily *was written by Seymour Martin Lipset, the Caroline S. G. Munro Professor of Political Science, professor of sociology, and senior fellow at the Hoover Institution.*

Some of the stories published in the *Daily* on Hoover contain considerable error, not worthy of Stanford faculty or students or your reporters who ought to check out statements. I would like to comment on some of these.

1) Hoover funds. The Hoover Institution does not receive any moneys from Stanford's operating or endowment funds other than the $2.8 million assigned for its library, which is integrated with the other university libraries. All of Hoover's remaining funds for administration and research either come from annual gifts for its on-going activities or are taken from Hoover's endowment income. The Hoover endowment, moneys donated specifically for Hoover, is administered as part of the Stanford endowment, much like moneys given for chairs or other research organizations. The confusion about this arises from the fact that since Hoover is part of the University, all of its funds are handled by Stanford, and the

continued on next page

Rosenzweig comments on Hoover publications, appointments

continued from page 1

called a news conference outside the entrance of Hoover Tower Tuesday, May 10, to show reporters sheafs of petitions and counter public statements by Hoover officials.

Prof. John Manley, political science, said 75 faculty have signed petitions favoring a trustee inquiry. He indicated their names would be made public, once their individual preferences were known.

"All these petitioners have claimed is that a prima facie case exists that Hoover is a partisan political organization and, as such, a potential danger to the University. . . .

"Among the core ideals are nonpartisanship, objectivity and a rejection of overt and covert political participation by the University," he said in a written statement.

"If these ideals are to be upheld, can the Stanford community ignore the existence of a $60 million research organization within its midst that openly engages in a wide assortment of political activities?

"Perhaps. But to do so endangers the University's reputation as a nonpolitical, nonpartisan institution, and thus endangers the most precious thing a great university has: its legitimacy."

Hoover officials have repeatedly said the Institution is not partisan and does not take positions on public policy issues. None would meet TV reporters.

In a campus interview May 5, Robert M. Rosenzweig, former Stanford vice-president for public affairs and former lecturer in political science, said it was "unwise" for the Hoover Institution to "make as much of its connections with the Reagan Administration as they have."

In its 1982 annual report, the Institution "reached well beyond what was justified on the merits" and was "asking for trouble," he added.

But he said it was "not true" that Hoover appointments were based on political belief.

"There's a set of intellectual questions that conservative scholars are more likely to address—the role of markets in society, for example," he noted. In contrast, liberals usually would be more interested in such questions as welfare.

"There's no question the intellectual focus at Hoover is one of greater interest to conservatives. But in a serious university, the real question is the quality of work being done. . . . Hoover does some work that's good, and some that's not so good." But overall, "it deserves to be in Stanford."

During the Stanford presidency of Richard W. Lyman, now head of the Rockefeller Foundation, Rosenzweig was responsible for organizing ad hoc University faculty reviews of "about a half dozen" individuals proposed as senior fellows at Hoover over a seven or eight year period. The highest scholarly positions within Hoover, these appointments are continuous, but do not confer tenure.

There were instances where faculty reviewing the proposed appointments asked questions or requested additional information but "nobody was turned down" as a result, Rosenzweig said. "It's also unusual for a proposed senior level appointment to the faculty to be turned down."

Where senior fellows were proposed who had joint appointments with academic departments, they were subject to the normal University review procedures, he noted.

The University "would not accept funds for the Hoover Institution for politically partisan purposes," nor would it do so for any other department, he noted. All gifts to Hoover are subject to Stanford Board of Trustees approval.

The University does not closely monitor the activities of 1,100 faculty, but any instances of politically partisan behavior improperly involving the institution would be brought to a halt. Over the years there were "a few instances of this, not involving the Hoover Institution," he said.

If an inquiry is held, "nothing very interesting will be learned," he predicted. "It's probably not worthwhile."

As originally proposed, "this is not a neutral inquiry. There's a political view that lies behind it, as there was in the conservative attack on Harvard and its links to Kennedy in the 1960s."

"It's a game the 'outs' play with the 'ins,' " he observed.

Rosenzweig currently heads the Association of American Universities in Washington, D.C.

Steering Committee schedules debate on Hoover May 26

A faculty petition calling for a Board of Trustees, inquiry into the relationships between Stanford University and the Hoover Institution will be discussed by the Faculty Senate May 26, the Senate Steering Committee decided Wednesday, May 4.

The Senate's next regular meeting May 12 already had scheduled a report from the School of Humanities and Sciences and extensive discussion of an extensive report and recommendations on student evaluation of teaching.

Academic Secretary Clara Bush has confirmed that 69 names on the petition are those of Academic Council members. Fifty are needed to mandate Senate discussion.

The petition states that "the existence of a partisan research and policy organization, whether liberal or conservative, within the University raises serious questions concerning the academic Independence, integrity and reputation of the University."

In a letter published Wednesday, May 4, by *The Stanford Daily*, Prof. Seymour Martin Lipset, president of the American Political Science Association and a senior fellow at Hoover, said his personal survey of 25 senior fellows and senior research fellows in residence at Hoover showed 11 were Democrats, 10 Republicans, three Independents, and one not an American citizen. *(See text, page 8.)*

Prof. John Manley, political science, one of those who initiated petitions for the trustee inquiry, said the names of those signing would not be publicly disclosed. Signers were not told their identity would be made public, he explained.

The Steering Committee and the Academic Secretary said any disclosure of the identity of those signing the petitions should come from those who initiated this action.

Lipset. . .

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allocations appear in the University budget.

2) Since the political affiliations of Hoover scholars have become a matter of public debate, I thought I would try to find out what they actually are. The core group of scholars in residence at Hoover consists of 25 senior and senior research fellows. As far as I can discover, 11 of them are Democrats and 10 are Republicans. Three inform me that they are Independents, that they do not support either party, while one other is not an American citizen.

As in academe generally, Hoover scholars vary by discipline affiliation. Economics is the most conservative field in the social sciences, and at Hoover six of the economists are Republicans, two are Democrats (one of whom belongs to the Democratic Socialists), two are independents, and one is a foreigner. The sociologists and political scientists, more liberal generally, are predominantly Democrats at Hoover by nine (including one, Gerald Dorfman, who founded and puts out the Marxist quarterly, *Politics and Society*) to three Republicans. Among the historians at Hoover, one is a Republican and the other is an Independent.

This breakdown does not include nine people who also hold the rank of senior or senior research fellow, but who are administrators either of the institution generally or of the various library collections. It also does not count 11 individuals who have retired from their previous positions because of age, who hold Hoover appointments, many of whom are either not paid by Hoover or receive moderate post-retirement income supplements. I have not looked into the politics of the 14 national and public affairs fellows, younger scholars from universities around the country, who have a one-year fellowship, awarded annually through an open nationwide competition.

There are also a number of people who have titles as Hoover fellows, who are resident elsewhere. For the most part they are not paid by the institution, and are not engaged in research for Hoover.

For the record, I would note that there are only three Hoover fellows employed in Washington by the Reagan administration, only one of whom was an active Hoover scholar before he left, a second was an administrator, and a third who has worked for many administrations was a post-retirement appointee.

3) The report in the *Daily* that Heinz Eulau "wrote a letter inviting Alvin Rabushka, a Hoover senior fellow, to accept a courtesy appointment with the department" is in error. A political science appointment for Rabushka has never been formally proposed or discussed at a department meeting.

4) The suggestion that Hoover "demanded 'reciprocity' from the political science department in return for giving a number of its faculty joint or courtesy appointments" came up in the context of discussions concerning the proposal by the department that Prof. Harry Harding be given a joint appointment with Hoover, as part of an effort to meet an outside offer. A senior member of the political science department stated that if Hoover did this, it should understand there would be no reciprocity with respect to giving Hoover people appointments in the department.

5) The report that the only book published by the Hoover Press not written by a Hoover Fellow, was one by Ed Meese is an error. Hoover has published many books by persons unaffiliated with the institution.

6) Finally, I would note that the arrangements with the University for the appointment of Hoover staff require that the no political discrimination policy applies to Hoover, and that senior fellow appointments are to be made on recommendation to the director by a search committee.

The director, in turn, recommends to the president of the university, who is supposed to have such recommendations reviewed by an ad hoc faculty committee appointed by him who advise him as to whether to nominate the candidates to the Trustees.

Juilland, McCarthy, Sherby oppose probe of Hoover

Following is the text of a petition to the Stanford Faculty Senate, President Donald Kennedy, Provost Albert Hastorf, and the Board of Trustees placed in circulation May 10 by Profs. Alphonse Juilland, French and Italian; John McCarthy, political science; and Oleg Sherby, materials science.

In Defense of Academic Freedom

The undersigned professors at Stanford University deplore and oppose the investigation of the political orientation of the Hoover Institution, although we have no objection to an impartial assessment of the scholarly excellence and achievements of Hoover appointees.

The claim that Hoover is to be investigated for political rather than conservative bias, that an investigation would be requested even if Hoover's orientation were liberal, strikes us as disingenuous. We are convinced that no such investigation would be contemplated if Hoover's bias were liberal rather than conservative. Hoover's ties with the Reagan administration disturb us no more than the preeminent role played by Harvard professors in the Kennedy administration some time ago, when no requests were made that Harvard be investigated for services rendered to the country's government.

We are concerned by the dangerous precedent such an investigation would represent both inside and outside of the University. Since academic practices deemed improper at Hoover could not be acceptable in the University's schools, departments, and programs, similar investigations may be requested of Stanford departments which may appear too liberal or too conservative or too radical.

We are also concerned about the fate of numerous institutes and programs associated with colleges and universities all over the country, the political orientation of which is mostly liberal, sometimes conservative, rarely radical. Stanford's investigation of Hoover's politics could trigger similar investigations of joint institutions, resulting in a generalized witch-hunt with liberals trying to track down conservative bias while conservatives would strive to expose liberal prejudice.

Because of the grave threat it poses to academic freedom, we urge you to oppose the investigation of the Hoover Institution's political orientation and associations.

What's the mission of Stanford University? Here's the first description

The following is a Stanford University Statement of University Mission:

The origins of Stanford's mission are based in its founding during the last quarter of the 19th Century. Higher education in the United States was taking on new definition, combining traditional undergraduate instruction carried over in our liberal arts colleges from the English university with the German university's new emphasis on scientific research and graduate training.

Out of this confluence, flavored with a uniquely American aim of using knowledge to address practical problems, emerged the research university. While maintaining balance with undergraduate instruction, Stanford has been included from the beginning among a relatively small group of research universities which account for a large share of the total national output of research and PhDs. This heritage shapes the University's mission today.

Purposes

While goals and objectives suggest accomplishments within our reach, purposes represent the horizon of our aspirations. In keeping with the enduring nature of the University our purposes indicate direction and commitment; they do not define a destination that we expect to reach. The following statements of purpose sum up the University's mission.

In the research university, there is a continuum of effort ranging from the creation of new knowledge, to the collection, preservation, and publication of scholarly materials, to the training of graduate students in scholarly and professional disciplines, and to the general, liberal, and preprofessional education of undergraduates.

It is important that Stanford advance the limits of scholarship through original investigation across a broad range of fields which meet the test of intrinsic importance and which in the aggregate provide coherent coverage of much of what is important to mankind. However, these activities must be integrated with the education of students at all levels.

At the undergraduate level Stanford's purpose is to bring knowledge and understanding to each new generation of young people; to instill in them an appreciation of scholarship, and of health and physical vitality; and to provide the basis for ethical and responsible lives, productive careers, and contributions to the public welfare.

This purpose is pursued by instruction in the critical skills of analysis, reasoning, and expression; in human and self-understanding; in their own and other cultures; in the fundamental skills and methods needed in a rapidly changing world; and in preparation for professional life and studies. It is also pursued by providing a campus environment and activities through which students develop attitudes and values in the midst of a diverse population.

Stanford's purpose is also to bring advanced graduate students and post-graduate trainees in the scholarly disciplines to the limits of available knowledge in their fields, instilling in them the motivation for extending these limits and transferring their discoveries, and providing them with the skills and experience to perform these tasks with excellence and conscience.

In the professional schools Stanford's purpose is to train graduate students in current theory and practice, and to prepare them for leadership in the practice, policy, or research aspects of their professions.

Principles

Pursuit of these purposes is guided by a number of principles that shape an operating philosophy, provide a coherent framework for decisions at all levels, and imbue the institution with a distinctive style and character. It is inevitable that conflicts will arise among these principles requiring careful resolution to maintain balance without lessening the validity of particular principles.

* Stanford shall maintain the highest standards of excellence in research and teaching, recognizing that, in a research university, there is no inherent conflict between these endeavors and that advanced scholarship and research enrich teaching.

* Stanford shall practice and defend freedom of inquiry, thought, teaching, expression, and publication.

* While maintaining a comprehensive, but not exhaustive, commitment to coverage of the basic disciplines and professions, Stanford shall concentrate its energies and resources in order to maximize its ability to sustain excellence in selected areas.

* Stanford shall maintain a maximum degree of financial and political independence, and shall not accept financial or other support that would restrict the faculty's ability and freedom to carry out its academic mission, or otherwise constrain the institution's independence.

* Demonstrated capacity for research and scholarship at the highest level shall be a necessary condition for appointment and promotion of the faculty. Because teaching ability—in its broadest sense (including undergraduate teaching, graduate training, and advising)—is very important it shall receive thorough consideration. Teaching as well as research and scholarship are expected of all regular faculty.

* Because Stanford wishes to maintain high standards of excellence in support of its academic mission, merit (in relation to program requirements) shall be the principal basis for hiring and promoting staff.

* Both individual merit and diversity of the student population shall be the criteria for admitting students.

* Undergraduate students shall be admitted according to a policy that takes no cognizance of financial need.

* Affirmative Action shall be pursued vigorously for faculty, staff, and students.

* Stanford shall maintain a residential learning and working community for students, faculty, and appropriate staff.

* Stanford shall act with integrity in all of its affairs and as a good citizen in the local community.

* The faculty, as specified in the Articles of Organization of the Faculty (1904), shall have the prime role in determining institutional policies governing academic affairs (e.g. the granting of degrees, academic evaluation, research, appointments, admissions, etc.).

* Stanford shall preserve the openness with which the administration and faculty communicate and participate in formulating policy and making decisions.

* Stanford's financial and land resources shall be managed to achieve Stanford's purposes now and for future generations.

* Stanford shall provide the facilities and other support services needed to carry out its purposes and shall insure the primacy of academic objectives by maintaining high standards of productivity and efficiency in its support activities.

University Objectives

Stanford has many objectives, each rooted in the institution's purposes and principles. They state in specific but broad terms what we are trying to accomplish. Behind each objective lie operating plans and goals by which performance and progress at various levels in the institution may be measured. The following are the University's main objectives for the next five years.

Academic Affairs

1. Improve the undergraduate curriculum by introducing integrative general education courses for freshmen (especially multi-quarter sequences), by providing more honors and seminar work for advanced undergraduates, by increasing opportunities for writing instruction, and by increasing opportunities for undergraduates to participate in research.

2. Maintain and strengthen the quality of Ph.D. and professional programs by providing adequate financial support for students as well as improved laboratory and library facilities.

3. Pay continuing attention to the quality of the faculty both as scholars and as teachers. Very careful recruitment, a commitment to increasing the number of qualified minority and women faculty, provision of opportunities for professional development, and rigorous standards for promotion are especially important policies, both during the initial hiring of new faculty and during promotion to tenured rank. Only the truly outstanding should serve on the faculty.

4. Establish policies that allow flexible responses to emerging patterns of corporate research support, while maintaining the University's essential commitment to academic freedom.

5. Review and, when appropriate, revise the organization of undergraduate studies, including the Undergraduate Cabinet, in order to make it a more effective arrangement for initiating improvements in undergraduate education.

6. Create a climate of continuing review and renewal of the curriculum at both the undergraduate and graduate levels and utilize visiting committees more effectively in the process. Respond to changing requirements in research and teaching by creating new programs and phasing out old ones. Establish an innovation fund to support this objective.

Student Affairs

1. Review, and where appropriate revise, student residential policies and programs to reflect new educational opportunities afforded us by added space for graduate and undergraduate students.

2. Help students recognize and appreciate the racial, religious, socioeconomic and other differences at Stanford; encourage interaction among diverse groups and individuals; and help students learn the skills needed to work and live effectively within this diversity.

Medical Affairs

1. Strengthen the management of the Medical Center and its three functional units (School, Hospital, and Faculty Practice Plan), and provide an environment that will attract and retain academically-oriented, top-quality executive personnel.

2. Correct major physical plant deficiencies that will allow the Center to maintain its leadership position as a major research-oriented medical school, regional referral center, and as a University teaching and community hospital.

3. Develop a strong Center-wide planning capability and specific long-range plans for both academic and service-oriented programs of the Schools and Hospital.

4. Review and revitalize the academic programs of the Medical School.

5. Develop and implement policies and programs that enhance the acceptance, understanding, and support of the Stanford University Medical Center in the local community.

Business Affairs

1. Support academic program goals by managing the University's business and financial affairs efficiently, effectively, and with integrity.

2. Modernize University accounting systems to fulfill current requirements and meet long-term needs using new technology whereever possible to minimize costs.

3. Revise University personnel policies to fit emerging needs, and to improve the productivity, the potential, and the satisfaction of those who work for Stanford.

4. Through a strengthened real estate and investment management organization develop a diversified and flexible portfolio to enhance the value of the financial and land endowments while safeguarding the long-term integrity of the university's capital structure.

5. Establish and carry out policies and programs to meet the University's essential housing needs.

6. Establish programs to keep University facilities operating at efficient levels consistent with other required uses of resources and with the needs of users.

Public Affairs

1. Organize and cooperate in efforts to protect and promote Stanford's interests through national and state educational associations and with other colleges and universities.

2. Promote the accomplishment of University plans by providing advice and assistance to those seeking the cooperation of local governments.

3. Encourage public understanding and appreciation of Stanford by presenting complete and accurate reports of University activities, and by presenting attractive public ceremonies, performances, and events.

Development

1. Increase total giving and achieve a closer relationship between gifts and critical University needs, including concerted fundraising efforts in the Medical Center and for unrestricted gifts.

2. Complete Stanford's first comprehensive effort in over a decade to identify new prospective donors, and plan and launch the fundraising activities to be associated with Stanford's Centennial period (1985-1991).

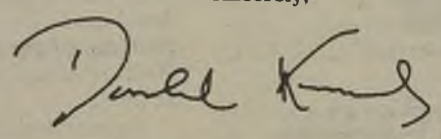
3. Strengthen the role of volunteer leadership, especially that of trustees, in formulating and executing fundraising activities.

Stanford has not had, in recent times, a written statement of its purposes and objectives. Some may believe that it does not need one: a university is, after all, a place in which to gain and disseminate knowledge, and scarcely requires a formal description beyond that.

On the other hand, a great many organizations—including some that would appear to be as self-defining as universities—have found it useful to undertake deliberately the exercise of saying what they stand for, and what they hope to accomplish in support of those purposes.

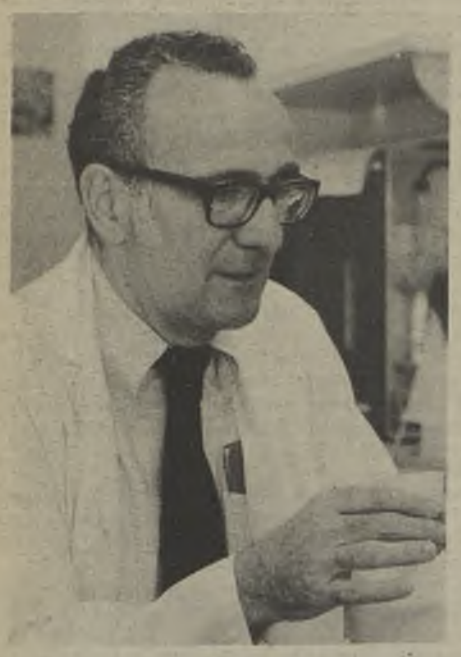
I therefore offer this statement of mission and objectives, which was drafted in consultation with the Management and Organization Study Group and others. It will, I hope, lead to lively discussions about the purposes of the University and stimulate comments from the Stanford community. My goal is to keep the document alive through occasional reviews and revisions reflecting Stanford's vitality and changing circumstances.

Sincerely,

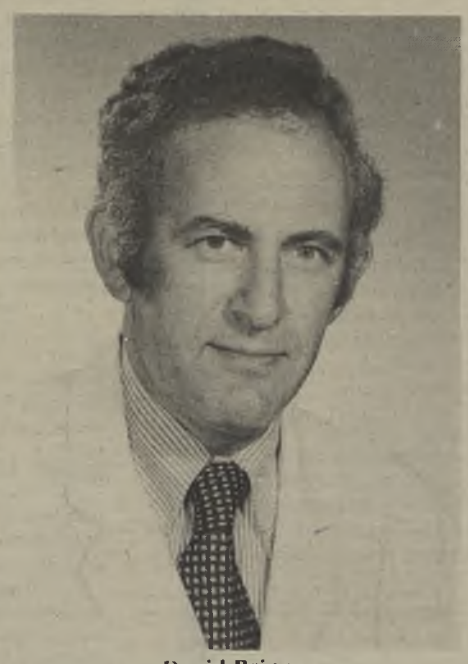


Donald Kennedy

Medical Center MEMO



Gerald Reaven



David Prince

New professorships begun at the School of Medicine

Two new endowed professorships at Stanford University Medical School will sponsor faculty members conducting research in neurological sciences and in the mechanisms and treatment of diabetes, the University Board of Trustees announced Monday.

Dr. Gerald Reaven, a professor of medicine/gerontology and a leader in understanding the role insulin plays in diabetes, has been named the Nora Eccles Harrison Professor in Diabetes Research.

Dr. David Prince, professor and chairman of the department of neurology, has been named the Edward F. and Irene Thiele Pimley Professor in Neurology and the Neurological Sciences.

Reaven, 54, has focused his research on the physiology, biochemistry and mechanism of action of insulin in the human body. He helped verify that it is certain cells' insensitivity to insulin, rather than a lack of insulin, that is the source of the most common form of diabetes. Tracking the problem to a cellular level, the physician has actively pursued new treatments aimed at improving tissue sensitivity to insulin, and thus improving control of the disease.

The Harrison Professorship is the first in the diabetes field at Stanford, and was established to honor Nora Eccles Harrison, a noted artist in ceramics, and founder of the Nora Eccles Treadwell Foundation, which sponsors advances in medical research in the areas of cardiovascular diseases, arthritis and diabetes, in California and Utah.

The chair is the second professorship at Stanford endowed by a member of the Eccles family. In 1973, the Marriner S. Eccles Professorship was established in the Graduate School of Business in the name of Nora Eccles' eldest brother, an internationally known banker, business executive and former chairman of the board of governors of the Federal Reserve System.

Prince, 50, holder of the Pimley chair, studies the intricate communication between cells in the brain. He has made important contributions to understanding the development of electrical signals and abnormal discharges in nerve cells, as well as the ways transmitters—chemical messengers of the nervous system—affect nerve cell behavior.

Prince and his colleagues were the first to record from inside neurons of the human brain, and have pioneered techniques for keeping brain tissue alive in an artificial environment to study the cellular abnormalities that can underlie neurological disorders.

Irene Thiele Pimley, a long-time San Francisco resident and patron of oriental art, was ill for many years with Parkinson's disease before her death in 1982. Her bequest to Stanford of more than $3 million for basic research into the causes and cures of Parkinson's and related neurological disorders reflected the interest she developed in the scientific background of the disease, her family said.

Pimley lived in China for many years his business interests there. He was one of the founders of the American International Group, a marine and business insurance fund that operates internationally.

Biotechnology company buys rights to DNA cloning patent

Creative BioMolecules Inc., of Brisbane, Calif., has licensed rights to the DNA cloning patent held by Stanford University and the University of California at San Francisco, Stanford announced last Monday, May 2.

John Callahan, president of the 1-1/2-year-old biotechnology company, said the patent was needed to perform quality control functions on chemically synthesized genes, including a product which offers the eventual possibility of helping persons with growth deficiencies.

The patent issued Dec. 2, 1980, covers the basic techniques of DNA cloning—often called gene splicing—which were developed by Dr. Stanley Cohen, professor of genetics at Stanford; and Dr. Herbert Boyer, professor of biochemistry at UCSF.

Seventy-four companies have taken out licenses, and current license holders total 68, said Katharine Ku, who administers the DNA cloning license for Stanford's Office of Technology Licensing.

Ku said several companies have dropped the license because they were no longer planning to use the technology, while other companies dropped out when they were acquired by other firms already holding a license.

The patent grants nonexclusive rights to this patent and a pending U.S. patent application which covers "products" of the technique. Ku said Stanford has not been actively soliciting new licensees until the outcome of the pending application is known.

Net proceeds from the licensing are split evenly between Stanford and UC and used to support research and education. To date, more than $2 million has been derived in licensing fees, Ku said.

One consumer health product, insulin, has been made and marketed from bioengineeering techniques based on the Stanford-UC patent. Other products are being made and sold in research, said Ku.

Creative BioMolecules, which has laboratories in the Boston and San Francisco areas, recently announced the availability of one such research product, its chemically synthesized gene for human growth hormone-releasing factor (hpGRF).

Callahan said the hpGRF gene will be offered for sale on a nonexclusive basis to any university or industrial group interested in the study or production of hpGRF.

The gene is a tool which a company eventually might use to manufacture medication which will trigger the release of a patient's natural growth hormone. Callahan estimated several years would elapse before any product could be available for widespread clinical use.

Creative BioMolecules specializes in nucleic acid and protein chemistries and their applications to the field of biotechnology. —Mike Goodkind

Public invited to Heart Health Fair

The first annual Heart Health Fair, sponsored by Stanford University Hospital, will take place from 11 a.m. to 7 p.m. Friday, May 20, at the Stanford Shopping Center. The public is invited, and the event is free of charge.

The Fair, intended to promote community awareness of available resources for the prevention of cardiovascular disease, is coordinated by the cardiac patient teaching committee of the department of nursing services at SUH.

Registered nurses, dietitians, and other health professionals will staff approximately 10 booths, according to Maureen Kennedy, R.N., nursing educational coordinator. These people will offer information on topics including the anatomy and physiology of the heart, cardiac risk factors, and yoga and aerobic exercise.

Blood pressure checks will be offered, and those wishing to donate blood will be able to make arrangements with representatives from the Stanford Blood Bank.

For further information on the Fair, call Kennedy at 497-6706.

Current Medical School faculty openings

Stanford University is an equal opportunity employer and welcomes nominations from women and minority group members and applications from them.

Stanford University Schooi of Medicine invites nominations and appiications of candidates for appointment to the fuil-time facuity as professor and chairperson of the department of anesthesia. This person would serve aiso as anesthesiologist-in-chief of the Stanford University Hospital.

Interested candidates should send curriculum vitae and supporting documentation to: Robert A. Chase, M.D., Chairman, Search Committee for Anesthesia, Stanford University School of Medicine, Stanford, CA 94305.

The division of infectious diseases of the department of medicine, Stanford University School of Medicine, invites applications for an M.D. Director of the Diagnostic Microbiology Laboratory.

Level of appointment, assistant or associate professor, will be determined by applicant's relevant experience and professional accomplishments. The primary function will be to introduce new diagnostic procedures and methods and to conduct a significant research program in diagnostic microbiology.

Other functions include internal medicine attending, infectious diseases consultation and teaching postdoctoral fellows and housestaff. The position is fully integrated into the division of infectious diseases.

Qualified applicants should submit a curriculum vitae, bibliography, statement of research and clinical interests, and two references to: Thomas C. Merigan, M.D., Head, Division of Infectious Diseases, Stanford University Schooi of Medicine, Stanford, CA 94305.

The department of genetics of Stanford University School of Medicine invites applications for an assistant professor of genetics.

Candidates should have scientific interests in the areas of human genetics (such as cytogenetics and human biochemical genetics), cellular genetics (particularly chromosome structure and function) or molecular genetics of higher eukaryotes, especially mammalian organisms. The position is full-time, tenure track, involving teaching and independent research.

Send curriculum vitae, bibliography and names of three references to: Dr. Stanley N. Cohen, Chairman, Department of Genetics, Stanford University Medical Center, Stanford, CA 94305.



Guthaner prepares to screen a patient using digital fluoroscopy, a relatively new, noninvasive diagnostic procedure for helping doctors detect disorders of the vascular system early on.

Radiologist predicts much use for modern, computerized diagnostics

An extension of a standard angiogram may provide more diagnostic information—while being less expensive, quicker, and more comfortable for patients—by incorporating modern computer technology, according to researchers at Stanford University Medical Center.

"Digital radiography is the wave of the future," said Dr. Diana Guthaner, assistant professor of radiology, who is researching its clinical applications.

Still not widely available, the procedure works by digitizing the information—converting it to computer language. In many situations, this allows physicians to get a better image than with a standard angiogram, which gives a picture of the body's vascular system by using X-rays.

More specifically, digital fluoroscopy is being used instead of more invasive angiograms to screen various diseases of the blood vessels, and determine heart function and blood flow. It is also being used to supplement angiograms in order to get the most out of the information obtained.

With standard angiograms, a catheter—a long tube thinner than a drinking straw—is threaded into the blood vessel physicians want to observe. An iodine contrast substance is injected through the catheter. The contrast blocks the X-rays from going through the vessel onto the film. Thus, the vessel appears white on the film, while everything else not blocked by the contrast appears black.

Piercing the skin with the catheter in order to thread it to the specific vessel is painful for the patients, Guthaner said. The iodine can be irritating, she added, which also causes pain. Many patients with heart or kidney failure cannot handle the large amounts of iodine necessary in routine angiograms. The substance makes the body retain water, she explained, which such patients cannot tolerate.

Digital fluoroscopy, on the other hand, is "virtually non-invasive and non-traumatic," Guthaner said. As a screening method, the iodine is injected into the veins rather than the arteries. It dissolves in the body's blood quicker. Therefore, its concentration in a specific vessel is lessened, which decreases the pain.

The procedure is quicker as well, she added. Following routine angiograms, the patient is required to stay in the hospital for at least six hours, which usually ends up being overnight. Digital fluoroscopy, however, is done on an outpatient basis, thereby cutting costs.

Rather than looking at an X-ray, physicians call up an image on the computer screen. This image can be enhanced by subtraction techniques, through which everything but the vessel in question is eliminated from the screen.

There are limitations to the procedure, however. Often the image is not quite clear, Guthaner said, because it can be obscured by any patient motion. And if the vessels overlap each other, she continued, the procedure is not effective.

But, she added, many patients who would forgo an angiogram because of its invasiveness will agree to digital fluoroscopy screening. This gives physicians the chance to diagnose disorders of the vascular system early on.

Digital fluoroscopy can be incorporated in standard angiograms, Guthaner said, providing more information without using more contrast.

Potential clinical applications, she continued, include determining what type of therapeutic intervention to use, aortic disease, patency of coronary bypass grafts, cardiac function, and as a follow-up for vascular surgery.

—Shirley Kraus

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Trigg to head planning of new CHAS

Langston Trigg, Jr., has been named project director for the New Children's Hospital at Stanford (CHAS), announced Dr. Lawrence Crowley, chairman of the Board of Directors.

Trigg has been assistant director of facilities/projects of Stanford University Medical Center since 1980. He will assume his new position on June 6, 1983.

As project director, Trigg will be responsible for overseeing the organization of planning and construction of the new children's hospital at the Medical Center. He will report directly to the chairman of the board.

The boards of directors of Stanford University Hosptial (SUH) and CHAS agreed last summer to consolidate the pediatric facilities of both institutions. The new hospital—to be built at an estimated cost of $40 million—will be physically attached to SUH.

It will consolidate the 60 beds at CHAS and the 44 pediatric acute medical-surgical and pediatric intensive care beds at SUH. It will also house the Stanford-Children's Ambulatory Care Center, which provides 27 separate clinic services. It will continue to provide inpatient services in the 15 specialties now offered by both hospitals.



Langston Trigg, Jr.

Prior to coming to SUH, Trigg was facilities planner and project manager at Children's Hospital Medical Center in Oakland, where he headed up a $36 million new building project.

He received his master's degree in architecture from the University of California, Berkeley, in 1975.

What we eat counts: a medical guide

"Low calorie diets put people in a semi-starvation state," warns a Stanford University scientist in a newly published book.

"They affect the metabolism, including brain activity," said Dr. Keith Taylor, professor of medicine. "In the extreme, they cause people to become dehydrated, go into stupor, or even become comatose."

Safe diets, he continued, are those in which none of the essential nutrients is left out, and in which people lose weight at a slower, steady pace. Increased physical exercise, he stressed, can help a lot.

The new book, *Clinical Nutrition*, (631 pages, McGraw-Hill Book Company, $21.95), was co-authored by Taylor and Dr. Luean Anthony of the University of Texas Health Science Center.

"We wrote *Clinical Nutrition* to be a reference book, but also to relay the message that physicians need to think about patients' nutritional status whether they're sick or well," Taylor said in an interview. "Like a medical textbook, each chapter treats a different body system and includes the basic medical information about each one. The difference is that we emphasize nutritional matters in relation to each system."

Nutrition is a major factor contributing to health and disease, but unfortunately, physicians tend to overlook its importance, Taylor observed.

His book, he said, may be the first all-inclusive medical textbook focusing on the importance of what people eat.

"Our goal is to provide physicians, medical students, nurses, and all health care providers the information they need to be able to discuss eating habits and educate their patients," Taylor said. When a patient asks about a diet, for example, the physician has got to know about it, he added.

"You've got to know why that specific diet is good or bad," Taylor said. "If you've never heard of it, you lose your credibility with the patient. Then even if you give good advice, the patient most likely won't listen."



Keith Taylor

Taylor extensively evaluates all the popular diets. "Diets on which people eat as few as 300 calories a day, such as the liquid protein diets, are dangerous," he said. "Many deaths have been reported, especially among young women, probably due to cardiac complications."

On a more general note, Taylor and Anthony speculate that some of the diseases of western civilization may in part be due to a move away from the bushman's diet. In the past 10,000 years, agriculture and cattle herding have led humans to adopt diets possibly including too much animal food. Early man's diet, he said, consisted mostly of vegetables with some animal food. By comparison, modern man's diet is probably much more restricted.

While Taylor said all essential nutrients are probably known, the ideal balance of these nutrients, and the effects of an imbalance on the human body still remain a mystery. "In this area," Taylor concluded, "we've still got a long way to go."

—Shirley Kraus

Why animals are needed in m

The search for knowledge is on instinctive trait unique to human beings. Perhaps no body of knowledge collected during many centuries by man is more valuable than the scientific and medical information which has been developed in the laboratory, almost always with the help of animals.

Recently there has been interest and curiosity about endeavors where the relationship between humans and animals is joined in research and teaching. Stanford University Medical Center os a major research institution would like to answer some of the more common questions raised by the public.

Why are animals needed in research?

The enormous strides gained in medical knowledge during recent decades could not have been accomplished without laboratory animals. Dominick Purpura, dean of the Stanford medical school, estimates that more than 90 percent of all medical knowledge in the last century has been directly dependent on studies involving laboratory animals. The heart and heart/lung transplant programs at Stanford would not have been possible without first testing survival of the transplanted organs on dogs and monkeys. Several forms of deafness are now correctable by surgery because of the help of cats. As far as we have gone, there is still a long way to go. For every child fighting for survival against leukemia, there is a medical puzzle which only research can solve.

What do animals do to help researchers?

Certain animals are susceptible to the same diseases as humans. Often researchers can find the underlying cause by studying the disease as it occurs in animals. Before newly discovered medications are administered to people, research can assure their safety by closely assessing their effects on animals.

Granted, this information is important, but aren't alternatives available?

Yes, alternatives are available, and the use of such innovations as tissue cultures and computers has played an instrumental role in reducing the number of laboratory animals needed annually by about 35 percent in the past 10 years. This is an important conservation achievement, and has resulted in significant financial savings for taxpayers and nonprofit supporters of research. Scientists who regularly work with laboratory animals have played an instrumental role in finding innovative alternatives to animal research.

What about some of these alternatives—computers for example?

Computers simply cannot duplicate nature. But data analysis with the help of computers often enables scientists to derive answers more quickly than before. For example, a computer might screen whether a potentially helpful drug has any potential hazards by scanning whether other products containing similar materials have been found to be harmful. This helps rule out a clearly harmful substance before the drug is laboratory tested. But this knowledge is simply not complete. As a safeguard the drug must still be given to animals before it is issued to humans. Computers are clearly not a substitute for basic research; they don't create their own data. Therefore, animal research will continue to be necessary for the forseeable future.

Some persons have pointed to tissue cultures. Do these offer an alternative?

Research on cellular structure, blood samples or other biological materials, both human and animal, is being conducted extensively. Studies in a test tube (or *in vitro*) can provide many useful answers about what goes on in living organisms on the cellular or molecular level. But these studies can't really tell scientists very much about how a whole animal or human functions. For example, researchers can't learn from such studies how kidney failure affects other organs.. Also, since cells must be taken from living laboratory animals, in vitro studies do not eliminate the use of laboratory animals. In short, current technology doesn't exist to eliminate animal research.

Is all animal research essential? Critics contend there is repetitious or even frivolous research which appears to benefit no one.

The hallmarks of science are the control of variable factors and the reliability (or repeatability) of results. Therefore, experiments must be repeated—often at different locations by several researchers—to ensure that results are both accurate and objective. It is very difficult to judge in advance whether a particular experiment will yield important knowledge or benefits. If the outcome were definitely known, there would be little point in conducting the research. On the other hand, responsible scientists clearly have a moral and ethical obligation to ensure that waste does not occur—particularly if it involves the additional responsibility of dealing with research animals. This is a matter which institutions, individual scientists and even the public have a responsiblity for monitoring. But it would be irresponsible for scientists to guarantee in advance that their work will indeed always provide vital information or an immediate clinical outcome.

What animals are used in research?

A wide variety of animals is employed in research. Sometimes a species is selected because it has characteristics similar to man. Other times it is selected because its properties contrast with a parallel function in man. For example, dogs do not suffer from hardening of the arteries, so medical researchers can learn much by studying them to learn what differences exist between dogs and humans. Such knowledge might someday lead to curing of hardening of the arteries in humans. At Stanford researchers are attempting to find the source and cure for narcolepsy, a disease that causes sudden sleep attacks in people. Researchers have found that dogs often display symptoms of the malady in a manner nearly identical to humans. In other cases, such as basic studies about circulation, rats might offer an acceptable similarity—sometimes called a model—to man. To cite another example, monkeys provide an excellent model for studying whether certain forms of cancer are caused by viruses which might be prevented if vaccines could be developed.

What animals currently are being used in research at Stanford?

Palo Alto VA concludes investigation of injured research dog incident

Animal recovery cages are being constructed at the Palo Alto Veterans Administration Medical Center following an internal investigation about an injured research dog, the chairman of the facility's Animal Care Committee said last week.

Dr. Malcolm Anderson, assistant professor of radiology and assistant chief of radiology at the VA, said the report concluded that the research animal had received excellent treatment until the time it was taken from the facility by a medical student.

Anderson was directed April 6 by James DeNiro, director of the VA center, to appoint a panel and investigate the incident.

The report, Anderson said, confirmed earlier reports that the animal was bitten several times by another dog during the the post-operative period after experimental surgery.

"Specifically designed recovery cages are already being installed," said Anderson.

Until about two years ago, he said, laboratory dogs were routinely housed in small cages where contact between the animals was impossible. However, the recently installed runs, about 4-feet-by-6-feet, may have enabled the dog's paws to protrude beneath the walls of the run, allowing the dog in the adjacent run to bite them.

"Although conscious, the dog still recovering from a surgical procedure was not fully alert," Anderson said.

Besides the recovery cages, the report recommended that doors to rooms containing animals remain closed and that emergency phone numbers be posted near animal areas, Anderson said.

The dog was taken from the VA March 24, nine days after surgery, by a medical student who refused a veterinarian's request that the dog be returned to the hospital for treatment. The animal subsequently was put to death by a private Palo Alto veterinarian who told a news conference that he believed the dog was suffering and could not recover.

"If the dog did need further treatment—and we would really question whether that was the case—then treatment was clearly delayed by its removal by the student," Anderson said.

"If an animal emergency existed, as a lab worker in the program in which the dog was involved, the student should have immediately contacted personnel associated with the research program who were known to him," Anderson said.

The dog, which had been involved in an experiment intended to perfect techniques for repairing and replacing blood vessels, was found by student Peter Barran after the animal walked into a corridor through a door left ajar by painters, Anderson said.

Anderson said he was convinced that the incident was isolated and was not likely to recur.

Other members of the panel included Dr. Frances Conley, associate professor of surgery and chief of neurosurgery at the VA; Veterinarian John Hicks; Dr. Shoichi Kohatsu, associate professor and chief of surgery at the VA; and Dr. Marion Smith, professor of neurology (research).

—Mike Goodkind

June reception to honor Med School and Clinics staff

For the first time, Medical School and Clinic employees will be the focus of a reception honoring specific years of service, announced Rosemary Hornby, manager of the school's Human Resources Group.

The event is scheduled Thursday, June 2, from 3 to 5 p.m. in the lobby of Fairchild Auditorium. Those receiving invitations are employees who have 5, 10, 15 and 20 or more years of service. In addition, invited employees will be free to invite a fellow worker to join the group.

"We would like to provide an opportunity to show our appreciation for employees' years of service and hard work at specific anniversaries in their school career.

"Several of the people with more than 20 years started with the school when it was in San Francisco. In addition to the recognition, this event is an opportunity to reflect a bit on our history," Hornby said.

Hornby said her department was flexible in determining number of years service and will count time spent working in the Hospital or other areas of the university.

Employees of the Faculty Practice Program and the Clinics will be eligible for invitations to the school reception. Some employees, because of their work arrangements, might also be invited to the hospital and/or FPP events, she said.

ledical research laboratories

There are between 15 and 25 species at the Medical Center at any given time depending on research needs. The vast majority of animals—about 95 percent— are rats and mice of breeds which are helpful in research but too fragile to survive in the wild. Animals are chosen carefully for their ability to provide the best scientific outcome possible. In January 1983, for example, individual species present in the facilities of the Division of Laboratory Animal Medicine included three calves, 62 cats, six chickens, 43 old world monkeys, 103 dogs, one ferret, 13 reptiles (including frogs, turtles and toads), one goat, 88 guinea pigs, 99 hamsters, 4,612 mice, one pig, 536 rabbits, 1,867 rats, 13 owls, and 84 ground squirrels. In addition there are separate specialized breeding colonies for monkeys and mice.

Where does Stanford get its animals?

Most animals are purchased from specialty suppliers, including the rats and mice bred specifically for biomedical use. Farm animals are purchased from agricultural suppliers, while dogs and cats currently are bought from pounds and shelters outside California. Legislation currently is pending which would make the use of pound animals in research illegal. Stanford, and other institutions such as the University of California, takes the position that it would be wasteful to breed dogs specifically for the purpose of research while annually millions of animals are euthanized because they are unwanted.

What about the use of animals in teaching?

Institutions sometimes use animals to demonstrate anatomical principles or surgery techniques to students. However, Stanford does not regularly use animals in the formal training of medical students, although research animals frequently are employed in the education of physicians or scientists who must master skills eminently needed for a human application.

What is Stanford's position on animal welfare and what standards are required for animal care?

Stanford University clearly has a moral and ethical obligation to protect its laboratory animals. And it also has explicit obligations rooted in law. Under federal regulations, researchers must take steps to eliminate any pain greater than a pinprick. In all surgical procedures involving animals, anesthesia must be used, and operating room standards are similar to those required for humans. Great precautions are taken to ensure that animals do not suffer pain, even when they must be killed so that research may be completed. Of course not all animals are euthanized. Stanford, for example, has a colony of rabbits whose contribution is to provide small quantities of blood which is made into serum used in the treatment of heart transplant patients. These rabbits on the average live far longer lives than rabbits in the wild or those kept as pets. Primates undergoing long-term behavioral studies live and breed in colonies at Stanford without the risks of predators or untreated disease found in nature. Dogs participating in medical experiments live in kennels under conditions conforming to stringent government guidelines, which include required exercise for each animal.

Who at Stanford is directly responsible for providing and ensuring standards of quality animal care?

Direct care is provided by the Division of Laboratory Animal Medicine, comprising a staff of 30 persons, including about 20 fulltime employees directly involved in the "hands on" care of individual animals. The Division employs a veterinarian and at least one resident from an accredited veterinary program. The veterinarian has the obligation and authority to stop any experiment anywhere in the university if evidence of abuse to animals is discovered. A nine-member committee, including a student, a law professor, and a veterinarian not otherwise connected to the university, supervises the division and its functions in animal health and welfare.

Who outside the institution is responsible for monitoring animal care?

There are numerous applicable laws and regulations concerning treatment of animals. The United States Department of Agriculture is the primary agency responsible for enforcing the requirements of the Animal Welfare Act, and agents conduct frequent, unannounced inspections of facilities.

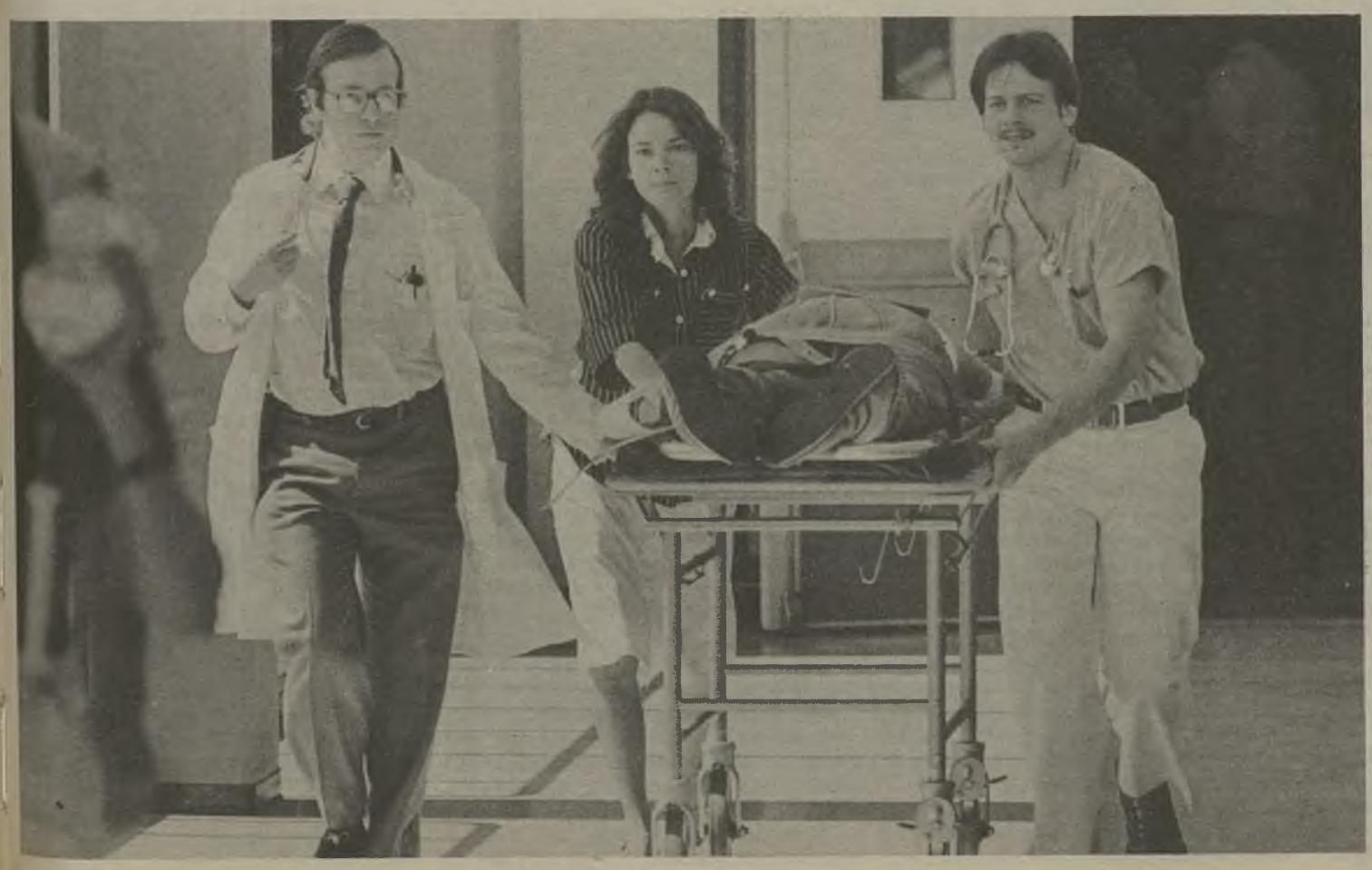
Does Stanford see areas where improvements can be made?

Yes, particularly in the physical facilities where animals at Stanford are housed. Although quality care is being provided in the current aging facilities, Stanford believes it can improve both quality and efficiency. A new $10 to $12 million state-of-the-art animal facility is being built to replace older existing facilities. When this centralized facility is completed in 1984, Stanford will be able to provide the finest level of animal care possible. In the meantime, current widely scattered facilities are undergoing renovation or temporary replacement.

Do animals benefit from the ongoing research?

Absolutely. Medical answers which are applicable to humans very often can be used to alleviate diseases and suffering among animals. These medical solutions are used for all animals, including those found in laboratories, agricultural environments and in human company as pets. Perhaps one of the most dramatic examples of research valuable to animals and humans involved an attempt to keep infant sea lions alive using cow's milk. Research disclosed that lactose, milk sugar, was damaging to the young pups. Since human premature infants fed cow's milk often exhibited the same symptoms as sea lion pups, research at Stanford led to the development of an infant formula beneficial to both human infants and sea lion pups who could not be fed by their mothers.

The issue involved with the humane treatment and ethics of laboratory animals is ongoing. Stanford is anxious to maintain a dialogue with other researchers and the public who share a concern for this topic. If you have questions or wish to discuss this issue, please write Director, Division of Laboratory Animal Medicine; Quad 7, Building 960T, Stanford University; Stanford, CA 94305.



Word was that the roof caved in on West 3B in the Hospital Monday morning, but fortunately it was only a drill. Hospital personnel responded swiftly when the disaster drill was announced, and evacuated 20 volunteer "casualties" from the site. Special patient holding and evaluation ("triage") areas were set up at the mock disaster site, at a secondary site near East 3B, and at the Emergency Department. The periodic drills are aimed at helping departments revise and consolidate their disaster plans in preparation for the "real thing."

PHOTO BY ED SOUZA

Medical Center Calendar

WEDNESDAY, MAY 11

Registration deadline: for Nursing Educational Services Basic EKG Interpretation Workshop to be held May 25, June 1, 8 and 15, from 7 till 9 p.m., 900 Welch Road, room 15. Intended for nurses with little or no experience in dysrhythmia interpretation. Basic instruction in cardiac anatomy, physiology and electrophysiology, and "hands-on" practice of interpretation with instructor guidance. A fee is charged, and continuing education credit is available. For further information, call Carole Kidder at 497-6366.

Hematology support group: Meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. till noon, TF-122c. For further information, call 497-6961.

Dept. of Neurology grand rounds: "Neuronal Substrates of Elementary Associative Learning"—Richard Thompson, Ph.D. 5 p.m., Palo Alto Veterans Administration Medical Center, building 7, room B108.

Div. of Hematology noon conference: "Drug cross resistance in cancer chemotherapy"—Dr. Branimir Sikic. Noon, L201.

Stanford Help Center workshop: "Surviving Life-Threatening Surgery—Coping with the Emotional Aftermath"—Lawrence Starkey, L.C.S.W. Noon to 1:30 p.m., Stanford Help Center/Galvez House.

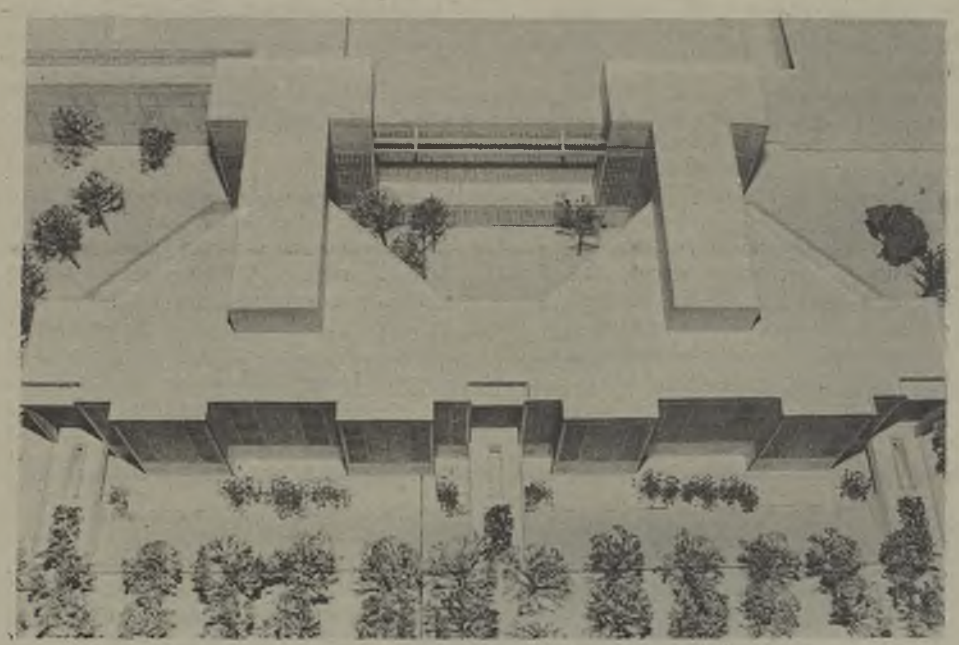
Dept. of Cardiology: "Nuclear Magnetic Resonance Imaging Systems"—Dr. Joel Blank (Diasonics Corp.) 7:30 p.m., Fairchild Auditorium.

THURSDAY, MAY 12

Friends of Psychiatry and Behavioral Sciences special program: "No Less a Woman: Self-Image and Sexuality After Mastectomy"—Regina Kriss, Ph.D. Film, lecture, and panel discussion. 8 p.m., Fairchild Auditorium. For further information call 497-6376.

Dept. of Medicine grand rounds: "Candidosis in the Immunocompromised Host"—Dr. Frank Odds. 8:30 a.m., Fairchild Auditorium.

Dept. of Pharmacology seminar: "Gene Amplification in Mammalian Cells"—Dr. George Stark. 4:15 p.m., Pharmacology Library R358.



This study model of the hospital modernization design has been built by the architects to assist in the planning stages. A final model will be made later this summer for display in the hospital.

Committee OKs modernization design

The University Committee on Land and Building Development (UCLBD) on May 3 gave its unanimous approval to the proposed architectural design for the Stanford University Hospital modernization.

The hospital plans next will be submitted for approval of the City of Palo Alto Architectural Review Board. They will be discussed at a study session of the city group on May 24.

Members of the Hospital Board of Directors approved the design at their April 13 meeting. The University Board of Trustees will review the design at their June 10 meeting.

The university committee (UCLBD), which consists of faculty, staff and student representatives, examined land use, circulation, elevations, materials to be used in the building and landscaping.

The architects for the project are the NBBJ Group, Palo Alto. The firm of Carter Hull Nishita McCulley Associates of San Francisco is preparing the landscape design.

A design review committee, composed of university architects, a Hospital Board member, representatives of campus and medical center facilities departments, and others, has worked with the architects through various studies of the building and development of landscape details.

The design includes a four-story building which will include a diagnostic and treatment wing and eight new nursing units, to be located immediately next to the present hospital building.

The architects describe the addition as a quiet background building with a design that minimizes its scale. It will have a sense of unity with the original building, designed by Edward Durrell Stone, without duplicating it. It will be close in height to the existing building.

The primary circulation areas of the new building include an atrium and courtyards adjacent to wide corridors.

Dept. of Biochemistry seminar: "Cytoplasmic Activation of Human Nuclear Genes in Stable Heterokaryons"—Dr. Helen Blau. Noon, M114.

FRIDAY, MAY 13

Dept. of Psychiatry and Behavioral Sciences lecture: "Isolation and Structural Characterization of Neuropeptides"—Dr. Frederick Esch (Laboratories for Neuroendocrinology, Salk Institute for Biological Studies, La Jolla). 3 p.m., M114.

First Annual Symposium of the Program in Molecular and Genetic Medicine. 8:15 a.m. till 5:30 p.m., Fairchild Auditorium. For information and to register, call the Office of Public Events at 497-6389.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Barriers to Health Care for Older Women"—Donna Ambrogi (managing attorney, Bay Area Law Center on Long Term Care; coordinator, Care Giver Task Force, Older Women's League). Noon, M114.

Dept. of Pediatrics grand rounds: "Hepatitis B Vaccine"—Dr. William Robinson. 8 a.m., M106.

Div. of Child Psychiatry grand rounds: "Auditory Attention Strategies in Hyperactive Children"—Margot Prior, Ph.D. (LaTrobe University, Australia). 11 a.m. till 12:15 p.m., Faber Auditorium, Children's Hospital at Stanford.

Div. of Child Psychiatry special presentation: "Theraplay: A New Treatment Using Structured Play for Problem Children and Their Families"—Dr. Ann Jernberg (Theraplay Institute, Chicago). 1 till 3 p.m., Clinic Conference Room, Children's Hospital at Stanford.

Dept. of Gynecology and Obstetrics grand rounds: "New Developments in the Treatment of Postmenopausal Patients"—Dr. Howard Judd (UCLA). 8 a.m., A336.

MAY 14 and 15

Dept. of Anesthesia workshop: "Hemodynamic Monitoring/Pulmonary Artery Catheterization." 7 a.m. till 5:30 p.m., Fairchild Auditorium. Designed for physicians dealing with critically ill patients with hemodynamic instability in operating room and critical care areas. For further information, call 497-7662.

MONDAY, MAY 16

Registration deadline: for Nursing Educational Services Legal Workshop to be held Monday, May 23, from 8:30 a.m. till 4:30 p.m., at the Palo Alto Holiday Inn. Open to all hospital personnel. Will address nursing practice according to state and federal regulations, professional and JCAH standards, etc. A fee is charged, and continuing education credit is available. For further information, call Carole Kidder at 497-6366.

Dept. of Medical Microbiology seminar: "A New Mechanism for Sensitivity in Biological Regulation"—Dr. Daniel Koshland, Jr. (UC-Berkeley). 1:15 p.m., M114.

TUESDAY, MAY 17

Dept. of Dermatology special lecture: "Cutaneous Markers of Endocrine Disease"—Dr. James Beckett. 10 a.m., A153.

Dept. of Genetics seminar: "Molecular Analysis of the Human X-Chromosome"—Dr. Louis Kunkel (Harvard). Noon, S336.

Stanford Help Center workshop: "Helping Children Grow Through Limit Setting—a lecture discussion for parents of preschool children"—Sharon Levin, L.C.S.W. Noon to 1:30 p.m., Help Center/Galvez House. To reserve a place, call 497-4577 before May 12.

Dept. of Psychiatry grand rounds: "Psychotherapy with Schizophrenic Patients"—Dr. Otto Will, Jr. 11:30 a.m. till 1 p.m., Fairchild Auditorium.

WEDNESDAY, MAY 18

Div. of Hematology noon conference: "The Spleen in Myeloproliferative Syndrome"—Dr. Theodore Cohen. Noon, L201.

Div. of Orthopedic Surgery grand rounds: "Total Hip Prosthesis Design"—Dr. Indong Oh. 7:30 a.m., M114.

Calendar items must be received in the Office of Public Events, 800 Welch Road, Suite 221, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

...News Notes...

Rose Grobstein, *chief pediatric social worker at SUH, was among three nationally prominent social workers honored last month by the National Perinatal Social Workers Association.*

In ceremonies in Boston last month, Grobstein, a charter member of the association, was given a plaque noting her pioneering efforts in the field. Grobstein helped found the first intensive care nursery at Stanford in 1962.

* * * *

Invitations from Dean Dominick Purpura for the Medical School Staff Recognition Reception were sent out recently. The reception is scheduled for Thursday, June 2, from 3 to 5 p.m. in the lobby of Fairchild Auditorium.

Invitations were sent to medical school employees with five, 10, 15 and 20 or more years of service, but past employment records are difficult to trace and the Human Resources Group would like to reach all employees who are eligible to attend this year's reception. Those who feel they should have received an invitation but didn't, should call their department administrator or the HRG at 497-5975.

* * * *

Doctors, nurses and administrators of SUH are reminded to please fill out and return the recently distributed questionnaire regarding the perceptions these three groups have of one another, to the department of nursing as soon as possible.

Respondents to the questionnaire, which takes about 15 minutes to complete, remain anonymous.

Student entrepreneurs conference expects 1,000 May 21

Organized entirely by students, Stanford's second annual Conference on Entrepreneurship is expected to attract more than 1,000 persons Saturday, May 21.

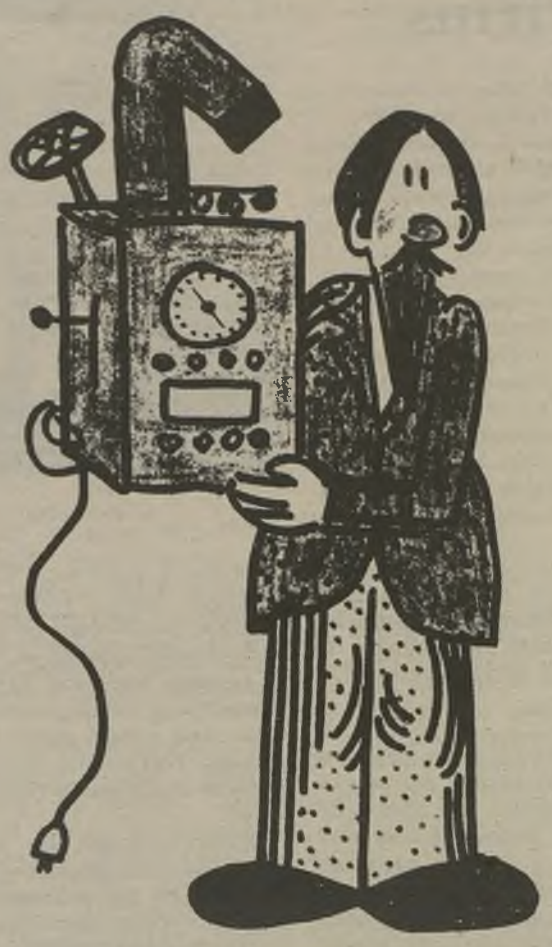
Featured speakers will include:

* Jim Treybig, founder of Tandem Computers;
* J.R. Simplot, inventor of the frozen French fry, now a leading investor in high technology;
* Sandra Kurtzig, founder of ASK Computer Systems;
* David F. Dixon, founder of the U.S. Football League and World Championship Tennis;
* Nolan Bushnell, founder of Atari, Pizza Time Theater, and Catalyst; and
* Morton Binn, chairman of Atwood Richards, an industrial bartering firm.

Dedicated to the memory of Frederick E. Terman, the Stanford electrical engineer popularly known as "the father of Silicon Valley," the conference will include 40 workshops on opportunity development, capital formation, industry trends, and entrepreneurship in large organizations, among other topics.

Workshop leaders will include James D. Guzzy, founder and president NTX Communications Corp., Santa Clara; Donald M. Dible, author of *Up Your Own Organization*; Craig Taylor, Asset Management Co., Palo Alto; Paul Hait, founder, American Innovation Corp., Palo Alto; William Younger, partner, Sutter Hill, Menlo Park; Lawrence Wodarski, acting district director, U.S. Small Business Administration; Charles Cagnon, author of *Business Ventures of Citizen Groups*; and Ronald Cape, board chairman, Cetus Corp., Berkeley.

Also: Thomas G.P. Guilbert and Judith Ann Hartmann, partners, Guilbert and Hartmann, Portland; James H. Pooley, editor of *Trade Secrets*; George Limbach, partner, Limbach, Limbach, and Sutton, San Francisco; James E. Rueter, president, Entrepreneur Support Center and Paula Colozzi, president, Entrepreneur's Alliance, Santa Clara; Patrick Corman, vice-president, Regis McKenna, Palo Alto; Rick A. Warp, president, Technical Advisers, Inc., Palo Alto; Thomas A. Fairey, chairman and founder, AIMS and PLUS, Inc., Austin, Texas; and Ellen Lapham, president, Syntauri Corp., Los Altos.



Industry trends will be discussed by Chuck Peddle, president, Victor Technologies, Scotts Valley; Robert Price, president, the Price Corp., San Diego; David B. Lockton, chief executive officer, Dataspeed Inc., Burlingame; Robert W. Pittman, chief operating officer, Warner Amex Satellite Entertainment; Marcia Klein, president, The Learning Co., Portola Valley; William Little, chief executive officer, MMR Technologies, Mt. View; William H. Hill, president, William Hill and Co., Napa Valley; and Charles Rosen, cofounder and chairman, Machine Intelligence, Inc., Sunnyvale.

Also: Bijan, president and designer of men's clothes, Beverly Hills; David A. Norman, cofounder and president, Businessland, San Jose; Ken Williams, president, and Roberta Williams, director, Sierra On-Line Inc., Coarse Gold, Calif.; Alain Leonnet, president, Lion Imports, San Francisco; Happ Klopp, president, The Northface, Berkeley; and Roy Larson Raymond, president, Victoria's Secret, San Francisco; Richard Meehan, president, Earth Science Associates, Palo Alto; Thomas Volz, vice president-marketing, Southwest Airlines, Dallas; Linda Cline Chandler, partner, Chandler Roberts, Inc, Santa Clara.

Other workshop leaders will include Niels Reimers, Stanford director of technology licensing; Bernard Ross, board chairman, Failure Analysis Associates, Palo Alto; Michael Boone and Larry Burke, Boone Corp., Newport Beach, and John Halamka, Colossus Computers, Stanford; Carolyn Morris, chief executive officer, Xpertek, Inc., Palo Alto; Robert Halperin, president, Raychem Corp., Menlo Park; John J. Gray, senior vice president, Western Pacific Railroad, San Francisco; William F. Miller, president, SRL International, Menlo Park; and Tom Peters, coauthor, *In Search of Excellence*.

Registration for those outside Stanford is $40, including lunch and a wine and cheese reception. Advance registration must be postmarked by May 12, including checks payable to Stanford University Center for Entrepreneurship. For more information, phone (415) 497-9651.

Last year's conference on entrepreneurship attracted more than 500 Stanford students from engineering, business, and the liberal arts.

This year's conference is cochaired by Bruce Johnson, senior in mechanical engineering, and Mary Van Maren, first-year MBA student in the Graduate School of Business.

It is one of several activities coordinated by the newly formed Stanford Center for Entrepreneurship, located at Owens House. Thayer Wendell, second-year MBA student, heads the student management committee. Members include Deborah Chen, senior in mechanical engineering; David Gleba, junior in electrical engineering; John McCarthy, second-year MBA; Mike Orsak, senior in economics; LuAnn Piccard, 1982 graduate in mechanical engineering; Steven Wisch, senior in political science; and John Zoglin, first-year MBA.

Center activities include a new venture assistance program, on-site visits, and internships with startup firms.

Entrepreneurs serving on its Board of Advisers include Howard Head, inventor of Head skis and the Prince tennis racket; Jim Levy, president of Activision; and Philip S. Schlein, chief executive officer of Macy's of California.

Board members from Stanford are James Adams, associate dean of engineering; Jean Fetter, associate dean of graduate studies and research; Robert Jaedicke, dean of the Graduate School of Business; William M. Kays, dean of the School of Engineering; Gerald Lieberman, vice provost and dean of graduate studies and research; and Prof. Karl Vesper of the University of Washington School of Business.

Students seem relatively happy with campus accommodations, survey shows

Though griping about dorm living is an accepted form of letting off steam for students, Stanford students seem to be relatively happy with their accommodations, according to a recent survey conducted by Facilities and Services.

The survey covered residents in all types of student housing facilities except Escondido Village. The questions aimed to determine the students' perception of their personal safety and the safety of their property, the state of physical repair and cleanliness of their quarters, and the responsiveness to their needs of the Housing Facilities Office staff.

Of the approximately 1,560 questionnaires distributed, 538 (34.5 percent) were completed and returned.

Most students feel safe from personal harm in their residences—50.9 percent feel reasonably safe and 41.6 percent very safe. So far as the threat of fire is concerned, 54.1 percent feel reasonably safe and 27.5 percent very safe.

Most students have not reported health, safety, or security hazards, but of those who did (19.1 percent) 26.2 percent had to make a second call to get the hazard repaired, and 42.7 percent thought the repair was not made promptly.

One fifth of the students felt their personal property was "somewhat insecure" or "very insecure" in their campus residences. Slightly more than 6 percent reported something had been stolen from their room.

Two out of five felt their bikes were insecure when parked outside the building. Only one in 10 felt that way about their cars. A majority felt there was not enough space for bikes, and 45 percent felt the same way about auto parking.

About three out of four students felt their dorm room, lounge, bathrooms, grounds, and furnishings were in "very good" or "reasonably good" physical repair. A similar majority felt their accomodations were at least "reasonably clean."

Roughly two-thirds said their residence temperature and lighting was "just right," But one third felt common areas were "too cold" and similar numbers felt lighting in corridors, lobbies, and outside was "too dark."

Ample space on the questionnaire form was allowed for comments, and more than 600 were received. These were transcribed by living groups and were distributed to their managers.

Jack Albrecht, assistant director of facilities and services and project manager for the measures of responsiveness program, stated "although we would like to have had at least a 50 percent response, we have received sufficient response from residents for the various types of housing to guide the staff of the Housing Facilities office in the most effective use of their resources."

Terry McGovern, manager of housing facilities, said, "We are pleased with the evaluation student residents have given our facilities managers within the four housing areas surveyed. We will analyze as best we can all critical data and comments received, and improve our communication with those areas of housing. Our priorities for improvement will be directed first toward issues of safety, followed by housekeeping, physical repair, personal comfort, and others."

The next survey to be reported upon will determine the responsiveness of the Facilities Project Management division of Facilities and Services, according to Jason Mavis, associate vice-president, Business and Finance. This will be followed by surveys for Purchasing and Contracts, Stores, Commissary, Word Graphics, and Operations and Maintenance.

"The surveys being taken are invaluable in helping us apply resources where they can best be used to satisfy the needs of the community and provide the services of most benefit," Mavis said.

Six themes of success mark innovative high-tech firms

To stimulate innovation, corporate managers should follow the example of America's own high-tech firms—not Europe or Japan, a Stanford expert contends.

Both small and large, these companies exhibit six "themes of success," says Modesto A. Maidique, associate professor of engineering management. In a study based on 100 interviews with high-tech executives, coauthored by Prof. Robert H. Hayes of the Harvard Graduate School of Business, he describes the themes as:

1) Strategic focus: an extraordinary concentration on products, markets and business themes, which results in good understanding of customers and technologies.

2) Adaptability: the daring and willingness to take a "you bet your company" kind of risk to stay abreast of technology and the market.

3) "Hands on" top management: in large companies as well as small, good high-tech managers understand the fundamentals of their technology, interact directly with key experts, and have the authority to make change happen.

4) Entrepreneurial culture: the hallmarks include close, open communication; dissolving of the classic organizational barriers to innovation; and multiple funding sources for new ideas.

5) Organizational cohesion: a commitment to long-term employment, a common purpose, and few accoutrements of seniority, rank or specialization. "The appearance of an executive dining room is one of the surest signals that a company has stopped being a high-tech firm," Maidique says. One chief executive said, "the toughest job in managing high technology growth is too keep the firm from ripping apart at the seams."

6) Sense of integrity: honesty, fairness and openness are not sacrificed for short-term gain.

One chief executive officer explained that "in such a high risk environment you must have mutual trust to succeed."

Strategic focus, organizational cohesion, and integrity all imply stability and conservatism, Maidique observes. But adaptability, entrepreneurial climate, and hands-on management are synonymous with rapid or even precipitous change. "The fundamental tension is between order and disorder," he says.

"The successful high-technology firm must be managed differently at different stages of the firm's evolution. A steady commitment to order and organization will produce one-color, Model T Fords. Continuous revolution will bay incremental improvements and productivity gains.

"Successful companies alternate periods of continuity and consolidation with rapid reorientation that redefines a business to capitalize on changes in competitive condition and technology."

Core job

A core job of high technology managers is overcoming the traditional patterns of established organizations, he adds. "By defining jobs and responsibilities, and arranging them in serial reporting relationships, established organizations encourage the performance of a restricted set of tasks in a programmed, predictable way. Not only do formal organizations resist innovation; they often act in ways that stamp it out."

Small firms as well as such large organizations as IBM, Texas Instruments, and 3M have found that periodic change is required for adapting to their environment. And all reorganized from a position of relative strength, rather than in response to financial difficulties.

The sustained, sharp strategic focus of the successful firms contrasts dramatically with conglomerates.

"Two of yesterday's technological stars, ITT and RCA, have paid dearly for



Modesto Maidique

diversifying away from their strengths," Maidique notes. "Today they are both trying to divest many of what were once highly touted acquisitions."

Leading high-tech firms concentrate research and development in one or two areas, and sustain support even in slack periods. This enables them to dominate research in the more risky, leading edge area.

Strategic focus also is reflected in continual reinforcement of selected priorities by top management: planned manufacturing improvement at TI; customer service at IBM; entrepreneurial product champions at 3M; and new products at H-P.

Yet these and similar firms, large or small, are willing to adapt rapidly. They have the agility and daring to try "wrenching shifts in direction" to maintain their market leadership.

In its early years, General Motors shifted rapidly into diesel engines, revolutionizing the railroad industry. In the mid-1960s, IBM redefined the boundaries of competition for decades with its introduction of the System 360.

Besides probing the potential of new technology, top managers must be willing to internalize the risks and make major changes in organization and resource allocation, Maidique declares. "That is why few firms are as tough to compete against as those whose success is due largely to the leadership of a small entrepreneurial group, one which is still in charge and at the height of its powers."

SA-1 companies

The speed and efficiency with which small companies can develop innovative products often baffles managers in large firms.

To foster an entrepreneurial culture, H-P splits up divisions soon after they exceed 1,000 employees. TI is subdivided into 32 divisions and 3M had 40 until recently.

Both TI and 3M also provide a variety of funding sources for internal entrepreneurs.

At IBM, "we encourage our scientists to rebel," one manager said. The disk memory for computers was developed as a bootleg project by a handful of employees who broke the rules and risked their jobs because they believed in their project.

Maidique notes that "young people in a rapidly evolving technological field are often as good, sometimes better, sources of new ideas as more experienced persons."

Besides breaking down barriers based on age, successful high-tech firms foster collaboration between product designers, marketing and manufacturing personnel. Rewarding excellence in each of these fields is important. Some firms consciously rotate managers through different functions to encourage greater cooperation instead of competition between departments.

The integrity of top managers includes candid self-understanding.

"Successful high-tech companies are able to reconcile their 'dream' with what they can realistically achieve. This is one of the reasons they are extremely reluctant to diversify into unknown territories," he comments.

Maidique previewed the findings of his research at a meeting with Stanford Engineering School alumni in Los Angeles, hosted by TRW, May 7.

Japan's cost advantage in producing cars grossly exaggerated —Bresnahan

Japan's cost advantage in car production has been "grossly exaggerated," according to Assistant Prof. Timothy Bresnahan of the Stanford Economics Department.

Estimates that the Japanese have a $1,500 to $2,000 advantage per $5,000 subcompact are "a big myth," he says.

Highly publicized at a 1981 conference which Bresnahan organized, these estimates by James Harbour and others contain two fundamental flaws:

1) They give equal weight to each of the Big Three U.S. producers, when in fact General Motors has the lowest costs and about half the total market; and

2) They assigned idle plant costs to U.S. cars at a time when Japanese automakers were operating near capacity.

When these two factors are taken into account, the likely Japanese cost advantage for subcompacts probably runs between $300 and $800 a unit, Bresnahan says. This is still a significant difference, but suggests the U.S. remains competitive with imports.

The U.S. labor cost disadvantage of about $500 per car is about the same as the cost of transporting a new car to the U.S. from Japan, he notes.

The Japanese auto industry benefited from a permanent shift toward smaller cars as a result of the oil price shocks of the 1970s. "They had the small car lines in place where the U.S.—and to a lesser extent, Europe— did not," he adds.

Where American firms now are scrambling to improve their efficiency in assembly work and the "fit and finish" of new cars, they have moved ahead of the Japanese in the technology of new models, Bresnahan says.

U.S. manufacturers are "vastly better" on engines and drivetrains. Most of the U.S. product lines are "much newer" than the Japanese and the recall rate should go down with time.

Except for Honda, Japanese car designs are now "quite mature" and will pose an increasing problem over time for the imports, he adds.

"The U.S. had—and has—a virtual monopoly on the market for larger cars," and now is benefiting from a domestic market shift in this direction.

Japanese manufacturers have "a lot on the ball" and "can produce excellent autos," he concedes. Their advantage in assembly and in-plant technology was one factor in the recent GM-Toyota agreement to build cars at Fremont.

"It's easier to change a car than reshape a work force," Bresnahan says. While some workers are now being recalled to U.S. plants, American firms generally will be making greater use of new technology for production as the market strengthens.

The Stanford economist sees no way in which more than half the auto workers now laid off will return to work in the same industry.

U.S. quality will "pick up quite a bit" and newer product lines will make American industry very competitive, he adds.

The new Corvette, which has sold as much as $10,000 above dealer list, and the Camaro are signs of the future. "Look at the sporty end to see where the trends are," Bresnahan suggests. "That's where the payoff comes first from new technology. The cars look good and are well put together."

Where U.S. industry made the best of a bad situation from politically mandated increases in fuel economy in the past, the Japanese now are doing so with voluntary export constraints.

Both GM and Ford will use up their fuel economy "credits" sometime in 1984, Bresnahan says.

The export constraints encouraged the Japanese to move toward larger cars, which has proven to be the market trend, he adds. Higher profit margins per unit have been plowed back heavily into stronger dealer networks, strengthening their long-term competitive position.

While Big Three U.S. sales appeared relatively flat until this month, the dollar volume rose 15 percent or more, reflecting higher unit prices. This was much faster than consumer spending generally.

While Chrysler may have "mortgaged its future" in battling back toward current profitability, Ford "needs only one hit" to do well and "GM can make a mint," he believes.

While Ford has done well internationally, there's very little export market for most U.S. cars. On the other hand, the middle third of the U.S. has retained a strong preference for U.S.-made cars and "demographics are now on the American side," Bresnahan says. As young families have more children, the demand for six-seat cars and station wagons will rise.

He personally drives a 1970 Volkswagen with a rack on the rear for a Japanese bicycle.

His views sparked lively discussion at a meeting of the Stanford Center for Economic Policy Research April 12.

Center for Integrated Systems groundbreaking ceremony planned May 19

The Center for Integrated Systems at Stanford— America's largest joint venture in electronics, computers, and related fields—traces its origin to the blind daughter of a Stanford family.

Formal groundbreaking for the new $14.5 million center is planned at 4:30 p.m. Thursday, May 19, at the site. Already deeply excavated, it is located near the Campus Drive and Via Palou intersection, between the Medical Center and the Main Quadrangle. (Principal speaker will be William Hewlett, cofounder of Hewlett-Packard. Hewlett-Packard President John Young and Richard DeLauer, Undersecretary of Defense for Research and Development, will speak at 8 p.m. following an invitational dinner.)

The center's construction is made possible by $750,000 in gifts from each of 19 major corporations. Federal research funds in programs linked by the center has risen from $8 to $12 million in the past two years.

Help for blind daughter

But the CIS story began with people, not statistics. Prof. John Linvill, an electrical engineer, wanted to help his blind daughter, Candace, read regular books. He invented an electronic device to do just that, called the Optacon.



William R. Hewlett

To work, the Optacon required a large integrated circuit. This was designed and built in 1970 under the supervision of James Meindl, an electrical engineer whom Linvill recruited as an associate professor.

Then the largest integrated circuit built on any campus, the Optacon chip was three by four millimeters and contained 144 phototransistors. Meindl and his colleagues kept on building record-breakers in the Integrated Circuits Laboratory on campus.

Linvill and Meindl now codirect the Center for Integrated Systems. It has attracted 60 affiliated faculty at Stanford from electrical engineering, computer science, materials science, applied physics, and radiology.

Just three years ago—in 1980—the center was nothing more than an idea with a "hunting license" for funds. But the hunters were very well known in Silicon Valley: Young, of Hewlett-Packard; DeLauer, then of TRW; George Pake, vice-president of research for Xerox; and Bob Noyce, vice-chairman of Intel. All except Noyce were Stanford alumni or former faculty members at the University.

Under their leadership, CIS began quickly and then accelerated. "It's as though we started to walk, then run, and finally hopped on a bicycle," says Meindl.

Academic quality, basic research opportunities, and access to some of the best student brains in the country were the key factors.

Graduate student strength

Stanford has 540 graduate students in electrical engineering, more than any other U.S. university, and has repeatedly ranked among the top three institutions in faculty quality with MIT and Berkeley.

In computer science, graduate enrollment totals 205 and the faculty has consistently ranked first nationally. Stanford confers 25 computer science Ph.D.'s annually, one-eighth of the U.S. total.

While MIT, Berkeley, RPI, CalTech, Carnegie Mellon, North Carolina, Texas, and several other others are setting up joint ventures between industry and academe in microelectronics, CIS so far is the only program to receive so much support from so many different corporations.

Its sponsors include General Electric, Hewlett-Packard, TRW, Northrop, Xerox, Texas Instruments, Fairchild Camera and Instrument, Honeywell, IBM, Tektronix, Digital Equipment Corporation, Intel, International Telephone and Telegraph, General Telephone and Electronics, Motorola, United Technologies, Monsanto, American Microsystems-Gould, and Philips-Signetics.

Each company will have its own office in the center's new building, and each already has assigned high level executives as liaison to CIS. Continuing support of $2 million annually from the companies already has been projected.

Less duplication of efforts

Besides reducing duplication of effort in fundamental research, CIS provides sponsors lead time in watching work in progress and access to highly qualified graduate students.

The Center will provide a research base for an average of at least 30 Ph.D.s and 100 master's degrees annually. These will be awarded through Stanford's regular academic departments.



John Young

"Never before have computer designers in a university had such access to such high technology in semiconductors," Meindl says. "And never, in any institution, have people in integrated circuits had such a broad set of collaborating colleagues in computer science."

As its name implies, the CIS will provide a way for semiconductors to support research in computer sciences and for computer science to support semiconductor design and fabrication.

"This is something new, rapidly evolving, and unique," says Meindl. "We're entering the domain of manufacturing research."

Both he and Linvill believe the best way to tap American creativity and productivity is to "run fast, not scared." And both are strong believers in linking technological advances to liberal education and society.

Restriction not workable

In the long run, says Linvill, "restriction is not a workable strategy" in trade or ideas. Closer, two-way ties with industry should enhance basic research and shorten the lead time in its application, Meindl says.

Corporate support "broadens our academic freedom" by diversifying the funding of research, he adds. "It gives faculty entrepreneurs a broader market for their ideas for new research."

Besides formal meetings with their sponsor advisory committee, "all kinds of informal ties will keep faculty aware of what the problems are in industry, and vice versa," Linvill says.



James Meindl

Meindl notes that "secrecy, cost, and managerial control go way up" as ideas move out of the laboratory toward the marketplace. "It's to their benefit to use us for long-range research, that nourishes the roots of new product ideas."

Linvill cites two current examples:

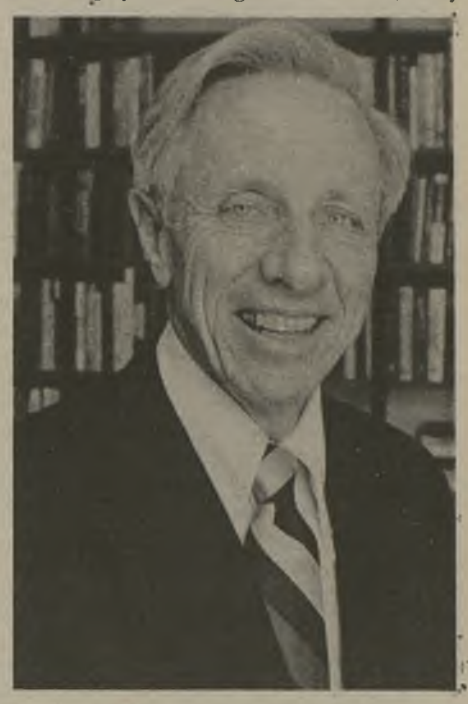
1) Many companies are interested in developing new computer-based work stations. The SUN (Stanford University Network) terminal, which includes the largest integrated circuit developed at any university, can provide a useful source of ideas.

2) While many companies are developing different systems for networking computers, there still is a need for a fundamental intellectual look at their structure.

Forum for communication

Linvill believes the center can provide a forum where communication can proceed among competing U.S. firms, fundamental science can be discussed and developed, and elements of hardware important to enhance productivity can be reviewed and targeted.

CIS also can foster integrated efforts by such disciplines as solid-state physics, device physics, integrated circuits, very large scale integrated (VLSI) circuits, computer systems, artificial intelligence, and computer science.



John Linvill

University-industry cooperation also can improve life-long professional education in rapidly evolving technology. The "half-life" of knowledge in some fields now is as short as five years, he notes.

Better use of resources

Besides making better use of scarce intellectual resources, Meindl believes joint research can stimulate innovation, and improve productivity and quality.

At the national level, potential problems concerning closer ties between industry, academe, and government include: 1) restrictions on publication, 2) ownership of patents and copyrights; 3) a tendency toward development of new products rather than basic research; 4) potential constraints on research, threatening creativity, and 5) de-emphasis on arts and humanities "which must be avoided," Meindl says. "The quality of life still depends on the arts and humanities."

On balance, he believes, the promise of joint sponsorship of university research far outweighs these potential problems. He remains optimistic that the U.S. can be a world leader in technological innovation, productivity, and quality. He sees the groundbreaking and construction of CIS as a step in this direction.

Carpools

Riders needed for vanpool M-F. Leave Newark 7 a.m.; Leave Stanford 4:45 p.m. Call Mark, 7-4342.

Need ride: San Jose (No. Capitol) to Stanford (ERL) and back, 8:30 and 5, M-F. Call Maria at (408) 280-2568 (day) or (408) 926-5328 (night).

Research report to C-AAA:

Student ratings often valid guide to teaching effectiveness, Gage says; ratings, expert consultation both needed to improve classroom instruction

The following "Glance at Research on Students' Ratings and Collegial Evaluation of Teaching in Higher Education" was prepared by Prof. N. L. Gage of the School of Education, a member of the Subcommittee on the Evaluation and Improvement of Teaching of the Committee on Academic Appraisal and Achievement.

The research literature on the evaluation of teaching comprises hundreds of papers, technical reviews, and books. Most of this literature by far deals with student evaluation of teaching. This brief review will examine only two quantitative syntheses on two important questions about student ratings and one of the few significant papers on the use of evaluations by colleagues.

1. *Are the average ratings received by instructors correlated with the average achievement of their students?*

Research on this question can be done only in multisection courses where the content, purposes, and measures of student achievement are ostensibly the same across sections.

Cohen (Peter A. Cohen in "Student ratings of instruction and student achievement: A meta-analysis of multisection validity studies," *Review of Educational Research*, 1981, 51, 281-309) synthesized the findings of 41 independent studies reporting on 68 multisection courses. The correlations between mean overall rating of the *instructors* and the mean achievement of the instructors' students averaged .43. The correlations between the mean overall *course* ratings and mean student achievement averaged .47.

Of approximately 20 dimensions on which these studies varied, only three were substantially related to the correlation between mean student rating of the instructor and mean student achievement.

a) When students knew their final grades before rating their instructors, the correlations averaged .85; when students did not know their final grades before making their ratings, the correlations averaged .38.

b) When achievement tests were graded by an external grader, the correlations averaged .52; when achievement tests were graded by the students' own instructors, the correlations averaged .15.

c) When the instructors were full-time faculty members, the correlations averaged .48; when the instructors were graduate students, the correlations averaged .34.

Other study characteristics were essentially unrelated to the obtained correlation between ratings and achievement. These other characteristics were:

* random assignment of students to sections;
* control for scoring bias in the achievement criterion;
* control for author bias in the achievement criterion;
* control for rating instrument bias;
* statistical control for student ability;
* control for students' prior knowledge of the instructor;
* the length of the period of instruction;
* the degree of the teachers' autonomy;
* the number of sections involved in the study;
* the overall methodological quality of the study;
* the course content's emphasis on hard discipline, pure knowledge, or life studies;
* the course level (introductory-level or more advanced);
* institutional setting (doctorate-granting or other institutions);
* source of study (published or unpublished);
* year of publication of the study.

All but two of the 41 studies yielded positive correlations. One of the studies that yielded a negative correlation, that by Rodin and Rodin, is well known because it was published in *Science*, but it used highly questionable methods for measuring student achievement.

The reviewer concluded that "The present meta-analysis provides strong support for the validity of student ratings as measures of teaching effectiveness. Teachers whose students do well on achievement measures receive higher instructional ratings than teachers whose students do poorly."

Nonetheless, in my opinion, the substantial correlation (r = .43) between a) "time at which ratings were administered" (whether ratings data were collected before or after students knew their final grade or examination score) and b) the correlation between mean rating and mean achievement raises some questions.

In only four of the courses the ratings were collected after the students knew their final grades; in 56 courses, the ratings were collected before the students knew their final grades. In the four multisection courses in which students knew their final grades at the time they made their ratings, the four correlations between mean rating and mean achievement averaged .85. In the other 56 multisection courses, in which the ratings were made before the students knew their final grade, the 56 correlations averaged only .38.

But suppose we assume that even in the latter courses, where students made their ratings before knowing their final grades, the students had some inkling, before they knew their final grades, of what their final grade was going to be.

This "inkling" might have to some extent the same effect on the correlation as would the actual knowledge of the final grade. That is, it would tend to increase the correlation between mean rating and mean achievement.

If so, the mean correlation of .43 over all 60 courses (and even the mean correlation of .38 in the 56 courses where the students did not know their final grades at the time they made their ratings) might be produced by the same tendency that resulted in the extremely high mean correlation of .85 in the four courses where the students did know their final grades.

This tendency would be one whereby students rate more favorably, or "reward," instructors from whom they expect to receive higher grades. This interpretation of the overall correlation of .43 differs from the one which attributes the correlation to the validity of students' ratings as indices of instructor effectiveness.

But is the expectation of higher grades determined by a perception of instructor leniency, or generosity, or by a perception of instructor effectiveness? The latter possibility emerges in courses that use the same final examinations *graded objectively*.

In such courses, the rating-achievement correlation may reflect an accurate perception on the part of the students that the instructor is indeed more effective in fostering higher student achievement. That higher achievement is, in turn, reflected in an *objectively* determined higher grade.

The latter interpretation is supported by the fact that the correlations between instructor ratings and achievement averaged .52 when achievement tests were graded by an external grader but only .15 when they were graded by the students' own instructors.

In the latter condition, instructors would have had an opportunity to foster higher ratings by grading more leniently. But this opportunity did not raise the correlation between student ratings of instructors and student achievement.

Accordingly, I concluded that **student ratings are valid to a substantial degree as indices of instructor effectiveness in fostering achievement in multisection courses.**

2. *Are ratings by students effective in improving college teaching?*

Improvement in teaching can take two forms: long-range improvement extending over many semesters, and short-range improvement from early to late within a given course.

Cohen (Effectiveness of student-rating feedback for improving college instruction: A meta-analysis of findings. *Research in Higher Education*, 1980, 13, 321-341) brought together the results of 17 studies containing 22 comparisons. Each comparison dealt with the improvement in instruction, as rated by students, on the part of instructors who received midsemester student-rating feedback and the improvement of instructors who did not receive such feedback.

Cohen converted the results of all of the comparisons to what they would have been if all of them had used a five-point scale. With this conversions technique, he found that the average end-of-semester rating for the feedback groups was 3.86 on the five-point scale (with five representing the desirable end of the scale), while the mean rating for the no-feedback groups was 3.70.

That is, the instructors who received midsemester feedback averaged .16 higher (on a five-point scale) on the end-of-semester overall ratings than instructors who received no midsemester feedback. This gain can also be expressed as .38 of a standard deviation unit, or a percentile rank gain of 15 points. That is, instructors who received the midsemester feedback have an average end-of-semester percentile rank of 65 as compared with 50 for instructors who did not receive midsemester feedback.

The consistency of the effect of midsemester feedback is evident in the finding that the feedback group received higher end-of-term "total" ratings than the no-feedback group in 20 of the 22 comparisons. Of the 22 comparisons, 10 resulted in statistically significant differences between feedback and no-feedback groups, and all of these significant differences favored the feedback group.

Different dimensions of instruction were affected in different degrees by the feedback. The dimension called "skill" showed the largest average standardized mean difference, or effect size (.47), in 14 comparisons.

"Feedback to students" showed an average effect size of .40 in seven comparisons. On the other hand, "Rapport" showed an average effect size of only .25 in 11 comparisons, "structure" showed an average effect size of .29 in eight comparisons, "difficulty" showed an average effect size of only .09 in five comparisons, and "interaction" showed an average effect size of only .09 in nine comparisons. Cohen's review does not give descriptions of these dimensions of instruction or the ways in which they were measured; for such details, it would be necessary to examine the original reports of the studies he reviewed.

Students' perceptions of their own learning or progress in a course were labeled "Student progress ratings." The average effect size in four comparisons on these averages was .30, favoring the students of the instructors who received feedback.

Similarly, student attitude toward the subject being taught was more favorable in the classes with midsemester feedback, with an average effect size of .42 in the four comparisons made on this dimension. Finally, achievement was higher among the students of instructors who received feedback in three of the four comparisons on this dimension, but none of these differences in achievement was statistically significant; the average effect size was .19.

The effect size resulting from each of the comparisons of feedback and no-feedback instructors was correlated by Cohen with nine characteristics of the studies. These characteristics and their correlations with effect size were as follows:

Study Characteristics	Correlation with Effect Size
Random assignment of comparison groups	-.06
Statistical Control for prefeedback ratings	-.07
Duration	.09
University setting	.09
Instructor experience	.03
Use of augmentation of feedback	.64
Use of self-rating discrepancies	.26
Use of normative data	.11
Source of study	.08

Accordingly, Cohen concluded that "only one variable, augmentation of feedback," was significantly related to effect size. Augmentation refers to whether the student-rating feedback was accompanied by consultation or various improvement strategies or both.

"The evidence indicated clearly that such augmentation of the midsemester feedback results in substantially greater improvement, as measured by end-of-semester student ratings. The effect size for comparisons of augmented feedback with no feedback averaged .64 while that for nonaugmented feedback with no feedback averaged only .20."

Thus a typical instructor receiving augmented feedback was performing (at the end of the semester) at the 74th percentile. This can be compared with the typical instructor receiving only student ratings (58th percentile) and the typical instructor receiving no midsemester feedback (50th percentile).

In short, this quantitative synthesis of the results of 22 experiments with midsemester feedback suggests that such feedback is conducive to the improvement of end-of-semester ratings by students and, further, that the effect of such feedback is enhanced considerably by its being augmented with consultation. "These results clearly suggest that instructors need more than just student-rating feedback to markedly improve their instruction."

Whether these results have implications for the value of end-of-semester feedback, as against midsemester feedback, is unknown. Cohen's review dealt with three studies that measured overall teaching effectiveness in subsequent semesters.

The findings of these studies did not differ from those of studies assessing change from the middle to the end of the semester. Further, Cohen found that the use of "normative" data—data that make possible comparisons of an instructor with his colleagues—did not seem to enhance the improvement results from feedback.

What implications do these findings have for using student-rating feedback to facilitate within-class improvement? It is evident that **when instructors are left to their own resources, ratings provide little help. Augmented feedback, or more specifically expert consultation, seems to be the key element for making rating data useable for improvement purposes.**

It is also clear that instructional change cannot be

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Evaluation...

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useful for improvement (of teaching).

"It also seems clear that instructional change cannot be accomplished on all teaching dimensions. Therefore, instructors should only request midterm student feedback for aspects of teaching that they are able to modify.

"Finally, rating items and dimensions that supply specific information should be preferred to verbal ratings. With these considerations, student ratings are a valuable data source improving instruction at the college level."

In its report to the Senate, the committee noted that the present 32-question form was not administered in 41 percent of the courses where it should have been used. Even when it was distributed, 30 percent of the students failed to fill it out. A simplified form should encourage wider use.

The recommended changes may receive heightened support from academic deans and others concerned with teacher evaluation and improvement, the committee noted.

In a letter to the committee, Humanities and Sciences Dean Norman K. Wessells noted that department chairpersons will be required to bring at least one set of recent student evaluation forms for professors to the conferences where salaries are set.

Instituted during winter quarter this procedure will help provide impetus for faculty use of some formal procedure in student evaluation of teaching, he said.

"High quality teaching characterizes many of our faculty. More must be helped to attain that ranking. Student evaluations are one means of providing direct feedback for that purpose. Equally important, those student evaluations provide a critical form of data for administrative purposes in reappointment and promotion."

The Committee on Academic Appraisal and Achievement is headed by Prof. Susan Matisoff, Asian languages. Its Subcommittee on the Evaluation and Improvement of Teaching is headed by Prof. Walter Lohnes, German studies.



Responding to SLAC-SSRL protest, Kennedy reaffirms open research policy

Following is a memo from Donald Kennedy to members of SLAC/SSRL and the Stanford communities.

I have received the petition regarding the SSRL research project. The sponsors request, in two attached communications, that I appear at SLAC to discuss the proposed research and, that I meet, under unspecified circumstances, with others who are concerned about the problem.

First let me turn to the petition itself. It is somewhat difficult to interpret, because the language used by the framers misstates the issue. The petition asks support for the proposition that Stanford should "oppose any research explicitly dedicated to nuclear weapons testing and instrumentation undertaken at SLAC or anywhere else on campus, even when unclassified."

Signers might have experienced more hesitation had the authors stated their recommendation more realistically: "Stanford should, as a matter of institutional policy, prevent faculty members from conducting research projects, even ones that they judge to be morally acceptable and that are unclassified, if an end-use of that research relates to nuclear weapons testing and instrumentation."

This revised formulation is more realistic, for what we are talking about is the *institutional regulation of individual behavior*. The University policy in question here was made by faculty, and it governs the work of faculty. The framers of that policy decided, after extended debate during a period of great controversy over weapons research, that it was *not* appropriate to regulate their colleagues' research on the basis of prospective end-use.

To bar the SSRL proposal, the faculty—through the Senate and its Committee on Research—would have to renounce the present policy, and then enact another. Furthermore, a new mechanism would be required that would 1) predict the possible end uses of a given research project, and 2) evaluate their acceptability.

I discussed this matter in my quarterly report to the Academic Council, well before the present petition was framed. What I said about the policy then still holds, and I reiterate it now:

"In the present instance, we have a research program that will produce some output clearly related to nuclear weapons testing. A careful reading of the proposals reveals that in fact a wide variety of work, including a number of programs on the fundamental properties of living materials, is to be conducted, although the weapons applications are understandably stressed in the short form of the proposal directed to the funding agency. The heterogeneous mix of intentions and prospective uses for this proposed facility demonstrates clearly just how tricky and difficult it is to judge end-use and intent. Sometimes the search for knowledge leads one to unexpected places; no research can safely be predicted to be free of harm—nor, conversely, can a piece of work that includes a military end-use automatically be defined as 'bad.'

"That is why the Committee on Research and the Senate reached the conclusion I described earlier—that is, that University restrictions on resarch would not be imposed based upon intent or end-use, but only upon conduct. The Stanford faculty decided that to open the door to prohibitions of this kind would, in the long run and in the aggregate, do more harm than good. It foresaw that today's benign restriction might become tomorrow's suffocation: that once you begin making value judgments about the possible outcomes of scientific work there is no place to stop. In summary, we placed our faith in the ultimate net benefit of free inquiry.

"I therefore do not plan to try to change the University's policy on research in order to eliminate the proposed program nor do I think that my colleagues should wish to do so. I would hold that view even if the project under consideration were much more heavily devoted than it is to end-uses with which I am personally uncomfortable.

"Good general principles often get their severest and most meaningful tests in such uncomfortable situations. That is why those who are devoted to civil liberties sometimes find themselves defending dreadful people, and it is why the courts frequently have to release felons when it turns out that the police discovered their felonies in inappropriate ways.

"Our policy is that Stanford scientists are free to conduct work of their own choosing as long as it can be carried out in accordance with principles of openness and freedom of publication. The principle underlying the policy is that the social benefit flowing from free and unimpeded efforts to gain new knowledge will outweigh the cost exacted by the occasional pieces of dangerous knowledge we obtain as a result of free inquiry. Because I believe in the principle, I support the policy."

The proposing group from the Lawrence Livermore National Laboratory has already agreed to appear at SLAC to discuss the proposed research project, and SLAC representatives have quite properly taken their concerns both to the Committee on Research and to the Senate. Prof. Panofsky has also invited Prof. Bienenstock and me to appear at SLAC to discuss, with him and with his faculty and staff colleagues, the other issues raised by the proposed research. I intend to accept his invitation; he will make the arrangements.

As to the second request, I have emphasized that the policy in question is a faculty policy, and I have given my reasons for not urging its reconsideration. I have done so not only to the Academic Council but to student groups in various settings, and I expect that will continue.

C-AAA report...

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accomplished on all teaching dimensions. Therefore, instructors should only request midterm student feedback for aspects of teaching that they are able to modify.

Finally, rating items and dimensions that supply specific information should be preferred to verbal ratings. With these considerations, student ratings are a valuable data source improving instruction at the college level.

3. *How can the evaluation of college teaching by colleagues be conducted?*

Evaluation by colleagues or peers is widely regarded as a desirable supplement for student evaluation of teaching. Nonetheless, according to Cohen and McKeachie (P. A. Cohen and W. J. McKeachie, The role of colleagues in the evaluation of teaching. *Improving College and University Teaching*, 1980, 28, 147-154), the percentage of colleges and universities using such evaluation has decreased over the years.

These writers went on to consider the dimensions of teaching that colleagues are best qualified to judge. The set of dimensions they identified concerned the following:

* Mastery of course content
* Selection of course content (knowledge of what must be taught)
* Course organization
* Appropriateness of course objectives
* Appropriateness of instructional materials—readings, use of media, etc.
* Appropriateness of evaluative devices—exams, written assignments, reports
* Application of most appropriate methodology for teaching specific content areas
* Commitment to teaching/concern for student learning
* Student achievement based on performance on exams and projects
* Support of departmental instructional efforts

When colleagues provide information on inclass instructor behavior for use in making personnel decisions, "Classroom observations should be carefully planned and the data should be collected as systematically as possible."

But observation by colleagues can create an artificial classroom atmosphere, unnerve instructors, and result in highly favorable ratings owing, perhaps, to faculty concern for reciprocity. Sentra found that colleague ratings based on limited classroom observations had reliability (interobserver correlations) too low for use in evaluating teaching for administrative purposes; it would take the average of the observations of approximately 10 colleagues to raise reliability to an acceptable level (J. A. Sentra, Colleagues as raters of classroom instruction. *Journal of Higher Education*, 1975, 46, 327-337).

But, when colleague ratings of teaching are correlated against student ratings of teaching, the correlations turn out to be fairly high; the five coefficients cited by Cohen and McKeachie range from .62 to .87.

But this substantial correlation may result from the colleagues' knowledge of the faculty members' reputation as determined by student ratings. To correlate colleagues' ratings with student achievement would require the study of multisection courses similar to those used in the studies of correlations between student ratings and student achievement.

Some administrative arrangements have been suggested for collegial evaluation of teaching. One writer suggested that colleges financially support selected committees of faculty members, each of whom would visit classrooms and make reports on teaching effectiveness.

Another writer proposed that the rating procedure safeguard the anonymity and independence of the colleague making the ratings and that at least three colleagues be chosen by administrators or instructors or both to make the evaluations of an instructor's teaching. But no college or university is named as having used such systems.

Variety of programs offered in workplace skills, supervision, accounting

WORKPLACE SKILLS DEVELOPMENT

Challenges of the workplace will be explored in the following courses, each of which is structured to develop skills helpful to effective work performance in many different kinds of jobs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore, please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Telephone Techniques—This workshop focuses on using the telephone and having an effective telephone personality. Topics include an overview of the skills required, tactful phraseology, and examination of issues and problems.

- Thursday, 6/30, 1-3

Office Interaction: Getting and Giving Cooperation—Does your job include answering questions, giving information, assisting people who call or come to your office? This workshop focuses on how to make these interactions both efficient and productive. Participants will explore the ways that they and the people they work with experience the communication/problem solving process.

- Schedule to be arranged

Office Interaction: Working With Pressure—How to function at your best in spite of the pressure of continuous office interactions. Participants will examine ways to increase concentration and patience for effective workplace relations.

- Schedule to be arranged

Assertiveness Training—Assertiveness Training introduces verbal and nonverbal skills for handling uncomfortable situations. As a result of active involvement in this course, participants will be able to ask for what they want in clear statements, assertively deal with conflict on the job, maintain a feeling of self-worth while effectively dealing with manipulative demands, and make assertive decisions.

- Tuesday, 7/12, 8:30-12:30
- Tuesday, 7/19, 8:30-12:30
- Tuesday, 7/26, 8:30-12:30
  (Attend all sessions.)

Career Exploration Workshop assists staff members in making more effective career decisions. It consists of seven sequential one-hour workshops which provide methods for self-assessment (interests, skills, values, career motivations, interpersonal skills), information about Stanford career possibilities, and practice in decision making and development of action plans. Checking ideas against job market reality is emphasized.

Some of the tools used in the self-assessment process include the Strong-Campbell Interest Inventory Test, the Quick Job-Hunting Map, Firo-B, and problem-solving and values clarification exercises. Discussion includes reality testing of the kinds of skills the University looks for, the kinds of jobs on campus, and the personal qualities necessary to get ahead. Exercises on strategizing and decision making are used along with the development of short- and long-term career goals. Instruction and information on resume writing and interviewing are included, with information on the use of the Stanford Employment Department and its organization.

- To register, call Marilyn Gilla, ext. 7-0659.

On-The-Job Goal Setting—How can you focus your energies and skills more effectively to increase the satisfaction you get from your work, as well as the contributions you make? Susan Strong will provide practical steps for setting and reaching well-stated workable goals.

- Schedule to be arranged.

Skills Development Center—The clerical skills program upgrades skills of employees on their present jobs, helps them prepare for additional responsibilities, and provides clerical training specifically related to Stanford's policies and procedures.

For information about the clerical skills program, call Marilyn Gilla, clerical skills program coordinator, ext. 7-0659.

Is lack of typing skills getting in the way of effective use of your computer terminal? Marilyn Gilla teaches both beginning and intermediate keyboard skills for staff members starting to use a terminal. For information, call ext. 7-0659.

CONTROLLER'S OFFICE WORKSHOPS

The Controller's Office schedules these workshops throughout the year. For more information and/or the current schedule of workshops, call Alice Forbes, ext. 7-4531.

Course 1: Introduction to the Stanford Accounting System—(two two-hour sessions). For employees new to Stanford who monitor either departmental or auxiliary activity expenditure statements. The course includes the organization of the Controller's Office, discussion on account numbers, responsibility for the use of funds and record retention. Practical work includes practice in reading an expenditure statement and in forecasting for future results.

Course 2: Travel—(one two-and-a-half-hour session). For employees who need to understand the University's travel policy (Guide Memo 36.7) to complete travel and expense reports. The Travel Workshop summarizes travel policy, defines allowable travel costs, and provides practice in completing the necessary forms for Advances (SU-34A) and Expense Reports (SU-35).

Course 3: Equipment Administration—(one two-and-a-half-hour session). For employees who are new to the field of equipment administration as well as for those who want to "brush up" and/or need more information on the new computerized system. The emphasis of this workshop is on how to use the manual, forms and reports.

Course 4: Payroll/Personnel—(three two-hour sessions). For employees completing forms related to Payroll/Personnel actions and record keeping. This workshop includes a review of policies and procedures, and practice in completing all necessary forms.

Course 5: Fund Accounting at Stanford and How to Read Fund Statements—(two two-hour sessions). The purpose of this workshop is to teach interested employees the fundamentals of fund accounting as practiced at Stanford. The University's financial statements are discussed as well as fund statements and fund summary reports.

Course 6: Fundamentals of Grant and Contract Administration—(four two-hour sessions). This workshop is planned for administrators and others involved with the preparation of proposals as well as accounting procedures for expenditures, monitoring, and forecasting for sponsored research projects. Members of the Sponsored Projects Office will participate in the workshop. The sessions planned are:

1. Introduction and Overview of Definitions, Federal Regulations and the role of SPO.
2. Proposal Preparation.
3. Proposal Processing and Post-Award Administration.
4. Contract and Grant Rebudgeting, Forecasting, and Financial Management.
5. Grant and Contract Closeout, Updates, Issues, and Trends.

Course 7: Grant and Contract Administration Update—(one two-hour session). This new workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session.

Course 8: Procurement—(two two-hour sessions). This new workshop reviews the procurement process along with criteria for choosing the correct form amongst the SU-10, SU-11, SU-12, SU-13, SU-14, SU-15, SU34A, SU-34B, SU-35, SU-40, SU-41, and SU-43.

Course 9: Grant and Contract Administration Update—(one two-hour session). This new workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session. The topic for this first workshop is the closing out of sponsored projects. A panel discussion is planned, followed by a guest speaker, Fred Bentley, associate director of SPO, who will speak on current issues.

SUPERVISORY DEVELOPMENT PROGRAM

The supervisory development program includes a two-session orientation to the personnel administration aspects of supervision, two intensive supervisory skills courses, and shorter workshops on specific aspects of supervision. All courses and workshops combine theory and practice and apply directly to participants' on-the-job experience.

Supervisory courses and workshops are given regularly through Staff Development. They may also be adapted to specific departmental needs and presented in departments. New workshops are developed to meet general and departmental needs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Fundamentals of Supervision—is a course in how to develop employee performance, establish effective supervisor-employee communication, and establish and maintain the supervisory role. Participants learn through discussion and practice of skills, incorporating new skills into their own supervisory style. An orientation meeting prior to the sessions introduces the basic principles on which the course is based.

Participation in the course requires at least three months of experience as a supervisor. Attendance at all sessions is also required.

Session topics are:

Session 1, Setting Job Standards
Session 2, Teaching a New Job
Session 3, Communicating about Performance
Session 4, Giving Recognition
Session 5, Identifying and Solving Performance Problems
Session 6, (Group Choice of Topic) Review

Fundamentals of Supervision (A)
- Monday, 6/13-8/1, 1:30-4:30

Fundamentals of Supervision (B)
- Wednesday, 7/27-9/7, 9-12

Effective Interviewing—introduces methods for making productive hiring decisions by getting sufficient appropriate information in interviews. The workshop is centered around practice exercises that are progressively more complex; participants will learn to plan and conduct interviews related to the specific responsibilities and duties of open positions.

- Friday, 7/15, 8:30-4:30

Managing Conflicts—which can and do occur in any work setting, and when well handled can renew motivation and be a catalyst for innovation. When ignored or mismanaged, however, conflicts can cause serious damage to morale, productivity, and well-being. Effective conflict management involves guiding the disputants to solve their own problems. In this workshop participants will learn how to find out the nature and scope of the conflict, how to elicit suggestions, and how to get agreement to an action plan while controlling bickering and outbursts without taking either disputant's side.

- Friday, 7/22, 8:30-4:30

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Staff Development/continued from page 24

Self-Control of Speaking Anxiety—If you are ready to break out of your scared-to-death frame of mind Self-Control of Speaking Anxiety will help you develop qualities and techniques enabling you to speak with more ease. You will learn positive ways of controlling physical tension while you prepare and give presentations.

- Wednesday, 6/22, 8:30-4:30

Confident Speaking—This workshop is for staff members who regularly present talks as a routine part of their jobs. Special techniques to help you prepare, practice, and deliver your train-of-thought will be demonstrated and practiced in class.

Preparation and Practice Skills
- Wednesday, 6/29, 8:30-4:30

Delivery Skills—
Body Language and Vocal Expression
- Wednesday, 7/6, 1-5
- Wednesday, 7/13, 8:30-12

Giving Directives is a practical three-step procedure for giving directives of all kinds. Participants will also learn the specific effects of language on directives.

- Friday, 7/8, 8:30-4:30

SPECIAL INTEREST COURSES

Courses from the Learning Assistance Center

The following courses have been developed by the LAC to respond to specific staff training requests. Each course combines classroom instruction and individual tutorials with the instructor. Class size is limited to provide for maximum participant involvement, and enrollments are accepted in the order received.

Time Management—Is a day simply not long enough? This workshop helps participants discover where their time goes, set up a schedule and establish priorities, and become more effective at accomplishing what they decide to do. The class meets four times (one hour each time), and the instructor meets with each participant for three individual half-hour sessions.

- Friday, 7/1-7/22, 12-1

Stanford Publishing Course (Presented by Stanford Alumni Association)—An intensive program for publishing professionals who wish to update their skills, recharge their batteries, and gain a working knowledge of the various facets and operations within the book or magazine industries. The course is conducted by leading publishing executives and distinguished Stanford faculty. A special discount on tuition is offered to Stanford faculty and staff.

- Monday, 6/20-7/1
- For more information, contact Bill Peabody at Bowman Alumni House, 497-2021.

English as a Second Language—Tutorials—For non-native speakers of English. Participants contract for individual tutorials (the minimum is six). Especially recommended for those who have completed one of our ESL classes, but open to any non-native speaker who wishes to have individual instruction for reading, speaking, or writing English. Conferences may be planned around vacation schedules. *Conferences will be held between June 27 and August 12.

- To arrange your first conference, call the Learning Assistance Center, ext. 7-2207.

Courses from the Association for Continuing Education

The Association for Continuing Education delivers courses accredited by local colleges and universities. For more information call ext. 7-0657.

CPL 102—Introduction to BASIC—A good beginning course in BASIC, the most popular and easily understood computer language available today. Students will learn the computer operations they seek for a given application through a process of self-checking exercises and flow-charting. It will not be necessary for students to have access to a computer to learn from this course. (Certificate only.)
(Tuition $90; book $14.86.)

- Tuesday and Thursday, 6/21-8/25, 12-1

CPL 105—Introduction to PASCAL—An introductory course in PASCAL for people who want to acquaint themselves with modern programming tools and concepts. It will give students with no previous programming experience a good grasp of the fundamentals and provide a foundation for learning correct and disciplined programming skills. (Certificate only.)
(Tuition $90; book $12.25.)

- Monday and Wednesday, 6/20-7/20, 12-1

The Staff Training Assistance Program

The Staff Training Assistance Program provides reimbursement of tuition costs to $75 a quarter for courses and academic programs related to job performance. If tuition costs for a given quarter are less than $75, costs for textbooks and other required course materials can be partially or fully reimbursed. (If costs exceed $75 in a given quarter, departments may provide financial assistance beyond that available through STAP.)

Courses may be taken at Stanford or elsewhere. To receive STAP reimbursement a staff member completes a STAP form, available through Staff Development, ext. 7-0657. Supervisory approval is required.

You must include a receipt and/or canceled check to be reimbursed.

California may trail the national surge in support for public schools

California may trail the national surge in support for public schools by several years, a Stanford educator believes.

"The market's turning in a major way, but California may be one of the last states to see it," says Prof. Michael Kirst, former president of the State Board of Education.

The turn-around could take as much as three or four years here, he adds. "The problem is money in the till.

"The California economy has not recovered. California has not raised taxes. More than 20 other states already have done so, including Michigan, Ohio and Pennsylvania"—all hard hit by the recession.

Kirst and several faculty colleagues spoke at the first Friends of the Stanford School of Education conference on campus April 23.

Kirst warned that education of Hispanics is "utterly floundering," even though Hispanic enrollment has risen from 10 to 27 percent as a share of California's public school enrollment since 1970.

Hispanics and Asians now account for nearly all the enrollment growth in California schools. By 1987, 57 percent of enrollment may come from minority groups, including blacks.

Hispanic education issues are "heavily laden with gut-level reactions," not careful analysis, he said. "That's very disturbing."

In a similar vein, Prof. David Tyack, education and history, said sheer survival is no longer the schools' primary concern. "The preservation and enhancement of equality" in educational opportunity is "the number one issue on the agenda," he said.

Until recently, declining enrollments and school closings were the major issues for school boards, he noted.

Tyack predicted that "the likeliest future for education is neither crisis nor breakthrough. . . .

"Education is beset by Cassandras and panaceas. Because public education is deeply embedded in American society, it will not change rapidly."

A much larger share of the public would like to see the nation develop the best education system in the world (84 percent) than become the most efficient industrial system (66 percent) or the strongest military force (47 percent), Tyack noted.

Schools should provide for "equality of dignity" among students from different groups. But if schools don't provide the skills needed to compete in mainstream society, students will be cheated, he added.

Prof. Robert Calfee, who has frequently taught in San Jose elementary schools, said: "the view from inside the classroom is not all bleak."

He's developed new ways of teaching reading that "work like gangbusters." After reading straight through conventional classroom stories, he asks leading questions for students to answer about the material covered.



Friday the 13th! Prof. William Ramsey (above) and graduate student Sharon Paul will conduct the Stanford Chorale

Help Center program on surgery set

The Help Center will sponsor a discussion on "Surviving Life Threatening Surgery" from noon to 1:30 p.m. Wednesday, May 11, at Galvez House.

Areas to be covered in the discussion include the onset, preparation for surgery, the experience of hospitalization, aftercare, and reintegration into family/relationship/work.

The discussion is intended for those who have undergone life-threatening surgery in the last six to 12 months. It will be led by Lawrence Starkey, L.C.S.W.

Helping Children Grow

Sharon Levin, L.C.S.W., will lead a discussion on "Helping Children Grow through Limit Setting" from noon to 1:30 p.m. Tuesday, May 17, at the Help Center.

The focus of this workshop will be to clarify limit setting. Some issues to be addressed are age-appropriate limits, parental conflicts around limit setting, and the dilemmas working parents face in setting limits. Call 497-4577 by May 12 to reserve a place.

The Help Center is an employee benefit program open to Stanford University, Children's Hospital, Stanford Medical Center, and SLAC employees and their immediate families.

All workshops, seminars, support groups, lectures, and counseling sessions are free. For more information about any Help Center program, call 497-4577.

Rental housing

HOUSING AVAILABLE

□ **June 1 to Sept. 1:** 1BR furn apt., Boston waterfront nr. Quincy Mkt. air-cond., excl bay view. Elev., sec. guard, atrium. EXCHANGE or rent $900/mo. MIT Prof. visit. Stanf. Call COLLECT (617) 367-3192.

□ **Aug. 1 to mid-Sept. '84:** Portola Val. 3BR/2BA, fully furn. hse, 2 frpl, redwood beams, stained glass, oriental rugs, sculpture, art. Multi-level, decks, pool w/solar, wooded hillside acre, scenic views. $1600/mo. Call (415) 851-8743.

□ **Aug. 20 to late Mar. '84:** Spac. campus hse, fully equipped, 3BR/2½BA, guest/FR w/BA, DR, study. Call 493-0777 or 497-1941 (day).

□ **June 10 to Aug. 30, '83:** Fully furn. & eqipt Menlo Pk. hse; 2BR/1BA, lrg ktchn, lndry, yd. Nr. dwntwn PA. $800/mo. Call 327-2137 or 322-9591.

□ **June 20 for 1 yr:** Condo nr. Calif. Av., 3BR/2BA, pool, lndry, bike rm, storage, gar. Nr. shops, train, bus, 5 min. to Stnaf. $1050/mo. Call J. Harris, (415) 325-0659, or write c/o 455 Grant, #1, Palo Alto 94306.

□ **June:** Attrac. 1 mo. sublet, dwntwn Palo Alto, furn 1BR, sep. study, Col. style budg. Park. space, nr shops, cafes, transp. Perf. respite while locat. perm. resid. $350/mo, nego. Call Karen, (415) 780-2240, Tues-Fri, 322-9848, eves, wknd.

□ **June 27 to Aug. 21:** Spac. hse in Southgate, Palo Alto, 2BR/2BA (master BR + den/guest rm), fully furn. incl. linens, etc. 3 blks to Stnaf. $950/mo. Call 327-3537.

□ **NOW:** Room w/priv. BA, ktchn. priv., $350/mo. incl. util, gar, lndry facil. Call 322-1313, a.m. bset.

□ **June-Sept.:** Inclusive or shorter periods: LONDON. Spac. 3-4BR flat, 2BA, breathtaking views adj Hampstead Heath; gardens, tennis, squash. 200 lbs wkly. Call 857-0237.

□ **June 6 thru Sept. 21:** 1BR/1BA apt. Menlo Pk, LR, DR, ktchn, W/D, fully furn. Quiet nghbrhd, spac., sunny. $425/mo. Call (415) 322-5143.

□ **June 5 to Sept. 15 (flex):** Fully furn. hse in Woodside, 4BR/3BA, LR/DR, DW, W/D, walk to tennis. 4 mi. to Stanf. $1490/mo. or $372.50 per person. Call Brian, (415) 369-6459, eve.

□ **Sept. '83 to Sept. '84 (flex):** Visit Prof. wishe to EXCHANGE apt. in France, Strasbourg, 3BR, LR, DR, piano, garden, fully furn., & car (insur. approx. $800/yr); for furn. apt. or hse nr Stanf. with car, if avail. Call Robin, 497-6270 or write: Dr. J.F. Lefevre, IBMC, 15 rue Rene Descartes, 67084 Strasbourg Cedex, FRANCE.

□ **Aug. '83:** Paris apt., charming 2BR furn., modern ktchn, nr metro Alesia. Ideal for cpl, small fam. $800/mo. Write immed: Weinstein, 46 rue Vasco de Gama, 75015, Paris, France.

□ **July, Aug.:** HONG KONG. Univ. lec. desires SWAP w/Stanf. resid. Lrg mid-levels flat, TV, air-cond, W/D, avail. exchange for close to Stanf. hsng. Write: J. Schiffer, Centre Urban Studies, Planning, Univ. fo Hong Kong, Pokfulam Rd., Hong Kong.

□ **NOW:** Spac. twnhse, Menlo Pk, 3BR/2½BA, AEK, air-cond, all carpets, master BR w/walk-in cl. Walk to SRI, train, dwntwn. $1000/mo. Call (415) 968-3477.

□ **Aug. 12 to Sept. 6:** All or any part of time per: fully furn. campus hse, 4BR, study, FR, piano, fenced yd. $375/wk incl. 2 cars, elec, lawn-mow, bi-wkly clean. Call 493-2042, eve.

□ **Beg. May 1:** SHARE 2BR/2BA condo, Mt. View; quiet, garden setting, pool, 7 mi. to Stanf. $400/mo. + ½ util. Call (415) 965-7684.

□ **Beg. Aug. '83:** Crescent Pk, Palo Alto, Medit. style fully furn. hse, 3BR/3BA, DR, new ktchn, encl. yd, W/D, baby grand. $1590/mo. incl grdnr, water. Call COLLECT (602) 299-4499.

□ **Summer '83 (flex):** Lovely lrg. 3BR country home in sunny Corralitos, by Aptos, CA. Desire EXCHANGE for comparable hse in or nr Los Altos. Call (408) 967-2918.

□ **June 30 to July 30, '83:** Pleasant hse w/charm. patio, low-maint. grdn, So. Palo Alto, nr bus, shops, tennis, library. Suitable for cpl. nonsmokers. $750/mo. incl. grdnr, util. Call Helen, (415) 324-1710 (day), (415) 494-2624 (eve).

□ **June 18 to July 31:** Los Altos hse, fully furn, 3BR/1BA, deck, 1/3 acre, fenced yd., nonsmokers. $700/mo. Call 948-5659.

□ **June 15 to Sept. 1:** Summer sub-let, Esc. Vil. 3BR apt, fully furn. on campus, great for kids. Call P. Lagarde, 856-4136.

□ **July 26 to Aug. 31, '83:** Spac. Victorian hse, 4BR/3BA, gourmet ktchn, LR, DR, FR, lrg. yd. Nr. dwntwn Palo Alto, Rincon. Pk, pool, tennis, libr. $875/mo. Call (415) 328-6794, eve.

□ **June 15 (flex) to late Sept. '83:** 4BRs in 5BR furn. hse in Portola Val/Woodside area. 3BA, W/D, beautiful vistas, nrby recreation. $225 to $300/mo. Call (415) 941-9016 between 7 & 9 a.m. or 9 & 11 p.m.

□ **Avail. June 1, '83:** To SHARE: 2BR lux. condo, pool, many xtras, fully furn, nr transp, Rdwd City. 24 yr. old SRI employee seeks male rmmate. Call (415) 366-8896.

□ **Avail. June 1, '83:** Beautiful 2BR condo, garden setting, sauna, wt. rm, tennis. Mt. View. $750/mo. Call C. Walker, 321-6466 or 497-2207 (day).

□ **June 1:** Fully furn. apt, Oak Creek, 2BR (1 king, 1 dbl), lovely patio. Pool & club facil., walk to Stanf. Call (415) 322-2977.

□ **June, July, Aug. '83:** Fully furn 5BR/4BA hse in Portola Val. Panoramic view. Rent incl grdnr, clean., pool serv. Call 851-2481.

□ **NOW:** Kauai, Hawaii. Lovely furn. 2BR/2BA twnhse. Pool, tennis, priv. club atmosphere. $50/day. Call Howarth, (415) 591-5190.

□ **June 16 to Sept. 5:** Fully furn. classic Spanish-style hse, 5BR/5BA, new ktchn. w/microwv, encl. crtyd, jacuzzi w/dress. rms. Balc., spiral staircase. Full acre, trees, creek flows thru prop. No pets. $3000/mo. + util. Call 327-1142.

□ **Beg. June 15 (nego):** Summer qtr: Fully furn. campus hse, 4BR, sep. study, LR/DR areas, interior patio. Pine Hill II. $1650/mo. (nego) + sec. & clean dep. Call Prof. Banks, 497-1830 (day), or 493-4231.

□ **NOW:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone, adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly avail.:** 1 to 3BR furn & unfurn apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. NO FEE. $595 to $1200/mo. Call Shirley, (415) 856-6049.

□ **End June to end Sept. (flex):** Lovely 3BR/2BA hse, fully furn., Crescent Pk, in Palo Alto. Cul-de-sac, patio, garden. Walk to pool, tennis, schls. Bike to Stanf. $1250/mo. incl water, grdnr. Call 321-1142 or 497-4364 (day).

□ **June 1 to Aug. 1, '83:** Old Palo Alto hse, LR, DR, ktchn, 5BR/2BA, deck. 1 mi. to Stanf. Poss. rent from 6/1 to 6/1/84. Call 328-4395, between 4 & 5:30 p.m. or after 10 p.m.

□ **NOW:** Rm. in old Victorian hse, fully furn., ktchn. priv., lndry, walk to Stanf. & dwntwn. Short term rent pref. $400/mo. Summer rms. also avail. Call Peggy, 327-2510.

□ **June:** Tahoe hse, on water, 4BR w/tennis crt. No pets or sublet. $2000 for 2 wks, $3000/mo. Call Linda Catron, 921-3433 or Marilyn Yalom, 497-1994 (day).

□ **Sept. '83 to May '85:** EVERGREEN, COLO. Denver suburb: BR/2½BA unfurn. hse, LR, DR, study, loft, AEK, frpl w/wood, W to W carpet, deck, cable TV, ath. club mbshp avail. 2 car gar. 4 levels, 1 acre, mtn views. $1400/mo. or EXCHANGE for hse nr. Stanf. Call (303) 674-2244.

□ **June '83 to June '84:** 2BR fully furn. hse, incl. linen, dishes. Det. gar., fully insul, easy maintain, fruit trees, nr San Jose Civic Ctr, #17 & #101, 20 mi. to Stanf. $600/mo. incl. water. Call (408) 275-1491.

□ **Sept., Oct., ½ Nov.:** Furn. 1 or 2BR lux. apts. Olymp. pool, sauna, jacuzzi, tennis, racquetball. Adult complex. 1 apt. air-cond. Refs. req. Rte #280 to Stanf. $600/mo. + dep. Call Prof. Arnold, (415) 968-0951.

□ **Beg. June 15:** Period nego. 1BR/1BA apt. on campus. Fully furn, lrg LR/DR, storage, lndry priv., all util. incl. $650/mo. Call 497-1486 (day), 493-3349 (day or even).

□ **May for 1 yr. (or longer):** Mt. View hse, 2BR/1BA, patio, yd, dog run, gar., roomy ktchn, stove, frig, W/D. 6 mi. to Stanf. Call 494-6135 or 962-8530.

□ **Beg. June 15:** Summer rent and/or 1 yr; high Portola Valley (Ladera); 3BR/2BA fully furn hse. Atrium, lrg. self-maint. grdn, oaks, pool, tennis, 7 min. to Stanf. $1300/mo. Call 324-1624 (eve), 327-3505.

□ **Aug.:** Attrac. summer rent, dwntwn Palo Alto, 2BR/2BA, fully furn condo, suitable for cpl., libr. w/spiral stair, balc, pool, security. 18th C. European. $1200/mo. Call 324-1624 (eve), 327-3505.

□ **July '83 to July '84 (poss. longer):** Paris apt., Foch-Victor Hugo area, furn. studio, in new condo, 2nd floor of 22 unit bldg. LR, BA, ktchn, balc., wood flr. Quiet, view of prk. Call (415) 540-6523 till May 10; after, call Paris, 011-331-707-0034 or 011-331-553-6253.

□ **July 1 to July 23, 1983:** Furn. 3BR/3BA campus hse, LR, DR, 2 studies, spac. ktchn. No pets. $1000/mo. incl. grdnr. & garb. Call J. Keller, 497-0851 (day), 857-0409 (eve).

□ **Beg. July 1, '83:** University owned rental housing: unfurn. lrg. studio, w/frpl & pool, on campus, for Stanf. fac. & staff only. $500/mo. Call Marsha Lee, 326-7195.

□ **July 10 (flex) to April 1, '84 (flex):** Fully furn. lux. hse. w/pool, Steinway; 3BR/2BA, AEK, W/D, 2 studies, frpl, fenced yd. Nr. Med. Ctr., bike to campus. $1500/mo. (nego) incl. pool serv. Call 497-1348 (a.m.), 325-4533 (lv. message), 322-9866 (eve).

□ **Aug. '83 to Jan. '84:** Fully furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, Com. Ctr. Prof. going o Sabbat. $1500/mo. Call 325-1709.

HOUSING NEEDED

□ **Sept. '83 to June '84:** Visit. prof. on sabbatical from Cornell needs furn hse to start Sept. for 9 mos. Family w/2 children. Call (415) 857-7030 (day).

□ **June:** Visit. scientists need furn. 2 or 3BR hse or apt. in Palo Alto area for mo. of June. Call 857-7030 (day).

□ **Sept. 15 to Jan. '84:** Senior U.S. Gov. official & wife, visit. scholars at Stanf. seek furn. or part. furn. hse or apt w/2 or 3BR. Nonsmokers, no pets, ideal hsesitters. Excel. refs. Call 497-4244 (day) or 324-0457.

□ **1983-84 Academic Yr:** Resp. Stanf. Grad. Sch. of Bus. students want to rent ASAP, 4 to 5BR fully furn. hse close to Stanf. Will pay equitable rent. Call Bob, 326-1354; Robert, 856-3360 or write Bob Thronson, 557 Mayfield, Stanford, Ca. 94305.

□ **Sept. '83 to Aug. '84:** Visit. Prof. & spouse seek small furn. hse nr campus. Nonsmokers. Call COLLECT (609) 452-4811. Will visit Stanf. May 24 to 27; lv. message at (415) 326-5377.

□ **July 1 to Aug. 30:** EXCHANGE: Need apt for cpl. in Stanf. area. Have apt. in Tours, France. Call Phil Breeden, (415) 322-2703, eves.

□ **Beg. June 1:** Stanf. staff person & spouse (landscape architect) seek 2BR apt. or cottage. Prefer reduced rent exchange for ydwrk and/or landscape design. Local refs. Call Phillip, 323-6533 after 8 p.m.

□ **Beg. July 15 (flex):** Writer, mature woman, longtime Palo Alto resident, seeks quiet apt. or cottage for work-live space. Call Dillon, 497-2558 (day), or 493-9392.

□ **Mid-June to Mid-July '83:** Eng. woman prof, staying longer than planned, seeks rent or hsesit on or nr campus. Careful tenant. Call H. Himmelweit, 321-2052 (day) or 321-8979 (eve).

□ **June or July thru Aug. '83:** Reliable student seeks home to hsesit/caretake. Will care for garden, yd, pets. Local refs avail. Call Kyle Koehler, 324-1471 (early a.m. or eves.)

□ **Beg. Nov. '83 for 1-2 yrs:** Visit. Australian M.D., wife & 2 children (5 & 2) seek 3 or 4BR furn hse on or nr campus. Refs. avail. Call B. Barnett, 497-5913 (day).

□ **Sept. '83 to Aug. '84:** Visit. French M.D. & wife seek 1BR furn. apt. on or nr campus. Local refs avail. Call B. Barnett, 497-5913 (day).

□ **Sept. '83 to Jan. '84:** Female librarian seeks hse or apt. Call D. Kemp, 321-3204 or write: 1812 Willow Rd., Apt. 406, Palo Alto, Ca. 94304.

□ **July, Aug., Sept. '83 (flex):** Retired cpl. seeks apt. or small hse. Nonsmokers, no entertaining, very neat. Local refs. Call Fuchs, 326-7639 (day), 858-1527 (eve).

□ **July 1, '83 to Dec. 31, '83:** Seeking 3BR furn. hse in Palo Alto/Stanf. area for visit. prof, wife & 2 children. Call Susan Richardson or Michelle Renaldo, 497-2218 (day).

□ **Aug. '83 to July '84:** Visit. prof, wishes to rent hse in good schl nghbrhd for above period (flex). Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

□ **Beg. June 15 for min. 1 yr:** M.D. & wife, no children, no pets, seek 2 or 3BR unfurn. hse in Palo Alto area. Refs. avail. To $1000/mo. Call (313) 996-1800 or write Stuart Flynn, M.D., 1810 Virnankay, Ann Arbor, MI 48103.

□ **Sept. '83 to mid-April '84:** Sabbatical physician, wife, son 15, dghtr 12, nonsmokers; seek hse nr Stanf. Rent or EXCHANGE our hse Portland, Ore., 4BR/3BA, study, FR, 1 acre, trees, view, easy access Portland, Med. Sch., Univ. Call COLLECT (503) 222-2464.

□ **July 12 to 28:** Visit. prof. seeks 2-3BR furn. hse or apt., quiet. Partly EXCHANGE travel trailer. Call 494-6492.

□ **Beg. July 1:** 5th yr. senior, Humanities Honors seeks 1 yr. rent. 1BR apt. in Stanf. area. Willing to hsesit, garden, + pay reduced rent. Refs. Call Tory Read, 322-8022.

□ **July 1, '83 to June 30, '84:** Visit. resrch. fellow, cardiology, seeks 2-3BR hse. access. to Med. Ctr. for family of 3. Stanf. refs. Write Dr. Dorian, 175 St. Clair Ave. E., Toronto, Ontario, M4T 1N9 Canada.

□ **June 8 to July 8, '83:** Prof. wife, son 17, seek campus hse or apt. Fellow at CASBS, local refs. Call Arthur Goldberger, Econ. Dept. U. Wisc., (608) 263-3876 (day) or (608) 238-6138; or Molly Agras, (415) 323-2829.

□ **Sept. 20, '83 to Mar. 25, '84:** Adult visit. German prof. & family needs furn. 3BR hse or apt. vicinity Stanf. Call 494-3347.

□ **Aug. '83 to June '85:** Stanf. MBA student, wife; nonsmokers, 3 children, seek 3BR/2BA hse, furn or unfurn. on or nr campus. Lease for 1 or pref. 2 yrs. Or EXCHANGE for Denver residence. Call (303) 674-2244.

□ **July & Aug. (2 mos):** Grad student, wife, 2 children seek local rental/caretake. Or EXCHANGE for 3BR apt. in NYC at Columbia U. Local refs. Call Delson, 855-2619 or 493-0404.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



A timely moment: William Kimball cuts the ribbon.

Why a clock? It refreshes our spirits

Why, asked President Don Kennedy, at the dedication of Stanford's new/old clock tower (*see adjoining story*), should funds be spent on "an opportunity to improve the aesthetic or traditional qualities of this place," rather than on scholarships or academic needs?

The key reason, he said, is the vital need "to refresh our spirit, to diversify our environment, and to pay attention to the extra things in life that add so much meaning to the rest."

If every dollar coming into Stanford had to be devoted to the central academic purposes, "this would be an austere and miserable place indeed. Pluralism of donor interest is one of those forces that relieves us of the obligation to be about our main business all the time."

Kennedy praised Bill and Collie Kimball for "this something extra—a traditional and aesthetic pleasure that reflected experiences that were important to him and to Collie, and that they wanted, together, to replace in *our* lives."

The clock and its bells, he said, should mean different things: "an invitation to rest; a reminder of our history; an attractive signal of the beginning or the end of academic episodes; a rendezvous; and a reassurance that we aren't, after all, too late.

"And perhaps it will be many other things as well; for it is now much too early to tell what role it, or indeed any new work of art or oasis of landscape, will play in our lives.

"Years from now such things will be found incorporated in a thousand individual habits, in unexpected and refreshing ways. The old clock will thus come to have new meaning to all those who make it part of their lives here, just as—in an earlier incarnation—it meant something new to Bill and to Collie."

Bell Tower...

continued from page 1

tower. Behind Mickey, on the inside wall, is one of the original clock faces that graced Memorial Church.

Furthermore, the clock has been restored to its original wind-up status it had when built in 1901 by the Seth Thomas Co. It will have to be wound once a week—with a big crank.

During its few years on the Church, before the 1906 earthquake sent the clock and tower crashing into the church, it was designed to ring constantly—except during church services.

Now, its four bells—the largest is four feet high and weighs a ton—will be heard from 8 a.m. through 7:45 p.m.

The bells' notes are best known as the Big Ben bells atop the British Parliament. But they date back to 1794, according to Gina Balestracci of the Stanford Music Department Library.

"Westminster Quarters are from a set of four variations composed by William Crotch, based on a portion of 'I Know That My Redeemer Liveth,' from Handel's 'Messiah,' " she said.

"He wrote it for Great St. Mary's Church at Cambridge University. In 1845 a set of bells was installed on Royal Exchange Church in London, with those notes, and in 1859 Big Ben was installed in the new House of Parliament."

After the earthquake at Stanford, the bells and clock mechanism just sat in storage, according to Stanford Archivist Roxanne Nilan. In 1915, a temporary tower was built on a terrace back of Memorial Church to house them.

There they rang, and the clock worked, until 1967, when the landmark wooden tower was removed to make room for major landscape changes, including Lomita Mall. during those 52 "temporary" years in the tower, the mechanism was run by an electric motor.

In the intervening years, many plans for site and use of the clock and bells were discussed, but none seemed right—and the potential cost was huge.

But several dedicated people persisted.

"When the tower came down in 1967, I felt terrible," said Prof. Henry O. Fuchs, engineering professor who retired in 1972 but still is teaching. "I was very interested in getting the clock and bells up again, somewhere on campus."

He and David Beach, teaching specialist in mechanical engineering, cleaned and restored the mechanism to working order, refurbished it to look like new, and installed it in the Terman Engineering Building library.

Meanwhile, Harry Sanders, former director of planning, and Prof. James Watkins, founder of the Stanford Historical Society, made it their personal goal to have the clock tower rebuilt. Sadly, Watkins died last fall, but the Society kept his idea alive.

Its efforts brought in Dorian Clair of Palo Alto, a clockmaker, and clock collectors John and Bill Grass, who spent endless hours "scrubbing off dirt, taking it apart, bringing it back to its original mechanical perfection," said Clair.

When everything came together, according to Shirley Chen of Stanford's facilities project management office, the steel and stucco tower, with benches and trellises around it, was built.

"Now we need a volunteer to wind it once a week," she said. —Harry Press



AT THE TOP: early morning Mickey Mouse



AT THE BOTTOM: a few lines of credit

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

29963-VW (JCC:2120) ACCOUNTANT I: Versatile accountant reporting to Admin Offcer; respon range fr basic bookkeeping functions to problem analysis, incl statement verification & resolution; maint of over 100 accts which represent gov't & non-gov't grants & contracts; various gifts accts & an operating budget; prep of monthly statements for Principal Investigators; prep of annual close-out reconciliation; a computerized acctg sys needs to be implemented; QUALIFICATIONS: BA in Acctg w/ related field exp or 5 yrs of exp resulting in acquired knowl of acctg theory & practice; highly desirable to have computer sys exp as well as micro-computer exp.; C05; $1670-2086.

43576-TC (JCC:5588) LIFE SCI RES ASST I: Respon for maintaining tissue culture cell lines & aiding in the prep of primary cell cultures; perform radioimmunoassays & receptor assays; establishing new methods & modifying RIAs for samples fr tissue culture & serum & for interpretation & analysis of data; QUALIFICATIONS: BS degree or equiv exp; familiarity w/ basic lab skills; willing to work w/ 125I, 3H, & 14C labelled chemicals; familiarity w/ sterile tech nec.; C05; $1670-2086.

43518-TC (JCC:5999/6000) Nurse Practitioner/ Physician's Asst: Key professional in a one yr study whose purpose is to detect previously undiagnosed physical illness in psychiatric patients; perform a complete med evaluation of 2-3 patients/day; patients will be clients of public mental health programs of Santa Clara, Santa Cruz, San Benito, Monterey Counties; exams performed at location of these programs; evaluation will incl administering a standardized psychiatric interview, clarifying patients' responses to a med history questionnaire, performing a complete physical exam & drawing blood for screening diagnostic tests; QUALIFICATIONS: grad of nurse practitioner or physician's asst training program or be certified as an adult nurse practitioner or physician's asst; able to perform an accurate physical exam, formulate a problem list, & commu findings & judgments to a physician; sufficient maturity & exp to work successfully w/ psychiatric patients; facility in speaking Spanish useful.; C07/C07; $2113-2724/2113-2724.

43517-TC (JCC:5999/6000) Nurse Practitioner/ Physician's Asst: Key professional in a one yr study whose purpose is to detect previously undiagnosed physical illness in psychiatric patients; perform a complete med evaluation of 2-3 patients/day; patients will be clients of public mental health programs of Santa Clara, Santa Cruz, San Benito, Monterey Counties; exams performed at location of these programs; evaluation will incl administering a standardized psychiatric interview, clarifying patients' responses to a med history questionnaire, performing a complete physical exam & drawing blood for screening diagnostic tests; QUALIFICATIONS: grad of nurse practitioner or physician's asst training program or be certified as an adult nurse practitioner or physician's asst; able to perform an accurate physical exam, formulate a problem list, & commu findings & judgments to a physician; sufficient maturity & exp to work successfully w/ psychiatric patients; facility in speaking Spanish useful.; C07/C07; $2113-2724/2113-2724.

Nonexempt

41747-PM (JCC:2596) SECY II-SPEC: Respon in 3 areas: 1) 50% bkup for Admin Asst to Dean of Law Sch'l (incl substitution during absences); answer & screen phone calls; receive & screen visitors; typeing & transcription support; asst in travel arranging & mtg scheduling; 2) 15% devoted in providing basic sec'l support for Asst Dean; 3) 35% devoted to sec'l support for Appts Committee; typing & distributing Committee memos, as well as scheduling candidate interviews w/ faculty members, collecting, analyzing & correlating candidate evaluation forms, etc; will hire two 50% people for job share; QUALIFICATIONS: typ 75+; excel typing & transcription skills; ability to use most offc eqpt; ability to commu w/ people at all levels; knowl of or willingness to learn word processing eqpt; send appl/resume to E. Chatfield, Room 113, Crown Quad.; B12; $1310-1373.

33459-PM (JCC:2462) OFFICE ASST III: Book Order Clerk; 37.5 hrs/wk, 8-4:30; about 100 book orders daily fr booksellers & others, domestic & foreign (25% foreign); fr each order the coder extracts info & translates it into number codes according to book title & customer; precision & strict attention to detail are essential; all Sales Dept corresp is read daily, along w/ important journal articles & trade news dealing w/ book publishing; QUALIFICATIONS: typ 35; rudimentary reading knowl of a modern European lang desirable; neat, legible handwriting required; an acquaintance w/ organization of institutions of higher learning, & of libs, is essential; ease w/ titles & subtitles of esoteric scholarly works, & familiarity w/ bibliographical terms in lib & academic work; send appl/resume to Robert Lloyd,; B11; $1171-1231.

31163-PM (JCC:1747) LIBRARY SPEC I: 50%; fixed term 5/23/83-5/22/84; performs duties in Record Maintenance Unit of Catalog Dept; searches in Name Authorities (microfiche), the main catalog & Lib of Congress reference file in RLIN sys; typ tracings on authority cards & typ reference cards for nec locations; sort cards in alphabetical order, etc; QUALIFICATIONS: typ 50; high accuracy in typing; demonstrated clerical & organizational skills; atten to detail; prev lib exp; knowl of one Western European lang other than English; contact Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $595-623.

43726-PM (JCC:2058) ADMIN ASST I (N): AA I provides support to Asst Chief of Med for Clinical Programs, in the continuing develop't & coord of clinical programs w/in all areas of their respon; coord of inpatient & outpatient care & develop't of programs in outpatient clinics, emergency room & intensive care units; develop & carry out studies to determine what factors influence patient census; spec assignments which can require collecting, interpreting data, & proposing recommendations for remedial action or programs; asst in implementation of new programs or procedures; attend mtgs; prov sec'l support for Asst Chief; QUALIFICATIONS: analytical & satistical skills; exp in long-range planning; ability to coord programs among a variety of Depts & indivs; sec'l skills; send appl/resume to Jon Erickson, Med Ctr S-102; B16; $1593-1671.

41668-BP (JCC:2058) ADMIN ASST I (N): 8-5pm Mon-Fri + travel; the AAI provides admin support to RLG Board of Governors & the RLG Executive Office; reports to RLG President & Executive VP & is respon for coordinating all admin functions in the Executive Office; use word processors & computing tools (WYLBUR & SPIRES) to compile corporate data, prep reports, & compose memos, letters & manuscripts; manage executive calendars w/ heavy schedules & complex travel arrangements; develop budget forecasts; reconcile operating statements; may supv support staff; asst in hiring decisions write performance evaluations; make recommendations for salary increases, promotions, & dismissals; QUALIFICATIONS: excel oral & written commu skills to deal effectively w/ central staff & board members; ability to work w/ a high; B16; $1593-1671.

31632-LL (JCC:6810) SOC SCI RES ASST I: Med Clerk will obtain & record health serv utilization data fr psychiatric patients & their med records; administer questionnaires to patients at mental health treatment facilities in Santa Clara, Monterey, Santa Cruz & San Benito counties; obtain cost data by phone fr health care providers in these counties; enter data on IBM Personal Computer & transport diskettes to Data Mgr in Palo Alto; typ nurse practitioner reports using IBM Personal Computer & Wordstar word processing program; send reports to involved M.D.; maintain patient data files; asst in arranging 90-day follow-up evaluation of patients; QUALIFICATIONS: typ 60-65; able to use med & psychiatric terminology correctly; neat, legible handwriting; relate well to emotionally disturbed patients; relate well to physicians & their offc staff; enter data into an IBM Personal Computer; use Wordstar word processing program; B12; $1310-1373

41748-PM (JCC:2462) OFFICE ASST III: Gift Processing Assistant in Law Fund Offc; requires ability to maintain accurate & detailed gift records for production of reports to volunteers, & for internal use by the Law Fund Offc; maintenance of a variety of record keeping files; prep & mailing of all nec mat'ls in connection w/ various Law Sch'l fund-raising programs; typ acknowlm'ts fr the Dean of Law Sch'l; typ letters to volunteers; occasional evening & wkend work may be nec; QUALIFICATIONS: typ 60; familiarity w/ 10-key adding machine & other offc machines & eqpt; exp w/ memory typewriter useful but not mandatory; 2 yrs related exp; good command of English grammar; ability to effectively commu over the telephone; strong typing skills; good interpersonal skills & organizational ability; send appl/resume to Emily Chatfield, Room 113, Law School.; B11; $1246-1310.

29681-BP (JCC:2462) OFFICE ASST III: Will cross-train & substitute for the existing Procurement & Maintenance Desks during absences & when workload dictates a reassignment of duties; typ genl corresp & memos for dept mgrs & maintains offc corresp files; typ & tabulates statistical info w/ respon for completeness & accuracy; performs minor reconciling of dept'l budgets; answer phones & acts as receptionist; sort mail, etc; QUALIFICATIONS: knowl of business offc procedures & practices; good sec'l skills required; good working knowl of all business machines; able to deal w/ a diversity of individuals; good public relations & commu skills; aptitude for figures & details; willing to learn use of HP3000 terminal used at Maintenance Desk; send appl/resume to Peter A. Harvey, 308 Crothers Memorial Hall.; B11; $1246-1310.

32033-BP (JCC:2554) SECRETARY II: Works closely w/ Forum admin asst & other Forum staff on a variety of sec'l tasks; heavy typing load on IBM Electronic typewriter & computer terminal (NCR text editing sys); typing corresp, manuscripts & reports; some involvement in making travel, seminar, & conference arrangements; respon for inventory & supply orders, photocopy machine records, telephone billing, & other similar tasks as assigned; QUALIFICATIONS: typ 60+; good typing skills required; exp w/ computer text editing sys preferred, or willingness to learn basic sys quickly; good judgment & organizational skills nec; contact: Gerry Bowman, 497-9626.; B11; $1246-1310.

21985-BP (JCC:2562) SECRETARY III: Sec to Chairman of Mechanical Engrg Dept; organize & manage Chairman's busy appt schedule w/out detailed consultation; act as interface between Chairman & faculty, students & visitors; typ all Chairman's corresp; prep & process a variety of univ forms; screen & organize all mail; maintain Chairman's filing sys; respon for ordering & stocking offc supplies; organize lower-level tasks for student help; QUALIFICATIONS: typ 70; dictaphone; tech typing preferred but not essential; several yrs sec'l exp; good judgment, initiative & organizational skills required; knowl of univ policy & procedures helpful; send appl/resume to Dianne Sinn, Bldg. 500, Room C.; B14; $1440-1514.

26999-PM (JCC:2562) SECRETARY III: Prov support to VP for Development, the Assoc VP for Development, & the Deputy to VP under the direct supvn of their Admin Asst; typ memo, letters, proposals, manuscripts & position papers; answer incoming calls; establishing & maintain files; arrange mtgs; maintain & order supplies; make travel arrangements; maintain calendars of VP, the Assoc VP, & the Deputy; work w/ word processor, IBM Sel II, dictating machine & computer terminal; QUALIFICATIONS: typ 65; ability to perform all duties thoroughly, quickly & accurately; handle confidential mat'l w/ discretion; excel typing; proficient in spelling, grammar & punctuation; able to work effectively w/ persons fr diverse bkgrounds & disciplines, both in person & on phone; willing to learn to operate word processor, dictating machine & computer terminal; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B14; $1440-1514.

31432-PM (JCC:2672) MED SERV ASST III: 8:30-5pm; performs all clerical duties nec to properly register patients into Faculty Practice Program; interview patients for financial & insurance info; receives & documents patient cash payments; works under dir of Nurse Mgr or Clerical Supvr in Dermatology Clinic to accomplish the clerical functions of the patient care provided in ambulatory setting; incl patient appt setting, requisitioning lab & radiology exams, as well as heavy phone commu w/ patients, physicians & other depts; QUALIFICATIONS: 1 yr exp in a med setting; able to work in a fast pace, pressure environ; able to interact w/ public; Bilingual ability desirable; contact: Vicki Sfewart, A367 Boswell Bldg.; B11; $1246-1310.

Bargaining Unit

42329-DS (JCC:7316) FOOD SERVICE WORKER III: Thurs-Mon, 6am-2pm; prep salads for buffet, a la carte salads or sandwiches during lunch, hors d'oeuvres for spec parties; 65% for daily buffet, makes jello molds, fruit trays, relish trays & a wide variety of salads & dressings; prep special desserts & fruits; makes sure left-over foods are returned to kitchen, properly stored & reused whenever possible; 25% sets up station for sandwich and/or a la carte salads; works salad or sandwich station during lunch; 10% prep cold plates, dips & hors d'oeuvres for special parties; QUALIFICATIONS: pantry exp in restaurants, hospitals, hotels, clubs or w/ a catering serv required.; A12; $ 6.54.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, May 17, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Ph.D. oral exams

FRIDAY, MAY 13

Ali Akbar Iranmanesh, electrical engineering, "Electron Beam-Induced Temperature Profile, 3:15 p.m., McCullough 240.

MONDAY, MAY 16

Laurel E. Burns, geophysics, "The Border Ranges Mafic Complex: Plutonic Core of an Intraoceanic Island Arc," 2:15 p.m., Mitchell 372.

TUESDAY, MAY 17

Richard Lawrence Baer, electrical engineering, "Ultrasonic Transducer Arrays for Non-Destructive Testing," 2:15 p.m., Applied Physics Room 200. **Kent D. Baugh,** civil engineering, "Rate of Formation/Decomposition and Methane Fermentability of Autohydrolysis Products from Lignocellulose," 2:15 p.m., M 33 Terman Engineering Center. **Shinichi Ichikawa,** chemical engineering, "The Effect of Particle Size on the Reactivity of Supported Palladium," 1:15 p.m., Chemical Engineering Gazebo. **Isaac Cuir Riak,** education, "Capital Accumulation and Schooling in Modern World Economy: The Political Economy of Education and Income Inequality in Jamaica," 2:15 p.m., e114 Education Bldg. (Cubberley). **Dona Lee Wong,** neurosciences, "Regulation of the Biogenic Amine Biosynthetic Enzymes in the Adrenal and Pineal Glands," 1:30 p.m., D202 Sherman Fairchild Bldg.

WEDNESDAY, MAY 18

David M. Bachman, political science, "To Leap Forward: Chinese Policy-Making, 1956-1958," 9 a.m., Political Science Faculty Lounge. **Kilsoo Kim,** mechanical engineering, "Static and Dynamic Characteristics of Materials with Beam-Microstructure," 3:30 p.m., 529 Terman Engineering Center. **Arye Nehorai,** electrical engineering, "Algorithms for System Identification and Source Location," 3:15 p.m., Durand Building, Room 450.

THURSDAY, MAY 19

Susan Valerie Cashion, education and anthropology, "Dance in San Juan de Ocotan, Mexico: A Non-Verbal Expressing of Cultural Values," 9 a.m., 204 So. CERAS. **Theodore R. Mitchell,** education, "Oppositional Education in the Southern Farmers' Alliance: 1890-1900," 3:15 p.m., e114 Education Bldg. (Cubberley).

FRIDAY, MAY 20

Kenneth M. Duvall, electrical engineering, "Signal Cancellation in Adaptive Antennas: The Phenomenon and a Remedy," 3:30 p.m., AEL 109. **Marilyn Diane Fife,** communication, "FCC Policy on Minority Ownership in Broadcasting: A Political Systems Analysis of Regulatory Policymaking," 2:15 p.m., Room 414, Bldg. 120. **Lowell J. Gallagher,** English, 2:15 p.m., Bldg. 40, Room 41-F. **Constantinos P. Halvadakis,** civil engineering, "Methanogenesis in Solid-Waste Landfill Bioreactors," 2:15 p.m., M33 Terman Engineering Center. **Lawrence K. Lam,** electrical engineering, 2:15 p.m., Applied Physics 200. **Richard Gerard Landry,** English, 2:15 p.m., Dean Albert Gelpi's Office, Bldg. One, Room 2B. **Lynda Thoman,** economics, "Two Essays in Applied Microeconomics: Repeat Purchases Under Quality Uncertainty; Labor Power and Productivity Within the Firm," 2:15 p.m., Encina Hall 414. **Thomas S. Tobey,** education and psychology, "The Evaluation of a Preventive Approach to Parenting for First-Time Parents," 2:15 p.m., e114 Education Bldg. (Cubberley).

Oslo lecturer to show rare China cartoons

Rare, original Chinese cartoons will illustrate a free public talk by Prof. Christolph Harbsmeier of the University of Oslo at 4:15 p.m., Tuesday, May 17, in Room 4 of Cummings Art Building.

The political cartoons, entrusted to Harbsmeier by various artists who drew them, will hang in Cummings Art Building from May 17 to May 25.

Harbsmeier, associate professor of Chinese at the University of Oslo, received his M.A. from Oxford and his Ph.D. from the University of Copenhagen. Among his publications are *Classical Chinese Syntax* (London, 1981) and a biographical study of the artist and man-of-letters Feng Zikai (Oslo: Scandinavian University Press, 1983).

Harbsmeier will also give a brown bag lunch talk on "Nominalization and Subordination in Classical Chinese" in the Asian Languages Lounge at Stanford at noon Monday, May 23.

Sponsored by the Center for East Asian Studies, the Stanford-Berkeley Joint East Asian National Resource Center and University Events and Services, the cartoon exhibit is open during the hours of Cummings Art Building.

I-Center to hold 4th International Festival May 21

The fourth annual International Festival will be held Saturday, May 21, at Bechtel International Center at Stanford University. This day of celebration features foods, crafts, and entertainment from around the world.

Both Stanford students and community members are participating in the festival. About 20 different nationalities will be represented in the food booths alone. Specialties such as yakitori chicken from Japan, shish kabobs from the Middle East, curried dishes from India, Vietnamese eggrolls, and the exquisite "Pavlova" dessert from New Zealand will be served. Free samples of Australian, Scottish, and English beers and ales will be available for tasting.

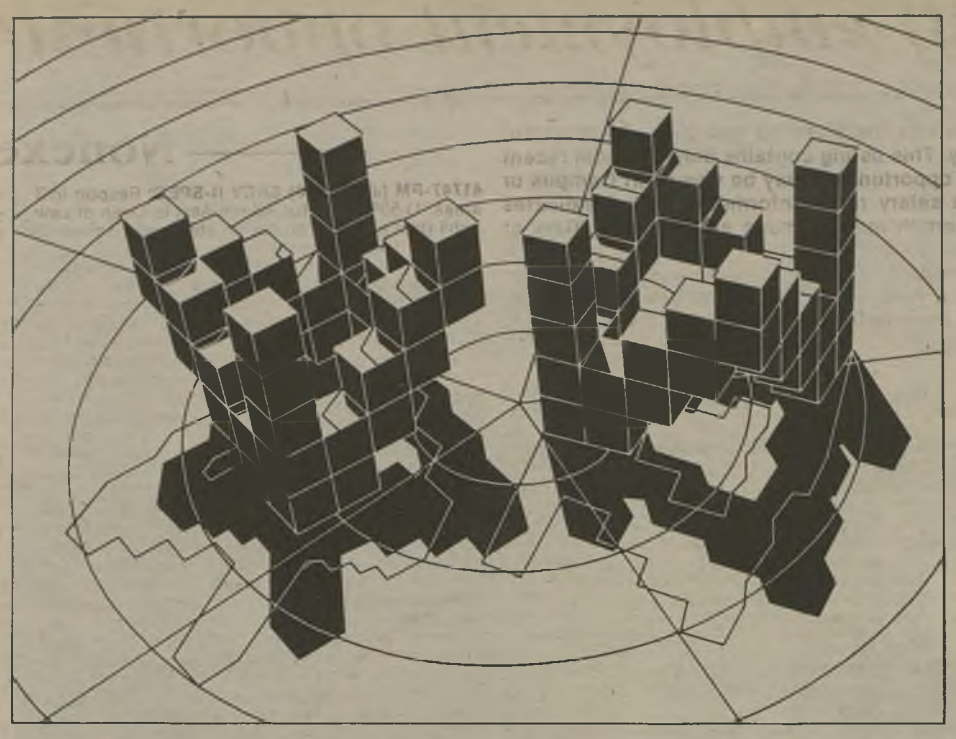
Many handcrafts

A wide variety of handicrafts will be exhibited and sold, including items from Peru and Brazil, plus international merchandise from the Palo Alto United Nations Store. Artists will demonstrate and sell their art, and handmade American quilts will be displayed.

Entertainment will be provided throughout the day, with Irish music, Mexican songs, Peruvian folkdances, and Indian dances included. A special demonstration of the Japanese Tea Ceremony will be given, as well. Members of the Peninsula Storytellers Guild will be on hand to tell stories to children and families.

Landscape watercolors by Lorraine Schreiber will be on view during the month of May at the International Center, and these works can be seen at the time of the festival.

The International Festival will be held from 11 a.m. to 5 p.m. at the Bechtel International Center at Stanford. For more information call 497-1831.



127 plus 3 by Edward Sellery

Sellery's paintings appear 3-D

"Color Matrix," a series of paintings by Edward Sellery, will be on view in the School of Humanities and Sciences from May 16 to August 12.

Sellery invents geometric forms and then renders them as objects against flat planes in his acrylic paintings, conveying an astonishing sense of three-dimensionality.

Asked how he conceives of his intricate and compelling compositions, the 31-year-old California native says, "Using three parameters—hue, value, and chroma—you can plot the painting on a three-dimensional graph or architectural model. It's the same thing a computer might do, although a machine wouldn't have as wide a color selection or the fineness I do. The computer might produce it faster though!"

The creative titles that Sellery bestows on his work—"Chocolate Ox," "What in the World," and "Blanket Statement," for example—convey the artist's enjoyment of both visual and verbal puns and his whimsy.

Sellery graduated with a major in Fine Arts (painting emphasis) from UC-Irvine. He presently works in a non-art position at a security brokerage firm in San Francisco and is also involved in the graphic design field.

He'll tell how to plan for future

"Planning for a Precarious Future" will be discussed by Dr. Donald N. Michael at noon Tuesday, May 17, at Bechtel International Center.

Michael is emeritus professor of planning and public policy and was also professor of psychology and a program director in the Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, at the University of Michigan.

He is a social psychologist with a background in the natural sciences with degrees from Harvard and the University of Chicago. His occupational career includes both government and business experience.

Michael is a fellow of the American Association for the Advancement of Science, the American Psychological Association, and the Society for the Psychological Study of Social Issues. He is also a member of the Club of Rome.

He has consulted about and published many professional papers, essays, and reports on practical and theoretical problems pertaining to personal, organizational and societal reactions to change produced by physical and social technology.

Among his major publications are *The Next Generation: Prospects Ahead for the Youth of Today and Tomorrow*, *The Unprepared Society: Planning for a Precarious Future*, and *On Learning to Plan and Planning to Learn: The Social Psychology of Changing Toward Future-Responsive Societal Learning*.

The presentation is one of the regular Tuesday Luncheon/Lecture series at the I-Center. Luncheon tickets are available at a cost of $2.50 one week before the event at the I-Center office on the second floor, or at the door as they last. Brown baggers are also welcome at no charge.

Other Cultures goes to Indonesia

The tropical archipelago of Indonesia is the focus of the Other Cultures Film Series at 7:30 p.m. Thursday, May 12, at the International Center.

"Wet Earth and Warm People," an hour-long film, centers on Indonesia's people. The camera moves from rice paddy to village, filming fishermen, soldiers, two-wheeled carts, bamboo rafts, people at work, and people at play.

Narration is provided by natural sounds and music—the laughter of children watching a puppet show; the chatter of women as they draw water from a village well; a dispute between two hot-headed fathers.

In the capital city of Djakarta, the old ways and the new sharply contrast. Viewers will see how pedicabs vie for street space with late-model automobiles.

The film is free and open to the entire community. A 75 cent donation will be requested to help defray the cost of the series. For further information on the weekly film series or other I-Center programs, drop by or phone the I-Center at 497-1831.

Piano recital set by Gregory Smith

Pianist Gregory Smith will give a free solo recital at 8 p.m. Tuesday, May 17, in Tresidder Lounge. Smith, a Stanford sophomore, is presented by the Department of Music.

He will perform two sonatas by Scarlatti, *Sonata in C Major (Waldstein)* by Beethoven, *Ballade II in F Major* by Chopin, and *Pictures at an Exhibition* by Moussorgsky.

Smith is a music major studying piano with Adolph Baller. At age 14 he soloed with the Utah Symphony, and has since been invited back twice to perform. At age 10 he was accepted into the Piano Preparatory Division of Brigham Young University, where he studied with Robert Smith, chairman of the piano faculty.

Bach, Telemann on Baroque program

The Department of Music presents the Stanford Baroque Orchestra, under the direction of Herbert Myers, and a Baroque vocal ensemble, under the direction of doctoral candidate Daniel Melamed, at 8 p.m. Wednesday, May 18, in Memorial Church.

The free concert will feature two cantatas of J.S. Bach: BWV 4 (*Christ lag in Todesbanden*) and BWV 182 (*Himmelskonig, sei willkommen*) with tenor soloist Harlan Hokin. This will be a rare opportunity to hear these cantatas performed as they were in Bach's day.

The Baroque Orchestra will also perform a concerto by Telemann with soloists Judith Linsenberg, recorder, and Roland Hutchinson, viola da gamba—both doctoral candidates in music.

The size of the choir and orchestra will be comparable to the forces used by Bach—12 singers and 15 instrumentalists, including an ensemble of cornetts and sackbuts for Cantata 4. Both groups employ Baroque performance techniques, and the orchestra plays on instruments built to 18th-century specifications.

Barnes recreates 1922 Sousa concert

John Philip Sousa comes to life again at 8 p.m. Saturday, May 21, in Dinkelspiel Auditorium when the Stanford Symphonic Band, under the direction of Arthur Barnes, recreates a summer band concert Sousa conducted in 1922. This is the Band's second annual Sousa recreation, featuring old-time band music from the park.

The program will include overtures from the opera *II Guarny* and *Euryanthe*, songs from Americana—*American Salute*, *Pop Goes the Weasel*—and encore marches by Sousa himself.

Director Barnes will solo on the baritone horn in Arthur Pryor's *Blue Bells of Scotland*.

The Symphonic Band will preview their concert at noon Wednesday, May 18, in front of Tresidder Union, and again at noon Thursday, May 19, at Civic Center Plaza in downtown Palo Alto.

Tickets for the May 21 concert are $4 general admission, $2 for students and senior citizens, available at Tresidder ticket office, 497-4317 and the door.



Theatre of Yugen in a scene from 'The Owl Mountain Pries'

Theatrical mixture of western and Japanese styles

The Theatre of Yugen, a company that combines styles from traditional Japanese *kyogen* and Western mime techniques, will give a lecture-demonstration and perform a playlet, *The Owl Mountain Priest* at 8 p.m. Wednesday, May 18, at the Elliott Program Center, Governor's Corner.

Founded in 1978 by its director Yuriko Doi, who was trained in Japan in Noh and *kyogen* as well as in Western dramatic styles, the Theatre of Yugen evokes the stylized drama and dance of traditional Japanese Noh and the earthy short comic interludes, *kyogen*, in its productions. Excerpts from plays to show stylized movements and dance will be followed by the short play *The Owl Mountain Priest* (*Fukuro Yamabushi*), a satire on a rough priest asked to perform an exorcism.

This free public performance is presented by the Center for East Asian Studies. The Elliott Program Center is located along Lagunita in the cluster of new dormitories at Governor's Corner near Santa Teresa Street and Governor's Avenue East (for parking).

Clifford Geertz to cover wide range in Harry Camp Memorial Lectures

Clifford Geertz, of the Institute for Advanced Study, Princeton, N.J., will deliver the Harry Camp Memorial Lectures at Stanford on "Works and Lives: The Anthropologist as Author" May 16, 17, 19, and 20.

The lectures will be given in Annenberg Auditorium, as follows:

Monday, May 16, 8 p.m., "Being There: Anthropology and the Scene of Writing";

Tuesday, May 17, 8 p.m., "The World in a Text. How to Read *Tristes Tropiques*";

Thursday, May 19, 8 p.m., "Slide Show: Evans-Pritchard's African Transparencies"; and

Friday, May 20, 4:30 p.m., "I-Witnessing: Malinowski's Children."

Through his essays on the interpretation of cultures, Geertz has blurred the boundary separating the humanities from the social sciences. In artfully describing other cultures, he has shown the beauty of marketing and the economy of art, the state as an aesthetic form and the politics in public processions, the moral imagination animating ritual and the practical side of mysticism. His prose both invokes worlds strange yet familiar and advances the theory of human understanding.

Born in 1926, in San Francisco, Geertz received his A.B. in philosophy from Antioch in 1950 and his Ph.D. in anthropology from Harvard in 1956.

He has held research or faculty positions at Harvard, UC-Berkeley, the University of Chicago, and Princeton University, and presently is the Harold F. Linder professor of social sciences at the Institute for Advanced Study.

Geertz has done field work in Java, Bali, Celebes, Sumatra, and Morocco. He is a fellow of the American Academy of Arts and Sciences, the American Philosophical Society, the National Academy of Sciences, the American Association for the Advancement of Science, and the Council of Scholars of the Library of Congress.

Geertz was a Harry Camp lecturer at Stanford in 1972 and since then has been asked to deliver the Lionel Trilling Lectures at Columbia (1977) and the Storrs Lectures at Yale Law School (1981).

His writings include *The Interpretation of Cultures: Selected Essays* (1973), *Peddlers and Princes* (1963), *Agricultural Involution*, *The Processes of Ecological Change in Indonesia* (1963), and *Negara: The Theatre State in Nineteenth Century Bali* (1980).

Bike Fair set

White Plaza will be the scene of a Bike Fair from 10 a.m. to 3 p.m. Friday, May 13.

Besides bike registration, there will be BMX (dirt bike) demonstrations, displays of helmets, baskets, and locks, security and safety tips, minor bike repairs, and door prizes.

The event is sponsored by the Police Department, with Alpha Phi Omega, the Tresidder Recreation Center, and some outside organizations. Some local bicycle shops will have accessories for sale.

For more information call Monica Miller of Police Department Special Services, 497-9633.

Flea Market-Fair at Escondido helps Childcare

The Escondido Flea Market-Fair, a benefit for the scholarship fund of the Childcare Council of Stanford, will be held 10 a.m. to 2 p.m. Saturday, May 14, in Pepper Tree Yard, Escondido Road, on the campus.

Booths for the flea market will be available at the Escondido Village Center for $10 until the eve of the event. Booths already planned include face painting, cake walk, paperback books, and Treasures and Trinkets.

Inside Pepper Tree there will be a coffee house with hot food and a puppet show.

A square dance will be held from 7-10 p.m., with Ken Oburn as caller.

The scholarship fund covers all the Childcare Council's centers on the campus, which are entirely parent-supported.

Childcare is of excellent quality, but the prices are high and waiting lists long. The young parents served by the centers often need financial help—hence the scholarship fund.

For more information call the Escondido Village Center, 497-1101, or the Childcare Resource Center, 497-2660.

Drama meeting set to preview Summer Theater

An informational meeting has been scheduled to discuss the Drama Department's Stanford Summer Theater Workshop 1983 at 4:15 p.m., Monday, May 16, in Little Theater.

The course offerings and play selection for the eight-week session will be announced; scheduling and student commitment will be discussed followed by a period for questions.

The workshop is open to students interested in participating in all aspects of theater production and willing to make a full-time commitment during the eight-week session.

University graduates, undergraduates, and students who have completed their junior year in high school are eligible for admission. The workshop may be taken on a no-credit basis or for eight units of academic credit.

The workshop will present two full-length plays in Little Theater and a noon-time series of six shorter plays in the Nitery. Beginning the third week of the summer session, noon-time performances will be presented Wednesday through Friday with an added performance at midnight on Friday. The evening series will begin the fourth week, each play running for a two-week period from Wednesday through Saturday.

The workshop provides a variety of opportunities for students to act, stage manage, design, and to participate in set construction, lighting, running crews, and front-of-house activities. The program is rigorous and demanding but provides a rewarding experience to students of theater.

Chicana health issues review to be held Saturday

Brazos Fuertes: Medicina y la Mujer, a conference to review Chicana health issues and the lives of Chicana health providers, will begin at noon Saturday, May 14, in Stanford's Zapata lounge and continue until 5:45 p.m.

Three panels, held in the large group instruction Room at CERAS, will explore the factors influencing the welfare of Chicanas, including socioeconomic status, sterilization abuse, high rates of infant mortality, lack of access to health services, etc.

11 a.m. to noon: Reception in Zapata Lounge.

Noon to 1:30 p.m.—Panel 1: La Chicana: Su Salud y Bienestar. Speakers will be Consuelo Chavez, Cathy Encisco, Kathy Flores, Kathy Preciado-Partida, and Sandra Salazar.

1:30-2:30 p.m.—Lunch.

2:30-4 p.m.—Chicanas as Health Care Providers: The Healing Tradition. Speakers will be Angie Dominguez Mefford, Ester Talavera, Olive Tejada-Flores, Sylvia Villareal, and Elizabeth Yaniegas.

4-4:15 p.m. Break.

4:15-5:45 p.m.—La Doctora: Personal Experience and Choice. Speakers are Carmen De La Rosa, Juan Flores, Ruby Raya, Lisa Solinas, and Laura Solorio.

The conference, sponsored by the Chicana Colectiva and the Stanford chapter of Chicanos in Health Education, is open to the public without charge.

American Indians' Festival and Pow-Wow starts Sunday

American Indian scholars and leaders ill keynote Stanford's second annual merican Indian Festival Sunday through riday, May 15-20, on campus.

The Stanford American Indian rganization's 12th annual Pow-Wow ill follow Friday through Sunday, May -22, behind the baseball diamond, cing El Camino real.

The festival will offer lectures and scussions of current American Indian sues, a poetry reading, and art and craft hibitions.

The Pow-Wow will feature Nathan ightball Jim as master of ceremonies and e Snake River Singers as host drum. here will be dancing and prizes, native ods, and arts and crafts for sale.

All events are open to the public. The tire schedule follows:

nday, May 15

"My Life Changed When I Looked " by Dr. Frank Dukepoo, Hopi, head the American Indian Education nter, Northern Arizona University; 8 ., Round Room, Memorial Church. ception to follow.

onday, May 16

Anthropology Department coffee hour honor of participants on the American dian Healers and Healing Panel; 9 a.m., thropology Museum, Room 111K, ilding 110.

Gregory Schaaf, a scholar of American story, will present a free public lecture "The History of the American Indian ace Movement" on Monday noon, May in the student lounge (Room 302) of e History Corner at Stanford.

Schaaf is completing his doctoral sertation at the University of California Santa Barbara based on the Morgan pers, a collection of unpublished cuments on Indian affairs during the volutionary War.

George Morgan was the Indian Agent the Continental Congress during the volution. Schaaf will discuss possible asons why the American Indians sided th the Colonies.

Anthropology Department lloquium: "The Historical Relationship tween Blacks and Indians" with Jack rbes, Anthropology Department; 3:30 ., Anthropology Museum, Room 1K, Bldg. 110.

Introduction by Prof. Clifford Barnett, airman, Anthropology Department. merican Indian Healers and Healing: A oss-Cultural Perspective," Family, mmunity, and Preventive Medicine, -5 p.m., Schultz Auditorium, ysiology Building, Campus Drive.

Reception at Stanford School of edicine; 5-6:30 p.m., Fairchild ditorium Lobby.

esday, May 17

Introduction by Count Gibson, fessor and chairman, Family, Comunity, and Preventive Medicine Public icy Symposium: "The Indian Health rvice and Its Challenge," with Everett odes, director, Indian Health Service; Alan Goodman, former director of vajo Health Authority; Robert Fairks and Lori Cupp, Stanford Medical dents. 7 p.m., Tresidder Room 271.

dnesday, May 18

The Dorothy Danforth Compton cture. Introduction by Gerald J. berman, vice-provost and dean of aduate studies and research. Shirley rt Hill, secretary of Natural Resources the State of New Mexico. 12 noon, Meyer Library Forum Room.

Sherry Hour to meet Shirley Witt Hill; 4 p.m., American Studies House, 566 Mayfield.

Thursday, May 19

Coffee Hour and presentation by Hans Lang, director, American Indian Museum, University of Zurich,' Switzerland. 9 a.m., Indian Cultural Center, basement, Women's Clubhouse, Old Union.

Introduction by Stanford medical student Miguel Dozier; "Cultural Research and Indian Community Development," by Prof. David Warren, director of cultural studies, College of Santa Fe, N.M.; 12 noon, Meyer Library Forum Room.

Reception for David Warren—4 p.m., 369 Wayside Road, Portola Valley.

Panel Discussion—"Problems of Identity; Who Is Indian Today?" with Indian Treaty Council and California Title IV Programs members. 7 p.m., Tresidder Union, Room 270.

Friday, May 20

Introduction: Albert J. Gelpi, Coe Professor of American Literature. Poetry Reading by Paula Gunn Allen; 12 noon, Meyer Library Forum Room. Reception following cosponsored by CROW and DOSA.

Exhibits

The Florence Pulford Collection of American Indian Contemporary Art Forms: Selections from the Northern Plains, Meyer Library Lobby, first floor.

Contemporary American Indian Quilt Art, Faculty Club.

American Indian Displays and Crafts, White Plaza.

May 20-22

Twelfth Annual Pow-Wow behind the baseball diamond, facing El Camino Real.

Black Arts Festival to have films, writers, arts, dance

Stanford University's Kuumba Arts Ensemble and Ujamaa House will present the fifth annual Black Arts Festival Monday through Sunday, May 16-22, on the campus.

This year's theme will be "Creativity toward Liberation: Self-Determination, Self-Defense, and Self-Reliance through Cultural Unity."

Weekday events include lunch discussions on black writers and intelligentsia, and a film and rally on Malcolm X.

The weekend events will start at noon Friday, May 20, with a Tresidder patio performance of the Celestial Lions, a Bay Area reggae band. That night is Cultural Night, with poetry readings, a one-act play, fashion show, and African food and music at 8 p.m. in the Lagunita Court Dining Hall.

Saturday, May 21, events will feature an Arts and Crafts Faire from 10 a.m. to 6 p.m. on the Tresidder patio deck. On the schedule are arts, crafts, and photo exhibits, poets, musicians, and the Kuumba Dance Ensemble.

The dance group, Balle Saba, will give a master class at 2 p.m. in the Women's Clubhouse ($2).

A dance concert, "Creativity toward Liberation: Dance in Motion," will be presented at 8 p.m. Saturday, May 21, in the Lagunita Court Dining Hall. On the program are Ancestral Wisdom and Balle Saba, as well as poets reading their work.

Admission is $2 in advance, $3 at the door.

The Stanford Gospel Choir will end the week with a performance at 3 p.m. Sunday, May 22, in Dinkelspiel Auditorium. Admission is $1 at the door.

The weekday schedule follows:

Monday, May 16: Noontime bag lunch discussion on black writers at Harmony House.

Tuesday, May 17: Noontime bag lunch discussion on the black intelligentsia at Harmony House; "Class, the Invasions. . ." at 7 p.m. in Ujamaa Lounge, Lagunita Court.

Wednesday, May 18: Noontime bag lunch discussion on the Black media at Harmony House; film on Malcolm X at 7 p.m. in Ujamaa Lounge, Lagunita Court.

Thursday, May 19: Noontime White Plaza rally on Malcolm X; slide show presentation and discussion on South Africa and Ghana at 3 p.m. in Ujamaa Lounge, Lagunita Court; "Class, the Invasions. . ." at 7 p.m. in Ujamaa Lounge.

For more information call Kuumba Arts Ensemble, 497-1587; Black Community Services Center, 497-1587; or African and Afro-American Studies, 497-3781.



BY ARNE FOLKEDAL

The Dance Division's 'Spring Migration' (above are Jean Massicotte and Jancy Limpert) will offer performances at 8:30 p.m. Wednesday through Saturday, May 11-14, in Roble Dance Studio.

Mendicants give annual concert

The Mendicants, Stanford's popular male vocal ensemble, will give their annual spring concert at 9 p.m. Wednesday, May 11, in Memorial Church.

The free public concert, which celebrates the Mendicants' 20th year on campus, will include music for all tastes—from pop to barbershop, spirituals to old English airs.



Ed Cohn

Hundreds to play Verdi's *Requiem* at Memorial Church

Hundreds of Stanford musicians will join forces to perform Verdi's monumental *Requiem* at 8 p.m. Friday and Sunday, May 20 and 22, in Memorial Church.

Conducted by William Ramsey, these performances will bring together the Music Department's Chorus, Chorale, Church Choir, and Symphony Orchestra. Joining them will be four very fine soloists: soprano Lila Stuart, mezzo Wendy Hillhouse, tenor Gregory Wait, and bass-baritone Ed Cohn.

Stuart and Wait are voice teachers at Stanford; Hillhouse and Cohn are well-known Bay Area opera singers. The Symphony Orchestra has been prepared for the *Requiem* by doctoral candidate Eric Kujawsky.

Verdi wrote his *Requiem* in memory of Alessandro Manzoni, an Italian national hero. It was first performed, with great success, on May 22, 1874, in Milan, conducted by Verdi.

Verdi's *Requiem* was last performed at Stanford in 1975, conducted by former choral director Harold Schmidt, to mark Schmidt's retirement. The performances this May 20 and 22 will honor the memory of Allyce Wishnevsky, a friend of music and of Stanford University, who left a gift in her name to perpetuate the life of music at Stanford.

Tickets for the performance are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., May 11, to cover the week of Mon., May 23, through Sun., May 29. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

MONDAY, MAY 16

American Indian Festival Week Panel Discussion: "American Indian Healers and Healing: A Cross-Cultural Perspective," guest panel. Reception 5 p.m. - 6:30 p.m. 1-5 p.m., 7-9 p.m. Shultz Aud., Stanford Medical School.

Anthropology Dept. Colloquium: "The Historical Relationship Between Blacks & Indians," by Jack Forbes. 3:30 p.m. Anthro. Museum Room 110.

Biological Sciences Seminar: "Neurotransmission and Neuronal Markers at Sensory Synapses in the Spinal Cord," by Dr. Thomas Jessell, Dept. of Neurobiology, Harvard Medical School. 4:15 p.m. Room T-175 Herrin Hall.

Numerical Analysis Seminar: "A Fourier Method for Three Dimensional Elliptic Problems," with Alexsei Shestakov, Lawrence Livermore Lab. 4:15 p.m. room 380C, Math Corner.

STARTS Presents Fred Astaire & Ginger Rogers in: "The Gay Divorcee," featuring songs by Cole Porter. 7 p.m. & 9 p.m. Tresidder Room 270. $2 students, faculty, and staff; $3 general.

Harry Camp Memorial Lecture: "Works and Lives: The Anthropologist as Author," by Clifford Geertz, Institute for Advanced Study, Princeton. Topic of discussion: "Being There: Anthropology and the Scene of Writing". 8 p.m. Annenberg Aud. Free.

TUESDAY, MAY 17

Bechtel International Center Tuesday Luncheon/Lecture Series: "Planning for a Precarious Future," by Dr. Donald N. Michael. Noon. I-Center. $2.50 for hot lunch, brown-baggers welcome at no charge.

Learning About Racism Lunch Series: "Inherent Barriers to Inter-Ethnic Communication," by Alejandro Martinez, psychologist at Cowell Health Center. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Hall.

Center for East Asian Studies Films: "Community Divided" & "Tokyo: World's Safest City?". Noon. Room 241, Lou Henry Hoover Bldg.

Stanford Art Museum Lunch Hour Tour: Early Lithography. 12:15 p.m. Stanford Museum.

Applied Mechanics Seminar: "Ship-Generated Solitons," with Prof. John Wehausen, University of California, Berkeley. 4:15 p.m. Materials Science Room 550a.

Center for East Asian Studies Colloquium: Dr. Christolph Harbsmeier, University of Oslo, will speak on Chinese political cartoons and China's political situation. Dr. Harbsmeier's own collection of rare, original Chinese cartoons will be on display in Cummings until May 25. 4:15 p.m. Room 4, Cummings Art Building.

Roble Hall Lecture: "What It's Like To Be a Journalist in a Country with Information Constraints," by Bradley Martin, Asian Correspondent for the Washington Sun. 6:30 p.m. Roble Hall. Free.

American Indian Public Policy Symposium: "The Indian Health Service and Its Challenges," by Everett Rhodes, director, Indian Health Service , and Alan Goodman, former director, Navajo Health Authority. 7 p.m. Tresidder 271.

Music Dept. Concert: Gregory Smith, piano. Scarlatti-Sonata in E Major; Beethoven-Waldstein Sonata; Chopin-Ballade in F Major; Ravel-Ondine from Gaspard de la Nuit; Mussorgsky-Pictures at an Exhibition. 8 p.m. Tresidder Lounge. Free.

Harry Camp Memorial Lecture: "Works and Lives: The Anthropologist as Author," by Clifford Geertz, Institute for Advanced Study, Princeton. The World in a Text. How to Read *Tristes Tropiques*. 8 p.m. Annenberg Aud. Free.

WEDNESDAY, MAY 18

CROW Lecture: "Cross-Cultural Sexual Attitudes and Behavior: Hispanics and Anglos," by Maria Luisa Flaherty, Clinical Social Worker, San Jose. Noon. Terman Aud. Free.

Latin American Studies Lecture: "Ideology and the Corporatist State Under Cardenas," with Dr. Alama Garcia-Marsh, Assistant Professor of Sociology, University of Santa Clara. Noon. Bolivar House.

Dorothy Danforth Compton Lecture: Shirley Witt Hill, Secretary of Natural Resources, New Mexico. Sherry hour with Hill at American Studies House, 4 p.m. Noon. Meyer Forum Room.

Stanford Art Museum Lunch Hour Tour: Early Lithography. 12:15 p.m. Stanford Museum.

Chemical Engineering Colloquium: "Bubble Formation at a Flexible Orifice," by Professor Richard G. Rice, Louisiana State University. 4:15 p.m. Chemical Engineering Conference Room.

Center for Research in International Studies Lecture: "American Public Opinion and United States Foreign Policy," by Dr. John E. Rielly, President, Chicago Council on Foreign Relations. 4:15 p.m. Room 205, History Corner.

Chemical Engineering Special Seminar: "Dynamics of Catalysts and Catalytic Reactors," with Dr. Louis Hegedius, director, Inorganic Research Dept. , Washington Research Center. 4:15 p.m. Chemical Engineering Gazebo.

Roble Hall Health Series: "Exercise Physiology and Weight Control," by Barbara Hewitt of the Stanford Heart Disease Prevention Program. 7 p.m. Roble Hall.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

Center for East Asian Studies: "Kyogen-Mime" lecture and demonstration by the Theatre of Yugen. Combining styles from traditional Japanese kyogen (short comic interludes) and Western mime techniques, the Theatre of Yugen will demonstrate stylized movement and speech and Noh dance, and will perform the short play *The Owl Mountan Priest*. 8 p.m. Elliott Program Center, Governor's Corner.

THURSDAY, MAY 19

Theology & Natural Sciences Lunch Series: "Science and Ethics - Genetics," by Ronald Davis, Professor of Biochemistry at Stanford, and Ernle Young, chaplain at Stanford Hospital. Noon. Otero Dining Hall, Wilbur Hall.

American Indian Festival Week Lecture: "Cultural Research and Indian Community Development," by David Warren. Noon. Meyer Forum Room.

Perspectives on Twentieth Century Japan Colioquia Series: Professor Harry Harootunian, Max Palevsky Professor of History and Civilization, University of Chicago will speak on an unannounced topic. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

Applied Physics Lecture: "Macroscopic Quantum Tunneling and Noise in Josephson Junctions," by Gerd Schon, Institute for Theoretical Physics, University of California, Santa Barbara. 4:15 p.m. Applied Physics 200.

Solid Mechanics Seminar: "Materials with Memory : An Essay in Thermodynamics," with Prof. J. Kestin, Div. of Engineering, Brown Univ. 4:15 p.m. Skilling Aud.

American Indian Festival Week Discussion: "Problem of Identity: Who Are Native Americans Today?" Panel discussion. 7 p.m. Tresidder 207.

Nuclear Film Program Series: "Nuclear Nightmares". 7:30 & 9:30 p.m. Meyer Forum Room. Free.

"Other Cultures" Film Series: "Waiting For Fidel" (Cuba). Inside Cuba with a movie-making threesome whose hope is that Fidel himself will star in their film. The film makers are a former Newfoundland premier, a radio and TV owner, and Canadian film director. What happens while this unusual crew awaits its star shows a good deal of the new Cuba and also the three Canadians who chose to film the island. 7:30 p.m. Bechtel International Center. 75 cent donation.

Center for East Asian Studies: "Captive Island" ("Shokei no Shima") (1966). Directed by Masahiro Shinoda; with Akira Nitta, Rentaro Mikuni. The son of an anarchist whose family was murdered sets out seeking revenge but ends up burying his past. 7:30 p.m. Room 040, Building 420.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

Harry Camp Memorial Lecture: "Works and Lives: The Anthropologist as Author," by Clifford Geertz, Institute for Advanced Study, Princeton. Slide Show: Evans-Pritchard's African transparencies. 8 p.m. Annenberg Aud. Free.

FRIDAY, MAY 20

Biological Sciences Special Seminar: "Immunological Methods to Detect DNA Damage in Vitro and at the Single-Cell Level," by Dr. Paul Lohman, head, Genetic Toxicology Dept., Netherlands Organization for Applied Scientific Research, Rijswijk, The Netherlands. Noon. Room T-175 Herrin Hall.

Center for East Asian Studies Bag Lunch: Prof. Hiroshi Kimura, Center for Slavic Studies, Hokkaido University will speak on "Soviet&Japanese Relations". Noon. Room 241. Lou Henry Hoover Bldg.

African Studies Center: Conference on "Resistance: Studies in Africa, Caribbean/ Latin American, and Afro-American History". 10 a.m. to 5 p.m. Sherman Fairchild Aud., Medical Center.

Applied Mathematics Lecture: "Relaxation and Structural Optimization," by Prof. Robert Kohn, Courant Institute & M.S.R.I. 3:15 p.m. Math 380-C.

Material Science & Engineering Colloquium: "Magnetic Thin Film Disc Recording," by Thomas Arnoldusssen, IBM Laboratories, San Jose, Calif. 3:30 p.m. Peterson Laboratory, Room 550A.

Harry Camp Memorial Lecture: "Works and Lives: The Anthropologist as Author," by Clifford Geertz, Institute for Advanced Study, Princeton. I-Witnessing: Malinowski's Children. 4:30 p.m. Annenberg Aud. Free.

Stanford American Indian Organization: 12th Annual Stanford Pow-Wow. 5-12 p.m. I.M. Soccer Field.

Music Dept: Stanford Chorus & Symphony Orchestra. Verdi Requiem; the chorus will be joined by soloists, Memorial Church Choir, and the Stanford Chorale. 8 p.m. Memorial Church. $4/$2.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

STARTS/Coffee House: Michael Gulezian, folk guitar. Tacoma recording artist performs at Stanford during West Coast tour. 9-12 p.m. Coffee House. Free.

SATURDAY, MAY 21

Men's & Women's Crew: PAC-10 Rowing Championships. Redwood Shores is located 10 miles north of campus on Highway 101. Take the Ralston Avenue turnoff, and the race course is right across the street from Marine World/ Africa USA. All day. Redwood Shores.

Stanford American Indian Organization: 12th Annual Stanford Pow-Wow. All day. I.M. Soccer Field.

Bechtel International Center: International Festival. International foods, crafts, and entertainment. 11 a.m. to 5 p.m. I-Center. Free.

Drama Department: Kaufman and Hart's classic American comedy, *Once in a Lifetime*. The classic American comedy about the beginnings of "the talkies" in Hollywood and its effect on everyone connected with the industry. 8 p.m. Little Theatre. $4 general; $2 students/seniors.

5th Annual Black Arts Festival Dance Concert: "Creativity Towards Liberation: Dance in Motion," featuring "Ancestral Wisdom" and "Balle Saba". 8 p.m. Lagunita Dining Hall. $2 in advance; $3 at door.

Music Dept. Concert: Symphonic Band (Wind Ensemble). Second annual Sousa Concert: recreation of a program from 1922, featuring solos, duets, trios, favorite band transciptions, and Sousa marches. Arthur Barnes performs "The Bluebells of Scotland" on the baritone horn. 8 p.m. Dinkelspiel Aud. $4/$2.

African Studies Center: Conference on "Resistance: Studies in Africa, Caribbean/ Latin American, and Afro-American History". 9:30 a.m. to 5 p.m. Room 112, CERAS Building.

SUNDAY, MAY 22

Men's & Women's Crew: PAC-10 Rowing Championships. Redwood Shores is located 10 miles north of campus on Highway 101. Take the Ralston Avenue turnoff, and the race course is right across the street from Marine World/ Africa USA. all day. Redwood Shores.

Stanford American Indian Organization: 12th Annual Stanford Pow-Wow. All day. I.M. Soccer Field.

University Public Worship: Preacher: R.G. Hamerton-Kelly, Dean of the Chapel. 11 a.m. Memorial Church.

5th Annual Black Arts Festival Concert: Stanford University Gospel Choir. 3 p.m. Dinkelspiel Aud. $1 at the door.

ASSU Sunday Flicks: "The Spy Who Loved Me". 7 & 9:3 p.m. Memorial Aud. $1.50.

EXHIBITS

The Prints of William Nicholson. Tues.- Friday 10 a.m. p.m., Sat.-Sun. 1-5. Stanford Museum. March 20 - May 22.

Prints of William Nicholson. Stanford Art Museum. March 2 - May 22.

Early Lithography: 1803-1830. Museum, Miedel Room. Apr 12 - June 19.

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. . Louis Lur Rotunda, Green Library. April 25 - June 30.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidde Coffee House and Upper Lobby. May 1 - June 15.

Lorraine Schreiber, watercolor paintings. Reception Friday, May 6th, 5 - 7 p.m. I-Center. May 4 - May 30.

Works by Graduate Students in the M.F.A. Program Stanford. Art Gallery. May 17 - June 12.

CAMPUS REPORT

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The SLAC Accelepede has brought glory to Stanford by winning first prize for the best centipede costume at the Bay-to-Breakers race in San Francisco Sunday. The Accelepede consisted of 33 runners wearing modulator units (SLAC power supplies) connected with beam pipe, plus the added excitement of flashing lights and electronic beepers. Mathematician Ken Witthaus was in charge of the monster.

Public affairs has new chief: Bob Freelen

Robert E. Freelen, 49, has been named Stanford vice-president for public affairs, effective immediately, University President Donald Kennedy announced Monday, May 16.

A former Stanford student body president, Freelen has served as acting vice-president since February. He succeeds Robert M. Rosenzweig, who was named president of the Association of American Universities in Washington, D.C.

Freelen will be responsible for federal, state, and local government relations; news and publications; events and services; and the guide service.

He and his colleagues have frequently been praised by Kennedy for "extraordinarily effective" representation of the University in Washington and Sacramento.

Announcing his appointment, Kennedy said: "Bob's two highly successful tours as acting vice-president, and the breadth of his experience at Stanford are among the reasons for my confidence that Stanford's public affairs will be in good hands. He is also deeply knowledgeable about public policy in the areas important to us and he is a splendid organizer and leader of the staff."

Active in government relations for



Bob Freelen

Stanford since 1972, Freelen has been concerned with such issues as tax policy, student aid, and indirect cost recovery.

In an interview with *The Stanford Daily* last year, Freelen said "one of the

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Excellent research called prime criterion for tenure

Demonstrable excellence in research "should be recognized as our primary criterion for tenure," Dean Norman K. Wessells of the Stanford School of Humanities and Sciences told the Faculty Senate Thursday, May 12.

"No person should be granted tenure here who is not demonstrably excellent as a research scholar," he declared, "We must continue to emphasize that high quality teaching is critically important, but we should embrace the concept that first-class university-type teaching is sustained by, and is directly dependent upon, continuing scholarship of the first rank. The two are inseparable."

Wessells noted that the School's faculty is now 79 percent tenured, one of the highest ratios among major universities. This will increase further as the result of changes in retirement laws.

"Unless we take new steps to reverse the trend, by the 1990s, the School of Humanities and Sciences will have only about 75 professors among its 28 departments. For comparison, Yale now has 55 percent tenured faculty and has adopted

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Governance, appointments key Hoover issues—Kennedy

The key issues in the emerging debate over the relationship of the Hoover Institution to Stanford University "have to do with governance and the mode of appointment and not with who has what kind of politics," University President Donald Kennedy said Saturday, May 14.

"Political body counting, which has become kind of a feature of the present debate, is not a terribly important or useful thing on which to concentrate," he told more than 1,000 persons attending the Alumni Association's 51st annual campus conference. *(See text page 10.)*

"Indeed, consideration of those matters is not only improper under our own perceptions of academic freedom but plays its own role in turning the discussion into one that is unnecessarily strident on both sides."

About 1,500 members of the Stanford community, including at least 75 of the University's 1,100 faculty members, have signed petitions asking the Board of Trustees to conduct an inquiry into the present relationship, where Hoover is "independent within the frame" of the University.

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People

Faculty Senate elects Heller 1983-84 chairman

Associate Prof. H. Craig Heller, 39, biological sciences, has been elected chairman of the Stanford Faculty Senate for 1983-84.

Elected to serve with him on the Senate Steering Committee May 5 were Profs. Michael Bratman, philosophy; Paul Robinson, history; Sanford Dornbusch, sociology; and Kenneth Arrow, economics.

Formed in 1968, the Senate is a key policy-making group within the University. It includes 53 elected faculty representatives and 10 ex-officio members, including the president, provost, deans of seven schools, vice provosts responsible for overseeing undergraduate and graduate education, and the academic secretary.

Heller sees the chairman's role as one of facilitating discussion in this forum. "It's like a traffic cop in Paris," he says. "Things fly by fast and furious. If they're not kept in order, disaster can occur."

Heller is former chairman of the influential Committee on Committees, which recommends faculty to serve in the governance structure of the University. He currently is a member of this group and of the Steering Committee.

Heller also is former chairman of the Commission on Investment Responsibility, a student-faculty-alumni-staff group which serves in an advisory capacity to the Board of Trustees.



Craig Heller

Born in Philadelphia, Heller graduated from Ursinus College (B.S., 1965) and Yale (M.Phil., 1968; Ph.D., 1970). A Stanford faculty member since 1972, he received the Walter J. Gores award for excellence in teaching in 1977. His research concerns the autonomic nervous system, particularly the mechanisms for regulating body temperatures in vertebrate animals. This includes the investigation of sleep, hibernation, and adaptation to extreme environments.

Academy elects three from Stanford

Three Stanford faculty members are among 77 new members of the American Academy of Arts and Sciences.

They are Prof. Theodor Hansch, physics; Bradley Efron, statistics; and Olle Bjorkman, consulting professor in biological sciences.

Earlier this year, Hansch was named to share the $5,000 Cyrus B. Comstock prize of the National Academy of Sciences. In January, Efron received a $220,000 fellowship from the John D. and Catherine T. MacArthur Foundation.

Bjorkman works at the campus office of the Carnegie Institution of Washington.

At present, 118 of Stanford's 1,100 faculty members belong to the Academy. Founded in 1780 by John Adams and other leading intellectuals of the period, the Academy is a national honorary society with a membership of nearly 2,400 scholars, scientists, and public figures.

AAUP meets June 1 at Meyer Library

The Stanford chapter of the American Association of University Professors will hold its annual meeting at 4:15 p.m. Wednesday, June 1, in the Meyer Library Forum Room.

"The Benefits Package" will be discussed by a panel consisting of Profs. Kenneth Scott, law; Alain Enthoven, business; and Jeannie Thomas, manager of benefits.

The results of the annual election will also be announced at the meeting. Nominees for the 1983-84 executive committee include Denis Phillips, education, for president; David Danelski, political science, for vice-president; James Jucker, industrial engineering, for secretary-treasurer; and Julian Davidson, physiology, and Christopher Coe, psychiatry, for members at large.

The nominating committee consisted of Profs. Leon Rosenberg, medical microbiology, Bernard Roth, mechanical engineering, and Herbert Schwartz, pediatrics.

Two immediate past presidents will also serve on the executive committee: Ronald Rebholz, English and Clifford Barnett, anthropology.

Robert Conquest

Robert Conquest, curator and senior research fellow at the Hoover Institution, has written the introduction for *Andropov: New Challenge to the West*, coauthored by Arnold Beichman and Mikhail S. Bernstam (Stein and Day, due June 10).

The book relates what is known inside and outside the Soviet Union about Yuri Andropov—his origins, skills, character, and how he managed to climb to supreme power.

Werlen trip to Switzerland

German studies graduate student Hans Werlen and his wife Martha, a secretary in the Psychology Department, have organized two unique two-week trips to the Lotschental, a secluded mountain valley in southern Switzerland, in mid-July and mid-August.

Hikers and beginning or intermediate climbers will be taught by professional Swiss mountain guides in a beautiful area unspoiled by tourism.

For a brochure or more information call the Werlens at 493-7578.

Brest named to Montgomery chair

Prof. Paul A. Brest has been named to the Kenneth and Harle Montgomery professorship in clinical legal education at Stanford Law School.

His appointment was reported to the Stanford Board of Trustees Tuesday, May 10, by John Hart Ely, dean of the Law School. He called Brest "an extraordinarily strong and central member of our faculty."

A Stanford faculty member since 1969, Brest played a leading role in developing



Paul Brest

an experimental program, called "Curriculum B," which laid the groundwork for a number of significant changes in the School's program for 1983-84.

Dean Ely noted that, in addition to being an innovative teacher, Brest is "one of the nation's leading scholars of constitutional law" and author of an unusually creative casebook in the field, *Processes of Constitutional Decision-Making* (1975).

The Montgomery chair was established in 1980 by Mr. and Mrs. Kenneth Montgomery of Northbrook, Ill. Its first holder, Prof. Anthony Amsterdam, left Stanford in 1981.

Brest was born in 1940 in Jacksonville, Fla. and graduated in 1962 from Swarthmore College.

He earned his law degree *magna cum laude*, in 1965 from Harvard where he was Supreme Court and developments note editor for the *Harvard Law Review*.

From 1966 to 1968 Brest was an attorney with the NAACP Legal Defense and Educational Fund in Jackson, Miss.

He then served at the Supreme Court as law clerk for Justice John M. Harlan, joining the Stanford Law School in the fall of 1969.

Brest was elected last year to membership in the prestigious American Academy of Arts and Sciences.

He and his wife, Iris Brest, an attorney with Stanford's Office of the University Counsel, live on the Stanford campus.

Library to honor 100 volunteers

About 100 Stanford Library volunteers will be recognized at an informal ceremony in the redwood grove between Serra St. and the Art Gallery, starting at 3 p.m. Friday, May 27.

Library Director David Weber will speak briefly and introduce the volunteers. Some of their activities include helping catalog rare maps, aiding in identification of brittle books, and helping the FAST-CAT catalog system.

Great works course seeks assistant

WANTED. Assistant to the coordinator of "Great Works of Western Culture."

Person must be an efficient administrator, and have the diplomatic skills to work with a teaching staff made up of regular members of the Stanford faculty and instructors.

Responsibilities will include teaching one class each quarter; insuring the organic unity of the course; chairing the meetings in which the teachers prepare for the teaching of the works and determine the syllabus and final examination; putting those latter documents in their final form; collecting and distributing materials which will aid the teaching of critical reading, thinking, and writing; working with the teachers, especially the new instructors, to improve their teaching; encouraging and helping organize supplementary programs, like staged readings of plays, concerts, and the film series; participating in the search committees for new instructors; and representing "Great Works" on the Core List Committee. Position is defined as two-thirds of full time.

Pay will be $15,000. Apply by May 25 to the Western Culture Program Committee, c/o Prof. Marsh McCall, Western Culture Program.

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In a Harlem elementary school, Clay Bates set his goals down in writing—now he's busy achieving them all

BY DONALD STOKES

When Clayton W. Bates, Jr., was in elementary school in Harlem he wrote down in his album exactly where he planned to get his higher education, in order to become a top scientist.

He kept closely to that life plan, and has become:

* The researcher largely responsible for the type of X-ray image intensifier used in diagnostic radiology throughout the world;

* Leader of the research team that is nearing the creation of an inexpensive photovoltaic solar cell.

All this and, as they say, much, much more.

Joining Stanford in 1972 as associate professor and promoted to full professor in 1977, Bates is an athletic handsome man with an easy manner who has for 10 years been in demand as a professional photographic model, in whatever spare time he can manage.

He shrugs off mention of the fact that he was born and raised in Harlem, and the problems caused by his black background.

A pinpoint summary of his beginnings show that he was born the child of a broken marriage. His mother was a domestic. He and his sister were raised by their mother in New York City.

"I was interested in science and engineering as far back as I can remember," he said. "I still have the album from my elementary school, in which I wrote down exactly which schools and colleges I planned to go to, in order to study engineering.

"My first ambition was to become an aeronautical engineer. I was told that the way to do that was to study a combination of civil and mechanical engineering. So I started out as a civil engineer. Eventually I became interested in electrical engineering and got my first degree in this area."

His master's degree followed, and he finished all the course work as a candidate for a Ph.D. in electrical engineering, but then decided he was more interested in physics. He started graduate school all over and obtained his doctorate in physics at Washington University in 1966.

He worked for 10 years in private industry before joining Stanford. Among his employers were RCA (on circuit design); Ford Instrument, a division of Sperry Rand (on the atomic submarine Seawolf); Sylvania Electronics (where he got his love for solid state physics).

He spent six years with Varian Associates as senior engineer, and won their sabbatical award for 1967-68, which brought him a trip to England. He was Reader (associate professor) at the Imperial College of Science and Technology in London.

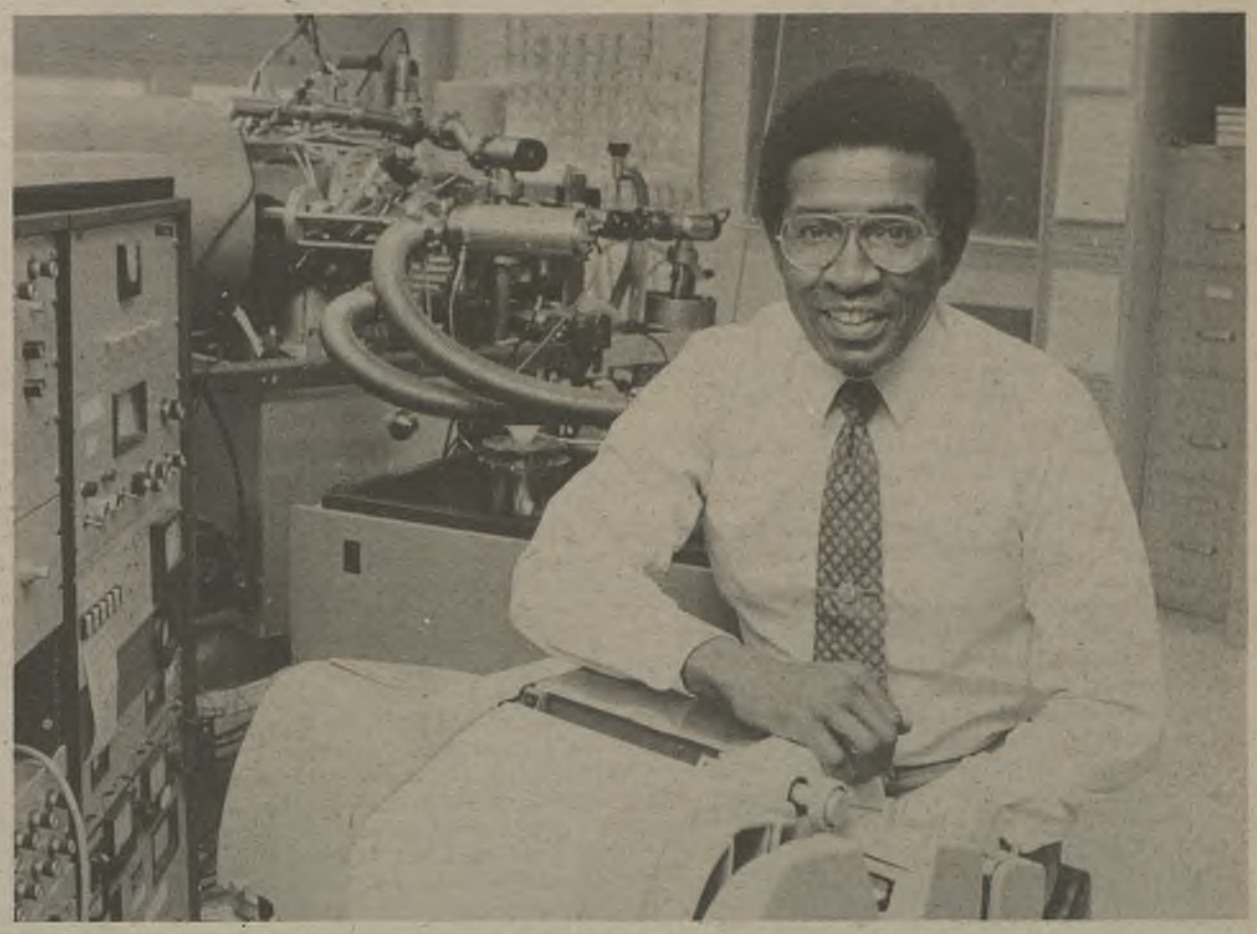
Here he was one of the principal creators of an X-ray intensifier tube for diagnostic radiology. This is now standard equipment in hospitals throughout the world. Bates' name is still associated with the tube and today, 15 years later, he still gets consulting work in the field of X-ray intensification.

Bates' major area of expertise is solid state physics. He is particularly interested in photoelectronic materials and devices. His work involves the unraveling of processes involved in the interaction of photons and electrons with the highly complex materials used in photoelectronic sensing devices.

These include photoemissive surfaces, luminiscent phosphors, and electronically conducting glasses. Bates was one of the first scientists to use X-ray photoelectron spectroscopy on glasses to determine their electronic structure. He credits his work in this area of amorphous materials for his appointment at Stanford in 1972.

He has served as adviser to various government agencies, including the National Science Foundation and the National Academy of Sciences.

"My approach is quite fundamental in my research to determine the electronic structure of fairly complex materials systems," he says.



That is what keeps us going—the excitement of the hunt! So long as you keep enthusiastic, you can keep going. Some people call research a rat race, but I can't think of anything I'd rather be doing.
—Clayton W. Bates, Jr.

One of his projects, in which he leads a team of five researchers, is into photovoltaic solar cell systems, using novel or unique techniques in preparing materials which show much promise in making a cost-effective cell.

"A solar cell has to amortize itself over a period of time, so a minimum efficiency is required for the process. In the cells we are working on the materials are cadmium sulfide and copper indium diselenide.

"The process of making our cell is comparatively inexpensive, so our cell does not have to be so efficient in order to pay for itself. The efficiency we are shooting for ranges from six to eight percent, which should be more than sufficient for it to be viable economically.

"The technique we are employing for cell fabrication is called chemical spray pyrolysis, and it is quite similar to spray painting. The equipment is extremely simple and can be used by unskilled production personnel.

"Our team prepares the materials, makes the cells, and measures the electronic properties of the materials, as well as the response of the completed cells."

All the while his team gets closer to the day when their cell will become visible as a source of competitive energy.

"We need to increase our efficiency by a factor of two. When we do that the cell will be approximately cost-effective. The best cell we have made so far has an efficiency of close to three percent. If we can make a cell with an efficiency of six percent it will pay for itself.

"In most photovoltaic cells one thinks of 10 percent as the break-even point, as the materials of which they are made are more costly.

My students and I have determined the parameters for making the materials that go into each part of the cell. We have prepared a few of these and need to prepare more. The experiments look very promising just now.

"As soon as this interview is over, I am going to hurry into the lab to see the latest results. I believe we are getting close to a solution now."

An interviewer mentioned the work of other Stanford engineers and scientists, each of whom was optimistically pushing across frontiers of research.

"That is what keeps us going," exclaimed Bates. "The excitement of the hunt! So long as you keep enthusiastic you can keep going. Some people call research a rat-race, but I don't know of anything else in the world I would rather be doing."

The photovoltaic cell is only one of the areas in which Bates is busy. He has recently been awarded three years of funding by the National Science Foundation to examine the physics of certain small metal particles which have very interesting properties.

"These particles don't act in the way larger pieces of the same metal would," said Bates. "The idea is to develop a detector of radiation in the two-to-five micron range. One can tailor the response or the absorption of these particles by varying the particle size, or the matrix in which one sets the particles.

"Practical applications? The two-to-five micron

continued on next page

Bates/ continued from page 3

range is a seductive one for the military. They are looking for detectors in that region.

"I got into these fundamental studies from looking at other practical surfaces which are called photo-cathodes. These have been part of the electronics industry for the last 50 years.

"My students and I were the first ones really to determine scientifically in detail the electronic structure of the surfaces, which have been around for so long. We have thrown considerable light on why they work the way they do.

"My colleague Bill Spicer, of the Electrical Engineering Department, was one of the first people to get me interested in these surfaces. He developed a basic theory of them when he was working for RCA in Princeton.

"This led to a theory of mine, which I believe will lead to an improved surface, a better sort of device. The theory concerns the dielectric response of a system composed of a number of materials. A certain fraction of the volume is made up of metal particles in a particular matrix. What we have done is to determine the response of this composite to electromagnetic radiation, that theoretically gives results consistent with experiments performed on these systems.

"In order to detect the radiation one has to absorb it. So what we do is to tailor the structure so that it absorbs in a particular part of the electromagnetic spectrum."

Bates has recently received funding for another project, which is to examine the silicon-silicon dioxide interface. "Much of industry today is based on silicon technology, so the study of this problem has vast implications, and is of considerable interest to Silicon Valley.

With a joint appointment in Materials Science and Electrical Engineering, Bates teaches advanced graduate courses in quantum mechanics and solid state physics, including a laboratory course on photoelectronic materials and devices. He presently supervises 10 Ph.D. research students and a number of postdoctoral visitors.





Among Clay Bates' many "roles" in modeling have been a riverboat gambler, sportsmen, a guitarist, a basketball player, and a three-piece suit executive.

Bates is active in black affairs on campus, including being adviser to the Society of Black Scientsts and Engineers, of which he was a founder. There are two other black scientists on campus besides Bates; they are John T. Gill III, associate professor of electrical engineering, and Arthur B. C. Walker, professor of applied physics.

Bates spent a year's sabbatical at Princeton 1978-79, during which he enjoyed very much the consulting work he did with Bell Labs at Murray Hill. He laughed with remembered pleasure: "Think of it—I was able to spend all my time in the labs, eight to 10 hours a day, doing research work without any university-associated responsibilities. It was great.

"One has to wear so many hats, be so many people, when a professor. There is teaching, research, advising, consulting. . . sometimes it is frustrating. I cannot spend as much time in the labs with my students as I would like to."

Bates and his wife Priscilla were resident fellows for three years, first at Roble Hall and then at Lagunita's East Court, where they guided the Black Theme house.

He had first met Priscilla when she was an undergraduate at Barnard College, New York City, and he was starting graduate school. He had known her for many years before they married. They have three children: Katherine, 12, Christopher, 8, and Naomi, 4.

Katherine may be a budding scientist, says her father, "but just as important, it appears she could be a fine athlete if she wants to."

Bates has fervent opinions on education, especially the need for parents to become involved in support of their children's schools. He was president of the local P.T.A. when Ventura School, Palo Alto, was closed.

The Bates bought an old house on Kellogg Avenue, Palo Alto, in 1976, and the garage was an old carriage-house. Opening off this was a room which apparently had once been used for shoeing horses. "There are still leather thongs and straps on the walls, and various tools. I am thinking of converting that part of the house into a complex which all the family can enjoy.

"I have a study at home which is detached from the rest of the house. I am beginning to get it into shape for use as a lab."

Priscilla Bates was busy in acting some 10 years ago, and the couple went to a San Francisco photographer to have composite photos taken of Priscilla for promotional purposes, with a view to her securing modeling jobs.

The photographer said to Clayton Bates: "Say, I'd like to take some of you too." He did so.

The photographer sent off the pictures of the two Bates, together with some 15 other hopefuls, to a major advertising agency. The only one selected for future work was Clayton Bates: "My wife has never forgiven me!" he grinned.

"The modeling work is spotty," said Bates. "Sometimes I get several calls close together and am unable to accept them because work is so pressing."

He has been a professional model in whatever spare time he can manage for the last 10 years. His picture has appeared on the United Way posters and for advertising several brands of autos.

Among his many "roles" in modeling have been a riverboat gambler, sportsmen, a guitarist, a basketball player, and a three-piece suit executive.

The roles he has played in real life overshadow the images of the lens.

Applications open for management development program for University staff

Applications for participation in the fifth year of Stanford's Management Development Program are being distributed this week through vice-presidents' offices and are also available from Staff Development.

The program is directed toward managers and administrators in both line and staff functions with substantial influence on operations, use of resources, or policy development in the University. While staff members performing such functions generally hold positions assigned to the C-8, C-9, and C-10 pay ranges, or are assistant or associate deans, those in C-7 jobs who are also doing such work are encouraged to apply.

Discussion of current issues in Stanford management is a key aspect in the program, which focuses on ways things get done in University administration, and on human resources management, management of financial resources, and the missions, purposes, and values of the University.

In addition to regular sessions, usually led by Stanford officers and administrators, participants meet informally with representatives of major University constituencies, discussing subjects of mutual interest with faculty and students. They also attend regularly-scheduled meetings of policy-making groups such as the Board of Trustees, the Administrative Council, and the Senate of the Academic Council.

Other parts of the program include initial and closing retreats, completion of projects (done in small groups), and adjunct activities, which are one-half to one-day sessions emphasizing specific management skills. Participants as a group plan some of the regular sessions, which provides for consideration of subjects of immediate concern to the group as a whole.

Administrative Council members select a group of 20 participants reflecting the organizational diversity of Stanford, characterized by a balance between line and staff responsibility, and having a range of years of experience.

Application deadline is June 24 (and may be a few days earlier in some vice-presidential areas). Results of the selection process will be reported to applicants early in August. For more information, see the Personnel Senior Staff representative from your area, call Staff Development at ext. 7-0657, or talk with a current or past MDP participant.

Participants for 1982-83 are: Hector Allen, procurement operations manager; Karen Bartholomew, assistant director, News and Publications Service; Fred Bentley, associate director, Sponsored Projects; Anne Coxon, assistant dean, Humanities and Sciences, and director, Academic Information Center; Hector Cuevas, director, Student Employment Office, Career Planning and Placement Center; Paul Fearer, manager of compensation and systems, Personnel; Margaret Ann Fidler, assistant dean for administration, Dean of Student Affairs' Office; Tamara Frost, chief, Catalog Department, University Libraries; David Glen, director of development, Athletics; Mike Goodkind, writer/editor, Medical Center News Bureau; Michelle Hall, associate director, Annual Fund, Office of Development; Joe Jezukewicz, assistant director of administrative services, Green Library; Jerry Jobe, assistant budget officer, SLAC; Rick Johnson, director of placement, GSB; Bill Lusebrink, deputy manager, Plant Engineering, SLAC; Roland Merchant, director, Office of Management/Strategic Planning, SU Hospital; Nancy Padgett, assistant director for business and finance, Athletics; Lori Rendall, assistant dean, School of Engineering; Jeannie Siegman, management analyst, CIT; Celine Walker, chief, science libraries, SU Libraries; Curt Williams, manager of engineering, Facilities Project Management Office; Jasper Williams, associate staff counsel, Office of University Counsel.

Liberal education can work well in unexpected settings, Kennedy declares

The biggest mistake made by many undergraduates is to concentrate their studies only on those they think will lead to a high-paying job.

In fact, most successful people in America find their great opportunities in areas other than those in which they received their formal education.

President Donald Kennedy and many members of the Stanford faculty spoke on this theme at "A Majors Event" May 10 in the Inner Quad. They offered their own careers as examples.

"The most educated people in the U.S. are usually those who are not doing what they were trained to do, but who nonetheless managed to make their education go in unexpected and unfamiliar contexts," Kennedy said.

Throughout the day the crowds were addressed by a series of 14 speakers, nearly all of whom stressed that too narrow a choice of studies was self-defeating, that a wide spectrum of knowledge was the most useful resource for life and a career.

What's it good for?

"The question about any major is 'What on earth is my major good for?' and the answer is: You," Kennedy told the undergraduates.

"That is not very easy for most people to accept because we are all a little utilitarian."

He told his own experience: "I arrived at the university in 1948. I was determined that I was going to major either in English or in biology.

"What I wanted to do was to become a creative writer. I went down the yellow brick road to a senior writing course led by Archibald MacLeish. . . . I was 17 at the time. I did all right with the words but I found that I had very little to say. At the end of the third week, when I had turned in my third work of pseudo-fiction the instructor said to me 'Why are you doing this?'

"I said I wanted to be a writer. He asked me what else I was interested in. I said 'Biology.' He said 'Biology is a *very* good subject, especially for you.' Accordingly I became a biologist.

"What you think you're going to need in a career is almost never what you're actually going to need. What you wind up doing in life rarely bears any resemblance to what you concentrated on as an undergraduate.

Job changes frequent

"Although I spent a good deal of my life as a biologist, almost nothing I do today has any relation to what I did as a biologist or as a student. If you trace the experience of most educated Americans that is the typical trajectory.

"The average American changes his or her job at least once in his or her first five years of career and does so a couple more times before settling down.

"What is the lesson of all this? That you are free from the kinds of constraints that we put on ourselves by virtue of our expectations about what we are going to do in the world. You are free to choose what really interests you. The subject to major in is exactly the thing you desire most, exactly what excites you the most. I want you to think of this as a liberating thought, because it opens up opportunities you may not have thought about before."

Provost Al Hastorf said that he spent his first two years in college as a dedicated prospective neurosurgeon. "I delighted in neurology till my father arranged for me to watch two neurosurgical operations. This made me become a history major.

"I spent two happy years as a history major and somehow ended up as a psychologist. For God's sake, study what you find interesting, demanding, and exciting. Don't study what you think is going to have a big economic payoff, because that may not be true 10 years from now."

Prof. Tjeerd VanAndel, earth sciences, gave examples of how people often switched interests and careers. He spoke of geology majors who ended up in law school or teaching history, of an archaeologist who found himself an oceanographer, of people who after getting M.B.A.s went into careers that had nothing to do with business.

VanAndel mentioned how his own interests had spread so that he now teaches not only geology, but also human biology, and some classical archaeology.

Ivan Sag, assistant professor in linguistics, gave another perspective on the main theme. Few people would think of linguistics as anything but the study of speech, he said. In fact, linguistics was a fine example of the interaction of spheres of knowledge and research.

Linguists with corporations

Linguists are working closely with corporations in Silicon Valley, moving toward the next generation of computers. Psycholinguists were helping to research the processes of the human mind. "We have close ties with people in psychology, neurology, anthropology, engineering, philosophy, and music."

Colin Pittendrigh, director of Hopkins Marine station, recalled that if he had not happened to break a plate glass window, when a youth, and had to find a way to earn enough to pay for it, he would not have taken a job that brought him into contact with biology, and he would never have taken the career path he did.

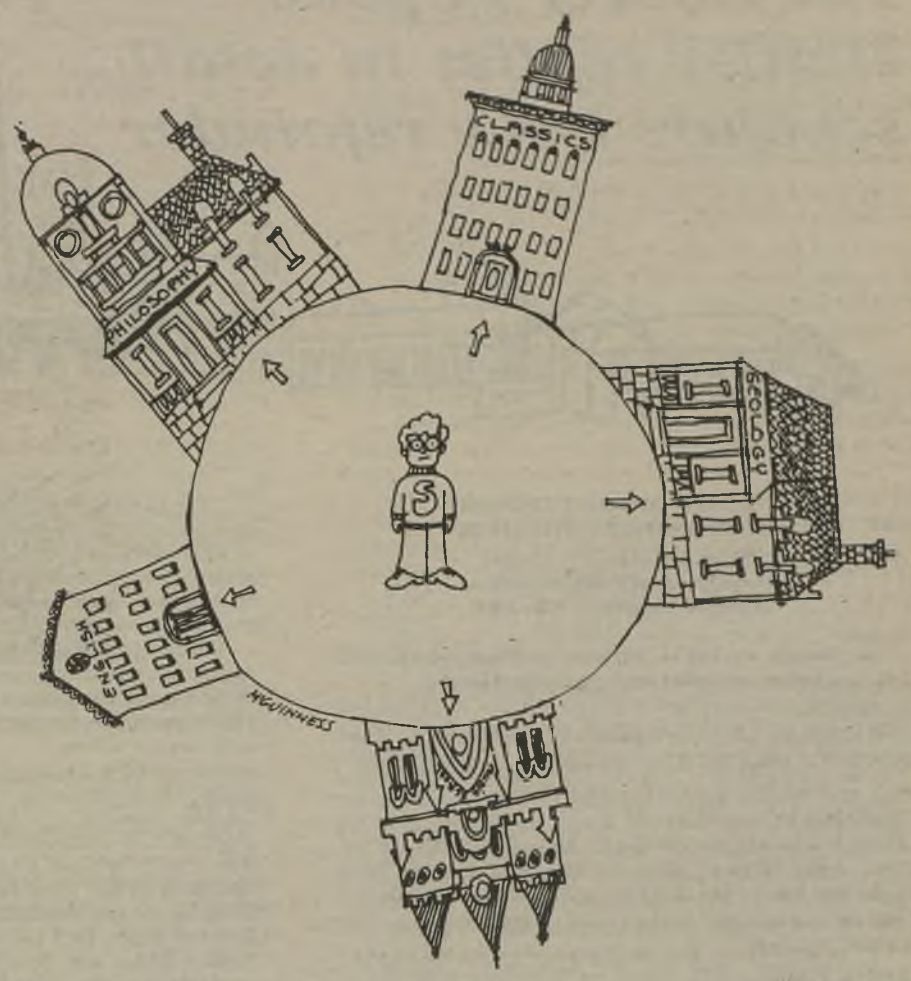
"It doesn't matter so much what you major in, but how you go about pursuing your chosen major. Stanford education is not in any sense a trade school. Don't look on your major as preparation for any trade."

Vice Admiral James Bond Stockdale, America's ranking naval hero, holder of the Congressional Medal of Honor, said he was grateful he had been able to take his electives at Stanford in moral philosophy, literature, and some classics.

"I will never be able to thank Stanford enough for what I learned at Philosophy Corner about human nature, about how to handle fear, guilt, what courage is, how imagination affects it, and a little about the durability and nobility of the human spirit."

Departments cooperate

Forty-four departments of the university cooperated to help undergraduates become aware of the many



hundreds of courses and majors available. Students crowded around the 46 stalls where departments had volunteers who answered questions, gave advice, explained the nature of their courses, and often offered refreshments and entertainment.

The event culminated five months of hard work by Audrey Bernfield, director of advising and career planning in human biology and coordinator of the departmental student services in the School of Humanities and Sciences. She was assisted by Deborah Duncan, assistant to the director of career planning and placement.

Bernfield brainstorms

"Last fall I was brainstorming with some advising associates and a teaching assistant. We had found that a considerable percentage of students were not meeting their intellectual needs," Bernfield said.

"A lot of people have tried in a piecemeal way to get across to students the full scope of what Stanford offers. Students often think there is only one way to get to their particular goal. What we have tried at this event is to show them there is a variety of ways they can choose."

Kennedy said that "A Majors Event" was a great stimulus to the enthusiasm and entrepreneurial spirit of the various departments. "It shows that departments are not just lying there waiting for students to come by, but are actually interested in students."

The clusters of students round many of the tables were so thick that at some, of which the English Department table was typical, half a dozen volunteers were busy all day answering questions.

The Classics Department exhibit was a center of interest, drawing attention to the work being done in Greece at excavations. The volunteers here served retsina wine, *ouzos* liqueur, and baklava sweetmeats.

The German Department, in addition to their stall, where German beer was served to waiting lines of students, later gave a reception in Haus Mitteleuropa. The table organized by Hopkins Marine Station served broiled squid. Philosophy Department sold blue T-shirts bearing the words "What Does it Mean?"

Robert Sinclair, associate professor in materials science, gave practical demonstrations of the wonders of materials and how they can be invented or adapted.

At the Physics stall, senior students were on hand to answer questions, but these were not numerous. Physicist Alexander Fetter, chairman of the Faculty Senate, explained why: "I suppose most people who want to be physicists know where they're going."

During the day the Music Department provided a series of performances, including those on the flute, harpsichord, and brass. The Fleet Street Singers also performed.

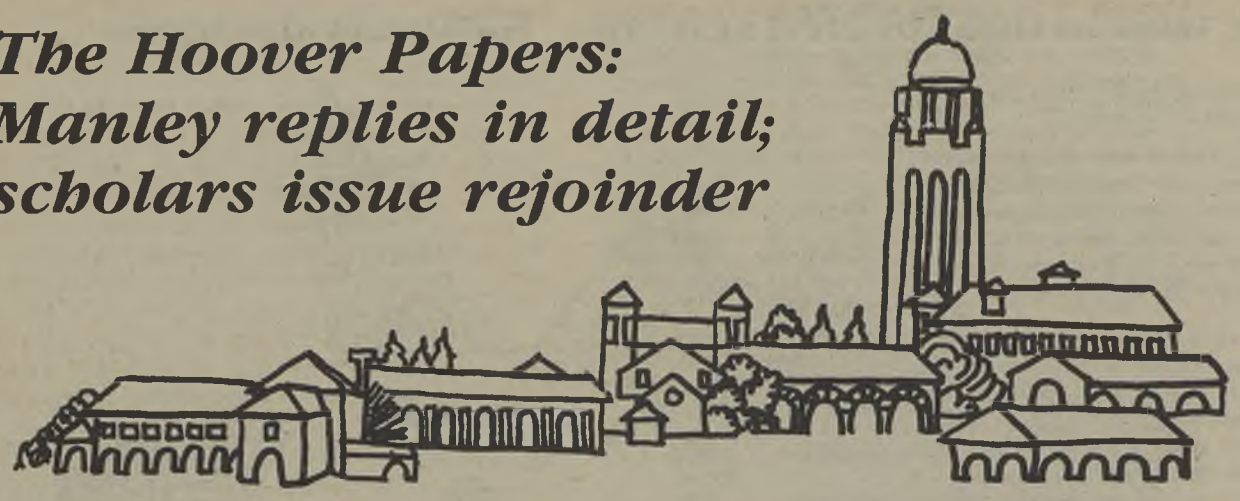
In the evening a total of 15 dormitory dinners were organized by various departments.

The following day, May 11, each of the 44 participating departments held meetings appropriate to their particular functions.

These included panels, receptions, film shows, discussions, and slide shows. The aim of each was to encourage students to explore the possibilities of a wider choice of studies.

Freshman Kelly Gonser summed it all up: "I have discovered a lot more majors than I knew existed. My decision will be a lot harder now, but it will also be a lot more intelligent." —**Donald Stokes**

The Hoover Papers: Manley replies in detail; scholars issue rejoinder



A POINT-BY-POINT RESPONSE TO THE HOOVER INSTITUTION

By Professor John F. Manley
Department of Political Science
Stanford University, May 1983

1. Hoover is not a partisan political organization because it does not take stands on political issues.

For evidence of Hoover's diverse political activities look first at the 1982 *Annual Report* of the Hoover Institution, a document that could have been written by the Republican National Committee. In it are no fewer than five pictures of President Ronald Reagan together with Hoover-connected photographs of virtually the entire top leadership of the Reagan administration: Edwin Meese III, Caspar W. Weinberger, Donald T. Regan, William French Smith, Philip C. Habib, former top domestic policy adviser Martin Anderson (now returned to Hoover as a Senior Fellow), and a number of others.

We all know that one way a research organization participates in politics is by doing research for candidates. Does Hoover engage in this sort of activity, and, if so, for whom?

Let Hoover Director W. Glenn Campbell and President Reagan address these questions:

President Reagan: ". . .during the recent campaign, I called on more people from the institution to help with my campaign than from any other institution." (1981 Hoover *Annual Report*, p. 24)

President Reagan: "Under the leadership of your able director Glenn Campbell, and with hard work and diligence, you built the knowledge base that made the changes now taking place in Washington possible." Said at a January 11, 1982, White House reception for the Hoover Board of Overseers. (1982 Hoover *Annual Report* p. 29)

Hoover Director Campbell: "The highlight of the past year was the election of honorary fellow Ronald W. Reagan as President of the United States." (Hoover *Annual Report*, p. 11)

Hoover Director Campbell: "Since President Reagan took office on January 20, 1981, more than 30 scholars and former fellows of the Hoover Institution have been requested to participate in public service and have been appointed to positions in the executive branch of the federal government or as members of boards and commissions." (1981 Hoover *Annual Report*, pp. 11-12) Hoover has since claimed over 40 individual placements with the Administration and other branches of government.

As far as I know the Institute for Policy Studies, the Brookings Institution, and the American Enterprise Institute let their individual members do as they please politically. It would be shocking to learn that the officers of any of these institutions told anyone on the staff what to write. Nor, as far as I know, do these institutions take stands on issues.

But can anyone seriously believe that because these organizations don't take stands on issues, they are not political? Or do not serve certain partisan causes more than others? Just because these organizations are comprised of individuals and do not take stands on issues hardly makes them apolitical research organizations. If anything, such apparent nonpartisanship probably enhances their effectiveness as politically-inclined research organizations, just as is true in Hoover's case.

2. Hoover is not a partisan political organization because Hoover represents a diversity of views, and contains Democrats as well as Republicans.

No one would be so rash as to claim that everyone at Hoover sees the world in exactly the same way, but there is a great deal of evidence to suggest that Hoover is not in fact mainly a pluralistic institution of diverse views, but an organization with a mission:

History: Was the Hoover Institution established to engage in value-neutral research, or was it established to defend and advocate certain values and policies? The evidence here seems fairly decisive. As Herbert Hoover put it in a 1959 declaration to the University Board of Trustees:

"The purpose of this Institution must be, by its research and publications, to demonstrate the evils of the doctrines of Karl Marx—whether Communism, Socialism, economic materialism, or atheism—thus to protect the American way of life from such ideologies, their conspiracies, and to reaffirm the validity of the American system."

It is fashionable to dismiss Herbert Hoover's declaration as an unfortunate example of cold-war rhetoric, but a look at the Hoover Institution's activities and publications since 1959 suggest that the Institution has remained quite faithful to its founder's design.

For example, Stanford Professor of History Alexander Dallin, for seven years a Senior Fellow at Hoover, and currently chair of the University's international relations program, told the *Stanford Daily* recently that he resigned from Hoover because he perceived violations of academic standards by an "inner sanctum" of conservative activists whom he was unable to influence from inside the institution. (*Stanford Daily*, April 19, 1983, p. 1)

The press has investigated the Hoover Institution regularly, and if it is to be believed, Hoover has a quite definite tilt. To cite only three examples:

New York Times magazine, July 23, 1978, Kenneth Lamott:

"Through its ties with the right wing of the Republican Party, the Hoover Institution is exerting increasing political influence. It is the brightest star in a small constellation of conservative think tanks that serve as workshops where out-of-office intellectuals can fabricate the underpinnings of domestic and foreign-policy positions for the Republicans."

Los Angeles Times, November 18, 1980, William Endicott:

"Throughout this campaign year, Reagan turned to Hoover to provide intellectual substance for his conservative views on a broad range of domestic and international issues. Now, as he starts to shape a new administration, he is expected to lean heavily on the institution for both personnel and policy advice."

Dun's Review, April 1981, T.J.M.:

"By his own admission, President Reagan has probably learned more about public policy issues from Stanford University's citadel for scholars, the Hoover Institution on War, Revolution, and Peace, than from any other source."

It should be emphasized that even if Hoover were better balanced politically the existence of any such organization—radical left, right, or middle—with access to millions of dollars in outside private funds, would cause questions in an academic institution. The central problem of Hoover is not its conservative bent, but that it is bent at all.

3. Hoover is not a partisan political organization because it contains Democrats as well as Republicans.

This contention, put forth by Hoover Fellow and Professor Seymour Martin Lipset in the May 4 *Stanford Daily*, cannot stand critical inspection.

First, Professor Lipset boils down the 61 scholars on Hoover's current masthead to a "core group" of 25, then he reports that 11 of them are Democrats. Though Professor Lipset does not say that these Democrats are liberals, we are invited to conclude that because 11 of 61 Hoover fellows are Democrats, the Institution is fairly well balanced from an ideological perspective.

There are several problems here:

1) The partisan political activities of the Institution as such are not addressed by the fact that Lipset can identify 11 Hoover Democrats.

2) There are conservative Democrats as well as liberal Democrats. Therefore we have to know how many of these 11 Democrats are associated with the McGovern-Kennedy wing of the Democratic party, and how many are identified with the neo-conservative wing, in order to make any valid inferences about ideological diversity at Hoover. On this point, Lipset, a well-known neo-conservative Democrat, is silent.

3) Hoover has in recent years attracted a number of distinguished Stanford scholars to its masthead, and some of these may consider themselves liberal. But to know whether or not these people have had an impact on the general thrust of Hoover we would have to know if these liberals have offset the conservatives in and around Director Campbell who, Professor Dallin says, really sets the Institution's tone.

4) Since the questions about Hoover as a partisan-funded political organization do not center on the party affiliation of individual members of Hoover's staff, Professor Lipset's data are irrelevant to the major questions that have been raised about Hoover.

5) Let's say all 11 of the Hoover Democrats claim to be liberals. What would this prove? Absolutely nothing. Why? Because the faculty and students calling for public discussion of Hoover have pointed out from the start that Hoover is a two-tiered organization: a dominant inner group that is dominantly conservative and politically active, and an outer group of Stanford academics. Ironically, the existence of a few liberals at Hoover, and perhaps even a socialist or two, may make the Institution even more effective in pursuing its political activities by allowing it to claim that it is a pluralistic institution.

4. Hoover is no more partisan or political than Harvard during the Kennedy Presidency, so why all the fuss?

This argument also takes the form of noting how many Stanford faculty have served Democratic administrations. Donald Kennedy's role as FDA Commissioner under President Carter is frequently cited.

Of all the arguments that have been put forward on Hoover's behalf, this is probably the most effective. It appeals to our sense of fair play: the government needs all the help it can get, liberal professors help Democrats, conservative Hoover people help Reagan, so what's the difference?

There are three:

1. Those professors who joined the Kennedy Administration came from a variety of different departments at Harvard, not from a central liberal think tank associated with Harvard, and they did so as individuals, not as members of a left-leaning equivalent to Hoover. There was and is no Harvard equivalent to Hoover—no Franklin Delano Roosevelt Institution with millions of dollars in liberal endowment and private contributions established especially to advance liberal political causes.

2. No one has ever questioned the right of any individual faculty member or for that matter of anyone at Hoover to join the Reagan Administration. What has been questioned is the existence of a separate and unique institution within Stanford University that is largely autonomous from University control and engages in the kinds of overt political activities that Hoover appears to pursue. Hoover can justly lay claim to being one of the leading conservative think tanks in the country, a situation not really comparable to the academic brain trust around Kennedy or other liberal presidents.

3. Let us, for the sake of argument, accept the Harvard analogy. The questions that must then be faced are:

a. Does Stanford University want to become so closely connected to conservative donors and conservative politics that it counter-balances Harvard's liberalism?

b. Do we want to become a Republican counterweight to Harvard's Democratic bias?

c. Or do we want to maintain our reputation for independence and nonpartisanship?

There are dangers for a university that gets too close to one particular political spectrum. Stanford retains considerable diversity, but if the Hoover Institution has, as the press reports, a $60 million endowment, at what point does this "university" within the University raise concern? Is there nothing especially troubling about Hoover because a lot of Harvard professors worked for Kennedy? Some think so. Others are not so sure.

5. The problem with Hoover is not that it is too close to Stanford but that it is not close enough: we should therefore increase joint appointments and further blur the lines separating Hoover from the University.

The problem with this line of reasoning is that to the extent that Hoover is a partisan political organization, and to the extent that the lines between it and Stanford University are blurred or obscured, Hoover's prestige and influence are enhanced, and so too the causes for which Hoover exists. Or, to put it another way, the problem with Hoover is that it has a cause, not that it is too far removed organizationally from Stanford control.

The issue here is: can Stanford University, or any university, afford to become so closely linked to certain sources of money and to certain political interests that it runs the danger of losing or appearing to lose its independence and autonomy? Some say Hoover just offsets the liberal political bias of professors generally.

This position at least has the merit of admitting Hoover's conservative bias, but, again, such arguments miss the central point: one cannot compare the Hoover Institution, with its money and power and political leverage, to some statistical tendencies for certain kinds of professors to be more liberal than conservative. In my experience at Stanford, conservatives are by no means unrepresented in

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Hoover Institution

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the departments—and certainly not so much that we need an organization like Hoover to balance us out.

As for efforts to diversify Hoover through joint appointments and the like, consider Professor Dallin's experience: "There were people on the faculty side who thought the only way to influence Hoover was to get a foot in the door by placing tenured faculty over there. I have come to believe that will not work; you'll never change the inner sanctum." (*Stanford Daily*, April 20, 1983)

6. The people who have raised these questions about Hoover are themselves engaging in a partisan political attack.

This response takes a variety of forms, but the general tone was set by Hoover Director W. Glenn Campbell when, as reported in the April 24, 1983 *Peninsula Times-Tribune*, he dismissed the faculty-student concerns as "character assassination charges."

Since then their attack has ranged from Hoover Senior Fellow Thomas Sowell's "hypocritical farce" and charges of a "witch hunt," to Hoover Senior Fellow and public affairs coordinator George Marotta's "innuendoes" and "attempts at intimidation," to cries of "McCarthyism" and "guilt by association."

These and other contributions to the public debate reached new levels when Hoover Senior Fellow Peter Duignan told the *San Francisco Examiner* (May 8, 1983):

"This is the same gang that was against the Vietnam War, supports the partisans in Nicaragua and now backs the rebels in El Salvador."

According to Duignan, this "gang" overflows with "envy and greed" because Hoover's full-time researchers can travel more and produce more writings for publication.

Regarding these comments, I will simply note the irony of such arguments coming from those who complain loudly of "character assassination charges."

More substantial are the comments of former Stanford liaison with Hoover, Robert Rosenzweig. Rosenzweig told the *Stanford Daily* (May 6, 1983) that the political charges against Hoover were a "charade," part of a game that the " 'ins' historically play with the 'outs' in politics."

Such responses do a serious disservice to the more than 70 members of the Stanford faculty and over 1,400 members of the student body and community who have called for discussion of Hoover's relations with the University. When issues are raised for discussion and dismissed as mere politics, the dialogue that is supposed to characterize the University is undermined.

All these petitioners have claimed is that a prima facie case exists that Hoover is a partisan political organization and, as such, a potential danger to the University. Such questions are not mere political questions. They express genuine concern for Stanford and are raised in Stanford's interest, not for partisan reasons.

7. The Annual Reports of the Hoover Institution are just public relations material designed to make the Institution look good, and are not to be taken seriously.

When all else fails, Hoover repudiates its own material.

The May 8, 1983, *San Francisco Examiner* quotes Hoover Senior Fellow and P.R. officer George Marotta as follows:

"Hoover's Marotta downplays the annual report, calling it a 'p.r. document, not to be taken seriously.' 'All such reports are full of self-praise and puffery,' added Hoover's Duignan."

These reports no doubt contain some puffery and are designed to present Hoover in a favorable light. But they also describe in factual detail what Hoover as an organization does. Do we not have in Hoover's own reports an accurate description of real activities and events?

Many readers of Hoover's 1981 and 1982 *Annual Reports* think the activities of Hoover are a legitimate source of concern, regardless of Hoover's efforts to minimize the documents. We believe the *Annual Reports* report a prima facie case for public discussion and that to dismiss them as p.r. as Hoover would like us to do is perhaps the best reason of all to take them seriously.

Conclusion

The *San Francisco Examiner* in a May 8, 1983, news article by Carl Irving, cautions us about Hoover in the following words:

"As the Institution became widely known for leadership that openly backed conservative causes, endowment funds flowed in, reaching $60 million earlier this year. The rate of growth in support per scholar far exceeded most other campus units in recent years."

Hoover's budget this year is over $8 million, and for next year it will exceed $9 million. Only about one-third of this money goes for the library and archive. The rest goes for other activities.

What seems to have happened in the past 10 or 15 years is that Hoover has emerged as one of the leading conservative think tanks in the country. Its endowment exceeds that of many universities, and as a research organization it enjoys many subsidies from Stanford University.

Some people are not bothered by any of this. They point out that Stanford has emerged as one of the leading universities in the world, and asks: what is wrong with an Institution that brings millions of dollars into the University?

What is wrong is that Hoover does not bring millions of dollars into the University. Most of the money goes to Hoover. It is used to support activities that appear to many observers to be political, partisan, and objectionable.

What is wrong with having such a well-endowed university within the University? Such funds obviously provide some benefits to Stanford, and not all of Hoover's work is political.

What is wrong concerns the nature of a university. Although universities often fail to live up to their ideals, they nonetheless have them. Among the core ideals are nonpartisanship, objectivity, and a rejection of overt and covert political participation by the University.

If these ideals are to be upheld, can the Stanford community ignore the existence of a $60 million research organization within its midst that openly engages in a wide assortment of political activities? Perhaps. But to do so endangers the University's reputation as a nonpolitical, nonpartisan institution, and thus endangers the most precious thing a great university has: its legitimacy.

These are subtle issues. It is hard to measure credibility and legitimacy. But if there is anything at all valid in the concerns that have been raised about Hoover, perhaps it is time for the University community to look up and see what Hoover has become. The picture of itself that Hoover projects to the outside world in its *Annual Reports* and its multiple political ties is, and must be, of concern to the broader Stanford community.

Thomas Gale Moore: Hoover does not engage in partisan political activities

In the following paper Thomas Gale Moore, director of domestic studies at the Hoover Institution, replies to the concerns detailed by Profs. John Manley and Ronald Rebholz in the May 11 Campus Report.

Having just returned from an extended trip, I discovered that a few individuals have launched a vicious attack on the Hoover Institution. While the *Daily* has published a series of articles on Hoover, mostly inaccurate, let me respond specifically to the May 10 piece by Profs. Manley and Rebholz, which levied seven charges.

1) Yes, the Hoover Institution, like the Business School, the Law School, the Center for Economic Research (Economics Department), and the Food Research Institute, to name just a few, receives millions of dollars from private sources outside the University. Such funds are usually administered by the University but earmarked for the particular schools.

The money comes from foundations, individuals, and corporations—as do the grants for other organizations on campus. No strings are attached to the money; we do not conduct contract research. Funds are sometimes designated, however, for the library, the endowment, or for research.

Why do they give it? For the same reasons they give to the Food Research Institute and other campus programs—they want to support the programs of the particular organization.

Who decides how to use the funds? The dean or head of the school; for the Hoover Institution, the director allocates the funds.

2) The other activities besides the Hoover Library that are funded by the Hoover Institution are described in the Annual Report. Profs. Manley and Rebholz should have looked past the first few pages instead of focusing exclusively on a section in which President Reagan lavishes praises on Hoover, as any good politician does when he appears before a group. Of course Hoover takes pride in being commended by the President of the United States, as would Stanford, Harvard, or most organizations. Had they looked at the rest of the report, they would have found the work of the Hoover Institution consisted of nonpartisan economic, political science, and public policy research.

For example, during the last year 20 manuscripts were produced by scholars in domestic studies that were included in our working paper series sent to some 170 scholars and academic institutions. These included such "political" studies as Olivier Blanchard's (Hoover National Fellow and Harvard University) "Identification in Dynamic Linear Models with Rational Expectations"; Patricia Danzon's (senior research fellow) "Settlement Out of Court: The Disposition of Medical Malpractice Claims"; and Charles E. McLure, Jr.'s (senior fellow) "Tax Exporting and the Commerce Clause: Reflections on *Commonwealth Edison*."

Reading further in the 1982 Annual Report, Profs. Manley and Rebholz also would have discovered that we held three major conferences dealing with such topics as the appropriate method for states to tax corporations, a fiftieth anniversary critique of Berle and Means' classic text, *The Modern Corporation and Private Property*, and a conference bringing together the best young labor economists in the country. These conferences have included as participants three Nobel Prize winners in economics and leading economists from Harvard, Princeton, Yale, and MIT.

Since by no stretch of the imagination can these activities be described as partisan, the answer to the question as to whether the money would be given if Hoover were "nonpartisan" is on a par with a question about whether Tip O'Neill has stopped beating his wife. Brookings Institution, which has a distinctly liberal image, has no trouble raising money. Ideology apparently has little bearing on the ability to raise funds.

3) The Hoover Institution as an institution does not engage in any partisan or political activity. Some Hoover scholars do become involved in influencing the government and we brag about that. I like to point to the letter of appreciation sent to me by Senator Edward Kennedy for the help I gave him in deregulating airlines. I personally have been more critical in writing of President Reagan's regulatory policies than of President Carter's, which I have praised.

4) I do like to think that the *New York Times Magazine* was right and that our research is so good that politicians, like Senator Kennedy, are taking note of it. Senator Russell Long (Democrat) has used Martin Anderson's book on *Welfare* to shape federal policy. Senator Dennis DeConcini (Democrat) is sponsoring tax legislation based on work done by Senior Fellows Alvin Rabushka and Robert Hall.

5) The Hoover Institution does no research for political parties, nor does any of the staff, unless it is on a consulting basis or they are on leave. There is one exception that I am aware of, William Schneider, a senior research fellow currently in Washington, is spending part of his time working for the Democratic Party.

6) and 7) As stated above, Hoover does not engage in partisan political activities. Several scholars have taken leave of absence to work in political campaigns, as have scholars at other institutions. But this no more makes Hoover a Republican think-tank than Harvard a Democratic university.

Profs. Manley and Rebholz go on to pose more questions of the "Have you stopped beating your wife?" variety. They admit that Hoover contains liberal Democrats, but because certain Hoover scholars are very active in this administration they conclude it is partisan. Currently, only two Hoover fellows hold full-time positions with the administration, although others have held appointments in the past. The Stanford Business School also has two faculty members on leave with the Reagan administration and the Law School has one.

Profs. Manley and Rebholz claim that Hoover's research and publications appear to be partisan. I have already cited examples of our research, which no one could contend was partisan. It is incumbent on them to identify the research they consider partisan. An examination of the books Hoover published as listed in the Annual Report proves that our publications are also nonpartisan. Let me cite just the first four of these books, in alphabetical order—see if you can detect partisan bias: Anderson, *Registration and the Draft: Proceedings of the Hoover-Rochester Conference on the All-Volunteer Force*; Bailey, *The American Pageant Revisited: Recollections of a Stanford Historian*; Buss, *The United States and the Republic of Korea: Background for Policy*; Cargill and Garcia, *Financial Deregulation and Monetary*

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Control: Historical Perspectives and Impact of the 1980 Act.

Several of the attacks have questioned staff recruitment at Hoover. As chairman of our search committee I would like to explain the procedures. For senior fellows we conduct an exhaustive search, like that of academic departments on campus. We advertise; we seek suggestions from our advisory committee (chaired by Nobel Laureate George Stigler); we consult with well-knonw academics at other universities. We read the scholarly works of proposed senior fellows and ask for letters of evaluation from other well-known scholars in the candidates' fields.

Most of these candidates are full professors at some other major university at the time they are recruited. We never ask their political affiliation or their ideology. Those that pass this search-committee screening are invited to Hoover to give a seminar. The search committee may then recommend them to the director who, if he concurs, forwards our search committee recommendation to the President of Stanford for his submission to the trustees.

The procedure is a little different for senior research fellows since they normally receive only a fixed appointment (three to five years is usual). Here we seek younger academic scholars, as well as individuals who may not meet all the formal requirements of an academic department but will add breadth and insight to the Stanford community.

For example, Philip Habib, who has been nominated for a Nobel Peace Prize and who worked for Jimmy Carter, is a senior research fellow, but he lacks the requisite academic publications to hold a full-time position in a department.

Admiral James Stockdale, who taught on campus this year, does not meet the usual criteria for a regular appointment, but he brings an experience that cannot be gained in graduate school.

According to the calendar, Milton Friedman is too old to be a professor here, yet he has the vigor of most 40-year-olds and contributes significantly to intellectual debate at Hoover. None of these scholars is particularly active politically, although all have had a role in public policy-making.

It is a scary experience to be attacked in this way through unsubstantiated innuendos, rhetorical questions, and anonymous petitions. We have yet to be given a list of those who are accusing us; in most free societies it is considered a fundamental right to be faced with your accuser. It is a real danger to academic freedom when a handful of individuals can smear so many by saying so little.

The Hoover Institution has built a great reputation as a place where scholars of all viewpoints can work unhindered on their own research. Next year Joe Pechman of Brookings, whom many consider very liberal, will be a visiting scholar. Joseph Stiglitz from Princeton, a former Stanford professor and a brilliant economist, will also be in residence. Our reputation is international; Staffan Linder of the Parliament of Sweden and author of *The Harried Leisure Class* will also spend the year. The alleged political biases have failed to reduce the attractiveness of Hoover.

Through joint appointments, through our impressive facilities, and through the high caliber of our staff, we have helped to attract a number of senior scholars to Stanford. Several senior professors would not be here, were it not for Hoover. Four Nobel prize winners, nine members of the American Academy of Arts and Sciences, and seven members of the National Academy of Sciences are connected with the domestic studies program at Hoover.

It would be a tragedy if such a resource for Stanford were destroyed.

Rhinelinder: Hoover fellows have more diverse opinion now than 25 years ago

Following is a May 12 letter to President Donald Kennedy from Emeritus Prof. Philip Rhinelander, philosophy, concerning the Hoover Institution.

As you may recall, while I was dean of humanities and sciences I also served briefly in 1959 as acting director of the Hoover Institution in the interim between the resignation of Easton Rothwell to become President of Mills College and the appointment of Glenn Campbell, the present director. In view of this circumstance, I venture to comment briefly on the current controversy over the relation between the University and the Hoover Institution.

The issues that have been recently raised are not new: they were all faced and considered in 1959. It was because of concern with these same matters that I undertook the acting directorship, and it was after considering them that the Trustees of the University made their decision at that time.

Now it is obvious that individual opinions can, and do, differ on the complex questions involved. Indeed, I then advocated a somewhat different arrangement from the one actually adopted. At the same time, it seems to me that in the interests of all concerned it is of primary importance that once a decision has been made on a matter of this sort, it should be adhered to unless strong reasons exist for a reexamination. And no such reasons have been put forward, as far as I am aware.

The current requests for an inquiry seem rather to assume that the issues raised have never been recognized and should therefore be looked into. But such an assumption is mistaken. A new inquiry would merely repeat former inquiries without adding anything of significance, as far as I can see. In this connection several facts are specially relevant:

1) There is more diversity of opinion among the fellows of the Hoover Institution today than there was 25 years ago. Hence there is less reason to be concerned over the "partisan" character of the Institution now than there was then.

2) Commitment to a partisan position or partisan ideology can seriously threaten the "free market of ideas" when such commitment is concealed or misrepresented. But we have the opposite position here. The current objection is that the Hoover Institution's links with the Reagan administration have been publicized too extravagantly, not too little. Thus nobody could claim to have been misled or deceived.

3) The notable progress made by the University over the past 25 years is ample evidence that its academic prestige has not suffered from its association with the Hoover Institution, which has been widely known for having a special orientation.

Philip H. Rhinelander
Olive Palmer Professor of Humanities, Emeritus, and Professor of Philosophy, Emeritus

Moore: Relationship between Hoover, Stanford spelled out clearly in 1959

Facts about the Hoover Institution
by John H. Moore associate director of the Hoover Institution

The current criticism of the Hoover Institution and its scholars is an unpleasant reminder of a dismal history of baseless, partisan attacks on the Institution. The so-called issues that have been raised by Professors Manley, Rebholz, et al are either totally unfounded attacks on the integrity and scholarly qualities of the administration and senior staff of the Hoover Institution or, as in the case of the Institution's relationship to Stanford or its finances, matters that are well-known and well-established.

A formal reply to the attacks on the integrity of the administration and senior staff of the Hoover Institution, the scholarly abilities of the staff, or the alleged partisanship of the Institution perhaps bestows an undue dignity on the charges and those who have brought them.

Since all but a few of the signatories of the petition have insisted upon anonymity, we are not afforded the elementary right of knowing who our accusers are. Nevertheless, individuals who know the Hoover Institution well—far better than its detractors—are presenting the facts on these unfounded attacks in numerous letters and columns in the newspapers.

In the case of the ignorance and misunderstanding of the relationship of the Hoover Institution to Stanford University, the basic facts can be spelled out simply and briefly for the record.

The relationship between the Institution and Stanford was carefully established by the Stanford Board of Trustees more than 20 years ago and it has been reaffirmed by the Board on several occasions since that time. The relationship specifies both the formal tie between the Institution and the University and the basis of the appointment procedures followed by the Institution. The financial relationship is also well known and a matter of record, since the Trustees regularly received financial reports for the University as a whole which include information about the Hoover Institution.

Relations with Stanford

The petitioners have repeatedly alleged that the Hoover Institution's relationship with Stanford is vague and unclear. On the contrary, the relationship between the Institution and the University is clearly spelled out in various actions of the Stanford Board of Trustees, principally a May 21, 1959, resolution.

The third paragraph of the resolution states "That the Hoover Institution on War, Revolution, and Peace is an independent Institution within the frame of Stanford University. Its relation to the University is that the President of the University will propose all appointments, promotions, and the budget of the Institution directly to the Board of Trustees. There will be no reference to any faculty committees between the President and the Trustees." It is also clearly stated in a later paragraph of the same resolution that the Director of the Hoover Institution is responsible, through the President of the University, to the Board of Trustees of Stanford University.

The 1959 document also states that "The members of the staff of the Hoover Institution must be free to publish statements or books of the results of their research work in which they give their 'interpretation' or opinion. If the writer of this type of publication wishes to state that he is a member of the Hoover Institution, the publication must carry a declaration that the Institution does not assume responsibility for statements in the publication."

The 1959 agreement was reaffirmed by the trustees in 1962 as a condition of Mr. Hoover's donating his archives to the Hoover Institution, in 1971 when the name of the Institution's board was changed from the Advisory Board to the Board of Overseers, in 1975 when funds were provided by Congress for the construction of a federal memorial to the late President Hoover, and again in 1978 when the William H. Volker fund was donated to the Hoover Institution.

A report of the activities of the Hoover Institution prepared by the Institution's Board of Overseers is sent each year to the Stanford Board of Trustees for its consideration. This report is the formal communication with the Trustees of the activities of the Hoover Institution during the year.

Appoinments

The petitioners have stated that "most fellows hired by Hoover do not need University approval." Actually, the appointment process for various categories of scholars is as follows.

For senior fellows who receive continuity appointments but not academic tenure, the president creates an ad hoc committee to review the nomination by the director (which is made after a nationwide search) before submitting it to the trustees.

In the case of senior research fellows who receive term appointments of five years or less, the director gives the president advance notice of his intention to recommend a particular person and provides background information.

In the case of certain senior library personnel, such as the associate director for library operations, curators and the archivist, search committees composed of Institution staff as well as representatives of University faculty and administration are used. The latter representatives are selected by the director in consultation with and with the concurrence of the president. The director recommends one candidate to the President who reviews the candidate before submitting the recommendation to the Board of Trustees.

Junior members of the scholarly staff as well as other staff members are selected in accordance with procedures similar to those used by the rest of the University.

Hoover Institution Finances

The total budget of the Hoover Institution for the academic year 1982-83 is $8.4 million. Of this total, University funds account for $2.65 million, or 31.6 percent. These funds are devoted to the Library and Archives, where they are used to purchase books, periodicals, and additions to the archival collections, to pay the salaries and staff benefits of the library and archives staff, and to cover the other expenses of the Library and Archives.

These include, for example, the costs borne by the Institution for its membership in and use of the national automated library cataloging system known as RLIN, which makes the collections accessible to scholars throughout the nation. University funds account for slightly less than 80 percent of direct library and archival costs; the balance is covered by expendable gifts to the Hoover Institution and income from the Institution's endowment.

Over 90 percent of the University funds go directly to the library; the rest is applied toward the general administrative expenses of the Institution, where they cover about one-third of the total administrative costs. The remaining two-thirds of the cost is paid from Hoover In-

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stitution funds.

Two points about this allocation are pertinent. First, the Hoover Institution provides a larger share of its administrative costs from its own funds than any other comparable unit in the University. Second, the proportion that University funds bear to the total administrative budget of the Institution equals the share that the expenses of the Library and Archives bear to the Institution's total budget. Thus all of the University support of the Hoover Institution's budget is applied to the Library and Archives.

Income from the Institution's endowment will provide about $2.0 million for 1982-83. It must be emphasized that these are restricted funds which cannot be used for any purpose at Stanford other than to support the Hoover Institution. They result from the raising of funds for that purpose by the Director of the Hoover Institution and its staff over the past 20 years and are held by Stanford for the support of Hoover Institution programs. In no sense, therefore, can the support from the endowment be counted as part of the University's support of the Institution.

Almost the entire balance of the budget is accounted for by expendable gifts made to the Institution on an annual basis, or on the basis of multi-year pledges. These gifts are made by a large variety of donors, including individuals, corporations, corporate foundations, and private foundations.

In the category of annual and multi-year gifts of this kind, the pattern of donors for the Institution differs in some respects from that for Stanford. The share of foundations in annual gifts (about 70 percent) to the Institution is greater than that share in donations to Stanford, while gifts by living individuals are smaller.

The share of industry and business in annual gifts to Stanford as a whole is about twice the share from that source to the Hoover Institution. Bequests typically play a larger role for Stanford than for the Hoover Institution.

Since the Institution's budget is small relative to Stanford's, there are fluctuations in the shares from various categories of donors from year to year. The Institution would have no objection to disclosing its list of donors if Stanford were to change its policy against the disclosure of the names of donors, which presently prevents all individual units at Stanford from such disclosure.

Finally, approximately four percent of the Hoover Institution budget is derived from the sale of books published by the Hoover Institution Press and microfilms, and less than one percent from government grants.

The Library and Archives account for approximately 36 percent of the total 1982-83 budget. Research in both domestic and international studies accounts for about 49 percent of the budget. The remaining expenditures are divided approximately equally between administrative expenses and publications costs.

Comments on the Hoover Institution from the so-called 'Inner Core'

Once again the Hoover Institution and its scholars are being attacked on spurious grounds while the real reasons for what can only be termed an indecent assault are hidden behind appeals to value-free research and calls to end Hoover's partisanship.

The reasons for the current attacks on Hoover appear to be the same ones that motivated earlier attacks, that is, greed, envy, and political partisanship. Liberal-Left faculty and students are intolerant of views that run counter to theirs and are unwilling to allow conservative view to be espoused in any significant or dynamic way.

Ideological one-sidedness has been present among some faculty at Stanford since at least the 1960s. Now that some campus activists perceive that there are scholars at Hoover who have political influence with the Reagan administration, they have launched a mini-war against us.

Since Prof. Manley's memorandum to the Political Science Department sparked this new controversy and is the basis for faculty and student petitions, let's discuss his major points seriatim.

It is Manley's (and the faculty and student petitioners') belief that Hoover by its ties to a great university "shares in the prestige of the University and so enhances its mission." The second part of this statement is patently untrue—Hoover as an institution has no mission; its many scholars have many missions; not included among them, however, is the mission to be politically partisan.

The first part of the statement is certainly true, but it is equally true if the order is reversed: the University shares in the prestige of the Hoover Institution.

By any criterion, Hoover in its fields of interest (20th-century international and domestic studies) and in its library and archives is at the very least equal to University departments and libraries that do similar work.

International studies at Stanford have been centered at the Hoover Institution since 1919. Its library and archives are a national resource. Certainly Hoover's research library is unique, transcends the Stanford University Library system, and is nationally ranked in the top three in all its collecting fields (East European and Soviet Union, East Asian, Western Europe, Africa, Middle East, and Latin America). The University gains because of Hoover's national and international reputation as a documentation center with the major international studies program in the western United States.

Hoover's publications and fellowship programs (such as the National Fellows Program), its conferences and lectures, are equally outstanding and lend luster to Stanford. No university department or departments in its fields of interest (area studies, international studies, domestic studies, political science, history, economics, sociology, international relations) produce as much as Hoover does.

The International Studies Program of the Hoover Institution currently supports 199 projects (14 on Africa, 26 on East Asia, 58 on Eastern Europe and the Soviet Union, 32 on Latin America, 27 on the Middle East, 31 on the U.S., 11 on Western Europe). Scholars associated with this program come from the leading institutions in the U.S. and are among the leaders in their fields. Their works are published not only by the Hoover Press but by such university presses as Harvard, Cambridge, Oxford, Princeton, and Stanford.

Let's compare one University and one Hoover program. The University's Africanists certainly include some outstanding scholars; so do Hoover's. Hoover's African Program, by virtue of its resident staff and fellowship program, has in the past 20 years outproduced (90 books to date) the University's Africanists by about four volumes to one (only three or four of the 90 volumes can be considered policy-oriented research). The scholars associated with Hoover's African Program are overwhelmingly Left-Liberal. But while Hoover scholars have always invited those they disagree with to contribute to their volumes, reciprocal courtesy is seldom afforded them.

The charges against us force us to praise ourselves when others should be doing that. Likewise the attacks on the political affiliations of Hoover scholars require us to use labels such as our opponents use. There should be no necessity on a university campus dedicated to free inquiry to have to call people left, liberal, or conservative.

In area studies and international studies, Hoover equals or outranks the University faculty. Time and again in the past, Hoover has had to lead the University into new fields of study.

Hoover was first to develop formal studies programs at Stanford on Eastern Europe and the Soviet Union, the Middle East, and Latin America. To this day the University has no Middle East program; Hoover has had one since the 1950s. This program has published 25 books and currently is funding 27 projects.

Hoover, no matter what its detractors contend, is a prestigious national institution associated with Stanford and attracts students and scholars from around the world. Furthermore, the presence of Hoover's great research facilities induced some of Stanford's major scholars to take up appointments at Stanford. Mention should be made of at least one, former president Richard Lyman, who was Hoover's honorary curator of the British Labor Collection. Others are cited in Berger's letter.

The University gains further prestige from Hoover's Domestic program (DSP). Four Nobel Laureates are fellows of the DSP. Virtually all of the Stanford joint or courtesy appointments are in domestic studies. Obviously they have perceived it to be in their interests to associate themselves with Hoover. And they lend as well as receive prestige by such an association.

Hoover senior scholars in the DSP are recognized as leaders in their fields. Their many conferences on domestic issues have brought the country's ablest scholars to Stanford. Scholars associated with Hoover in both the International and the Domestic Studies Programs include five Nobel Laureates—and between them—32 members of the American Academy of Arts and Sciences, the American Association of Sciences, the National Academy of Sciences, and the National Academy of Education. As, with Stanford faculty, we have our share of Guggenheim and NEH fellowships and awards from the Ford and Rockefeller foundations.

Hoover as a Two-Tiered Organization

The Manley memo (and the petitions) make much of an imagined two-tier, two-class system at Hoover, claiming that the Stanford scholars who add greatly to Hoover's prestige are in one tier and the Hoover regular research staff are in another and lower tier—lower, that is, in reputation, legitimacy, and influence.

This two-tier system, the petitioners believe, was cleverly developed by Glenn Campbell "to upgrade the Institution's reputation by improving its quality and adding luster to its masthead." While it is true that the many Stanford scholars associated with Hoover do enhance our reputation, it is not true that there are no equally able and famous people on Hoover's regular staff.

One has only to look at their rewards, honors, fellowships, and publications to determine that Hoover's curator-scholars, for example, are the foremost experts in the United States not only as documentalists but also as bibliographers and scholars. Hoover's senior economists and political scientists are also recognized as among the leaders of the U.S. intellectual world.

The benefits of the Hoover-Stanford association then are mutual. The chairman of the Sociology Department, Joseph Berger, writing in the *Stanford Daily* of April 26, 1983, explains what the Hoover connection did for his department—it enabled Sociology to achieve a national preeminence in social science by allowing that department to attract and to keep four outstanding people.

The Hoover appointments allow the University "to keep them in the face of competing alternatives" and "is dependent, to an important degree, on the resources for scholarship. . . made possible by their Hoover Institution appointments." What are these resources?

Freedom to do less teaching and more research, office space, secretarial help, research assistance, access to word processors and computers, to mention only the material benefits. Prof. Berger knows of no "political litmus test" for these four appointments. Nor do we know of any political tests or loyalty oaths to any party required of any Hoover scholars.

This takes us to the question of whether or not there is a Hoover plot to develop a two-tier organization to enhance our reputation and to overcome our so-called lackluster regular staff. Alas, the two-tier plan exists only in Manley's head; it has never been in Glenn Campbell's head. He simply does not believe he needs to augment his research staff with Stanford's eminent scholars. He believes the regular staff he recruited is at least equal to Stanford's faculty.

The push for joint or courtesy appointments never came from Campbell; he did not initiate negotiations for any of these appointments. The initiative either came from the faculty themselves or from Hoover scholars who wished to have faculty colleagues join them at Hoover. So there is no plot.

As for Hoover creating a "two-class professoriate" at Stanford—"those who receive research funds and the benefits from Hoover, and those who do not"—the answer is that a two-class professoriate is endemic at all universities, not just at Stanford.

Some professors publish more and are paid more. Some law professors have outside sources of income and some do not, some scientists and engineers consult and some do not. There is no moral obligation in life to see to it that everyone benefits equally regardless of ability and drive. Some Stanford professors make more than others, but Prof. Carnoy does not censor the University for this.

Ironically, Hoover does represent most shades of political opinion, and we have greater diversity in this respect than most social science departments at prestige universities. According to the research on academe by Lipset and Ladd, the social science faculties of American universities are overwhelmingly Liberal-Left and members of the Democratic Party. Hoover thus appears conservative only when compared with Stanford faculty in certain areas.

In any case, whereas social science and humanities both at Stanford and elsewhere are overwhelmingly dominated by registered Democrats, Hoover senior staff has a near balance: 11 Democrats, 10 Republicans, and three Independents. And if you were to tally the political beliefs of all scholars associated with the Hoover Institution—that is, not only the resident scholars but also those on grants or fellowships from the Institution or commissioned to write books or chapters in books for it, you would discover that at this so-called conservative, partisan center there is, in reality, a wide variety of views.

Take, for example, the distribution of perspectives in the cooperative study of Marxism published for Hoover by the Stanford University Press in 1965. Of the 35 active participants, no more than five could be considered "right-wingers." The liberal and even the socialist contingent was far larger and unquestionably dominated the proceedings. Among the Socialist contributors were Carl Landauer, Lewis Feuer, Sidney Hook, Max Schachtman, Max Nomad, Hans Gerth, and Daniel Bell. (See the *New York Review of Books*, October 28, 1965.)

Or take another example, the five-volume series *Colonialism in Africa*, published by Cambridge University Press. Of the 55 contributors the Liberal-Left corps outnumbered the Conservatives five to one. In *African Socialism*, another Hoover volume published by the Stanford Press, we can find no known conservatives but many Socialists and one Soviet Communist scholar!

So where is our partisanship, slanted research, or

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conservative bias being shown? As the examples above demonstrate, Hoover invites those of different political persuasion to contribute to its publications.

The record then is clear: Hoover has balance and is open, tolerant, and free of partisanship. Furthermore, Hoover scholars are at least as divided on political issues as their colleagues in the University. We have a better balance of political affiliation than any of Stanford's social science and humanities departments, which Lipset and Ladd show to be almost all liberal-left Democrats.

Rather than being political partisans, some Hooverites are outspoken critics of some of this administration's policies, as they were of those of previous administrations. And this fact is made abundantly clear to White House aides when they visit.

Our critics charge us with being a conservative think tank that has provided the Reagan administration with much of the research base behind its policies. Although the Reagan administration has taken some of our permanent staff, it has not always taken our advice.

Appointees included Martin Anderson, assistant to the president for policy development (Level II), Darrell Trent, deputy secretary of transportation (Level II), Richard F. Staar, ambassador to the mutual and balanced force reduction negotiations (Level II), Philip C. Habib, special envoy of the president to the Middle East (Level II), Annelise Anderson, associate director of the office of management and budget (Level IV), and John F. Cogan, assistant secretary of labor for policy (Level IV).

Furthermore, many scholars invited to Washington did not go, preferring to remain at Stanford and be free to criticize. Hoover staff members were approached but did not accept high level appointments at the following ranks: one level I, one level II, one level III, and two level IV. These positions included the directorship of the Arms Control and Disarmament Agency, secretaryship and assistant secretaryship of Education, membership on the Council of Economic Advisers, and assistant to the president for deregulation.

We have been criticized for reporting about the people who have moved from Stanford to Washington and about our influence in the White House. We have every reason to be proud that so many of our staff have been called upon to serve the nation in so many responsible positions.

When Stanford sent people to Washington during Carter's years, much boasting was heard. The March 1977 Stanford *Observer* proudly reported the event under the headline of "Top Jobs" and "Stanford in Washington. Faculty Division," with pictures of Barbara Babcock, associate professor of law, appointed to an executive level IV position as head of the civil division of the Department of Justice, and Donald Kennedy, endowed professor in human biology, appointed to an executive level V position as commissioner of the U.S. Food and Drug Administration. (The highest presidential appointment is level I.)

The *Observer* noted that other faculty members would be on leave to serve in President Carter's administration, including Professor of Psychology Richard Atkinson, appointed to the only really top government post, a level II position, as director of the National Science Foundation; Professor of Law Thomas Ehrlich as president of the Legal Services Corporation; and Professor of Psychiatry David Hamburg as president of the Institute of Medicine, National Academy of Sciences.

Many Stanford faculty have served in the federal government under both Democratic and Republican administrations. We do not recall any criticism of improper "partisan" behavior having been made prior to the current charges.

Berkeley and Harvard sent more people to Washington during Kennedy's time in the White House. Again much was made of these appointments in the press of those universities. The list of faculty and alumni was so extensive, it took up almost two pages in a February 1961 *Harvard Alumni Bulletin* under the heading "Crimson Cabinet." Law School Dean Griswold is alleged to have complained that Mr. Kennedy had taken more than 10 percent of his faculty of 40. James Reston quipped that there would soon be "nothing left at Harvard but Radcliffe."

Appointed faculty at these institutions did not charge partisanship then. A Harvard witticism has it that you cannot get a quorum in the Faculty Senate when a Democrat is elected president, and you cannot get one on the Board of Overseers when a Republican becomes president. Surely the petitioners are not against public service, or are they opposed only if it is done for a conservative, Republican president?

Hoover is not technically a think tank like Rand or Brookings. At Hoover there is no coordination or direction of work of the individual scholars. We have seldom done contract research for government, and we have undertaken no research for any branch of the Reagan administration. As individuals we do engage in public policy, public-choice research at Hoover, but this is not our exclusive interest.

Our critics make much of the fact that Hoover engages "in an impressive variety of policy-relevant research" as if this were unscholarly and objectionable. We would indeed be remiss if we did not study crucial issues of the day, such as the draft, social security, health care, welfare, and Soviet expansion and militarism.

As a dynamic, scholarly institution, we fail to understand why we should not do so or why we should be censured for writing hundreds of articles and op-ed pieces each year on vital issues of concern to citizens. These were not written just to influence a Republican president.

Are Profs. Manley, Carnoy, and Rebholz protesting our fecundity or our concern for policy matters? Are they denying us our right to express our views? Certainly faculty members at Stanford and elsewhere do not hesitate to criticize or comment on Reagan's presidency.

One has only to look at Hoover's list of publications to realize that we are not only concerned with public-choice questions of the present. Many of our works are historical analyses and deal with people and events before 1980!

Does the Domestic Studies Program at Hoover Constitute a Perversion of Hoover's Original Charter?

Early on the Hoover Institution had researched domestic issues but then stopped until such work was revived in the 1960s and expanded in the 1970s. Why should this be a perversion of its original charter? Mr. Hoover did not exclude such work.

Surely the Institution has a right to expand its programs. Should we have limited our work just to the causes of war because that was Mr. Hoover's original purpose in founding the Hoover War Library? Common sense refutes the charge. Furthermore, the Domestic Studies Program was carefully worked out with University authorities and had their approval. Dr. Martin Anderson proposed a domestic studies program at the Hoover Institution to concentrate on studies on domestic change. He reassured the Board that this work would complement and not supersede or replace the existing international studies program. (See the Hoover Board of Overseers' Report to Stanford University's Board of Trustees, January 1971, and the annual reports thereafter.)

At the 1972 meeting of the Hoover Board of Overseers, the minutes record that President "Lyman pointed out that the Hoover Institution already had a considerable domestic research presence in Anderson, Freeman, Possony, and Rita Campbell. The new program, then, would noi represent any drastic shift."

The fact is that there has been full University awareness of and support for a Domestic Studies Program at Hoover since the beginning. Furthermore, Dr. Lyman had only praise for and welcomed this new program provided funds were available.

As former Vice-President for Public Affairs Robert Rosenzweig noted in the May 6 *Daily*, it is ironic that petition initiators charge Hoover with being a partisan political institution while maintaining that the issues raised do not concern the policies of individual members of the institution.

Further we understand the names of faculty members supporting the petition will not be disclosed. This appears to Hoover scholars to be unfair and certainly unacademic. It smacks of McCarthyism.

The political charges against Hoover are a charade, an example of faculty partisanship and of double standards. The record of political partisanship of activist faculty and students is overwhelmingly in support of so-called liberal causes.

There is no comparison between this kind of faculty activism as expressed in sit-in demonstrations, parades, riots, breaking up of meetings, intimidation, support of Marxists, Maoists, Trotskyites, and anything Hoover scholars have done to promote the Republican Party, the Reagan administration, or the cause of conservatism.

In any case, what is the right proportion of particular views in each department or institute of the University? Should the University ensure that all views are represented in all departments? Why should the Hoover Institution alone be singled out for this kind of an investigation? Surely, social science and humanities departments are more monolithic than Hoover. Should we investigate whether there are too many Marxists and not enough conservatives in some University departments?

We think the petitioners have no case; we trust the Senate will not recommend that a committee of the Board of Trustees be appointed to investigate Hoover. Such an investigation in our view is unnecessary and offensive to our scholars. The last Senate investigation of Hoover produced a report that was so full of misjudgments that although the Senate received it, it did not act upon the report's recommendations.

Peter Duignan
Lewis H. Gann
Milorad Drachkovitch
Senior Fellows
Hoover Institution

Kennedy comments on Hoover petition

STATEMENT ON THE HOOVER INSTITUTION PETITION
President Donald Kennedy
May 17, 1983

The Senate of the Academic Council now has on its agenda for May 26th, a discussion of some of the issues raised by petitioners. I do not think it would be appropriate for me to preempt the terms of that discussion; but I do venture to hope that it will be forward-looking and productive, and concentrate upon how the Hoover Institution and Stanford can improve upon a relationship that has been increasingly valuable to both.

The important issues, it seems to me, have to do with governance and appointments, and not with who has what kind of politics. Consideration of the latter not only is an improper criterion for appointment or evaluation under our principles of academic freedom; it can also turn a discussion into one that is unnecessarily strident on both sides.

In the course of the present debate, both sides have referred to the University's budgetary relations with Hoover, and to the appointment process. It may be helpful for me to review the present status of each, so that our future deliberations can concentrate on more substantive matters.

During the present fiscal year, the Hoover Institution will receive a total of about $2.7 million in University general funds. Ninety percent of this budget line is for the support of the Hoover Library and Archives, which are part of the network of University Libraries. Petitioners assert that "this figure represents a 64 percent increase since 1979-80 at a time of severe University funding cutbacks." The intention, apparently, is to suggest that Hoover is receiving especially favorable budgetary treatment.

Actually, the increase is 55 percent, not 64 percent. It compares with an increase of 62 percent in Stanford's overall operating budget over the same period: this rate of growth reflects the degree to which *all* budgets have been subject to inflationary increase. The Hoover increase thus has some economic significance, but no political significance whatever.

By a 12-year old agreement, Hoover Senior Fellows—the only category of Hoover appointees on continuing appointment—are subject to the approval of the President.

They have been reviewed in the following way. The President has asked the University's liaison officer with Hoover—the Vice-President for Public Affairs—to constitute an informal consultative group of knowledgeable Stanford faculty members in the same discipline as the prospective appointee.

After studying the documentation submitted by the director of the Hoover Institution, this group advises the Vice-President on the suitability of the nomination, who reports the result to the President.

A relatively small number of appointees has been processed in this way over the past decade, since many senior fellows were simultaneously appointed to the Stanford faculty and accordingly received regular tenure reviews. No appointments subject to the above process have been rejected in the past dozen years, though some have been returned for additional information.

These clarifications may contribute in a small way to an improvement in the quality of the discussion on which we have embarked. The relationship between Stanford and the Hoover Institution is an important one, and its future matters more than its present or its past. I hope that consideraiton of that relationship can concentrate upon the more serious issues, and can be based upon the information that is accurate and pertinent.



Company stories help employees resolve conflict —Martin

Those "unique" company stories about employees who brave fire and flood to get the product to the customer are not unique, nor is the recounting of these stories just idle talk around the office water cooler.

So says Stanford Business School Prof. Joanne Martin, principal investigator in a study of "The Uniqueness Paradox in Organizational Stories." Stories of heroic feats of achievement or sacrifice are intended as statements about the company culture—predictions about what the firm will or won't do in certain situations, or its expectations about how employees should behave, says Martin.

She is an associate professor of organizational behavior at the School.

Martin and a three-member student research team have examined the commonality among organizational stories and why some stories proliferate and others do not. The student researchers, all doctoral students, are Mary Jo Hatch and Sim Sitkin of the Business School, and Martha Feldman of Stanford's political science department.

Organizational stories, like fairy tales, legends, and religious myths, are expressions of a culture that convey claims to uniqueness, says Martin. The paradox, she says, is that "a culture's claim to uniqueness is expressed through cultural manifestations that are not in fact unique."

Organization tales

In the study, the researchers examine seven types of organizational stories that carry a claim to uniqueness, yet occur in virtually identical form in a wide variety of organizations. The stories include some Martin collected from academic literature on organizations and from published institutional histories as well as stories she and her researchers personally gathered.

The seven story themes are: 1) Rule-breaking, in which a low-level employee challenges the head of the company for breaking a company rule; 2) Is the big boss human?; 3) Can the little person rise to the top?; 4) Will I get fired?; 5) Will the organization help me when I have to move?; 6) How will the boss react to mistakes?; 7) How will the organization deal with obstacles?

In one example of the rule-breaking story, a young security supervisor dares to challenge Thomas Watson Jr., the intimidating former chairman of the board of the IBM Corp., for not wearing the proper identification badge in a high security area of the company. In the story, Watson, when challenged, follows the regulations and puts on the correct identification. The IBM story, says Martin, enables employees to complete the sentence: "What we are proud about around here is. . . ." For high-status employees, the moral is "Even Watson obeys the rules, so you certainly should." For lower-status employees the message is, "Uphold the rules, no matter who is disobeying," says Martin.

Martin says she found remarkably similar versions of the rule-breaking story in a variety of organizations and that in each case the story had the same two characters: a high-ranking figure in the organization and a low-status employee who is either very young or new to the firm.

"These attributes of the two protagonists amplify the status differences between them," says Martin. "The inequality in power sets up a tension: Will the high-status person pull rank and be angry at the attempt to enforce the rules?"

Martin analyzes the content of organizational stories with the aid of script theory, a way of stripping a story of all but its barest essentials, and ending up with a set of characters and a causally-connected sequence of events. She is then able to determine whether a given tale is or is not an example of a common story type.

Of the seven story types, the most common is the obstacle story, in which employees respond to natural disasters, technical problems, or errors of other employees with effort beyond what is required in their formal job descriptions in order to get the job done. Examples include insurance agents who buy snow shoes and hike through blizzards to reach their clients, scientists who work night and day to solve an untractable problem, or a team of employees who overcome great odds to solve an elusive quality control problem.

Martin makes a distinction between what she calls "positive" and "negative" organizational stories. In the positive stories, employees, who are usually mentioned by name, exert considerable control over events; obstacles are overcome, bringing unanticipated success to the organization, or at least a return to the status quo. In the negative stories, the starring employees are not mentioned by name, do not exert unusual courage or effort, but simply do their jobs.

Martin cites as an example of the negative story the tale of a large bureaucracy in which an employee receives a form requesting him to mail someone a report. He complies with the request, unlike five employees before him, who each received the request but delegated the task to someone else. The hero thereby overcomes an obstacle by doing his job, while other employees are portrayed as poor performers.

Why do some organizational stories survive and others die by the wayside? Those that survive do so because they help resolve tensions between the individual employee and the organization, help explain past actions of employees or the organization, and allow employees to identify with or distance themselves from the organization.

Seven types

Like anthropological myths, organizational stories bridge conflict between the goals of the individual and the goals of the organization by offering a clear-cut resolution or by expressing discomfort at doing so, Martin says. "Employees may value equality, security, and control, while organizations may demand the right to threaten these values in order to survive," she says.

Common story types present a self-enhancing explanation for organizational events, she says. "People and organizations often seek retrospective explanations. This is not merely dispassionate inquiry. Reputations and self-esteem are on the line. Not surprisingly, individuals and organizations often see themselves as the cause of success, while blaming failure on forces beyond their control."

Martin says the positive organizational stories enable employees to identify themselves with the organization while the negative stories allow them to distance themselves. "In the positive versions, the starring employees have the same desirable control over outcomes as the rest of the organization—a control which is not characteristic of forces in the environment, such as other organizations," she says.

Martin characterizes the message of positive story types as: "My organization and most, if not all, of its employees are good, sane, just, and competent. To the extent that difficulties are not surmounted, this is the fault of forces outside our control."

The message of negative stories, she says, is: "Some employees in my organization with whom I identify, are good, sane, just, and competent. My organization, however, is bad, insane, unjust, and incompetent. To the extent that successes occur, they happen because of the efforts of these admirable employees, because of assistance from forces outside the organization, and despite the actions of the rest of the organization. When failure occurs, the organization itself is to blame.

Martin says: "It is difficult for most people to abandon the assumptions that decision-making processes are rational and that events are under one's personal control. It may be that in organizational cultures the claim to institutional uniqueness is as fundamental as assumptions about rationality and internal control. In our society these assumptions are comforting. It is possible, however, to imagine societies where they would not be."

—Herb Blanchett



It is difficult for most people to abandon the assumptions that decision-making processes are rational and that events are under one's personal control.

—Joanne Martin

Wessells backs higher tenure standard

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policies to keep their percentage between 50 and 60 percent." Among 13 major private universities, the tenured faculty ratio is about 70 percent.

The School of Humanities and Sciences has a professoriate of 470, whose average age is 48.

Changes in expectation for tenure, a tightened job market elsewhere, and the growth of what Stanford Law Dean John Hart Ely calls "tenure law" have greatly increased faculty grievances, Wessells said.

"The intrusion of non-University attorneys into the University's tenure processes will have extremely deletrious consequences if we ignore what I believe is a strong thrust in a number of grievance papers.

"This is an explicit failure in them to recognize that the process of evaluations at departmental, school, and higher levels of review are basically subjective judgment processes. They are not processes involving simple algebraic summation of pluses and minuses in the form of referee letters, statements by Stanford colleagues or student evaluations.

"Instead the essence. . . involves careful weighing of all such evidence, examining precisely what is said, why, and by whom—reading between the lines, if you will, in some instances—and then arriving at a balanced, reasoned and wise judgment. . . .

"Grievance documents written by various attorneys would turn us away from those long-established practices and toward a system of rigid objectivity in which professional *judgment* would have little role to play—10 letters in favor, four against, yes on tenure.

"Such procedures would seriously damage the quality of the faculties of great research universities. Like it or not, we simply cannot define precisely a single set of criteria every syllable of which may serve as the launch pad for a grievance. . . .

"We must literally take the offensive in improving our system or the courts will ultimately try to do so for us.

"We must define our criteria for tenure, describe our time-tested procedures, apply them with utter equity and fairness, and insist that it is the University professoriate—not the aggrieved assistant professor, the attorneys or the courts—that determines the rules of the game."

Symposium heralds molecular clues to disease



"Only in the last decade has learning become something we can study on a cellular level."

—Eric Kandel

Genes that can trigger cancer, the biology of learning and memory, and cell receptors that help the body fight heart disease all played a part in what Stanford Medical School Dean Dominick Purpura called an "academic festival" held at the medical center last Friday.

Six scientific sleuths from around the country, prominent in the search for molecular answers to questions of health and disease, profiled their research for an overflow crowd in Fairchild Auditorium in a day-long symposium entitled "Perspectives in Molecular and Genetic Medicine."

Just as the invention of the microscope opened a window on a world too small for the naked eye, the new biochemical tools of geneticists are permitting scientists to go several steps further and explore the interactions of molecules in both healthy and diseased tissue. Researchers in a variety of fields are now snipping molecular strands of genetic material into component parts, and recombining them in ways that offer a new, deeper level of understanding.

"We are, to a large part, what we are because of what we've learned. But only in the last decade has learning become something that we can study on a cellular level," said Dr. Eric Kandel, a neuroscientist from Columbia University whose work with Dr. James Schwartz has revealed fundamental mechanisms of learning in sea slugs.

The celebration of recent advances in genetics, biochemistry and medicine was prompted, Purpura

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Genetic tools are being used to get an inside look at arteriosclerosis—an often fatal clogging of the arteries.

—Michael Brown

Remarkable research findings on origins of cancer. . .

A series of remarkable research findings in the past four years are clearly illuminating the route to understanding the precise biochemical and genetic events that surround man's most dreadful disease—Cancer!

These discoveries were an unanticipated growth of studies of a group of simple viruses that cause tumors in animals. In spite of having very little genetic material—some as few as two or three genes—the viruses are powerful inducers of cancer, according to Dr. J. Michael Bishop, a microbiologist at the University of California in San Francisco.

Bishop's research is in the opening phases of what is, in a very real sense, a biological revolution. It was to look at the status of that revolution that scientists from all over the country gathered at Stanford for a day-long conference on Friday in the Medical School's Fairchild Auditorium.

Bishop's work not only illustrated the progress made in understanding basic aspects of the cancer problem, but also the impact of recombinant DNA technology on these developments, which the public does not seem to have yet fully grasped.

With this powerful new tool researchers can for the first time begin to literally dissect the genetic material of tumor viruses and identify the single viral genes responsible for malignant transformation.

The University of California, Stanford, and Harvard are among the several institutions whose laboratories are taking a leading role in this field. To date some 17 different transforming genes have been found among viruses. Each of these genes, inserted into a host cell's genetic material by a virus, can subvert or alter the cell's biochemical machinery making division its primary function.

How some of these genes work is known. They produce enzymes that subtly alter some cellular functions, at least one of which triggers uncontrolled cell growth.

This observation has led to another significant—and surprising—discovery. Uninfected cells display the same enzymatic activity, though at much lower levels. That is, a gene or genes producing similar enzymes must be a normal component of cells. The question: is there any similarity between these and viral genes?

Just a few years ago, this question would have defied experimental answers, the scientists agreed. With recombinant DNA techniques, however, the experiments are now possible and quite straightforward. Briefly, the viral transformed genes themselves are used as probes to detect similar or identical genes in cellular DNA.

DNA, the genetic chemical, is composed of two slender strands made up of subunits called nucleotides. It is the sequence in which different nucleotides are strung together that makes each gene functionally separate and unique.

The two DNA strands are held together by weak bonds between certain pairs of nucleotides. In a gene, typically some thousands of nucleotides in length, the two chains are exactly complementary; each nucleotide binds to one opposite it and the two strands are held together tightly by the combined strength of thousands of weak bonds. Moreover, if the strands are separated by heat or chemical treatment, which breaks these bonds, and then allowed to reform, the complimentary strands will come together again in precisely the right way.

This exact nucleotide pairing is the basis of the so-called DNA hybridization technique, an elegant way scientists use to compare viral and cellular genes. Thus, while single DNA strands from the same or identical copies of the genes will reform tight double strands, single strands from dissimilar genes will not. In this case, there's not enough sequence "homology" to hold the strands together.

In the test, radioactive single strands from the viral transforming genes are washed over a surface bearing fragments of cellular DNA. If, during this process, the viral strands encounter highly homologous cellular jequences, radioactive viral-cellular hybrid molecules are formed and retained. These are easily detected and their presence demonstrates that a cellular gene very similar to the viral gene was present.

Using this technique researchers have found that each of the known viral transforming genes has a counterpart in animal cells. In fact, it is now clear that the cellular genes came first. Cancer virus may have evolved from non-tumor virus which picked up these genes during the course of infection.

When recombinant DNA techniques were applied to a group of simple viruses that cause tumors in birds, an answer was quick to appear: just one gene was sufficient to transform a healthy cell to a cancerous one. Moreover, the protein product of the transforming gene of one of these, the Rous Sarcoma Virus in chicken, was identified by Bishop and his colleagues at UCSF as being responsible for causing the tumor.

The gene—named *src*, after sarcoma—takes advantage of the production machinery in the cell to make many copies of the offending protein. As always, this finding raised important new questions: Do all tumor viruses transform that way? Are there other ways by which cells can become malignant?

At least partial answers to these questions have come rapidly from laboratories throughout the world. They confirmed the original findings, but also they have showed that other tumor viruses did not transform cells into cancer that way. Clearly, scientists now think, alternate mechanisms of transformation of normal cells into cancer must exist.

In fact, studies already suggest how cancers may arise in the absence of viruses. Apparently, normal genes have the potential to transform normal cells into cancer. Mutation-causing chemicals or radiation can alter the usual genetic control mechanisms, allowing these genes to function when they should not.

There are clues that potential "cancer" genes, like the cancer genes in mice and fowl, do in fact exist in man. Studies have begun looking for such genes and scientists may learn much more about the origin of human cancer.

—Spyros Andreopoulos

Medical Alumni Symposium to tackle creativity and early experience

Two Nobel laureates and an internationally-acclaimed pianist will highlight Stanford's Medical Alumni Symposium scheduled for the morning of June 4 at Sherman Fairchild Auditorium.

Drs. David Hubel, John Franklin Enders University Professor at Harvard Medical School, and Joshua Lederberg, president of Rockefeller University, will join artist Lorin Hollander to explore "Creativity and Early Experience," with members of the Stanford Medical Alumni Association, and medical school faculty and students.

Hubel, a neurobiology professor at Harvard, received the Nobel Prize in Medicine or Physiology in 1981 for his work with two colleagues on the visual information-processing system.

Lederberg, former head of Stanford's genetics department, received the Nobel Prize in Medicine or Physiology in 1958 for his work on the organization of genetic material in bacteria.

Hollander began his career as a concert pianist with a Carnegie Hall debut at age 11. In addition to performances, he holds artist-in-residence programs at universities throughout the country, which include lectures and workshops that examine the psychological mechanisms of the creative process, the phenomena of stagefright and the neurotic distortions of creativity. He has served on national and international artistic and scientific organizations as well.

Specifically, Hubel will discuss "How Plastic is the Newborn Brain?"; Lederberg will talk about "The Biography of a Scientific Discovery;" and Hollander will discuss "Music, the Creative Process, and the Path of Enlightenment."

Participants in the morning program can earn up to three hours of Category I credit in the California Medical Association's Certificate in Continuing Medical Education Program. Certificates of attendance will be available.

The alumni association's annual meeting is scheduled to follow the morning program. Keynote speaker Dr. David Rogers, president of The Robert Wood Johnson Foundation, will speak on "Keeping Book on American Medical Care: How Are We Doing?"

The afternoon will end with a cocktail reception at the Stanford Faculty Club, hosted by Dean Dominick Purpura. Reunion dinners for the classes of 1933, 1938, 1943, 1948, 1953, 1958, 1968, 1973, and 1978 are scheduled for the evening.

For information and registration, contact the Stanford Medical Alumni Association, 750 Welch Road, Suite 300, 497-6389, by May 26.

Pre-meds need more than sciences

It takes more than a knowledge of science to make it in medicine, and the time to get that other knowledge is before entering medical school, Stanford University Medical School faculty and community physicians told undergraduates during a panel discussion last week at Sherman Fairchild Auditorium.

"There's a strong misconception that there's only one path to success in medical school," said Dr. Bruce Parker, associate professor of clincal radiology. "It's not that important to major in a specific field, such as science. It is important, however, to choose a field and put some real effort into pursuing it in a scholarly, intellectual way."

"That you'll understand the biological sciences is a given," added Dean Dominick Purpura. "But it's the human values, the ethics, and the concepts dealing with the essence and meaning of life that you need also. Medicine is simply an extension of humanity."

The panel, entitled "Reflections on Medicine: Education, Lifestyle, and Diversity," was the kick-off for the Majors Event the following day (last Tuesday). Booths—staffed by faculty, graduate students, and alumni—set up in the University's Inner Quad gave Stanford undergraduates the chance to learn about all majors.

The medical panel participants discussed the pros and cons of choosing medicine as a career as well. "Medicine is one of the most flexible professions," said Dr. Harvey Weinstein, clinical assistant professor of psychiatry. "There are multiple career pathways, such as administration, teaching, or clinical practice. You can arrange your life according to your priorities, and get as involved in medicine as you'd like. You can't do that with a lot of other professions."

"Medicine is a big commitment, however," cautioned Dr. Roger Peeks, who is in private practice. "It's important to know what you're getting into. Once you start your medical education and training, it's like a snowball effect. It's hard to stop if you decide you don't like it."

"There is nothing more intellectually stimulating and fun than medicine," concluded Dr. Tom Fiene, who also is in private practice. "Every day you deal with a great variety of people. You have to be able to relate to them on more than just a scientific level. Once you're in medical school you won't have time to learn this. The time to learn about different things, and to establish your values, is now, as undergraduates."

—Shirley Kraus



Gonda (left), for whom the top SUH employee service award is named, congratulates Bill Ferguson, this year's winner.

Hospital employees gathered for 25th annual service awards banquet

President Donald Kennedy noted the "remarkable length of service record of Hospital employees," and surprised award winners accepted recognition plaques, as almost 400 employees and their guests gathered for the hospital's 25th annual employee service awards banquet last week.

The top award went to Bill Ferguson, associate project manager in the Operations and Maintenance Department, a 24-year hospital employee. He was presented the Thomas A. Gonda Award for dedicated and exemplary service.

Special awards also went to Laurie Gunderson, clinical nurse coordinator on the North Intensive Care Unit; Armanda Holland, dietitian assistant; Carol Oakes, assistant director of care review/risk management; William Schueler, senior orthopedic technician, Nursing Services; and Marilyn Tucker, Systems Development supervisor.

Dan Robinson, acting director of Personnel and master of ceremonies for the event, noted that the first employee awards banquet was held in 1958 in the old Palo Alto-Stanford Hospital, now Hoover Pavilion. Nineteen employees attended that event in the hospital cafeteria, he said.

This year, more than 350 employees observing five, 10, 15, 20, 25 and 30 years of service to the hospital received award pins.

Three employees were recognized with a standing ovation for achieving 30 years of service: Elizabeth Griffith of telecommunications; Lovie Lewis, laundry and linen; and Helen Rantz, housestaff administration.

Eighty-four employees and 48 retirees who worked 20 to 40 years at the hospital were invited as honored guests.

The Gonda Award recognizes the former hospital director and medical director who has been associated with SUH for 29 years.

Bill Ferguson, eighth recipient of the annual award, was introduced as a "doer, a teacher, a leader. . .with a track record for accomplishing the impossible yesterday" in construction, remodeling, renovation and maintenance projects.

Laurie Gunderson was described in award nomination letters as earning the highest respect from her peers and physicians, "a dynamic leader, a true professional, and above all a caring person."

Armanda Holland, who recently received the Outstanding Employee Award of the dietetics department, was praised for her dedication. She also volunteers in the Hoover gift shop during her days off.

Carol Oakes, hospital employee since 1963, teaches infection control practices for health professionals and patients. She has received the "Woman of the Year" Award of the Palo Alto Chapter of the American Business Women's Association, and was a national finalist as Business Woman of the Year.

William Schueler was recognized for his services in the orthopedic-neurosurgical speciality area, his day-to-day contributions in instruction and in-service programs, managing budgets, supplies and equipment.

Marilyn Tucker, with more than 20 years of service, not only played a key role in the recent patient accounting conversion project, but also has been involved with solving information needs and systems problems for many hospital departments.

—Barbara Battino

Hematology clinic forms weekly patient support group

How would you feel if your doctor told you you had leukemia? Or hemophilia? Whom would you talk to? How many of your friends and relatives understand what problems such diseases present?

These are just some of the reasons that a new patient support group has been formed at the Medical Center for patients treated in the hematology clinic with relatively rare diseases such as leukemia, multiple myeloma, polycythemia, or hemophilia.

The group enables patients with the same types of medical problems to share the feelings, frustrations, coping strategies and other concerns peculiar to this type of health problem. The support group meets each Wednesday from 10:30 a.m. until noon.

The group is run by Dr. John Ruark, a resident in psychiatry, and Phyllis Burton, R.N., B.S.N., a staff nurse in the hematology clinic. Also frequently present are Juanita Smith, M.S.W., and Kathleen O'Brien, M.S.W., both from the department of social services.

Patients are welcome to bring family members or friends to the support group, which meets in TF-122c of the Psychiatry Building at the medical center. Other health care staff are also encouraged to attend at any time. For further information, call the clinic at 497-6961.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Group therapy helps women to cope after breast loss

To heal her scars is the goal of a mastectomy patient on the road to recovery.

Often overlooked, however, is the fact that these scars are more than skin-deep. The emotional recovery of a woman who's undergone a mastectomy is frequently harder to reach—and longer in coming—than her physical recovery.

"Women who've had mastectomies as long as 20 years ago still experience the same emotional stresses as those new to the situation," said Regina Kriss, Ph.D., project director of postmastectomy group therapy in the department of psychiatry at Stanford. "It's clear that, contrary to what many women have traditionally been told, time alone will not help."

It was largely these considerations that led Kriss, a family therapist, to undertake a study of the role of therapy in helping women deal with their psychological reactions to breast loss.

Specifically, Kriss collaborated with Dr. Helena Kraemer, associate professor of psychiatry, to research the effects of group therapy on the sexual adjustment and self-image problems of post-mastectomy women.

A panel of postmastectomy women, joining Kriss in a public lecture at the Medical Center last week, confirmed that the group setting had been particularly helpful. It provided the chance for each woman to hear her own emotions expressed and validated by others, and as one woman said, "to feel that she was probably not the worst off."

Sixty-two women entered Kriss' study groups, which began in 1979. Compared to women who had not had mastectomies, these women were less self-accepting, less sexually active, more dependent, and more self-sacrificing, she said. Both married and single women had experienced profound changes in their sexual interactions.



Kriss and participants in her postmastectomy study brainstormed to plan the May 12 presentation on emotional recovery after breast loss. The women pictured are, from left: Corrine Goldstick, Kriss, Bev Jorgensen, and Maria Mather.

Film shows emotional turmoil

As demonstrated in "No Less a Woman," a dramatized documentary film made by Kriss and Marvin Silverman, professor of education at San Francisco State University, married women often found their husbands withdrawn and cold, unable to offer comfort or to express their own sorrow and fear; many single women, terrified of rejection, shrank away from establishing any relationships with men.

Kriss, who has herself had two mastectomies, explained, "Breasts are a symbol of femininity, of desirability. Without them, it seems that everything you can offer a man is gone. It isn't vanity—it's the loss of an essential part of your core of existence as a woman."

Says one woman in the film, "I feel like a fraud. On the outside I look fine, but I'm not a real woman on the inside. I can't stand even looking at myself in the mirror; how can I show anyone else?"

Kriss said that because of these feelings, and possibly also because of the anger they feel about what's happened to them, some postmastectomy women end up feeling asexual. Ironically, at the same time, they may feel a greater need for sex and a sexual relationship than ever before.

"Some women find it harder to make a sexual adjustment toward their husbands than toward other men, since with their husbands there's more a sense of sadness about their loss," said Kriss.

But one man in the audience commented, "Being a WWII veteran myself I've seen many people have to cope with physical mutilation. Twenty years ago it would have been harder I think, but now I just know I'd rather have my wife here than not. So I can look at those pictures of mastectomy scars, though it's hard, and I can tell my wife here in public that I hope to God it never happens to her, but it won't make a damn difference to me if it does."

Because the issue is so complicated, Kriss soon realized in her research that she had to include men. So she held separate and then couples group sessions. She also did this with the women's daughters, most of whom were frightened, realizing they were at higher risk for cancer.

"In both cases, I found that everyone was protecting everyone and not telling how they felt. Through the groups they were all able to open up more." She added, "This is a time for close communication within a family, and all family members, even sons, are affected."

(In the next step of her studies, Kriss plans a pilot study on family work through groups of mothers and daughters, in collaboration with Dr. Alice Lee, a psychiatrist in private practice and a clinical instructor in the department of psychiatry.)

During the study, the importance of early therapeutic intervention after mastectomy became increasingly obvious, said Kriss. Few doctors realize the trauma of the surgery, she said, or prepare their patients for its psychologic impact.

Awareness must grow

"Doctors don't know because their patients don't tell them. To be 'good' patients, women after mastectomy deny perfectly normal feelings. They have to take the responsibility for communicating their problems, and doctors have to listen."

One woman in the audience added, "If any doctor says, 'Never mind that, just trust me,' run away so fast that you can't see straight."

Kriss attested that the medical community is now becoming more aware and attuned to the special problems of mastectomy patients. In Hoover Pavilion at SUH, she said, women and their husbands are interviewed carefully on attitudes towards breasts and the possibility of breast loss.

One exercise of her therapy groups was for the women to go home and really look at their scars. At another session, the women decided to compare their scars. "That was so therapeutic," said one. "You could say to yourself, 'hey, it doesn't look so bad when you look at someone else.' "

Emotional recovery after mastectomy, said Kriss, is tied intrinsically to the medical experience of surgery followed by chemotherapy or radiation. "The whole thing is so traumatic because of its suddenness," she said. "One day you're OK, the next you're not. You're not prepared for it, it's not gradual like the aging process or the progression of chronic disease."

The question women later ask is, "My cancer's now cured, but what next? When do I start to feel like me again?"

Some women opt for reconstructive surgery as part of the recovery process or to make them more comfortable in their active, outdoor lifestyles. For others, going "under the knife" again is too frightening, or unnecessary.

But even those who've had successful reconstruction say it doesn't change the fear, or the knowledge that they've had cancer. It doesn't erase anything.

Neither does group therapy solve all the problems. But the most important thing every mastectomy patient must do, said Kriss, is admit to herself if she needs help coping and seek out a group that can help.

—Lisa Ames

This week features nutrition computer series by docs

A series of minicomputer programs providing new perspectives on nutrition will be available for use by Medical Center health care professionals May 18, 19, and 20, said Jane Woeckener, assistant director of dietetics.

Three programs, all written by physicians, will be offered, each 15 to 20 minutes in length. The topics addressed are "Protein-Calorie Malnutrition—A Preventable Complication of Hospitalization;" "Protein Malnutrition—Clinical Expression and Assessment;" and "Nutrition Intervention—Techniques for the Prevention of Protein-Calorie Malnutrition."

This educational program uses the Apple microcomputer and has been exhibited at national conventions for such groups as the American College of Surgeons, the American Academy of Family Practice, the American College of Gastroenterology, and the American Society of Clinical Oncology.

The computers will be in the P.A.T.S. lounge as follows:

- Wednesday, May 18, from 9 a.m. to 5 p.m.
- Thursday, May 19, from 7 a.m. to 4 p.m.
- Friday, May 20, from 7 a.m. to 4 p.m.

The program is sponsored by Abbott Laboratories, and a representative will be available to assist in operating the computers.

For further information, call Dietetics at 497-6904 between 8:30 a.m. and 4:30 p.m.

Symposium. . .

continued from page 12

said, by the university's recent commitment to a "Center for Molecular Genetics," an interdisciplinary program planned for development at Stanford within the next several years.

"It is critical to be far-sighted," President Donald Kennedy later told a gathering of alumni, "if we are to lead phase two of the wave of breakthroughs in biochemical research in the same way that we have led phase one."

"Phase two" of the revolution will involve further exploration of basic science, Purpura said, coupled with applications of that knowledge in ameliorating disease.

A century-old search for a genetic basis for cancer may have found its first fruits in the recent discovery of "oncogenes," genes found in certain animal tumors, and thought also to exist in some human cancer cells, that by their very presence convert a healthy cell to a cancerous one.

"Tumor viruses have revealed to us a set of genes whose activities may lie at the heart of every cancer, no matter what its cause," said Dr. J. Michael Bishop, a microbiologist from the University of California, San Francisco. "We view these genes as the keyboard on which many



Courtesy Stanford University Press

The common sea slug yields clues to the biochemistry of memory and learning.

different carcinogens can play, whether they be chemicals, X-rays, the ravages of aging, even viruses themselves. An enemy has been found—it is part of us—and we have begun to understand its lines of attack."

Bishop uses viruses as experimental tools "to ferret out the universal processes that may cause a cell to run amok" (*see commentary by Spyros Andreopoulos, page 12*). Dr. Michael Brown, a geneticist at the University of Texas Health Science Center at Dallas, spoke of using similar genetic tools to get an inside look at arteriosclerosis—an often fatal clogging of the arteries.

"Mike Bishop mentioned that one out of four people in the United States die from cancer. Twice as many die from hardening of the arteries," said Brown. "It's an insidious disease that begins in the teenage years, but usually causes no symptoms until middle age, when heart attacks and strokes begin to occur."

To understand why the disease starts and how it progresses, Brown and colleagues looked to the metabolism of cholesterol and found answers. Most cholesterol is made in the liver and travels through the blood in tiny protein packages called "low density lipoproteins," or LDLs. Receptors inside each cell retrieve the LDLs from the cell surface and carry them inside to be broken down in a several-step process.

About one in 500 people in the world have a genetic defect that makes those receptors faulty, Brown said, and permits too much cholesterol to build up in the bloodstream. "Hypercholesterolemia," an illness that leads to arteriosclerosis, is one of the most common genetic diseases in the world, he said. During the past eight years, Brown and his team have defined gene mutations that deform the LDL receptor in persons who have the disease, have located the receptor within the cell, and are now trying to clone the genes in an effort to better understand and find new ways to treat arteriosclerosis.

The new tools of molecular and genetic medicine have found a niche in the study of normal processes as well as in the research of disease. Kandel told the audience how his work with "aplysia," a variety of sea slug, is shedding light on the mechanisms of memory and learning.

"Some of us feel that the ultimate challenge facing biology is the neurobiology of mentation," Kandel said. "Can the complexity of behavior be explained by a simple grammar of biological rules?"

The sea slug has relatively few neurons that are large and much easier to study than the interlocking maze of cells that make up man's brain. The slug's behavioral repertoire is also quite simple, but the primitive behaviors, and ability to learn and remember, are probably governed by the same molecular mechanisms as the more complicated processes seen in higher organisms, Kandel said.

Even remembering the name of an acquaintence probably causes semi-permanent changes in the junctions between nerve cells in the brain, he suggests.

Channels in the membrane of nerve cells open and close to permit electrically charged molecules to flow back and forth at the bid of an electrical signal initiated in the brain. Changes in the number of channels that open determine how much neurotransmitter—the chemical messenger between nerve cells—will be released.

Kandel and his associates have studied the sea slug's "gill withdrawal reflex," the tiny creature's response to being disturbed. In calm tidepools, a sudden change in water pressure signals that a predator may be nearby, and prompts the gill withdrawal reflex as a first step towards escape.

But when repeated exposure to the same stimulus causes no ill effects, the sea slug grows accustomed, or "habituates" to the stimulus. Through experiments, Kandel has linked the habituation to a change in the number of specific ion channels open in the cell membrane. If the sea slug is then exposed to a new stimulus—such as a mild pinch—the configuration of open channels changes again, more transmitter is released, and the creature quickly withdraws his gill.

Neurobiologists see habituation and its sister phenomenon "sensitization" as building blocks of learning.

Other speakers at the symposium included Drs. Philip Leder, Harvard Medical School; Gerald Rubin, Carnegie Institution of Washington; and Leon Rosenberg, Yale University School of Medicine.

Dr. Paul Berg, Stanford's Nobel prize winning geneticist, called Friday's symposium a "treasure trove of scientific discovery." The conference will be held annually, Purpura said, to "memorialize life through the study of science" and to foster the translation of research advances in molecular and genetic medicine into revolutionary methods of disease diagnosis and treatment.

—Deborah Franklin

Construction Corner

Boswell Renovation Progress Report:

- **Balconies**—The external decks in the courtyard, which are designed to allow patient access and waiting space, have had concrete poured. Fireproofing of the structural steel will soon be completed. The temporary protective awning should be removed by mid-summer.
- **Radiation Therapy**—Fireproofing of the columns and concrete fill around the footings have been completed. The core drilling of concrete is proceeding in the ceiling above Radiobiology. The coring is for Phase II plumbing work. This requires close coordination between the department, facilities and the contractor to minimize the impact on the ground floor research functions. The contractor was scheduled to complete his work in Radiation Therapy by May 15.
- **Penthouse**—The mechanical room designed to house the new air conditioning system located on the roof of the west wing of the Boswell Building is proceeding with the erection of walls, roof panels, and electrical equipment. The latter was delivered from the street level up to the penthouse via helicopter early Saturday morning.
- **First Floor South**—Demolition is nearly completed with the exception of the entry doors from the external deck. These will be cut soon.
- **Furniture**—Consultants are nearing the completion of their report as to the needs of the new areas to allow a furniture budget to be identified.
- **Third Floor**—Preliminary programming has been completed for anticipated usage of the third floor. Currently, there is not funding for this project; however, the design will allow for identification of plumbing and electrical needs that may be incorporated in the construction activities occurring on the floors below.

SUMC South Parking Lots, Revised Work Schedule:

As previously announced, most of the expansion work on the southeast and southwest parking lots will be accomplished on Saturdays and Sundays. However, the scope of the project will require work on some Fridays, thereby resulting in a loss of some parking on those days.

The work will ultimately result in an increase of parking availability, so everyone's cooperation and indulgence in this inconvenience is requested. A revised work schedule, available from Safety/Security Services, indicates when the various parking lots will be affected by Friday closures. Lot entrances will be blocked off and signed to indicate closures.

Chilled Water Line:

The Medical Center chilled water line now under construction will, in part, follow the alignment of Blake Wilbur Drive. If the new Children's Hospital "footprint," yet unknown, should encroach upon Blake Wilbur, it may force the relocation of this service line. However, the line is required now and there is no sure alignment that would avoid Children's with certainty; therefore, work is proceeding.

Volunteer services coordinator named

Sharon Beckham has been named coordinator of volunteer services at SUH, announced Jeanne Kennedy, director of community relations.

Beckham has been coordinator of volunteer services at the University of California at San Francisco (UCSF) since 1977. She will assume her new position at Stanford July 5.

Beckham's main function, said Kennedy, will be to develop programs that recruit, retain and reward volunteers. She will report to the director of community relations and work closely with the Medical Center Auxiliary and other ongoing volunteer activities of the hospital. Direct supervision of the volunteers will remain with the departments to which they are assigned.

At UCSF, Beckham was administrative support manager with responsibility for the business management and development of the volunteer services program.

Prior to that position she was coordinator of volunteer services at UC Irvine. She also was director of volunteer services at Cedars-Sinai Medical Center in Los Angeles, and has served as a consultant to organizations in the design of volunteer systems.

Beckham is president of the Northern California Association of Directors of Volunteer Services, and teaches volunteer management courses at UCSF and Dominican College. She is a graduate of Tulane University.

FPP employee awards banquet

Invitations have been mailed to all Clinics and Faculty Practice Program (F.P.P.) employees for the third annual F.P.P. employee awards banquet, to be held Friday evening, May 20, at the Stanford Faculty Club.

Awards will be presented to those employees who have five, 10, 15, 20, 25 and 30 years of service at the Medical Center. A total of 29 awards will be given, including one 30-year award to Sylvia Hupman, a licensed vocational nurse in the eye clinic.

Social hour for the event will begin 6:30 p.m., with dinner to follow at 7:30. Speakers will include Medical School Dean Dominick Purpura and Donald Tower, executive director of the F.P.P. and the Stanford University Clinics.

For further information about the banquet, call 497-6323.

Intern's death under investigation

Thirty-year-old Lorraine Johnsrud, an intern in medicine at Stanford University Hospital, was found dead in her Menlo Park apartment by police May 6.

The cause of her death is under investigation by the San Mateo County Coroners Office.

Colleagues at SUH notified Menlo Park police when Johnsrud failed to report to work that morning. Police entered her apartment at 10:13 a.m. and found her body.

Johnsrud had received a Ph.D. in molecular biology from Harvard, and an M.D. from Washington University prior to coming to SUH.

"She was an excellent physician," said Dr. Mark Perlroth, head of the department of medicine's housestaff program.

Colleagues said she had been severely depressed in recent months following the death of her father, and had been receiving professional help.

Johnsrud is survived by her mother, sister, and brother. Funeral services were held in Minnesota on May 10.

...News Notes...

Ruth Allen, *chairwoman of volunteers of the SUH Auxiliary, was honored last month in recognition of outstanding volunteers in the county, by the Junior League and the Volunteer Center of Santa Clara County.*

Allen was chosen from 93 county volunteers nominated for the award. A member of the Auxiliary for 13 years, she has given over 1,000 hours of volunteer service to SUH patients.

"Ruth really cares about having things work right for patients," said Jeanne Kennedy, director of community relations, who works closely with the Auxiliary.

* * * *

Two junior Auxiliary members were awarded scholarships at the Junior Volunteer Awards and Recognition Picnic, held April 30 in the Garden Patio.

Holly Reichert *and* **Blanka Pecen,** *both graduating high school students, were each given a $500 college scholarship, said Phyllis Alper, first vice president of the Auxiliary.*

Reichert, a Palo Alto High School senior, has volunteered more than 200 hours at the gift shop and flower desk. She plans to attend the American University in London for the summer, and then return in the fall to Menlo College.

Pecen has contributed over 85 hours in the pediatric playroom. A junior at Los Altos High School, she is graduating after only three years and will attend UC Riverside. She hopes to participate in a program in biomedical science that will allow her to complete her undergraduate and medical school studies in seven years.

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The joint office of SUMC Public Events and the Medical Alumni Association has moved. The new location is 750 Welch Road, Suite 300. They can still be reached at 497-6389 or 497-5064, respectively.

* * * *

Three staff members in hospital personnel have new telephone numbers.

Dan Robinson, *acting director of personnel management, said he and secretary Gail Escobar can be reached at 497-6527.* **Frank Montalvo,** *manager of wage and salary administration, can now be phoned at 497-6630.*

All are still located in E009 of the hospital.

* * * *

Stanford Medical Center Day at Marriott's Great America will be Sunday, May 22. The park will be open from 10 a.m. to 8 p.m., and specially-priced tickets are $6.95, with children under three admitted free. The price includes a full day's admission with unlimited use of all rides and shows.

Tickets may be purchased May 16 to 20, 11 a.m. to 3 p.m. in the cashier's office, C110 of the hospital; or 2 to 4 p.m., in the Hoover Nursing Administration office, N149; or May 19 and 20, 6 to 8 a.m. in E009, hospital personnel.

* * * *

Dr. Marvin Karasek, *professor of dermatology, was elected vice president of the Society for Investigative Dermatology at the group's meeting in late April in Washington, D.C.*

* * * *

Three personnel appointments have been made in SUH Safety and Security Services, said Hilary Ryniewicz, director of that department.

Ed Avila *has been promoted to safety and security supervisor.*

Paul Watkins *has been hired as the night shift senior safety/security officer.*

And **John Lyons** *has been hired as the evening senior safety/security officer.*

* * * *

A program to acquaint new employees to the Medical School is scheduled for **May 25.** *This is the second "new employee welcome" sponsored by the Dean's Office, and is planned to be offered three times annually.*

The intention of the new employee welcome is to provide medical school and clinic employees with some knowledge of the history, organizational structure, and services available to Medical Center employees.

Invitations were recently sent to employees who began their status with the medical school from January through April. Employees should also still attend the Stanford University New Employee Orientation.

* * * *

A new Stanford University Medical Center **Facts** *booklet for 1983 is now available. Filled with statistics, graphs, telephone numbers, important names and information regarding the medical school, hospital and clinics, copies of the publication can be obtained by writing or phoning: Publications, Office of Medical Development, 780 Welch Road, Suite 106, Palo Alto, CA 94304; (415) 497-7603.*

Medical Center Calendar

WEDNESDAY, MAY 18

Div. of Hematology noon conference: "The Spleen in Myeloproliferative Syndrome"—Dr. Theodore Cohen. Noon, L201.

Dept. of Medicine Research seminar: "Fluid and Solute Transport Across Pulmonary Alveolar Epithelium"—Dr. Edward Crandall (UCLA). 4 p.m., M110.

SUH Auxiliary Volunteer Orientation. 9:45 a.m., W001. For further information, call the Auxiliary office at 497-6636.

Hematology Support Group: Meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family and significant others welcome. 10:30 a.m. till noon, TF-122c. For further information, call 497-6961. *(See related article in this issue.)*

THURSDAY, MAY 19

Registration deadline: for Nursing Educational Services workshop, to be held June 2, "Burnout: Treatment and Prevention," from 8:30 a.m. till 4 p.m., 701 Welch Road, suite 327. Course will focus on defining burnout, assessing individual levels, developing standardized and individualized care plans to counteract the problem, and identifying helpful responses to others' burnout. For further information or to register, call Carole Kidder at 497-6366.

Dept. of Pharmacology seminar: "Tyrosine Protein Kinases"—Dr. Edwin Krebs (Univ. of Washington). 4:15 p.m., Pharmacology library R358.

Dept. of Medicine grand rounds: "Myasthenia Gravis"—Drs. Bruce Adornato and Joseph Lacy. 8:30 a.m., Fairchild Auditorium.

Div. of Otolaryngology/Head and Neck Surgery lecture: "Management of the Paralyzed Face"—Dr. Mansfield Smith. 6 p.m., R117.

Dept. of Biochemistry seminar: "Introns/Exons and the Evolution of Genes"—Dr. Walter Gilbert (Harvard). 4 p.m., Braun Auditorium, S. G. Mudd Chemistry Building.

FRIDAY, MAY 20

Dept. of Clinical Social Work workshop: "Adaptation to Hemodialysis"—Elizabeth Garifalos, L.C.S.W., Dr. Alan Ringold, and Pam Simmons, R.N. 10 a.m. till noon, Hoover Pavilion Nursing Cottage, 1st floor. For further information, call 497-5091.

Pediatric grand rounds: "Contraception in Teenagers"—Dr. Iris Litt. Case presentation by Dr. Mary vander Velde, intern in pediatrics. 8 a.m., M106.

Heart Health Fair at the Stanford Shopping Center: sponsored by the cardiac patient teaching committee of Nursing Services. 11 a.m. till 7 p.m.

Registration deadline: for Nursing Educational Services "Selected Concepts in Surgical Nursing" conference to be held June 3 from 8 a.m. till 4:30 p.m., 900 Welch Road, room 15. For further information, call Carole Kidder at 497-6366.

Dept. of Gynecology and Obstetrics grand rounds: "The Evaluation and Treatment of Breast Lumps"—Dr. Hewlett Lee (Palo Alto Medical Foundation). 8 a.m., A336.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Sex Role Development"—Julie Olsen Edwards (Cabrillo College). Noon, M114.

Div. of Child Psychiatry grand rounds: "Time and Trauma"—Dr. Lenore Terr (UCSF). 11 a.m. till 12:15 p.m., Faber Auditorium, CHAS.

SATURDAY, MAY 21

Dept. of Emergency Services Pre-Hospital Care Program: Sports Medicine for R.N.s, M.D.s, and allied health professionals. Goal is to teach development of personal exercise programs and identification and emergency management of sports-related injuries seen in various medical practices. 8:30 a.m. till 5 p.m., Fairchild Auditorium. Will also be offered June 4 at Letterman Army Medical Center in San Francisco. For further information, call 497-6017.

SUNDAY, MAY 22

SUMC Day at Marriott's Great America. Park to be open 10 a.m. to 8 p.m., and specially-priced tickets are $6.95, with kids under three admitted free. Tickets may be purchased May 16 to 20. See related "news note" for details.

MONDAY, MAY 23

Registration deadline: for Nursing Educational Services conference "Pediatric Critical Care Course: Level I," to be held June 6 and 7, 900 Welch Road, room 15. For further information, call Carole Kidder at 497-6366.

Dept. of Medical Microbiology seminar: "Retinal Pigments in Halobacteria as Light Energy and Signal Transducers"—Dr. Walther Stoeckenius (UCSF). 1:15 p.m., M114.

TUESDAY, MAY 24

Dept. of Dermatology special lecture: "A New Look at the Older Antibiotics"—Dr. Jay Sanford (Uniformed Services University of the Health Sciences, Bethesda, Md.) 10 a.m., Dermatology Library R136.

Dept. of Dermatology special lecture: "Yellow Rain"—Dr. Jay Sanford (USUHS, Bethesda, Md.) 4:30 p.m., M114.

Dept. of Psychiatry and Behavioral Sciences lecture: "Amphetamine: Effects on Neurochemical and Behavioral Circadian Rhythms"—Dr. Anna Wirz-Justice (Univ. of Basel, Switzerland). Noon, Pharmacology Library R358.

WEDNESDAY, MAY 25

Nursing grand rounds: "Career Development: New Directions for Job Joy." Guest speakers will describe various strategies for job expansion including lateral transfers, administrative opportunities, clinical nursing specialist research and combining nursing with other careers (such as medical law). 3:30 till 5 p.m., M104. For further information, call Karen Kawauchi days at 497-6923, or Kit Laird nights at 497-6377.

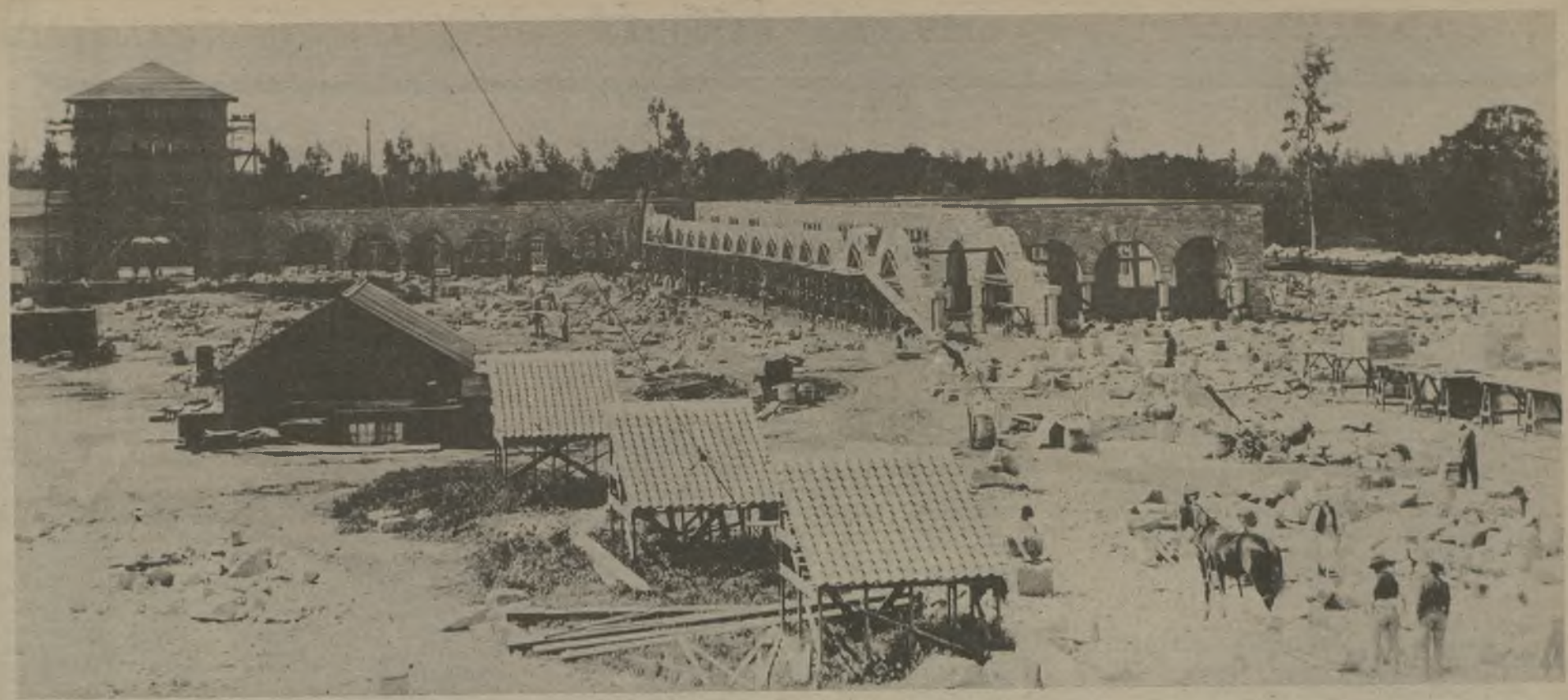
Div. of Hematology Wednesday noon conference: "Pediatric presentation"—Dr. Bertil Glader. Noon, L201.

Dept. of Structural Biology seminar: "Three Crystal Structures for Citrate Synthase: Catalytic Activity Requires Large-Scale Conformational Changes"—Dr. James Remington (Univ. of Oregon at Eugene). Noon, Fairchild Building D102.

Div. of Orthopedic Surgery grand rounds: "Anatomy—Foot and Ankle"—Dr. Gary Watson, 7:30 a.m.; and "Cement Fixation"—Dr. Steven Woolson, 8:30 a.m., M114.

Dept. of Neurology grand rounds: "The Synthetic Street Heroin Story: A New Model for Parkinson's Disease"—Dr. William Langston (Santa Clara Valley Medical Center). 5 p.m., C364.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



The arcade, which is the distinguishing feature of the quandrangle, was the work of master craftsmen who carefully shaped and placed the great blocks of sandstone.

From stock farm to University: How the campus evolved

Do not say that you have nothing to live for. . . Live for humanity."

These words, which Senator Leland Stanford heard his son tell him in a dream the first night after the youth's death, provided the impetus for the founding of Stanford University—a fitting memorial to a young man approaching college age.

The Stanford family's country residence, the Palo Alto Stock Farm, was the natural location for such a university; Leland, Jr. had always considered it "Home."

Monday, May 23, marks the opening of an exhibit in the gallery of the West Wing of Green Library detailing the evolution of this memorial—from stock farm to university—through the planning and construction of the Stanford Quadrangle. It was compiled by Barbara Begley from resources in the University Archives.

The design of the University was a collaborative effort between Senator Leland Stanford, landscape architect Frederick Law Olmsted, and the architectural firm of Shepley, Rutan, and Coolidge (formerly H. H. Richardson's Boston office).

The Senator took an active part in the design from the beginning and adamantly clung to his ideas of architectural planning, much to the dismay of the professional designers.

The earliest conflict concerned the siting of the University. Olmsted, most famous today for his design of New York's Central Park, favored a site in the foothills, which would have required an asymmetrical design of the type Olmsted was most comfortable with.

Stanford insisted upon locating the school on the plain, ostensibly so that no topographic features would interfere with the addition of future buildings.

The exhibit, by way of introduction, displays photographs of the virtually barren plain which was the site of Senator Stanford's highly successful trotting horse farm. Also highlighted is Frederick Law Olmsted, including several of his working architectural drawings and his correspondence with his client.

The cornerstone was hurriedly laid on the 14th of May, 1887, on what would have been Leland Jr.'s 19th birthday.

The plan was still undergoing major revisions at this time. While a consensus had been reached very early in the planning that the architectural style be "distinctively Californian" (alternatively "Spanish," "Moorish," or "Mission"), the designers and the Senator had not yet agreed on the form or orientation of the quadrangles. Construction continued for nearly two years.

Stone was brought up from the Goodrich Quarry near San Jose on Stanford's Southern Pacific line, necessitating a new short spur to the construction site. Piled in the area known today as the Oval, the sandstone was shaped to specified dimensions by stonecutters, then carted by wheelbarrow to the construction site and laid into place. As the walls increased in height, ramps and cranes were used to hoist the stones.



The arcade, which is the distinguishing feature of the quadrangle, was created of meticulously laid voussoir arches. After building a wooden framework for the arch, the stones were set into place and the frame removed. All stages of the construction are well documented in photographs—from stonecutting, wheelbarrows, and ramps to the carving of the frieze in Memorial Arch.

Because the Memorial Arch was destroyed in the earthquake of 1906 and not rebuilt, many people are not familiar with its more interesting features. One of the many fascinating items in the exhibit is an architectural blueprint of the Arch, showing the stairs inside both sides leading to the observation level near the top which had windows through which people could view the town of Palo Alto down Palm Drive.

Memorial Church was also severely damaged in the earthquake and not entirely rebuilt. Parenthetically, the mosaic adorning the facade of the Church was not an element of the original design, but rather the thought of Mrs. Stanford following her husband's death in 1893. Several of the artist's drawings for the mosaics on the facade are on display. While the Church had not been completed at the time of the University's opening in 1891, the site was marked by more elaborate arches.

Senator Stanford and Frederick Law Olmsted also differed on the matter of landscaping. Olmsted was vehemently opposed to the use of "New England scenery"—New England trees and grass, which would require extensive watering. He preferred low-growing vines as ground covering and indigenous flora, and suggested that the quadrangle be paved.

The concept of circular plantings in the quad seems to have evolved at an early stage, although there was disagreement over their diameter, the height of the "pavers" enclosing them, and the eventual height of the proposed plants to be included.

The surface was originally paved completely with asphalt. Within a few years, this had become badly cracked, and before the earthquake the major axes were paved with concrete and the remainder covered with gravel. (It was resurfaced in 1915 and has been neglected since.)

A series of photographs illustrate the changes from a completely barren state through early planning when the palm trees were a mere eight feet tall, and show the wide variations in surfacing prior to the earthquake.

Throughout the planning and construction phases there was a great deal of public attention drawn to the University. One case of the exhibit is devoted to the media coverage of the campus design during this period, including interesting examples from periodicals such as the San Francisco *Examiner* and *Harper's Weekly Magazine* showing how the media portrayed the plan (quite often completely incorrect in their assumptions).

The final case displays photographs of the completed quad in the period before the earthquake.

The plan of Stanford, particularly the concept of enclosed and interconnecting quadrangles, was a significant innovation in campus planning. The unified and powerful design of the quads resulting from the collaborative effort of several great minds continues today as the nucleus of the University.

Anna-Marie King

Senate report

TO MEMBERS OF THE ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 12

Summary of actions taken by the Senate
May 12, 1983

At its meeting of May 12, 1983, the Senate took the following actions:

1. On the recommendation of the Steering Committee, the Senate, by unanimous voice vote, requested the Committee on Committees to draft a charge appropriate for an *ad hoc* Committee on Senate Representation. The *ad hoc* committee should recommend the most appropriate Senate size, proportional representation, and reapportionment procedures, given the current size and compositon of the Academic Council. The committee should report to the Sixteenth Senate no later than November 10, 1983.

2. On the recommendation of the Committee on Academic Appraisal and Achievement, the Senate, by unanimous voice vote, approved the C-AAA Proposals for Student Evaluation of Teaching, as amended. The Proposals, in final form, appear at the end of this report.

MINUTES OF THE FIFTEENTH SENATE OF THE ACADEMIC COUNCIL
May 12, 1983

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, May 12, 1983, beginning at 3:18 p.m. in Room 180 of the School of Law with A.L. Fetter, chair, presiding. Present were 36 representatives, 9 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting held on 4/14/83 (SenD#2501) were approved as submitted.

Report of the Steering Committee

In the report from the Steering Committee, A.L. Fetter, chair, called attention to the change in forthcoming agenda items for the remaining meetings of the Fifteenth Senate. Two reports from C-US will not be ready to present to the Fifteenth Senate in time for it to take action before the end of the academic year. These include the review of the Overseas Studies Program and the report on residential education. Both of these reports are now expected to be early agenda items for the Sixteenth Senate in the autumn quarter. The report on the review of the Freshman/Sophomore Seminar Programs does not demand Senate action, and will be included as a report item in the 1982-83 Annual Report of C-US which is to be presented to the Sixteenth Senate in the fall.

He called attention to the Hoover/Stanford petition included for information in the recent Senate mailing, and explained that the Steering Committee had decided against scheduling it for discussion at the May 12th Senate meeting because of important prior agenda commitments, and because the Steering Committee had rightly been criticized earlier in the year for scheduling new business too late in a Senate meeting for adequate discussion. The petition will therefore be an agenda item for the Senate meeting of 5/26/83. That meeting will also hear a brief report on alternatives to TIAA-CREF.

The final Senate meeting of the year will consider two reports from the Committee on Research: one a proposed change in copyright policy, and the other the preliminary report on weapons-related research at Stanford.

The final item reported from the Steering Committee was a motion to establish an *ad hoc* Committee on Senate Representation:

> It is moved and seconded by the Steering Committee that the Fifteenth Senate of the Academic Council ask its Committee on Committees to draft a charge appropriate for an *ad hoc* Committee on Senate Representation. The *ad hoc* committee should recommend the most appropriate Senate size, proportional representation, and reapportionment procedures, given the current size and composition of the Academic Council. The committee should report to the Sixteenth Senate no later than November 10, 1983.

It is expected that a draft of the charge to this committee would be presented to the Fifteenth Senate at one of its two remaining meetings. The Committee on Committees of the Sixteenth Senate would then be expected to appoint the members of this committee by mid-June of this year.

Senate hears reports from Wessells, Provost

Dean Wessells suggested that such a committee might also look at the way the Steering Committee has been selected in the past. Traditional procedures make possible the election of a Steering Committee which contains representatives of only one school (e.g., the members of Steering Committee XVI are all from Humanities and Sciences) and this does a disservice to the Senate with respect to representation. A. Fetter confirmed that this question, and others raised in a survey of the legislative history of apportionment and reapportionment, would be transmitted to the Committee on Committees for consideration before completion of the draft charge.

The motion, put to a vote, passed unanimously.

Report of the President

President Kennedy reported first on an interesting new phenomenon on the national scene in undergraduate admissions: a significant departure by many high quality institutions from the nationally carefully constructed system of following a need-based policy of financial aid. This results in a "bidding" for academically talented students to win them away from institutions where financial aid is awarded on the basis of need. He expressed the hope that Stanford could resist this trend, which be believes to be pernicious.

He then remarked that he had been asked to comment on the Hoover/Stanford issue, but declined to do so since it is scheduled for debate at the next Senate meeting. He did not mean to preempt that discussion, which he hoped would be forward—looking and constructive. He does plan to comment at that meeting on the facts concerning the part of the Hoover budget that derives from general funds, and on the arrangements regarding presidential review of continuing appointments at the Hoover Institution. These issues are germane to the inquiry and there is a need to clarify some misapprehensions on these matters.

A. Siegman asked a question in advance of the Hoover petition discussion as a courtesy to permit the collection of necessary information or the determination of who might be best able to respond: There are a number of requirements which apply to sponsored research in the University (participation of students, identification of sponsors, etc.). To what extent do those same policies apply to restricted funds which are given through the University to Hoover or directly to Hoover?

Vice-Provost Lieberman indicated that policies on identification of sponsors apply uniformly across the board, to Hoover as well as to the University at large. The question of student participation is more interesting because whether or not students are involved in Hoover-sponsored research is not now known to him. He will check into it.

President Kennedy pointed out that, while the criterion for student participation in sponsored projects is one of the criteria applied in general; there is no requirement that every individual project must have a student attached to it. Some off-campus sponsored projects, for example, do not.

A. Siegman commented that he had in mind also the extent to which sponsored project requirements apply to any research activities paid for by outsiders at Hoover, whether they are technically listed as sponsored projects or not.

President Kennedy responded that there is an important definitional distinction between sponsored projects and those carried out by a department, for example, under the terms of a restricted gift. To the latter, sponsored research regulations don't apply at all. Such a gift does not involve a proposal, an award that pays idirect costs, and a prescribed reporting schedule. A gift may be described as applicable to a specific area of research but contain no such 2quid pro quo1 arrangements.

C. Degler inquired whether the administration could provide information on the relationship between Harvard and the Kennedy School of Public Policy, and Princeton and the Woodrow Wilson graduate school by the May 26th meeting.

President Kennedy agreed that such information as could be gathered would be forthcoming from the administration by the next meeting, but pointed out that more germane models might be found among institutions which were affiliated with universities but were themselves not degree-granting. The two examples cited are composed of regular university faculties and themselves constitute regular schools or departments of the institution with which they are affiliated. The administration will try to prepare some comparative information for the 5/26/83 meeting.

G. Gillespie asked for a list of other research groups at Stanford which do not grant degrees. Vice-Provost Lieberman referred him to page 626ff. of the current *Courses and Degrees Bulletin*.

Report of the Provost

Provost Hastorf began his report by noting that Professors R. Davis (biochemistry) and D. Purpura (neurobiology and Dean of the School of Medicine) are newly-elected members of the National Academy of Sciences. Professors O. Bjorkman (biology and, by courtesy, the Carnegie Institution), B. Efron (statistics) and T. Hansch (physics) were elected members of the American Academy of Arts and Sciences. Professor J. Gibbons (electrical engineering) was a recent recipient of the Texas Instrument Founders Prize.

The provost also announced that academic and administrative computing will now be separated, with the appointment of a new member of the provostial staff to assume responsibility for academic and research computing and planning (including network planning) and for LOTS. The provost hopes to announce that appointment before the end of the academic year. He is now consulting with deans and other faculty and with a committee, on micro processors chaired by G. Lieberman. That committee includes W. Kays, J. Hennessy, P. Suppes, J. Ullman, J. Moore, and R. Gorin. The Center for Information Technology will continue to operate its present equipment and to deal with administrative computing; E.E. Shaw will continue to direct that Center.

Report from the Dean of Humanities and Sciences

The report on the School of Humanities and Sciences delivered by Dean N. Wessells is published in its entirely elsewhere in this issue of *Campus Report*. His remarks had three major focuses: undergraduate education, the Humanities and Sciences faculty, and issue of faculty grievances.

In focusing on a promised new activism in undergraduate education, he called attention to the team of associate deans sharing responsibility for that endeavor: W. Chase, D. Kennedy, and C. Lougee. One of Dean Lougee's most important accomplishments to date has been the establishment of the new Humanities and Sciences Advisory Committee on the Curriculum, which parallels the school Advisory Committee on Appointments and Promotions. The school intends to assume a leadership role in undergraduate education, including departmental curricular reviews, the encouragement of advanced intensive work by juniors and seniors, grading policy and practice, experimentation with the academic calendar, the promotion of liberal education, and the expansion of the undergraduate writing experience. Attention will also be given to the graduate curricula and to degree requirements.

The extradepartmental programs transferred to H & S last fall have been operating well. Reviews of several have been completed, and decisions based on the recommendations of the faculty review committees will be made soon with the advice of C-US. The remainder of the extradepartmental programs are scheduled to be reviewed next year. This will afford an opportunity for looking at the total picture and considering what the optimal program of extradepartmental education at Stanford ought to be. This new review committee has already been planned in consultation with the Committee on Committees, the Steering Committee, the President's Undergraduate Cabinet and the school's Advisory Committee on Curriculum. It will contain strong representation from the faculties of H & S, Engineering and Earth Sciences and also from the student body. The School of Humanities and Sciences is committed to maintaining and improving innovative education for undergraduates.

Dean Wessells' second focus was the school's most important resource: its faculty. He discussed the growth of the tenured proportion of the school's faculty over the past decade and compared the school's tenuring percentage to the average across similar institutions. Stanford is about 10

continued on next page

Senate report...

continued from page 18

percent more heavily tenured than the average. Major funding for junior faculty development is the highest priority funding project in the school.

He detailed a number of notable appointments made this year in the humanities, and singled out a series of senior appointments in Linguistics, Computer Science, Philosophy, and Cognitive Sciences as a model of how effective leadership can best make use of scarce billets in tight times.

He discussed in some detail the relationship of the assistant and associate professor ranks both with regard to the time needed prior to the tenure decision and the serviceability of the rank of associate professor with tenure. A lengthening of the period prior to tenure is widely preferred within the school, and the diversity of criteria and interpretation of the tenured associated professorship makes the usefulness of that rank questionable. These issues will be discussed next year in Humanities and Sciences and will be brought before the Senate for discussion if a strong consensus for change develops within the school.

His last focus was on the problem of the filing of faculty grievances on the basis of denial of tenure. Ninety percent of these in recent years have occurred in the Humanities and Sciences and an increasing number of them are filed by lawyers on the basis of accusations never made a decade ago. Dean Wessells attributes these grievances to altered expectations about tenure at Stanford and at other institutions after leaving Stanford, and to misconceptions about the criteria now being used in tenure decisions. Standards of promotion at Stanford in the 1980s must be extraordinarily high. Earlier criteria are no longer adequate. The primary criterion must be demonstrable excellence as a research scholar. High quality teaching is critically important, but top quality teaching is inseparable from first-rank scholarship.

It is essential that tenure criteria be clearly defined and fairly administered, that procedures be adequately specified, and that the right of the professoriate to determine the rules be maintained. We must also provide a better system of junior faculty career development, with strong support from administrators and senior colleagues. This includes frank and adequate feedback on deficient performance all along the line.

The alternative to this acceptance of responsibility and control of the present grievance problem will be the loss of the tenure line billet system for junior faculty—a system from which Stanford has benefited greatly.

At the conclusion of Dean Wessells' report, J. Merryman observed that lawyers do not exist without clients and that the important point is to ensure that the academic process is invariably due process.

R. White remarked that a lifetime professorial career inevitably is 80 percent post-tenure. Lowering the tenure non-tenure ratio necessitates taking one of three actions: 1) lengthening the time prior to tenure; 2) eliminating the tenure—line assistant professorship; or 3) finding some way to eliminate older faculty.

Dean Wessells commented that no decisions had been made about what policies should be adopted. The problem is clearly serious enough to warrant study, however, probably not just within Humanities and Sciences but also in the University at large. He pointed out that in the years from 1962 to 1979, the promotions to tenure in H & S ran about 38 percent of those initially appointed as assistant professor, a far higher rate than that of any similar university except Duke.

President Kennedy pointed out that a system which has a low promotion rate has an automatic incentive to search less carefully for assistant professors. Hence, low promotion rate is an outcome of a behavior that it itself generates. Dean Wessells agreed that such schools cannot attract as high quality assistant professors as Stanford can. That's another reason we must keep and improve that very important aspect of our system.

B. Roth commented that some of the legally-initiated grievance cases may stem from a perceived unfairness in our grievance procedure, in which grievances are heard by the same people who were responsible for the original decision. If neutral hearing officers were invoked in our grievance procedures, that might cut down on the number of grievances field with recourse to legal aid.

He also challenged once again the belief that the change in the retirement law will have an adverse effect upon faculties and that increased aging among the faculty is a serious problem.

Dean Wessells responded that, like it or not, nerve cells die as a function of age and that, on the average, an older faculty is a less vigorous faculty. The gap in age between our freshman (born after Kennedy was killed) and many of our faculty is one important reason why we have to have a large and vigorous junior faculty.

C-AAA Report on Course Evaluation and Teaching Improvement

S. Matisoff, chair of the Committee on Academic Appraisal and Achievement, presented the C-AAA Report on the Stanford Program of Course Evaluation and Teaching Improvement, which had been published in the 4/27/83 issue of *Campus Report*. She pointed out that the review mandated by the Senate took three years to complete. Two important aspects of the report are C-AAA's reaffirmation of a Senate-mandated system of student evaluations of teaching, and the report's emphasis on an integrated system of evaluation of teaching which uses course evaluations by students as one of a number of components.

She expressed the gratitude of the parent committee for the exceptional work of its Subcommittee on the Evaluation and Improvement of Teaching (SC-AAA-EIT), chaired by W. Lohnes. That subcommittee's report to C-AAA was published in the *Campus Report* of 4/27/83. Although the recommendations of the two reports are not identical, the proposals presented for Senate action by C-AAA are entirely in accord with the subcommittee's findings, and the C-AAA Proposals have been endorsed by SC-AAA-EIT as well as by the parent committee. A further report, prepared by N. Gage and subcommitted as an appendix to the C-AAA report, was also published in *Campus Report*, on 5/11/83.

From the background of these three reports, C-AAA presented a set of 10 proposals concerning student evaluation of teaching to the Senate for approval. Together, the proposals represent a modification of the course evaluation system currently in effect. The course evaluation form has been revised to make it simpler, and to have the uses to which it will be put, as well as the method of administration, printed on the form itself. (A second part of the form, to be used in the preparation of the ASSU Guide, will be designed by ASSU at a later date.)

Matisoff expressed the committee's hope that, if adopted, the changes would be implemented as soon as feasible and no later than autumn quarter 1984. The system should be reviewed again after another four years, once it is put in effect.

In the discussion following the C-AAA report, the proposals were lauded for simplifying the standard evaluation form, encouraging more open-ended student feedback, including the evaluation of team-taught courses and teaching assistants, clarifying the uses to which the evaluations will be put, separating the various functionsof the evaluations, and stipulating that the evaluation should be completed in class time.

There was consensus that no one evaluation form would fill all needs, however, and several criticisms were made of the form proposed. These included oversimplification, insufficient "anchoring" for judgments on the rating scale, the deletion of data on medians for comparison with a norm, the lack of mid-quarter applications, failure to include the final or the completion of a project, and the inadequacy of the allotted minimal 10 minutes for completing the form if mini-essay student responses are desired. Matisoff and W. Durham, vice-chair of C-AAA, responded in each case with the committee's reasons for settling on the proposal given as the best compromise, given the total problem.

It was also pointed out by several that alternative methods can be used for mid-quarter reviews of how a course is going, and that these must be highly specific evaluations of aspects which can be effectively changed on short notice.

N. Gage commented that this compromise evaluation form does not optimally serve teaching improvement needs. Research shows that mid-quarter evaluations can improve teaching if they are augmented by consultation with those who can help the teacher implement the suggestion for improvement. Matisoff reminded the Senate of the availability of the Stanford Center for Teaching and Learning for this purpose (see *Campus Report*, 4/27/83, p. 23).

It was suggested that the ASSU Course Guide should evolve as a more subjective, critical complement to the evaluation form represented in the C-AAA proposal. No draft of the ASSU portion has been yet provided, but Matisoff indicated that ASSU feedback and collaboration went into the form proposed by C-AAA.

It was also made clear that the mandate for course evaluation applies University-wide, regardless of the form employed in the various schools.

In a strong statement against the use of median figures and norm-referenced evaluations, N. Gage pointed out that using norms in interpreting these evaluations is like grading on a curve: a good rating becomes not good when the normative value is somewhere between good and very good or higher. These ratings are determined by many factors besides the excellence of the teaching. They are conditioned by the size and nature of the class, the kind of student, the discipline, whether the course is elective or required, etc. Comparisons across disciplines or even departments can often be spurious. This is why C-AAA is discouraging norm-referenced evaluation. They cause false impressions.

E. Webb asked for clarification on the contrast between the present and proposed systems on courses to be excluded from the mandated review. The present system provides that those courses must be reviewed but the reviews need not be made public; the proposal exempts them from review and leaves the evaluation of such courses to the option of the instructor. This perception of the difference was confirmed by S. Matisoff.

Since a number of other questions had been raised earlier about the wording of particular portions of the form (e.g. the ambiguous term "learning experience"), at this point, M. Bratman proposed a friendly amendment, the wording of which was slightly modified in an amendment later proposed by S. Dornbusch and accepted by Bratman. As amended itself, the amendment read as follows (to be added as a second sentence to the fifth proposal:

> C-AAA will have the authority to make minor changes in the questions, or other minor adjustments in implementation, while this system is in effect.
> The friendly amendments were accepted by consensus.

The motion to approve the amended C-AAA Proposals for Student Evaluation of Teaching was then put to a vote. It passed unanimously. The Proposals are presented below in their final amended form.

The meeting adjourned at 5:12 p.m.

Clara N. Bush
Academic Secretary

C-AAA PROPOSALS FOR STUDENT EVALUATION OF TEACHING (as adopted by the Senate, 5/12/83)

1. There shall continue to be Senate-mandated student evaluation of teaching in all courses in the pool of courses defined below.
2. All courses are subject to mandatory evaluation each time they are offered except those of the following type:
   a. Courses of an individual/independent study nature (e.g., independent study courses, special research projects, thesis enrollments, etc.);
   b. Courses considered practica (e.g., studio art and music practice courses);
   c. Laboratory courses (i.e., those which carry separate course numbers and units of credit);
   d. Physical Education activity courses;
   e. Courses taught by first-year instructors;
   f. Courses of an experimental nature;
   g. Courses with enrollments of 7 or fewer.
3. There shall continue to be a standard form for this purpose;
4. This standard form, the University Dual Form, shall consist of two parts:
   A. The first part shall serve the purposes of improvement of teaching and administrative review. In contrast to the standard form prsently in use, it will
      1. be simpler;
      2. have the uses to which it will be put printed clearly on the form itself;
      3. have the method of administration printed clearly on the form itself;
   B. The second part of the form will be designed by the ASSU, or other authorized student organization, to provide it with information to assist students in course selection.
5. The first part of the University Dual Form shall consist of the questions shown as Appendix I. C-AAA will have the authority to make minor changes in the questions, or other minor adjustments in implementation, while this system is in effect.
6. Student answers to the multiple-response section of the first part of the standard form will be tabulated and reported only as frequency distributions.
7. Where the University Dual Form is undesirable, a School, Department, or Program may devise its own substitute for purposes of satisfying the Senate mandate, provided that the part of the form to be used for administrative review in the evaluation of teaching is acceptable to the relevant Dean (in consultation with the Provost and Advisory Board).
8. The first part of the standard form, or its approved substitute, is to be used in all courses in the described pool. Faculty use of the second part is strongly encouraged.
9. Ordinarily, the University Dual Form will be administered in class at the end of the quarter, usually during Dead Week. The timing of administration of substitute forms is a matter to be settled between the School, Department, or Program and the relevant Dean.
10. The data gathered from the first part or its substitute is not intended for public release, but is to be released only to the faculty member, department chairman, and other appropriate administrative officials for the purpose of confidential administrative review. The right to release this material for any other than confidential administrative purposes resides solely with the faculty member.

Wessells says research should be prime tenure criterion

Following is a report from Humanities and Sciences Dean Norman K. Wessells to the Faculty Senate, May 12, 1983.

It is a pleasure and honor for me to talk with the Senate about some opportunities and concerns for Humanities and Sciences.

First let me address the issue of undergraduate education. When I accepted the deanship I assured Provost Hastorf that there would be a new activism in undergraduate education in the Humanities and Sciences dean's office. Associate Deans Kennedy and Chace were chosen in part with that in mind, since they are such remarkable teachers and educators.

With our new responsibilities inherited from the former Office of the Dean of Undergraduate Studies, I have had the great good fortune to add Carolyn Lougee to our team. One of Dean Lougee's most important accomplishments to date is establishment of the Humanities and Sciences Advisory Committee on Curriculum. That group is composed of some of the School's and University's most distinguished faculty persons.

Traditionally, our office has played a modest, behind-the-scenes role in curricular matters, a subject left largely to departments, programs, and occasionally the Senate. That has changed. So far the new committee has discussed: 1) the question of mandating periodic curricular reviews by our departments; 2) new ways to encourage more intensive and advanced work among our juniors and seniors; 3) grading policy and practice; 4) ways to encourage experimentation with the academic calendar—that in response to the Senate's mandate; and several other topics.

In general, the committee will begin its work by concentrating on ways to promote liberal education for undergraduates in a research university. In future years, we intend to place issues about graduate curricula and degree requirements on the committee's agenda. Because the committee is close to the budget allocation machinery of Humanities and Sciences, I envision that it can have strong beneficial effect upon the quality of undergraduate and graduate education here.

For instance, our goals of expanding the undergraduate writing experience and of providing a special, enriched educational program for some of our most independent and intellectually ambitious juniors and seniors will be aided greatly by the committee's deliberations.

The transfer to our office of responsibility for the extradepartmental programs took place last autumn. I am happy to report that all of those programs have continued to operate well this year. The regularly scheduled reviews of some have been completed, and decisions on the recommendations of the faculty review committees will be made soon, with the advice of C-US.

Self-examination, evaluation

Next year affords us a superb opportunity for self-examination and educational innovation. The remainder of the extradepartmental credit-granting programs are scheduled for review. This includes SWOPSI, SCIRE, Undergraduate Specials, URO, and ARLO.

In considering how to plan those reviews, we were mindful of Representative Kenneth Arrow's remarks about small Ph.D. graduate programs—each by itself is always approved, but we never really look at the whole collection and ask basic questions about what we are doing.

Dean Lougee and I plan, therefore, to ask the single special review committee not merely to review the operation of these five programs, but also to examine the question of what the optimal extradepartmental educational program at this University should encompass; and, once defined, how we get there.

We have already discussed the composition of this committee and its charge with the Committee on Committees, the Senate Steering Committee, the Committee on Undergraduate Studies, the President's Undergraduate Cabinet, and the School's Advisory Committee on Curriculum.

Within a few weeks, we will name this committee, with strong representation of the facilities of Humanities and Sciences, Engineering, and Earth Sciences, and of the student body. In accepting responsibility for the extradepartmental programs (EDPs) last year, I assured Dean Katchadourian and Provost Hastorf that the Humanities and Sciences dean's office is committed to maintaining and improving non-departmental educational opportunities for our undergraduates.

We have the opportunity, indeed the obligation, to profit from the designs of the late 1960s and early 1970s, as we conceive and implement exciting new opportunities for Stanford's undergraduates of the 1980s.

Second, permit me to turn to issues of our School's most important resource, its faculty.

In 1949-50, the year Humanities and Sciences was organized, 62 percent of our 214-person faculty was tenured. By 1964, the 15th year of Humanities and Sciences' existence, the percentage of our professorial faculty with tenure was 68 percent. Today Humanities and Sciences is 79 percent tenured. That figure will rise further over these next years, due to the new retirement laws.

Unless we take new steps to resist the trend, by the 1990s Humanities and Sciences will have only about 75 assistant professors among its 28 departments. For comparison, Yale now has 55 percent tenured faculty and has adopted policies to keep their percentage between 50 and 60 percent. Also, for comparison, the average of 13 major private universities is about 70 percent tenured.

The other side of this coin is, of course, mean faculty age—as President Kennedy summarized in October, that is rising at a distressing rate; the mean for Humanities and Sciences is now nearly 48 years of age.

As far as I can discern, Stanford and Duke Universities stand in the extreme in having let themselves become so heavily tenured. Members of the visiting committee to Humanities and Sciences, the Humanities and Sciences Council, have expressed great concern about our situation, and along with my colleagues in the dean's office, feel that something must be done to guarantee continuing presence in our departments, laboratories, and classrooms of significant numbers of developing young scholars.

Junior faculty fellows

Major funding for a Junior Faculty Fellows program is the highest single development package for our School—our aim is to bring young persons here on two-year appointments, give them only modest teaching responsibilities, and provide them every opportunity to develop as scholars. We owe it to our undergraduates, to our graduate students, and to the professions to make the junior faculty.

This year University budget difficulties forced us to defer some faculty appointments we would otherwise have liked to make. Nevertheless, we have proceeded with our long range faculty planning process and have had an excellent year at making new appointments and in retaining a number of our faculty who had received exceptional outside offers.

In the Humanities, due to the efforts of William Chace and Chairperson Joaquim Coelho, a spectacular young chairholder from Princeton, Alban Forcione, will join Spanish and Portuguese. In fact, in order to retain their star, my counterpart at Princeton offered a second chair to this broad-based young scholar.

Also in the Humanities, one of our proudest faculty acquisitions will be to Stanford's already famous group in Computer Music led by John Chowning. The appointee is John Pierce, distinguished past director of the Bell Laboratories and more recently of Cal Tech. Pierce is described by one referee as follows: "... it would be no exaggeration to say that Pierce is universally regarded as the number one living engineer in the entire world." Music and Humanities and Sciences are happy to do this small bit to help improve Engineering at Stanford!

Finally in Humanities, under John Freccero's leadership, searches are underway that will bring two preeminent senior scholars to our Comparative Literature Program, and will help to make that program a gemstone in the Humanities at Stanford. I am sad to report that we came very close but did not succeed in adding a superb young professor from Yale to Comparative Literature and the Feminist Studies Program. Our efforts at faculty recruitment for Feminist Studies continue; Dean Lougee and I are currently planning procedures for a search at the senior level in certain social science disciplines.

A new steeple of excellence—in Fred Terman's parlance—is about to appear at Stanford due to the imagination and leadership of Linguistics Chairperson Elizabeth Traugott and Dean David Kennedy.

Three senior appointments have been made in the area of Formal Linguistics. Senior persons from MIT, Texas, and Wisconsin will join our Departments of Linguistics and Philosophy. Together with faculty already here, they will constitute an interface of Linguistics, Computer Science, Philosophy, and Cognitive Science.

This kind of package appointment involving several senior persons working in one area should serve as a model, I believe, if we are to use our precious faculty billets most beneficially during tight times.

Associate professor rank

Next permit me to address two linked issues about the assistant and associate professor ranks. First, young scholars in some fields require longer times than average to get their scholarship programs established so that a sufficient volume of published work is available to permit the assessment of quality and potential that is the basis for tenure judgment. This may involve, for them, the acquisition of special skills; it commonly involves publishing books instead of journal articles.

In discussion with Humanities and Sciences chairpersons Appointments and Promotions Committee (A and P) members, and Policy Committee members last year there was broad, though not unanimous, support for lengthening the assistant professorship term. In fact, significant numbers of chairpersons felt that a term longer than seven years might be desirable.

This year, when we discovered that the change to the seven-year assistant professorship was feasible under existing regulations, we chose that time, with three- and four-year appointments being adopted. A number of departments would prefer the four and three combination. I do not believe that the seven-year policy will lead to a lowering of standards for promotion to tenure—and I shall address the issue of our standards in a moment.

A second, related issue is that of our rank of tenured associate professor. The extraordinary diversity in professional disciplines among our 28 departments in the School is associated with very different attitudes toward that rank and the promotion from associate to full professor.

I suspect that as much personal pain, misunderstanding, and resentment are associated with this issue as any other in faculty life. Yale has finally come to grips with one aspect of this problem by adopting a policy of automatic promotion to professor at the end of seven years as tenured associate professor.

Whereas past deans of Humanities and Sciences have endeavored to ensure equity in the criteria for promotion to full professor at five, six, or more years, there can be no doubt that there remain substantial differences in expectation among colleagues, both tenured and non-tenured, about the meaning and criteria for promotion.

I believe most departmental faculties have agonized over this dilemma: promote now, say, in the ninth or eleventh year, in the hope that a pat on the back will be what is needed to pep up a flagging performance; *or*, don't promote now, the title of Professor is too important a distinction.

Deep reservations expressed

The basic question is, however, whether the tenured associate professorship is a useful rank. I have conversed with many senior colleagues in the School about that question and find a significant number who have deep reservations about the system we have inherited.

Many would prefer what some of our Eastern colleagues have lived successfully with for years, a single tenured rank, Professor. A new arrangement for us might be, then, a non-tenured associate professorship of, say, four or five years in length that would follow a single assistant professor term of, say, four years.

You now see the linkage in discussion of both assistant and associate professor appointments. I believe we would gain two desirable ends by such changes; the prolongation of the period prior to the tenure decision, and the disappearance of a rank that may not now be serving us well.

Obviously, this kind of proposal is faculty business, Senate business, indeed Trustee business, since it would require alteration in basic faculty structure. I shall be discussing it with our new Policy A and P Committees in the fall, so that the issues are likely to be studied in detail in our School next year. Since the Humanities and Sciences faculty is the largest at Stanford I hope that the Senate will be willing to discuss these issues if we develop a strong consensus for a new appointment schedule.

Next, permit to turn to what I view as a grave problem that is taking a larger and larger proportion of time of chairpersons, deans, and the Provost. The problem is *grievances*.

Grievances now occur in many cases in which persons fail to gain tenure. About 90 percent of faculty grievances at Stanford in recent years have come from Humanities and Sciences. I wish I could say that the problems they present are ones to be resolved exclusively in our School. I fear, however, that since we include 470 of the professorial faculty, the solutions we design will inevitably have impact upon other Schools. Let me describe the situation in some detail.

Grievances are being filed on the basis of combinations of accusations never seen a decade ago. Some grievances are written by attorneys as wide nets designed to catch the fish of some administrative slip-up or deficiency, occuring at any one moment during the six assistant professorship years.

Such grievance documents can be monographic in size, and demand immense time, intense concentration, and prolonged consultation with University counsel in order that chairpersons, deans, or grievance officers may do justice to the grievant and to the University.

Law School Dean John Hart Ely remarked to me recently that a new subspecialty in law has appeared—it is called "tenure law." That occurance bodes ill for the professoriate and the universities, and leads me, wistfully, to recall that wonderful scene in Henry VI, Part 2, when Jack Cade and his henchmen pipedream for the new world—Dick the Butcher exclaimed "... let's kill all the lawyers!" Being a university, we should be humane and discriminating on that one.

Why the greater proportion of grievances? First, I sense that an alteration has occurred about the expectation for

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tenure at Stanford, and about professional expectations beyond Stanford.

Time was, during the 1960s and early '70s, when most junior faculty could spend profitable years here but then move on to rewarding academic employment elsewhere. More recently, however, the job market for six- or seven-year assistant professors in most Humanities and Sciences disciplines has dried up. Many of the School's assistant professors do not have the options available to junior persons in medicine, law, business, engineering, and earth sciences. "Up or out," too often is followed by "out and down."

Against that background we have a simple but strong reality: a solid record of published scholarship and of teaching is now not enough to guarantee tenure at Stanford.

It is not yet clearly recognized that the standards for promotion in the 1980s and '90s are and must be extraordinarily high here. Yet being denied tenure at Stanford is not a statement that the individual is an unworthy scholar and teacher.

Indeed, since virtually all persons initially appointed to our assistant professor ranks do have substantial talents, some people of real quality will be denied permanent membership on our faculty. This is not because they are deficient on the national scale, but because they do not meet the extraordinarily high standards we must set for ourselves.

One of the causes of the current unrealistic expectation on tenure has resulted, I believe, from the inadvertent chiseling in stone of then-Dean Albert Hastorf's criteria for tenure: "... truly superior in either scholarship or teaching, and at least very good in the other."

Those criteria are no longer adequate for the Stanford of the 1980s and '90s. We are now among the elite research universities of the world: no person should be granted tenure here who is not demonstrably *excellent* as a research scholar.

That, in sum, should be recognized as our primary criterion for tenure. We must continue to emphasize that high-quality teaching is critically important but we should embrace the concept that first-class university-type teaching is sustained by, and is directly dependent on, continuing scholarship of the first rank. The two are inseparable.

Senior faculty, chairpersons, and deans of this University must articulate clearly our tenure standard, explain how it applies in the various disciplines, and ensure that no junior faculty member remains unaware of what is required to attain tenure here.

Let me return to the painful issue of grievances. The intrusion of non-University attorneys into the University's tenure processes will have extremely deleterious consequences if we ignore what I believe is a strong thrust present in a number of grievance papers.

This is an explicit failure in them to recognize that the process of evaluations at departmental, school, and higher levels of review are basically *subjective judgment processes*. They are not processes involving simple algebraic summation of pluses and minuses in the form of referee letters, statements by Stanford colleagues, or student teaching evaluations.

Instead, the essence of the process involves careful weighing of all such evidence, examining precisely what is said, why, and by whom—reading between the lines, if you will, in some instances—and then arriving at a balanced, reasoned, and wise judgment.

At the level of supra-departmental reviews, the Humanities and Sciences Advisory Committee on Appointments and Promotions or the University Advisory Board, groups of our most distinguished and seasoned faculty persons, are brought together literally to judge the judges. Those committee members carefully assess why the chemists or philosophers or economists believe some young person warrants the distinction of a tenured appointment here. And sometimes, of course, they disagree.

Grievance documents written by various attorneys would turn us away from those long-established practices and toward a system of rigid objectivity in which professional *judgment* would have little role to play—10 letters in favor, four against, yes on tenure. Such procedures would seriously damage the quality of the faculties of great research universities. Like it or not, we simply cannot define precisely a single set of criteria every syllable of which may serve as the launch-pad for a grievance.

Courts might intervene

So, where can we go from here? First, we must literally take the offensive in improving our system or the courts will ultimately try to do so for us.

We must define our criteria for tenure, describe our time-tested procedures, apply them with utter equity and fairness, and insist that it is the University professoriate, not the aggrieved assistant professor, the attorneys, or the courts, that determines the rules of the game.

Second, if we are to preserve our independent system, then we must develop a better form of Faculty Career Development. By that, I mean a program for all junior faculty that will include such components as minimal committee work, maximal aid in developing teaching skills, a sympathetic ear when leaves for scholarly and research purposes are requested, aid in finding research funds, and effective guidance by senior professional colleagues. Perhaps each assistant professor should be formally or informally linked to one or two senior colleagues who can act as confidants and advisers about all phases of professional career development.

Faculty Career Development must include something we owe to every junior faculty person: more complete and frank assessment each year and at the time of reappointment. Over the years, I suspect that it has been the rule, not the exception, for department chairpersons and senior colleagues to avoid saying difficult, perhaps discouraging, things to their junior colleagues.

One result of failing to give adequate feedback on deficiencies in performance is the awful "surprise" of being denied tenure. On occasion reservations held by senior faculty, deans, provosts, or the advisory board have not been passed on to the junior faculty person. The times no longer permit that behavior.

We must develop a new trustworthiness of communication so that occasional sober perspectives on reappointment papers at the departmental, decanal, provostial, or Advisory Board levels can be included in the appraisal given to the assistant professor.

Part of this new frankness must be the acceptance that criticisms can be expressed without later being the basis for accusations of bias or prejudice against the individual offering the advice.

It is ironic indeed that in some cases, chairpersons have given frank criticism and guidance at the three-year review, and then, when tenure was denied at six years, those chairpersons have been accused of bias by the unsuccessful candidate. That catch-22 is not acceptable, and can be avoided if the giving of frank appraisal to *all* junior faculty becomes a recognized duty of chairpersons and senior faculty colleagues.

But let me return to the most important part of Faculty Career Development: the positive aspects intended to give every assistant professor the opportunity to develop as scholars and teachers to her or his fullest potential. This aspect of Faculty Career Development must become a way of life in every department.

In closing, let me emphasize that I regard the junior faculty of our School as one of Stanford's great assets. Young scholars such as Mary Pratt, Patricia Jones, Corey Goodman, Ann Peck, Jay Fleigelman, and Brigette Cazelles—all promoted from within last year and this—are by any standards a spectacular group.

We must ensure a continuing flow of such marvelous young people to the faculty. We must do so despite the unfortunate effects of new retirement laws and our very high standards for tenure.

Stanford has benefited greatly from having a tenure-line billet system for junior faculty; such a system has meant there has been a real possibility of promotion to tenure. But the warning signals are clear: *if* we cannot bring the grievance problem under control, *if* we cannot streamline the grievance procedures in significant ways without abrogating faculty rights, *if* we do not do a much better job at Faculty Career Development, then I see only one alternative: a non-tenure line junior faculty.

Under that system, no tenured position would necessarily be on the horizon; most of the kinds of grievances we see would be eliminated, but so too would much of junior faculty morale and identification with the institution.

Sober dwelling on that bleak outlook should be sufficient goad to us all to work with vigor and enthusiasm at improving what we have. I would hope that our colleagues in other schools will join us in the Humanities and Sciences in designing and implementing policy and practice in these important areas.

Humanities Center appoints 11 new fellows from Stanford, other universities

The Stanford Humanities Center has selected six Internal Fellows and five External Fellows for the academic year 1983-84.

The Internal Fellows from Stanford are: N. Gregson Davis, associate professor of classics; Carl Degler, professor of history; John Felstiner, associate professor of English; Thomas C. Grey, professor of law; Diane W. Middlebrook, associate professor of English; and Richard M. Morse, professor of history.

Each will also teach one course at the University during their year's residency.

The External Fellows are: Joseph Frank, professor of comparative literature at Princeton, and William Reddy, assistant professor of history at Duke, will be Marta Sutton Weeks Fellows.

John McNees, instructor of philosophy at the University of Houston, will be the William Rice Kimball Fellow.

Gonzalo Munevar, associate professor of philosophy at the University of Nebraska at Omaha, and Gail L. Mortimer, associate professor of English at the University of Texas at El Paso, will be the Ethel Wattis Kimball Fellows.

Five new Graduate Fellows have been selected: James M. Carolan, comparative literature; Thomas M. Lutz, modern thought and literature; Martha G. Newman, history; Mark Pentecost, English; and Antje-Christiane Petersen-Weiner, German studies.

Continuing Graduate Fellows are Maria M. Makela, art; Maurice P. Rehm, drama; Maidi Rosenblatt, anthropology; Nancy Ruttenburg, comparative literature; and Kenneth W. Warren, English.

According to Prof. Ian Watt, director of the Humanities Center, "The number of fellows represents a considerable increase above the current year. This partly reflects the generous donations of the Mellon Foundation and the Kimball family to support visiting junior fellows."

Watt also notes that five of the nine fellows at the Center this year have completed books during their tenure. Wanda M. Corn, associate professor of art at Stanford, has completed *Grant Wood: The Regionalist Vision*. Lilian R. Furst, professor of comparative literature at the University of Texas at Dallas, has completed *Fictions of Romantic Irony*.

Herbert S. Lindenberger, professor of English and comparative literature at Stanford, has finished a book on opera, tentatively titled, *The Extravagant Art: A Poetics of Opera*.

David E. Wellbery, Stanford assistant professor of German, has completed the revisions of his book *Lessing's 'Laocoon': Semiotics and Aesthetics in the Age of Reason*.

John J. Winkler, assistant professor of classics at Stanford, has finished his book *Auctor and Actor—Narratology and Religious Conversion in Apuleius' The Golden Ass, Concerning Metamorphoses*.

Hoover...

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The petitioners claim "the existence of a partisan research and policy organization. . . raises serious questions concerning the academic independence, integrity and reputation of the University."

Hoover Institution spokesmen have denied charges of partisanship. More than a dozen faculty have signed a counter-petition warning that such an inquiry could threaten academic freedom.

Kennedy expressed hope the Faculty Senate debate scheduled for May 26 will be "forward looking and constructive" and "concentrate on how the Hoover Institution and Stanford can improve upon a relationship that has been increasingly valuable to both."

Commenting on recent faculty and student petitions opposing unclassified, weapons-related research proposed at the Stanford Synchrotron Radiation Laboratory, Kennedy repeated his earlier comments to the Academic Council that "to open the door to prohibitions based on prospective end use would do more harm than good.

"Today's benign restriction might become tomorrow's suffocation. Once you begin to make value judgments about the possible outcomes of scientific work, there is no place to stop.

"We place our faith in the ultimate net benefit of free inquiry."

Kennedy added: "My own judgment is that the faculty will not decide to change that research policy, although it is theirs to change. I have told my colleagues that I do not propose to ask that they change it." Widespread applause followed.

Victor Fuchs takes a comprehensive look at *How We Live*

Male dominance likely to decline economist says

The following are excerpts from a new book by Prof. Victor Fuchs of the Stanford Economics Department. How We Live: An Economic Perspective on Americans From Birth to Death, Harvard University Press, 1983.
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Since World War II, the family has faded in importance as the major institution in American life.

At every stage of life, there is evidence of this change:

* The birth rate has been below replacement level for a decade;

* The proportion of all births delivered by unmarried women has risen to 18 percent from 5 percent in the past 20 years;

* Among women age 25-29, the proportion never married has grown to 21 percent from 11 percent in the past decade;

* The number of unmarried couples living together has tripled in the past decade;

* The proportion of married women with children under age six in the work force has risen to 45 percent from 12 percent over the past three decades;

* Two out of five marriages now end in divorce;

* Almost 25 percent of all children now live in no-parent or one-parent households;

* About 40 percent of all children will live in one-parent households before reaching age 18;

* The proportion of adults living alone has nearly tripled, to 11 percent from 4 percent, in the past three decades.

Individuals rely less on their families today than in the past for the production of goods and services and as a source of financial and psychological support.

Documenting the scope and reasons for these social, economic, and demographic changes may help us better understand how these changes influence our personal lives and suggest constructive ways in which we, as a society, can better cope with the future.

Fertility rate falls

Over the long term the general fertility rate (the number of births per thousand women ages 15-44) has moved sharply downward. Between 1800 and 1910 the rate fell by more than half, and between 1910 and 1980 it again fell by half.

Most economists believe that this long-term downward trend, which has its counterpart in all economically developed countries, can be explained by three types of changes: a decrease in the benefits to parents from having children, an increase in the costs of having children, and a decrease in the costs of avoiding having children—that is, the costs of birth control.

The benefits of children are many and varied. For most parents children are a source of pride and delight, a link with the future, an object and a source of love and affection. In agricultural societies children are often valued for their contribution to production; in that sense the demand for them is analogous to the demand for farm machinery. Moreover, in societies that lack banks, insurance companies, and other financial institutions, investment in children is a principal method of providing for the future.

Industrialization substantially reduced the economic benefits of children. Economic development shifted the locus of work from the farm to the city and raised the age at which children began work, thus making them less valuable to parents as a source of production and income.

Growing opportunities for accumulating savings in banks, securities, and annuities virtually eliminated the need for children as a method of saving. And the expanding role of government in providing retirement benefits, health insurance, unemployment insurance, and other social programs diminished the importance of having *one's own* children as a source of insurance later in life, even though society as a whole depends upon future generations to pay the retirement benefits of the preceding ones.

While the economic benefits of children have been decreasing, the costs of raising them have been increasing.

Traditionally, one of the largest costs of child-rearing has been the time spent by the mother. A good measure of the alternative cost of this time is what the mother could earn if she held a paying job. Thus, the long-term rise in women's earnings has increased the "price" of children, and at any given time the price is higher for better-educated



Victor Fuchs

women because they have higher potential earnings. Better-educated women tend to have fewer children, and, if husband's schooling is held constant, the negative effect of wife's education on fertility is even more pronounced.

Unmarried mothers increase

Although teenage fertility fell considerably over the past two decades, the U.S. rate of 52 per thousand is still double that of most countries of Western Europe, five times that of the Netherlands and Switzerland, and more than 15 *times* as high as teenage fertility in Japan.

The relatively high U.S. rate is mostly the result of the growing fertility of *unmarried* teenagers. The number of babies born to unmarried women ages 15-19 jumped from 87,000 in 1960 to 240,000 in 1978, while births to married teenagers fell from 507,000 to 316,000, thus tripling the illegitimacy ratio in less than two decades.

Why are there so many babies born to unmarried teenagers? The oft-heard answer that these births are the *unintended* consequences of increased sexual activity among teenagers is unsatisfactory. Sexual activity has undoubtedly increased, but there is good reason to believe that many, possibly more than half, of these babies are wanted by their mothers at the time of conception. They are not "accidents."

This is true even though the large majority of *pregnancies* of unmarried women are unwanted, because most unwanted pregnancies are terminated by abortion.

A sharp decline in the willingness of unwed mothers to offer their babies for adoption provides additional evidence that these births are wanted. This is particularly true of whites, for whom the ratio of adoptions to births out of wedlock fell rapidly between 1960 and the mid-1970s.

Most of these births are to young women from low-income families who have little education and poor employment opportunities. For young women in such circumstances motherhood often appears to offer an opportunity to leave the parental home, to improve one's status, and to develop a more satisfying life.

The only difference between the present and the past is that in the U.S. this formerly had to be accomplished within the bond of matrimony. Without the sanction of church or state there was great social stigma for mother and child, and no reasonable prospect of financial support.

Recently, the social stigma has been greatly reduced, and government has come forward as a source of support. AFDC payments, food stamps, day care centers, Medicaid, and other subsidized programs make it possible for unwed mothers to establish a separate household and raise their children, albeit at a low level of living. Some are completely supported by transfer payments while others use government programs to supplement low earnings. A small proportion of the babies are born to young women with relatively good jobs who have opted for a life without a husband for themselves or a father for their children.

Mothers in the labor force

Why has the labor force participation of married mothers grown so *rapidly* and so *steadily*? Popular discussion frequently attributes this growth to changes in attitudes that were stimulated by the feminist movement, but Betty Friedan's *The Feminine Mystique* was published in 1963, long after the surge of married mothers into the labor force was under way. Moreover, there is no evidence of any sudden acceleration in response to this movement. Similarly, widespread public expression of feminism *followed* rather than preceded the rise in the age of marriage and the fall in the birth rate. Divorce is the one variable whose change coincided with the burgeoning feminist movement, rising rapidly between 1965 and 1975.

Feminist writings and discussion, valid as they may be in their own terms, will probably not be viewed by future historians as a basic cause of social change but primarily as a rationale and a rhetoric for changes that were already occurring for other reasons.

Within the economics profession the explanation that commands the widest consensus is that *higher wages* have attracted more married mothers into the labor force.

The rapid expansion of jobs in the service sector has also contributed to the rise in female labor force participation. The service industries (retail trade, financial services, education, health, personal services, public administration) have traditionally offered much greater employment opportunities for women than have mining, manufacturing, construction, and other branches of the industrial sector.

Service sector employment has provided nearly all of the additional job opportunities in the U.S. economy since the end of World War II. Between 1947 and 1980 U.S. employment expanded by 39 million; the service sector provided 33 million of these additional jobs.

Better control of fertility makes a career in the labor market more promising to women, not only because of a reduction in the *number* of children but also because women now have better control over the *timing* of births.

The increase in the *probability* of divorce contributes to the rise in female labor force participation because women recognize that complete commitment to home and husband can leave them in a perilous economic position if the marriage should dissolve.

Alimony and child support payments are often inadequate, and are not paid at all in a large proportion of cases. An old song says that "diamonds are a girl's best friend," but today the ability to earn a good wage is likely to prove a more reliable asset.

The future of marriage

What about the future of marriage? Does the increase in living alone, unmarried cohabitation, and divorce signal the demise of this ancient institution? Probably not, but the character and the basis of marriage are changing, and not for the first time.

In most preindustrial societies the marital union was part of a more elaborate and more-extended network of family and clan relationships. These relationships served to enhance production, to distribute risk, and in general to contribute to the economic and social welfare of the larger group. The interests and preferences of the individual bride and groom were usually subordinated to those larger concerns. Decisions about the timing of marriage, choice of mate, living arrangements for the married couple, and the like were typically not left to them, but were the responsibility and prerogative of their elders. These decisions were frequently made only after consultation with others who would be affected by the union.

With the coming of the Industrial Revolution, the growth of markets, an increase in formal education, greater mobility, and increases in private and public insurance programs, marriages became less the concern of the extended family and more that of the individual man and woman. The basis for marriage shifted primarily to that of a partnership entered into for affection, intimacy, children, and the benefits of the division of labor. Women typically specialized in home production, including child care, cooking, and cleaning, while men specialized in work in the market.

In this partnership the husband usually contributed more goods and services than the wife, except when there were small children at home, in which case the longer hours worked by the mother tended to offset the differential in explicit or implicit wage per hour.

The earnings potential of men was higher than that of women for two principal reasons. First, the fact that women usually bore several children and were at risk of additional pregnancies sharply reduced their opportunity to successfully pursue a remunerative career. Second, physical strength was an asset in most jobs prior to the development of modern production techniques and the growth of the service industries. Although the economic power of the husband was usually greater than that of the wife, their consumption of goods and services was usually equal. Such marriages, therefore, were typically hierarchical rather than egalitarian in social and power relationships.

The inequality in economic power resulted in deference of the wife toward the husband, a double standard with respect to sexual behavior, and other gender inequalities. Most women accepted these hierarchical marriages because the alternative seemed worse.

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Family fades, economy, government rise

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Perpetuation of such inequality is morally indefensible. Fortunately, another transition in the nature of work and marriage is under way. Better control over fertility and longer life expectancy imply that women can consider spending many more years in the labor market. The rise of a service economy implies that differences in size and strength no longer confer an advantage to men in most occupations. The hospital, the classroom, and the shopping center have replaced the coal mine, the steel mill, and the assembly line as the major work sites of modern society. "Industrial man" has been succeeded by "postindustrial person."

These economic and demographic changes will reduce economic inequality, there will be less specialization, and male dominance is likely to diminish. Even Lady Diana Spencer, the bride of the future king of England, did not promise to "obey" when they were married in 1981.

There is, however, one large obstacle remaining in the path of economic equality for women: their demand for and concern about children. If, as current behavior suggests, this demand and concern are not as great among men as among women, two outcomes are possible. On the one hand, concern for children may prevent some women from committing themselves as wholeheartedly as men to paid careers, and an earnings gap will remain. On the other hand, full commitment to careers by women may result in further decline in fertility and less parental attention to children. Solution of this dilemma will require imaginative and courageous action in both the private and public sectors.

Many women (and some men) desire complete gender equality at *work* and at *home*. To date, these expectations and desires have not for the most part been realized.

If we want more and better day care for children, we must be prepared to say how we will meet its cost. The problem is not solved by simply saying that "business firms" or "the government" should pay for day care either through direct provision of services, subsidies, or "tax incentives."

Surely, we have learned by now that there is no magic wand that can divert resources to day care without taking them away from something else. If business firms provide day care (and it may be good business for them to do so), the cost of that care must come primarily out of the wages or other fringe benefits of employees, or be added to the price of the goods and services they produce. If government bears the cost (and there may be good reasons why it should), this must result in higher taxes or in lower expenditures for other services.

The fading family

The family has faded relative to the market and the government for several reasons. First, economic growth has increased the advantage of both large-scale and specialized production units. As Adam Smith so acutely noted more than 200 years ago, productivity rises with division of labor, and division of labor is limited by the size of the market.

As markets have expanded, the processing of food, the making of clothing, the education of children, and the production of many other goods and services have moved from the home to specialized institutions. Technological change involving economies of scale frequently contributes to this shift; some elements of modern hospital care, for instance, could not possibly be delivered within the home.

The declining importance of home production of most goods and services, far from strengthening the family, seems to be leading to further reductions in its most intimate, most central functions. It is not at all unusual today for men and women to purchase child care services from institutions or other individuals, seek advice about education, health, and careers from professionals, depend on the workplace for emotional support and assistance with smoking and drinking problems, and delegate care of dying relatives to hospital and nursing home personnel.

Not only has the market taken over many activities formerly carried out in the family, but government has also been assuming many family functions such as providing social insurance for widows and orphans, the sick, and the elderly. Occasionally, universal government insurance is more efficient than private insurance because it overcomes the problem of adverse selection.

The main reason for the proliferation of government programs, however, is the pressure for income *redistribution*. Almost all government "insurance" programs, from Aid to Families with Dependent Children to Social Security retirement benefits, contain significant elements of redistribution. When the family was the dominant social and economic institution in society, it redistributed resources among its own members, but there was great inequality among families.

The more affluent and complex a society becomes, the more it depends on the willing, cooperative, conscientious efforts of the people who work in that society and the more difficult it is to obtain satisfactory effort through the use of force.

The declining importance of home production of most goods and services, far from strengthening the family, seems to be leading to further reductions in its most intimate, central functions.

—Victor Fuchs

When the main task of society consisted of hauling large blocks of stone from a quarry to a pyramid, it was a relatively simple matter to rope hundreds of slaves together and use a whip and the threat of starvation to secure compliance. In feudal societies the predominantly agricultural workers were kept in line by force, by taking advantage of their limited mobility and their need for protection, and by preaching to them the promise of Heaven and the threat of Hell.

But when a nation's workers are airplane mechanics, teachers, and operating-room nurses, for example, such techniques will not succeed. The complexity and interdependence of a modern economy make it highly vulnerable to disruption by disaffected workers. Furthermore, a regime based on force and terror is incompatible with the widespread education, free flow of information, and geographic and social mobility necessary for a highly productive economy.

In advanced industrialized societies the problem of getting everyone to "go along" is compounded by the waning power of religion, nationalism, and other traditional control structures. Calls to serve God and country do not meet with as enthusiastic a response as they once did, whether that service is military or some onerous and not particularly rewarding civilian task.

Modern governments use egalitarian social welfare legislation to induce mass participation and cooperation in the tasks of society. Paradoxically, this same legislation also can create negative incentives for work and investment.

For example, subsidization of food and medical care is in part an attempt to placate the poor and bring them into the mainstream of society. These attempts succeed, at least to some extent. But subsidiess that are available only to individuals and families with income below specified levels tend to discourage work and saving because greater income would result in a loss of benefits.

The expansion of government at the expense of the family is exacerbated when, as is often the case, public assistance is provided only if individuals use *nonfamily* sources for the subsidized services. Nursery schools, hospital care, and nursing homes provide examples of the way in which government policy biases choices in the direction of obtaining services outside the home, even though some of them could be provided within the family.

Government agencies undoubtedly find it more difficult to monitor the use of financial aid in a family than in an institution, but some of the biases embedded in present programs of subsidized care could be eliminated. For instance, subsidies for home care of chronically ill elderly could result in reduced expenditures for hospitals and nursing homes.

The same pressures for equality that result in redistributive social welfare legislation also lead to weaker hierarchical relations within the family—as well as in the church, the workplace, the school, and other institutions.

We have only to contrast present with past relations between priests and parisoners, employers and employees, or teachers and pupils to realize that the weakening of parental authority over children or of husbands' authority over wives is part of a larger phenomenon.

As Stanford historian Carl Degler has stated, "The great values for which the family stands are at odds not only with those of the women's movement, but also with those of today's world. Democracy, individualism, and meritocracy, the values most closely identified with the last two centuries of Western history, are conspicuous by their absence from the family."

As Norman Macrae so aptly noted in *America's Third Century*, "It is pointless to say... that society must therefore return to being ruled by the old conventions, religious restrictions, craven obedience to the convenience of the boss at work. Individuals will not accept these restrictions now that they see that wealth and the birth control pill and transport technology make them no longer necessary."

If we value the contribution that the family can make to individuals and society, we have no choice but to try to reconstitute it on a more democratic, egalitarian basis while enhancing its role as a vital, viable institution for socialization. Maintenance of an adequate level of investment in children by both the private and public sectors will play a central role in meeting that challenge.

The Inter-Group Conflicts

The long-term trend toward lower fertility has radically altered the age distribution of the population—a change that has important social and economic implications, especially for the elderly.

The upward trend in the relative numbers of elderly, from 4.6 percent of the population in 1930 to 11.3 percent in 1980, has resulted primarily from changes in fertility and only secondarily from the lengthening of life expectancy.

Poor health, mandatory retirement, and age discrimination may affect the employment status of individual older workers, but they do not explain why four out of five older men were not at work in 1980. The major reasons are the growth of real income, the relative increase in the number of elderly, the retirement incentives built into the Social Security and tax systems, and institutional changes such as the decline of self-employment.

The drastic decline in the labor force participation of older men during the last 30 years would already have had a large effect on the ratio of workers to retirees if not for two offsetting trends: the rapid growth in female labor force participation, and the large influx of young workers into the labor force in the 1970s as a result of the baby boom of the 1950s. These trends will not continue.

The labor force participation rate of women is likely to remain high and will probably even increase, but there is no possibility of its continuing to increase at as fast a rate during the next 30 years as it did in the past 30.

Furthermore, the number of young people entering the labor force will surely decline because of the fall in the birth rate in the 1960s and 1970s. Thus, unless retirement patterns change, the ratio of workers to retirees will decrease substantially, and further improvement in life expectancy will intensify the decrease.

A cynic once observed that "rich or poor, it's good to have money." From that perspective, today's older Americans are much better off than their predecessors. They have more income and more wealth (adjusted for inflation) than any previous generation of elderly.

The cleavage between the elderly and other groups is one of the sharpest to emerge in recent years, as the population 65 and over grows in numbers and political power.

Although they constitute only 16 percent of the voting-age population, the political influence of the elderly is great because they can focus single-mindedly on a few issues of special relevance to them. Children, by contrast, have no political power themselves, and other age groups are not likely to devote political efforts exclusively to benefiting children.

Age is not the only basis for intergroup conflict. The interests of women and those of men are far from identicial, primarily because women have a stronger desire for children and care more about their welfare. Thus, there are many public policies such as those subsidizing child care or promoting part-time employment that could favor women at the expense of men.

If our society is to achieve "liberty and justice for all," traditional male *dominance* must end.. Great care is needed, however, to distinguish this objective from the elimination of male *presence* within the family. The challenge to individuals and to public policy is to promote equality between men and women without "throwing out the father with the bath water."

Some diversity of interests among age, sex, and marital status groups is inevitable, but the growing tendency to try to resolve differences through government poses a great danger to our nation. A society that tries to settle all the detailed questions of life through the ballot box and the courts should not be surprised to find itself fragmented, polarized, and unstable.

When large principles are at stake, there is no alternative to the political process; but for day-to-day adjustments regarding who does what and who gets what, both market processes and intrafamily decision making are usually smoother and less divisive.

Public policy priorities

There are many areas of American life that would benefit from changes in public policy. Based on the criteria of number of people affected, economic impact, and availability of workable solutions, highest priority should be given to *reform of the Social Security retirement system*.

This system affects nearly every American; over $100 billion in retirement benefits are paid annually. It is basically a good program and should be continued, but several changes are currently needed in order to correct injustices, increase economic efficiency, and restore the

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Balance of institutions best for future

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system's financial integrity. In the fall of 1982 a Presidential Commission investigated the problems of Social Security, and many remedies were proposed.

In my judgment, the following modifications would provide the greatest improvement with the least disruption:

First, slowly and gradually raise the age of eligibility.

Second, make the program universal so that it covers every man and woman.

Third, make the individual's benefit (above a minimum level) proportional to the taxes paid.

Fourth, define a minimum benefit available to all elderly as a matter of right; if the earned benefit does not at least equal the minimum benefit, the difference should be made up from general revenue.

These changes would improve the balance between revenues and expenditures without raising taxes or reducing benefits to current retirees. It would result in fairer treatment of women, and it would lead to a larger work force and a bigger gross national product. Most important, if these moderate changes are not made now, we will face a crisis that may destroy the system as the baby boom cohorts of the 1950s approach retirement age.

A second area requiring priority attention is health. *Reform of health insurance*, and concomitant changes in the organization of medical care, are needed because the cost of health care is increasing at a more rapid rate than the nation can sustain in the long run.

Expenditures by private and public health insurance plans now exceed spending for national defense, and the present system of paying for care is incapable of stemming further increases. Most hospitals are reimbursed according to their costs and physicians according to their fees; thus, expenditures soar because neither the insured patient nor the hospital nor the physician has any incentive to hold them in check.

The best solution to this problem would be to develop comprehensive health plans that deliver care for a fixed amount per person or per family per year—that is, "capitation" reimbursement. In each area of the country there should be several such plans competing on the basis of quality and cost, and the government should subsidize participation in these plans by the poor and the near-poor.

Short of this comprehensive approach, and as a partial solution to our present difficulties, several steps should be taken.

First, Medicare and Medicaid beneficiaries should be offered a voucher option that would enable them to join existing comprehensive capitation plans as an alternative to the fee-for-service, cost-reimbursement system.

Second, a ceiling should be established on the amount of employer-paid health insurance that employees can receive *tax-free*; this ceiling should be generous enough to include all present plans, but should help deter future increases.

Third, all employees should be given a choice of health insurance plans, with the same contribution by the employer regardless of the plan selected, provided it meets federally established minimum standards.

Despite its fading importance, the family is still the biggest barrier to equality in postindustrial society.

—Victor Fuchs

Fourth, if an employee chooses a plan that costs less than the employer's contribution, the employee should receive from the employer a tax-free rebate equal to the amount saved.

The objective of these reforms is not necessarily to keep health care expenditures from increasing in the future but to ensure that these expenditures are the result of rational choices by physicians and patients who have considered the costs as well as the benefits of alternative courses of action.

The third area for priority attention, *increased investment in children*, involves more complex issues and solutions are less certain. Nevertheless, I favor expansion of subsidies for children, subsidies that would be available to all families regardless of marital status, work status of the mother, or income.

Subsidies to low-income families, however, should be proportionately greater than to high-income ones. These subsidies would help reduce the widespread inequality of opportunity that still stands as a formidable barrier to efficiency and justice in our society. Efficiency suffers because many infants, children, and adolescents do not receive enough investment in human capital to realize their full potential as workers and citizens. Justice suffers because inequality of opportunity contributes to inequality of achievement.

Subsidies for child care provided at home or in the market would alleviate some of these problems. These subsidies would also help women in their efforts to achieve equality with men.

Depending upon how they are structured, child subsidies could also contribute to a pronatalist policy, if further declines in fertility make such a policy necessary.

There are many different ways to provide subsidies for children, and considerable study is desirable before launching any major programs. The needs of children, however, must be kept in the forefront of public discussion because the political power of other groups, such as the elderly, is so much greater than that of children.

If more attention were paid to children, there would be fewer crises in adolescence, but the problems of this stage—unwed motherhood, poor work skills and attitudes, crime, suicide—will not disappear.

We should, therefore, *experiment with alternatives to conventional schools* for men and women ages 16-24. Many young people might benefit from an opportunity to leave their homes and schools to participate in residential programs that encompass work, training, and counseling. These experimental programs should appeal to advantaged as well as disadvantaged youth by providing an opportunity to perform a significant nonmilitary service for the nation through the conservation and enhancement of natural and human resources.

Youth who successfully complete such a program should be entitled to scholarships and other benefits similar to those given the veterans of World War II. These benefits would serve as an inducement to join the program and as a subsidy for further investment in human capital.

The best way to reduce unwed motherhood and unemployment among teenagers is to increase their skills and earning power, but *elimination of the minimum wage* would also improve their opportunities to work and make progress in life.

At present we make it illegal for many young people to obtain valuable work experience by setting a minimum wage that is higher than their net value to employers.

This policy bears particularly heavily on young black teenagers who, in many cases, must overcome other disadvantages such as growing up in low-income one-parent homes, attendance at trouble-ridden schools, and racial prejudice. The full benefits from the elimination of the minimum wage would take time to accrue, and many other policies are needed to improve the prospects for black youth. The minimum wage, however, needlessly makes their lives more difficult by imposing an artificial barrier to employment.

Final recommendations

In the future the government should pay more attention to preserving *efficiency* when designing redistributive programs. In general, a negative income tax or cash grants should be used rather than grants that are tied to the purchase of particular goods or services.

The worst policies of all are those that attempt income redistribution by regulating particular markets through wage controls, rent controls, energy subsidies, and the like.

This kind of interference introduces needless injustices and inefficiencies. Injustices arise because some of the people who benefit from the regulations are not the ones whom the policy is supposed to help—wealthy tenants in rent-controlled housing, for example.

Inefficiencies arise because regulations are expensive to administer and because people change their behavior in order to take advantage of controlled prices, rents, and so forth. For instance, when the government holds the price of gasoline below its true cost, consumers use too much of it and producers supply too little.

Most important of all, we must recognize the need for *balance*, both in the goals that we set and in the institutions that we nourish in order to pursue these goals. If we value efficiency *and* justice, freedom *and* security, the economic perspective tells us that we will often have to give up some of one goal in order to ensure the partial achievement of others.

Both theory and history indicate that the best way to seek multiple goals is through a balance of institutions—market, government, family, and others. No single institution is superior for all goals; each functions best when complemented by the others. Moreover, diversification, be it of institutions, genes, or security holdings, is the wisest strategy for stability and survival in the face of an uncertain future.

We must recognize the potential conflict between the family and the expansion of redistributive government. Despite its fading importance, the family is still the biggest barrier to equality in postindustrial society.

Inheritances can be taxed, but as long as mothers and fathers pass on to their offspring their genetic endowment, their knowledge, and their special heritage and values, attempts to achieve complete equality will be frustrated.

At some point in the future we will have to ask whether the last increment of equality is worth the loss of so valuable an institution as the family—one that can stand as a refuge from impersonal markets and authoritarian government.

The message for public policy is clear. Let the market do what only it can do well: allocate human, natural, and man-made resources to producers, and distribute goods and services to consumers.

Let government do what only it can do well: maintain a legal and financial framework conducive to the smooth functioning of competitive markets, redistribute income to ensure a more just society, and use taxes and subsidies to eliminate differences between private and social costs and benefits.

Let families and religious, philanthropic, and cultural institutions do what only they can do well: socialize the young, honor the old, transmit values, give texture and meaning to life, teach love, and inculcate faith in the possibility of human improvement.

The message for individuals is also clear. There is no magic path that can carry us to every goal. If we are wise, we will determine what we most deeply value and will realistically balance aspirations against resources. In short, we must choose, and the choices we make will help determine how we live. The wisdom of those choices will determine how well we live.



Serra House moved last Tuesday (May 10) beginning in the wee hours of the morning—8 a.m. found it near the intersection of Escondido Road and Alvarado Row.

Freelen...

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great ironies of advocacy is that it has such a bad name. But the one quality which you have to have consistently is honesty.

"If you don't provide accurate information or withhold it, then you have used up your good will. Once you have shaded the truth or lied, you don't have access. . .any more."

During 1978-79, he was chairman of the board of trustees for the Council for Advancement and Support of Education (CASE), a national service organization for college fund-raising, publications, and related matters.

A native of Rutland, Vt., Freelen received his bachelor's degree in political science at Stanford in 1957 and his MBA here two years later. He returned to the University in 1961 as associate general secretary and director of the Stanford Annual Fund.

He was named associate dean of students in 1969, director of student services in 1970, and director of government relations in 1972. He was promoted to associate vice-president for public affairs in 1978 and served as acting vice-president during 1980-81 while Rosenzweig was working on a major AAU project.

Vice Provost Gerald Lieberman headed a consultative committee for Kennedy on the search for the new vice-president. Freelen is the third appointment at this level in 1983. Prof. Henry Riggs, industrial engineering, a 1957 classmate of Freelen, was named vice-president for development and John Schwartz, university counsel, was promoted to vice-president.

Freelen lives in Watsonville with his wife, Sally, and their two children.

Kennedy blasts merit-based scholarships

The new national trend toward merit-based scholarships is "quite pernicious," Stanford President Donald Kennedy said Thursday, May 12.

The trend is "quite a significant departure" by "quite good quality schools" from the "quite carefully constructed system of need-based" financial aid, he noted.

"I don't know how heavily laden this bandwagon is going to get," Kennedy told the Faculty Senate. "But if it continues to grow rapidly for another two or three years, it may "prove hard for a great many places to resist it—though not, I sincerely trust, for us."

Stanford is one of the few institutions nationally which follows a "need-blind" admissions policy. It meets the calculated financial need of all those admitted as freshmen through a combination of student self-help, loans, jobs, grants, and scholarships. About 70 percent now receive aid.

In the 1970s, President Richard W. Lyman of Stanford was among the leaders in a national effort which urged the National Collegiate Athletic Association to have athletic scholarships based solely on need. Their effort failed by two votes.

Board of Trustees report

Board of Trustees approves faculty appointments, promotions

On May 10, 1983, the Board of Trustees approved the following actions, effective September 1, 1983, unless indicated otherwise:

PROMOTIONS

Nancy D. Cartwright, professor of philosophy; Eve V. Clark, professor of linguistics; Ralph Cohen, associate professor of mathematics; C. Norman Coleman, associate professor of radiology and medicine; Dieter R. Enzmann, associate professor of radiology, 6/1/83; Ronald J. Gilson, professor of law, 7/1/83; Peter B. Gregory, professor of medicine (clinical) and, by courtesy, of family, community, and preventive medicine (clinical); Richard T. Hoppe, associate professor of radiology; Patricia P. Jones, associate professor of biological sciences; James V. Jucker, professor of industrial engineering and engineering management; Helmut Krawinkler, professor of civil engineering; Drew V. Nelson, associate professor of mechanical engineering; Nel Noddings, associate professor of education; James Plummer, professor of electrical engineering; Orrin W. Robinson III, professor of German studies.

REAPPOINTMENTS:

Arthur N. Applebee, associate professor of education; M. Beatriz Arias, assistant professor of education; Kristina Branch, assistant professor of art; Hector Cavallari, assistant professor of Spanish and Portuguese; Dean R. Chapman, professor of aeronautics and astronautics and mechanical engineering: (research); William H. Durham, assistant professor of anthropology; John K. Eaton, assistant professor of mechanical engineering; Kathleen M. Eisenhardt, assistant professor of industrial engineering and engineering management; Joseph A. Eliason, assistant professor of surgery; Paul Evans, assistant professor of economics; James A. Fill, assistant professor of statistics; Martin Ford, assistant professor of education; David L. Freyberg, assistant professor of civil engineering; Gerald C. Fuller, assistant professor of chemical engineering; Michael Garet, assistant professor of education; William F. Gilly, assistant professor of biological sciences; Stephan Graham, associate professor of geology and applied earth sciences; Edward Haertel, assistant professor of education; Charles R. Helms, professor of electrical engineering (research); Paul A. Hensleigh, associate professor of gynecology and obstetrics; Lambertus Hesselink; assistant professor of aeronautics and astronautics; Charlotte D. Jacobs, assistant professor of medicine; Jeffery D. Kocsis, assistant professor of neurology; Keith A. Lantz, assistant professor of computer science; Charles C. Marson, associate professor of law, 7/1/83; Keith I. Marton, assistant professor of medicine; Jody Maxmin, assistant professor of art and classics; John Medieros, assistant professor of physical therapy; Miguel A. Mendez, associate professor of law, 7/1/83; Frederick Mihm, assistant professor of anesthesia; Bella Mody, assistant professor of communication; Martin Morf, associate professor of electrical engineering; Vera B. Morhenn, assistant professor of dermatology; David D. Oakes, assistant professor of surgery; Peter Parham, assistant professor of structural biology; Diana M. Y. Paul, assistant professor of religious studies; Steven C. Quay, assistant professor of pathology; Ralph Rabkin, associate professor of medicine; Brian K. Reid, assistant professor of electrical engineering; William P. Rogerson, assistant professor of economics; David Rogosa, assistant professor of education; Bruce B. Rosenstock, assistant professor of classics; Edward Rubenstein, professor of medicine (clinical); Joel Samoff, associate professor of education; Marion E. Smith, professor of neurology (research); Lawrence Steinman, assistant professor of neurology and pediatrics; Stuart H. Thompson, assistant professor of biological sciences; Fouad A. Tobagi, associate professor of electrical engineering; Kenneth K. Tsuboi, professor of pediatrics (research), 6/1/83; Leonard G. Tyler, professor of electrical engineering (research); David I. Wilkinson, professor of chemistry in dermatology; Janet Wyner, assistant professor of anesthesia; Tomas Ybarra-Frausto, assistant professor of Spanish and Portuguese.

APPOINTMENTS:

Sandra O. Archibald, assistant professor at the Food Research Institute; Jon Barwise, professor of philosophy, 7/1/83; Dennis W. Choi, assistant professor of neurology; Michael R. Genesereth, assistant professor of computer science, 4/1/83; Sandra J. Horning, assistant professor of medicine, 7/1/83; Hau L. Lee, assistant professor of industrial engineering and engineering management; Avishai Mandelbaum, assistant professor of decision sciences, GSB; Robert A. Marcus, associate professor of medicine (clinical); Stephen J. Peroutka, assistant professor of neurology, 7/1/84; Paul Stanley Peters, professor of linguistics, 6/1/83; Richard M. Schoen, professor of mathematics; Raymond B. Seed, assistant professor of civil engineering; Terry Sicular, assistant professor at the Food Research Institute, 8/1/83; J. H. Pate Skene, assistant professor of neurobiology, 6/1/83; George S. Springer, professor of aeronautics and astronautics; Robert I. Sutton, assistant professor of industrial engineering and engineering management, 7/1/83; Peter M. Vitousek, associate professor of biology; Giovanni Wiederhold, associate professor of medicine and computer science (research), 6/1/83.

REPORT MATTERS

Paul A. Brest, professor of law and, by courtesy, professor of education, appointed the Kenneth and Harle Montgomery Professor of Clinical Legal Education, effective immediately.

Leslie J. Dorfman, associate professor of neurology, appointed associate professor, by courtesy, of mechanical engineering, effective 1/1/83.

Lorenz E. A. Eitner, Osgood Hooker Professor of Fine Arts, reappointed chairman of the Department of Art, 9/1/83 to 8/31/86.

William J. Goode, professor of sociology, reappointed senior fellow, by courtesy, at the Hoover Institution, 9/1/82 to 8/31/85.

Bobby R. Inman, appointed senior fellow, by courtesy, at the Hoover Institution, effective immediately.

David A. Prince, professor of neurology, appointed the Edward F. and Irene Thiele Pimley Professor of Neurology and Neurological Sciences, effective immediately.

Gerald M. Reaven, professor of medicine, appointed the Nora Eccles Harrison Professor of Diabetes Research, effective immediately.

Sherwin Rowsen, appointed senior research fellow at the Hoover Institution, 6/15/83 to 6/14/86.

Henry S. Rowen, professor of public management, GSB, appointed senior research fellow at the Hoover Institution, 4/1/83 to 3/31/88.

Nancy Tuma, professor of sociology, appointed senior fellow, by courtesy, at the Hoover Institution, 9/1/83 to 8/31/88.

Jeffrey Ullman, professor of computer science, appointed acting chairman of the Department of Computer Science, 9/1/83 to 8/31/84.

Roy H. Maffly, professor of medicine, appointed associate dean for student affairs in the School of Medicine, effective 8/1/83.

Hoover Tower project approved

The Board of Trustees took the following actions at its meeting on May 10, 1983:

1) Approved actions already taken by the Office of the Vice-Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of February, 1983, totaling $9,516,673 and for the month of March, 1983, totaling $12,404,986. The monthly average of such awards for the twelve-month period ending March 31, 1983, was $14,879,174 compared with $12,536,981 for the corresponding period the year before.

2) Accepted gifts received during the month of March, 1983, totaling $9,373,103 and during the month of April, 1983, totaling $5,798,886.

3) Amended its By-Laws to provide for the creation of the office of Vice-President and General Counsel.

4) Appointed Bruce Hinchliffe as Stanford's representative to the Newhouse Foundation.

5) Authorized an investment of $1,000,000 in CH Transition Fund.

6) Accepted a report of action taken between meetings to invest $400,000 in the convertible notes of SB Investors, Inc.

7) Accepted a report of action taken between meetings to offer to purchase the Leasehold interest at 3381 Miranda Avenue.

8) Heard the semi-annual report by portfolio managers from Capital Guardian Trust Company.

9) Approved the project and design for improvements in the facilities for tennis.

10) Approved the project to improve fire safety at Hoover Tower with a total budget of $807,000.

11) Approved the concept of constructing the Samuel J. and Ileen B. Campbell Wing of the Braun Music Center.

12) Authorized the transfer of $1,017,661 in the Medical School Equipment Annuity Fund from funds functioning as endowment to expendable funds.

13) Approved the design for the Electronics Building Annex at the Stanford Linear Accelerator Center (SLAC).

14) Heard the Annual Report on Debt.

15) Heard a report on a change in the interest rates charged on funds loaned to students.

16) Established the Edward F. and Irene Thiele Pimley Professorship in Neurology and the Neurological Sciences.

17) Heard a report on the proposed Center for Molecular and Genetic Medicine at the School of Medicine.

18) Conversed informally with students selected for prestigious scholarships.

19) Heard a report from J. Myron Atkin, Dean of the School of Education, on "Collaboration with High Schools: Stanford's School Study."

20) Discussed the "Facilities Plan and Capital Funding Forecast, 1983-86."

Rental housing

HOUSING AVAILABLE

□ **June 18 to July 31:** Los Altos hse, fully furn, 3BR/1BA, deck, 1/3 acre, fenced yd., nonsmokers. $700/mo. Call 948-5659.

□ **June 27 to Aug. 21:** Spac. hse in Southgate, Palo Alto, 2BR/2BA (master BR + den/guest rm), fully furn. incl. linens, etc. 3 blks to Stnaf. $950/mo. Call 327-3537.

□ **NOW:** Room w/priv. BA, ktchn. priv., $350/mo. incl. util, gar, lndry facil. Call 322-1313, a.m. bset.

□ **June 15 (flex) to late Sept. '83:** 4BRs in 5BR furn. hse in Portola Val/Woodisde area. 3BA, W/D, beautiful vistas, nrby recreation. $225 to $300/mo. Call (415) 941-9016 between 7 & 9 a.m. or 9 & 11 p.m.

□ **Avail. June 1, '83:** To SHARE: 2BR lux. condo, pool, many xtras, fully furn, nr transp, Rdwd City. 24 yr. old SRI employee seeks male rmmate. Call (415) 366-8896.

□ **Avail. June 1, '83:** Beautiful 2BR condo, graden setting, sauna, wt. rm, tennis. Mt. View. $750/mo. Call C. Walker, 321-6466 or 497-2207 (day).

□ **June 15 to Sept. 1:** Summer sub-let, Esc. Vil. 3BR apt, fully furn. on campus, great for kids. Call P. Lagarde, 856-4136.

□ **June 1:** Fully furn. apt, Oak Creek, 2BR (1 king, 1 dbl), lovely patio. Pool & club facil., walk to Stanf. Call (415) 322-2977.

□ **June, July, Aug. '83:** Fully furn 5BR/4BA hse in Portola Val. Panoramic view. Rent incl grdnr, clean., pool serv. Call 851-2481.

□ **NOW:** Kauai, Hawaii. Lovely furn. 2BR/2BA twnhse. Pool, tennis, priv. club atmosphere. $50/day. Call Howarth, (415) 591-5190.

□ **July 26 to Aug. 31, '83:** Spac. Victorian hse, 4BR/3BA, gourmet ktchn, LR, DR, FR, lrg. yd. Nr. dwntwn Palo Alto, Rincon. Pk, pool, tennis, libr. $875/mo. Call (415) 328-6794, eve.

□ **Beg. June 15 (nego):** Summer qtr: Fully furn. campus hse, 4BR, sep. study, LR/DR areas, itnerior patio. Pine Hill II. $1650/mo. (nego) + sec. & clean dep. Call Prof. Banks, 497-1830 (day), or 493-4231.

□ **NOW:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone, adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Regularly avail.:** 1 to 3BR furn & unfurn apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. NO FEE. $595 to $1200/mo. Call Shirley, (415) 856-6049

□ **Aug. '83 to Jan. '84:** Fulyl furn. Cape Cod Colonial hse in Palo Alto, 3BR/2½BA, study, lrg. FR, W/D, pool, 1 mi. to Stanf. Nr. schls, shops, park, Com. Ctr. Prof. going o Sabbat. $1500/mo. Call 325-1709.

□ **NOW:** Mt. View, unfurn. 2BR/1BA + sep. studio/1BR apt. on central crtyd. FR, AEK, DW, frpl, A/C, dbl gar., lndscp yd. Nonsmokers, refs. reqd. $1375/mo. incl. water, grndr. Call (415) 941-5976.

□ **Beg. June 10:** Palo Alto old twn, furn. 2BR/2BA apt. SHARE w/grad. stud. or other Stanf. male. Quiet, nr campus & dwntwn. Pool, lndry, storage for bike, cov. prkng. $385/mo incl. util. Call Dan Stephen, 324-1552 or 859-2185, wkdys.

□ **Beg. mid-June, min. 1 yr:** Charming 3BR/1½BA hse in old Palo Alto. Bike to campus, walk to Calif. Av. shops, transp, park. Ideal for cpl or sm. fam. No pets. Nonsmokers. Lease. $1000/mo. + util. Call Jan 497-5000, X5507 (day), 321-5444 (eve).

□ **Mid-July to Mid-Sept. (flex):** Fully furn. hse, nr Sharon Hgts. Walk to SLAC, Stanf. 2BR/2BA, study, FR, frpl, DR, grand piano. Patios, low-maint grdn, all appl, bikes, xtras. $1200/mo. incl (auto) water + dep. No pets, nonsmokers. Call Chiltons, 497-4289 (day), 854-5432 (eve).

□ **Jan. 1 to Dec. 31, '84 (flex):** Fully furn 2-story campus hse, 4BR/4BA, study, den, DR, encl. yd. $1300/mo. incl. grdnr. Call Moser, 857-0413.

□ **Beg. June 1:** Fully furn 2-story twnhse, 2BR/2½BA, fully furn, quiet location. W/D, gar., $900/mo. Call 321-3802.

□ **Late June to late Aug. (flex):** Charming older hse nr creek & dwntwn Palo Alto. Bike to Stanf. 2BR/1BA, study, patio. Fully furn. Piano. Nonsmokers, pets nego. $900/mo. Call 321-4586 (eve).

□ **June 12 for 1 mo:** Furn. studio apt. Sublet, nr Rengstorff Pk. in Mt. View. $230 + util. Write G. Hicks, PO Box 390045, Mt. View, 94039-0045.

□ **July 1 to 31:** Poss. overlap into last wk June/Aug. Furn. 3BR/2BA hse in old Palo Alto, grdn, IBM pers. computer. Bike to Stanf. $800/mo. Call 326-0284.

□ **July 1 to Aug. 15 or 31, '83:** Pearce Mitchell condo, 2BR/1½BA, fully furn, on campus, pool, rec. rm, air-cond. $750/mo. Call Dr. Strober, 497-6500 (day), 854-2757 (eve).

□ **July & Aug:** Summer rent, dwntwn Palo Alto. Attrac. 1BR/2BA condo, fully furn. suit. for cpl. Libr. w/sprl staircase, balc, pool; secure. 18th C. European style. $1200/mo. Call (415) 324-1624 (eve), 327-3505.

□ **June 18 to Sept. 18:** Furn campus cottage, 1BR/1BA. $550/mo + util. Call Curt, 497-3118 (day), 327-7608 (eve).

□ **Beg. June 1 (flex):** For 1 yr. or longer. Unfurn 2BR hse, garden, frpl, easy bike to campus. $750/mo. + util. Call 856-0808.

□ **July 10 for 2 yrs:** Palo Alto, unfurn (or furn) 4BR/2BA hse, DR, FR, on lrg. wooded lot. Nr. Stanf, park, shops. $1350/mo. incl. grdnr. Call Sprig Theobald, 321-3434, wkdays.

□ **July 1 to Aug. 31:** Fully furn 4BR/2½BA hse, FR, DR, secluded Los Altos ½ acre. $1300/mo incl grdnr, cleaners. Call Sprig Theobald, 321-3434, wkdays.

□ **June 10 to Aug. 31:** Palo Alto, fully furn 3BR/2BA contemp. hse, w/swim, tennis club. Nonsmokers. $950/mo. Call Sprig Theobald, 321-3434.

□ **Beg. June 1:** Rm in 6BR hse, dwntwn Palo Alto coop, non-veget. hsehld seeks spirited male to share dinners, yrd, hsehold work w/2 men, 3 women. Cook. talent a must. Spac. rm w/connec. BA. $233.50/mo. + util. & dep. Call 328-0952 after 5 p.m.

□ **July 10 (flex) to April 1, '84 (flex):** Fully furn. lux. hse. w/pool, Steinway, 3BR/2BA, AEK, W/D, 2 studies, frpl, fenced yd. Nr. Med. Ctr., bike to campus. $1500/mo. (nego) incl. pool serv. Call 497-1348 (a.m.), 325-4533 (lv. message), 322-9866 (eve).

□ **Beg. June 1:** 1 yr lease, renewable; new Barron Pk. hse, 3BR/2½BA, unfurn; modern ktchn; redwd deck, low maint. grdn, quiet, bike path to Stanf. $1250/mo. Call 323-7565, eve.

□ **NOW:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone, adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Beg. July 19 :** Lux. 1BR furn. campus apt. Lrg closets. Priv. patio. $875/mo. incl. all util. Call 856-6049.

□ **June 22 to Aug. 20:** Summer rent, 9 wk. lease. Sunnyvale, 3BR/2BA furn hse w/yd. Nr. #280. $1700 incl. water, grdnr. Nonsmokers, no pets. Call (408) 739-9182.

□ **NOW:** Dwntwn Palo Alto, fully furn. rm. in apt., use of ktchn, LR. Short or long term rent. $275/mo. Call 327-2402.

□ **Aug. 1 for 1 yr:** Hse to swap, Chevy Chase/Wash. DC. 3BR/2½BA, den, finished attic, basemt, small yd. Xclnt publ. transp. Wish to EXCHANGE for hse in Sunnyvale/Palo Alto area. Call COLLECT (202) 363-0558.

□ **Mid-June to Mid-Sept. (flex):** 3BR/2BA fully furn. hse. TV rm, quiet grdn, 3 mi. to Stanf, 1 mi to dwntwn Menlo Pk. $950/mo incl. water & part-time grdnr. Call 325-5339.

□ **Aug. 7 to Aug. 26 (flex):** ENGLAND. Twnhse in charming market twn, 3BR/1BA, 40 min to London/-Cambridge. Walk to pub. transp. $200/wk. Call Phyllis Wood, (415) 969-6540.

□ **Beg. approx. July:** Furn. hse in Westchester Co. N.Y. on Conn. border; 4 wooded acres. Or EXCHANGE for your Bay Area domicile. Call Eva, 941-2686 or 326-3684.

□ **July 1 to July 23, '83:** Furn. 3BR/3BA campus hse, LR, DR, 2 studies, spac. ktchn. No pets. $1000 incl grdnr & garb. Call J. Keller, 497-0851 (day), 857-0409 (eve).

□ **Beg. June 1, '83:** Fully furn 1BR apt. sept. wing of lovely old campus hse. Priv. entr. $500/mo. Call 323-5982.

□ **June 20 to Aug. 20, '83:** Fully furn. hse in Mt. View, nr. Rengstorff Prk. 2BR/2BA, util. rm, lrg. patio. $750/mo. Call (415) 961-8382 (eve).

□ **End June to end Sept. (flex):** Lovely 3BR/2BA hse, fully furn., Crescent Pk, in Palo Alto. Cul-de-sac, patio, garden. Walk to pool, tennis, schls. Bike to Stanf. $1250/mo. incl water, grdnr. Call 321-1142 or 497-4364 (day).

□ **Sept., Oct., ½ Nov.:** Furn. 1 or 2BR lux. apts. Olymp. pool, sauna, jacuzzi, tennis, racquetball. Adult complex. 1 apt. air-cond. Refs. req. Rte #280 to Stanf. $600/mo. + dep. Call Prof. Arnold, (415) 968-0951.

□ **Jan to Dec, '84 (flex):** Fully furn hse, 5BR/4BA, LR, DR, study, old campus. Rentable gar. rm. Call 497-4210 (day).

□ **June 10 to Aug. 30, '83:** Fully furn. & eqipt Menlo Pk. hse; 2BR/1BA, lrg ktchn, lndry, yd. Nr. dwntwn PA. $800/mo. Call 327-2137 or 322-9591.

□ **June 20 for 1 yr:** Condo nr. Calif. Av., 3BR/2BA, pool, indry, bike rm, storage, gar. Nr. shops, train, bus, 5 min. to Stnaf. $1050/mo. Call J. Harris, (415) 325-0659, or write c/o 455 Grant, #1, Palo Alto 94306.

□ **June:** Attrac. 1 mo. sublet, dwntwn Palo Alto, furn 1BR, sep. study, Col. style budg. Park. space, nr shops, cafes, transp. Perf. respite while locat. perm. resid. $350/mo, nego. Call Karen, (415) 780-2240, Tues-Fri, 322-9848, eves, wknd.

□ **June-Sept.:** Inclusive or shorter periods: LONDON. Spac. 3-4BR flat, 2BA, breathtaking views adj Hampstead Heath; gardens, tennis, squash. 200 lbs wkly. Call 857-0237.

□ **June 6 thru Sept. 21:** 1BR/1BA apt. Menlo Pk, LR, DR, ktchn, W/D, fully furn. Quiet nghbrhd, spac., sunny. $425/mo. Call (415) 322-5143.

□ **June 5 to Sept. 15 (flex):** Fully furn. hse in Woodside, 4BR/3BA, LR/DR, DW, W/D, walk to tennis. 4 mi. to Stanf. $1490/mo. or $372.50 per person. Call Brian, (415) 369-6459, eve.

□ **Sept. '83 to Sept. '84 (flex):** Visit Prof. wishe to EXCHANGE apt. in France, Strasbourg, 3BR, LR, DR, piano, garden, fully furn., & car (insur. approx. $800/yr); for furn. apt. or hse nr Stanf. with car, if avail. Call Robin, 497-6270 or write: Dr. J.F. Lefevre, IBMC, 15 rue Rene Descartes, 67084 Strasbourg Cedex, FRANCE.

□ **Aug. '83:** Paris apt., charming 2BR furn., modern ktchn, nr metro Alesia. Ideal for cpl, small fam. $800/mo. Write immed: Weinstein, 46 rue Vasco de Gama, 75015, Paris, France.

□ **July, Aug.:** HONG KONG. Univ. lec. desires SWAP w/Stanf. resid. Lrg mid-levels flat, TV, air-cond, W/D, avail. exchange for close to Stanf. hsng. Write: J. Schiffer, Centre Urban Studies, Planning, Univ. fo Hong Kong, Pokfulam Rd., Hong Kong.

□ **NOW:** Spac. twnhse, Menlo Pk, 3BR/2½BA, AEK, air-cond, all carpets, master BR w/walk-in cl. Walk to SRI, train, dwntwn. $1000/mo. Call (415) 968-3477.

□ **Aug. 12 to Sept. 6:** All or any part of time per: fully furn. campus hse, 4BR, study, FR, piano, fenced yd. $375/wk incl. 2 cars, elec, lawn-mow, bi-wkly clean. Call 493-2042, eve.

□ **Beg. May 1:** SHARE 2BR/2BA condo, Mt. View; quiet, garden setting, pool, 7 mi. to Stanf. $400/mo. + ½ util. Call (415) 965-7684.

□ **Beg. Aug. '83:** Crescent Pk, Palo Alto, Medit. style fully furn. hse, 3BR/3BA, DR, new ktchn, encl. yd, W/D, baby grand. $1590/mo. incl grdnr, water. Call COLLECT (602) 299-4499.

□ **Summer '83 (flex):** Lovely lrg. 3BR country home in sunny Corralitos, by Aptos, CA. Desire EXCHANGE for comparable hse in or nr Los Altos. Call (408) 967-2918.

□ **June 30 to July 30, '83:** Pleasant hse w/charm. patio, low-maint. grdn, So. Palo Alto, nr bus, shops, tennis, library. Suitable for cpl. nonsmokers. $750/mo. incl. grdnr, util. Call Helen, (415) 324-1710 (day), (415) 494-2624 (eve).

□ **June 1 to Sept. 1:** 1BR furn apt., Boston waterfront nr. Quincy Mkt. air-cond., excl bay view. Elev., sec. guard, atrium. EXCHANGE or rent $900/mo. MIT Prof. visit. Stanf. Call COLLECT (617) 367-3192.

□ **Aug. 1 to mid-Sept. '84:** Portola Val. 3BR/2BA, fully furn. hse, 2 frpl, redwood beams, stained glass, oriental rugs, sculpture, art. Multi-level, decks, pool w/solar, wooded hillside acre, scenic views. $1600/mo. Call (415) 851-8743.

□ **Mid-June to late Sept:** 60 acre ranch sublet. 4 out of 5BRs avail. Furn. Portola Val-Woodside, vistas, nr rec. areas. Rents from $225 to $300/mo. 3BAs, W/D. Call (415) 941-9016, 7-9 a.m., 9-11 p.m.

HOUSING NEEDED

□ **Sept. '83 to June '84:** Visit. prof. on sabbatical from Cornell needs furn hse to start Sept. for 9 mos. Family w/2 children. Call (415) 857-7030 (day).

□ **June:** Visit. scientists need furn. 2 or 3BR hse or apt. in Palo Alto area for mo. of June. Call 857-7030 (day).

□ **Sept. 15 to Jan. '84:** Senior U.S. Gov. official & wife, visit. scholars at Stanf. seek furn. or part. furn. hse or apt w/2 or 3BR. Nonsmokers, no pets, ideal hsesitters. Excel. refs. Call 497-4244 (day) or 324-0457.

□ **1983-84 Academic Yr:** Resp. Stanf. Grad. Sch. of Bus. students want to rent ASAP, 4 to 5BR fully furn. hse close to Stanf. Will pay equitable rent. Call Bob, 326-1354; Robert, 856-3360 or write Bob Thronson, 557 Mayfield, Stanford, Ca. 94305.

□ **Sept. '83 to Aug. '84:** Visit. Prof. & spouse seek small furn. hse nr campus. Nonsmokers. Call COLLECT (609) 452-4811. Will visit Stanf. May 24 to 27; lv. message at (415) 326-5377.

□ **July 1 to Aug. 30:** EXCHANGE: Need apt for cpl. in Stanf. area. Have apt. in Tours, France. Call Phil Breeden, (415) 322-2703, eves.

□ **Beg. June 1:** Stanf. staff person & spouse (landscape architect) seek 2BR apt. or cottage. Prefer reduced rent exchange for ydwrk and/or landscape design. Local refs. Call Phillip, 323-6533 after 8 p.m.

□ **Beg. July 15 (flex):** Writer, mature woman, long-time Palo Alto resident, seeks quiet apt. or cottage for work-live space. Call Dillon, 497-2558 (day), or 493-9392.

□ **Academic yr, '83-'84:** Visit. scholar, wife; nonsmokers, need med-sized hse on campus. Poss. EXCHANGE for hse in Bethesda, Md. 10 min. to NIH. Call Gurley, 857-0169.

□ **June to Aug. (flex):** 4 to 6 wks. Mature 17-yr-old French male seeks active fam. life. Exchange later (Paris & Normandy coast) or will pay. Enjoys sports, music, cooking; plans wilderness trips. Call Chiltons, 497-4289 (day), 854-5432 (eve).

□ **June 22 to July 23:** Swedish prof, wife, 16-yr-old daughter seek 2-3Br furn hse or apt. Call 948-8058.

□ **June or July thru Aug. '83:** Reliable student seeks home to hsesit/caretake. Will care for garden, yd, pets. Local refs avail. Call Kyle Koehler, 324-1471 (early a.m. or eves.)

□ **Beg. Nov. '83 for 1-2 yrs:** Visit. Australian M.D., wife & 2 children (5 & 2) seek 3 or 4BR furn hse on or nr campus. Refs. avail. Call B. Barnett, 497-5913 (day).

□ **Sept. '83 to Aug. '84:** Visit. French M.D. & wife seek 1BR furn. apt. on or nr campus. Local refs avail. Call B. Barnett, 497-5913 (day).

□ **Sept. '83 to Jan. '84:** Female librarian seeks hse or apt. Call D. Kemp, 321-3204 or write: 1812 Willow Rd., Apt. 406, Palo Alto, Ca. 94304.

□ **July, Aug., Sept. '83 (flex):** Retired cpl. seeks apt. or small hse. Nonsmokers, no entertaining, very neat. Local refs. Call Fuchs, 326-7639 (day), 858-1527 (eve).

□ **July 1, '83 to Dec. 31, '83:** Seeking 3BR furn. hse in Palo Alto/Stanf. area for visit. prof, wife & 2 children. Call Susan Richardson or Michelle Renaldo, 497-2218 (day).

□ **Aug. '83 to July '84:** Visit. prof, wishes to rent hse in good schl nghbrhd for above period (flex). Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

□ **Beg. June 15 for min. 1 yr:** M.D. & wife, no children, no pets, seek 2 or 3BR unfurn. hse in Palo Alto area. Refs. avail. To $1000/mo. Call (313) 996-1800 or write Stuart Flynn, M.D., 1810 Virnankay, Ann Arbor, MI 48103.

□ **Sept. 25 to Mar. 25, '84 (flex):** Visit Canadian physician & wife, no children, seek 1-2BR furn apt, sm hse, or hsesit position. Prefer within 10 min. to Stanf. Med. Ctr. Refs. avail. Call (403) 432-3912 (day), (403) 439-5135 (eve).

□ **Sept. '83 to May '84 (flex):** Visit. prof, sabbatical at Stanf., & spouse with dog seek 2BR furn hse in Palo Alto, Menlo Pk area. Nonsmokers. Call COLLECT (413) 367-2286 (eve).

□ **Aug/Sept. '83 thru July '84:** Humanities Ctr Fellow & spouse visit. from Duke U. seek 1-2BR fully furn hse or apt. in Palo Alto or Stanf. area. Refs. avail. Call COLLECT (919) 544-3116 late aft., early eve.

□ **Beg. June '83 for 6 mos:** Faculty cpl from Albert Einstein Coll. of Med, NYC, seek rental nr Stanf.

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For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Stanford—Utah State team launch electronic tether in space

Researchers from Stanford and Utah State University launched a sounding rocket at 1 a.m. Saturday, May 14, from the White Sands Missile Range, N.M., to test the effects of a beam of electrons on the surrounding ionosphere.

The rocket, a Nike Black Brant V, a two-stage, solid-fuel rocket, will fly for about nine minutes and reach an altitude of approximately 250 kilometers (155 miles).

Roger Williamson, senior research associate at the Stanford Electronics Laboratory, said the experiment, called CHARGE (Cooperative High Altitude Rocket Gun Experiment) is the first use of an electrodynamic tether in space. (The word "gun" refers to an electron gun, not a weapon.)

The rocket will also carry sophisticated, state-of-the-art electronics, including a microprocessor, to monitor and analyze the data.

At about 90 kilometers (55 miles) the top half of the rocket is to separate from the bottom half containing the rocket motor. The payload will stop spinning, and will orient itself so it is traveling sideways, perpendicular to the magnetic field and to its direction of travel.

Two portions of the sounding rocket then separate into a "mother" and "daughter" section. Most of the instrumentation is in the mother section, which is connected to the daughter by a long wire.

An electron gun fires from the mother, and instruments on both sections measure the beams as the two fly apart.

"We are particularly interested in looking at what we call plasma waves that are generated by the electron gun beam pulsing," Williamson said. "These are radio waves of various frequencies, as well as some special types of waves that only propagate when you have ionized gas around, like we do in the ionosphere."

The mother section takes photographs of the beam, measures the light, the voltages, and the energy of the electrons which come back to the sounding rocket.

The electrons fired off must be replaced on the rocket to neutralize it. "We are very much interested in how that occurs in space," Williamson said, particularly with large space stations and space telescopes planned in the future.

Williamson said that the insulated wire between the two sections will provide the first reference point in space for measuring voltages. When the wire is stretched fully it will be about the length of four football fields.

He said the microprocessor will be measuring the beam at a rate of 10 million times a second. The devices will collect 160 million bits of information per second.

The system then will "dump" the data to earth by radio from the electronic memory on board.

Williamson said that several things make the experiment unique. First, this is an active experiment; most in the past have been passive. Second, CHARGE uses nature as the laboratory, which means the scientists will be dealing with densities, pressures, and energies different from what can be recreated in laboratories. This will enable engineers to better understand the operation of the space shuttles and large space stations.

Other Stanford researchers are providing a group station to monitor the very low frequency transmissions produced by the electron gun and the tether.

John Raitt is the main scientist on the project from Utah State, where the experiment was built. The photography devices were provided by Los Alamos National Laboratory, and several Japanese scientists from the Institute for Space and Aeronautical Science in Tokyo provided much of the instrumentation. Other scientists from the University of Michigan and NASA's Goddard Space Flight Center will participate in the experiment.

Funding comes from NASA.

Housing. . .

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during sabbatical. Our hse avail. for rent or EXCHANGE. Call Dr. Philip Silverman, (212) 430-3124 (day), (914) 723-3103 (eve), or write: 2 Shady Lane, Scarsdale, NY 10583.

□ **Sept. '83 to Aug. 31, '84:** Visit. Prof., wife, 3 children seek to rent 3-4BR furn hse on or nr campus. Up to $1500/mo. No pets, nonsmokers. Call 497-3480 (day), 856-0534 (eves, wknds).

□ **Beg. Oct. 1, '83:** Visit. Eng. MD seeks 3BR hse or apt for 1-2 yrs. Wife, children (2½ & 6 mos). Nonsmokers. Prefer furn. nr. campus. Will pay to $1000/mo. Call UK 272-502114 or write 54, Westacre Close, Westbury-on-Tryon, Bristol, UK, Dr. Gaston.

□ **Aug. '83 to July '84 and Sept. '83 to Aug. '84:** 2 Stanf. Humanities Ctr Fellows seek quiet, furn. 1BR apts, pref. nr. campus. Call Sue Asch, 497-3054 (day).

□ **Aug. '83 to Aug. '84:** Visit. scholar from New Mex., spouse & children 12 & 14, seek 3BR hse on or nr campus. Call W. Harrison, 497-4224.

□ **Beg. late Sept. '83:** Studious male grad student, nonsmoker, seeks furn. rm. in hse on campus or College Terr. Ktchn unnecess. Local refs. Call Gabriel, 328-5932 (eve).

□ **July 1 for 1-4 mos:** Reliable Stanf. staff seeks HOUSESIT for summer—flex. Returning from EAST. Nonsmoking, childless cpl will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write David Mark, MD, 20 Walnut Hill Rd., Chestnut Hill, MA 02167.

□ **June 14 to July 12:** Careful tenant, English woman prof, staying longer than planned, seeks apt or hse on/nr campus. Call H. Himmelweit, 321-2052 (day) or 856-9696.

□ **Summer:** Visiting grandparents desire to HOUSESIT. Avail. any part of summer. Call Paulette, 493-4598.

□ **Aug. '83 to July '84:** Visit. scholar from Penn State seeks furn. 3BR hse. Prefer Palo Alto or Sunnyvale Sch. Dist. Nonsmokers, no pets. Will care for plants, pets, gardn. Call (814) 234-8110 (eve). Prof. Mathews, (814) 865-8859 (day).

□ **NOW:** As soon as poss: 2-3BR unfurn hse or duplex, commute dist. to Stanf. Will pay to $800-900/mo. For new Stanf. fac., husb, & child. Call Elissa, 497-4977 & lv. message.

□ **Beg. July 1:** For min. 1 yr. M.D. assoc. w/Stanf. Med Ctr seeks to lease hse or condo w/3BR in or so. of Palo Alto area. No children, no pets, not cost limited. Call (619) 450-1133 or write John Connolly, 8652-1 Villa La Jolla Dr., La Jolla, CA 92037.

□ **NOW to Sept. 1 or longer:** Stanf. staff w/Univ & local refs wants caretake or HOUSESIT in Palo Alto area. Will give excl care to your hse, business, yd, pets. Call Donna, 497-3967 (day).

□ **Beg. Aug. (flex) for academic yr:** Visit. scholar, wife, 1 child, seek furn. hse. or apt. nr campus. Nonsmokers, clean living, home-owners. Will care for plants & pets. Local refs. Call COLLECT (314) 875-2858 (eve).

Scientists seek Sakharov release

Eight internationally prominent physicists and arms control experts Monday, May 16, urged the Soviet Union to allow Andrei Sakharov to emigrate to the West.

They strongly discounted Soviet claims the famed physicist still has crucial state secrets stemming from his past work in weapons programs.

"Based on our experience and our understanding that Sakharov has had no involvement in Soviet weapons programs for more than 15 years, we can neither understand nor accept the validity of the Soviet statement," they declared.

Signers included Luis W. Alvarez, of UC-Berkeley; Hans A. Bethe, of Cornell; Richard W. Garwin, of IBM's Thomas Watson Research Center; Jerome Weisner, of MIT; Herbert York, of UC-San Diego; and Sidney Drell and William J. Perry, both of Stanford, and Marvin Goldberger, president of Cal Tech.

"Soviet authorities have recently said that Andrei Sakharov cannot be permitted to leave the Soviet Union for the West because of his knowledge of crucial state secrets based on his past work in their weapons programs.

"Each of the undersigned scientists has had a long and extensive involvement with U.S. defense technology and problems. Based on our experience and our understanding that Sakharov has had no involvement in Soviet weapons programs for more than 15 years, we can neither understand nor accept the validity of the Soviet statement.

"We urge that our great colleague Andrei Sakharov be allowed to emigrate and come to the West, where we are eager to welcome him."

Personnel update

Tuition grant applications due

Faculty and staff parents whose children qualify for the University's Tuition Grant Program are asked to submit applications during June for the school year beginning next fall.

Applications for those children who will be attending UC-Berkeley must be completed before June 15.

Staff members with five or more years of continuous, full-time (100%) service with the University are eligible to apply for Stanford's tuition grants for their children who will be attending accredited colleges and universities.

Additional information and applications are available from Chris Rodger in the Office of Benefits and Records, Old Pavilion, or by calling 497-1778 between 9 a.m. and 4:30 p.m.

Applications are available also at the Benefits Office at SLAC. Employees located at SLAC should return their completed applications to the SLAC Benefits Office.

Dental plan rates increase June 1

Dental plan rates will increase effective June 1, reports Jeannie K. A. Thomas, manager of benefits and records.

Faculty and staff members who are not currently required to contribute to the cost of the dental premiums because of their appointment or the terms of a collective bargaining agreement will not be affected by the rate increase. However, if employment status is such that a deduction is currentiy made from an employee's pay for dental insurance, the deduction will increase on the May 22 paycheck. The May 22 deduction covers the month of June.

If you have any questions or wish to make changes in your dental plan participation, please call the Office of Benefits and Records at 497-1776 or 1777. SLAC employees should call the SLAC Benefits Office at 2357.

Below are the rates effective June 1:

For	50-74% Time Your Monthly Contribution	Leave Without Salary Your Monthly Contribution
You	$ 5.62	$11.25
You plus one dependent	$10.29	$20.58
You plus two or more dependents	$16.76	$33.52

Carpools

Riders needed for vanpool M-F. Leave Newark 7 a.m.; Leave Stanford 4:45 p.m. Call Mark, 7-4342.

Need ride: San Jose (No. Capitol) to Stanford (ERL) and back, 8:30 and 5, M-F. Call Maria at (408) 280-2568 (day) or (408) 926-5328 (night).

Accidents and injuries

Accidents and Injuries Occurring During Week of May 9-13

Cause of Accident	Number	Number of Days Off
Animal/insect contact	2	(0, 0)
Cut by sharp object	1	0
Pinched, squeezed, crushed	1	0
Fall from height (incl. stairs)	1	1

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

43520-PM (JCC:2094) ADMIN ASST II: Supv personnel activities; interpret Univ policy; maintain records & control research grant expenditures; prep annual operating budget; monitor & control expenses; prep monthly statements & forecasts for division accts; assess & recommend div'l space & eqpt allocations; represent Clinic Chief in negotiations w/ other clinics; prep & monitor annual IMC budget & prov financial forecasts; QUALIFICATIONS: prev exp in budgetary mgmt & personnel supvn; excel interviewing skills; diplomatic & resourceful in interpersonal relationships; ability to assign prior; and show initiative in developing creative solutions to problems required; computer literacy desired; contact: Anne Gaddy, Med Ctr S-169 (497-5821).; C05; $1670-2086.

21692-JB (JCC:2160) ACCOUNTANT II: responsible to provide acctg serv & acctg info to Operations & Maintenance Personnel as directed by the F/M Analyst; position is of a cost acctg nature; prov cost useful for income & expense measurements; analyzing variance between income & expense; devel costs approp for mgmt decisions; aid in controlling operations; specifically prep journels, analyze accts, work w/ mgrs to research & reconcile balances, monitor acctg data for customer service; must be able to access info on HP3000 data base; QUALIFICATIONS: BA or BS in Acctg or Business or equivl practical exp; familiarity w/ complex acctg system, computer applications in acctg fields & principles of cost acctg & fund acctg; must be able to meet deadlines & work under pressure to meet deadline from multiple sources; must be well organized & have strong interpersonal skills & communications for dealing w/ a wide variety of people.; C06; $1854-2312.

40382-JB (JCC:2262) FIN/MGMT ANALYST II: Develop budget control mechanisms; review monthly expenditures vs budgets; revise budgets periodically; report monthly to DOE & periodically to other sponsors; prep annual 5-yr budget plan submittals; prep annual Univ budget; interact w/ sponsors, SLAC & Campus budget & acctg offices; interact w/ SSRL Directorate & staff on budget matters; QAULIFICATIONS: 3-5 yrs Acctg & financial mgmt exp, preferably w/ emphasis on Dept of Energy funding; hands-on exp w/ computer-based acctg & financial mgmt sys desirable.; C07; $2113-2724.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, May 24, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

27147-LL (JCC:5588) LIFE SCI RES ASST I: Exp in drug analyses using gas-liquid chromatography, high performance liquid-chromatography & radioimmunoassay techniques; familiar w/ all aspects of these techniques incl a thorough understanding of theory involved in performing these analytical techs; exp w/ instrument maintenance desirable; QUALIFICATIONS: knowl of scientific theory assoc w/ completion of a Bachelor of Sci degree & sufficient lab exp to allow the indiv to function independently in the lab.; C05; $1670-2086.

26639-AW (JCC:5108/5116) SCIENTIFIC PROGRAMMER II/III: Act as a genl consultant/analyst for users of the software & services of CIT; act as an instructor for CIT classes; write & review documentation for CIT users; help plan, implement, test, & evaluate user software, incl some programming; give users consulting advice & other tech assistance on a broad range of applications incl utilities, langs (PL/I, FORTRAN), text processing (SCRIPT, WYLBUR), statistical packages (SAS,SPSS), & database tools (SPIRES); phone/-mail consulting; QUALIFICATIONS: BA Degree or equiv edu/exp; approx 3-5 yrs computing exp w/ text editing & formatting using WYLBUR & SCRIPT, data base/info retrieval (w/SPIRES), graphics & statistical programs; 3 yrs customer serv exp in tech writing/teaching; excel written/verbal commu skills w/solid command of English lang; exp in design & development of user applications; excel planning/organization ability; level III require in-depth exp w/ an understanding of a broad range of programming langs & applications.; C06/C07; $1854-2312/2113-2724.

Nonexempt

11059-PM (JCC:2554) SECRETARY II: Academic Affairs Sec sets up & maintains all undergrad & grad student academic files, grad admission files, grad award files, & alumni files; handling corresp, transcripts, study lists, gradeslips, supplementary grad report cards & all petitions & applications; produce copy for Courses & Degrees; typ qrterly Time Schedules; maintain & distribute up-to-date rosters of students & advisors, & Preliminary Class Lists, End Quarter Reports, etc; serv as receptionist in Dept Offc; answering phones; sorting mail; QUALIFICATIONS: typ 50; substantial exp in genl offc work; familiarity w/ Stanford forms & procedures helpful; some exp w/ computer text-editing highly desirable; ability to set constantly changing work prior required, using high level judgment & discretion; ability to interact effectively w/ diverse group of faculty, staff, students & the public; send appl/resume to Betty Kaplan, Dept of Communication, Bldg. 120.; B11; $1246-1310.

27054-PM (JCC:2554) SECRETARY II: Sec'l Assistance to Sr. Fellows, Sr. Res Fellows, and/or Visiting Scholars participating in Domestic Studies Program of Hoover Institution; typing manuscripts, articles, & corresp (making extensive use of word-processing eqpt); covering phones on call-director eqpt; this support will be coordinated by sec to the dir of the Domestic Studies Program; QUALIFICATIONS: typ 65; excel typing skills; prev exp on word-processing eqpt preferred; ability & willingness to learn required; judgment & tact in fielding varied requests; ability to establish work prior; send appl/resume to Mrs. Audie Carlson, Hoover Institution or call 497-2585.; B11; $1246-1310.

32122-PM (JCC:2562) SECRETARY III: Sec to Dir of Residency Program & Postgrad Edu Program & Pediatric Subsection faculty in Div of Diagnostic Radiology; developing letters & brochures to be sent to applicants; screening applications & routing to proper faculty for review; setting up interview schedules; prep mat'l pertaining to course mat'l & mail; make arrangements for mtgs; answer phones, corresp, travel, monitoring accts, manuscripts, etc; prov sec'l serv for Chief Resident relating to schedule & programs of residents, etc; QUALIFICATIONS: typ 65-70; excel organizational skills & ability to work w/out supvn; good command of English lang & excel typing skills; familiarity w/ Stanford policies & forms very helpful; dictaphone & word processor desirable; send appl/resume to Sally Healey, S078 Med Ctr.; B14; $1440-1514.

43577-PM (JCC:2596) SECY II-SPEC: Prov full sec'l serv to Faculty in Endocrinology Div of Dept of Med; type corresp & manuscripts fr long hand & transcription, incl careful proofreading of final drafts; use Xerox word processor; answer phones; set up & maintain filing sys for clerical & scientific mat'l; open & sort mail; make travel arrangements & prep expense reports; prep purchase reqs for lab & offc supplies; QUALIFICATIONS: typ 65 fast & accurately; knowl of or ability to learn Xerox 860 word processor; well organized; good interpersonal skill; knowl of scientific & med terminology desirable; good written & oral commu skills; send appl/resume to Mary Driscoll, Med Ctr S005.; B12; $1310-1373.

31436-PM (JCC:2672) MED SERV ASST III: 8:30-5pm; performs all clerical duties nec to properly register patients into Faculty Practice Program; interview patients for financial & insurance info; receives & documents patient cash payments; works under dir of Clinic Chief & Nurse Mgr in Neurosurgery Clinic to accomplish clerical functions of patient care provided in ambulatory setting; duties incl patient appt setting, req lab & radiology exams as well as heavy telephone commu w/ patients, physicians & other depts; QUALIFICATIONS: 1 yr exp in a med setting; able to work in a fast pace, high pressure environ; able to interact w/ public; bilingual ability desirable; contact: Vicki Stewart, A367 Boswell, 497-6323.; B11; $1246-1310.

31435-PM (JCC:2672) MED SERV ASST III: 50%; performs all clerical duties nec to properly register patients into Faculty Practice Program; interview patients for financial & insurance info; receives & documents patient cash payments; works under direction of Nurse Mgr or Clerica Supvr in Surgery Clinic to accomplish clerical functions of the patient care provided in ambulatory setting; QUALIFICATIONS: typ 35-40; 1 yr exp in a med setting; able to work in a fast pace, pressure environ; able to interact w/ the public; bilingual ability desirable; contact: Vicki Stewart, A367 Boswell Bldg., 497-6232.; B11: $623-655

32504-BP (JCC:2454) OFFICE ASST II: Support dept professionals & sec—data processing, proofreading & editing; typ responses to routine corresp; screen phone calls; open & sort mail; filing; photocopying; run errands; serv as bkup on word processor; QUALIFICATIONS: typ 60; excel grammatical & spelling skills; evidence of flexibility & reliability; good organizational skills; ability to interact w/ diverse group of people; prev word processing exp helpful, but will train; prev offc exp desired; send appl/resume to Sally Hines, 105 Encina Hall.; B09; $1130-1189.

31168-PM (JCC:1747) LIBRARY SPEC I: 75%; 10-5pm; performs duties in Gov't Documents Dept; checks out, renews, discharges documents; maintains circulation records according to dept. guidelines; processes monthly & quarterly overdues & mails notifications; serv as dept resource person regarding circulation activities & genl info questions; enforces dept circulation procedures & regulations & SUL policies as well; checks patron ID for circulation of documents; assts in interviewing, hiring, & training student assistants & evaluates performance; schedules staff hrs at circulation desk; QUALIFICATIONS: typ 40; prev public serv exp; good organizational & clerical skills; reliability & punctuality; familiarity w/ WYLBUR or other word processing sys desirable; prev lib exp desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $892-935.

31167-PM (JCC:2462) OFFICE ASST III: Performs duties in Privileges Division of Access Services Dept; answer patrons' questions & makes approp directional/info'l referrals; interviews patrons to determine privileges needs; issues lib cards; accepts payments; takes appi for UC Berkeley/Stanford Coop Program cards; respon for opening/-closing procedures as assigned; organizes & maintains complex records, files, & statistical records; maintains sections of Privileges Manual; prov clerical assistance to Div Head; QUALIFICATIONS: typ 45; demonstrated clerical & organizational skills; prev public serv exp; ability to learn & interpret a large number of complex policies on lib privileges & fees; good commu skills; prev cash register exp desirable; knowl of standard offc machines & prev exp w/ automated lib offc processes desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B11; $1246-1310.

31433-PM (JCC:2696) MED SERV ASST IV: 8:30-5pm; respon for coordinating & supervising clerical functions that support patient care in Eye Clinic; performs & supv others in performing charge procedures, ordering lab tests, making patient appts, telephone commu, preparing med records & registration process; QUALIFICATIONS: typ 40; must have demonstrat supervisory ability; 2 yrs exp in a med setting; able to work in a high pressure situation; must have excel verbal & writing commu skills; contact: Vicki Stewart, A367 Boswell Bldg., 497-6323.; B14; $1440-1514.

31431-PM (JCC:2696) MED SERV ASST IV: 8:30-5:00; respon for coordinating & supervising the clerical functions that support patient care in ENT Clinic; performs & supv others in performing charge procedures, ordering lab tests, making patient appts, telephone commu, preparing med records & registration process; QUALIFICATIONS: 2 yrs exp in a med setting; demonstrated leadership ability; able to work in a high pressure situation; excel verbal & writing commu skills; contact: Vicki Stewart, A367 Boswell Bldg., 497-6323.; B14; $1440-1514.

31635-TC (JCC:6810) SOC SCI RES ASST I: 9-5:30 occasional wkend & evening hrs; coord screening & recruitment of potential subjs for sleep & neurobehavioral studies involving premature infants; conduct sleep observations of infants on and off waterbeds; perform data reduction & analysis by hand & w/ computers; prep manuscripts & grant applications; the ongoing research is done at Intensive Care Nurseries of Stanford Hospital & Kaiser-Permanente Med Ctr in Santa Clara; QUALIFICATIONS: typ 40+; BA or equiv exp; interest in developmental problems desirable; interest in developing computer & word-processing skills; well-organized; strong atten to details; commu effectively w/ a broad range of people; require a car to travel to Kaiser Hospital.; B12; $1310-1373.

Bargaining Unit

29759-DS (JCC:7654) CUSTODIAN: TMS Unit; 8-4:30; works under direct supvn; performs daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; 1 spot cleans, shampoos, waxes, & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift moderately heavy items, 25-75 lbs; ability to withstand extensive walking, pushing, pulling, stooping, & squatting.; A13; $ 6.68.

SLAC

94690-JM (JCC:8880) ELECTRONIC ENGINEER:
94691-JM (JCC:8880) ELECTRONIC ENGINEER: Hardware & software sys design of computer control & monitoring sys for linear accelerator; sys integration & field testing; design, develop't & testing of analog & digital circuits; design, planning, documentation of sys & training of field personnel; QUALIFICATIONS: BSEE (MSEE preferred) in electronics or computer sci or equiv; extensive exp in computer control sys; analog & digital design, particle accelerator control sys exp desirable; knowl of FORTRAN essential; assembly lang, Camac & multibus exp desirable; good oral & written commu skills; ability to effectively supv efforts of others.; C99; $2600-3800. APPLY AT SLAC

94695-JM (JCC:8880) ELECTRONIC ENGINEER: Design, construct, test, maintain & document radiation & electrical interlock sys for the accelerator, research area & storage ring facilities; supv electrical installers, electricians, mechanics & draftpersons; develop safety procedures, schedules, cost estimates & procurement; QUALIFICATIONS: BSEE or equiv; must have comprehensive knowl of fail-safe redundant circuit design w/ clear understanding of falure mode implications; familiar w/ National & Calif. codes & safety regulations; exp in lge accelerator environ desir; familiar w/solid state & electromechanical logic circuits; C99; $2200-3000; APPLY AT SLAC (854-3300 ext. 2353)

94644-JM (JCC:2462) OFFICE ASST III: Prepare & type travel expense reports applying approp policies, procedures & authorizations; typ reqs, advances, invoice & other forms; maintain files; asst w/ travel arrangements, quarterly reports, annual analyses & spec projs; serv as reference source on travel policies for personnel, visitors and/or guests; QUALIFICATIONS: accurate typing 50-65 wpm; good spelling & figure aptitude; knowl of 10-key calculator, intelligent typewriter (or willingness to learn); good understanding of filing tech; ability to work under pressure w/ frequent interruptions; ability to be tactful, discrete & exercise good judgment.; B11; $1246-1310. APPLY AT SLAC

91355-JM (JCC:5124) SCIENTIFIC PROGRAMMER IV:
91354-JM (JCC:5124) SCIENTIFIC PROGRAMMER IV: Specify, write, debug & support real-time FORTRAN applications programs for SLC control sys; programs incl control & monitoring of complex accelerator apparatus such as radio frequency klystrons, megawatt power supplies, beam monitoring instrumentation, etc; work w/ engrs, technicians & operations personnel performing on-line testing; QUALIFICATIONS: MSEE, MSCS, Ph.D. or equiv; thorough knowl of CAMAC sys & VAX VMS operating sys highly desirable; ability to independently & effectively commu w/ others.; C08; $2464-3848. APPLY AT SLAC

95572-JM (JCC:5284) COMPUTER OPR TRNEE: TMS Unit; rotating shift; 15 mon training program; operate peripheral units such as tape drives, disk drives, card readers, printers; monitor & report eqpt malfunctions & output errors; fulfill admin reporting requirements; QUALIFICATIONS: high school or equiv; some exp in computer facility working in dispatch, disk, tape area; must know how to clean eqpt, change printer ribbons/paper; good reading, oral & arithmetic skills.; A00; $1300. APPLY AT SLAC

95355-JM (JCC:6680) S&E TECH MECH: TMS Unit; monitor target status & record vital data in log book; fill, transport, connect, operate & service liquid hydrogen & nitrogen dewars; asst in construction, testing, installation & alignment of apparatus used w/ hydrogen targets; maintain eqpt; QUALIFICATIONS: requires basic training in engrg & scientific principles, math & related subjs equiv to technical, trade or vocational school; couple yrs of practical work exp; working knowl such as maintenance, troubleshooting, test, repair & modification of tech eqpt; proficient in use of standard hand tools, wrenches, drills, saws, etc; exp w/ vacuum sys, leak detectors & cryogenics desirable; able to qualify for gov't driver's license; ability to handle heavy eqpt.; A28; $ 1647. APPLY AT SLAC

94958-JM (JCC:6714) ACCELERATOR SYS OPR TR: TMS Unit; rotating shift; genl operation of complex research sys to establish, tune & maintain particle beams for physics experiments; correction & preventative maintenance of related eqpt; QUALIFICATIONS: AA degree in electronics or equiv; related exp desirable; aptitude for learning computer programming, operation & particle accelerator beam dynamics; ability to function in high stress environment.; A00; $1811. APPLY AT SLAC

91526-JM (JCC:6774) ELEC PROTOTYPE FAB: TMS Unit; perform work such as chassis & modular devices metal fabrication, electronic assembly, genl wiring, wirewrapping & breadboard circuits; use electrical, electronic & machine tooles; QUALIFICATIONS: ability to read schematic & logic diagrams, related component polarity & symbology; ability to originate wire lists fr prints, demonstrate proficiency in chassis layout, fabrication & wiring; basic math skills required to work w/ fractions, decimals & metric dimensions; basic knowl of printed circuit board design desirable; basic fundamentals of electronics theory mandatory w/ several yrs or related practical exp; practical & soldering test will be given.; A28; $1647. APPLY AT SLAC

Public meeting set May 27 on renovation of Inner Quad

A meeting to solicit public opinion about design of the upcoming Inner Quadrangle renovation will be held from noon to 2 p.m. Friday, May 27, in room 2 in the History Corner basement.

Part of the open planning process preceding the actual design phase, the session will feature a presentation by Anthony M. Guzzardo, the San Francisco landscape architect retained by the University as project designer. Guzzardo will present results of his preliminary site analysis, including surveys of existing conditions in the courtyard, behavioral and use characteristics of the area, and historical research.

Interested persons then will have an opportunity to address Guzzardo and the project's advisory committee on any aspect of the Inner Quad renovation, according to project manager Max Mazenko.

Other meetings are being scheduled with departments that surround the Inner Quad.

Mazenko said the meetings are being held "because of the special nature of the Inner Quad courtyard as the historical heart of the campus and because of the anticipated high level of community interest.

"Because the courtyard is the original campus 'commons space,' community input is regarded as vital to the planning and design process and development of a renovation plan which will be accepted by the community as a whole."

Specific design recommendations are expected from Guzzardo next autumn. Presentations of the design alternatives to the community and the Inner Quad neighbors are tentatively set for October.

Both oral and written statements are solicited for the May 27 meeting, Mazenko said.

The renovation project will include new paving and ground surfaces, landscaping and irrigation, lighting, and additional seating, using $1 million in anonymous gifts donated for that purpose.

When designing the University Frederick Law Olmsted recommended that the Inner Quad courtyard be paved with artificial paver blocks resembling granite. Instead, it was paved with bitumen, a forerunner of asphalt, and later covered with gravel. The rough surface has been a source of aggravation to many for nearly a century.

Olmsted also wanted seat-height edges around the eight planting circles. A Planning Office report last January advocated making the courtyard more of a "people space" where people could "stop, ponder, pause, sit, chat, and relax."

The Project Management Office, which will oversee the renovation, has appointed a resource advisory committee. Members are:

Pete Allen, University editor emeritus, representing the Stanford Historical Society; Dick Bennett, director of administration, Office of Development; Andy Doty, director of community relations, Public Affairs; Douglas Kessler, student; Paul Turner, assoc. professor of art, author of books and articles about the University's planning and architecture; Michael Wade, student; and Phil Williams, director of planning.

Staff members may audit selected classes at night in summer quarter

Summer quarter provides the opportunity for Stanford staff members to audit a number of evening classes free of charge through the Staff Summer Auditing Program.

In general, auditing is a passive function, but active participation in the class is possible at the instructor's invitation and may even be required in some classes. Auditors earn no academic credit and no records are maintained for them.

The following classes are open to staff auditors this summer. All daytime classes and evening classes with formats which are inappropriate for auditing are excluded.

* Engineering 205. International Telecommunication Agreements, W 7-9 p.m.
* English 138/238A. Impressionist Novel: James to Hawkes, MW 7-9 p.m.
* History 168. American History in Film: WWII to Present, T 7-10 p.m., TH 7-9 p.m.
* Psychology 117S. The Disabling Society: Social Psychology of Physical Differences and Disabilities, T 7:30-9:30 p.m., TH 7:30-8:45 p.m.
* Sociology 113. The Family in Transition, W 7-10 p.m.
* Statistics 60. Introduction to Statistical Methods, TTH 7-9:15 p.m.
* Undergrad Special 34. History of Jazz, W 7-9 p.m.

These are all eight-week classes; summer quarter runs from June 20 to August 13. Detailed course descriptions appear in the Summer Session *Bulletin* which may be obtained at the Special Registration window in the Old Union or by calling the Summer Session Office (7-3109).

Staff wishing to audit should complete the application form in the *Bulletin* for *graduate students and persons over 25* and indicate the course number(s) on the tentative study list. Completed applications should be sent to Katie Adler, Summer Session Office, Building 1. The deadline for application is June 3. Applications will be considered on a first come, first served basis, and applicants will be notified of instructor approval and space available by June 15.

All questions regarding the Staff Summer Auditing Program should be directed to the Summer Session Office.

Blood Bank adjoins Mem Chu Sunday

Blood is like a parachute—if it's not there when you need it, chances are you'll never need it again.

The Stanford University Blood Bank will have a blood drive 12:15-3 p.m. Sunday, May 22, in Room 61A of the Inner Quad (next to Memorial Church).

Sign-ups will be taken after Sunday services or call the Blood Bank, 497-7831, or Memorial Church, 497-1762, for an appointment. Walk-ins will be welcome too.

Ph.D. oral exams

THURSDAY, MAY 19

Toshimasa Oyama, materials science and engineering, "Processing and Properties of Ultrahigh Carbon Steels," 2:30 p.m., 550A Peterson Bldg. **Sarahelen Thompson**, food research, "Price Performance in Thin Markets," 9:30 a.m., 214 Food Research Institute.

FRIDAY, MAY 20

Hisham Z. Massoud, electrical engineering, "Thermal Oxidation of Silicon in Dry Oxygen: Growth Kinetics and Change Characterization in the Thin Regime," 10 a.m., Applied Elec. Labs. AEL 109. **Stephan G. Regulinski**, engineering-economic systems, "R&D Portfolio Selection," 2:15 p.m., Terman 329.

MONDAY, MAY 23

Rajeev Batra, business, " 'Low Involvement' Message Reception—Processes and Advertising Implications," 2:15 p.m., 243 Graduate School of Business. **Richard J. Gerrig**, psychology, "Lexical Innovations and Theories of Comprehension," 3 p.m., 358 Jordan Hall. **Doug Morgan**, electrical engineering, 4:15 p.m., Mc 127. **David Oyibo Ogbe**, petroleum engineering, "Pulse Testing in the Presence of Wellbore Storage and Skin Effects," 2:15 p.m., Mitchell 350.

TUESDAY, MAY 24

Emilio Antunez, petroleum engineering, "Single Well Tracer Test Studies," 2:15 p.m., Mitchell 350. **Pieter G. Buning**, aeronautics and astronautics, "Computation of Inviscid Transonic Flow Using Flux Vector Splitting in Generalized Coordinates," 4:15 p.m., Materials Science, Room 550A, Durand 450. **Helen Cunningham**, psychology, "Children's Motor Programming and Spatial Representation Skills," 3 p.m., 358 Jordan Hall. **Yoshihiro Iwasaki**, food research, "International Transmission of Inflation to the Developing Countries: An Application of the Scandinavian Model," 2:15 p.m., Room 214 Food Research Institute. **Thao N. Nguyen**, electrical engineering, "Physics and Modeling of Short-Channel Effects in Surface—and Buried-Channel MOSFETs," 1:15 p.m., AEL 109. **Eugene Sidney Schweig III**, geology, "Neogene Tectonics and Paleogeography of the Southwest Great Basin, California," 1:15 p.m., 61G, Bldg. 60. **John L. Shefelbine**, education and psychology, "Learning Word Meanings from Text Context," 2:15 p.m., e114 Education Bldg. (Cubberley). **Ruth J. Williams**, mathematics, "Brownian Motion in a Wedge with Oblique Reflection at the Boundary," 1:45 p.m., 383N (Mathematics Bldg.). **You-Wen Yau**, applied physics, "Generation and Applications of Finely Focused Low Energy Electron Beams," 2 p.m., McCullough Building, Room 240.

WEDNESDAY, MAY 25

Les Atlas, electrical engineering and speech and hearing sciences, "Speech Processor Design Considerations for an Auditory Prosthesis," 4 p.m., AEL 109. **Charles Lincoln Ballard**, economics, "Evaluation of the Consumption Tax with Dynamic General Equilibrium Models," 3 p.m., Bldg. 20-21B. **Marjorie Ellen Foddy**, mathematics, "An Analytic Solution for the Stationary Distribution of Reflected Brownian Motion with Drift Confined to a Quadrant by Oblique Reflection," 2:15 p.m., Math Bldg., Room 383N. **Susan Holloway**, education and psychology, "Mothers' Attributions Regarding Math: Formation and Consequences for Children's Motivation," 2:15 p.m., e114 Education Bldg. (Cubberley). **William Newton Suter**, education, "An Experimental Investigation of Correlational Bias in Students' Ratings of Teaching Effectiveness," 9:30 a.m., e114 Education Bldg. (Cubberley).

THURSDAY, MAY 26

Pamela Clark Brown, engineering-economic systems, "Design of Incentive-Compatible Procurement Contracts that Allow Risk-Sharing," 9:30 a.m., Terman 329. **David Charles Dobson**, geology, 2:15 p.m., Room 326 (Department of Geology). **Kristina M. Johnson**, electrical engineering, "A Study of Reciprocity Law Failure in Multiple Exposure Holography, with Applications to the Display of Medical Data," 4:15 p.m., McCullough Room 134. **George J. Mergos**, food research, "Prices, Technology, and Derived Demand for Grains: An Econometric Model of Feed Substitution Responses," 11 a.m., 214 Food Research Institute. **Christine E. Miller**, mechanical engineering, "Static Point-Load Measurements of Basilar Membrane Compliance," 4:15 p.m., Skilling Auditorium. **Bizhan G. Moslehi**, mechanical engineering, "Electromechanics and Electrical Breakdown of Particulate Layers," 9 a.m., HTGL Conference Room, Bldg. 520, Room G.

FRIDAY, MAY 27

Susan Bryan, English, "American Literature (1840-1940)," 2:15 p.m., Bldg. 1, Room 2-B. **Robert Bunge**, history, 3 p.m., Bolivar House. **John Lawrence Dunec**, aeronautics and astronautics, "Development and Perturbation Analysis of Model Stochastic Equations for Global Circulation," 2:15 p.m., Room 450 Durand. **Ellen Palmer Francik**, psychology, "Referential Choice and Narrative Structure," 9 a.m., 358 Jordan Hall (Bldg. 420). **Bruce A. Harvey**, English, "19th Century British Literature," 2:15 p.m., Bldg. 40, Room 41-F. **Kyttack Hong**, economics, "Monetary Policies in Semi-Industrial Countries: Theory and Evidence from Korea and Taiwan," 2:15 p.m., 414 Encina Hall. **William H. Magruder**, biological sciences, "Fertilization, Reproduction, and Life History of the Red Alga *Callithamnion neglectum*," 2:15 p.m., Terman 105. **Brian Daniel Mariani**, biological sciences, "Expression and Replication of the Dihydrofolate Reductase Gene in the Cell Cycle," 2:15 p.m. T-175 Herrin Labs. **Steven Arthur Newton**, applied physics, "Optical Fiber Delay Line Signal Processing," 2:15 p.m., Applied Physics 200. **Gail Adrianne Perez**, English, "Renaissance Literature (1509-1640)," 2:15 p.m., Bldg. 70, 71E (Professor Ryan's Office). **Michael Gary Prisant**, chemistry, "Studies in the Reaction Dynamics of Beam-Gas Chemiluminescent Reactions," 2:15 p.m., Chemistry Gazebo. **Andrew Edmund Scharlach**, psychology, "Filial Responsibility of Women Toward Their Elderly Mothers," 3:15 p.m., 358 Bldg. 420. **Elaine Vaughan**, psychology, "Effects of Perceived Familiarity and Personal Relevance on the Assessment and Acceptability of Risk: Implications for the 'Expert' Decision Maker," 10 a.m., Bldg. 420, Room 371.

MFA student exhibit at Art Gallery

An exhibition of paintings, sculptures, and photographs by four students who have completed the requirements for the Master of Fine Arts degree at Stanford opened Tuesday, May 17, in the Stanford Art Gallery.

Daniel Phill, a graduate of Washington State University, shows abstract paintings that combine, according to the painter, "freely painted surfaces as well as areas treated with refinement and precision." Color plays an important role in animating Phill's abstract forms.

Steven Schloemer, who came to Stanford from the University of Iowa, shows large expressionist oil paintings. Themes are drawn largely from his experiences as a commercial fisherman in the waters off the Northern California coast. Many of the paintings refer to a type of abstracted figuration, often human in its connotations, though rarely specific in its associative meanings.

The sculptor in the group, Alec MacLeod, describes his work as conceptual, yet imbued with "ethical and personal themes in a simultaneously satirical and romantic manner." MacLeod received his bachelor's degree from Hampshire College in Amherst, Mass.

Tony Grant, the photographer, exhibits 35 photographs. He studied as an undergraduate at UCLA with Lee Friedlander and like Friedlander, is "interested in picturing people and peopled things."

The four artists have studied, respectively, with Frank Lobdell, Richard Randell, and Laura Volkerding of the Department of Art.

The MFA exhibition runs through Sunday, June 12. The Art Gallery, on the Stanford campus next to the Cummings Art Building, is open Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday, from 1 to 5 p.m. It is closed on Mondays. Admission is free.

Dramatists slate *Getting Out*

Pulitzer-prize-winning playwright Marsha Norman's first play, "Getting Out," will be presented at 8 p.m. Wednesday through Saturday, May 25-28, in the Nitery Theater on Stanford campus.

Directed by second-year drama doctoral student Johanna Dickey, the production is a presentation of the Drama Department's Graduate Directing Workshop.

Beginning at 7:30 p.m. each evening, free programs which serve as the "ticket" of admission will be distributed to the first 100 persons at the Nitery.

Norman won the Pulitzer this year for her play "Night, Mother," which is currently running on Broadway. It has been nominated for a Tony award. Her latest play, "Hold Up," is currently being performed in San Francisco by the American Conservatory Theatre.

"Getting Out" is a play about a woman who has spent most of her adolescence in prison. The action begins the day she is released. The play uses flashbacks and two actresses play the leading role.

Lisa Glass, playing Arlene in the present, must confront the "outside" world and come to grips with her uncertain and far from glowing future.

Her past is revealed as Arlie (Arlene's younger self), played by Terra Vandergaw, lives out her prison experience with all its graphic horror.

The process of "getting out" is the maturation of Arlene and the reconciliation of her two selves, as she becomes free of her past and is able to face the future.

'Beyond War' film series

"Beyond War," a series of three free films, will be shown at Stanford under the sponsorship of six faculty and staff members.

"Race to Oblivion," a new film by Physicians for Social Responsibility, will be shown at noon Wednesday, May 18, in Skilling 193.

"No Frames, No Boundaries" will be shown at noon Tuesday, May 24, in GSB 82 and at noon Wednesday, May 25, in Skilling 193.

"What About the Russians?" which includes interviews with SALT II negotiator Paul Warnke and Admiral Gene LaRocque will be shown at noon Tuesday, May 31, in GSB 82 and at noon Wednesday, June 1, in Skilling 193.

Sponsors of the series are Profs. Martin Hellman and Malcolm McWhorter and Dick Lagerstrom, Jerry Ostrander, Ed Scoles, and Gary Williams.

I-Center to show *Waiting for Fidel*

Cuba is in the spotlight this week in the Other Culture Film Series. "Waiting for Fidel" will be shown at 7:30 p.m. Thursday, May 19, at the International Center.

Viewers find themselves inside Cuba with a movie-making trio whose hope is that Fidel himself will star in their film. The filmmakers are former Newfoundland premier Joseph Smallwood, radio and television station owner Geoff Stirling, and NFB film director Michael Rubbo, a Stanford graduate.

What happens while this unusual film crew awaits its star shows a good deal of the new Cuba and also of the three Canadians who chose to film the island.

The film is free and open to the public. A 75 cent donation will be requested to help defray the costs of the series. Stay for fresh pastries and coffee at the I-Center's "Cafe" after the film.

Singers, Band set joint concert

The Stanford Music Department's Early Music Singers and Renaissance Wind Band will perform Franco-Flemish music of the Renaissance in a free joint concert at 8 p.m. Tuesday, May 24, in Memorial Church. The Singers are directed by William Mahrt; the Band by Herbert Myers.

Featured work on the program will be a Mass by Josquin DesPrez based on the "L'Homme arme" tune performed by the Early Music Singers. Josquin's work is a particularly famous one, in which the secular song warning against the "armed man" is placed in a different key for each movement.

The Renaissance Wind Band will play settings of courtly songs for various instruments and humorous tunes by German contemporaries of Josquin.



Kay Bedenbaugh

Kay Bedenbaugh piano recital set

The Music Department will present DMA candidate Kay Bedenbaugh in a free piano recital at 4 p.m. Sunday, May 29, in Tresidder Lounge. She studies with Adolph Baller.

Bedenbaugh will perform *Fifteen Hungarian Peasant Songs* by Bartok, *Sonata in F minor, "Appassionata"* by Beethoven, *Three Intermezzi, op. 117* by Brahms, Haydn's *Sonata in G Major*, and *Ballade in f minor, op. 52* by Chopin.

Bedenbaugh received a Bachelor of Music degree from Birmingham-Southern College in Alabama and a Master of Music degree from Juilliard, where she was a scholarship student of William Masselos.

She recently returned from London where she studied at the Royal Academy of Music on an International Rotary Fellowship. While in London, Bedenbaugh gave solo recitals at the Royal Albert Hall and Queen Elizabeth Hall, and was heard on Capital Radio.

Bing Fair this Sunday

Bing Nursery School will hold its eighth annual Bing Fair between 11 a.m. and 3 p.m. Sunday, May 22, at the School, 850 Escondido Road.

The event offers games and activities for children two to eight years old. The tots may enjoy puppet shows, clowns, helium balloons, face painting, and a wide selection of children's handicrafts.

There will be hot dogs, a creperie, and the traditional array of foreign foods prepared by Bing families.

Job Spring Jazz concert Saturday

Saturday, May 21, Student Arts at Stanford (STARTS) in conjunction with the Stanford Jazz Workshop will present the 3rd annual Joy Spring Jazz concert—an afternoon of free jazz entertainment on the front patio of Tresidder Union.

This year's concert features Stanford's own Adlai Alexander Band at noon, and Bay Bop at 1:15 p.m. The Mark Levine Quintet will perform at 3 p.m. Pianist, composer, and valve trombonist Levine recently released his first album, "Up Till Now," on Catalyst Records.

The music for this performance is funded in part by U.S. recording companies as arranged for by the Music Performance Trust Fund (MPTF) and the National Association of Jazz Educators (NAJE).

Lectures

Wisse on Sholom

Prof. Ruth Wisse, visiting professor of Jewish civilization from McGill University in Canada, will speak on "Sholom Aleichem at Stanford" at 4 p.m. Sunday, May 22, in Room 270 Tresidder Union.

Wisse, a professor of literature in the Department of Jewish Studies at McGill, is known as a foremost teacher of Yiddish literature. At Stanford she is teaching two courses—Humor, Realism, and Fantasy in Yiddish literature, and The Modern Jewish Short Story.

Wisse is the author of *The Schlemiel as a Modern Hero* and coeditor with Irving Howe of *The Best of Sholom Aleichem*. She also is a frequent contributor to *Commentary* magazine.

Her lecture is part of the visiting professorship sponsored by the Endowment Fund of the Jewish Community Federation.

Human rights talk

"Human Rights in the '80s" is the title of an address to be presented by Law Prof. John Barton at noon Tuesday, May 24, at Bechtel International Center.

Barton, a graduate of Stanford Law School, acquired his bachelor of science degree in philosophy and physics from Marquette University in 1958. He practiced law in Washington, D.C., before coming to Stanford's law faculty in 1969.

His principle subjects are arms control, contracts, international business transactions, and international human rights.

Barton's talk is the last in the regular Tuesday Luncheon/Lecture series at the International Center for this academic year.

Luncheon tickets are available at a cost of $2.50 one week before the event at the I-Center office on the second floor, or at the door as they last. Brown baggers are also welcome at no charge.

Research management

"Science and Engineering Research—Its Management" will be the topic for a panel discussion at 4:15 p.m., Thursday, May 26, in Room 420-041 (entrance in the basement of the Math Department).

Discussants will be June Anderson, manager of disk materials product engineering at IBM General Products Division; Ruth Havemeyer, director of research administration at Syntex; and Lynn Roylance, project manager at Hewlett-Packard Laboratories.

The event is sponsored by WISE—Stanford Women in Science and Engineering—the last of a spring quarter series designed to promote interdisciplinary discussion among women.

The formal presentations are followed by informal discussion over refreshments.

Hamlet's Doubles

Distinguished English critic Frank Kermode will speak on "Hamlet's Doubles" at 4:15 p.m., Thursday, May 26, in Annenberg Auditorium.

Kermode, a professor of English at Columbia University, is the former King Edward VII Professor of English at Cambridge University. His talk, which is open to all, is sponsored by the English Department, the Stanford Humanities Center, and University Events and Services.



Windham Hill: l to r Ira Stein, piano; Daniel Kennedy, percussion; Russel Walder, oboe

Windham Hill artists play for KZSU

Windham Hill recording artists Ira Stein, piano, and Russel Walder, oboe, will perform with their new percussionist Daniel Kennedy at 8 p.m. Wednesday, May 25, in Dinkelspiel Auditorium.

The concert is a benefit for Stanford student radio station KZSU.

The original duo, Stein and Walder, have had a successful debut album called "Elements." Kennedy's work on tabla and conga provides an energetic base to the lyrical sounds of those pieces.

Stein and Walder recently performed with George Winston and Will Ackerman at Davies Symphony Hall in San Francisco.

Tickets for the Stanford concert are $6 in advance (Tresidder Ticket Office and all BASS outlets) and $6.50 at the door.

Top student pianist plans concert

The Stanford Music Department presents pianist Alan Gampel in a free solo recital at 8 p.m. Saturday, May 28, in Dinkelspiel Auditorium.

Gampel, a sophomore, recently received the Peter Rosenthal award for the undergraduate student in the Music Department most gifted in piano.

After his performance of Rachmaninoff's *Piano Concerto No 2* in November, the *Peninsula Times-Tribune* wrote: "Standing ovations are not as common as they once were, but the audience rose spontaneously to applaud the brilliant performance of the concerto."

Gampel's May 28 recital will include Sonatas in C minor and E Major by Scarlatti, three Preludes from Book II by Debussy, *Sonata, op. 110* by Beethoven, and Schumann's *Carnaval*. Gampel studies piano with Adolph Baller.

In March, Gampel performed Tchaikovsky's *Piano Concerto No. 1* with the Fremont-Newark Philharmonic to outstanding reviews in *The Argus*: "Sunday afternoon's crowd. . .witnessed a spectacularly brilliant performance of this monumental work. The local audience is notoriously generous with its standing ovations, but this time, for Alan Gampel, the ultimate tribute was quite justified."

Gampel has won many awards and scholarships, among them first place in the Music Teacher's Association of California Piano Concerto and Solo Competitions and a Presidential Scholars Award.



Alan Gampel

Symposium on 'Resistance' honors Marcuse May 20-21

The African Studies Center at Stanford will host a free public symposium on "Resistance: Studies in African, Caribbean-Latin American and Afro-American History" Friday and Saturday, May 20-21.

The conference marks the 40th anniversary of the publication of *American Negro Slave Revolts*, a pioneering study by Herbert Aptheker, ethnic studies scholar at the University of Santa Clara.

Editor of *The Complete Published Writings of W.E.B. Du Bois*, Aptheker will be one of 11 scholars presenting papers for subsequent publication. The others are:

John H. Bracey, Jr. Afro-American studies, University of Massachusetts-Amherst, author of 10 books including *Black Nationalism in America*;

Michael Craton, history, University of Waterloo, Canada, author of *Testing the Chains*;

Elizabeth Fox-Genovese, history, SUNY-Binghamton, first secretary of the Coalition for Women in the Humanities and Social Sciences and coauthor of *The Fruits of Merchant Capital*;

Eugene D. Genovese, history, University of Rochester, author of *The Political Economy of Slavery From Rebellion to Revolution*, and *Roll, Jordan, Roll*, among others;

Vincent Harding, Iliff School of Theology, University of Colorado, coeditor of *The Slave Trade and Slavery* and author of *The Other American Revolution*;

Paul E. Lovejoy, history, York University, Canada, editor of *The Ideology of Slavery in Africa* and *Transformations in Slavery: A History of Slavery in Africa*;

Terence Ranger, history, University of Manchester, former president of the African Studies Association of the United Kingdom, and author of *Revolt in Southern Rhodesia, 1896-97* and *The African Voice in Southern Rhodesia, 1898-1930*;

Leslie B. Rout, Jr., history, Michigan State University, author of *The African Experience in Spanish America: 1502 to the Present*;

Herbert Shapiro, history, University of Cincinnati, author of a recent critique, "Eugene Genovese, Marxism, and the Study of Slavery;" and

Rosalyn M. Terborg-Penn, history, Morgan State University, cofounder of the Association of Black Women Historians and coeditor of *The Afro-American Woman: Struggles and Images*.

Directed by Gary Y. Okihiro of the University of Santa Clara and Joel Samoff of Stanford, the conference will meet in the Sherman Fairchild Center of the Medical Center May 20 and in Room 112 of the CERAS Building May 21.

Contributors in support of the program include the Ethnic Studies Program, University of Santa Clara; the UC-Stanford Joint Center for African Studies; and the International and Comparative Studies Program, UC-Santa Cruz. Additional funding comes from the California Humanities Council and the National Endowment for the Humanities.

For further information call the African Studies Center at (415) 497-0295.

Chamber Orchestra to play May 27

Stanford's Chamber Orchestra will present works by Haydn, Stravinsky, and Walton at 8 p.m. Friday, May 27, in Dinkelspiel Auditorium.

Doctoral candidate Eric Kujawsky will conduct Haydn's *Symphony No. 82 in C Major, "The Bear"*—one of Haydn's most popular symphonies.

Doctoral candidate Chris Christensen will conduct two 20th-century works: *Concerto in E-flat Major, "Dumbarton Oaks"* by Stravinsky and *Facade* by William Walton.

Robert Woods Bliss, owner of the Dumbarton Oaks estate in Washington, D.C., commissioned Stravinsky's concerto and sponsored its first performance there in 1938. Stravinsky studied and played music by Bach while composing the piece, and it shows the influence of Bach's third Brandenburg Concerto in particular.

Facade, as originally composed in 1923, was designed to accompany nonsense verse by Edith Sitwell, a good friend of Walton's. Walton subsequently revised it as both a ballet score and a work for full orchestra. The Stanford Chamber Orchestra will perform it as originally intended, with Jane Boothroyd reciting.

Conductor Christensen, son of Lew Christensen (codirector of the San Francisco Ballet), describes Walton's 21-movement work as a "jazzy novelty piece." He is dedicating this performance to the composer, who died last month.

Tickets for the May 27 concert are $4 general, $2 students and senior citizens.

Donna Ornitz to give flute concert

The Stanford Department of Music presents flutist Donna Ornitz in a free recital at 8 p.m. Wednesday, May 25, in Tresidder Lounge. She will be accompanied by pianists Ikuko Fukui and Akimichi Takemura.

Ornitz will perform Platti's *Sonata in G Major, Sonatine* by Dutilleux, *Fantaisie* by Gaubert, *Andante and Rondo for two flutes* by Doppler, and *Sonata in A Major* by Franck. Flutist Kathryn Barnard will join her for the Doppler duo.

Ornitz is a senior majoring in biology. She plans to go to medical school. A student of flute teacher Frances Blaisdell, Ornitz will probably attend a music school this summer. She is a member of Stanford's ski team and Band.



Donna Ornitz

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., May 18, to cover the week of Mon., May 30, through Sun., June 5. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

MONDAY, MAY 23

Center for East Asian Studies Bag Lunch: "Nominalization and Subordination in Classical Chinese," by Prof. Christolph Harbsmeier, University of Oslo. Noon. Asian Language Lounge.

Numerical Analysis Seminar: "The Probability of a Numerical Analysis Problem Being Difficult," with Jim Demmel from U.C. Berkeley. 4:15 p.m. Room 380C, Math Corner.

Slavic Dept. Lecture: "Tartu Semiotics School as a Social Institution," by Prof. Boris Gasparov. 4:15 p.m. Bldg. 200, Room 34.

Biological Science Seminar: "Regulation of Yeast Histone mRNA," by Dr. Lynna Hereford, Dana-Farber Cancer Institute, Boston, Mass. 4:15 p.m. Room T-175, Herrin Hall.

STARTS Presents Katherine Hepurn & Spencer Tracy in: "Adam's Rib," about a dual-career couple and female equality. 7 p.m. & 9 p.m. Tresidder Room 270. $2 students, faculty and staff, $3.

TUESDAY, MAY 24

Bechtel International Center Tuesday Luncheon/Lecture Series: "Human Rights and International Migrations," by John Barton, Stanford Law Professor. Noon. I-Center. $2.50 for hot lunch, brown-baggers welcome at no charge.

Learning About Racism Lunch Series: Workshop on Unlearning Racism. Bring a bag lunch or arrange to eat at Casa Zapata. Noon. Casa Zapata Dining Room.

Center for East Asian Studies Film: "Misunderstanding China," directed by Irv Drasnin, narrated by Charles Kuralt. An excellent historical presentation of how Americans have viewed China, illustrated through old film clips, comics, newsreels, etc. Noon. Room 241, Lou Henry Hoover Bldg.

Computer Science Colloquium: "How Fast Can a Single Instruction Counter Machine Execute?," by Tilak Agerwala, IBM T.J. Watson Research Center, Yorktown Heights, New York. 4:15 p.m. Skilling Aud.

Applied Mechanics Seminar: "Computation of Inviscid Transonic Flow Using Vector Splitting," with Pieter Buning, graduate student in Aeronautics & Astronautics. 4:15 p.m. Materials Science Room 550a.

Center for East Asian Studies Colloquium: Dr. Lin Ke, Institute of World Economics and Politics, Chinese Academy of Social Sciences will speak on Chinese and American economic issues. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

S.O.A.R: American Youth Hostel Slide Show. 7 p.m. Tresidder Union, Rm. 271.

Music Dept. Concert: Early Music Singers & Renaissance Wind Band. William Mahrt & Herbert Myers, directors Franco-Flemish music of the Renaissance. 8 p.m. Memorial Church. Free.

WEDNESDAY, MAY 25

Latin American Studies Lecture: "The Mexican Corporatist State and Public Policy Formation in Education," with Carlos Alberto Torres, Ph.D. candidate, SIDEC. Noon. Bolivar House.

CROW Lecture: "What Is Female Sexuality?" by Marilyn Safir, senior lecturer in psychology, Univ. of Haifa. Noon. Terman Aud.

Structural Biology Seminar: "Three Crystal Structures for Citrate Synthase: Catalytic Activity Requires Large-Scale Conformational Changes," by Dr. James Remington, Institute for Molecular Biology, University of Oregon. Noon. Fairchild Bldg., Room D102.

Chemical Engineering Colloquium: "Models of a Porous Solid Undergoing Reaction," by Prof. George R. Gavalas, Dept. of Chemical Engineering, Caltech. 4:15 p.m. Chemical Engineering Conference Room.

Music Dept. Concert: Donna Ornitz, flute. Works by Franck, Gaubert, Bach, Martinu. 8 p.m. Tresidder Lounge. free.

THURSDAY, MAY 26

Theology & Natural Science Lunch Series: "Certainty in Science & Theology," by Robert Hamerton-Kelly, Dean of Memorial Church, and Sidney Drell, Deputy Director of SLAC. Noon. Otero Dining Room, Wilbur Hall.

Stanford Women in Science & Engineering: "Science & Engineering Research: Its Management". June Anderson, Manager, IBM Research; Ruth Havemeyer, Director of Research Administration, Syntex; Lynn Roylance, Project Manager, Hewlett Packard Labs. 4:15 p.m. Building 420, Room 041 (Enter through Math Dept. basement).

Center for East Asian Studies: "The Problem of National Identity in Medieval Korea," by Prof. Michael Rogers, Dept. of Oriental Languages, U.C. Berkeley. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

Solid Mechanics Seminar: "Measurement of Basilar Membrane Compliance," with Christine E. Miller, graduate student in Applied Mechanics. 4:15 p.m. Skilling Aud.

Industrial Engineering Symposium: "Alternative Methods of Public Decisions," with Dr. Lee Merkhofer, SRI International. 4:15 p.m. Terman Aud.

Condensed Matter Physics Seminar: "Phase Diagrams of Spin Glasses," by M. Gabay, Ecole Normale Superieure, Paris, and University of California, Berkeley. 4:15 p.m. Applied Physics 200.

"Other Cultures" Film Series: "Faces of Man, Faces of France," and "Two French Families". A visit to five families, each in a different region and each with a distinct mode of living. The different regions shown are Brittany, Marseilles, the Alps, Loire Valley, and Paris. "Two French Families" looks at the life styles of a a traditional large farming family and a young urban couple with one child in Paris. 7:30. Bechtel International Center. 75 cent donation requested.

La Casa Italiana Panel Discussion: "Contemporary Italian Poetry," with Beverly Allen, Luigi Ballerini and Paul Vangelisti. 7:30 p.m. La Casa Italiana.

FRIDAY, MAY 27

Mathematics Dept. Lecture: "Some Free-Boundary Problems," with Erik Hansen, from Technical University, Lyngby, Denmark. 3:15 p.m. Room 380-C, Math. Bldg. 380.

Dept. Concert: Stanford Chamber Orchestra. Haydn-Symphony No. 82 in C Major, "The Bear";Stravinsky-Concerto in E-flat Major, "Dumbarton Oaks"; Walton-Facade, with poetry of Edith Sitwell. 8 p.m. Dinkelspiel Aud. $4/$2.

Stanford Society of the Archaelogical Institute of America: "New Excavations in the Fayum," by Wilfred Griggs of Brigham Young Univ. 8:15 p.m. Room 370.

STARTS/Coffee House: Elements: Russ Walder and Ira Stein. Windham Hill recording artists perform pieces from their celebrated debut album, "Elements". 9-12 p.m. Coffee House. Free.

SATURDAY, MAY 28

Applied Physics Colloquium: "New Systems for Imaging Below 500 A.," by Prof. C.F. Quate, Applied Physics & EE Depts., Stanford. 4:15 p.m. Applied Physics 200.

Music Dept. Concert: Alan Gampel. piano. Works by Scarlatti, Beethoven, Brahms, Schu Chopin. 8 p.m. Dinkelpiel Aud. Free.

SUNDAY, MAY 29

University Public Worship: Preacher: Wendy Smith, Assoc. Dean of the Chapel. 11 a.m. Memorial Church.

Music Dept. Concert: Kay Bedenbaugh, piano. Bartok-15 Hungarian Peasant Songs; Beethoven-Sonata op. 57 ,"Appassionata"; Ravel-Valse Nobles et Sentimentales; Brahms-Three Intermezzi, op. 117; Chopin- Ballade in F minor,op. 52. 4 p.m. Tresidder Lounge. Free.

ASSU Sunday Flicks: "An Officer and a Gentleman". 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. Louis Lurie Rotunda, Green Library. April 25 - June 30.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

Lorraine Schreiber, watercolor paintings. I-Center. May 4 - May 30.

Master of Fine Arts Exhibition. Tues.-Fri.: 10 to 5 p.m.; Sat. & Sun. 1 to 5 p.m. Stanford Art Gallery (next to Cummings Art Bldg.). May 17 - June 14.

Works by Graduate Students in the M.F.A. Program at Stanford. Art Gallery. May 17 - June 12.

Electronic news goes on display at Tresidder



Tresidder Union has joined more than 80 university and college unions in the U.S. with the recent installation of an electronic message center in the first floor dining area.

The electronic display board transmits news, sports, and campus information (plus a few commercials)—and University departments and student organizations can have their own messages added at no cost.

The electronic message center is on-line with a central computer in Dallas, Texas, which transmits the eight-minute segments that run each day.

Ad segments for campus-wide events and services of general interest to the Stanford community will be reserved on a first-come, first-served basis.

Blank message forms are available at the Tresidder Information Desk—the forms must be turned in two weeks prior to the week in which the ad segment is to appear.

For more information on how to display a free ad segment for your organization or department, call 497-4311.

CAMPUS REPORT

Volume XV, Number 34 | A publication for Stanford University faculty & staff | May 25, 1983

DeLauer says CIS provides model of U.S.

The U.S. plans to stay ahead of the Japanese with a new Defense Department supercomputer project, a key official said Thursday, May 19, at Stanford.

"I call it the 'N' generation computer. . . the Japanese plus one," said Richard DeLauer, undersecretary of defense for research and development.

"If they have six (generations), we'll have seven. It's going to be configured exactly the same way" as Stanford's new Center for Integrated Systems, a joint government-university-industry effort to maintain world leadership in electrical engineering, computer science, materials science, and related fields.

"The Defense Department can fund the leading edge, industry can fund the institution on a continuing basis, with a university that can supply the best minds and in such a way that we can rapidly introduce this into the general economy."

The "N" generation computer has military objectives, DeLauer said. "I want to make it clear our job is to spend taxpayers dollars for security. We want to spend it smart enough to flow out into the economy."

The supercomputer will have "three orders of magnitude over existing systems as far as speed is concerned," he added. "Right now it's in a five-year plan to match the Japanese dollar for dollar. I think we'll be able to do it if we're smart."

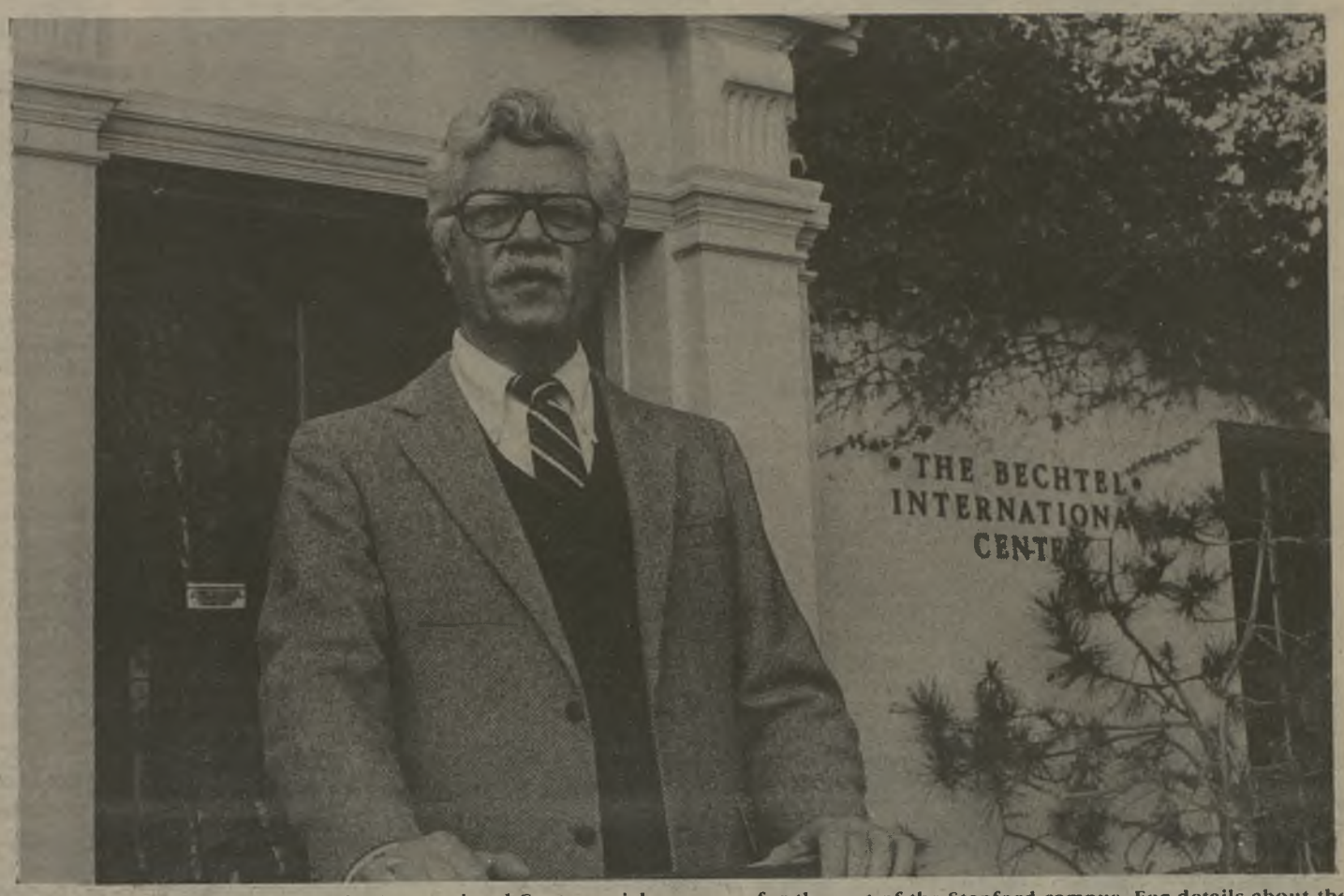
IBM plans to join the superconductor project, he added. "That's like having Catholic services at a synagogue—we're getting together. . . . Joshua Lederberg (Nobel Laureate formerly at Stanford) said we can't leave Rockefeller (University) out."

The whole "very exciting" venture "started with CIS" at Stanford, he said. DeLauer, then at TRW; Robert Noyce, of Intel; George Pake, of Xerox; and John Young, of Hewlett-Packard; were instrumental in getting 19 firms to provide $750,000 each for the CIS, which celebrated its formal groundbreaking Thursday.

DeLauer, a Stanford alum who cochairs a Defense Department-universities committee with Stanford President Donald Kennedy, said the

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Director Lee Zeigler considers the International Center a rich resource for the rest of the Stanford campus. For details about the staff, the activities, and the volunteers, see page 10.

131 faculty sign counter-petition on Hoover

Working single-handedly, a conservative Stanford professor has obtained 131 faculty signatures on a petition opposing an investigation of alleged partisanship by the Hoover Institution as a "grave threat. . .to academic freedom."

Prof. Alphonse Juilland, French and Italian, says the widespread support "proves this is not a dispute between the Stanford faculty and the Hoover Institution, as has been presented in the news media. . . . The faculty does *not* want an investigation. "Stanford has about 1,100 faculty members.

The Faculty Senate Thursday, May 26, will discuss a petition signed by 84 faculty, including 76 whose names were made public, asking that the Board of Trustees "initiate an immediate and independent inquiry, including a public report, on the relationship between the Hoover Institution and Stanford University."

Juilland charged that Profs. John F. Manley, political science, and Ronald Rebholz, English, speak for "quite a meager fringe" of "ultra-liberals."

Contrary to Juilland's petition, Manley and Rebholz argue that "we are not proposing an inquiry into the political orientation of Hoover—that seems generally well established; rather we are proposing a debate over the proper relationship between Hoover as a political research institution and the University. . . .

"If Hoover and Stanford are joined ever more closely, and if Hoover engages in political activity, it appears that Stanford directly and indirectly aids a political cause."

If Manley and Rebholz had addressed governance issues exclusively Juilland said in an interview, "all the reaction they would have elicited from the community would have been a gigantic yawn.

"They needed to inject politics to hook public attention. In this they succeeded. But now they're stuck on a hook of their own creation."

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Rebholz, Manley disclose 76 Hoover petition signers

The names of 76 Stanford faculty among 84 who have urged their colleagues to discuss an independent inquiry by the Board of Trustees into the relationship between the University and the Hoover Institution have been made public by Profs. John F. Manley, political science, and Ronald Rebholz, English.

The issue will be debated by the Faculty Senate Thursday, May 26.

The petition states that "The existence of a partisan organization, whether liberal or conservative, within the University raises grave questions concerning the academic independence, integrity, and national reputation of the University."

And continuing:

"Whereas, the legitimacy and influence of the Hoover Institution and the causes for which it stands are immeasurably enhanced by sharing in the prestige of a great University; and

"Whereas, Stanford University provides approximately one-third (32 percent) of the Hoover Institution's annual budget, and this $2.7 million support comes at a time of severe cuts in the University's budget;

"Therefore, the undersigned members of the Academic Council request the Steering Committee of the Academic Senate to place on the agenda of the Senate the following resolution:

"The Academic Senate urges the Board of Trustees to initiate an immediate and independent inquiry including a public report, on the relationship between the Hoover Institution and Stanford University."

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People

Dean's student service awards presented to 17—here's what they've done



Mary Haynes, senior in communication, for "leadership in the Black Student Mental Health Advisory Committee, the Black Media Institute, Black Recruitment and Orientation, the Black Student Union, and as a Theme Associate in Ugamaa and a Resident Assistant in Mirrielees. . . ."



Gary A. Allen Jr., graduate student in aero and astro, "for transforming the Stanford Student Branch of the American Institute of Aeronautics and Astronautics. . .into one of the most lively AIAA chapters in the country. . . ."



Megan Chestnut, senior in psychology, for her role as "Cowell nursing assistant, volunteer at the Peninsula Children's Center, swimming instructor at the Community Association for the Retarded, president of Pi Beta Phi sorority, student counselor for Miramonte Mental Health Organization, and dedicated Resident Assistant at Roble and Manzanita. . . "



Deborah Chen, senior in mechanical engineering, "for effectively applying her technical skills to social needs for solar energy, improved computer instruction in local schools, and mechanical devices to aid the locomotion of disabled children. . . ."



Chris Eberspacher, graduate in applied physics, "for his instrumental role in designing and teaching Applied Physics 010, a new undergraduate course in science and technology. . . ."



Forrest Ames, graduate student in mechanical engineering, "for his work in energy conservation, projected to save the University $300,000 annually through an improved chilled water pumping system. . . ."



Sharon Padilla, graduate in education, for her "valued talent as an organizer, group leader, and teacher of leadership skills; for her dedication to the development. . .of numerous high quality co-curricular programs such as El Centro, Chicano Orientation, and OSA Leadership Training. . . ."



Magdalena Rosales, graduate in education, for her role as "teacher, counselor, and leader in Casa Zapata, for her involvement in the problems of world hunger, for her travel to Central America and subsequent presentations of her observations of different approaches to national development. . . ."



Shelly Saunders, junior in economics and sociology, for her role as "leader, manager, group member, facilitator, communicator, coordinator; for the unusual level of dedication she brings to her job as Resident Assistant in Lagunita; and for her spirited devotion to the goal of celebrating ethnic and cultural diversity. . . ."



Ruth Williams, graduate in mathematics, "for her many quarters of hard work as a Teaching Fellow in the Mathematics Department, and especially for organizing the highly successful 1982-83 lecture series for Women in Science and Engineering. . . ."



Front row (left to right): Nancy Showen, senior in human biology; Carrie Griffin, senior in biological sciences; Nancy Kass, senior in human biology. Back row: Robin Cooper, senior in international relations; Jim Steyer, law student. "For effectively combining their many and different talents in service to the goals of the Rape Education Project, yielding a campus-wide voluntary program unique in its impact, energy, organization, and educational contributions to the campus community. . . . "

Dean's Student Service Awards were presented to 17 students, including a group of five who worked together on the Rape Education Project, Monday, May 16.

Recipients each received a bronze medallion and a personalized certificate.

The awards, given by the Dean of Student Affairs office, pay tribute to "outstanding service to Stanford and to its students."

Not pictured are Andy Beal, senior in economics, honored "For his leadership of the Inter-Fraternity Council. . . and for his efforts to remove real and imagined barriers between the fraternities and other student communities. . . . " and Doug Perkins, senior in biological sciences, honored for "his many achievements as captain of the wrestling team, and for time and affection freely given—to his teammates, to little kids on the nursery school playground, to youngsters at Sierra Camp, and to Stanford students new to the scene of college athletics. . . . "

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The Raubitscheks: a classics couple with extended family of scholars in U.S.

Last year, all graduates in classics perservered, found suitable employment

BY DONALD STOKES



Isabelle and Antony Raubitschek

A white-haired couple work late every night in their Palo Alto home, piecing together a tale that is thousands of years old.

Antony and Isabelle Raubitschek are busy in separate studies, his on the ground floor, hers on the upper. Their research is in different but complementary parts of the story of ancient Greece.

Occasionally they cross-check with each other, when their research meshes. Then they bring alive together yet another piece of mankind's history that refuses to die. They reveal another aspect of the civilization which has been an inspiration to the west since long before the days of Christ.

There is an overflow from each of their studies, of papers and books, artifacts and drawings. Links with the ancient days are found in the oddest places; there are, for example, books on the laundry room.

Antony Raubitschek, emeritus professor in Stanford's Classics Department, is famous in the classical world for his study of inscriptions, the public and private notices carved by the Greeks. These have thrown new light on the customs, laws, habits, and philosophy of that remarkable race.

Isabelle Raubitschek is associate professor emerita in the Art Department at Stanford. She is known for her work in bringing alive the full meaning of classical art and literature.

The couple has been married for 41 years. Perhaps the most important thing about them has been their creation of an extended family of scholars, all over the nation, who are filling in more gaps in knowledge of the classical world.

The professional family consists of former students of the Raubitscheks who are now widely dispersed, each one pushing ahead on a particular piece of the great puzzles of the Grecian past.

It is a small but determined band, which faces economic worries and the temptation to concentrate on fields where salary prospects are brighter. Last year all the graduates of the Classics Department found suitable posts; that modest achievement is a measure both of the difficulties and the persistence of the classicists.

The extended family of the Raubitscheks was seen in force during March when more than 100 classical scholars came to Stanford from far and near to honor Antony Raubitschek's 70th birthday. Sir Ronald Syme and David Lewis came from Oxford, and every corner of the U.S. was represented by former students of the Raubitscheks, some going back several decades.

For two days members of the extended family renewed touch with each other and with the age that refuses to die.

"Much of the major scholarship work I have passed on to former students. They will carry on the work," says Antony Raubitschek. "Many of them are so very able.

"I have not written as many books as I might have, but each one of my friends at the meeting was a sort of wonderful book. Each was distinguished in a particular way. Such friends are more important than books, which get out of date so quickly."

Most members of the extended family act as if they are children of the Raubitscheks. "They are just as loving and just as demanding," laughs Mrs. Raubitschek.

"A great deal of Toni's time is spent answering their letters and phone calls, reading their manuscripts, trying to find jobs for them. Often he gives his own partially completed manuscripts to his students for their own projects."

At Christmas the flood of hundreds of cards chokes the mailbox of their big house in "old Professorville," Palo Alto.

The family is still growing. Some of the youngest members are seen each morning when Toni Raubitschek cycles to campus—he has never learned to drive a car. Invariably he is escorted by an informal honor guard of young students. There is a remarkable bonding of affection between the old man and the young people.

Raubitschek brings his students little presents—cookies, avocados from his garden. He handwrites, then duplicates a digest of each one of his lectures for presentation to his flock. The students respond with gifts of their own. At the end of his lectures they often stand to applaud him. There is an almost tangible emotion of love and caring in the air.

The story of the Raubitscheks began just as the warclouds of Nazism began to menace Europe.

In 1937 Isabelle Kelly was 23, a student at the American School in Athens, where she had come to work on her dissertation. While still an undergraduate at Barnard she had done graduate work at Columbia under William Bell Dinsmore, the great expert on classical architecture. She had previously gained a fellowship to the Sorbonne in Paris where she had studied Greek archaeology under Charles Picard.

Antony Raubitschek was a Viennese, aged 25, who had already established a reputation for his work on reconstruction of the statue bases on the Acropolis, where he had physically moved the stones back into their correct positions.

He was able to do that because in those days the Greek authorities were very cooperative with genuine researchers, and the Acropolis had not become the center of mass tourism it has today.

Isabelle heard the young man lecture at an open meeting of the Austrian School. He had dark curly hair, and his enthusiasm for his work was infectious. He on his part had heard about the Boston girl and had looked forward to meeting her. They shook hands formally during the reception after his address but were not able to pursue their acquaintance as she had to go on field research in Attica.

Although Raubitschek was supposed to attend his classes at the University of Vienna, actually he spent nearly all the school year in Greece, researching the dedications and working at the Acropolis. He returned to Vienna only to take the examinations at the end of term.

His one difficulty was in the course on pedagogy, for which he had enrolled as the usual insurance of a classicist against lack of employment.

When he showed up for the pedagogy examination the professor exclaimed, "I've never set eyes on you before!" On hearing the explanation he allowed Raubitschek, after a brisk period of reading, to take the examination. This he passed, as he did the others.

The Nazi war machine was poised ready to gobble up little Austria. Being of Jewish ancestry Raubitschek realized his peril, and decided to accept an offer to join the famed Institute for Advanced Study at Princeton, N.J.

Fate brought the two young people together again. Isabelle, then teaching in Brooklyn, came to the Institute to be interviewed for a job as assistant to the distinguished British paleographer E. A. Lowe.

She got the job and found a husband, for she met Raubitschek again on that first day.

They were married in 1941 and went to New Haven where he joined the faculty at Yale, and she finished her Ph.D. dissertation. During the first seven years of their marriage, they moved back and forth several times between Princeton and New Haven. They shifted homes 10 times and they had four children during that period.

When their youngest child entered kindergarten, Isabelle went back to teaching, at a private school in Princeton. She taught Latin and Greek there till 1963, when the Raubitscheks came to Stanford.

The scholastic collaboration of the Raubitscheks had begun during their second stay in New Haven. "This was during the war, the evenings were long, and we were sharing the house with another family," recalled Toni Raubitschek. "We worked together on two books. One was a translation of a Greek play, and the other was a whole volume of Cicero's works.

"We had been asked to edit old translations, which by the time they lose their copyright are rather stale. So we decided to make a new translation. We spent evening after evening on the task. I had the Latin text before me, with Isabelle dictating and discussing. The resulting book was brought out by the Classics Club."

continued on next page

Raubitscheks. . .

continued from page 3

Raubitschek was at the Princeton Institute during one of its highwater marks. Among the luminaries there were Albert Einstein and the celebrated mathematician Hans von Neumann. There was a School of Humanistic Studies, to which Raubitschek was attached.

There, Prof. Benjamin Meritt arranged to have paper impressions, called "squeezes" made of all the important inscriptions from Greece. (Meritt, now 84, came to Stanford from Texas for the celebration of Toni's 70th birthday.)

"We filled a whole room with 'squeezes,' " said Raubitschek. "We did an extraordinary amount of work with them, matching them and finding pieces that belonged together, restoring the texts."

Meanwhile, the young married couple continued their work at home which they would discuss with each other. Typically, she would study some ancient work of art and he would fill in for her the historical and political background.

Their work together gradually grew over the years. Her special expertise was in classical art, and she taught this at Stanford for many years. She also taught the survey course in ancient art.

She has for years been working on the large collection of Greek and Roman coins owned by the Stanford Museum, and is engaged in the long and intricate task of cataloguing. Most of the coins have been given to the Museum by former students and friends.

"We were each trained as classical archeologists," says Mrs. Raubitschek, "but my husband's aim was to be a Greek historian. While he examined the inscriptions, the primary evidence of Greek history, I would handle the archeological evidence."

The secret of her husband's fame, thinks Mrs. Raubitschek, is his rare capacity for absorbing the *mores* of each main period during the long span of Greek civilization.

"He has the facility to interpret sources in the light of the ways and thinking of the people of that particular time. This is essential. The outlook of Greeks separated by hundreds or even thousands of years from each other varied as much as it does among more recent civilizations. Think how differently we feel and act than, say, the Pilgrim Fathers.

"Very few historians are capable of entering the minds of people who lived long ago. They don't have the imagination to project themselves back two thousand years, and think in the way people did in a particular period.

"Toni is completely immersed in the various shades and changes of Greek history so that he can think, for example, like a Greek of the fifth century B.C."

Asked whether she reads any of her husband's manuscripts in draft she laughed. "Sometimes, and occasionally I disagree, so perhaps it is not wise to read them. I do argue my own point of view on those occasions"—again her laugh—"but I am not sure I have ever influenced him!

"One of our standing arguments is about the sculpture on the Temple of Zeus at Olympia, where he is sure that Pausanias' account was correct. I am sure that it is impossible."

Among their joint works was a paper on vase painting. "I was lecturing in Milwaukee, where I had been told there was nothing to look at," said Toni Raubitschek.

"That was utterly stupid, because there is an awful lot there in its marvelous museum. I found an Attic vase that looked very unusual. I discussed it with the director, who kindly let me have photos of it.

"The longer my wife and I looked at it the more interested we became, because it included features from two distinct styles. Several years later we were invited to write a catalogue statement about it when the vase was exhibited at a Midwest collection."

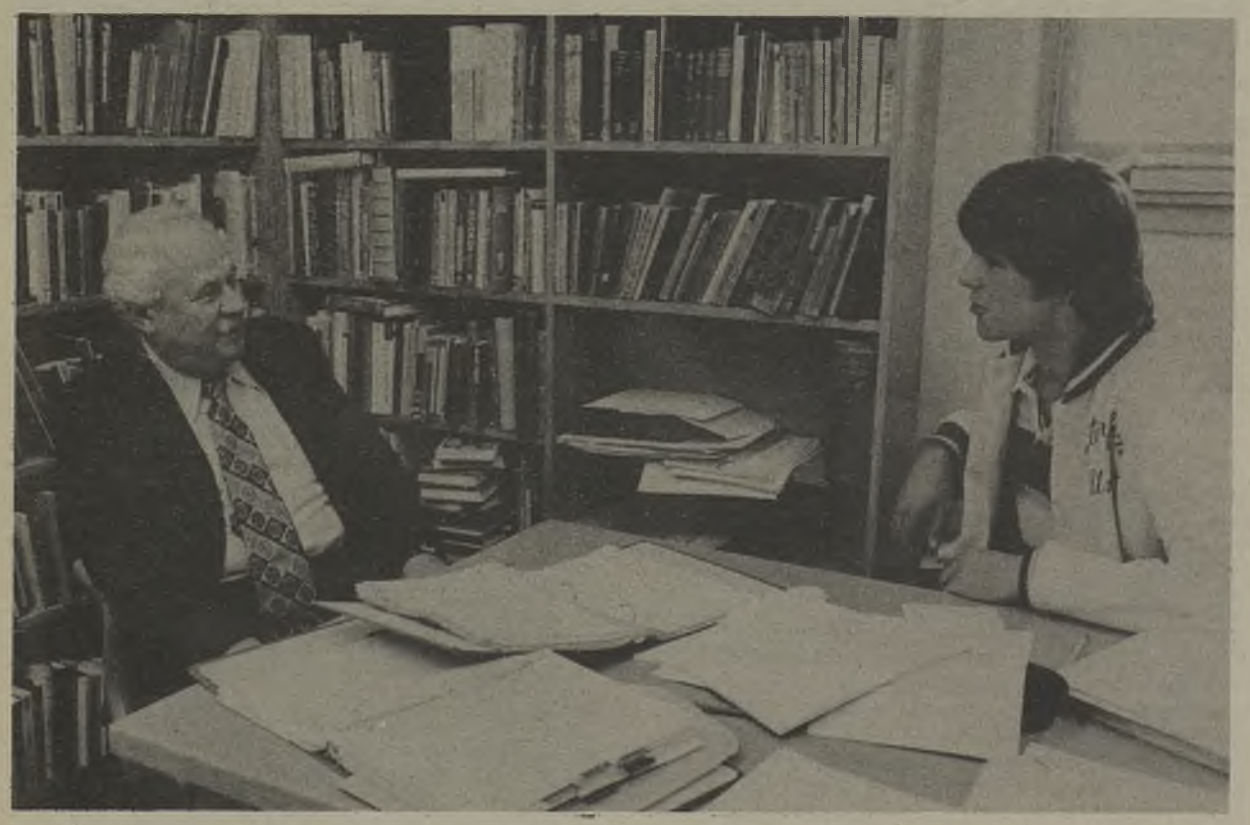
One of the joint tasks they enjoyed most is on the Vase of Triptolemos, in the Stanford Museum. This is a krater (mixing bowl) which illustrates the Greek belief that Athens had given the world knowledge of the use of grain and of wine.

"Triptolemos was the Johnny Appleseed of ancient Greece. The goddess Demeter gave him the ears of corn, and a chariot to go and spread the word of how to use them," said Toni Raubitschek.

Each of the Raubitscheks contributed expertise to a study of the legend and the vase. The result was a distinguished paper *The Mission of Triptolemos*.

At this time Isabelle is working on the bronzes from the excavations at Isthmia. "I have been busy on these for some time," she said. "There are over 3,000 of them. It is a difficult problem because the area was destroyed by the Romans in 146 B.C. and repeatedly devastated in subsequent centuries.

"The area was bombed by the Nazis in World War II, because it is adjacent to the Corinth Canal, which they were trying to block. So there is no stratification. Some of the oldest relics are near the surface, and more recent material is well below."



Toni Raubitschek with student Ted Pappas: "If you do this (teaching) well, it takes up many hours."

One of their great regrets is that they have not been able to go to Greece as often as they would wish. They have each made trips of a few weeks, not often together, because of Isabelle's poor health in recent years. On several occasions Toni has gone carrying Isabelle's queries and problems, and he has spent as much time as he could seeking answers to her questions.

He draws beautifully, and he has done many of the illustrations for her volume on the Isthmian bronzes. He is also a skilled sculptor.

The Raubitscheks are distressed by the deterioration that is afflicting many of the irreplaceable relics of the past, especially in smoggy Athens. When they first went to Athens after the war and saw how it had been spoiled by unskilled people trying to "clean up" they were appalled.

"Many of the statue bases Toni had joined had been moved around so that they were in meaningless positions," said Isabelle. "Apparently the work had been done by people who were cleaners rather than archaeologists. Some of the pieces, to the untrained eye, were simply bits of stone. It needed an expert to tell them for what they were.

"Many of the pieces are now in the storeroom of the Acropolis. But it would take a couple of years for anybody to go in and put right the damage.

"There are all sorts of schemes, some quite wild, to stop the ravages caused by erosion, and chemicals in the air. In the end I think a more conservative approach will be adopted.

"Some of the treasures in Greece, and in Italy, have already been damaged irretrievably. The work of restoring the rest and protecting them is one that requires very painstaking individual work of the type that is very rare in the modern world."

She believes that in many cases it will be necessary to move many of the treasures that are now in the open, prey to all the destructive chemicals in the air, into indoor sanctuaries where the air content and humidity can be controlled.

She does not approve the ideas of Melina Mercouri, Greek Minister of Culture, who is asking for the return to Greece of such treasures as the Elgin Marbles in England. "When you consider what has happened to many of the relics that remained in Greece, it is clear that the treasures abroad were safer where they were protected."

During the last few years, Toni Raubitschek has devoted much of his time to teaching: "If you do this well it takes up many hours."

He shrugged in cheerful resignation, and the brown eyes sparkled: "As you get older there are so many calls on your time. There are letters of recommendation, the inquiries, the friends all over the world, other peoples' manuscripts to read."

The Raubitscheks take great pleasure in their four children and seven grandchildren. Their elder son, John, is a patent attorney for the U.S. government and lives in Washington with his wife and two children. Their elder daughter, Kleia, clinical director of obstetrics and gynecology at Toledo Hospital, is married to Kurt Luckner, a former student of Isabelle's at Stanford; they also have a son and daughter.

Marita, a developmental psychologist, lives in Minneapolis with her husband, Terry Hopmann, a Stanford Ph.D. in political science, and they have two children.

The youngest child, Andrew, was a resident physician at Stanford Medical Center and now works for Cetus Immune. He, his wife, and one-year-old son live with Toni and Isabelle in the latter's Palo Alto home.

Mrs. Raubitschek is something of a fatalist. "Things that look like chance really are not," she says. She believes that the pattern of lives unfolds in predestined ways.

She and her husband each came from medical families and each took some medical training, but each was drawn into the career that brought them together. Both have made a significant contribution to the education of two generations of students and to our general knowledge of antiquity.

Emigre musician finds 'You have to build a whole new world'

BY JULIA SOMMER

Emigration is like a divorce—it is a total disruption. We think of ourselves as autonomous, but actually we have countless links. . . to family, colleagues, friends, society. When you cut these links, it leaves a wound. You have to build a whole new world."

So says Stanford's newly appointed associate professor of music, Karol Berger, who left Poland in 1968 at the age of 20. As a musicology student at Warsaw University, Berger felt "suffocated in that kind of society. You have to get out because it is a jail—quite large and comfortable, but nevertheless a jail. I needed fresh air."

Asked what it was like living in Poland in the '60s, Berger gave this response: "If you want to understand how it feels to grow up in a communist state, you have to realize that it is a state ideologically committed to the construction of paradise on earth.

"There is just one little problem which makes this project unrealizable—namely, the existence of human beings—those recalcitrant creatures whose destiny is not to live in paradise, but on the ever-imperfect earth.

"This human reality is a thorn in the side of the 'scientific' ideology of the state which claims to have found the ultimate answers to all fundamental problems of humanity. Consequently, much of the state's effort is devoted to suppressing all evidence which contradicts the claims of the pseudo-science on which it wants to build its legitimacy.

"If there is one word that characterizes the texture of life under communism, it is lie—the incessant falsification of reality and language, and the enormous effort of the state to force everyone to repeat and participate in these distortions so that one becomes, willingly or not, an accomplice of the state."

Berger emphasizes that his Jewish background was not the reason he left. "I felt completely accepted by my schoolmates and Polish society. I left Poland because of its social and political system," he says. "The system offered absolutely no future for my generation. . .no room for personal growth, no field for maneuver. I saw no prospects for change.

"The range of options for my generation was extremely limited in comparison to more open societies because there were so many areas into which you simply could not go if you did not want to participate in the officially sanctioned lie.

"A legal career was closed to you because there was no independent judiciary, as was journalism because of the controlled press. Business was closed to you because the state had a monopoly on all economic activity.

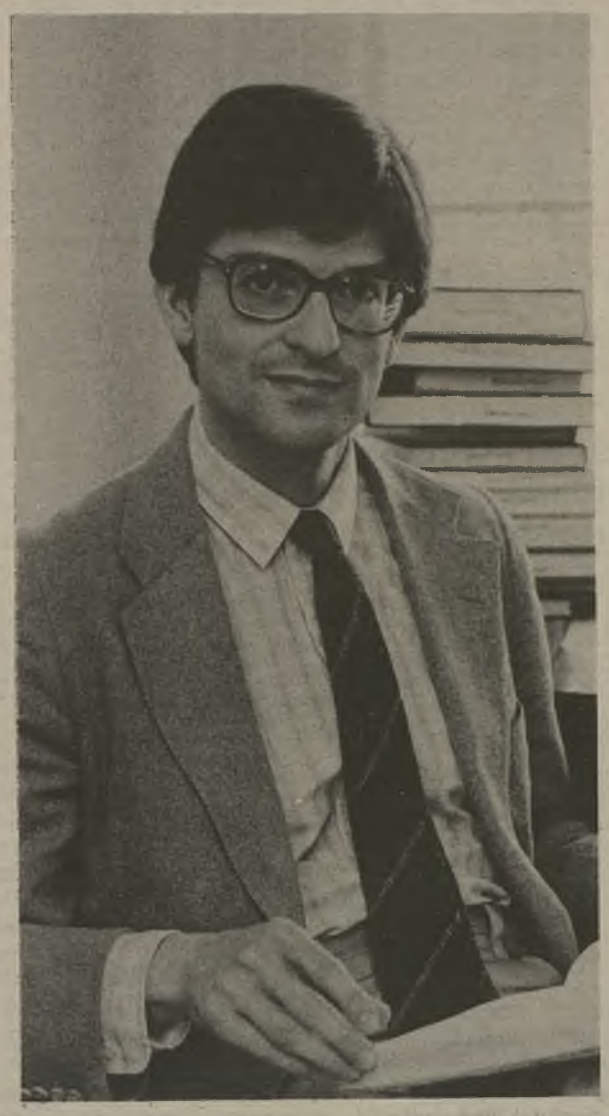
"These enormous fields which suck in the majority of college graduates here were closed to us. This resulted in certain benefits for pure science and the arts because these were the only fields left for people who did not want to collaborate, but yearned for a genuine civil society.

"For instance, theater played an enormous part in the spiritual life of Warsaw. In a controlled society, art and music and theater can take over roles normally assumed by parliament and newspapers. Even so, the government made tremendous efforts to infiltrate these few areas left open to us as well.

"So, many of us left. It was a choice between internal and external emigration. Sometimes I think the better of us stayed in Poland. The decision to go abroad was, in a way, a defeat because that is what the authorities wanted. It's much easier to stay in power when there are no troublemakers around, and it used to be the intellectual community that produced the most active troublemakers.

"The emergence of Solidarity changed this. Now the authorities have to fear not only intellectuals, but the working class as well. It is not an accident that during the recent so-called state of war the internees were urged by the authorities to emigrate.

"We are back to where we started: communism would be perfection itself, if it weren't for the people. Or, as Brecht suggested after a workers' revolt in Berlin: 'Since the people cannot elect a new government, the government should elect itself a new people.'



Karol Berger

"If I had stayed in Poland, I would probably have worked at a research institute or become a private scholar supporting myself by translating—a common fate for those who choose internal emigration. I started writing music criticism and translating while a student to explore these fields. (Berger's translation of the book *Emotion and Meaning in Music* by Leonard Meyer from English to Polish was published in 1974.)

"Even academia entailed certain compromises with the political regime.

"I don't think the Polish government can last many more years because it is entirely unnatural and contrary to the aspirations of the Polish people, but it could last long enough to have spoiled my life there."

Berger's academic specialty is early music theory, mainly that of the Italian Renaissance since "from the 15th century on most innovative thought on music was happening in Italy.

"Italian music theorists thought music was worth writing and fighting about, even in the midst of monumental wars and plagues. You find scholars writing vituperous letters to each other about the most esoteric issues that would break off friendships for 20 years!

"There was an explosion of thought on music in the 16th century that coincided with the beginning of printing. What makes these texts particularly fascinating is that they allow you to observe the beginnings of the process which transformed the humble craft of music-making into the great art we know.

"More important, music of the distant past would be scarcely comprehensible to us if we did not know how it was originally heard and understood. In my work, I try to reconstruct these old ways of hearing and show how they differ from the more recent ones.

The way we hear and understand music is not immutable, but constantly changes.

—Karol Berger

"I also try to sell this idea—that the way we hear and understand music is not immutable, but constantly changes—to my students. Right now I teach a seminar on late 16th-century analysis, where we examine the way certain tonalities work in the music of the most influential master of that period, Orlando di Lasso, and compare this with the behavior of the same tonalities in later music."

Lasso is Berger's special interest among the composers of this period. He has written two papers on Lasso's music, and last fall participated in a conference on Lasso at his birthplace—Mons, Belgium.

Berger's Ph.D. dissertation, *Theories of Chromatic and Enharmonic Music in Late 16th-Century Italy*, was published by UMI Research Press in 1980.

Since receiving his doctorate from Yale in 1975, Berger has been writing and publishing a series of articles which examine early musical thought, some crossing the boundaries of traditional academic disciplines. In one, neo-Platonic views of the spiritual power of music form the point of departure for an interpretation of Shakespeare's *The Tempest*.

Another paper traces the way musicians of the Middle Ages and Renaissance imagined the whole universe of sounds (they imagined their sounds on the joints of the open left hand, while we imagine them on the keyboard) to the ancient art of memory (mnemotechnics).

Berger describes the direction of his research in this way:

"In music there is a triangle: one person writes the music, another performs it, and a third listens to it, although one person could do all three. Most of the effort in musicology has been directed at what composers do. The interest at Stanford is largely from the performance angle.

"I have been working for a long time on one of the most intractable problems which distorts our performances of Renaissance music—the problem of pitches which look entirely normal in notation, but which were accidentally inflected in performance.

"But my main interest is with the third point on the triangle, the least studied of all. I'm interested in music from the standpoint of its reception—the way people hear, react to, understand music. I read what people wrote about music in the past in order to reconstruct how they heard it."

Before coming to Stanford, Berger taught at Boston University for seven years, receiving tenure there last year.

"I find the give and take of the smaller classes here very pleasant, and I think the students learn more in small classes, but it's too early to make any further comparisons," he says.

"At any rate, graduate students in music are, for the most part, excellent everywhere these days. It takes real dedication to choose music over law or business."

Berger applied to Yale for graduate study in musicology while still a student in Poland, and was accepted with a scholarship.

"Relative to other emigrants, such as the Vietnamese, I had it very easy," Berger comments. "But when I got here, I found a totally alien society. I could have been from another planet. I found the free world extremely exotic.

"What struck me hardest was the transience of American society, what appeared to be a rootlessness, a lack of commitment to traditions and customs handed down from generation to

continued on next page

SCIRE announces Stanford Educational Administration Internships Program

SCIRE (The Student Center for Innovation in Research and Education) has announced a pilot opportunity for students, the Stanford Educational Administration Internships Program.

A variety of Stanford administrators have been contacted to participate in the program, which will offer undergraduates the opportunity to work in the administrative offices and study firsthand issues of undergraduate education and University administration such as decision making and policy formulation. "The internships will offer undergraduates the opportunity to gain experience in University administration and a unique perspective on how the University operates," says SCIRE staff codirector Judy Adams.

"Since 1976 SCIRE has worked closely with special fieldwork and departmental internship programs to coordinate fieldwork resources for students. Our *Clearinghouse Catalog* offers a broad range of community internships and research opportunities with Stanford faculty.

"It occurred to us that there are many untapped resources within the University for students to address management problems, policy-making, and the education goals of University administration. Why not enlist the help of University professionals in enhancing undergraduate education by setting up Stanford internships in their offices?

"We began contacting University offices in fall 1982, and are still in the process of developing positions. We collected syllabus materials from courses offered in the School of Education's Administration and Policy Analysis program, and from James Lyons, dean of student affairs.

"Although much remains to be done, we have decided to begin the program with three pilot internships: the Ombudsman's Office, the Affirmative Action Office, and the Community Outreach program of University Events and Services. These programs have the time to administer an intern and offer three different perspectives on the operation of the University. Each office will supervise the intern's work and provide an evaluation at the end of the internship.

"Interns may also be assigned faculty sponsors, and have a SCIRE support group/seminar which will provide a forum for discussion and an opportunity for the interns to meet with each other and compare their experiences. The internships will be accredited through SCIRE, although SCIRE will also facilitate departmental credit where appropriate.

"Students will be responsible for keeping a journal and writing a final paper on the experience. As such, the requirements will be the same as for our other SCIRE internships; what will be especially exciting is that students will be able to gain insight about the workings of their own University.

"In addition to adding new administrators to the program, SCIRE is also exploring with ASSU the possibility of offering academic credit to committee interns who meet SCIRE internship requirements."

Students can look at job descriptions and pick up application forms at the SCIRE office, 590A Old Union (or call 497-4504) for more information. The selections will take place spring quarter or early in the fall for internships to begin in fall 1983.

The deadline for fall quarter applications is October 6. Internships may be for one, two, or three quarters of that academic year. New positions will be announced as they are developed.

"Our Policy Board and the administrators sponsoring interns will evaluate the program as it develops," says Adams. "We hope students will be excited at the prospect of working in the University. We are excited about offering the opportunities."

Interested students should contact Adams at the SCIRE office.

CAHPERD elects Garcia as vice-pres

Robert A. Garcia, director of graduate programs in physical education and acting instructor of education in the Stanford School of Education, has been elected vice-president elect boys' and men's athletics for the California Association for Health, Physical Education, Recreation, and Dance.

CAHPERD is an active association of over 5,000 members who are committed to developing higher standards of professional growth, competency, and ethics in the fields of health, physical education, recreation, dance, and allied interest areas.

Anthony Chun, Royal Kopperud

Anthony L. Chun and Royal J. Kopperud have won $500 each in the Stanford undergraduate engineering writing and speech competitions, respectively.

Both winners of the W.B. Dickman prizes are seniors in chemical engineering.

Their selection was announced by David Lougee, director of the technical communications program in the School of Engineering.

French painter Gericault subject of Lorenz Eitner's new book

The first comprehensive study of the French painter Theodore Gericault's life in more than 100 years, a new book by Prof. Lorenz Eitner of the Art Department, has been published by Cornell University Press.

In *Gericault: His Life and Work* (376 pp., 9x11½, $75) Eitner traces the development of the artist's painting, taking a close look at the varied influences on his themes and style—his artistic training, his assessments of other artists, his trips to Italy and England, his political involvements, and his resourceful responses to the changing role of patronage.

Though Gericault was tormented by scandal, poor health, and bouts of insanity, and died at the age of 33, he produced paintings that prefigured the artistic revolutions of the 19th century.

Berger. . .

continued from page 5

generation, a lack of common cultural awareness. Only gradually did I realize that these first impressions were quite superficial, if not entirely incorrect."

While writing his dissertation at Yale, Berger worked for two years as assistant curator at the Archive of Historical Sound Recordings. Having never received a formal undergraduate degree in Poland, "I had an additional anxiety when I was writing my dissertation because I knew that if I didn't finish it, I wouldn't have any degree at all!"

Berger spent over two years in Shanghai, from age 13 to 15, when his father was stationed there as a consul. "This was a very happy time in my life because I didn't have to go to school. I spent those two years reading novels; in fact, all my literary education comes from this period. I also studied piano and English. It was a very fruitful time not to be subjected to formal requirements."

When he returned to high school in Warsaw, Berger also enrolled in a separate music school. He received diplomas from both.

The first foreign language taught in Polish schools is Russian, which you take from fourth or fifth grade until high school graduation. Since the hatred of Russia is universal, most Poles make it a point of honor not to learn the language, which is stupid. One knows very little about Russia in Poland.

"In high school you learn a second language—in my case, Latin. I continued to study English privately.

"In Poland there is a very strict separation of music performance and music scholarship. Only musicology is taught at the university; performers study at conservatories.

"Musicology in Poland is very respectable. I had good teachers. I'm very glad I had this experience. . .to benefit from education in two different countries with two different approaches to musicology. I maintain quite a close contact with some of my teachers in Poland and try to keep track of what is going on there.

"My first year in this country I fortunately had a teacher who required essays every week, which helped improve my English. This is something I now do with my own graduate students so they learn that writing is not so forbidding."

This quarter Berger is teaching, besides his graduate course on analysis of late 16th-century music, a course for non-major undergraduates: the operas of Mozart. "I want to teach courses of very different kinds. Music is potentially very attractive to non-majors, and this department should serve the general undergraduate community," Berger believes.

"Teaching the operas of Mozart is enormous fun. No other composer realized the dramatic potential of music so perfectly. Mozart not only embellishes his libretti with beautiful melodies, he makes your very nerves feel the movement of the dramatic action." Berger is preparing a paper on Mozart's tragic opera, *Idomeneo*.

Another interest of Berger's is the Polish composer Karol Szymanowski (1882-1937). He recently attended a conference on Szymanowski in Vienna, along with 30 other scholars. "Szymanoswki is very little known in this country, but he has a lot to offer. He is an interesting subject to a historian because he is not yet entirely classified by the music history bookkeeping system. He is not one of the very great, nor is he negligible.

"The view of the development of music in our century which dominates academic music history today was constructed largely by Schoenberg and his followers. In this view, music history consists of a progressive series of technical conquests made by one generation of avant-garde composers after another. There is no place in music history of this sort for composers like Szymanowski, Janacek, or Britten-Composers who were not interested in inventing new techniques and yet had something unique and important to say. When we study such composers, we are forced to reconsider the way in which we construct our recent past."

I think musicology concentrates too much on the past. It is not respectable for musicologists to study contemporary music.

Berger read a paper at the conference on Szymanowski's opera, *King Roger*—"a fascinating attempt to subvert the Wagnerian tradition from within, using the ideas of Nietzsche and Debussy as the weapons.

"I think musicology concentrates too much on the past. It is not respectable for musicologists to study contemporary music. When I was a graduate student, most of us went into Renaissance, fewer people studied medieval or Baroque music, but very few did anything else.

"It was not even terribly respectable to write a dissertation on music as recent as the 19th century!

"This has changed drastically in the past 10 years, with an explosion of 19th-century studies. I think the 20th century is next. We could pursue this profitably at Stanford. After all, we already have a world-class center for computer music here.

"We music historians are socially irresponsible if we don't promote what is truly valuable today; we should not leave it entirely to journalists and cultural impresarios.

"The 20th century is rich in opportunities for re-evaluations, changes in emphasis, but we have to know what is going on currently."

To practice what he preaches, Berger will offer a course on "Music Since 1945" next spring.

Margaret Doody views Aristotle as ancient Sherlock Holmes

BY MILLICENT DILLON

To Margaret Doody, visiting professor of English at Stanford, all scholarship is a form of detective work, the act of putting together clues.

So it's not at all surprising that she is the author of several detective stories, most notably *Aristotle Detective*. Doody is a professor of English at Princeton and an expert on 17th and 18th century English literature.

As its name implies, *Aristotle Detective* (Harper and Row) is a whodunit with Aristotle as the Sherlock Holmes figure—and a very logical and rational one he is, too.

"He's the classic detective," said Doody in a recent campus interview at the Stanford Humanities Center, where she is a visiting fellow. "He has that sense of humor, that detachment, that unshockability combined with curiosity as to why people do what they do."

She remembers clearly the moment when she got the idea of writing this mystery. "I was in Oxford, on a break from the University of Swansea. One night I was reading a translation of Aristotle's *Rhetoric* in preparation for talking to a graduate student about 17th century rhetoric.

"Then I crawled into bed with a detective story and the thought came to me that someone should write a book in which Aristotle was the Sherlock Holmes character. I thought about it for three weeks and realized that nobody was going to do it if I didn't. So I did.

"Of course there was an influence of the Dorothy Sayers' essay, which I had read many years before, on Aristotle and the *The Poetics*. In that, Sayers said he was really defining the detective story as a genre, though it hadn't been written yet.

"And above all, there was the influence of those visits to Greece I made when I was an undergraduate and graduate, 'the hiding places 10 years deep,' as Wordsworth says. Things come back that are important and you don't know that's what's going to happen."

Since she was not a Greek scholar, she had to do all her research in translation. But Doody knew where to find things and received a good deal of help from her classicist friends, most particularly John Gould, then head of the Classics Department at Swansea.

Doody has just finished another detective story with Aristotle as the chief character. Called *Aristotle and Poetic Justice*, the novel is set in Delphi.

"Part of the denouement takes place with the Delphic oracle. Aristotle and Stephanos (the Watson figure) travel and there's much more sex in it than there was in the first book. One scene takes place in a brothel. It's got comedy. It's got corpses turning up in odd places."

She's now doing research for a third story that focuses on Aristotle and medicine and the biological sciences. "I'm supposed to be reading part of that book at a conference on Aristotle and the biological sciences at Williams College, a serious conference, this July. I'm giving a reading in the evening as part of the entertainment.

"This new one will be partly set on the island of Kos, the hospital island, in fact Hippocrates' island.

"Aristotle wrote a great deal about biology, the parts of animals, the motion of animals, etc. Of course, his father was a doctor and he may have practiced medicine himself.

"He was a leader in biological sciences as well as in poetic criticism. People are going back to him now, as every few generations they do go back.

"People have at one time or another become enslaved to Aristotle, it's true. They've taken his sayings as simply ends and not as points of departure. But then other people have been very unfair to him. There's still a kind of Sunday newspaper school of criticism that classes Aristotle as everything rigid and bad.

"Of course, it's quite untrue. He's a great, great genius, with an extraordinarily flexible and entertaining mind, with a strong sense of order as well as a strong sense of questioning.

"It's amazing how off he was in some things—say, the organs of the body—and yet how nearly he really got other things, in particular he was close to the circulation of the blood."

Doing her research, Doody is spared questions of forensic medicine and ballistics that modern day detectives have to deal with—naturally, there was no fingerprinting, no bloodtyping, no autopsy, no revolver to be hidden or left at the scene of the crime.

But what makes it possible to write a detective story about the Greeks in the Fourth Century B.C. she says, is that they did have a legal system. "That's what you need: a legal system, a trial, evidence—a city of law.

"The Athenians had that. They had laws about murder. Fortunately I found just the right book, by a man called Douglas MacDowell, *Athenian Homicide Law*. It was just perfect, an answer to a prayer."

How do Doody's colleagues feel about her writing detective stories? "Some people don't approve at all, and others think it's great fun.

"In England it's taken more for granted that academics will write this kind of thing—there's a whole tradition. You can write hightone novels or lowtone novels and it's accepted as something you can do.

"But the American notion of being professional means that you don't deviate from your field.

"However, if you look around California you see that there are besides myself, Max Byrd at Davis, and E.F. Hutter at UCLA, who are also in 18th century English, and who also write detective fiction."

Doody's most recent project is a play based on Samuel Richardson's *Clarissa*, the longest novel in English, written in the 18th century. Richardson has been the subject of her scholarly study for many years. Her earliest published academic work was *A Natural Passion: A Study of the Novels of Samuel Richardson*.

"I thought for years of making *Clarissa* into a film. But then after I moved to Princeton and was teaching part-time at Columbia also, I met Florian Stuber who'd just finished his thesis on *Clarissa*. I found out he was thinking of turning it into a television serial.

"He had already started work on it with a friend in Hollywood, John Sgueglia, and then I joined up. And it has turned out that Florian and I have worked on the project and John has given us advice.

"We've written Episode One and the outline of the other twelve parts. So far we haven't been able to sell the television serial. We need someone with imagination to take it.

"However we had only just begun to look about us for something to do with what we had written when a young director, Bill Hegeman, asked if he could see it. And he offered it as his submission for a Director's Workshop at Circle Rep in Manhattan. He was chosen and it will be put on in the Workshop.

"Each piece being presented is an original work.

"So now we have 20 professional actors who will be in the presentation. In addition Diana Tramon is writing music for it.

"Of course, we had to rewrite it as a stage piece, not as something to be filmed."

Doody will be in New York for the presentation on May 26 and 27.

Commenting on the power of *Clarissa* as a literary work, Doody says, "In the deepest and least transient sense it's a feminist work. It's also a very powerful work about the relationship of human beings to society, to money, to power, about what happens to human beings under pressure, about the power of the irrational elements in all our characters and the irrational and destructive side of sexuality.

"It's the only tragedy the 18th century produced in literature.



Aristotle's a great, great genius, with a strong sense of order as well as a strong sense of questioning.
—Margaret Doody

"It's all about a fading aristocracy and its last bid for power. The only arena left for power for men of that class is in sex, as in *Don Giovanni*. Lovelace, the aristocrat, encounters Clarissa, a young woman from a new bourgeois family.

"Richards on himself, of low middle class working origin, portrays the bourgeois family very frighteningly.

"As for Clarissa she doesn't define herself as either bourgeois or aristocratic. She insists on trying to be herself. To my mind she is a spiritual genius.

"It's a very great work, an obsessive novel. You get inside it and it obsesses you.

"To Lovelace, possessing Clarissa sexually is an act of power. To him it means that he owns her. Clarissa's view, of course, is entirely different.

"I was brought up in classrooms where the men sort of giggled at rape. Now we don't. Women never do really.

"But to Richardson rape is a major issue. It signifies everything that is wrong not only between men and women but in power and in the relations of the powerful to the weaker, in the social structure, in an order of the community that allows and even encourages it—all the things in fact that we've been talking about recently.

"Lovelace ends up using force on Clarissa, as her own family in another way had used force upon her. It's a very violent world Richardson is writing about, along with all the new money and the elegance and the silks and satins.

"Richardson sees human beings as being violent at the heart under whatsoever veil of civilization. And the civilization itself is suspect.

"Clarissa at the end chooses to die in Covent Garden, which is a very low-life mixed area in London, instead of going into the country to die romantically.

"This is a book that has tremendous vitality. It deals with basic issues. It has wonderful characters, comedy and tragedy. It's very moving and very dramatic."

Letters to the editor

Fuchs 'stuck in familiar ruts of lockstep liberal academia,' Cohn contends

Editor, *Campus Report*:

The excerpts from (Prof. of Economics) Victor Fuchs' new book constitute a fascinating document of our times. The global breakdown of liberal (in the modern sense) economics such as Keynesianism, which has affected even the Democratic Party, is reflected here in some important admissions such as the fact that the minimum wage is often counter-productive.

He is realistic about the costs of supporting women in the labor force through extensive publically-funded childcare and accordingly sees a rapid descent in the rate at which women will be moving into jobs or professions.

But when it comes to truly long-range and deep perspectives on where we are going, Prof. Fuchs reveals himself to be stuck in the familiar ruts of lockstep-liberal academia in our time.

For example, he makes a fetish of the horizontal dimension of existence, in the particular form of egalitarianism. Of course, this direction of human reality is infinite in its claim on us, but there is the other infinite, of value, transcendence, deep personality, risk, vital *difference*, and (at least provisional) hierarchy, and so on, and we have somehow to balance this infinite with the other and muddle through in an enlightened way.

Fuchs does give some attention to the vertical dimension but rather grudgingly and certainly insufficiently. To him, the family is a *barrier* to equality since it perpetuates privileges in the genes and circumstances, so he rather welcomes its decline.

Well, in the first place, though it is true that the *extended* family has taken a beating (with some severe losses in the texture of culture which he doesn't mention), the nuclear family has bounced back strong an now constitutes 76 percent of all such arrangements in this country.

Secondly, when one thinks of what traditional and hierarchical families have contributed to culture, one wonders what he is crowing about. No more Freuds ("my golden Siegie" as his mama called him), Kennedys (old Joe beat the boys compulsively at everything), etc., etc.

Fuchs doesn't appreciate that it is precisely vertical *hierarchy*, starting, say, with the Oedipal crisis in which the sensitive boy is "crushed" in his rivalry with his father, according to Freud and Lacan, that is the motor of the boy's rising to powerful cultural fatherhood in his turn. Sure this vital process is risky and unjust (provisionally!) but what of any importance isn't in this world, at times? It is extremely interesting if you can take it. . . and you have to take it eventually anyway.

Bringing this steep and ambiguous, dialectical dimension into awareness as the best of modern thinkers have consistently done—it is the very hallmark of twentieth-century thought, starting with the Mallarmean revolution and passing through all the major figures of France—you get to realize, for example, that behind the cliche of male "domination" which to Fuchs is "morally indefensible" (and worth bringing down culture to cure) is a subtle irony.

Men have dominated mainly in the realm of Form, which is their particular turf, i.e., certain structures of civilization such as law and high symbolic achievement, abstraction, etc. This has to do with the basic differences arising from the fact that men are alienated *ab ovo* from the birth-core, from the center of human existence (a new book by Lillian Rubin has just rediscovered these old truths) and had to develop these compensatory *forms*.

Underneath, women have dominated in their own way of Being all along, clearly in the Old Testament at times, and folk wisdom has often alluded to this reversibility (who really wears the pants in the family, etc.). But economists and academics generally tend not to be in tune with imaginative folk wisdom, let alone visionary and whole-seeking thought.

And when you recall that just about all the violent crimes are still committed by men (and maybe worse-to-experience inner assaults are committed by women) and you look at our Congress and see, after all the hullabaloo, only 21 women out of 435, you wonder what the point of higher education—where everyone is ritually taught that men and women are essentially just the same or will be—is in 1983.

None of this is to deny the ambiguity of gender and the consequent complexity of the relation, including numerous "crossovers"; the point is rather to emphasize that there are *also* built-in differences which it is silly to ignore, such as when the Army wasted billions and pulled down our preparedness by training men and women together, oblivious of the 40 percent gap in upper-arm strength.

Fuchs' ideal aim is the redistribtuion of wealth. My own preference is for the higher health of mankind, implying a balance between the glories of superior art and achievement of all kinds on the one hand and maximum decency and opportunity on the other: Imperfect, to be sure, but lively and worth staying around for. Having witnessed the drab and dreary consequences of egalitarianism in Russia—has he been there?—one wonders why they want to keep going (alcohol seems to be the main support).

The answer is that human beings are tough and resilient, having come up the hard way from the original explosion and slime. And the "Adamic" way will never be easy for anyone, even in "laid-back" California where we have a high suicide rate, some strange new diseases and cancerous spiritual disorders along the lines of *1984*.

Having eliminated failure from the official picture at Stanford, we are now failing in a big way underneath. But the masterpieces of religious wisdom and of art are still on our consciences reminding us that, for all the original odds, life can do better than that.

Robert Greer Cohn
Professor of French

VA lab dog had advanced pneumonia, dehydration, fur in stomach: Giraud

Editor, *Campus Report*:

Some remarkable statements have come from the Medical Center lately—one being that "the search for knowledge is an instinctive trait unique to human beings." (That must be a scientific finding unique to our Medical School.)

There is a moving allusion to a relationship not clearly spelled out—"the relationship between humans and animals joined in research and teaching," which inevitably calls to mind a recent example thereof, specifically the case of the laboratory dog. . . .

Here is what happened:

On the evening of March 24, a third-year medical student, Peter Barran, working on a Stanford project in a Palo Alto VA Hospital lab, suddenly found himself confronted by the sight of a large, emaciated dog, collapsed on the threshold of his office. The dog, a white Samoyed, was lying in his own feces. His body was being shaken by a wracking cough. On his left rear leg the bare bone was exposed where an ulcerated wound had gone through skin and tissue. The other three legs were covered with deeply infected wounds. Barran peeled back a bit of scab and uncovered a bed of pus. In the right groin, a gaping six-inch incision that had penetrated skin, fascia, and muscle had opened and was oozing a yellowish fluid. The dog seemed in shock, and Barran judged he was near death. . . .

Barran, who later said he acted as he did out of a compassion for suffering that had made him enter his chosen profession in the first place, decided. . . (after a telephone conversation with Stanford and VA veterinarian Carolyn Reed) to take the animal to the only veterinary hospital open at that hour, the South Peninsula Emergency Clinic, where veterinarian Randy Hemphill was on duty.

Hemphill has said: "There is no doubt in my mind that this animal was suffering tremendously and had not been receiving proper medical or nutritional care." Like Barran, he judged the dog not likely to live out the night and decided to put him out of his misery with an injection of sodium pentobarbital.

The necropsy Hemphill subsequently performed revealed that the dog, in addition to what had already been apparent, was also suffering from advanced pneumonia, was badly dehydrated, that his intestines were empty and his own fur the sole contents of his stomach. Hemphill's findings were later confirmed by another necropsy performed, at the instigation of humane societies, by a veterinary pathologist at the Veterinary Medical Teaching Hosptial of UC-Davis. . . .

The dog had been obtained from a pound. It had been someone's pet and friend. Stanford and othe research institutions are fighting tooth and nail to defeat California SB 883, Senator Roberti's pound seizure bill, that would outlaw the use of pound animals in labs (a practice the National Institute of Health do not themselves support). The bill is now making its way through Senate committees, embattled all the way.

The VA's own committee cleared the VA of all wrong-doing in the case (May 11).

The three humane societies of the area, the Peninsula Humane Society, the Humane Society of Santa Clara Valley, and the Palo Alto Humane Society, are pressing for criminal prosecution of those responsible. . . .

Lise Giraud
Librarian, Green Library

Western Culture tracks solicited

Beginning in the fall quarter, 1984-85, there will be room in the Western Culture Program for a new track or tracks to take care of about 250 students. Proposals must be submitted to Marsh McCall, chairman, Western Culture Program Committee, by December 1, 1983.

Inquiries about the contents of such a proposal should be made, until June 15, to Laurie Davis in the Western Culture office (7-0944), and over the summer to Marsh McCall in the Department of Classics (7-2581).

Research staff sought

Protein crystallographer with Ph.D.

Research Associate or Senior Research Associate: A position is currently available at the Stanford Synchrotron Radiation Laboratory for a protein crystallographer with Ph.D. and several years research experience.

The candidate should be experienced in both electronics and software development and should have a strong crystallographic background. The successful candidate will take part in the further development and use of an area detector data acquistion development system that is being used in an experimental program to determine protein crystallographic phases using differences in the anomalous scattering at multiple X-ray wavelengths.

The candidate should be willing to interact with visiting research groups using 1) the area detector facility, 2) a rotation camera facility which will shortly be completed, and 3) a CAD-4 diffractometer system. There will be an opportunity for both personal and collaborative research in the field of crystallography.

The level of appointment and salary (from $25,000) will depend on experience. The initial appointment is for three years and may be renewed. Please send a CV, a list of publications and the names of three referees to Dr. Paul Phizackerley, at SSRL/SLAC Bin 69, P.O. Box 4349, Stanford University, Calif. 94305.

Application should be received before June 30, 1983.

Stanford is committed to equal opportunity through affirmative action in employment; we are especially eager to identify qualified minority and women applicants.

Intermediate energy physicist

Applications are invited for a **postdoctoral research associate** to participate in a program of experiments in intermediate energy physics. Current activity centers on the use of the Crystal Box detector for the study of rare muon and pion decays at the Los Alamos Meson Physics Facility.

The successful applicant should be prepared to reside at Los Alamos for appropriate periods of time. A willingness to participate in other projects involving -ray and X-ray detection at accelerator laboratories and in space is desirable. The position is tenable, intially, for three years with the possibility of further extension. Salary commensurate with experience.

Applications with curriculum vitae and the names and addresses of two academic referees should be sent to Prof. Robert Hofstadter, Department of Physics, Stanford University, Stanford, Calif., 94305, by August 31, 1983. Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify qualified minority and women applicants.

Tucci works with computers, would like to be a conductor

In high school I couldn't decide whether to major in computer sciences or music. I couldn't make up my mind at Stanford either, so I ended up majoring in both."

Christopher Tucci will receive both an MS in computer science and a BA in music this June after five years at Stanford. Last year he received his BS in mathematical sciences.

Now he's frantically trying to decide between job offers from GM, IBM, and Ford Aerospace while studying for finals and finishing a master's project. "I don't know what to do. I've been on long distance every night for a week trying to decide."

Besides his double major, Tucci has worked over 20 hours a week throughout school to support himself; started a 16-man singing group (The Stanford Fleet Street Singers); directed and helped write past Gaieties; RA'd at Wilbur Hall; and cofounded Stanford Children's Theater. He still manages six or seven hours sleep a night.

Tucci took 61 units freshman year, completing half his math-science major. He also played in the Band ("I had a lot of fun in Band, but it burned me out. . . it took too much of my time"), studied trumpet privately, performed with Alea II (the contemporary music ensemble), and wondered whether he should be a music major or not.

Sophomore year Tucci declared himself a music major, but stopped playing the trumpet. "I was experiencing sophomore slump," he recalls. "I dropped a lot of classes. I kept meaning to practice, but never managed to get my trumpet out of its case. I never thought I'd finish the music major; I just wanted to take as many music classes as I could."

That same year Tucci cofounded Stanford Children's Theater with two friends. They put on musicals *(Free To Be You and Me, Androcles and the Lion*, and original creations) at schools and hospitals in the area. Tucci was music director for two years.

Last year Tucci picked up his trumpet again, studying with Stanford trumpet teacher David Burkhart (principal with the Oakland Symphony). "I missed trumpet so much, and it was a great release of tension for me to play," he says. Tucci plays in the Symphonic Band, which gave its second annual Sousa concert May 21 under the direction of Art Barnes.

Both this year and last Tucci has received Music Guild scholarships to study with Burkhart. "Tucci is a very personable fellow," says Burkhart. "He's got the kind of personality, as well as talent, that make him a pleasure to teach."

Tucci is also a singer. "I started to sing when I was a senior in high school because I didn't want to play in the pit orchestra for the spring musical anymore. I figured the only way to get out of it was to try out for a part, and I got one of the leads (in *Carousel*). All the leads were given private voice lessons by the high school. Our spring musicals were a big deal in the Detroit area. We always sold out the seven performances and almost a third of the student body auditioned every year."

Last year Tucci studied voice privately with Vera Scammon, and last year and this has sung with the Early Music Singers under William Mahrt.

"I took two music courses from Prof. Mahrt and really enjoyed them. Then I directed the singers in *Everyman* my sophomore year, and I decided I wanted to sing more plain chants and Renaissance music."

Tucci especially enjoys conducting. Among his credits: *Guys and Dolls*, performed at Wilbur Hall May 5, 6, and 7; and *CopacaBranner* at Branner Hall in 1979.

Not to leave a musical stone unturned, Tucci is composing the music for a film by Cal Lai (compensation analyst in Stanford's Personnel Department and Resident Fellow at Okada House) under the auspices of De Anza's film department.

Tentatively entitled "Clog," the screenplay describes teenage life in Silicon Valley of the 1990s.



My short-term goal is to get a good job and do music on the side. I'm already $4,000 in debt.

—Christopher Tucci

Lai plans to distribute the film in February to cable networks, PBS, and film festivals.

Tucci's master's project in computer science brings his two majors together. He is concocting a program to solve counterpoint exercises that will hopefully interface with music Prof. Leland Smith's music typesetting program. (Counterpoint refers to two or more lines of music sounding simultaneously.)

This spring Tucci's commitments fairly boggle the mind. He is an RA at Okada House in Wilbur Hall (the Asian-American theme house), where he is responsible for organizing academic and social events and "just being there." He spends four or five hours a day on some musical activity, including two hours of trumpet practice. He works for the Computer Science Department typesetting books (he used to design typefaces for them), and teaches 20 students in a three-unit Undergraduate Special Program course on Tolkien. "And I'm supposed to be graduating!" he exclaims, with a note of panic in his voice.

Tucci has also worked at Stanford Hospital, starting up the pharmacy computers every morning at 6 a.m.; at the Faculty Club; and as a consultant for LOTS.

"My short-term goal is to get a good job and do music on the side," he says. "I'm already $14,000 in debt."

Tucci thinks that double-majoring in music is a great idea "if you want to work on music but not commit everything to it. I really enjoyed the small classes in the Music Department. No one is afraid to ask questions, and I always felt I had a handle on the material, unlike some of my technical courses."

One of Tucci's long-time dreams was realized last year when he, along with some close friends, formed the 16-man singing group, The Stanford Fleet Street Singers. They perform at study breaks every Wednesday night in the dorms and will give their spring concert May 26 in Toyon at 9 p.m. "We know about 35 songs, mostly our own arrangements of barbershop, '50s rock, crazy songs, and old Stanford songs. We want to be Stanford's newest tradition."

The Fleet Street Singers rehearse five hours a week, each section meeting separately for one hour. Having learned tap-dancing at Stanford, Tucci even does a soft-shoe routine with the group.

Tucci comes from Birmingham, a suburb of Detroit "where Jimmy Hoffa was kidnapped." His two sisters and one brother all attend the University of Michigan ("we're all on financial aid!") and his father teaches psychology at a local community college.

Last summer Tucci traveled throughout Italy, visiting relatives and friends of the family. His mother's family is from Abruzzo; his father's from Salerno.

Looking back over his five lively years at Stanford; Tucci recalls the courses and professors that made the biggest impact on his education: Medieval and Renaissance music (Mahrt), trumpet lessons (Burkhart), classical politics (Raubitschek) Dec-20 assembly language programming (Gorin), and statistical inference (Haley).

Looking ahead, he wonders if he is going into the right field. "I don't want to work with computers the rest of my life. I think I'd like to conduct an orchestra."—**Julia Sommer**

Procurement staff reduced: how you can adjust

Due to the University's budget reduction program, Procurement has had to reduce personnel. The full impact on service level is unknown at this time. However, with your help and cooperation, a reduction in service level may not be a problem.

The following are some of the ways departments can help:

1) **Plan ahead.** Submit requisitions early, as soon as you become aware of the need for materials or services. Consolidate orders to reduce the number of requisitions in the system. Order two or three months' supply of an item.

2) **Economies and convenience through Stores.** Save time and money by buying through Stores. Stores is happy to add stock items that are ordered frequently by departments through Procurement. Please call Stores Customer Service at 7-9606 to request a Stores catalog or to find out more about adding Stores items.

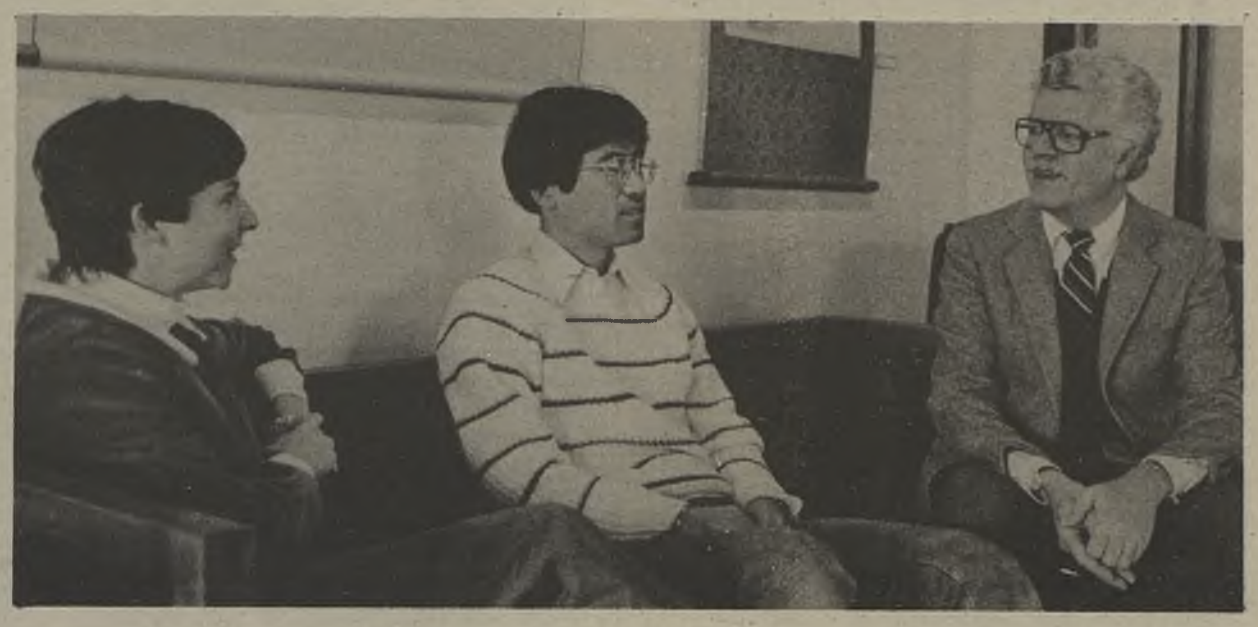
3) **Submit complete requisitions.** You can be assured of prompt processing by making sure you submit *complete* requisitions. Here are some of the items frequently omitted from requisitions:

* Account number (including fund number);
* Appropriate signatures;
* University Property Administrator's signature, for SU-15s;
* Supporting documentation.

Procurement welcomes any ideas or suggestions you may have to improve our service to your department. Please call any of the following Procurement operations managers with your thoughts or questions: Jim Gallaher, Special Contracts, 7-9406; Petchy Sargent, University/Hospital Buying, 7-1001; Jim Middleton, Facilities Procurement, 7-2429; Hector Allen, Stores, 7-3794; Kenn Klitgaard, Commissary, 7-3745.

The International Center—a global microcosm

Lee Zeigler works to broaden campus view of the world



Lee Zeigler (right) chats with English-in-Action volunteer Lisbeth Deisenroth (right) and student Hiro Yoshida

Our ideal role is to make Stanford a more international place," says Bechtel International Center Director Lee Zeigler.

"We want to help the people who are here from other countries for limited periods of their lives have the maximum exposure to the diversity of American life as it's presented here.

"At the same time, we'd like the whole Stanford community to be more aware of the rich international opportunities *they* might have through interacting.

"All international work is very two-way. You're helping people understand what we're all about, and you're learning what they're all about."

Zeigler, now in his 12th year as director, remarks that the I-Center's responsibilities have increased continuously since he took over.

Besides foreign students, the staff now handles programs for postdoctoral scholars and short-term foreign visitors. The Fulbright, Marshall, Rhodes, and Churchill Fellowships are now administered by Cathy Gamon of the Overseas Resource Center. And the wives' programs have kept on growing.

Zeigler attributes the I-Center's success to two things—a marvelous staff and the hundreds of volunteers who give their time and energy to make the programs work.

"I have a fantastically talented staff," he says—"people who are mostly overqualified for the jobs they're holding, and who work in many different ways.

"Most of the staff here are not confined to a particular role. They get involved in other programs, or they follow up on their own ideas for interaction."

What could happen to the programs without the volunteers?

"We wouldn't have them. We couldn't run this place on staff alone. All our hospitality services and our new student orientation, our English-in-Action program, the meals we provide for the luncheon discussion groups, our international visitor services—those are all dependent on volunteers.

"People ask what it's worth in dollars. I don't like to quantify volunteer work—it cheapens it. People give of themselves in a lot of different ways that are beyond a price tag.

"For instance, take international visitors. Last year there were 1,400, this year it will be more. That's one staff person (Maria Bun) with about 15 volunteers who help her different days of the week."

Zeigler became interested in things international when he was a Stanford undergraduate and a Latin American studies major. He spent summer and fall quarters between his junior and senior years studying and teaching English in Guatemala.

After receiving a master's degree at NYU, he spent five years with the Bi-National Centers program of the U.S. Information Agency in Ecuador, Bolivia, and Chile.

"I became convinced that the most effective exchange was with people who could come to this country and see it for themselves, rather than the propaganda method of going to other countries and telling them what we were all about.

"Therefore, when I came back to the U.S. in 1955 I tried to get a job as a foreign student adviser, but at that time there were very few opportunities."

Zeigler spent four years as assistant to the director of the World Affairs Council in San Francisco, "all the time hoping that some day I could get back to foreign student work."

The chance came in 1960-61, when he filled in for a Stanford assistant foreign student adviser who was on leave.

"The temporary job at Stanford was a launching pad for me," he recalls. "I met many people in the field and was offered several positions. The one I accepted was at the University of Hawaii—I went there in 1961 as director of their international student office and remained until 1969."

Zeigler came back to Stanford in 1969 as associate director with Ken Cooper and was appointed director in 1971.

His basic philosophy in operating with international students and scholars is simple—"Our first line of responsibility is to maximize their stay by minimizing their problems.

"If we help them to resolve their immediate needs when they come here and help make them comfortable, then they will reach out more and enrich their stay beyond the classroom or the laboratory.

"We give a lot of emphasis to the orientation period—helping people during the first weeks of their stay when they need basic things like housing, shopping, banking, settling in, and child care.

"This is a time when our volunteers give hours and hours and hours. I don't think the University has ever realized the contribution they make."

The I-Center remains a social point for some foreign students, who spend time there almost every day. Others develop their social lives in other places, such as Escondido Village or among their colleagues, and only appear for special events.

"We try to be broad enough to serve needs in a lot of different ways," says Zeigler—"everything from the official visa-related matters to the informal feeling comfortable here."

American and foreign student leaders run the four luncheon discussion groups held at the I-Center, and others are members of the program board. Each week a group comes in to cook their nationality's food for a special Sunday supper.

One of his ongoing wishes is to promote more interaction between American and foreign students. Stanford undergraduates seem to be so wrapped up in pressure to study and the social life of their residences that they don't reach out much beyond those things.

"People don't realize that we're more than a place for foreign students," says Zeigler. His ideas for joint programs with the residences so far have found few takers.

"Years ago the Row houses used to invite foreign students to eat with them several days a week, and there was an ASSU scholarship program through which foreign students would live in different residences for each quarter. That doesn't happen anymore."

Zeigler worries that the situation contributes to the fact that Americans in general tend to be naive and uninformed about international affairs and cultures.

"Americans are traditionally lacking in the need to communicate with people from other countries," he laments.

"As the world becomes increasingly interdependent, and the global powers are no longer the leaders they once were, economically and politically, survival demands more international understanding and more language communication.

"I think languages are terribly important for people to study. It broadens their whole perception of the world culturally by being able to perceive other people through their language."

Last fall's ASSU Course Guide contains a statement from him upholding the language requirement at Stanford.

Zeigler exempts the local community from his comments on Americans' naivete about other cultures. In fact, he has noticed that the people in this area have traveled and worked in other countries far more than the average American. These people are a rich source of volunteers for I-Center programs, and they also attend many of the I-Center events.

"We would like to get more students coming to our Thursday films and Tuesday noon lectures," he says. "We are primarily a student-oriented organization. As it happens, lots of staff and community people come."

The Thursday evening Other Cultures Film Series is Zeigler's particular pleasure. It began five years ago when the I-Center addition was built, providing space for an assembly room.

His two main sources for the international films are the University of California Extension Media Center—"They have a wealth of international films"—and the Australian consulate.

"Australian documentaries cover a lot of other countries, and they're extremely well done," he relates. "One of our community volunteers discovered the film archive at the Australian consulate, and we now have a special relationship with them.

"I've used 15 or 20 different sources, and I keep exploring, looking for others. We use the consulates,

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Meet the International Center's magician, Mary Clark

Mary Clark's boss refers to her as "a phenomenon" and says it would take three people to replace her if she left.

She herself is very modest about what she does as associate director of the International Center, but the fact is that she probably knows more than anyone else at Stanford about immigration law.

"It was a gradual thing," she says. "When I first started here in 1969 we had something like 900 foreign students. The work for foreign scholars was done in the personnel office by Ida Dickinson, but when she retired in 1972 it seemed reasonable for that work to be transferred to the I-Center. We were getting a lot of expertise in immigration regulations.

"So I inherited that, and as part of the inheritance I learned to do immigrant visas, temporary worker visas, and exchange visitor visas—the kinds of things we had no familiarity with.

"Since I do it so much, I guess I've become an expert. I enjoy it tremendously.

"It's been a long process of learning, keeping in touch with attorneys, getting their interpretations about things I don't understand. It's the kind of thing where you never know it all—it's constantly changing."

To help keep abreast of all the changes, she subscribes to the twice monthly *Interpreter Releases*, the *Operating Instructions* of the Immigration and Naturalization Service, and the *Technical Assistance Guide* of the U.S. Department of Labor.

Clark was a student wife at Stanford in the 1950s (her husband, Donovan Clark, was a Ph.D. candidate in anthropology), and worked in the Office of Public Exercises.

When the Clarks returned to the Bay Area in 1968 after a two-year stay in Washington, D.C., and four years in Asia, Mary spent a year as a secretary at SLAC before transferring to a similar position at the I-Center. She and the new associate director, Lee Ziegler, arrived on the same day, July I, 1969.

Since then the I-Center's work load has grown tremendously.

"In 1969 there were about 900 foreign students—currently there are 2,052. Last year we had 1,158 foreign scholars, so it's been an incredible increase in our clientele. Furthermore, as we become more expert, we're expected to provide more information.

"Our advising back in the early 1970s was pretty much confined to helping people find housing, helping them with health insurance and day-to-day settling-in problems. There was very little advising about immigration—people would go to attorneys.

"We now refer students, faculty, or staff to attorneys only when it goes beyond our expertise—if it's a deportation case of if someone wants to make a big investment in a U.S. company, for instance."

What's the most common problem with visas?

"Students are extremely careless about keeping their student status up, and that presents a lot of difficulties. There are cases where someone has goofed, and the Immigration Service takes a hard line with them. Then we step in, and frequently we're able to help."

Have students actually had to leave?

"Not often, but we did have an Iranian student who had to leave. There again, it was a situation of carelessness on his part. He permitted his stay to expire, and it was during the Iranian crisis."

As Stanford hires more noncitizens on a permanent basis, and getting immigration status becomes more and more difficult, Clark's paperwork burgeons.

"For example, if a department wants to hire an alien as an assistant professor—they've already singled him out—I then start his immigration papers. We're talking about a process that could take as much as a year-and-a-half, and it is very time-consuming because during that time we have a lot of contact.

"The Labor Department is terribly backed up. More and more every year want to become immigrants, and they don't have the labor force in their own offices to handle these petitions quickly.

"They're getting very, very fussy, due to the unemployment here—we have to demonstrate that we've really tried to find an American for the position. That's done by means of advertising.

"The advertising requirements are very specific—if you advertise and 100 people reply to that ad, you have to show why the 99 you turned down were not suitable.

"In 1975 it was much easier. If a person had a Ph.D. he could simply present himself at the Immigration Service and say he wanted to stay and they would have given him immigrant status.

"That has all changed. In 1977 it was made much more difficult, and it becomes more difficult all the time."

On top of all this, Clark has somehow become known in the local area as a person who has all the answers to everyone's visa questions.

"We have people who have no connection to Stanford coming in wanting information. Tourists will walk in and ask 'How can I get a job at Stanford?' 'How do I get a work permit?' 'How do I stay in the U.S.?' That's an everyday occurrence."

Clark also is active in the National Association for Foreign Student Affairs (NAFSA), a large organization which helps U.S. schools keep up on the changes in laws regulating immigrants and aliens. She is on the national team of the Council of Advisers to Foreign Students and Scholars, an elective office with a term of two years.

It's the regional section that takes the most time, however. Clark was cochairman for the regional conference in Asilomar in February. In the past she's been regional chair, district chair, and editor of the district newsletter. She conducts yearly workshops for all the foreign student advisers in this district.

Clark also functions as the I-Center's office manager, handling personnel, purchasing, and building problems. But the unoffice-like atmosphere and a staff that gets along well together make the work enjoyable.

"The I-Center is a wonderful atmosphere for work," she says—"if you don't mind people practicing the piano and little kids screaming.

"Marvelous smells come wafting up from the kitchen. Foods from all over the world are cooked there—and there are always leftovers for us!"

The I-Center is the first place foreign students go when something goes wrong in their lives. It might be a strained marriage, illness, or trouble with a landlord, but they expect help with the problem.

"They think we're magicians," says Clark. "Sometimes we've been able to help, sometimes not. If we can't, there are other people out there who can."



Mary Clark

One definition of magic is "an agency that works with wonderful effect." Maybe you *could* call Mary Clark a magician.

Marcia Makino's role

Although immigration matters comprise much of the advising at the I-Center there are many other areas of concern to the foreign students at Stanford.

Marcia Makino, assistant director for foreign student advising, confronts a multitude of problems relating to students' visas, extensions of stay, employment permissions and re-entries to the United States. In addition, she helps students sort out their financial problems, working closely with the Financial Aids office.

Solving financial dilemmas involves much more than supporting short-term loan requests, according to Makino, who has been at the I-Center since her undergraduate days when she first took a part-time job in 1975. Currency flow from abroad, possible part-time employment, and other funding sources such as foundations and civic organizations are all considered.

Communication with departmental academic advisers, discussion with landlords, car salesmen, merchants, foreign government sponsors, international companies, placement officers and residential education staff are all routine for Makino in her continuous efforts to help students from abroad work through troubling situations.

Makino, who has held her present position since September I981, spent three months at Kiel University in Germany on a direct staff exchange initiated by Lee Zeigler. A staff member of the foreign student office at Kiel spent the same period at the I-Center.

Makino's activities extend beyond problem solving, including continuous liaison with the nationality groups on campus, planning orientation programs for newly arriving students and working with the annual workshops for mid-Peninsula high school students to "Experience Another Culture at Stanford."

Teenagers get a chance to know Stanford students and their families in a variety of cultural-immmersion activities each winter.

More I-Center stories on the next page

Zeigler. . .

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places like the Goethe Institute, public libraries, private sources, the National Film Board of Canada. . . .

During the interview for this article, a student came by to offer a student-made film on Bali. Zeigler told her to find a free evening on the I-Center calendar and schedule it for showing.

"We get that kind of thing every day," he says. "Although we put on a number of programs, the real life of this place is the contribution of many other people—nationality groups and other campus groups, community people. . . . "

The I-Center could be seen as Stanford's microcosm of the rest of the world. Anyone who feels a need to have his or her horizons stretched should take a short trip over there.

Overseas experience is a must, says Catherine Gamon



Catherine Gamon of the Overseas Resource Center

"We want as many people as possible to get abroad."

The speaker is Catherine Gamon, director of the Overseas Resource Center (ORC) at the International Center. A person with a lot of overseas experience herself, she is convinced that direct knowledge of other cultures is a priceless asset.

"Overseas experience is valuable for any individual, and its value is more than a selfish one," she says. "People in positions of influence and power have to know what other people are thinking and doing, and they should experience it firsthand instead of merely reading about it.

"We facilitate this process."

No one at the I-Center remembers who started the collection of information on study, travel, and work in other countries. The legend is that it began about 12 years ago with a shoe box full of travel folders.

Now it's a whole room, filled with catalogs from foreign universities and overseas programs of U.S. institutions, background information on U.S. firms with international offices, and lots of material on travel.

The Overseas Resource Center is more than just a collection of written materials, however. Staff members there draw upon their own international experience and stay in touch with others on campus who can advise students about international study, work, and travel or about particular regions of the world.

"We work closely with Overseas Studies, International Relations, theme houses, and other international and area studies programs on campus in order to serve people as effectively as possible," says Gamon. "Each quarter we organize several programs to promote specific options for study, work, or travel, and programs focusing on particular countries or areas. Often these programs are sponsored jointly by the ORC and other departments or programs.

"Our focus is on student needs," says Gamon, "but faculty and staff members often use the travel information and that about higher education in other countries."

In addition to maintaining the library of materials on international study, work, and travel, ORC staff members are actively involved in the administration of numerous scholarships for study abroad.

"We administer the campus competition for such diverse programs as the Rhodes, Marshall, and Churchill Scholarships for study in Britain," Gamon says, "plus two graduate Fulbright programs, direct exchanges at the undergraduate and graduate level with German universities, the Haas-Koshland Scholarship for study and personal development in Israel, and the International Student I.D. Card Scholarships for undergraduate research or volunteer work in developing nations in Latin America, Africa, and Asia.

"We urge students to explore *all* funding sources for international study, many of which are listed in grants directories in the Overseas Resource Center. But of course we work most closely with those students who are applying through us for one of the scholarships we administer."

Gamon enjoys hearing, through her correspondence with them, about the fellows' and scholars' experiences abroad.

"One person is in Papua-New Guinea," she remembers. "Correspondence has to go to Port Moresby, then on a once-a-month missionary plane to somewhere, and then three days on foot if someone is found who can take it."

Gamon grew up in an American foreign service family. She was born in Italy, started school at age four in Martinique, lived in Sri Lanka when it was still Ceylon, and met Prof. Jim Gibbs of Stanford's Anthropology Department when she was a high school student in Liberia.

"I had always taken moving for granted," she remembers, "but I wanted to be *American*—to eat hamburgers, etc. It was in high school that I began to be seriously interested in international experience."

As Gamon started her freshman year at Stanford in 1973, her parents moved to South Africa.

"I was full of liberal ideas about how horrible that country was," she relates. "But then I spent my sophomore summer there working for the U.S. Information Service, advising South African students who wanted to come to the U.S.

"It was my first chance to meet black and colored South Africans. I found that people *were* working for change within the country. I also began to appreciate the importance of educational exchange."

Gamon had also spent a quarter at Stanford's Tours campus during her sophomore year, but the travel bug soon bit again.

"After my junior year I decided I needed more international experience, to experience being in another country and to look at it from an academic and intellectual point of view.

"My parents had just moved to Pakistan and suggested that I come. I said, 'No way!' but a couple of weeks later I was packing my bags."

Gamon spent the year teaching English to Saudi Arabian female dental students sent for training to Pakistan.

"For me, Pakistan seemed very restrictive, but to them it represented freedom. They could go out together in twos, and they didn't have to cover their faces in public."

She also did part-time secretarial work for projects on anopheles mosquito eradication, water resources, and implementing technical changes in villages, with the resulting sociological stresses.

"That year helped me learn a lot more about the world," she says, "and I wanted to facilitate the same thing for other people. I decided I wanted to work in educational or cultural exchange."

Gamon graduated from Stanford in 1978 with a major in international relations and worked in Meyer Library that summer. Then a job at the I-Center opened up, and she's been there ever since.

Like the other areas of the I-Center, the ORC relies on outside help, from both students and community volunteers.

Work-study students take care of developing and keeping up to date the library materials. When the office is very busy, they take on back-up advising, too.

Community volunteer Nancy Rogers has worked in cooperation with the Career Planning and Placement Center to develop the ORC's file of organizations with international scope.

Anna Maria Limerinos walked in one day and asked for something to do—she has helped with the office work ever since.

"We could not function without students and community volunteers," says Gamon. "We hope they get as much out of their being here as we do."

The ORC issues international student ID cards (1,500 each year) and Youth Hostel cards, which keeps them busy just before each Stanford group leaves for an overseas campus.

Gamon wants students to explore all the options at the ORC.

"There are foreign university programs for foreign students, and both U.S.-sponsored and foreign-sponsored programs. People with language fluency can enroll directly in foreign universities—that's a good, inexpensive option.

"We want to promote all the scholarships as well as the specialized programs in specific countries."

Like others at the I-Center, Gamon appreciates the value of speaking other languages. She has a working knowledge of French and some Spanish,

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CCIS: the I-Center wouldn't function without them

A few months after Werner Warmbrunn became Stanford's first foreign student adviser in 1952, he called together five women to discuss the needs of the international visitors.

The five became the core group of the Community Committee for International Students (CCIS), an organization whose history is an integral part of the International Center.

Chairman of that first group was Joan Lane, a recent graduate of Smith College and newly married to Melvin Lane of Sunset Publishing Company. The other four were Sheila Spaeth (wife of Law Dean Carl Spaeth), Virginia Page (wife of Geology Prof. Ben Page), Pat Chadwick, and Barbara McFarlane.

The first thing they did was start the Homestay Program, in which foreign students live with local families for a short time prior to registering at Stanford. It was only the beginning of a multitude of services to make their stay at Stanford a success.

The International Center's first real home was the late Prof. Bailey Willis's old house on Lasuen Street, near where the Post Office is now situated. It opened in 1957 after students, staff, and CCIS volunteers cleaned, painted, and furnished it. It had a sidewalk cafe with five-cent coffee and became a center for discussions, cultural events, and social life for international students.

When the house burned down in 1961, CCIS joined the search for new quarters, while the I-Center's offices and programs were scattered in available space around the campus.

The I-Center's home since 1963 is the former Zeta Psi house, which was remodeled with a major gift from Stephen Bechtel and the proceeds of successful fundraising by CCIS. The library is named after Guy Post, who led the fund-raising effort to obtain the house. A CCIS member who is a professional

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Gwyn Dukes gives foreign families something of their own at Stanford



Gwyn Dukes (center, in plaid shirt) enjoys a Thursday morning coffee hour with international students' wives and their children.

When a foreign student or scholar comes to Stanford, he (four-fifths of them are men) knows exactly what he will do. He'll attend classes, study, participate in research projects, and develop friendships with his fellow students.

If he is married, his wife will have a little more trouble building herself a satisfying life in the Bay Area.

Often wives have not yet learned English. Sometimes they are newlyweds and have not had the experience of running a home even in their own countries. They have left support systems of relatives and friends behind and must cope alone with setting up housekeeping, marketing, getting around town, and finding new friends and activities.

Enter Gwyn Dukes, adviser to wives and families at the I-Center, and a battery of volunteers. There's a possibility that the foreign wife will end up as busy as her husband is.

There are English classes, morning and evening coffee hours, and trips to explore the local scene. There are women's circles in which people get to know each other so well they keep up contact long after leaving Stanford and visit each other in their home countries.

It's not merely "kaffee klatch talk," either. They have lively discussions on the role of women in their respective countries, comparative medical care and education, for instance. Last year one group attended the debate between Phyllis Schlaffly and Stanford Assistant Prof. of Law Catherine MacKinnon and came back to their own discussion afterward.

"It's a way of learning about each other and learning other points of view and perspective," says Dukes, who has an infectious enthusiasm for her job.

"The thing that excites me the most is to understand the underlying value systems and patterns of communication of people from different parts of the world," she continues.

"I like to try to see people from other cultures in their own context, instead of looking through the little lens of my own culture. I want to be able to see how the Japanese behave from a Japanese perspective, and to understand Latin Americans according to their frame of reference.

"There are many aspects of our own value system that one might differ with or question. It's so refreshing to find a society that is less materialistic, for example."

Dukes grew up in Washington, D.C.—"You automatically get interested in foreign relations there," she says.

She received her bachelor's degree in government from Denison University (Ohio) and a master's degree in student personnel administration from Columbia. While at Columbia she was an intern at International House in New York, one of three such residences in the U.S., where international and American students live together.

Dukes came to Stanford in 1964, and after a year as director of Union residence joined the staff of the I-Center, where she has worked as program coordinator and foreign student adviser. After the birth of her son she took a few years off, returning as coordinator of programs for wives and families in 1972.

Under her direction, the support system for international wives starts on orientation day, with an information table for them at the I-Center. Soon after that several couples from different countries, who have been at Stanford for at least a year, form a panel to talk about what it's really like to live in the Bay Area. Afterwards, newcomers and veterans break up into language groups for follow-up discussion.

The wives get a calendar of events and classes, plus someone to call up in their own language in case they have problems or questions.

After that, volunteers will help them learn English, teach them about basic American cooking and marketing, provide them household items from the Loan Closet, show them all the interesting places in town, and bring their children to participate in international playgroups.

"We're more organized than anyone expects us to be," Dukes comments.

"We try to give people an idea of what the typical problems are and give them some resources and ideas on how to meet the challenge."

She saw a need for the women's circles as a way to put people in touch with each other on a continuing basis, and to build a sense of community for wives who had no direct contact with the University.

"We tried lectures, but it seemed that the people in the groups had interesting things themselves to say, and that it would be much more important for them to build the relationships with one another."

Dukes soon discovered that the international wives represented a gold mine of talents and skills.

"We plan a lot of classes according to what interests we find," she says. "Each year there have been people who came forward with many different special interests. We want to convert the talents there are here into things that everyone can enjoy and benefit from.

"They have so much to give, both to each other and to the American community."

Dukes very much enjoys another part of her job—the Speakers' Bureau, which gives people in the local community the benefit of learning firsthand about other cultures.

"We've worked with the Extended Resource Center of the Palo Alto Unified School District, individual teachers and schools, as well as other organizations," she says.

"We've supplied Chinese, Mexican, French, and Iranian cooks for a Palo Alto High School cooking class. Wilbur wants someone to speak French with the Students, and Jordan wants someone to come to a Spanish class. A German student recently discussed economic issues with a Woodside High international relations class.

"Any chance our school children have of being exposed to other points of view, other ways of looking at the world situation, other ways of doing things, is to their benefit.

"Children here complain that they have so much homework, when actually, compared to a child in Japan, they hardly have any homework at all. The relationships with teachers are different there, the hours are longer."

Some of the foreign women interrupt their education to take leave from jobs of great responsibility to accompany their husbands to Stanford.

Some, who expected to find jobs here, have settled for volunteer work in their fields instead. Others have taken degrees at Foothill, San Jose State, or UC-Santa Cruz, or concentrated on perfecting a craft or sport.

Dukes coteaches, with volunteer Judy Shea, an English class for foreign wives which prepares them to go out to local schools to share their cultures and skills. Other English classes are based on learning about American culture or reading American short stories.

Cowell social worker Charlotte Siegel spends two mornings a week at the I-Center, counseling students and wives on family or personal problems.

Sometimes there are concerns about pregnancy, given the high cost of maternity care here. As a

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studied Urdu during her year in Pakistan, and has a beginning in Hindi, which uses the same alphabet. This quarter she has begun studying German, to aid in the administration of scholarships for study in Germany.

People at Stanford tend to take all these resources for granted, but those who have tried to find the same type of information at other universities see it differently. Stanford's ORC is probably one of a kind.

Medical Center MEMO

Eat and play your way to slimness, advises Wood

Encouraging people to ultimately eat more, not less, should be the goal of any worthwhile weight loss program, contends Dr. Peter Wood, deputy director of the Stanford Heart Disease Prevention Program (SHDPP).

What sounds like a unique twist to modern theories of weight control stems from Wood's scientific observation that slim people generally eat more—and do more exercising—than their overweight friends.

As Wood explains in his new book, *The California Diet and Exercise Program* (288 pages, Anderson World Books, Inc., $13.95), the problem with most popular diets is that they focus too heavily on the wrong side of the calorie equation.

"The idea that being overweight is due to, and sustained by, eating inordinately large amounts of food has been with us for many centuries, and dies hard: the gluttony model," the professor of medicine (research) said in an interview.

Actually all it takes, Wood said, is 14.4 calories too much each day for 30 years to store up 45 pounds of extra fat by age 50. This is about a fifth of a banana too much each day, hardly an amount fit to prohibit or prescribe.

"Since the early 1900s Americans have actually decreased their food intake, become more sedentary, and grown fatter. It's clear that the problem is not eating too much, but exercising too little," Wood observed.

In studies at the SHDPP, Wood and colleagues compared lean, middle-aged runners (40 miles per week) and tennis players (10 hours singles per week), of both sexes, with average, randomly selected men and women.

"The case of the tennis playing women was particularly striking," said Wood. "They reported eating about 62 percent more than their sedentary counterparts." They have to eat a lot, he said, to remain very active.

Progressive plan

Wood's book sets forth a systematic approach to weight control, intended for those who've been moderately overweight as adults. Extending over a full year, the program is purposely gradual. "People can be easily discouraged if pushed too fast to change, and that's why so many give up on other diets."

Also, he added, "Most experts agree that a true loss of one to two pounds of body fat per week is the fastest you should go."

The sort of exercise Wood advocates is "play"—that which is enjoyable. He urges people to vary their activities and exercise in company, increasing social contacts as well as physical benefits.

"Of course," he said, "the more vigorous activities burn fuel faster. Jogging, cycling and swimming are champion fat burners." The London born researcher has been an avid runner himself since the age of seven, and authored *Run to Health* in 1980.

"But remember that if you have the time, a mile walked slowly will use nearly as many calories as a mile run fast," he said.

In Wood's program, menu plans work side by side with play plans, the two intricately dependent on each other. Caloric intake is decreased somewhat at the beginning of the year, but gradually increases with level of play, until by the end of the program the individual is both playing more and eating more than before.



"People ask more of car salesmen than they do about new diets."

—Peter Wood

(seen here in one of his frequent runs around the Stanford campus)

"Rewards are built in at intervals," Wood explained. "At the end of the year the body is in balance, neither gaining nor losing calories (or fat). This is the state we need to reach, one of equilibrium."

Wood believes that a full year on his program will accustom the individual to a new lifestyle, ensuring weight maintenance rather than the instant gains so commonly experienced after dieting.

He pointed out that an active lifestyle brings with it numerous health advantages besides weight loss. These include improved cholesterol pattern, decreased inclination to smoke, muscle build-up, benefits to bones and joints, improved heart function and respiratory function, lower resting pulse rate, less constipation, increased resting metabolic rate, improved sleep, and improved mental outlook.

Eating heartily also, Wood said, is what Nature intended for human beings. "There are many disadvantages and some dangers in the permanent low-calorie approach to weight control.

"In my view, low-calorie diets should be used sparingly and therapeutically to achieve loss of accumulated fat; *not* prescribed as a permanent, desirable, modern, with-it, and thoroughly admirable way of life," he said. "Life—especially Californian life—requires food!"

And, he added, "When your body gets a lot of food and exercise, the natural mechanism for balancing the two works very well." As an example, Wood said he has to be careful that his own weight doesn't go too low.

Advantages of hearty eating include a higher resting metabolic rate, improved nutrition (provided that foods are chosen wisely), less constipation, and more enjoyment.

Also, "Several long-term scientific studies now agree that people who go on to suffer heart attacks are more likely to have been eating *less*, years earlier, than similar people who remained well," said Wood.

"What the data are probably telling us is that the people in the studies who were eating more were also more active and leaner; and these two attributes accounted for their reduced heart disease rates."

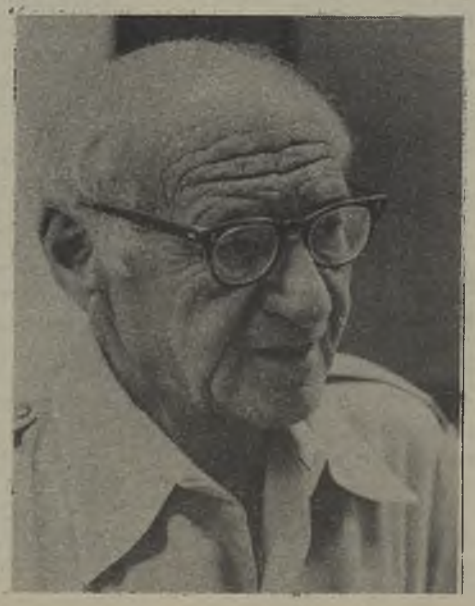
Wood designed his weight loss program with safety and efficacy in mind, as well as a special concern for the older person. His plans provide ample amounts of nutrients (protein, vitamins, minerals) and other components to maintain good health (like fiber), and are low in items that should be low (salt, cholesterol, saturated fat).

"Many natural foods are beneficial to health, and may help, along with good exercise, to ward off the major chronic diseases of the age, heart disease and cancer." While dieting, Wood said, many people may inadvertently increase their risks of future disease by omitting some basic food essentials.

This is where most popular and self-designed diets go wrong, he added. "But unfortunately, people ask more of car salesmen than they do about new diets. Some of the fads that have been promoted are outrageous—but you name it, they sell it."

Besides becoming well-informed oneself, it's a good idea, Wood said, to inform one's doctor when embarking on a considerable change in lifestyle. "Those more than 80 pounds above their ideal maximum, or having known major health problems, should certainly consult with their medical advisors before beginning any weight loss or exercise plans."

—Lisa Ames



George Feigen

Prominent Stanford researcher and teacher dies after illness at 66

Dr. George A. Feigen, a Stanford University physiologist whose wide-ranging interests joined the fields of immunology and pharmacology in more than 44 years of teaching and research, died at Stanford University Hospital Sunday evening, after suffering a ruptured aorta. He was 66.

"He was an international leader in research who literally trained students from throughout the world," said Dr. Eugene Robin, acting chairman of the department of physiology.

Head of the department's Ph.D. training program for the last ten years, Feigen was "a man of the highest standards, who insisted that the highest level of performance in hands-on training in the lab was critical to the education of excellent young scientists," said Robin.

Born in Rostov, Russia in 1916, Feigen came to the United States in 1930. Doctorate degrees in physiology and immunology from the California Institute of Technology in 1947, sparked a career that explored the effectiveness of various blood substitutes, examined the mechanisms of shock triggered by severe allergy, and investigated the effects of allergic reaction on the heart and blood vessels.

Anaphylactic shock—the most severe allergic response—was Feigen's special area of expertise. In 1967, scientists identified a special protein, called immunoglobulin E (IgE) which plays a key role in triggering an allergic reaction.

continued on next page

Only two so far in 1983

Donor scarcity holds up heart-lung transplants

Scarcity of donors has restricted Stanford's heart-lung transplant effort, the program's principal investigator said last Wednesday, May 18, after the first such operation in more than four months.

"We have been hoping to perform about 12 such transplants a year, but today (Wednesday) was the first time we have found a suitable donor since January," making it only the second heart-lung transplant this year, said Dr. Stuart Jamieson, assistant professor of cardiovascular surgery and head of the heart/lung program.

"Three of the 10 persons waiting for new hearts and lungs have died since last January, and we can expect to lose more unless potential donors are brought to our attention."

The physician said only about 20 percent of potential heart transplant donors are suitable for the double transplant operation, which has been performed 12 times at Stanford since March 9, 1981. Eight of the patients, including the four most recent before Wednesday, have returned to their hometowns and are doing well, Jamieson said.

The difficulty, Jamieson said, is that the lungs often become damaged before they are removed and can be used in surgery. Pneumonia is the most common condition which afflicts brain dead donors while mechanical equipment keeps their hearts beating and their lungs ventilated until the organs are transplanted into a recipient, Jamieson explained.

When the lungs are found unsuitable, the heart often can be used for a heart-only transplant. Eight such operations have been performed since the last heart-lung operation was performed, bringing the heart-only total at Stanford to 263 since January 1968.

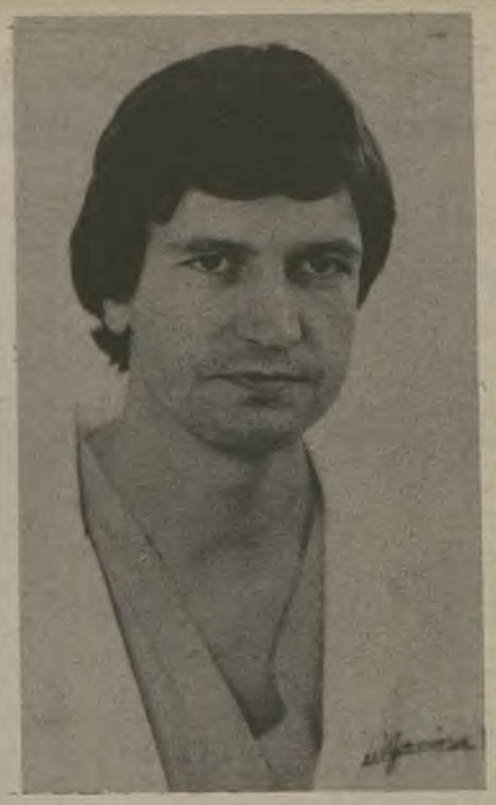
Heart-lung transplantation is newer and was made possible by recent improvements in medication intended to prevent patients' bodies from rejecting their new organs. A new drug, cyclosporine, permits healing of the windpipe.

"Heart-lung transplantation has been proven to be helpful to a small number of patients who otherwise would face certain death without the procedure," said Jamieson. "But our ability to perform the operation is limited because of our difficulty in having potential donors brought to our attention."

Donors, he said, must be brain dead but free of other disease. Their families must give permission to donate their organs after death.

"Our whole problem," Jamieson said, "depends on public awareness of the need for this precious resource."

The most recent heart-lung patient was identified as Fernando Flores, 32, of Mercedes, Texas, who was reported in critical but stable condition after the five-hour operation. On Thursday morning he was awake and breathing unassisted. By this week he was reported in stable condition, eating solid foods and walking in his hospital room.



"We'd like to be able to perform more of these operations. The critical factor is donors."

—Stuart Jamieson

"He still has a long way to go, but he is doing well," Jamieson said.

Flores, who had worked as a career counselor, suffered from a ventricular septal defect. A hole present from birth allowed blood to flow between the chambers of heart, causing a volume overload of blood which eventually damages the lungs. The condition ultimately is fatal unless both the heart and the lungs are replaced.

A 38-year-old Visalia, Calif., man, Dennis Vinyard, was the last heart-lung transplant recipient at Stanford. He has returned home after hospitalization and treatment following up his Jan. 10 operation, Jamieson said.

Stanford's first heart-lung transplant, Mary Gohlke, now 47, has returned to her Mesa, Ariz., home. She has worked as a newspaper advertising executive and has been working on a book recounting her experiences.

"We'd like to be able to perform more of these operations," said Jamieson. "The critical factor is donors."

The physician stressed that hospital personnel can play a critical role in identifying potential donors and explaining during a very stressful time to families how the brain dead patient's organs can be used to save someone else's life.

Medical personnel or families who may have a potential donor may call Stanford's Department of Cardiovascular Surgery, (415) 497-5771, 24 hours a day.

"We are able to accept donors from throughout the United States or Canada," Jamieson said.

—Mike Goodkind

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Stanford Medical Group on the move in more ways than one, says Jacobs

With more than a year of successful operation behind it, the Stanford Medical Group (SMG) is looking at ways to expand and improve its services, according to co-founder Dr. Michael Jacobs, clinical associate professor of medicine.

Established by the Medical School's department of medicine in 1981, the clinic provides members of the Stanford and surrounding communities with the opportunity to receive high quality medical care by faculty physicians without being part of the teaching format.

Two more physicians—Dr. Susan Kritzik, currently a staff physician at Palo Alto Veterans Administration Medical Center, and Dr. Terrigal Burn, currently a clinical instructor in the division of general and internal medicine, and the department of mental health and community nursing at the University of California, San Francisco—are scheduled to join Jacobs and Dr. Scott Wood in the University-based group practice this fall. Co-founder Dr. Armand Gelpi, clinical professor of medicine, will be leaving the clinic.

The new physicians will enable the clinic to expand its consultation service, which currently serves all clinical departments at the medical school and northern California physicians, as well as its medical-psychiatric inpatient service.

"We also need to address the question of what a service-oriented practice group is doing in what is primarily an academic center," Jacobs continued. "We have to integrate our practice with the academic goals of the medical center without risking the quality of care."

The way to accomplish this, Jacobs explained, is to assign select senior residents to work with patients in the clinic. This will be done initially with the inpatient consultation service, followed by "establishing an outpatient rotation for carefully screened senior medical residents especially interested in the practice of primary care internal medicine.

"This would be a natural step for someone who plans to go into private practice within the next few months."

Jacobs said he hopes the group physicians will be able to start documenting original clinical observations. This, he said, will contribute to the "scholarly credibility" of the group.

The idea for the group practice evolved in response to individuals' expressed desire to have a full-time faculty member as their personal physician. SMG is based on similar programs in existence at about half the nation's medical schools. Jacobs and Gelpi formed the original core of physicians, aided by about 12 affiliates from the department of medicine. The group, which also includes a full-time nurse, offers patients complete outpatient and inpatient care on a 24-hour basis.

The faculty member chosen to be the personal physician is fully responsible for the patient's care. The physician arranges consultation with other specialists if needed, and is available for visits in the clinic during office hours. If hospitalization is necessary, the doctor admits the patient to SUH, and assumes the attending or teaching function on one of the teaching services.

During its first year of operation, the group received more than 3,200 outpatient visits, Jacobs said. About 40 percent of the referrals came from SUMC physicians, while about 60 percent came from outside physicians.

"The group achieved a balanced budget in its first year, which is a distinctly unusual occurrence in comparable programs," he added.

In 1982 Wood joined the group. He cares for SUH employees' job-related illnesses, and performs all intake examinations on them.

"Attaining this contract between the SMG and the hospital was important because it justified adding a third full-time physician after only a year of operation. Also, Wood is in an ideal position to attract new patients to the group," Jacobs observed.

The group, which is administratively and financially independent, is also planning to move into new office space, as part of the Boswell Building renovation plan. The $6.5 million construction, equipment, and remodeling program will upgrade the physical facilities of the Stanford University Clinics. The clinics serve as offices for the medical school faculty.

—Shirley Kraus

George Feigen dies. . .

continued from page 14

Through their study of guinea pigs, Feigen and his colleagues discovered the biochemical reactions that IgE uses to unleash histamine—a potent chemical, normally sequestered in certain cells of the body. Sudden release of histamine into the bloodstream can produce severe and sometimes fatal symptoms.

Feigen spent two decades seeking to understand why a defense system usually so powerful in protecting a person from infection, "goes overboard" under certain circumstances, producing poisons detrimental to the host.

One recent project explored theories that certain cases of female infertility may result from immunization to sperm. Feigen showed that human fallopian tubes are extremely sensitive to histamine, and that the the intensity of an anaphylactic response varies at different phases of the menstrual cycle.

Researchers in Feigen's laboratory are also currently studying the effects of vitamin C on the immune system.

"As a teacher he was feisty and demanding, but extremely loyal to his students," said Robin. "George Feigen radiated integrity."

Feigen joined the Stanford faculty in 1949, after several years of teaching at Cal Tech and the University of Southern California. He spent a year at the University of Oxford, England, in 1956-57 as a traveling scholar of the American Heart Association, and returned to Oxford in 1963-64 as senior post-doctoral fellow, courtesy of the National Science Foundation.

A member of numerous scientific societies, including the American Physiological Society, Sigma Xi, and the New York Academy of Sciences, Feigen served often as guest teacher and lecturer to universities throughout the world.

He is survived by his wife of 35 years, Priscilla R. Feigen. Memorial services will be held 4 p.m. June 2, in the upstairs lounge of Tresidder Memorial Union.

According to the family, memorial contributions can be made to the George A. Feigen Memorial Fund, and sent c/o Professor Robert Hofstadter, Department of Physics, Stanford University.

So many aching backs: wh

BY LISA AMES

Three things are established about back pain:

- It hurts.
- It's a widespread problem, with overlapping causes often difficult to pinpoint.
- Human beings' ancestors were originally four-footed animals whose hands were later freed by evolution for more useful pursuits. But their backs have paid the penalty of being forced to maintain balance in the upright position.

When you suffer from back pain what are your chances of receiving help? Great progress has been made in understanding back pain—but what about cures?

Some prominent orthopedists, neurosurgeons, and physical therapists in the community and Stanford University Medical Center were recently interviewed about this. They agreed that most of the 75 million Americans who hobble to the doctor's office each year seeking relief are *not* candidates for surgery.

Rather, many suffering from back pain find relief with mild analgesics and anti-inflammatory drugs (like aspirin), muscle relaxants, bed rest, therapeutic exercise, heating pads and warm baths. "In most cases the pain will go away with conservative measures and time," said Dr. Eugene Bleck, professor and chief of Stanford's orthopedics division. Even slipped discs can sometimes resolve themselves.

Physical therapist Joan Smithline said that patients should be taught at the first onset of back pain how to take care so their problems don't escalate to the point of needing surgery. "Once you've hurt your back," she explained, "you're much more prone to having the pain again unless you really treat it well."

"It's best for people with histories of back problems to avoid activities that vertically load the spine: horseback riding, running, and anything that pounces," added Dr. Frances Conley, associate professor of neurosurgery.

Dr. David Hull, a Palo Alto orthopedic surgeon and clinical faculty member, has treated many patients with back pain during his 28-year-old practice. He summed up:

"The most important factors in treating lower back pain are correct diagnosis and evaluation, careful patient selection for the various treatments available, and above all prevention through public education.

"The latter is crucial," he said, "because back pain is a strain not only on sufferers but on the nation's economy, taking its toll annually in the millions of dollars." About 85 percent of the American population, he said, have at some time experienced back pain severe enough to seek medical care. Back problems account for a large number of worker's compensation claims and workday absences.

It's not an easy field to be in however, Bleck admitted. Correct diagnosis is especially difficult in the back, because the spine and nerve roots are deeply seated. It takes at least an hour and maybe many more visits for a physician to get to know a patient and determine the likely sources of pain.

The first decision is whether the patient has a mechanically induced problem from injury (most common); disc or joint disease (second in frequency) fracture of the spine; arthritis or rheumatism; a benign or malignant tumor; or perhaps a "tension headache in the back—one of the most difficult conditions to treat," Bleck said.

His colleagues added to the list of possible causes: infections (especially among drug abusers); complications of diabetes; diseases of the kidneys, pelvic and abdominal organs; internal bleeding into the lower back (especially with chemotherapy patients); abnormalities in bone growth; congenital defects; and vascular disorders.

To diagnose the problem, physicians test motor strength, sensation and range of motion, take a medical history, and conduct a clinical neurological exam. When necessary, they may opt to use myelograms (dye injected into the spine making abnormalities visible by X-ray), CT bone scans (three-dimensional X-ray), blood counts, and bacterial cultures.

Once a diagnosis is made, non-surgical treatments can often be selected, depending on the condition. In home lumbar traction, the patient is suspended on a surfboard-like device which uses gravity to separate the vertebrae and help take stress off the nerves. There are also other types of traction which may be beneficial.

Transcutaneous electrical nerve stimulation, administered through a small device worn by the patient, may be used as a last resort to control pain in some cases.

And then there is a promising drug, chymopapain.

An enzyme extracted from the papaya plant, chymopapain was only last fall approved by the Food and Drug Administration for use in this country under the brand name "Chymodiactin." Injections of the drug have long been used effectively in England, Russia and Canada to dissolve slipped discs, avoiding surgery for many back patients. The procedure is called chemonucleolysis.

Though chymopapain poses some risks, the danger of death is as low (though existent) as with back surgery, said Conley. "We haven't started using chymopapain here yet," she said, "so we don't know how effective it will be with our tertiary patients, most of whom need salvage surgery."

The surgery Conley performs with Dr. John Hanbery, professor and chief of neurosurgery, is an attempt to reestablish and/or preserve the anatomic alignment of the back using stainless steel rods, coupled with spinal fusion. The purpose is to preserve enough space for nerve roots to pass where disc degeneration or removal has occurred.

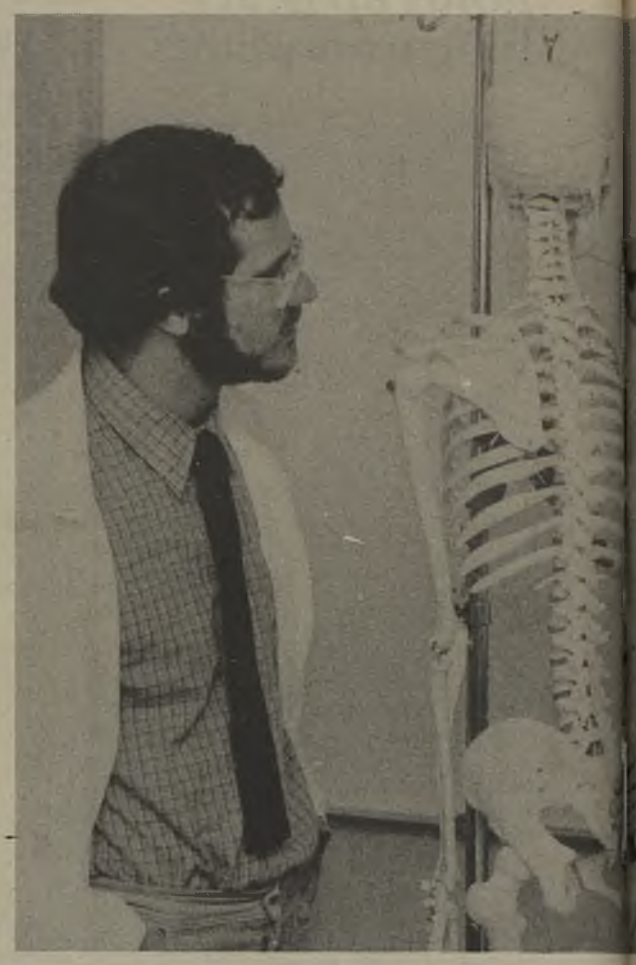
"Our success rate for the carefully selected group of patients we treat is very good," said Conley.

She explained that disc degeneration is a normal part of the aging process which begins at about age 20 in everyone. The discs, which are gelatinous shock absorbers between each vertebra of the back, begin to lose fluid and can no longer distribute vertical loading forces evenly. With routine movements of the back, the gel of a disc begins to migrate through the fibrous capsule which encloses it.

The term "slipped disc" covers both prolapsed and herniated discs, only the latter of which implies a full movement of the inner gel structure from where it belongs. Prolapsed discs are those in which some migration of the gel has occurred.

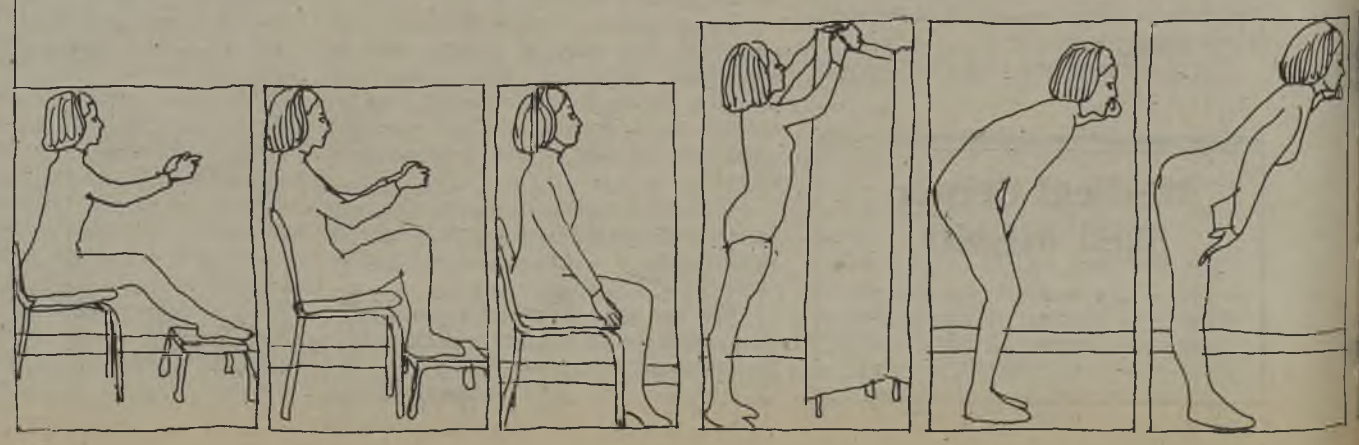
If the runaway gel places abnormal pressure on a nerve root, this causes pain and neurologic dysfunction. In these cases, Conley said, "I don't think chymopapain could be delivered safely to dissolve the disc without damaging the nerve root."

But in cases where disc degeneration has just begun, she added, chymopapain may help hasten the natural process by which fibrous connective tissue replaces disc material. "For these patients, chymopapain might be gentler and less costly than surgery, but the injections must be directed at the disc with absolute accuracy."

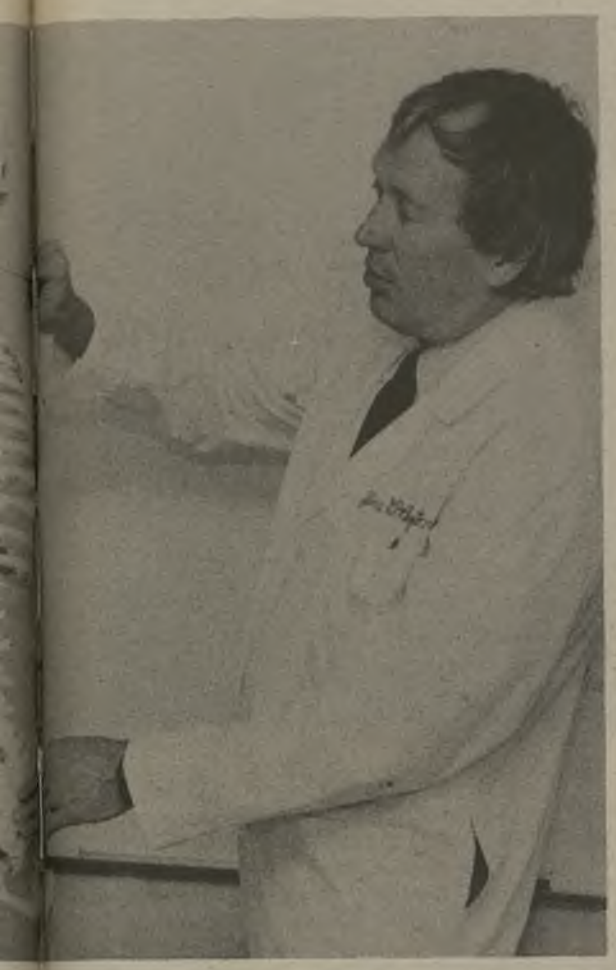


Dr. Lorne Eltherington (right), director of Stanford's pain c, p skeleton model, while discussing a current patient case wit

Whatever current theories are espouse more effective diagnostic and therapeu lower back pain. Meanwhile, healt pr help, according to their various spcia pattern of pain, depression, and medic vicious cycle. But people can lower be expensive tests and treatments by mar healthy habits in preventing back ob



...at do the experts say?



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The FDA's approval of the procedure culminates a 20-year struggle by its developer, orthopedist Lyman Smith, to prove its efficacy in the face of sometimes contradictory clinical trials.

Conley noted the FDA has approved use of the drug only when conservative methods fail.

Patients with chronic back pain who haven't responded to conservative or other treatments are often referred to the pain clinic at Stanford, directed by Dr. Lorne Eltherington, associate professor of anesthesia.

Eltherington said many non-surgical patients can benefit from "nerve blocks"—injections of steroids or local anesthesia.

Steroids, he said, can fight the inflammation and swelling of nerves that sometimes cause obstruction of blood nourishment and pain. "But steroids also give people a 'high,' so there's the question of whether *that's* why pain is relieved," he added.

Sometimes, he said, a steroid injection into the "epidural space"—the area around the lining of the spinal cord and nerve roots through which all nerves pass—relieves a patient's back pain permanently. In other cases, repeated injections are needed periodically. Fortunately, the treatment is relatively complication-free.

Often patients come to the pain clinic after they are shown to have no identifiable pathologic or organic problems, with complaints out of proportion to reality. "Many back patients develop dependent emotional behavior," Eltherington explained, "even when the initial injury is long since resolved."

For this reason bed rest, though beneficial, is not recommended for prolonged periods of time, since it can add to depression and dependency as well as weaken vital muscles.

"Approaches that can help include behavior modifying psychological interventions such as stress reduction, self-hypnosis, and biofeedback."

But the public, the experts agreed, can lower their odds of having to undergo expensive tests and treatments by bearing in mind the importance of healthy habits in preventing back problems.

We're all vulnerable," said Smithline, outpatient clinical coordinator in the hospital's department of physical and occupational therapy. "Standing with correct posture puts no real stress on the back. But bending, lifting, or working in the garden can change the alignment if not done right."

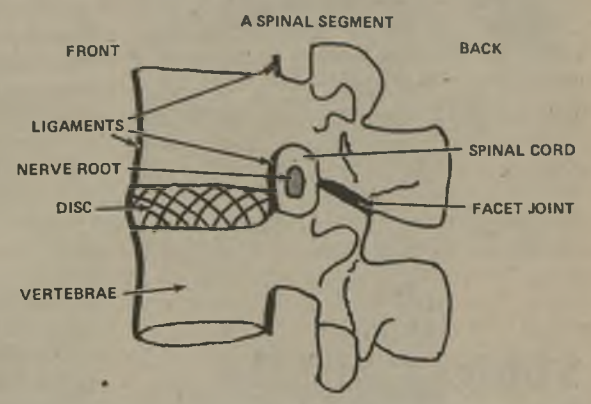
It is most important, she said, to maintain normal spinal alignment of the three curves of the back—the cervical, thoracic, and lumbar—while going about one's daily routine.

Hull added that maintaining muscle tone and keeping one's weight down is essential. "Our bodies are not designed for heavy loading. Unfortunately, many people in civilized cultures are sitters, standers and eaters rather than doers," he said.

Hull advocates firm mattresses and regular exercise such as swimming, walking, or biking to keep the back in good shape. "Every bit of exercise helps," he said. "But we've also found that sit-ups and push-ups, if done incorrectly, can aggravate back problems, as can toe touches."

Sit-ups are recommended because they help strengthen the abdominal muscles, which are important—like a corset—in properly supporting the back. But traditional long-lying and flexed knee sit-ups can, it has been found, overexert the spine.

Bleck recently tested a sit-up variation which he and colleagues devised, to maximize muscle activity while minimizing flexion (bending) of the lumbar spine. The variation was compared and found superior in these regards to the traditional forms. In the flexed knee position, the individual raises himself only enough to elevate the shoulder blade from the mat.



COURTESY DEPARTMENT OF PHYSICAL AND OCCUPATIONAL THERAPY, STANFORD UNIVERSITY HOSPITAL

Healthy habits and proper seating should begin at a young age. "We believe that early childhood education in proper posture, strength and mobility may significantly alter the unnecessary abuses that we unknowingly impose on our lower backs as adults," said Dr. John Medeiros, acting director of the medical school's physical therapy division.

Recent research in the division has compared a more traditional regimen with the so-called McKensie protocol for preventing and alleviating lower back pain, with results suggesting greater effectiveness of the latter.

A physiotherapist from New Zealand, Robin McKensie developed a specific exercise regimen which calls for both flexion and extension of the back muscles. "In the past," explained lecturer Gail Chamberlain, "only flexion, or bending forward, was emphasized as important."

Other current research activities in the division include: a comparison of methods of teaching children proper lifting techniques; clinical evaluation of the abdominal muscle strength in normal children aged three to seven; and the use of electromyography and mobility testing to evaluate the effectiveness of a clinical exercise device that maximizes spinal extension.

Thus, whatever current theories and philosophies are espoused, the quest goes on for ever more effective diagnostic and therapeutic tools with which to treat lower back pain. Two possibilities being studied in various medical centers, for example, involve the use of localized ultrasound, and lasers, to selectively remove disturbing disc material.

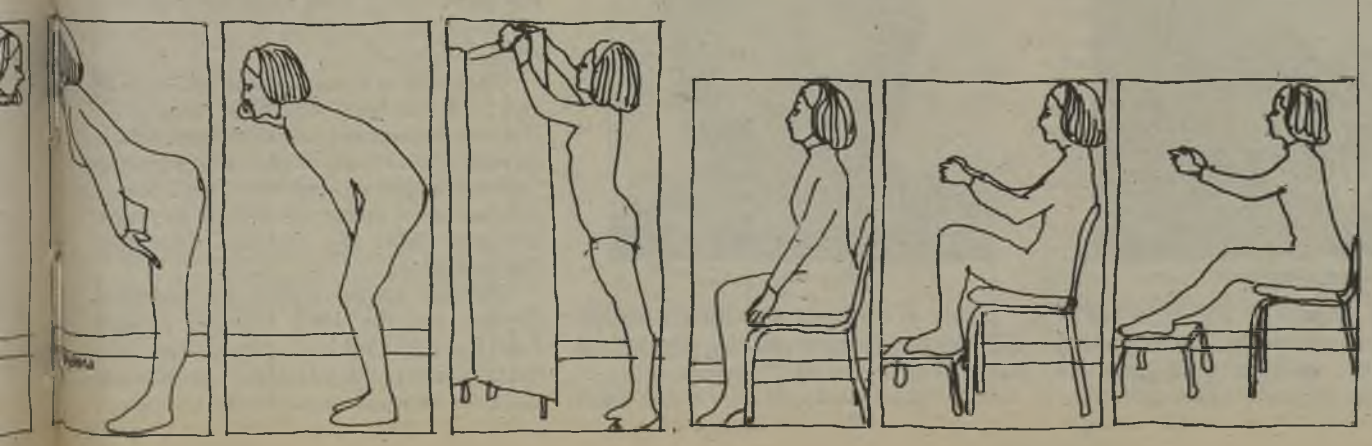
Meanwhile, health professionals guide the aching masses through the phases of back pain, attempting at least to make it more bearable. "We teach relaxation techniques and give our patients emotional support by maintaining a positive attitude," said Smithline.

This is important because, compounding the anxiety of often incomprehensible pain is the confusion posed by today's wide variety of specialists and available treatments. For many patients the pattern of pain, depression, and medical overshopping has become a vicious cycle.

Though frustrated patients may find fault with physicians for not coming up with easy and uniform answers, Hull admonished, "Back problems have existed for centuries, and modern medicine continues to help increasing numbers of patients."

Conley added, "The problem is not medicine's failing to deliver a cure-all; it's the popular media's failing to communicate the message that there is no cure-all." Americans, she said, have been conditioned to expect magic from their doctors.

"It's important to keep in mind that back pain is not like a cut finger," Chamberlain remarked. "It can take a long time to heal. We encourage patients to look for and celebrate small improvements, perhaps from one week to the next, as they work to strengthen their backs."





Anne Gaddy

Student Affairs has new leader

Anne Gaddy, administrator in the department of general internal medicine, will be replacing Diane Winkle as administrative director of student affairs at the Medical School.

Winkle is leaving Stanford after nearly five years to pursue a position in the real estate field.

Gaddy, who will assume her new responsibilities by July 1, plans to stay involved with both of her offices in the interim, in order to help train her replacement and to receive training from Winkle.

Gaddy received master's degrees in education and business administration, and has held positions as both a faculty member and administrator. She feels her new position will be the perfect blend of her past experiences, she said.

One of Winkle's major contributions in the student affairs office, both women agreed, has been initiating the installation of a computerized data base management system.

"Computerizing much of the student information will allow the office to be more of a student service rather than a data gathering operation," Gaddy said. "Not having to manually look up information will create more time to spend with the students, and will improve the office's rapport with them as well."

Chief gardener proud of SUMC's outdoors

"Stanford University Medical Center has the chance of being one of the prettiest places in the state," said Malcolm Kirkwood.

As supervisor of grounds, he's doing all he can to turn that chance into reality.

The quality of care he gives to the landscaping around the medical center is obvious with a glance at the abundance of well-trimmed trees and shrubs, green grass, and clean walkways. A tour of the area with Kirkwood leaves no doubt that his love for vegetation is deep-rooted.

"I have as much pride in doing my job as a doctor does doing surgery," he explained. "It's just like another branch of medicine. I save lives too—the lives of trees!

"When people come here, the first thing they see are the grounds," he continued. "If they're tacky, the visitors may think the doctors are tacky too."

His job presents a constant challenge then, because he feels there is always room for improvement. One of his goals for the coming year is to mix color in with the various hues of green. The areas that are seen the most get top priority.

"The atmosphere of the center can be controlled by the types of plants here," he said. For an example, he points to the Japanese rock garden in the psychiatry building. "People coming here for help need to be able to be calm. I wanted to capture a peaceful, relaxed feeling there."

Kirkwood is gearing up to enter the center's landscaping in a national competition, sponsored by the Professional Ground Maintenance Society. Membership in the organization is by invitation only, and Kirkwood was honored earlier this year. An invitation to join is just the first step, however. To be certified by the group, he has to take oral and written exams, and must complete a week-long take-home test in which he must develop a long-range landscaping plan for a hypothetical place.

"There's much more to the job than just cutting grass," Kirkwood said. With an annual budget of about $100,000 and six staff gardeners, he matches the growing conditions required by the vegetation with what's available at the center. Rather than make all the planting decisions himself, Kirkwood asks employees who work near the area in question what types of greenery they'd like to see around them.

"When people come here, the first thing they see are the grounds."

—Malcolm Kirkwood



(far right, conferring on a project with staff gardener Perry Morrison)

Kirkwood's fondness for vegetation branches out much further than the scope of his job. The apartment he shares with his wife, Maxine, a staff nurse at Stanford Unversity Hospital, is full of plants, he admitted. And "if it's the last thing I do," he said, he wants to have a greenhouse in which to grow orchids.

"I've always loved nature and the outdoors," Kirkwood recalled. A San Francisco native, he opted for a rural location when it came time to go to college. On a basketball scholarship, he played center forward for Whitworth College in Spokane, Wash. The aggressive position on the court is in sharp contrast with his easy-going, laidback manner at the center.

And while his bachelor's degree in sociology helps him in dealing with his staff, he said, it was an oldtimer he met while working in Idaho's forestry service who gave him the start of his nature education.

He's supplemented that knowledge with information gleaned from seminars, classes, and books—information he passes on to his staff gardeners. "When my staff needs help, I'll show them where to find it, but I want them to learn for themselves," he said. "That way they'll learn they don't have to be dependent on me."

Plants are just the beginning of Kirkwood's affection for nature, which includes animals, people—all living things. He always has a friendly word for passersby at the center. "I like people, and a friendly word goes a long way," he said.

He spends his free time camping, hunting, and fishing, and wants to learn photography so he can capture the beauty of what he sees on his ventures. Future plans, he said, include an African safari on which he'd like to hunt and take photographs. And by that time, he revealed, he hopes he and Maxine will have children to take along.

"Everything in nature has a purpose, and a right to live or die," he explained. "I hope my kids will be able to blend in without destroying what already exists."

—Shirley Kraus

Two SUH dietitians recognized this month by professional association

The California Dietetic Association (CDA) honored two Stanford Hospital dietitians at its annual meeting May 3-5 in San Diego.

Citing her "unique contribution in the area of legislation and public policy" affecting dietitians, the CDA presented Ann Coulston, R.D., with the 1983 Distinguished Service Award.

Coulston is a senior research dietitian in the clinical research center (CRC). The association of 5,000 registered dietitians honors a member each year whose special leadership and achievements have greatly contributed to the profession.

Coulston served as president of the CDA in 1979-80 and is presently a state delegate to the American Dietetic Association (ADA). Active in state governmental affairs affecting dietitians, she helped select the CDA's first legislative advocate and was instrumental in the drafting and passage of the Title Act in 1982, which established a standard definition of the registered dietitian in the California Business and Professions Code.



Ann Coulston



Patsy Obayashi

Coulston has been with the CRC since 1978 and a lecturer in the division of gerontology for the past two years.

Patsy Obayashi, M.S., R.D., was selected as one of nine California Recognized Young Dietitians for 1982-83 at the conference as well. This award acknowledges the "outstanding contribution and leadership in the field of dietetics" of up-and-coming members of the ADA. Each state nominates its own recipients in proportion to its number of ADA delegates.

Obayashi, a clinical dietitian in W2B and E2B, has been with SUH since 1977. Her many Stanford contributions include serving as a member of the SUH Nutrition Committee and editing *Nutrition Notes*, a publication of the department of dietetics. She also chairs the Dietetics Education Committee.

She has helped coordinate nutrition displays for the 1982 Stanford Health Fair, the 1983 Children's Health Fair, and the upcoming Heart Health Fair. She has also been active in various CDA activities.

Fair points way to healthier hearts



PHOTOS BY
ED SOUZA

To promote public awareness of available resources for the prevention of heart disease, R.N.s, dietitians, and other professionals staffed a variety of display booths (NICU above) at SUH's first annual Heart Health Fair, held Friday at the Stanford Shopping Center. Information included anatomy and physiology of the heart, cardiac risk factors, surgical procedures, intensive care, rehabilitation, and more. Blood pressure checks were offered, and Stanford Blood Bank donations were scheduled. For a close-up on the paramedics units that help save cardiac victims, see photo feature, p. 20.



Jane Chappell (far left), an R.N. in Stanford's cardiovascular intensive care unit and owner of Heartbeat, Ltd. of Palo Alto, led students from her aerobics fitness class in a demonstration of beneficial exercises.



Ten-year-old Bryan Beresford, a former SUH patient who had open heart surgery at the age of two, watched as surgical ICU nurse C.C. Kettering checked his electrocardiogram (ECG).

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, MAY 25

Nursing grand rounds: "Career Development: New Directions for Job Joy." Guest speakers will describe various strategies for job expansion including lateral transfers, administrative opportunities, clinical nursing specialist research, and combining nursing with other careers (such as medical law). 3:30 till 5 p.m., M104. For further information, call Karen Kawauchi days at 497-6923, or Kit Laird nights at 497-6377.

Medical School Human Resources Group orientation program for new employees: 8 a.m. to noon, Fairchild Auditorium. To register, call HRG at 497-7541.

Div. of Hematology Wednesday noon conference: "Pediatric presentation"—Dr. Bertil Glader. Noon, L201.

Hematology Support Group: Meetings for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

Dept. of Clinical Social Work and the American Cancer Society: "I Can Cope"—a program for cancer patients and their families. Wednesdays through June 22, 5:30 to 7:30 p.m., TF-122c. For further information and to register, call 497-5091.

Dept. of Structural Biology seminar: "Three Crystal Structures for Citrate Synthase: Catalytic Activity Requires Large-Scale Conformational Changes"—Dr. James Remington (Univ. of Oregon at Eugene). Noon, Fairchild Building D102.

Div. of Orthopedic Surgery grand rounds (two topics): "Anatomy—Foot and Ankle"—Dr. Gary Watson, 7:30 a.m.; and "Cement Fixation"—Dr. Steven Woolson, 8:30 a.m., M114.

Dept. of Neurology grand rounds: "The Synthetic Street Heroin Story: A New Model for Parkinson's Disease"—Dr. William Langston (Santa Clara Valley Medical Center). 5 p.m., C364.

THURSDAY, MAY 26

Dept. of Pharmacology seminar: "Regulation of Collagenase Gene Expression in Fibroblasts by Cell Shape"—Dr. Zena Werb (UCSF). 4:15 p.m., Dermatology Library R358.

Dept. of Medicine grand rounds: "Newer Aspects of Hyperthyroidism"—Dr. Joseph Kriss. 8:30 a.m., Fairchild Auditorium. Medical service meeting to follow.

Div. of Family Medicine Friday noon lecture series on Women and Health: "Women and the Nuclear Arms Race"—Dr. Deborah Gordon (physician, co-president of Redwoods chapter of Physicians for Social Responsibility). Noon, M114.

FRIDAY, MAY 27

Div. of Child Psychiatry grand rounds: "Febrile Seizures and the Use in Pediatrics of Drugs with Psychotropic Side Effects"—Dr. Alvin Rosenfeld. 11 a.m., central conference room, Children's Hospital at Stanford.

Dept. of Genetics seminar: "The Organization and Expression of the Human Cytomegalovirus Genome"—Deborah Spector (UCSD). Noon, Genetics Library S336.

Dept. of Pediatrics grand rounds: "Water Intoxication in Infancy"—Dr. Donna Chaet, senior resident; Case Presentation by Dr. Catherine Albin, junior resident. 8 a.m., M106.

Dept. of Biochemistry seminar: "Dideoxy DNA Sequencing Applied to Epstein Barr Virus"—Dr. Toby Gibson (MRC Laboratory of Molecular Biology). Noon, M316.

TUESDAY, MAY 31

Dept. of Biochemistry colloquium: "Cell-Cell Communication in *Dictyostelium*; Sensorary Adaptation cAMP Activated Adenylate Cyclase"—Dr. Peter Devreotes (Johns Hopkins). Noon, M316.

WEDNESDAY, JUNE 1

Dept. of Structural Biology seminar: "Mechanisms of Control of Gap Junction Conductance in Early Embryos"—Dr. Andrew Harris. Noon, D102.

JUNE 1 and JUNE 10

The Hypocritic Oaf Strikes Again! If you missed the live performance. . .this is your chance to catch some of the glamour of April 29, 1983. Two special video screenings of the Medical School musical will be held: Wednesday, June 1 at 7:30 p.m.; and Friday, June 10 at 3:30 p.m. in Fairchild Auditorium. Sponsored by the Office of Public Events. Everyone is welcome!

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Paramedics: vital to the community, coordinated part of emergency medical care



A man is stricken with chest pains. One of his coworkers calls emergency.
Within minutes, medical technicians and paramedics are by his side. They send ECG patterns over radio to a nurse (pictured here is Susan Lee) in SUH's emergency department. There, a doctor and nurse decide the man should receive drugs immediately to halt a rhythm disturbance of his heart. The nurse radios orders to the paramedics, who then prepare to bring the cardiac victim to the nearest emergency department.
SUH's emergency department serves as the base station for six paramedic units in the northern and central part of Santa Clara County.
The department's pre-hospital care program has offered field care training for the past nine years to nurses and paramedics from all over northern California and many western states.



Balding men still needed for study

Men with a specific type of balding are needed to participate in a study of the effectiveness of a drug that stimulates hair growth.

The Department of Dermatology is seeking healthy males between 18 and 49 years of age with early, progressive, male pattern baldness. Such balding begins at the crown of the head and spreads outward (*see accompanying diagrams*).

Those selected will be involved in a one-year double-blind study of the effectiveness of locally-applied Minoxidil, a drug which is regularly used in oral form to treat high blood pressure. Because the drug has shown some potential for promoting hair growth, the FDA has approved it for testing in a topical ointment form.

Interested volunteers who meet the above general requirements may call Olive Charles in dermatology at 497-7893, during the following hours:

- Mondays, 9 to 5 p.m.
- Tuesdays, 1 to 5 p.m.
- Fridays, 1 to 5 p.m.



Volunteers must not have more hair than this.



Volunteers must not have less hair than this.

...News Notes...

The Medical Board at its April meeting approved formation of a **Health Care Legislative Policy Committee.**

The action comes at a time when many issues affecting medicine, such as policies relating to third party payers and freedom of choice for patients to choose providers, are undergoing changes, many driven by legislation.

The board is to be composed of at least four members of the medical board but other physicians and non-physicians may be added, according to the board's action.

* * * *

The newly opened **Cafeteria North,** *between the PATS lounge and X-Ray North, is now available for use as a meeting or conference area, according to Peter O'Connell, director of Dietetics.*

The room will be used for cafeteria seating between 10:30 a.m. and 2:30 p.m., Monday through Friday, but other daytime hours may be reserved, O'Connell said.

First priority for use of the room goes to all Hospital departments. All other Medical Center departments must first receive approval of Hospital Administration. Otherwise, the first-come, first-served principle will apply.

The space accommodates 150 people, and a catering order form (SU-13) must be submitted to Dietetics indicating the desired meeting time.

For more details on reserving the room, call the dietetics office at 497-6904.

* * * *

Four medical center physicians were commended for special service by the Santa Clara County Medical Society at the Society's annual business meeting and awards banquet May 9.

Dr. Frederick Armstrong, *a clinical professor of medicine, was honored for his "outstanding contribution to the medical society."*

Dr. James McCort, *clinical professor emeritus of radiology, was awarded for his "outstanding contribution in medical education," as was* **Dr. Donald Alcott**, *clinical professor emeritus of pathology.*

Rodney Beard, *professor emeritus of family, community and preventive medicine, received recognition for his "outstanding contribution to the community."*

* * * *

The policy on **paid personal time off (PTO)** *for University employees has been revised effective May 1, said Felix Barthelemy, manager of University Employee Relations.*

While the total yearly number of PTO hours will not change, the new policy allows for use of up to eight hours per month, with supervisory approval.

Part-time regular staff are eligible for PTO in proportion to their work schedules.

The above changes do not affect Hospital personnel. Questions on the policy may be directed to the university's employee relations office at 497-4433.

* * * *

Medical School staff are reminded of the **Recognition Reception** *to be held Thursday, June 2, from 3 to 5 p.m. in the Fairchild Auditorium lobby.*

The event is by invitation for those with five, 10, 15 and 20 or more years of service. If you didn't receive an invitation and feel you should have, contact your department administrator or the Human Resources Group (497-5975).

* * * *

The **SUH Auxiliary** *has donated $6,235 to the* **Pain Clinic** *for a device which can ease pain for months or even permanently.*

The device, according to Dr. Lorne Eltherington, director of the pain service, is a neurostat, a needle probe which transmits extreme cold to the nerves in a process called cryosurgery.

Cryosurgery renders nerves temporarily unable to send pain messages to the brain, providing a few weeks to months of relief. The process is repeated when pain recurs, and occasionally the nerve is deadened permanently, ending the pain altogether.

Eltherington said he believes that, although the procedure itself is widely used for other purposes, Stanford is one of the few centers in Northern California employing it in the relief of chronic pain.

* * * *

Human Resources Development (HRD) *is offering summer classes for all medical center employees.*

The courses, which include such diverse topics as Supervisory Skills and Laughter in Health Care, are intended to "help employees increase their own knowledge and skills" to better serve the hospital.

Laughter in Health Care addresses the positive effects of laughter and play and shows health care professionals ways of translating these principles to their patients, helping to lower stress and relieve chronic pain.

The Supervisory Skills course is designed to help supervisors improve communications with employees by learning techniques that can be used to set job standards, improve employee performance, correct problem behavior, and overcome resistance to change.

Other course offerings include: better meeting organization; "Eat Light," a course on the psychology of weight loss; "Geodex," a management training course; assertiveness training; and three classes in confident public speaking.

Continuing education credit is available, fees are charged, and space is limited, in most courses.

For further information, call HRD at 497-5233.

* * * *

Second quarter **fire drills** *are scheduled for late May and June in the hospital, according to Ruben Perez, assistant director for Safety. Drills will take place on every work shift at both the main center and Hoover, and evaluations will be given in each department or nursing unit.*

* * * *

Roger Knobles *has been appointed accounting manager for SUH Finance, said Ron Kreutner, assistant director of Finance/Controller.*

Knobles, who has extensive accounting experience and has been the hospital accounting supervisor since 1981, fills the vacancy created by Tom Connelly's recent retirement.

Policy makers ignore powerful anaytical tools, Dantzig says

Computers and mathematical modeling have given policymakers a magnificent tool for decision-making, but most of them chose to ignore the possibilities, a Stanford scientist said today.

George Dantzig, professor of operations research and computer sciences, said in a paper prepared for the Detroit meeting of the American Association for the Advancement of Science on Saturday, May 28, that the problem is a lack of "infrastructure" in organizations that would accept models.

"Policymakers continue to make decisions without the benefit of the powerful analytical tools that are available to them. That the decisions they make are bad, is self-evident."

In the paper and an interview, Dantzig said that the power of modeling techniques is that they can handle a very high number of variables, "the number of the combinations of the ways to combine these variables is astronomical, and. . .the techniques are so powerful that. . .what they can do are absolute miracles."

They are widely used for some things. Every oil refinery in the world makes use of these models for production, yet the upper executive officers of these same oil companies have a deliberate policy of not using models for economic issues.

Models ignored

Dantzig quotes a Congressional aide as saying that a planning model used by the Department of Energy "is irrelevant to anything we do around here. No one, and I mean no one, takes it or any other model seriously."

He quotes another as saying that "the only influence or impact that modeling has is on the incomes of the modelers." Perhaps no more than a third of the models prepared under federal contracts have any influence on policy.

Models generally fall into two categories: predictive and prescriptive. Predictive models are "those that simulate an existing system and try to predict how it will change over time." Prescriptive models are "those that model a variety of possible futures with the idea of selecting one that is more attractive than the others according to some specified criterion."

In predictive models "you try to guess human behavior and put the human behavior in the model. I have my reservations about doing that. I think they can be predictive if you put a lot of 'ifs' on it."

Testing not possible

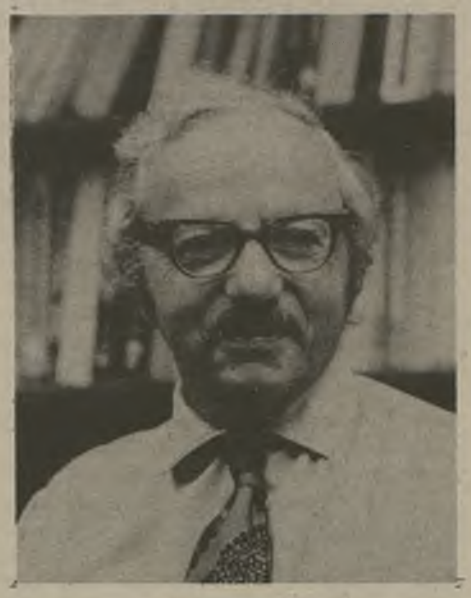
One of the problems with models, Dantzig admitted, is that they cannot really be tested without actually trying them out.

"The only 'laboratory,' unfortunately, is society itself, and once a policy is tested on it, it is too late."

There are other problems preventing wide acceptance, including the complexity of the programs required for modeling, the sometimes unfirm basis on which some models must be made (i.e., "modelers seem to accept the casual relations found in economic theory"), and the unpredictability of some events. Additionally, sometimes there is too much detail, sometimes not enough.

Despite all of this, modelers are "oblivious" to the pitfalls. One writer has likened them to fortune tellers and astrologers "because of their practice of forecasting economic phenomena for next year, or for a decade from now, which we are unable to measure today."

The main problem with getting models used in decision making may be in the nature of special interest groups which have a keen interest in the decisions. Their opinions are vital to the decisions because



George Dantzig

they sometimes know more about the situation than the policymaker, Dantzig said.

But, he added, "their decisions with respect to an issue are typically narrowly focused, with little knowledge or interest in how it affects others. Each issue is treated by them in an ad hoc manner; their guidelines are often inconsistent and their objectives multiple and vague."

Often these groups are incapable of even articulating their objectives, or what is wrong with the other person's objectives, making reaching a decision nearly impossible.

"They are sure that the other people are all wrong, and so they are busy throwing monkey wrenches into the machinery," Dantzig said. "In this crazy world we live in which lawyers are helping everybody with their trouble-making, it's even worse."

Here, however, is where the models might be useful. The models could be used to show the special interest groups what implementation of their demands would mean on the system as a whole, "using models to test whether proposed plans are feasible, and to determine what the short- and long-term tradeoffs are."

"The latter information is required for bargaining and arriving at a compromise solution."

Articulating needs

If he were a government planner, Dantzig said, he would get all the interest groups together and help them articulate what they want.

"If all the special interest groups say, 'I want this,' and all the other guys say 'I want that,' and you add it up across the board and it's not feasible, i.e., they want more than the resources available, the coordinating people can come back and say. . .it's not feasible. This will encourage them to cut back on their demands.

". . .In that kind of situation, the models that you have in the back room can be brought forward to give the exchange rates in order for you to get things more feasible, what to do, or how much to give up in the immediate present in order to make the future better—our children's future versus our own."

If groups and decision-makers can acquire the discipline to do this, then the infrastructure will exist for better decisions through modeling, Dantzig said.

Dantzig, the winner of the National Medal of Science, is considered the father of linear programming, the scientific method used widely in government and business for laying out a schedule of activities to be performed. —Joel Shurkin

Revised system for student evaluation of teaching approved

The Stanford Faculty Senate has approved a revised system for student evaluation of teaching.

The action was taken without dissent May 12.

It followed recommendations from the Committee on Academic Appraisal and Achievement (C-AAA), which said student evaluations were "worthwhile" but should only be part of an integrated system for improving teaching.

Prof. Nathaniel Gage, education and psychology, said the simplified form suggested for the student evaluations would be more helpful to administrators than to the improvement of classroom instruction.

The present research literature provides "good evidence" that evaluations midway through a course can help improve classroom performance, especially if accompanied by expert consultation, Gage said.

Little or no research has been done on the effectiveness of student evaluations at the end of a quarter or semester in improving future teaching, he added.

Associate Prof. Susan Matisoff, Asian languages, who heads the C-AAA, noted that mid-term evaluations are difficult to mandate.

One purpose of the simplified forms recommended by the C-AAA was to improve participation in the present program. Almost 40 percent of the courses covered by present policy are not evaluated, and 30 percent of the students asked their opinions about the remaining courses fail to reply.

President Donald Kennedy suggested that the Associated Students *Course Guide* might be more useful if it became "more subjective and rather more venturesome in its evaluations," instead of being "hung up on statistics."

A confidential guide?

Harvard students publish a "Confidential Guide" which is "hated by the faculty, but they line up two deep on Boylston Street to buy it," he noted.

Matisoff noted that there was a "wide diversity of opinion" over the value of student evaluations among department heads at Stanford, some of whom expressed "vehement objections" to the practice.

Prof. Ronald Rebholz, English, said the C-AAA suggestions were a "considerable improvement," particularly in reducing the number of questions from 30 or so to a half dozen.

Prof. Herant Katchadourian, vice provost for undergraduate studies, was "very much in favor" of the simplified form. The basic questions boil down to 1) how good is the course? and 2) how good is the teaching?

Prof. Bernard Roth, mechanical engineering, said the idea of using mid-term evaluations to improve teaching was "sensational."

Provost Albert Hastorf said he found it helpful to do so simply by picking a half dozen students at random and asking about his own course.

"They're a little bit hesitant at first," he said. "Of course, it's always a shock to learn you're not crystal clear" as a teacher, too.

Gage observed that "teaching isn't public; it's private. The only ones with intimate knowledge are the students."

Comparing student evaluations with various norms fosters competition between faculty and isn't that meaningful, he added. "Some comparisons are spurious—is Smith a better physicist than Brown is a harpist?"

Evaluations depend on the subject, whether or not it's elective, class size, and other factors.

"Math departments get low mean (average) ratings across the country," he said, simply because the subject is difficult. This results in an "unjust hardship" on math instructors, when compared with their colleagues in other fields.

The C-AAA recommended that the faculty review the new evaluation system in another four years.

Sarah Rivers, 56, dies at hospital

Sarah Rivers, 56, a Stanford campus resident since 1962, died of apparent cardiac respiratory arrest at Stanford Hospital Monday, May 23.

She collapsed at her home around 10:30 p.m. and was taken to the hospital by paramedics and Dr. Robert DeBusk, a neighbor and cardiologist. She died at 11:41 p.m.

A home gardner, Rivers was active in a campus investment club and often hosted students at home.

A native of New Orleans, she met her husband, Prof. William Rivers of the Stanford Department of Communication, while both were at Louisiana State University.

He and two daughters survive. They are Gail Rivers-Zimberg, of New York City, and Mariane Ball, of Bieques, a small island off Puerto Rico.

Cremation is planned. No decision has been made on whether to hold a memorial service.

High tech helps physically limited find jobs, thanks to Marjorie Linvill

Michael May graduated with a B.A. in political science from UC-Davis, spent three months in a small village in Ghana, West Africa, and then attended Johns Hopkins School of Advanced International Studies.

Even before the conferring of his master's degree, he was hired by the Central Intelligence Agency as a political analyst in the African Affairs section. His was a resume which anyone would have been proud to show a prospective employer. There was just one problem.

May had been blind since the age of three.

Like most physically limited people, May had overcome many obstacles on the road to self-sufficiency. Few were greater, though, than his attempts to look for meaningful employment in the private sector.

"On the basis of my experience and skills, I was often invited for interviews, but I found that people were reluctant to take responsibility for hiring a blind person and reluctant to give responsibility to a person who needed to accomplish his job tasks in somewhat unconventional ways," the bearded young man explains.

Returning to Walnut Creek, where he grew up, May expanded his job search to include a wider range of business opportunities. "I changed my tack," he explains. No longer restricting himself to international loan positions, he began applying to oil and electronics companies as well as to banks.

Finally, in January 1981, after a year of searching, an offer came. BankCal agreed to hire him as an operations analyst, one step on a management-training ladder.

Some nagging questions remained, though. How would May be able to handle the enormous amount of paperwork inherent in the job? How could be write reports and read those of his colleagues? How could be gather information at meetings and interviews?

Ten years ago, the answers would have been "impossible." But today, thanks to the genius and compassion of engineers and scientists all over the country, technology is becoming the miracle worker of the 20th century.

Marrying Technology and the Disabled

During his first week at BankCal, May's Department of Rehabilitation counselor requested the services of the Sensory Aids Foundation, a Palo Alto based nonprofit organization whose sole business is to bring technology, employers, and the physically limited together.

A Sensory Aids Foundation vocational specialist visited May in his office to analyze his job tasks and to determine which of numerous new electronic sensory aids on the market might serve him. Together they decided that a VersaBraille, a device which stores braille-encoded information on a cassette tape and plays it back under the user's fingertips, would be just what May needed to enable him to take and edit braille notes during meetings.

The VersaBraille could also be connected to BankCal's word processor to enable him to read reports written by his colleagues and to process his reports from braille to standard type.

Today, May is able to use many of those same sensory aids in his new job as a political analyst for Electromagnetic Systems Laboratories in Sunnyvale. He is eager to add even more devices, perhaps even a talking computer terminal, to enable him to work more independently.

"No one device does everything," he says, laughing. "It's important to figure out which device can serve you best. I'd like to have one of each. And then I'd get a much larger office to hold it all."

Since 1975, the Sensory Aids Foundation has helped over 350 people like May enter the job market by strengthening or replacing their senses, which have been lost or diminished, through the use of up-to-date sensory products, many of which are manufactured right here in Silicon Valley.

In addition to identifying and researching job opportunities for disabled people, SAF also offers employers consultation services on recruitment of disabled persons with appropriate job skills, identification of appropriate jobs, job retention, acquisition of sensory aids, and follow-up support services.

The foundation is funded by grants, primarily from the government, but increasingly from private corporations. Contributors read like a who's who list of California industry: Ampex Corporation, Ford Aerospace & Communications Corporation, Rockwell International, ROLM Corporation, Lockheed, Xerox, Verbatim Corporation, Syntex, and the

continued on page 23

Hewlett urges more industry support for research, education in CIS talk

American industry should become "a more vigorous supporter" of university research and take "a more direct and active role" in strengthening education, William Hewlett, cofounder of Hewlett-Packard, said Thursday, May 19.

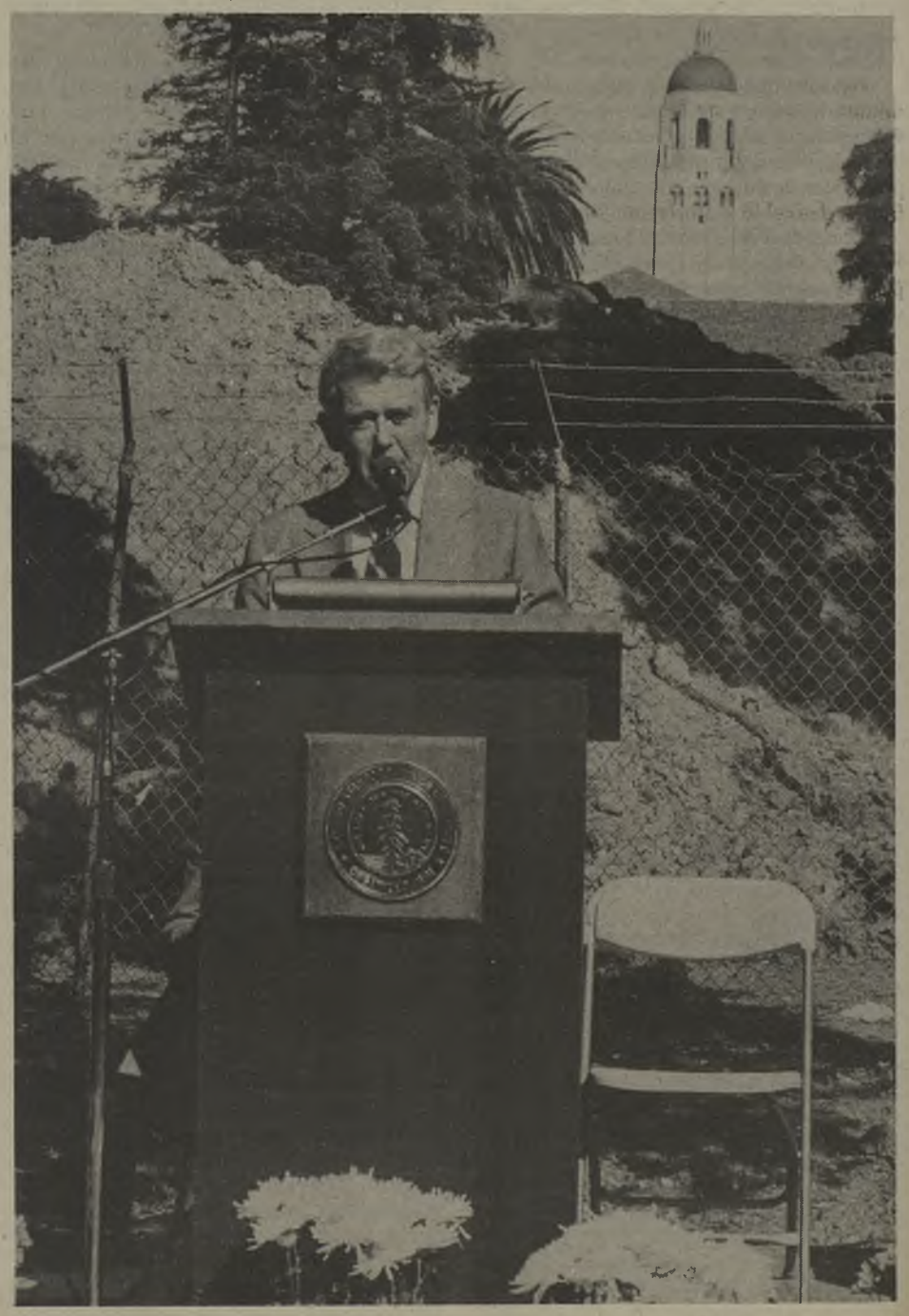
In remarks prepared for the groundbreaking of Stanford's new $14.5 million Center for Integrated Systems, Hewlett cited the new center as "a splendid example" of how companies can realize the benefits of basic research "without the inordinate expense of each establishing a critical mass to do such work on its own.

"Through such shared efforts, participants can partake in ventures well beyond the capacities of all but a few large corporations, and do so without inhibiting ultimate competition in the marketplace."

Industry should provide incentives to make faculty positions "more attractive and competitive," especially in science and technical fields, Hewlett said. His firm recently committed $6 milion over five years for this purpose. Ten outstanding Ph.D.'s annually will be encouraged to continue teaching and will be rewarded "for not coming to work on our payroll," he said.

The new center is America's largest joint effort by industry, universities, and government to conduct research in electrical engineering, computer science, materials science, and related fields.

Its construction has been made possible by $750,000 from each of 19 firms: General Electric, Hewlett-Packard, TRW, Northrop, Xerox, Texas Instruments, Fairchild Camera and Instrument, Honeywell, IBM, Tektronix, Digital Equipment Corporation, Intel, International Telephone and Telegraph, General Telephone and Electronics, Motorola, United Technologies, Monsanto, American Microsystems-Gould, and Philips Signetics. Profs. John Linvill and James Meindl are serving as codirectors.



William Hewlett

Kennedy urges editors to examine UC's need for more state support

Stanford President Donald Kennedy Friday, May 20, urged California editors to pay more attention to the "extraordinarily serious" financial problems now confronting the University of California.

Kennedy said: "This state has produced surely the most distinguished example of public higher education ever accomplished in the world.

"It is simply an extraordinary, irreplaceable asset. I do not have the sense, at the moment, that it is being taken seriously enough by this state government, or that the range of economic solutions recommended to protect it are adequate."

Kennedy spoke in answer to questions at the 45th California Newspaper Editors conference at Rickey's Hyatt in Palo Alto, hosted by the Stanford Department of Communication.

Asked about Stanford faculty petitions concerning the Hoover Institution, Kennedy said, "I think the temperature of the controversy is going down now, as people begin to understand that political head counting. . . is not important." Questions concerning governance and appointment procedures are "more interesting and fundamental," he observed.

Kennedy said he planned to join with the presidents of Yale and Harvard in hosting a conference on major research universities and the public schools at Stanford late this summer. The climate now is "very receptive" to efforts to improve primary and secondary education, he noted.

About 200 persons attended the CNE luncheon.

SAF/ continued from page 22

Hewlett-Packard Company are some of the enthusiastic donors to the Sensory Aids Foundation cause.

Local Miracle Worker

The chief "Miracle worker" at Sensory Aids Foundation is Marjorie Linvill, a pretty, motherly figure who also happens to be the wife of Stanford professor of electrical engineering John Linvill.

The Linvills interest in sensory devices for the blind came from personal need: their daughter, Candy, had gone blind at the age of eight months as the result of a tumor.

While Mrs. Linvill laboriously encoded books into braille and taught Candy to read, John Linvill and his colleagues began seven years of research to develop what eventually became the Optacon, an ingenious book size electronic device which enables blind persons to read ordinary printed material directly and independently.

Users "read" by means of a tiny camera which, when passed over the pages of a book, turns reflections given off by the letters into vibrating images which can be felt by the user's index finger. Since 1971, the Optacon has been manufactured by Telesensory Systems, Inc., and has become a worldwide reading instrument used by over 9,000 persons.

The Optacon was the first of many electronic devices which have since been developed to enable disabled people to lead fuller, more productive lives.

VersaBrailles, talking computer terminals, talking calculators and auditory switchboards have all been developed in the last 10 years to give blind and other physically limited people opportunities to find and excel in mainstream jobs.

Certainly the need is there. In the San Francisco Bay Area alone, 50,000 or one percent of the population, is blind or visually impaired.

"I could see the impact that the Optacon had on Candy," Mrs. Linvill recalls. "With it, she graduated from Stanford and continued to earn a Ph.D. in clinical psychology. When I look around and see all the new devices which have been developed in the last 10 years, I think it would be incredible if disabled persons couldn't take advantage of them."

Foundation organized

Marjorie Linvill and a corps of trustees began Sensory Aids Foundation in 1975 with an initial grant of $175,000 from the Department of Rehabilitation.

Job placement results have been quite impressive. For example, when the California Department of Motor Vehicles contacted the Department of Rehabilitation and Sensory Aids Foundation to determine if a blind person could successfully perform as an information officer, representatives of SAF and the Department of Rehabilitation responded with a visit to the DMV facility.

With a few minor modifications and the translation of printed reference material to braille, the job became accessible to the blind. Once they were sure that a blind person could be successful on the job the DMV hired not one, but seven blind persons to fill empty positions.

Similarly, two years ago Rockwell International's Information Systems Center contacted Sensory Aids Foundation and expressed a desire to hire a disabled person for a switchboard opening.

After an onsite evaluation by SAF, a Rockwell personnel representative interviewed Lillian, a legally blind woman who had been trained as a switchboard operator at the Braille Institute. Lillian was hired to operate a 120-button call director and take messages for Rockwell computer professionals.

Rockwell, Sensory Aids Foundation, and General Telephone worked together to divide the board into four sections. Each section had a different audible signal which enabled Lillian to immediately identify a quadrant of 20 buttons where the incoming call was located. The board was also modified to cut glare and Lillian was given instruction on scanning techniques.

In addition to job placement, the Sensory Aids Foundation has been active in the field of vocational counseling for blind and visually impaired youth. In a summer program, SAF instructors traveled weekly to the homes of physically limited youth aged 14 to 21, working with them on skills such as cooking, cleaning, laundry, and clothing management.

"It took one student four hours to make spaghetti," one instructor recalled, "but he did it by himself with no aid from me."

In addition to individualized training, SAF held group sessions for the youths to provide them with information on job seeking skills, career options and sensory aids, and gave them hands-on experience with Optacons, VersaBrailles, and talking computer terminals. The students are also able to talk with blind working people about finding and holding a job. One participant remarked, "It's nice to have blind people teaching me how to do things, because they know how to explain things the way I see them."

Aids the deaf, too

Although the Sensory Aids Foundation started as an organization to help blind or visually impaired people, it has since expanded its services to help people with a whole range of physical disabilities, especially those who are hearing impaired.

One of SAF's most ambitious projects is its effort to encourage development of a speech recognition device for deaf persons known as Vidvox (Latin: video = I see, and vox = voice).

The device would display a stream of phonetic symbols as a speaker talks, enabling hearing-impaired people to "read" what people are saying to them. The obstacles to producing such a device are enormous however. Donald J. Ruder, an engineer who acts as an adviser to the Foundation, notes that "Most commercially available speech recognition systems recognize only isolated words, have a limited vocabulary, and respond seconds after speech is uttered."

Ideally, the Vidvox would recognize speech segments and continuous speech at normal rates. "Athough the problem of speech recognition is a difficult one, we think it is one worth pursuing, despite uncertainty about its success," Ruder says. Development of a large-scale model of the Vidvox by a firm in Cambridge, Mass., is expected to continue at least until the end of 1984.

Benefits exceed cost

Marjorie Linvill is convinced that the time and money spent to develop sensory aids and to help disabled people enter the employment mainstream is worth it. And she has the figures to back it up.

During seven months in 1981, the Sensory Aids Foundation spent $31,110 on employment development for 16 disabled persons. Were they not working, those 16 employed persons would have received estimated total welfare payments of more than $35,000. Therefore, the program cost of $31,100 was $3,890 less than the public assistance money that used to be spent sustaining these individuals.

In addition, they earn a combined annual income of $179,000 and will pay an estimated total of $46,000 in state and federal taxes—$11,000 more taxes to the government than they used to receive in welfare.

Federal cuts hurt

Such results have people in government talking. In a letter to Sensory Aids Foundation, former Congressman Pete McCloskey noted, "In this day and age of billion-dollar deficit spending, I believe it both ethically and financially appropriate to support Sensory Aids Foundation.

"SAF's achievements in placing former dependent disabled persons in productive careers within the electronics industry has proven to be a successful and cost efficient program. I strongly endorse your organization, and in gratified the SAF resides within my Congressional district."

Despite such glowing praise government support for the Sensory Aids Foundation isn't as great as Linvill would like it to be. Federal budget cuts, especially, have hurt the foundation tremendously.

"In 1981, 74 percent of our funding came from the government," she explains. "In 1982, only 57 percent came from the government. In 1983, we expect only to get 44 percent of our support from the government."

Luckily, she says, private industry has been more than willing to pitch in and help. With an annual average budget of $250,000, annual fundraising drives are a must. The foundation's large staff of volunteer workers helps tremendously, Linvill notes. "Eighty-six cents of each dollar contributed goes directly to program services."

The impact that the program has had on individual lives, she adds, cannot be measured in numbers—but it is enormous.

"Raising Candy, I always felt that it was important for a blind child to become a part of sighted society," she explains. "For adults it is even more important. The hardest part about being blind is being dependent on other people. Our goal has always been to take advantage of the marvelous technology available to make blind and disabled people independent, to make them feel good about themselves and their capabilities.

"It hasn't always been easy. Even though we had qualified people and up-to-date technology to help them do their jobs, employers were reluctant to take them on.

"Some were concerned about insuring physically limited workers. Others worried about the safety of blind persons in their plants, or whether they could even get to work on their own, or how other employees would interact with them. Each year, as more and more physically limited persons are out in the working world, these types of concerns have lessened."

High reliability

Not only have they lessened, but many employers report that physically limited workers are among their best in terms of attendance, reliability, and competence.

A survey of DuPont, a corporation with an exceptionally good record of hiring physically limited workers, notes that 96 percent rated average or above average in safety compared with 92 percent for nonimpaired employees.

In performance of job duties, the physically limited improve their rating from 91 to 92 percent average or above, compared with 91 percent for nonimpaired employees. In attendance, those who rated average or above rose from 79 to 85 percent in 1981, compared with 91 percent for nonimpaired employees.

Government and donors willing, the Sensory Aids Foundation will be around to help employers tap this enormous human potential for many years to come.

"We've been very fortunate," Linvill says. "More and more people are beginning to realize that this is an exciting program and an important program. It's important to the people who are helped and it's important to the general public, in terms of getting people off welfare and into productive careers.

"By hiring the physically limited, everyone benefits."—Terry Becker

International Relations Council named

Stanford University has announced the establishment of an advisory and visiting committee to its Program on International Relations, to be known as the International Relations Council.

Invited to serve initially for a period of two years, its members are Lindy Boggs, member of the U.S. House of Representatives;

Walter E. Hoadley, former executive vice-president and chief economist of Bank of America, now at the Hoover Institution;

Leon Sloss, formerly a foreign service officer and currently president of the Stanford Alumni Association;

Richard H. Solomon, head of the Political Science Department of the Rand Corporation and formerly senior staff member of the National Security Council;

John K. Steinbruner, a Stanford alumnus currently director of the Foreign Policy Studies Program at the Brookings Institution;

Walter J. Stoessel, Jr., another Stanford alumnus who recently retired as undersecretary of state for political affairs; and

Strobe Talbott, diplomatic correspondent for *Time* magazine.

The Council will be asked to review the program and curriculum of the International Relations major, to make recommendations for improvements, to advise on placement of graduates and possibly on their improved preparation for careers in international relations as well as for graduate and professional training.

The International Relations Council joins other advisory groups in the School of Humanities and Sciences through which departments, programs, and the School seek to benefit from the knowledge and perspective of professionally competent peers from outside the university.

It provides for the faculty a knowledgeable sounding board as they assess future directions, strengths and problems of the program, a more formal means of communication with relevant constituencies outside the university, opportunity for students to meet and listen to acknowledged leaders in the field, information about fields related to the International Relations program, and knowledge about the impact of Stanford's International Relations program in the international world.

The Hoover debate continues as Senate session approaches

Drekmeier: News accounts relate a 'story of greed' in acquiring Volker Fund

Editor, *Campus Report*:

A recent statement of George Marotta, public affairs coordinator for the Hoover Institution, mentioned that Hoover's relation to Stanford needed no further clarification since that relationship had been spelled out in the May 1959 resolution of the Board of Trustees, and reaffirmed in the 1970s when the Volker Fund was donated to the Hoover Institution.

That last verb, "donate," brought back memories of the court struggles needed to wrest that huge sum of money from the charitable organizations of Missouri which had a legitimate claim to the philanthropist's legacy. But, I thought, that is history—although fairly recent history. And then, with Peter Duignan's recent ruminations regarding signers of the Hoover petition (*San Francisco Examiner and Chronicle*, May 8), I had second thoughts.

Mr. Duignan, a Hoover fellow, disregarding his boss's concerns about character assassination, would take us back to the late '60s to see the beginnings of that virus that has produced the current disease—the request that there be an inquiry at faculty and trustee levels into the place of Hoover at Stanford. "This is the same gang that was against the Vietnam War, supported the partisans in Nicaragua and now backs the rebels in El Salvador." (Such a remark can only encourage delusions of grandeur in many of us, I fear.) Mr. Duignan goes on to suggest that the motivation of Hoover's critics is based on greed. Greed which has made us envious of the various Hoover emoluments.

Indeed there *is* a story of greed in this whole matter. Some of the history of purloined documents and CIA links can be read in a lengthy account that appeared in *The Wall Street Journal* of June 2, 1967.

Among the comments on Hoover's sources of support, the staff reporter quotes a spokesman for the Allen-Bradley Co. of Milwaukee as saying "One of our basic policies is to support anti-Communist and conservative organizations. The Institution falls right in with this policy." The article testifies to the richness of the archival holdings, but raises questions (admittedly sometimes difficult to answer) about the ethics of their acquisition.

It is, however, the William Volker Fund and the role of Hoover and Stanford in *its* acquisition that ought to be of interest to those who apply to Hoover for research money or other kinds of assistance. This is the story.

In September 1977 the attorney general of Missouri won a temporary restraining order against the fund and its directors, preventing them from giving Hoover $9 million. The attorney general contended that the fund was created primarily to aid people and institutions in the Kansas City area. From the establishment of the fund in 1932 until Volker's death 15 years later the fund was administered in such an eleemosynary way.

"The articles of incorporation of the fund show that Volker's original intention was to devote the initial endowment and its interest to such humane and liberal causes as 'to care for the sick, aged, and helpless, and to relieve those who are distressed in the mind, body, and estate. . . .' " (*San Francisco Chronicle*, Oct. 5, 1977).

The will required the fund's liquidation 30 years after the philanthropist's death. At that time the directors of the fund determined that Hoover should have the bulk of this estate. The chairman of the directors, Morris A. Cox of Pebble Beach, Calif., was described by the *Chronicle*'s education correspondent "as (being) every bit as conservative as the Hoover Institution" (loc. cit.). Roy Dietrich, Volker's own attorney, alleged that Cox's "ruling motive in life is to spread conservatism" (*Daily*, May 17, 1978).

Of the other four directors, three lived in California. They were, and possibly still are, executives of Chlorox, Dean-Witter, and something called the College-University Corp., respectively. The director who remained in Missouri, Dietrich, voted against the Hoover grant as being contrary to the intent of William Volker.

If Hoover were to get the grant, Cox would receive a $25,000-a-year job as adviser to Glenn Campbell. A Stanford release of Oct. 5 stressed that this appointment and that of the three other directors to an unpaid advisory committee were not conditions of the grant itself. Later, evidently after questions about the propriety of Cox's salary, he declined compensation for whatever services he might render.

In justifying the grant "Cox maintains that the kind of recipient has changed over the years because the government now takes care of most of the problems Volker tried to solve" (*San Francisco Chronicle*, Oct. 5, 1977). If an accurate reflection of Cox's rationale, he was admitting Volker's commitment to the care of the sick, the aged, and the poor.

We might ask what Mr. Cox would say now that the Reagan administration has tried its best to minimize such support for such downtrodden and "distressed" people. (And done so with the counsel of Hoover fellows and their monetarist and supply-side arguments.) Cox contended that "the money would be better used now preserving the free enterprise system and trying to end the 'welfare state.' "

George Marotta noted at the time that if Cox was successful in giving $9 million of the $10.5 million Volker Fund to Hoover, that gift would almost *triple* the Institution's assets. Those assets were not inconsiderable, as was pointed out in a letter to the *Kansas City Star* (June 1, 1978) from a faculty member concerned that the people of Missouri not mistake Hoover for a charity.

"The Hoover Institution is already heavily endowed and its resources are staggering compared with most units within this University. . . . The Institution is clearly not in the business of aiding the sick, aged, and helpless, and is by no stretch of the imagination a charity. . . . Moreover, it has traditionally maintained a political stance in opposition to governmental programs devoted to carrying out the spirit of this will."

In June of 1978 a circuit court judge in Kansas City, under terms of an out-of-court settlement of the attorney general's suit, awarded Hoover $7 million and Kansas City charities $3 million.

This revision of the "distribution plan" was adopted "to avoid legal proceedings that could deplete the funds intended for charitable purposes, according to a statement by (the Fund's directors), (*San Francisco Chronicle*, June 19, 1978). There were a number of Stanford lawyers on hand in Missouri to help with the formulation of this winning phrase.

On April 1, 1960, President Wally Sterling promised members of the Academic Council, many of whom were unhappy over the manner in which Herbert Hoover had engineered the appointment of Glenn Campbell, that the Institution would be placed under "intensive scrutiny." Twenty-three years later that may happen.

Charles Drekmeier
Political Science

Giraud: Faculty should conduct its own inquiry

Editor, *Campus Report*:

I hope the faculty will encourage their representatives in the Senate to vote in favor of the inquiry into the relationships between the University and the Hoover Institution. Prof. Rebholz's petition urging that the Board of Trustees initiate the inquiry seems a very modest proposal.

Personally, I should have preferred that the faculty conduct an inquiry of its own, because our concerns do not necessarily coincide with those of either the administration or the trustees. I found it somewhat disturbing to read that Board President Kimball, in commenting on the matter, echoed some of the defensive arguments of Hoover fellows. Also, it seems to me that, since a number of our trustees are also members of the Hoover Board of Overseers, they would be put in the anomalous position of investigating themselves.

Nevertheless, despite some misgivings, I support Prof. Rebholz's petition, which I have signed. Furthermore, I do not think that President Kennedy's indication that the trustees may appoint a group of individuals to "look at the relationships and give us some advice" diminishes the Senate's responsibility to assert the faculty's own conviction of the necessity of an inquiry.

Obviously, the allocation and use of university money, as well as the processes of appointment, are questions of capital importance. I think, however, that political considerations are equally important, not for witch-hunting, but rather to establish the extent to which the very obvious political orientation of the Hoover Institution invites inquiry into the quality of their association with Stanford and debate on the question of whether the two should be more closely identified or more clearly distinguished from one another.

Some of my conservative colleagues have considerately expressed concern that such inquiry can lead to repression of academic freedom not only for Hoover, but also for that institution's liberal counterparts in the University.

I do not see it that way. I do not see Hoover fellows being inhibited in the expression of their views. Nor do I find any counterparts to the Hoover elsewhere at Stanford. I see no department or institute here, nourished with millions of dollars from the University's funds each year, and charged, for example, with the mission of demonstrating "the evils of the doctrines" of Adam Smith or Milton Friedman.

But the relevance of politics does not reside in the identification of individuals whose stand on particular issues might be seen as repugnant, one way or the other, as defenders or opponents of the Vietnam War or regimes in South Africa or Latin America. The question is rather the degree to which the University has become institutionally associated with a partisan political stance.

In a probing inquiry there would be careful examination of statements made through the years to ascertain whether they constitute implicit or even explicit revelations of an institutional Hoover petition (apart from ex-President Hoover's famous articulation of the Institution's mission).

Such statements would certainly include the material quoted by Profs. Manley and Rebholz from the Hoover Annual Reports. But there are others attributed to individual fellows that suggest not simply a personal view but a group position. Hoover Fellow Thomas G. Moore, for example, who is director of domestic studies there and who refers to what he calls "a vicious attack" on Hoover (*Campus Report*, May 18), apparently told *Newsweek* magazine (Jan 12, 1976) that "Hoover might become the next government in exile." Hoover Fellow Peter Duignan identifies proponents of an inquiry as "the same gang that was against the Vietnam War" (San Francisco *Examiner*, May 8) and then goes on to say: "they keep turning up and are intolerant of *our views*" (my emphasis). Mr. Duignan also seems to have an administrative position at Hoover, since he is identified as their "coordinator for international studies."

A responsible inquiry would ransack the record for similar statements and from them seek to establish whether, apart from the irrelevant counting of Democratic, Republican, and even "Socialist" heads at Hoover, there is not after all evidence of a predominant institutional political thrust. Such an inquiry would then go on to investigate the extent and the manner in which such a political thrust (if it exists) affects Stanford through the various ways in which we are connected with the Hoover, by governance, appointments, funding, and association in the media.

Only then can we decide whether an even more intimate marriage or a divorce of the two institutions would be in the best interests of the University.

Raymond Giraud
Professor of French

Hilton: Attacks on Hoover 'less than candid'

Following is a letter from Prof. Em. Ronald Hilton to President Donald Kennedy concerning the Hoover Institution:

You have certainly received more mail than you need about the Hoover controversy. However, since I came to Stanford in 1941 and was soon thereafter put on the first committee to study Hoover's place in the university, my testimony may have some historical value; there is no one on campus who has been following Hoover affairs for a longer period.

No one would claim that Hoover is perfect; it is a large institution and therefore moves slowly, as indeed the university itself does. This is why I have often been impatient with both. However, it has none of the viciousness which characterizes some of its enemies, who are silent in the face of the most outrageous violations of academic freedom coming from the left.

I myself am in the School of Humanities and Sciences, but the *World Affairs Report*2, which I edit, has formal ties with the Hoover Institution which were originally proposed by the University administration. Three members of our board are senior members of the Hoover faculty, and, until his illness, Milorad Drachkovitch was chairman. This has been sufficient for us to be victims of the campaign which has repeatedly hit Hoover.

The tenth anniversary of the *World Affairs Report* was marked by a long series of symposia, supported by the University, in which specialists from all over the world analyzed methodically the problems of each area. This was the first time such a grand-scale assessment of world affairs has been attempted anywhere. Now the *World Affairs Report* is the first journal in any language or in any field, the complete text of which is being put on line. Through DIALOG, the largest information system in the world, it will be available at 19,000 terminals in many countries. Both of these are firsts of which Stanford should be proud of.

Yet some of the very faculty members who should have applauded did all they could to sabotage the enterprise and to stifle publicity about it. They should be ashamed, and I trust the administration will not listen to their less-than-candid attacks on Hoover.

Manley, Rebholz: Juilland confuses academic freedom with academic license

Hoover and Academic Freedom
by
Profs. John F. Manley and Ronald A. Rebholz

No one likes to be called names and told they are engaged in a "witch hunt," but if you look past the rhetoric, Prof. (Alphonse) Juilland, by raising the issue of academic freedom, has done the University a great service.

Academic freedom is one of the central underlying issues in the debate over Hoover: the freedom to ask dangerous and unpopular questions and have them debated responsibly in a university community. Open discussion of issues that some people would rather avoid lies close to the heart of what a university is all about; hence, the University should be better off for having these issues raised than having ignored them.

Before responding directly (if briefly) to Prof. Juilland's concern, we would like first to explain why the Hoover Institution, to the extent that it engages in political and partisan activity, represents a problem for the University.

As a university, Stanford claims to be nonpolitical, nonpartisan, and politically independent. Our *legitimacy* as an institution of higher education—the most precious thing we have—is in complex and fragile ways dependent upon the validity of these claims. To honor these claims we not only allow but we encourage the widest possible political expression on campus, *and* we guard against any one view becoming too closely identified with the University per se.

When President Reagan says "... during the recent campaign, I called on more people from the institution to help with my campaign than from any other institution," and when he tells a White House reception for Hoover's Board of Overseers "... you built the knowledge base that made the changes now taking place in Washington possible," it seems to some of us that Hoover has entered national partisan politics in a big way, and that Stanford is involved too.

The question that then arises is:

If Stanford University, as a university, is committed to nonpolitical, nonpartisan, and politically independent values, how can these values be squared with a multi-million dollar research organization that justly lays claim to being the leading conservative think tank in the country, that openly and proudly engages in partisan politics, and that necessarily involves the University in such activities?

Many answers have been offered, but the nagging questions for Stanford won't go away by reference to Harvard and Kennedy, or the academic freedom of Hoover scholars to do as they wish.

Contrary to Prof. Juilland's petition, we are not proposing an inquiry into the political orientation of Hoover (that seems generally well established); rather, we are proposing a debate over the proper relationship between Hoover as a political research institution and the University.

The reason this is vitally important to the University is that, whatever the benefits of having Hoover connected with Stanford, Stanford also benefits Hoover. By supplying valuable assets to Hoover, does not Stanford help Hoover advance its political mission? To the extent that Hoover engages in political and partisan activity, does not Stanford get drawn into such activities? If so, how can we continue to maintain that we are nonpolitical and nonpartisan? These questions, like all good questions, are hard to answer and generate controversy. But it is for precisely this reason that they should be asked, not suppressed out of false fears over threats to academic freedom.

If the University's legitimacy were not at issue, we could all rest content with a few changes in the way Stanford and Hoover do business. But if there is any real basis for the concern over legitimacy, a little better governance may not suffice.

We think Stanford must face up to the difficult question of whether or not we want to be so closely linked to certain sources of money and political causes that we become increasingly known as the conservative, western counterweight to our leading rival in the east. In this what "Harvard of the west" is to mean? With no discussion?

That these concerns are University-concerns, and not reducible to a political attack on conservatives is amply demonstrated in the public media. Carl Irving, for example, in a May 8, 1983, news article in the San Francisco *Examiner*, calls attention to Hoover's $60 million endowment, and cautions the University: "As the institution became widely known for leadership that openly backed conservative causes, endowment funds flowed in, reaching $60 million earlier this year." A 1978 article in the *New York Times Magazine* flatly declares: "It is the brightest star in a small constellation of conservative think tanks that serve as workshops where out of office intellectuals can fabricate the underpinnings of domestic and foreign-policy positions for the Republicans."

In short, if Hoover and Stanford are joined ever more closely, and if Hoover engages in political activity, it appears that Stanford directly and indirectly aids a political cause. This contradicts the University's commitment to nonpolitical activity, and, at some point, might endanger the University's legitimacy and reputation as well. If we allow this to happen, it will be a sad day in the history of a great university.

Prof. Juilland fears a liberal witch hunt if we discuss these issues. We share his concern. There is always the danger of violations of academic freedom when academics exercise their rights freely. At a practical level we find it hard to imagine a Board of Trustees witch hunt into the Hoover Institution, or a board of distinguished scholars selected by Donald Kennedy burning the Political Science Department at the stake, but let us acknowledge the potential danger of which he warns.

Prof. Juilland's petition, however, in the name of protecting academic freedom would shut down free and open discussion of Hoover. Why? Because the debate *might* get out of hand. This does not give the Stanford community much credit for being able to conduct discussion responsibly, but it is also a rather strange definition of academic freedom.

We think academic freedom means not the avoidance of tough questions but their responsible pursuit through reasoned discourse. Isn't the University committed to the responsible exploration of *all* questions? We believe it is, therefore fears of a possible witch hunt are outweighed in favor of responsible academic discussion.

Prof. Juilland also objects that this is a liberal witch hunt. Notice first how this contention shifts attention away from Hoover to the motives of those who signed the petition. We do not have to concern ourselves with the validity of the question, it is enough to know or be suspicious of the motives of the questioner.

This problem aside, let us, merely for the sake of argument, grant Prof. Juilland's point. Are liberals then to be prevented from asking questions simply because their motives are suspect? Are liberals to be intimidated by the term "witch hunt" and let Hoover do whatever it pleases—no questions asked?

Even if every signature on the petition were liberal, would this negate the validity of the questions that have been asked about Hoover's political activities? Might not such a position in the name of defending academic freedom destroy it? Such a position seems to state that certain questions cannot be asked because the motives behind them may be political. And such a position logically leaves Hoover free to do whatever it wants politically, to receive as much money as it and the Board of Trustees decide is appropriate, and to use its resources to pursue its objectives—all with the aid of Stanford, and with no questions asked.

What, then, are we to do? Liberals are especially sensitive to questions of academic freedom because they have often been on the receiving end in the past. Yet it would be no less a travesty of liberal values to cower from a debate over controversial questions for fear of being called a name than to engage in a witch hunt itself.

Any university worth its salt must be a place where questions are asked—responsibly and openly and freely. Certainly conservatives and liberals must agree on this if nothing else.

And, if we agree, we must reject Prof. Juilland's position as a confusion of academic freedom with academic license. With people like Prof. Juilland around to uphold the fairness of public debate we see no reason why that debate, far from endangering the University, might not demonstrate the University's highest principles in action.

Campbell welcomes Kennedy statement on petitions

In answer to several press inquiries concerning President Kennedy's comments on the Hoover petitions, Dr. W. Glenn Campbell, director of the Hoover Institution, Thursday, May 19, issued the following statement:

I welcome President Kennedy's statement on the Hoover Institution petitions, particularly his emphasis that the discussion "will be forward-looking and productive, and concentrate upon how the Hoover Institution and Stanford can improve upon a relationship that has been increasingly valuable to both."

Likewise, I strongly share his view that the various political charges that the petitioners, virtually all of whom still remain anonymous, have hurled at the Hoover Institution and its distinguished scholars can only turn into a discussion that is unnecessarily strident on both sides.

I am confident that in the discussion of governance, President Kennedy will inform the Academic Senate, and the Stanford community in general, of the many binding resolutions and agreements that have been entered into by the Stanford Board of Trustees, the Hoover family, and the Hoover Institution Board of Overseers, which have been scrupulously followed during the years that I have been director of the Hoover Institution. This includes the appointment procedures that have been worked out over the years between the president of the University and the director of the Hoover Institution based on the above resolutions and agreements.



Hoover/ continued from page 1

"In light of the misinformation that has been circulated regarding the public release of the names of the faculty signers we feel compelled to explain the procedures that were followed in gathering and releasing the names," Manley and Rebholz said.

"When individual faculty members were asked to sign the petition they were being asked to endorse Faculty Senate discussion of a resolution calling on the Board of Trustees to initiate an inquiry into the relationship between the Hoover Institution and Stanford University.

"They were not asked for their permission to have their names made public, and the academic secretary, with the concurrence of the organizers of the petition drive, decided against releasing the names to the press. The organizers of the petition drive judged the initial petition to be an in-house document to the Senate, not a public statement.

"In the interest of open public discussion, signers were then asked if they had any objection to having their names made public, and they were given until May 16 to reply. This procedure was taken because of the aforementioned failure to get permission to declare the names when the petitions were first circulated, and to give signers a chance to decide explicitly whether or not they wanted their names released.

"In retrospect, it was good that this procedure was followed, because of the 84 signers, eight elected not to have their names made public.

We cannot, of course, speculate on the reasons why 76 faculty members allowed their names to be made public, any more than we can explain why eight did not, but it should be emphasized that this list does not represent a list of 'accusers' of Hoover.

"All that the signers agreed to was the proposition that the Senate should debate the resolution. No valid inferences can be made about the beliefs and views of the signers beyond that."

English: J. Martin Evans, Regenia Gagnier, Charles Fifer, Donald R. Howard, Mary F. Wack, Lucio P. Ruotolo, Wilfred Stone, John Felstiner, Gilbert Sorrentino, Robert Polhemus, Alfred Guerard, George Dekker, Anne Mellor, Arturo Islas, W. S. Di Piero, Larry Friedlander, and Ronald Rebholz.

Political Science: John F. Manley, Richard R. Fagen, Hubert Marshall, Kurt Steiner, David J. Danelski, Robert C. North, Jan F. Triska, and Charles Drekmeier.

Mechanical Engineering: Bernard Roth, Robert McKim, Ernest G. Chilton, Douglas J. Wilde, Thomas Connolly, Dennis Carter, and Thomas R. Kane.

Education: Edwin M. Bridges, Martin Carnoy, Arturo Pacheco, D. C. Phillips, Joel Samoff, and Robert Textor.

Genetics: Leonard Herzenberg, A. T. Ganesan, Lawrence Korn, Stanley Cohen, and Luigi Cavalli-Sforza.

Law: Deborah Rhode, William Gould, Michael Wald, Mark Franklin, and Miguel Mendez.

Anthropology: Clifford Barnett, John W. Rick, G. H. Herdt, James L. Gibbs, and Renato Rosaldo.

History: Alexander Dallin, Paul S. Seaver, and Harold L. Kahn.

Medicine: C. A. Camargo, Halsted Holman, and Eugene Robin.

Statistics: Charles M. Stein and Bradley Efron.

Electrical Engineering: Donald Carpenter and Umran Inan.

Economics: John H. Gurley and Donald Harris.

Chemical Engineering: George Homsy and Curtis Frank.

Medical Microbiology: Leon T. Rosenberg and R. J. Roantree.

Pediatrics: H. C. Schwartz and Howard Cann.

Biological Science: Dow Woodward.

Psychology: Juilland Davidson.

Physiology: G. A. Feigen.

French and Italian: Raymond Giraud.

Spanish and Portuguese: Mary Pratt.

Juilland: Hoover accusers never missed a chance to politicize campus life

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Juilland said, "Hoover's accused of politicizing the life of the University. The accusations come from the most political people on campus, who never missed a single opportunity to politicize academic life.

"These are the people who 15 years ago tried to rewrite academic programs and requirements along political lines in the name of relevance, of reconstituting the University. They flooded departments with political motions. . . .

"It's a classic case of the pot calling the kettle black."

In a written statement, Manley and Rebholz charged that Juilland's petition "in the name of protecting academic freedom would shut down free and open discussion of Hoover." It is "a confusion of academic freedom with academic license."

"What we are saying," Juilland replied, "is ask any questions you want, but don't ask them in a discriminatory fashion. Do not single out conservative programs for this kind of inquiry. Liberal programs also qualify."

Stanford has made different institutes, centers, and programs, and those with a perceptive bias are "pervasively liberal" except for Hoover, he said. To focus on the one conservative institution "blows my mind."

He accused Rebholz and Manley of being "champions of intolerance and conformity. . .before going to the barricades, they should have given some evidence they used channels" to obtain information about appointments and governance.

To look at the governance of Hoover now "seems discriminatory, particularly in the politically charged climate caused by the accusations," Juilland added. "If they want to investigate Hoover, then they should also investigate Department 'X' which shows prima facie liberal bias."

If the Faculty Senate does not table the petition or defeat it, it would be best to pass a substitute motion asking University President Donald Kennedy to look into the problem within the context of existing agreements and then make a report, Juilland said.

Among the Senate's 53 elected representatives, Rebholz and three others—Anne K. Mellor, English; Leon T. Rosenberg, medical microbiology; and Bernard Roth, mechanical engineering—signed the original petition.

Three Senate members signed the counter-petition: James M. Gere, civil engineering; Gerald Gillespie, German; and W.H. Northway, radiology and pediatrics. Juilland plans to attend the Senate meeting as an observer.

Juilland met with President Donald Kennedy Tuesday afternoon and gave him a list of faculty who had signed the petition to that time. He described their discussion as "cordial and fruitful."

Those signing the counter-petition were:

Andreas Acrivos, professor of chemical engineering; George Albright, associate professor of anesthesia; Malcolm Anderson, assistant professor of radiology; James Angell, professor of electrical engineering; Bert Auld, professor (research) of applied physics; Khalid Aziz, professor of petroleum engineering; Peter Banks, professor of electrical engineering; Jack Barchas, professor of history; William Bark, professor of history; Klaus Bensch, professor of pathology; Joseph Berger, professor of sociology; Douglas Bernheim, assistant professor of economics; Norman Blank, professor of radiology; Elliott Bloom, professor at SLAC; Frederick Bowser, associate professor of history;

Ronald Bracewell, professor of electrical engineering; Douglas Breeden, associate professor of business; Arthur Bryson, Pigott professor of aero/astro, mechanical engineering; Alan Campbell, professor of biological science; Charles Carrington, associate professor of pathology; Robert Cannon, Powell professor of aero/astro; Robert Chase, professor of surgery; Robert Cohn, professor of French; Roy Cohn, professor of surgery; Wendell Cole, professor of drama; James Collman, Daubert professor of chemistry; Thomas Cover, professor of electrical engineering, statistics; Aldo Da Rosa, professor of electrical engineering; Robert Davis, Kresge professor of business; Daniel DeBra, professor of aero/astro, mechanical engineering;

Carl Djerassi, professor of chemistry; Richard Eastman, professor of chemistry; Joseph Eliason, assistant professor of surgery, opthalmology; Lorne Eltherington, associate professor of anesthesia; Dieter Enzman, assistant professor of radiology; Von Eshleman, professor of electrical engineering; William Evitt, professor of geology; John Farquhar, professor of medicine; Willard Fee Jr., associate professor of surgery; Thomas Feeley, associate professor of anesthesia; Michael Flynn, professor of electrical engineering; John Fondahl, Leavell professor of civil engineering; George Foster, associate professor of business; Robert Fowles, assistant professor of cardiology; Joseph Franzini, professor of civil engineering;

Gerald Fuller, assistant professor of chemical engineering; James Gere, professor of civil engineering; Gerald Gillespie, professor of German, comparative literature; David Goodwin, associate professor of radiology; Roger Gray, Holbrook professor, Food Research; Richard Gross, professor of education; Carl Grumet, associate professor of medicine; Robert Hall, professor of economics; Paul Hanna, professor of education; John Harbaugh, professor of earth sciences; Donald Harrison, Irwin professor of cardiology; Walter Harrison, professor of applied physics; Warren Hausman, professor of industrial engineering; Leroy Heinrichs, professor of gynecology and obstetrics; Ronald Hilton, professor of Spanish and Portuguese;

Leo Hollister, professor of medicine; Robert Horn, professor of political science; Ronald Howard, professor of industrial engineering; Grant Ireson, professor of industrial engineering; Richard Jahns, L'Anphere professor of geology; James Johnston, professor of mechanical engineering; Alphonse Juilland, Bonsall professor of French and Italian; John Kaplan, Reynolds professor of law; Robert Kessler, associate professor of surgery; Steven Kline, professor of mechanical engineering; Robert Kovach, professor of geophysics; Konrad Krauskopf, professor of geology; Joseph Kriss, professor of radiology; John LaPlante, assistant professor of art; Louis London, professor of mechanical engineering;

Richard Mamelok, assistant professor of pharmacology; Tag Mansour, Baxter professor of pharmacology; John McCarthy, professor of computer science; James McClenahan, assistant professor of medicine; Walter Meyerhof, professor of physics; Craig Miller, associate professor of surgery; John Miller, professor of pediatrics; Katharina Mommsen, professor of German studies; Harry Mosher, professor of chemistry; Richard Muth, professor economics; William Nix, professor of materials science; William Northway, professor of radiology, pediatrics; Bruce Parker, professor of radiology; Elisabeth Pate-Cornell, assistant professor of industrial engineering; Robert Pecora, professor of chemistry;

Mitchell Polinsky, professor of law; Antony Raubitschek, professor of classics; William Reynolds, professor of mechanical engineering; James Rosse, professor of economics; Eugene Sandberg, associate professor of gynecology and obstetrics; Kenneth Scott, professor of law; William Shockley, professor of electrical engineering; John Shyne, professor of materials science; Oleg Sherby, professor of materials science; Douglas Skoog, professor of chemistry; Norman Sleep, associate professor of geophysics; William Spicer, Ascherman professor of electrical engineering; Lewis Spitz, Kenan professor of history; V. Srinivan, professor of business; Patrick Suppes, Stern professor of philosophy;

Michael Taksar, assistant professor of engineering; John Troxell, professor of business; Leonard Tyler, professor of electrical engineering; Tjeerd VanAndel, professor of geology; Joseph VanCampen, professor of Slavic; Kenneth Vosti, professor of medicine; Robert Ward, professor of political science; Roger Warnke, professor of pathology; Paul White, assistant professor of anesthesia; Charles Williams, associate professor of electrical engineering; Howard Williams, Lillick professor of law.

Claude Buss, professor of history; Edward Feigenbaum, professor of computer science; Jean Mayer, professor of aero-astro; Richard Popp, professor of medicine; Bruce Ransom, assistant professor of medicine; Saul Rosenberg, professor of medicine; John Schroeder, associate professor of medicine; F.B. Simmons, professor of surgery; Pamela, Strathairn, associate professor, athletics, physical education and recreation; Arthur Veinott Jr., professor of operations research; Steven Wheelwright, associate professor of business.

Hoover's visiting scholars to include Joseph Pechman, of Brookings

Twenty-one visiting scholars are among those expected to do research at the Hoover Institution, Stanford University, during the academic year 1983-84, according to Institution Director W. Glenn Campbell.

The domestic and foreign scholars will pursue a wide variety of research projects during their visits which vary in length from weeks and months to a full academic year.

Joseph A. Pechman, director of the Economic Studies Program at the Brookings Institution, will study the operation and effects of the U.S. tax system.

James B. Ramsey, professor and chairman of the Economics Department of New York University, plans to examine the policy perspectives and prospects of long-run supply and demand responses to OPEC pricing activities.

Richard N. Rosett, former dean of the University of Chicago's Graduate School of Business, will write a series of essays on U.S. foreign policy.

Staffan Linder, former Swedish Minister of Trade, will study the Swedish welfare state.

Ira Lapidus, professor of history at UC-Berkeley, plans a study of the role of Islam in the national development of Muslim countries.

Joseph Stiglitz, professor of economics at Princeton University, will spend his time at the Hoover Institution analyzing the problems of imperfect information as it relates to the field of microeconomics in its role as the foundation for macroeconomics.

Wang Bingzhange, of the Clinical Research Institute of Montreal, will continue a manuscript about current conditions inside Communist China.

John Blakeway, former British consul general of Istanbul, plans a research project entitled "Communism in the Churches."

Aurel Braun, an associate professor in the Department of Political Economy at Erindale College at the University of Toronto, plans to complete a study of the Warsaw Pact.

Peter Chelkowksi, professor of Near Eastern Studies at New York University, will study the Shiites and Iran.

Chi-Nung Chen from the Institute of World History, Chinese Academy of Social Sciences, Beijing, China, to research Japanese Imperialism in China between the Sino-Japanese wars.

Donald Gillin, from Vassar College, will supplement his research on the conflict between the Chinese Communists and Nationalists in the late 1940s.

Marcellus Snow, a professor of economics at the University of Hawaii at Manoa, plans a research project on telecommunications and media policy in the U.S. and the Federal Republic of Germany.

Rett Ludwikowski, political science scholar at Jagiellonian University in Krakow until his defection from Poland to the U.S. in 1982, will complete a manuscript entitled "Will the Crises of Communism Begin in Poland?"

A. Shtromas, from the Department of Political and Contemporary History at the University of Salford, England, will study continuity and change in Soviet Politics after Brezhnev.

Douglas Rimmer, from the University of Birmingham, will write "An Economic History of Africa Since 1945."

Sammy Smooha, political science professor from the University of Haifa, Israel, will write a manuscript entitled, "Ruling with Dissent: Arab-Jewish Relations in Israel."

Anthony Kirk-Greene of St. Antony's College of Oxford University, will study the history of the British Colonial Service in Africa.

Nora Beloff, Soviet and East European expert from London, plans to write a manuscript entitled "Yugoslavia: The Making of a Myth."

Keith Middlemas, reader in history at the University of Sussex, Brighton, England, will study politics in industrial society.

CIS talk...

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Defense Department's Advanced Research Projects Agency has "always been a pusher of new concepts."

But ARPA's time-sharing system "sat on the shelf for a decade" before being commercialized. Packet switching, still in its commercial infancy, is now being "picked up by the Europeans," he added.

Japan's widely heralded "Fifth Generation" computer stems from an ARPA project at Stanford, Carnegie Mellon, and MIT, he added. "It's been sitting around almost five years, and nobody picked it up" until the Japanese made it their number one research and development project for the next decade.

"They're now spending a half billion dollars over the next five years to capture 40 percent of the world market in information systems."

Why not the U.S.? "We have a queer process. I was part of it for 23 years," DeLauer said. In industry, "we make a forecast, look at the market, figure how much the investment's going to be, discount the cash flow, and if it doesn't match interest rates or what you can do with something else, forget it.

"That's terrific for Wall Street but not very good for getting long-range risky projects into being. . . .

"That's the reason we're so gung ho about the Center for Integrated Systems. It's the first time when we really have a partnership."

Speaking extemporaneously, he said that in seeking company support "if they didn't enjoy (supporting CIS), they were afraid of being left out. . . .

"The real heart of this thing (CIS) is that it is an educational institution. We want graduate students to work for us" in industry. DeLauer recalled telling companies "if you don't get two or three people from that university down to Dallas. . . " drawing a big laugh from hundreds of Stanford professors, students, and Silicon Valley executives in his audience.

"There's no question education is critical. That's the heart of why we want to do this," he added. Besides 19 corporate sponsors, 60 faculty are affiliated with CIS. Where the center initially projected 100 master's degree students and 30 Ph.D.'s might conduct their research as part of its programs, 462 graduate students already are involved.

"We're way ahead of schedule. That's very gratifying," DeLauer said.

While the Defense Department is the "daddy rabbit" of research, he said, rapid technology transfer is vital. "The basis for our security has to be our economy, the well-being of the society.

"There's no question technology has to be at the forefront of our security." English military theorists have shown that success in warfare is linear in relation to capability and numbers of people, but quadratic with weaponry.

"We'll never outnumber our opposition,' he said. "That means that if they have double our numbers, we have to be four times as good in the effectiveness of our equipment.

"We have a tremendous opportunity with microelectronics and computers to make that four-fold difference that is absolutely necessary," he added. The Defense Department represents only eight percent of U.S. manufacturing capability and only three percent in electronics, "so nowhere can you look to the Defense Department for the well-being of these two sectors." But it can help provide the "leading edge" through research.

During the past five years, the Defense Department spent about a half billion dollars on very high speed integrated circuits. While this has involved some industry-university collaboration, Stanford "stayed on the fringes" because of Congressional restrictions on involvement of foreign nationals. Now this research is far enough along to try putting it in the industry sector.

Teacher training scholarships offered

The nation's schools now have over 274,000 computers, but few teachers trained to use them. To help educators learn how to use computers in their schools, over $40,000 has been donated to a scholarship fund by the Luke B. Hancock Foundation, Raychem Corporation, IBM, and the David & Lucile Packard Foundation.

The scholarships will be awarded to teachers and administrators interested in attending the Stanford Institute on Microcomputers in Education. The Institute is cosponsored by Interactive Sciences, a nonprofit research group, and the Stanford University School of Education.

The funds are especially targeted for those who teach subjects other than math or science.

"Often, computers end up in the math department," says Jeff Levinsky, codirector of the Institute. "But math and science teachers are already in critically short supply. They can't be spared to take on new duties."

Computers have many exciting uses in other areas in the school, Levinsky states. "But once they start in the math department, it's hard to get them out. Therefore it's important for other teachers to learn about the new technology."

The intensive five-week Institute enables educators to serve as resource persons for their school and district. In addition to extensive hands-on learning in small groups, participants will tour Bay Area computer sites and see demonstrations of advanced computer products. Industry leaders, including IBM, Apple, Radio Shack, and Atari are supporting the Institute with equipment and software.

The scholarships funds are primarily for California public school educators, and especially for those from districts serving low-income or minority students. The scholarships will be awarded as requests are received, so early application is advised.

Further information on the scholarships and the Institute, which starts June 27, may be obtained from the Stanford Institute on Microcomputers in Education at (415) 497-9788 or (415) 497-2102.

Organizations or individuals wishing to add to the scholarship fund or to donate equipment should contact the Institute.

Memorial Day recreation schedule given

The following recreational facilities will be open on Memorial Day—Monday, May 30:

Encina lockers and showers, 9 a.m.-6 p.m.; Roble complex (except pool), noon to 5 p.m.; Encina weight room, noon to 5:30 p.m.; deGuerre Pools, 1-5 p.m.; deGuerre Courts, 11 a.m.-11 p.m.; Angell Field, Olympic Gamefield, Perrier Parcourse, open daylight hours; Tennis courts, sign up as usual; Tresidder Recreation Center, regular hours; Golf course driving range, 7 a.m. to one hour before dark.

CLOSED: Football practice fields, Maloney Fields I and II, Maples Pavilion, Roble Pool, and the Golf Course.



Urban design critic to talk

Gray Brechin, urban design critic, author, and architectural historian, will speak on "The Champs-Elysees That Never Made It" at 8:15 p.m. Thursday, June 2, in Annenberg Auditorium.

His lecture is the last in a series on San Francisco architecture sponsored by the Committee for Art at Stanford. Outstanding critics and writers have explored the changing face of San Francisco architecture and its impact on the spirit of the city and the lives of its citizens.

Admission is $4 for the general public, $1 for students.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

33617-VW (JCC:1988) UNIV MANAGER IV: Dir of Div of Lab Animal Med; As Asst Dean, the Dir will be reponsible for all admin & operational matters pertaining to housing & care of lab animals; serv on Admin Panel for Lab Animal Med; represent the Div to the public & scientific community regarding the care & use of animals in research; welcomes nominations of women & minority group members & applications fr them; QUALIFICATIONS: must have a D.V.M. & Board Certified in Lab Animal Med; must demonstrate significant past exp in mgmt of a similar animal research unit.; C10; $3494-4255.

33006-JB (JCC:2038) ADMIN SERVICES MGR II: Business Mgr/Analyst combines analytical & evaluative work w/ fiscal mgmt & facilities maintenance; respon for provision of analytical & admin support services, sys, & facilities to ten service cost ctrs; purchasing, estimating & pricing, billing, mgmt of automated business & production sys, budget admin, payroll & personnel admin, capital eqpt mgmt, bldg inventory & maintenance, analytical support to line mgrs, liaison w/ other Univ admin units; clerical support; QUALIFICATIONS: requires strong analytical & organizational abilities; working knowl in acctg, info sys, data processing, business mgmt, oral & written commu, quantitative methods & organizational behavior; MBA & several yrs of exp or equiv; demonstrated excel supervisorial skills; ability to delegate; ability to manage complex financial sys efficiently; knowl of Univ policies & procedures.; C07; $2113-2724.

29478-PM (JCC:2070) ADMIN ASST II: Direct liaison w/ MBA student organizations, meeting periodically w/ the groups or w/ their chairpersons; initiating designated student support activities, & assisting the student organizations in meeting their goals; principle assistant to Dir of MBA Program; recording sec to MBA Academic Coordinating Committee; participates in an active student counseling process, assisting students w/ both academic & personal problem-solving; coord specific on-going or periodic activities w/in the Program; supv a sec'l assistant; QUALIFICATIONS: strong interpersonal skills; strong commu skills; ability to develop & write effective rprts containing complex data; ability to work w/ a diverse student & faculty in a stressful environ; ability to understand & interpret GSB Faculty's policies regarding the academic programs; send appl/resume to Gary Williams, GSB 130.; C05; $1670-2086.

20174-JB (JCC:2120) ACCOUNTANT I: Control, submit, & correct batches of student financial documents; order & distribute computer-generated rprts; post & balance the Tuition Register; prep journal entries to distribute tuition & fee income; reconcile selected genl ledger accts; reconcile Tuition Register w/ other subsidiary ledgers; disburse funds to student organizations & health insurance carrier; asst w/ Univ registration process, etc; QUALIFICATIONS: Bachelor's degree in acctg or equiv acctg exp; able to work independently & apply sound acctg principles in resolving complicated transactions; strong analytical & problem solving skills; good organization skills & neatness required; extremely accurate in preparing & maintaining financial records; excel oral & interpersonal skills; use of 10 key by touch; computerized acctg sys desirable.; C05; $1670-2086.

27182-LL (JCC:5588) LIFE SCI RES ASST I: Asst in developing new analytical procedures for measuring drug concentrations in biological fluids & tissues; preparing samples for analysis by automated HPLC apparatus; performing analyses of drugs by gas & high pressure liquid chromatography; carrying out routine maintenance on these instruments; tabulating & aiding w/ data analysis; ordering & maintaining records of supplies, samples & consumables used in the lab; QUALIFICATIONS: BS in chemistry, biology or related subj or equiv exp; prev exp in a chemistry lab desirable.; C05; $1670-2086.

32949-TC (JCC:6826) SOC SCI RES ASST III: 50%; participate in an American Cancer Society research proj to develop methods for identification of cancer patients who need assistance in coping & to develop methods of intervention to assist these patients; conducting in-depth explorator intake interviews of cancer patients using therapeutic interaction skills & maintaining a close clinical association w/ patients; recording of responses; collection of data; developing & teaching mini-courses; QUALIFICATIONS: requires a social serv bkground to perform res in a clinical setting, sensitivity to psycho-social needs, especially those of cancer patients; exercise initiative & theoretical judgment in solving problems & making decisions; interviewing skills that are therapeutic; skill in grief counseling & exp w/ patient problems inherent in those w/ life-threatening illness; skill in commu w/ physicians.; C05; $835-1043.

33835-DS (JCC:2270) FIN/MGMT ANALYST III: Investment Financial Analyst to work in Treasurer's Office, as part of the professional investment staff; will be given projs of an investment analysis & financial evaluation nature, incl the review & recommending of action on investment of funds; work w/ Datapoint computer sys, doing investment performance computations & developing a monitoring sys for Univ's separate funds; spec projs will incl evaluation of different investment strategies & alternatives, incl review of proposals fr outside sources & determination of approp asset mix & specific securities holdings for specific funds; QUALIFICATIONS: MBA emphasis on Finance & Investments; computer exp, especially rate of return computations.; C08; $2464-3139.

Bargaining Unit

32388-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 8-5 & able to work late on occasion & on some wkends or holidays to complete experiments; work on proj in nucleic acid enzymology research; respon for prep of buffers & reagents; use of radioisotopes; lib searches; numeric & graphic data analysis; QUALIFICATIONS: college level course work in biology & chemistry; prev exposure to & ability to follow protocols in enzyme purification & assays, DNA isolation, column & thin-layer chromatography, gel electrophoresis, immunoglobulin purification & assay.; A18; $ 7.50.

Nonexempt

31169-PM (JCC:1747) LIBRARY SPEC I: Perform duties in Gov't Documents Dept, Federal Division; typ monograph & serials cards, ltrs, minutes, binding tickets, manuals & any lists/guidelines needed by the librarian & specialist; carries out claiming proj or other related info for missing periodicals; files cards & other misc filing tasks; processes requests & orders, etc; QUALIFICATIONS: typ 50; require demonstrated clerical & organizational skills; atten to details; knowl of basic lib operations & ability to compose simple business ltrs desirable; contact: Bob Johnson, Green Library, Room 223 (497-3152).; B10; $595-623.

33734-BP (JCC:2454) OFFICE ASST II: Answer phones; receive Ctr visitors; sort & deliver E-mail; organize bulletin board mat[illegible]e postage meter; order supplies; update [illegible]ailing list & asst w/ large mailings; provide support to other offc secretaries, etc; QUALIFICATIONS: typ 40; excel phone answering skills, as well as interpersonal skills; atten to detail; ability to work under pressure at times; send appl/resu to Estela Estrada, CROW, Room 30, Chemistry Bldg, Stanford, 497-1994.; B09; $1130-1189.

43552-BP (JCC:2462) OFFICE ASST III: Assistant to Dept Administrator; some checking & adjusting of dept accts requiring basic reconciliation & control; occasional sec'l assistance for dept chairman & professors; typing reports; responses to routine requests, reqs & other forms; maintaining inventory of dept offc supplies, petty cash, mailing lists, dept publications, directories; conference room & audio visual eqpt scheduling; acting as receptionist, genl reference source & problem solver for dept & mail distributor; QUALIFICATIONS: typ 50; 2-3 yrs exp (w/ some acctg duties) preferred; exp in setting prior; command of English (grammar & spelling); good interpersonal skills for interaction w/ faculty, visitors, students & staff; well organized but flexible w/ pleasant personality; send appl/resume to J. D. Parker, Room 251 Durand Bldg.; B11; $1246-1310.

44394-BP (JCC:2470) OFFICE ASST IV: Working for Assoc Provost & Registrar & the Asst to the Registrar; screen & route visitors, mail & phone calls; schedule mtgs; edit, typ & proof all corresp; compile & organize data fr various sources for rprts & mtgs; make travel arrangements; compose ltrs; routinely read, organize, file & answer electronic messages fr computer terminal; work w/ supvrs to fill vacancies for approx 30 non-exempt positions, incl recruitment of appl pools, screening appl, interviewing candidates & participating in selection decisions; prep payroll/personnel documents; asst in budget process & Staff Affairs duties; QUALIFICATIONS: typ 65; offc exp w/ a broad range of respon; incl decision making & sensitivity to confidential matters; exp in personnel recruitment & selection very helpful; knowl of Stanford's payroll/personnel sys or exp w/ a similar sys; strong typing & editing skills are nec; familiarity w/ WYLBUR & Contact EMS helpful; send appl/resume to Diane Shankle, Old Union, Room 137.; B14; $1440-1514.

29619-PM (JCC:2512) OFFICE ASST III-SPEC: Answer phones (6 lines); handle mail for entire dept; using word processor to typ ltrs, manuscripts, grants & statistical rprts, patient corresp & rprts; sec duties for 1 doctor; bkup sec'l work for other faculty members; order dept'l supplies; bill for dept'l eqpt used on patients thru hospital billing process; serv as dept'l librarian; serv as bkup for other offc staff during their absence QUALIFICATIONS: typ 70-80; well-trained & exp'd in med sec'l duties, offc work & med terminology; use of dictaphones; good phone answering skills; word processing skills nec; cardiology or cardiovascular surgery terminology preferred; contact: Lois Takaoka, Med Ctr A309, 497-5771.; B12; $1310-1373.

33735-BP (JCC:2554) SECRETARY II: 50-60%; prov sec'l serv to Ctr for Research on Women (CROW) staff; typ ltrs, manuscripts, rprts; complete univ acctg & work order forms to pay bills, honoraria, etc; answer phone & screen visitors as nec; respon for large mailings; operate copy machine & word processor (will train if nec); QUALIFICATIONS: typ 60; familiarity w/ univ acctg forms desirable; atten to detail; good interpersonal skills; accurate typing skills; word processor exp desirable; send appl/resume to Estela Estrada, CROW, Room 30, Old Chemistry Bldg, Stanford, 497-1994.; B11; $623-655.

22524-PM (JCC:2562) SECRETARY III: Full range sec'l serv for 1 Prof & Chairman & 1 Prof; handle diverse set of assignments on an equal prior basis; prep of draft & final copy manuscripts, rprts, speeches, grants, fellowship proposals using IBM word processor; mgmt of substantial corresp; answering routine inquiries; typing finished form ltrs & memo; make appts; maintain daily & proj'd calendars; set-up mtgs; make travel arrangements & accommodations; prep expense advances & rprts; schedule seminars & Wednesday club speakers, etc; QUALIFICATIONS: excel typing, grammatical & proofing skills; ability to compose ltrs fr oral instructions; use word processing eqpt or willingness to train; knowl of scientific terminology helpful; prior exp in academic setting desirable; contact: Lore Karrer, Med Ctr M318, 497-6559.; B14; $1440-1514.

Ph.D. oral exams

FRIDAY, MAY 27

Irina Reyfman, Slavic languages and literatures, "V. K. Trediakovskii: Hero of the Myth of the 'New Russian Literature,' " 2:15 p.m., Room 279, Bldg. 260.

MONDAY, MAY 30

John Thomas Clark, physiology, "Monoaminergic Modulation of Copulation in Male Rats," 12 noon, Physiology Library.

TUESDAY, MAY 31

Auguste Claude Boissonnade, civil engineering, 2:15 p.m., Terman Bldg., Room 251. **Bruce Carl Fuller,** education and sociology, "The Organizational Construction of Intrinsic Motivation: Staff Views Within an Employment Program Bureaucracy," 2:15 p.m., 204 CERAS. **Andrea Klimt,** anthropology, 9 a.m., 111-J. **Robert C. Kunath,** history, "Cultured Politics in Germany, 1914-1933," 1:15 p.m., Room 124. **Reid Maki,** history, "Local Study During the Depression," 2 p.m., History Corner, Bldg. 200, Room 307. **James W. Mehring,** electrical engineering, "The Satellite Applications of Amplitude Companded Single Sideband Modulation," 4 p.m., Durand 301.

Murray R. Metcalfe, engineering-economic systems, "The Adoption of Innovation in Systems of Interconnected Technologies," 2:15 p.m., Terman 217. **Frank J. Murray, Jr.,** English, "British and American Fiction and Drama, 1890-1980," 2:15 p.m., Bldg. 40-41F. **Nelson H. Oliver,** chemistry, "Rotational Motion of Small Rodlike Probes in Hindering Environments, as Probed by Fabry-Perot Interferometry," 2:15 p.m., Chemistry Gazebo. **Craig Edward Richards,** education, "Race and Educational Employment," 2:15 p.m., e114 Education Bldg. (Cubberley). **Neil Rowe,** computer science, "A Rule-Based Expert System for Top-Down Estimation of Statistics on a Database," 2:15 p.m, Jacks 146. **Robert John Tibshirani,** statistics, 2:15 p.m., s120.

WEDNESDAY, JUNE 1

Jean Davison, education, "Lifelong Education in the Lives of Kenyan Women," 2:15 p.m., e114 Education Bldg. (Cubberley). **Philip R. Fletcher,** education, "Mass Education as a State Agency of Legitimation in Brazil," 9 a.m., 204 CERAS. **Ji Soo Kim,** graduate special, "Post-Graduate Science and Technology Education in Korea," 2:45 p.m., ERL Room 232. **Timothy Jack Ross,** civil engineering, "Direct Shear Failure in Reinforced Concrete Beams Under Impulsive Loading," 3:15 p.m., Terman 251. **Jack Wright,** psychology, "The Structure and Perception of Behavioral Consistency," 2:15 p.m., 358 Jordan Hall. **Aaron A. Zick,** chemical engineering, "Fluid Mechanics," 4:15 p.m., Chemical Engineering Conference Room.

THURSDAY, JUNE 2

Kenneth N. Allen, history, "19th and 20th Century Germany," 2 p.m., Bldg. 200, Room 124. **Conrad Crane,** history, "U.S. Strategic Bombing, 1919-1945," Bldg. 200, Room 307. **Jeffrey Russell Koseff,** civil engineering and mechanical engineering, "Momentum Transfer in a Complex Recirculating Flow," 10 a.m., Terman M-33. **Elizabeth Forrester McCord,** chemistry, "CIDNP Studies of Amino Acids, Polypeptides, and Nucleic Acids," 2:15 p.m., Chemistry Gazebo.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, May 31 in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

DIRECTOR—Clinical Engrg: #3231—B-94: Responsibilities: An employee in this classification is respon for overall tech & adminis leadership & mgmt of coordinated clinical engrg effort in Hosp & Clinics, including mgmt of Clinical Engrg Dept, instruction of nursing & med staff, Med Schl interns & residents, liaison w/ & membership on various hosp committees, consultation w/ depts concerning formulation of medical capital eqpt & maint budget, & participation in research in medical applications; Qualifications: M.S. in Engrg in an accredited curriculum w/ emphasis on Clinical or Biomedical Engrg preferred; a knowl of med systems eqpt design, use & maintenance, & 5 yrs' experience as clinical engr w/ at least 3 yrs of managerial experience reqd; registration as a Professional Engineer highly desir; Permanent, Full-Time, M-F, 8-5pm, $18.71-29.00 hrly



Those mouth-watering meals that are served at the International Center's luncheon events are cooked right in the I-Center's kitchen—by volunteers. These members of the Stanford Mothers' Club were there last Thursday, preparing one of those lunches that has the I-Center staff hoping there are going to be leftovers for them. Left to right, they are Liz Watkins, Mid Schubert, Norma Pollock, and Myrtle Harris. The I-Center's volunteers make it one of the liveliest places on campus.

Gwyn Dukes...

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counselor who knows community resources, Siegel can be helpful in a variety of situations. A professional staff member of the Cowell Student Health Center, she has for 12 years provided liaison between the International Center and the medical and psychological resources on campus and in the community.

Like others on the I-Center staff, Dukes enjoys getting out of the U.S. occasionally. Her last trip took her to Japan several years ago, where she visited several of the families she met through her work at Stanford.

"I realized the great value placed on sensitivity to another person's feelings and situation," she relates.

"I was struck by how, if a society values something, it really pulls that quality out in people. To experience that thoughtfulness, their help, and their sensitivity was an overwhelming experience."

One of the rewards of working at the I-Center seems to be having someone to visit in almost any country one might go to. Many of the volunteers have the same experience.

"It's another example of the continuing contact," says Dukes. "Volunteers often become close friends or 'extended family' to the students they assist, and renew the contact when they travel abroad—meeting not only their former international student friends, but also their parents and relatives!

"There are even several babies around the world who have been named after their adopted American "grandfather" or "grandmother," and countless families whose friendship has continued for more than 10 or 20 years following their stay at Stanford."

How many volunteers help with Dukes' programs?

She begins enumerating them: a pool of 20 drivers; eight teachers and four substitutes in the English classes; about 120 volunteers for English-in-Action (informal conversation); three who teach cooking and one who teaches quilting; one coordinator and four leaders for the playgroups, and each playgroup has about eight American women who are partners with women from other countries. . . .

It seems that she's succeeding in her goal of spreading the benefits of the international visitors as far as possible.

CCIS...

continued from page 12

decorator donated her services to make the new center warm and homelike.

With the new space and an ever-increasing number of foreign students, programs at the I-Center have burgeoned.

Ken Cooper became the second director of the International Center in 1964; the current one, Lee Zeigler, took over in 1971.

By 1972 CCIS had grown so large that one chairman couldn't handle the work involved. The result was a classic Stanford solution—the council of presidents, now including those for business affairs (Ann Whitcomb), continuing programs (Lynn Phillips), and new student services (By Robinson).

Members of the organization come from all the towns around Stanford, with men playing an increasingly active part.

Stephen Bechtel made further gifts to the I-Center—first for enclosing the central courtyard, and then, with a contribution from the Lane family as well, for adding a new wing in 1978. As it is now, the old Zete house has completed its transformation into the perfect International Center.

CCIS will celebrate its 30th birthday on June 5 with champagne, music, and a host of distinguished guests. If one asks just how many members participate in I-Center programs, no one seems to know exactly—it's somewhere between two and three hundred.

"They're militantly nonfundraising," says Zeigler. "They have annual membership dues, and on that they manage to pay their bills. They want *people*, they want *involvement*.

"Volunteers come to the I-Center thinking that they want to give something," he continues. "They end up saying, 'Gosh, I learned so much more than I gave!' "

In this unique marriage between a University organization and a volunteer group, it's the service that means the most. As any I-Center staff member will verify, there wouldn't be much action there without the CCIS.

Information for this short history was found in several issues of the CCIS newsletter, Communique. *For more information about CCIS, call 326-5252.*



The I-Center's coffee hours for wives includes many toddlers like this one.

Campus crime report

May 16-23

Burglary/residence	0	Phone harassment	2
Burglary/nonresidence	0	Controlled substance	0
Burglary/Vehicle	0	Felony arrest	0
Theft/under $400	9	Misdemeanor arrest	15
Theft/over $400	6	Adult booking	13
Bicycle theft	15	Adult cite/release	2
Vehicle accident	2	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served	3
Assault	0	Driving under influence	3

The information report is based on campus crime reported to SUDPS during the stated time period, and may not necessarily reflect current crime trends.

Help Stop Crime! Join Neighborhood Watch Program! Contact Dan Smith or Kat Berry in the Special Services Unit, 497-9633.

Photographs for the I-Center stories are by Chuck Painter. Stories are by Pat Black.

Rental housing

HOUSING AVAILABLE

□ **Fall Qtr. to Jan. 1:** West Menlo Pk. hse, 2BR, 2BA, lrg. study, lrg. patio, fully furn, all appl. Bike to campus. Adults only. $1100/mo. incl. grdnr & wkly maid serv. Call 322-9109.

□ **Aug. 1 mo. only:** Fully furn. hse, 3BR/2BA, Crescent Pk, Palo Alto. $900. Call 328-2677 (eve).

□ **July & Aug.:** Sublet; nice, bright, furn. 2BR apt. in Menlo Pk. $700/mo. Call 323-4502 (eve).

□ **Jan. '84 to June (or Aug.) '84:** Peter Coutts Hill, 2BR/2BA + study, frpl, gar., pool, jacuzzi. Bike to Stanf. Use of car for insur. Fully furn. $1050/mo. call 493-6273, eve or wknd; 497-0833, days.

□ **Aug. 7, '83 to Sept. 3, '83:** 4 wks; fully furn hse, mid-twn Palo Alto, 3BR/1½BA, den, playrm, play-yd, lovely patio. $975/mo. incl. phone, util, lwn. serv. Ideal for yng. fam. No pets. Call Lee or Judy, 321-0250.

□ **July 15 to Aug. 15:** Artists apt. in NYC, to subiet, 1BR/1BA, 1st Ave. between 7th & St. Marks. 3 cats for companionship. $450. Call N. Langmuir, 497-4184, days; 327-4649, eves.

□ **June 15, '83 to Aug. '84:** SHARE 2BR old Palo Alto apt, easy bike to campus. Partly furn, sunny, W/D. Seek female grad studnt or other SU affiliate. No pets. $320/mo. incl. util. Dep. req. Summer rent thru Sept. considered. Call 322-8788, a.m., or after 5 p.m.

□ **Sept. '83 to Sept. '84:** Shorter term poss. 2BR/2BA Oak Creek apt nr Stanf. & hosp. Fully furn. incl. linens, dishes, AEK. Pool, tennis, sauna, jacuzzi. $1100/mo. Call 497-1968, day; 493-0894.

□ **June 7 to mid-Sept. '83 (flex):** Lrg. fully furn. hse in Palo Alto, 2BR/1½BA, DR, LR, color TV, grdn, quiet, nr shops, walk to prk, tennis. 10 min. to Stanf. $650/mo. + util. Call 857-1479.

□ **NOW:** Female nonsmoker to SHARE 3BR hse in Sunnyvale, 15 min. to Stanf. $300/mo. + dep. Call (408) 720-1311, eve; 497-6252 (Lynda).

□ **June 30 to July 30:** 1 mo. rent; So. Palo Alto hse, secluded, low-maint. grdn. Nr. shops, tennis, par-course, bus, park, library. Nonsmokers. Cpl pref. $750 + sec. dep; incl. util. Call Helen, 324-1710, day; 494-2624, eve.

□ **Sept. to Dec. 15, '83:** Furn. 1 or 2BR apts, luxury, lrg. pool, sauna, jacuzzi, tennis, racquetbl. Dep. req. Adult complex. 1 apt. A/C. Refs. $600/mo. Rte. #280 to Stanf. Cali Prof. Arnold, 968-0951.

□ **NOW:** 1BR luxury unfurn apt. Pool, sauna, tennis, Willow Rd. nr. campus. $750/mo. Call (408) 867-9187.

□ **Aug. '83 to Aug. '84:** Portola Val... walk to schls; 3BR/2BA, 2 frpl, multi level ... rg pool w/solar heat, wooded h... ...ined glass, oriental rugs, sculpt... ...ce of car nego. $1600/mo. Call 851-8743.

Cancelled

□ **Sept. '83 to Sept. '84:** Spac. furn hse in Palo Alto, 2BR/1½BA, study (or 3rd BR), FR, fenced yd. Quiet st. mid-twn, nr. shops, schls, transp. Poss. use of car. $1000/mo. Call 854-2306, days; Barbara. 857-1494, eve.

□ **Beg. June 18, Indef:** Pearce Mitchell condo, 1BR/1BA, fully furn, W/D, use of pool, jacuzzi. ½ block to campus. $700/mo. Call Mike, 497-5811, day; 328-4077, eve.

□ **June 18 to Aug. 12:** Summer rent. Fully furn hse, 4BR, study, pool, hot tub. $1200/mo. incl. util. Call 493-3661, eve; 854-5900, day.

□ **Aug. '83:** Fully furn hse, 2BR/1BA, study. 10 min. to Stanf. by car. $700/mo. Call Berman, 493-1571.

□ **NOW:** Summer rent. Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, W/D, phone, sleeps 10. $180/wk. Call 493-4139, eve.

□ **July 1, '83 thru June 15, '84:** Fully furn hse, 4BR/2BA, basic ktchn equip, some linens, grdnr. $1100. Call Colleen Hull, 326-6438.

□ **June 11 for 1 yr:** 1BR furn apt. Walk to Stanf & Med Ctr., shop ctr, theaters, restaurants. Pool, jacuzzi, sauna, 24 hr. Indry. Roll-top desk. $550/mo. Call (415) 538-9444, early a.m or very late p.m.

□ **Beg. June 1:** Fully furn. 2BR/1BA hse, frpl, cov. patio, fenced yd, west Menlo Pk. 1.5 mi. to Stanf. $1000/mo. Call 854-7730 or 956-2050.

□ **Regularly avail:** 1 to 3BR furn & unfurn apts & twnhses & 3BR/2BA hses in Menlo Pk. & Palo Alto in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049.

□ **Beg. Aug. '83:** Medit. style hse in Crescent Pk, Palo Alto, 3BR/3BA, DR, encl. yd, baby grnd piano, W/D. $1590/mo. incl. water & grdnr. Call COLLECT (602) 299-4499.

□ **NOW:** Hawaii, Kauai. Lovely, furn twnhse, 2BR/2BA. Pool, tennis. Priv. club atmosphere. $50/day. Call Howarth, (415) 591-5190.

□ **July 26 to Aug. 31, '83:** Spac. Vict. 4BR/3BA hse. Gourmet ktchn, LR, DR, FR, lrg. yd. Close to dwntwn Palo Alto, Rincon. Pk, pool, tennis, library. $875/mo. call 328-6794, eve.

□ **Jan to Dec, '84 (flex):** Fully furn hse, 5BR/4BA, LR, DR, study, old campus. Rentable gar. rm. Call 497-4210 (day).

□ **NOW:** Mt. View, unfurn. 2BR/1BA + sep. studio/1BR apt. on central crtyd. FR, AEK, DW, frpl, A/C, dbl gar., lndscp yd. Nonsmokers, refs. reqd. $1375/mo. incl. water, grndr. Call (415) 941-5976.

□ **Beg. June 10:** Palo Alto old twn, furn. 2BR/2BA apt. SHARE w/grad. stud. or other Stanf. male. Quiet, nr campus & dwntwn. Pool, lndry, storage for bike, cov. prkng. $385/mo incl. util. Call Dan Stephen, 324-1552 or 859-2185, wkdys.

□ **Beg. mid-June, min. 1 yr:** Charming 3BR/1½BA hse in old Palo Alto. Bike to campus, walk to Calif. Av. shops, transp, park. Ideal for cpl or sm. fam. No pets. Nonsmokers. Lease. $1000/mo. + util. Call Jan 497-5000, X5507 (day), 321-5444 (eve).

□ **Mid-July to Mid-Sept. (flex):** Fully furn. hse, nr Sharon Hgts. Walk to SLAC, Stanf. 2BR/2BA, study, FR, frpl, DR, grand piano. Patios, low-maint grdn, all appl, bikes, xtras. $1200/mo. incl (auto) water + dep. No pets, nonsmokers. Call Chiltons, 497-4289 (day), 854-5432 (eve).

□ **Jan. 1 to Dec. 31, '84 (flex):** Fully furn 2-story campus hse, 4BR/4BA, study, den, DR, encl. yd. $1300/mo. incl. grdnr. Call Moser, 857-0413.

□ **Beg. June 1:** Fully furn 2-story twnhse, 2BR/2½BA, fully furn, quiet location. W/D, gar., $900/mo. Call 321-3802.

□ **Late June to late Aug. (flex):** Charming older hse nr creek & dwntwn Palo Alto. Bike to Stanf. 2BR/1BA, study, patio. Fully furn. Piano. Nonsmokers, pets nego. $900/mo. Call 321-4586 (eve).

□ **June 12 for 1 mo:** Furn. studio apt. Sublet, nr Rengstorff Pk. in Mt. View. $230 + util. Write G. Hicks, PO Box 390045, Mt. View, 94039-0045.

□ **July 1 to 31:** Poss. overlap into last wk June/Aug. Furn. 3BR/2BA hse in old Palo Alto, grdn, IBM pers. computer. Bike to Stanf. $800/mo. Call 326-0284.

□ **July 1 to Aug. 15 or 31, '83:** Pearce Mitchell condo, 2BR/1½BA, fully furn, on campus, pool, rec. rm, air-cond. $750/mo. Call Dr. Strober, 497-6500 (day), 854-2757 (eve).

□ **July & Aug:** Summer rent, dwntwn Palo Alto. Attrac. 1BR/2BA condo, fully furn. suit. for cpl. Libr. w/sprl staircase, balc, pool; secure. 18th C. European style. $1200/mo. Call (415) 324-1624 (eve), 327-3505.

□ **June 18 to Sept. 18:** Furn campus cottage, 1BR/1BA. $550/mo + util. Call Curt, 497-3118 (day), 327-7608 (eve).

□ **Beg. June 1 (flex):** For 1 yr. or longer. Unfurn 2BR hse, garden, frpl, easy bike to campus. $750/mo. + util. Call 856-0808.

□ **July 10 for 2 yrs:** Palo Alto, unfurn (or furn) 4BR/2BA hse, DR, FR, on lrg. wooded lot. Nr. Stanf, park, shops. $1350/mo. incl. grdnr. Call Sprig Theobald, 321-3434, wkdays.

□ **July 1 to Aug. 31:** Fully furn 4BR/2½BA hse, FR, DR, secluded Los Altos ½ acre. $1300/mo incl grdnr, cleaners. Call Sprig Theobald, 321-3434, wkdays.

□ **June 10 to Aug. 31:** Palo Alto, fully furn 3BR/2BA contemp. hse, w/swim, tennis club. Nonsmokers. $950/mo. Call Sprig Theobald, 321-3434.

□ **Beg. June 1:** Rm in 6BR hse, dwntwn Palo Alto coop, non-veget. hsehld seeks spirited male to share dinners, yrd, hsehold work w/2 men, 3 women. Cook. talent a must. Spac. rm w/connec. BA. $233.50/mo. + util. & dep. Call 328-0952 after 5 p.m.

□ **July 10 (flex) to April 1, '84 (flex):** Fully furn. lux. hse. w/pool, Steinway, 3BR/2BA, AEK, W/D, 2 studies, frpl, fenced yd. Nr. Med. Ctr., bike to campus. $1500/mo. (nego) incl. pool serv. Call 497-1348 (a.m.), 325-4533 (lv. message), 322-9866 (eve).

□ **Beg. June 1:** 1 yr lease, renewable; new Barron Pk. hse, 3BR/2½BA, unfurn; modern ktchn; redwd deck, low maint. grdn, quiet, bike path to Stanf. $1250/mo. Call 323-7565, eve.

□ **NOW:** Ski cabin, so. Lake Tahoe, 2BR, frpl, color TV, phone, adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, (415) 497-2501 (day), (408) 739-3141 (eve).

□ **Beg. July 19:** Lux. 1BR furn. campus apt. Lrg closets. Priv. patio. $875/mo. incl. all util. Call 856-6049.

□ **June 22 to Aug. 20:** Summer rent, 9 wk. lease. Sunnyvale, 3BR/2BA furn hse w/yd. Nr. #280. $1700 incl. water, grdnr. Nonsmokers, no pets. Call (408) 739-9182.

□ **NOW:** Dwntwn Palo Alto, fully furn. rm. in apt., use of ktchn, LR. Short or long term rent. $275/mo. Call 327-2402.

□ **Aug. 1 for 1 yr:** Hse to swap, Chevy Chase/Wash. DC. 3BR/2½BA, den, finished attic, basemt, small yd. Xclnt publ. transp. Wish to EXCHANGE for hse in Sunnyvale/Palo Alto area. Call COLLECT (202) 363-0558.

□ **Mid-June to Mid-Sept. (flex):** ...BA fully furn. hse. TV rm, quiet grd... ...f, 1 mi to dwntwn Menlo Pk. $9... ...ater & part-time grdnr. Call 325-5339.

Cancelled

□ **Aug. 7 to Aug. 26 (flex):** ENGLAND. Twnhse in charming market twn, 3BR/1BA, 40 min to London/-Cambridge. Walk to pub. transp. $200/wk. Call Phyllis Wood, (415) 969-6540.

□ **Beg. approx. July:** Furn. hse in Westchester Co. N.Y. on Conn. border; 4 wooded acres. Or EXCHANGE for your Bay Area domicile. Call Eva, 941-2686 or 326-3684.

□ **July 1 to July 23, '83:** Furn. 3BR/3BA campus hse, LR, DR, 2 studies, spac. ktchn. No pets. $1000 incl grdnr & garb. Call J. Keller, 497-0851 (day), 857-0409 (eve).

□ **Beg. June 1, '83:** Full... ...sept. wing of lovely old c... ...ntr. $500/mo. Call 323-5982.

Cancelled

□ **June 20 to Aug. 20, '83:** Fully furn. hse in Mt. View, nr. Rengstorff Prk. 2BR/2BA, util. rm, lrg. patio.

continued on next page

HOUSING NEEDED

□ **Sept. '83 to May '84 (flex):** Visit. prof, sabbatical at Stanf., & spouse with dog seek 2BR furn hse in Palo Alto, Menlo Pk area. Nonsmokers. Call COLLECT (413) 367-2286 (eve).

□ **Aug/Sept. '83 thru July '84:** Humanities Ctr Fellow & spouse visit. from Duke U. seek 1-2BR fully furn hse or apt. in Palo Alto or Stanf. area. Refs. avail. Call COLLECT (919) 544-3116 late aft., early eve.

□ **Beg. June '83 for 6 mos:** Faculty cpl from Albert Einstein Coll. of Med, NYC, seek rental nr Stanf. during sabbatical. Our hse avail. for rent or EXCHANGE. Call Dr. Philip Silverman, (212) 430-3124 (day), (914) 723-3103 (eve), or write: 2 Shady Lane, Scarsdale, NY 10583.

□ **Sept. '83 to Aug. 31, '84:** Visit. Prof., wife, 3 children seek to rent 3-4BR furn hse on or nr campus. Up to $1500/mo. No pets, nonsmokers. Call 497-3480 (day), 856-0534 (eves, wknds).

□ **Beg. Oct. 1, '83:** Visit. Eng. MD seeks 3BR hse or apt for 1-2 yrs. Wife, children (2½ & 6 mos). Nonsmokers. Prefer furn. nr. campus. Will pay to $1000/mo. Call UK 272-502114 or write 54, Westacre Close, Westbury-on-Tryon, Bristol, UK, Dr. Gaston.

□ **Aug. '83 to July '84 and Sept. '83 to Aug. '84:** 2 Stanf. Humanities Ctr Fellows seek quiet, furn. 1BR apts, pref. nr. campus. Call Sue Asch, 497-3054 (day).

□ **Aug. '83 to Aug. '84:** Visit. scholar from New Mex., spouse & children 12 & 14, seek 3BR hse on or nr campus. Call W. Harrison, 497-4224.

□ **Beg. late Sept. '83:** Studious male grad student, nonsmoker, seeks furn. rm. in hse on campus or College Terr. Ktchn unnecess. Local refs. Call Gabriel, 328-5932 (eve).

□ **July 1 for 1-4 mos:** Reliable Stanf. staff seeks HOUSESIT for summer—flex. Returning from EAST. Nonsmoking, childless cpl will give xclnt care to plants, pets, hse. Call COLLECT (617) 469-2040 or write David Mark, MD, 20 Walnut Hill Rd., Chestnut Hill, MA 02167.

□ **June 14 to July 12:** Careful tenant, English woman prof, staying longer than planned, seeks apt or hse on/nr campus. Call H. Himmelweit, 321-2052 (day) or 856-9696.

□ **Summer:** Visiting grandparents desire to HOUSESIT. Avail. any part of summer. Call Paulette, 493-4598.

□ **Aug. '83 to July '84:** Visit. scholar from Penn State seeks furn. 3BR hse. Prefer Palo Alto or Sunnyvale Sch. Dist. Nonsmokers, no pets. Will care for plants, pets, gardn. Call (814) 234-8110 (eve). Prof. Matthews, (814) 865-8859 (day).

□ **NOW:** As soon as poss: 2-3BR unfurn hse or duplex, commute dist. to Stanf. Will pay to $800-900/mo. For new Stanf. fac., husb, & child. Call Elissa, 497-4977 & lv. message.

□ **Beg. July 1:** For min. 1 yr. M.D. assoc. w/Stanf. Med Ctr seeks to lease hse or condo w/3BR in or so. of Palo Alto area. No children, no pets, not cost limited. Call (619) 450-1133 or write John Connolly, 8652-1 Villa La Jolla Dr., La Jolla, CA 92037.

□ **NOW to Sept. 1 or longer:** Stanf. staff w/Univ & local refs wants caretake or HOUSESIT in Palo Alto area. Will give excl care to your hse, business, yd, pets. Call Donna, 497-3967 (day).

□ **Beg. Aug. (flex) for academic yr:** Visit. scholar, wife, 1 child, seek furn. hse. or apt. nr campus. Nonsmokers, clean living, home-owners. Will care for plants & pets. Local refs. Call COLLECT (314) 875-2858 (eve).

□ **Academic yr, '83-'84:** Visit. scholar, wife; nonsmokers, need med-sized hse on campus. Poss. EXCHANGE for hse in Bethesda, Md. 10 min. to NIH. Call Gurley, 857-0169.

□ **June to Aug. (flex):** 4 to 6 wks. Mature 17-yr-old French male seeks active fam. life. Exchange later (Paris & Normandy coast) or will pay. Enjoys sports, music, cooking; plans wilderness trips. Call Chiltons, 497-4289 (day), 854-5432 (eve).

□ **June 22 to July 23:** Swedish prof, wife, 16-yr-old daughter seek 2-3Br furn hse or apt. Call 948-8058.

□ **Sept. 25 to Mar. 25, '84 (flex):** Visit Canadian physician & wife, no children, seek 1-2BR furn apt, sm hse, or hsesit position. Prefer within 10 min. to Stanf. Med. Ctr. Refs. avail. Call (403) 432-3912 (day), (403) 439-5135 (eve).

□ **Beg. July '83 Indef:** Single prof. woman, will pay to $500/mo. for campus hsng, during owner's absence. Will care for grden & pets. Call 328-8627.

□ **Beg. June or July for 1, 2, or 3 mos:** Mature, resp. cpl. (husb. is architect), seek summer residence in Palo Alto area. Maint. & archic. serv. in xchnge for hsesit. is nego. Own home in S.F. Call (45) 567-0722.

□ **Sept. '83 to May '84:** Visit prof. on sabbat. at Stanf. & spouse w/dog, seek furn. 2BR hse in P.A., Menlo Pk., Stanf. Nonsmokers. Call (413) 545-0685 (work) (COLLECT), (413) 367-2286 (home), Amherst.

□ **July 19 to Aug. 13:** Seeking 5BR furn hse w/pool for visit. senior exec., wife & 2 children. Call Heidi Henauer, 856-6144 (day).

□ **Sept. 15 (flex) thru May or longer:** Creative writing instruc. seeks small, quiet cottage or apt. Prefer work-for-rent arrang. Local refs. Call John Daniel, 854-7729, a.m. or eve.

□ **June 15 to Aug. 22:** Institute for Humane Studies seeks 1BR furn. apt. or studio for visit. scholar. Call Joan Storm, 323-2464.

□ **July 13 to Aug. 22:** Institute for Humane studies seeks 2BR furn. apt. or hse for visit. scholars. Call Joan Storm, 323-2464.

□ **July 1 to Aug. 26:** Institute for Humane studies seeks 4-5BR furn. hse in Menlo Park for visit. scholars. Call Joan Storm, 323-2464.

□ **June 19 to Aug. 27:** Faculty cpl seeks to hse or apt-sit or to rent quarters nr campus, especially from weaver or spinner. Faculty Fellow in Astro & Aero. Write: Hays, Box 12, Brownsboro, Al. 35741, or call (205) 776-3940.

□ **May 25 to permanent:** Resp. quiet, prof. male, 30, seeks apt., rm, or cottage. Nonsmoker, 15-yr Portola Valley resid. Must have gar. Call John, 851-3185 (eve), (408) 995-6222 (day).

□ **Beg. June 15:** SUH med. tech, female, seeks quiet unfurn. hse. or apt. Nonsmoker. Call 497-6671 (day), 328-4759 (eve).

□ **Jan. to Feb. '84:** Visit. prof, Winter Qtr. needs furn. studio, 1BR apt., or hse-sit situation. Call 497-4487.

□ **Beg. June 15:** Stanf. staff woman w/dog seeks unfurn. small hse or cottage for long term rent. Nonsmoker, refs. avail. Call Sylvia, 854-3300, x2277 (day) or 969-1870 (eve).

□ **July 1 thru Oct.:** French exchange studnt, bilingual, computer sci. major, nonsmoker, needs rm & hse priv. w/good family. Employed by local firm for work/study prog. Call Diane, (415) 348-9181.

□ **Aug. '83 to July '84:** Visit. prof. from Canada seeks to rent hse in good sch. nghbrhd. Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

I-Center's final spring film show features stories of French families

French families will be highlighted in two films, "Faces of Man; Faces of France" and "Two French Families,"to be shown at 7:30 p.m. Thursday, May 26, as the last in the International Center's Other Cultures series for spring quarter.

"Faces of Man; Faces of France" visits five families in France—each in a different region and each with a distinct mode of living. All are deeply attached to their land and to their unique way of life, as the French people have been for centuries. The different regions shown in this film are: Brittany, Marseilles, the Alps, the valley of the Loire River, and Paris.

"Two French Families," a half-hour film, takes a look at the lifestyles of a traditional large farming family in western France and a young urban couple with one child in Paris. The film is narrated by Dr. Lawrence Wylie, a Harvard anthropologist and author of numerous works on France.

It shows that despite growing differences in their life styles, French families whether traditional or modern, remain strongly attached to the same basic principles. The film attempts to provide a deeper insight into this time-honored institution and the significance it has in French national life.

The films are free, though a donation of 75 cents is requested to defray costs of the films.

Help on relations with aging mothers

The Stanford Help Center will present a workshop on "You and Your Aging Mother" from noon to 1:30 p.m. Wednesday, June 1, in the Tresidder Union small lounge, Room 282.

The workshop will be presented by Andrew Scharlach, licensed clinical social worker and Stanford Ph.D. candidate in psychology.

Issues to be addressed include understanding your aging mother, community resources for the elderly, the strain of being a "woman in the middle," and how to improve filial relationships.

To reserve a place in the workshop call 497-4577 by Tuesday, May 31.

The Help Center is an employee benefit program open to Stanford University Children's Hospital, Medical Center, and SLAC employees and their immediate families. All workshops, seminars, support groups, lectures, and counseling sessions are free.

Summer Sports Camp expands a bit

The annual Stanford Summer Sports Camp, to be held June 20 through July 14 at the Roble Gym complex, has added an afternoon session for children who want a full day or just an afternoon's activity.

The campers, aged 7 to 12, will participate in badminton, basketball, bowling, dance, field hockey, fitness and exercise, football, frisbee, golf, New Games, softball, soccer, tennis, track and field, swimming, racquetball, and more.

They'll have access to Roble and deGuerre pools and raquetball courts, the Encina Weight Room, and Roble tennis courts.

Most of all, the camp will provide lots of fun and excitement for the children enrolled, with a staff assembled from the Stanford Varsity and Club sports coaches and the Stanford Teacher Education Program.

The morning session from 8 a.m. to noon and the afternoon session from 1-5 p.m. (including a supervised brown-bag lunch hour for full-day campers) Monday through Thursday provides a wide range of options.

For information, prices, and registration, call Shirley Schoof at 497-3089 or Bob Garcia, 497-2103.

Hollander gives piano concert June 4

Lorin Hollander, concert pianist, will give an informal performance at 2:30 p.m., Saturday, June 4, in Dinkelspiel Auditorium at Stanford.

The performance will be geared to families with children and will include discussion of pieces and questions from the audience.

Hollander made his Carnegie Hall debut at age 11. Since that time he has played with virtually every major symphony orchestra in the world and has given recitals in most of the world's music capitals and major universities. He appears regularly on national TV and radio and performed in the sound track of the film "Sophie's Choice."

Additionally, he is committed to activities outside the traditional concert hall setting. These include: lectures, recitals, teaching, workshops, and seminars on creativity and consciousness.

This performance is sponsored by the Alumni Association of the Stanford University School of Medicine in cooperation with the Community Outreach Program of the Lively Arts at Stanford. On the morning of June 4, Hollander will be a speaker at the Medical Center in a symposium on Early Experience and Creativity.

Admission to the afternoon performance is free and open to the public. In particular, families with children are encouraged to come.

Housing. . .

$750/mo. Call (415) 961-8382 (eve).

□ **June 15 to Aug. 31, '83:** Sublet, 2BR/1BA furn apt, 1st flr, College Terrace. $635/mo. + util. Call 493-0543.

□ **July 1 to Aug. 31, '83:** Furn. hse. 3BR/2BA, FR, bike to Stanf. Nr. Com. Ctr, pool, tennis. $950/mo. + util. Call Nancy or Gordon, 497-3518, day; 493-8927, eve.

□ **June 18 to July 31, '83:** Los Altos fully furn. hse. 3BR/1BA, deck, fenced yd., nonsmokers. 15 min. to Stanf. $700/mo. Call 948-5659, after 4 p.m.

□ **Mid-June to late Sept.:** 60 acre ranch sublet. 4 out of 5 BRs avail. Furn. Portola Valley-Woodside, vistas, nr. rec. areas. $225 to $300 per rm, per mo. 3BA, W/D. Call (415) 941-9016, 7-9 am, 9-11 pm.

□ **June 15 to July 30:** PARIS. Apt, 1BR, furn. W/D, DW. 16th Arrondisment. Wish to EXCHANGE for similar accommodation nr Stanf. Call 497-3555, day.

Stanford strengthen's arms control efforts with foundations' support

Stanford has established a new Center for International Security and Arms control to strengthen teaching, faculty research, and public outreach in these fields.

Already regarded as one of the nation's top three centers for arms control education and research, Stanford has attracted support from the Ford Foundation, the Hewlett Foundation, the Weingart Foundation, the Columbia Foundation, and anonymous private donors for the new center.

It succeeds the Arms Control and Disarmament Program, established in 1970. John W. Lewis, the William Haas professor of Chinese politics, will continue as director.

The basic undergraduate course sequence, offered through the Department of Political Science, will be expanded to three quarters from two.

The number of scholars involved in the Center's programs will increase from 18 to 42, drawn from the Schools of Humanities and Sciences, Law, Business, Medicine, and Engineering, as well as the Stanford Linear Accelerator Center. They will be joined by scholars from a number of other institutions, both in the U.S. and abroad.

The Stanford program has long been unique in drawing support from such a wide variety of disciplines. Its basic textbook, *International Arms Control: Issues and Agreements* has been revised in a second edition nearing publication by Stanford University Press. A new film, "Confronting Catastrophe: Lessons for the Nuclear Age," taken at a Stanford alumni college in March, 1983, is ready for release.

Initially the Center will concentrate its resources in four areas:

* *Undergraduate education.* Beginning in academic year 1984-85, the Center will offer a three-quarter course sequence under the auspices of the Political Science Department on international security and arms control.

The fall quarter course will concentrate on contemporary international security issues, with special reference to the formation and conduct of American and Soviet national security policies.

During the winter quarter, students will study the negotiation, content, and significance of all major post-World War II nuclear and conventional arms control agreements.

The spring quarter course will be an advanced seminar/tutorial for highly motivated undergraduates. Additional undergraduate and graduate-level courses may be developed in future years.

* *Advanced training.* The Center will expand fellowship opportunities for graduate students and post-doctoral scholars, with special emphasis on the recruitment of qualified candidates from countries traditionally underrepresented in such competitions, such as East Asia. The Center will also encourage applications from candidates in the natural and physical sciences, in addition to such disciplines as Political Science and History. The competitions will be held annually.

* *Collaborative research.* A principal purpose of the new Center will be to encourage more collaborative faculty-level research on problems of arms control and international security.

Research projects will be both short-term (one year or less) and multi-year in duration. Each major study will result in the publication of a book or conference volume.

U.S.-Soviet arms control and disarmament efforts, American defense and military policies, and European and East Asian security and arms control concerns will constitute the substantive research agenda of the Center's staff and associates.

To advance the Center's work, Prof. Alexander George will be in residence on a half-time basis during the 1983-84 academic year. Prof. David Holloway, an internationally known Soviet specialist at the University of Edinburgh, will join the Center in August 1983 as a senior research associate and a member of several joint projects the Center will undertake with Soviet counterparts.

* *Public education.* The issues upon which the Center touches in its teaching and research efforts are of such great interest and importance to the American public that those associated with the Center are committed to a significant increase in public education and community outreach activities.

The Center will offer intensive summer workshops and weekend seminars for such specialized audiences as journalists, teachers, and Congressional staffs.

In addition, the Center plans to utilize the most effective tools of mass communication—television and radio—as well as the production technologies of videotape and film, to extend the knowledge and expertise housed within the Center past the boundaries of the University, to the Bay Area and beyond.

Associated with the Center are nearly 40 Stanford faculty members and research scholars, as well as arms control specialists and former government officials from outside the University.

Coit D. Blacker, senior research associate, is associate director of the Center and Condoleezza Rice, assistant professor of political science, serves as assistant director.

Additional information may be obtained by writing to: Center for International Security and Arms Control; 320 Galvez Street; Stanford University; Stanford, Calif. 94305; (415) 497-9625.

Accidents and injuries

Accidents and Injuries Occurring During Week of May 16-20

Cause of Accident	Number	Number of Days Off
Chemical Inhalation	1	0
Contact with object		
Impact with object	2	0, 0
Cut by sharp object	2	0, 0
Pinched, squeezed, crushed	1	0
Lifting improperly	1	0

Summertime at the Music Department: concerts, workshops and lessons

Stanford's Department of Music will not take a vacation this summer.

Fourteen concerts are scheduled between June 18 and Aug. 10, including a Computer Music Festival July 14 in Frost Amphitheater. Music Department summer concert calendars will be available at Tresidder's Information Desk and from the Department of Music: 497-3811.



Barbara Allen will return to Stanford for the summer to teach class piano once again. The classes will run for eight weeks, June 21 to Aug. 11. Each class, limited to 10 students, meets once a week for two hours. Students are grouped according to ability and study technique, sight-reading, and repertoire. The classes are open to the community for $100, and free to Stanford students for one unit credit. Classes will be scheduled Tuesday, Wednesday, and Thursday from 3-5 p.m., 5-7 p.m., and 7-9 p.m.

Barbara Allen (left) and Eric Kujawsky (below)



New this summer is the University Summer Orchestra, to be conducted by doctoral candidate Eric Kujawsky. The orchestra will be open to all, and no auditions are required. It will meet from 7 to 9:30 p.m., Wednesdays throughout the summer session, ending with a concert Aug. 10. All interested musicians are invited to attend the first rehearsal on Wednesday, June 22, in Dinkelspiel Auditorium.

The orchestra's tentative program includes Rossini's overture to the opera *Semiramide*, Debussy's *Prelude to Afternoon of a Faun*, and *Symphony No. I* by Brahms. For more information about the orchestra, call Eric Kujawsky, 328-1543.

The Music Department also offers three special workshops this summer: *Baroque Music & Dance* (June 20-July 1) taught by Wendy Hilton, Virginia Hutchings, and Susan Bindig; *Clavichord & Fortepiano* (Aug. 1-12) with Joan Benson; and *Computer-Generated Music* (June 20-July 22). The computer workshop is already full, but applications are still being accepted for the other two, which may be taken on a credit or non-credit basis.

The Memorial Church Choir will be conducted by Prof. William Ramsey this summer. All are welcome. Rehearsals will be from 7 to 10 p.m., Thursdays, for Sunday morning services and a formal concert Sunday evening, July 31. All those interested should attend the first rehearsal June 23 in the choir room of Memorial Church.

For more information about these summer music activities, call the Department of Music, 497-3811.

Banjo Jubilee to benefit cancer research at Children's Hospital

The Peninsula Banjo Band will present the 11th annual Banjo Jubilee from noon to 6 p.m. Sunday, May 29, at the Marriott Hotel in Santa Clara—with all proceeds going for cancer research at Children's Hospital at Stanford.

Featured performer will be the nationally known "Banjo Prince," Scotty Plummer. Also appearing will be the talented and popular local artists Charlie Tagawa and Henry Clay Landram, along with a variety of bands and soloists from around the country.

Doors open at 11 a.m. with showtime at 12 noon. Admission is $5 for adults, $3 under age 17. The Band has provided Children's Hospital with more than $50,000 in the past 10 years.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., May 25, to cover the week of Mon., June 6, through Sun., June 12. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, MAY 31

Center for East Asian Studies Film: "Rebuilding an Old Japanese House". This film records the delicate process of reassembling a traditional Japanese house which was shipped in pieces from Kyoto to the Children's Museum in Boston. The film-maker, Rachel Strickland, will be present to discuss the film. Noon. Room 102, Lou Henry Hoover Bldg.

Beyond War Film Series: "What About the Russians?", with talks by Paul C. Warnke and Admiral Gene La Rocque. Noon . GSB, room 82.

The Stefan Bergman Memorial Lectures on Mathematics: "Monodromy of Hypergeometric Functions," by Prof. G.D. Mostow, Yale University. 4:15 p.m. room 380-c, Math Corner.

Numerical Analysis Group: Special Lecture. 4:15 p.m. Margaret Jacks Hall, room 352.

Applied Mechanics Seminar: "A Perspective on Theoretical and Applied Computational Fluid Dynamics," with Dr. Paul Cutler, NASA, AMES. 4:15 p.m. Material Science Room 550a.

Condensed Matter Physics Seminar: "Synchrotron Radiation Lithography for Sub-Micron Circuits," by Warren Grobman, IBM Watson Research Center ,Yorktown Heights, New York. 4:15 p.m. Applied Physics 200.

WEDNESDAY, JUNE 1

Beyond War Film Series: "What About the Russians?" with talks by Paul C. Warnke and Admiral Gene La Rocque. Noon. Skilling Rm. 193.

Structural Biology Seminar: "Mechanisms of Control of Gap Junction Conductance in Early Embryos," by Dr. Andrew Harris, Biological Sciences at Stanford. Noon. Fairchild Bldg. , Room D102.

Stanford Univ. Libraries Gifts & Exchange Division: Book Sale. Hardbound 75 cents, paperbacks and periodicals 10 cents. Books in many fields. 11 a.m. to 2 p.m. Green Library, West Wing, First Floor, Room 101.

Center for East Asian Studies Colloquium: "U.S. China Policy from Truman to Nixon," by Zi Zhog-yun, associate researcher, Institute of International Studies, Ministry of Foreign Affairs. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

THURSDAY, JUNE 2

The Stefan Bergman Memorial Lectures of Mathematics: "Lattices and Arithmeticity," by Prof. G.D. Mostow, Yale University. 4:15 p.m. room 380-c, Math Corner.

Berkeley at Stanford Lecture Series: "The Problem of National Identity in Medieval Korea," by Prof. Michael Rogers, Dept. of Oriental Languages, U.C. Berkeley. 4:15 p.m. Room 238, Lou Henry Hoovr Bldg.-

Nuclear Film Program Series: "A Look at the United Nations" with four short U.N. films. Includes discussion with John Barton, author of the book *The Politics of Peace*. 7:30 & 9:30 p.m. Meyer Forum Room.

Lectures on Architecture of San Francisco: "The Champs-Elysees That Never Made It," by Gray Brechin , author and architectural historian. Members of Committee for Art $3; nonmembers $4; Students $1; Stanford students are free. 8:15 p.m. Annenberg Aud.

FRIDAY, JUNE 3

Latin American Studies Lecture: "Economic 'Long Swings': Mexico and the United States," Dr. Matthew Edel, Professor of Urban Studies, Queens College , City University, New York. Noon. Bolivar House.

Applied Mathematics Seminar: "Path of Singular Points and their Computation," by Prof. Allan Jepson, Dept. of Computer Science, University of Toronto. 1:15 p.m. Dept. of Mathematics, Bldg. 380, Rm. 380-C.

SATURDAY, JUNE 4

Stanford Medical School Alumni Assoc. Concert: Lorin Hollander, concert pianist, informal performance. The performance is open to the public and will be geared to families with children. 2:30 p.m. Dinkelspiel Aud.

SUNDAY, JUNE 5

University Public Worship, Senior Sunday: Preacher: R.G. Hamerton Kelly, Dean of the Chapel. 11 a.m. Memorial Church.

ASSU Sunday Flicks: "The Graduate". 7 & 9:30 p.m. Memorial Aud. $1.50.

EXHIBITS

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection , Dept. of Special Collections. 8 a.m.- 5 p.m. . Louis Lurie Rotunda, Green Library. April 25 - June 30.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

Lorraine Schreiber, watercolor paintings. May 4 - May 30.

Master of Fine Arts Exhibition. Tues.-Fri.: 10 to 5 p.m.; Sat. & Sun. 1 to 5 p.m. Stanford Art Gallery (next to Cummings Art Bldg.). May 17 - June 14.

Works by graduate students in the M.F.A. Program at Stanford. Art Gallery. May 17 - June 12.

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning, development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23July 28.

CAMPUS REPORT

Volume XV, Number 35 | A publication for Stanford University faculty & staff | June 1, 1983

Faculty survey shows good compliance on consulting

A random sample survey of 60 faculty members has shown no significant problems in compliance with Stanford policies on consulting, according to Provost Albert Hastorf and Vice Provost Gerald Lieberman, dean of graduate studies and research.

The internal audit was done voluntarily by the University.

"There was a little sloppiness but nothing significant," Lieberman said.

There were three cases of consulting which "exceeded very slightly" the 13 days per quarter limit permitted by the University.

None equalled or exceeded the limit of 39 days for an academic year. Such averaging requires advance approval by department heads or deans. A follow-up indicated that approval would have been given in all three cases.

Among those surveyed, 26 (43 percent) reported they had not engaged in consulting during the past year, and an equal number said they had consulted less than 13 days in any one quarter.

Five (8 percent) said they had consulted 13 days in at least one quarter. None consulted as much as 39 days during the academic year.

Eight faculty members—nearly one fourth of those engaged in consulting—said they had hired or supervised students in outside consulting arrangements last year. Since December, 1982, the University has required that such arrangements be approved in advance by department heads or deans.

This new policy "appears to have been

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Committee on Research backs present policy for SSRL

The Stanford Committee on Research has voted 7-2 to reaffirm present Stanford policy that research projects should be judged on their scientific merit, not on potential applications.

The May 23 action followed expressions of concern to the committee from faculty and staff at the Stanford Linear Accelerator Center that they would be forced into "involuntary servitude" in providing beams used for a weapons-related research proposal at the Stanford Synchrotron Radiation Laboratory.

No final decision on the proposal has been made by SSRL Director Arthur Bienenstock, and the proposal was not included in President Reagan's fiscal 1984 budget. Whether or not it proceeds also depends on relative scientific merit and potentially conflicting demands for beam use at the laboratory.

These are expected to take several weeks or more to resolve.

In a report prepared for the Faculty Senate May 31, Prof. James Meindl, chairman of the Committee on Research, said "the vast majority of the. . . proposal was reported by the SSRL faculty to be very basic research.

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Kennedy to ask trustees for committee to study Hoover ties

President Donald Kennedy of Stanford said Saturday, May 28, he will ask the Board of Trustees to consider establishing a committee to investigate governance and appointments at the Hoover Institution.

The action was requested by the Faculty Senate Thursday, May 26, after it set aside a motion whose preamble asserted the Hoover Institution was "a partisan organization."

The Board of Trustees meets June 10. But Kennedy indicated the trustees might not formally act on the request for a committee until the fall.

Kennedy told the Senate he and Board President William Kimball felt the committee was "a good idea."

But the composition and charge for such a group must be carefully considered, Kennedy said Saturday.

The June trustee meeting customarily is the shortest one of the year. The board's next meeting is in September.

Nonpartisan vote

With a lone dissent in a voice vote, the Faculty Senate Thursday, May 26, backed a non-partisan review of the relationship between Stanford University and the Hoover Institution.

The surprisingly broad consensus followed weeks of prolific debate in the campus, local, and national press.

The Senate urged President Donald Kennedy "to consult with the Board of Trustees with a view to appointing a committee in the near future to explore and reassess the relations between the Hoover Institution and the University, including governance and appointment procedures, with the goal of promoting more effective and cooperative relations."

A move to strike the word "cooperative" failed in a 15-22 show of hands.

Midway in a two-hour debate, Kennedy said he and Board of Trustee President William Kimball agreed informally earlier this month it would be "a good idea" for a visiting committee to study governance and appointment processes. He indicated a visiting committee probably would be appointed by the trustees, including both board members and outsiders.

"We will get on with it as quickly as we can," Kennedy told reporters after the Senate vote. He said it was "inconceivable (the board) would study

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People



Richard Staar

Communist Regimes in Eastern Europe, a reference book on the governments and politics of eastern Europe by Hoover Institution Senior Fellow Richard. F. Staar, has been translated into Spanish and released by Madrid publishing company Editorial Playor. The Spanish edition is titled *La Europa Comunista: Economia y Sociedad*. Previous editions have been translated into Chinese, German, and Korean.

Originally published by Hoover Institution Press in 1967 with new editions appearing in 1971, 1977, and 1982, *Communist Regimes in Eastern Europe* has been adopted as a textbook in 267 colleges and universities throughout the world.

William Clebsch

A John Donne essay discussing suicide, first published in 1608, has been transcribed into modern English by Prof. William A. Clebsch, religious studies.

Suicide: Biathanatos Transcribed and Edited for Modern Readers (Scholars Press Studies in the Humanities, Number One) translates Donne's prose, and frequent Latin passages, "into vocabulary that is readily understandable today," Clebsch said.

He added that the concept for the book, the only one of its kind, was developed in his course, Introduction to the Humanities, in which honors students "delved into the conundrum of suicide as an anomalous human decision.

"While the essay does not advise readers to commit suicide," Clebsch said, "it was the first writing to challenge the traditional Christian condemnation of all suicides.

Edward Teller

Edward Teller, senior research fellow at Stanford's Hoover Institution, has received the National Medal of Science from President Ronald Reagan.

Teller was one of 12 scientists honored at the White House May 24. He was cited "for his outstanding contributions to molecular physics, understanding the origin of stellar energy, the theory and application of fusion reactions, the field of nuclear safety, and for his continued leadership in science and technology."

At Hoover since 1975, Teller has served on the White House Science Council since 1974.

A physicist who played a central role in development of the hydrogen bomb, Teller has strongly supported Reagan's emphasis on the need to develop strategic defense systems, saying the—President's action could mark a turning point from "mutually assured destruction to mutually assured survival."



Fernando Alegria

Prof. Fernando Alegria, Spanish and Portuguese, was honored May 20 by the Northeast Pennsylvania chapter of the American Association of Teachers of Spanish and Portuguese, for his contributions to Latin American literature.

Alegria is the author of more than 20 books of criticism, poetry, and fiction, which have been translated into 10 languages. He also has received many other awards, including the Latin American Literary Prize, the Diploma of the Congressional Hispanic Caucus, and Guggenheim Scholarship, and an NEH award for his contribution to Hispanic scholarship in the humanities.



James Gibbons

The Texas Instruments Foundation has announced that its 1982 Founders' Prize of $36,000, tax free, has been awarded to Prof. James F. Gibbons of the Stanford Department of Electrical Engineering.

The award recognizes outstanding achievement in the fields of physical sciences, health sciences, management sciences, engineering, and mathematics. It honors Texas Instruments Incorporated founders J. Erik Jonsson, Cecil H. Green, the late Eugene McDermott, and former chairman, the late Patrick E. Haggerty.

Gibbons has been widely recognized for his highly innovative research concepts in semiconductor electronics. He has trained many students who have become important investigators.

Gibbons has many accomplishments recognized as firsts in semiconductor processing, the most recent being his concept of the use of lasers or electron beams for recrystallizing polysilicon films on insulating substrates.

Members of the selection committee are Mrs. Patrick E. Haggerty; Philip R. Jonsson; Paul W. McCracken; Edmund Ezra Day, university professor of business administration, the University of Michigan; Frederick Seitz, president emeritus, the Rockefeller University; Richard A. Muller, professor of physics and faculty senior scientist, Lawrence Berkeley Laboratory; Jerome B. Wiesner, president emeritus, Massachusetts Institute of Technology; and S.T. Harris, general director of Texas Instruments Incorporated and a director of the Texas Instruments Foundation.

Marilyn Reed Hoskins

Marilyn Reed Hoskins has been appointed to the staff of the Counseling and Psychological Services of Cowell Health Center, effective immediately. She previously had been in an acting capacity.

Selected after an extensive national search, she will continue to have her office at Huston House where she helped implement the conference on "Feeling Good; Mind, Body, and Soul" presented jointly by the Black Mental Health Committee and Counseling and Psychological Services.

Hoskins received an M.S.W. from Simmons College of Social Work. Prior to joining the Stanford staff, she was senior social worker at the Tufts New England Medical Center from 1972 to 1979 and subsequently a senior social worker and director of Social Work Training at the Counseling Center for Tufts University from 1979 to August 1981.

Tjeerd Van Andel

Prof. Tjeerd Van Andel, Stanford geophysicist and oceanographer, is among 12 individuals elected to the California Academy of Sciences.

His election was announced May 29 by Bruce Bolt, president of the 130-year-old academy.

Moses Abramovitz

Prof. Moses Abramovitz of the Stanford Department of Economics has been named one of three Columbia University alumni to receive awards for excellence for 1983.

Former president of the American Economics Association, Abramovitz has been managing editor of *The Journal of Economic Literature* at Stanford since 1981.

Arthur Barnes

Music Prof. Arthur Barnes will conduct the El Camino Youth Symphony's final concert of the season at 8 p.m. Sunday, June 5, in Spangenberg Auditorium.

The program will include works by Mozart, Liszt, Handel, and Tchaikovsky. The two training orchestras, the Chamber Strings, and the Preparatory Ensemble, will be conducted by Sara Salsbury.

Tickets are $2 ($1 for youths and seniors).

Lipoprotein research associate

Research associate position available immediately in the Stanford Heart Disease Prevention Program at Stanford University School of Medicine.

Individual will supervise operation of the Lipoprotein Laboratory and conduct research in the general area of exercise and lipoprotein metabolism.

Candidates must have a Ph.D. in biochemistry, physiology, or organic chemistry and, preferably, two or more years of relevant research experience.

Please submit curriculum vitae and names of three references to Dr. Peter D. Wood, deputy director, Stanford Heart Disease Prevention Program, 730 Welch Road, Stanford, CAlif. 94305. *Stanford University is an equal opportunity employer and we are eager to identify qualified women and minority applicants.*

Roy Hoyer

Roy Hoyer, buyer at the Stanford Bookstore, served as a panelist for one of the educational sessions of the Annual Meeting and Trade Fair of the National Association of College Stores in San Francisco April 11-15. The session was entitled, "New Horizons in Technical Books."

Nearly 1,500 bookstore personnel from nearly every state in the union and several foreign countries gathered for this year's meeting, held at the San Francisco Hilton and the Civic Center. More than 60 educational sessions were conducted; the Trade Fair featured 470 exhibiting companies displaying books, products, and services in 672 booths.

National Association of College Stores is headquartered in Oberlin, Ohio, and serves 2,527 member college/university stores in the U.S., Canada, and 15 foreign countries.

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Davis advises Zero Population Growth as global goal to avert wider poverty

BY DONALD STOKES

Unless an effective population policy is soon adopted, or some cataclysm intervenes, our children will grow up in a world in which:

* Living standards will suffer as more than 80 million more people are added each year to the world's population;

* More than nine out of every 10 of the babies will be born in the less well-developed countries, those least able to educate and train them adequately;

* Enormous pressures for migration from developing to developed countries will be generated;

* Aging of the population in industrial countries will cause struggle between the old and young for the goods and services of society.

These are the prospects as seen by Kingsley Davis, one of the nation's leading demographers and a senior research fellow at Stanford's Hoover Institution.

Davis, former president of the Population Association of America, gained fame in 1967 by coining the phrase Zero Population Growth. He invented the phrase, he explains, because he was writing a critique of family planning as the sole approach to fertility control.

"In order to evaluate a policy one must know what the goal is, and in the family planning literature the goal appeared to be no population growth at all—in short, ZPG," he said.

His paper was published in *Science*. Soon, an organization was formed to promote population limitation; it was called ZPG.

For many years Davis has been a radical in the field of population policy. He has been a persistent critic of family planning—meaning the furnishing of contraceptives, abortion, and sterilization—as the sole approach to fertility limitation in the developing countries.

"The evidence that this policy does not succeed is the growth of the very phenomenon it is supposed to control—namely, the world's population.

The family planning movement got started in most of the developing countries in the early 1960s. Since then, 1.7 billion people have been added to the world's population, and the projections of the United Nations forecast another increase of that size by the end of the century.

"There has been a slight decline in the *rate* of growth in recent years, but the absolute increase per year has continued. Currently, some 80 million people are being added to the earth's population each year.

"These figures demonstrate that the exclusively family-planning approach to fertility control is a failure. The reason is that family planning provides the *means* for fertility control, but not the incentives.

"In all traditional societies of the Third World, the institutional structure embodies rewards for having children and penalties for not having them. Bearing sons is a woman's mission in life; being childless or having only one child is a terrible misfortune.

"Further, children provide labor, prestige, and social security. Unless those incentives are somehow altered, people will not use the contraceptives offered them or submit to abortion or sterilization.

"To be sure, the traditional incentives are altered when a country becomes industrialized, educated, or urbanized, as is happening in many developing countries today—such as Costa Rica, Trinidad, Hong Kong, Sri Lanka, Taiwan, and Malaysia. In such countries, couples seek out birth-control devices in order to avoid the huge families which occur along with high birth rates combined with low infant and child mortality.

"In these countries it is not the family planning program but rather economic development that has brought down fertility. The purpose of population policy is not to wait for development, but to lessen population growth so as to make possible, or hasten, economic development.

"If we wait for economic development to lower birth rates, we will have to wait for a very long time in countries such as Bangladesh, India, Pakistan, Nepal, Indonesia, and virtually all of Africa.

"In these countries, runaway population growth is a principal impediment to development. Policies must therefore be adopted which eliminate this impediment. How? By providing ahead of time incentives for small families and disincentives for big ones."

Davis points to China as the country which has seen most clearly the vital necessity for population control. "Here more than a billion people are crowded together on land deforested and eroded for thousands of years. Trying desperately to reverse the traditional incentive system embodied in the world's most familistic society, the Communist government has sought to use its grassroots political and economic controls to provide incentives to late marriage, childlessness, and one- and two-child families, and to penalize couples who have unauthorized pregnancies.

"Americans have condemned the Chinese policy as being 'compulsory,' but all forms of social control have compulsion involved in them.

"There is no painless way to curb population growth; to think there is, is to stick one's head in the sand."

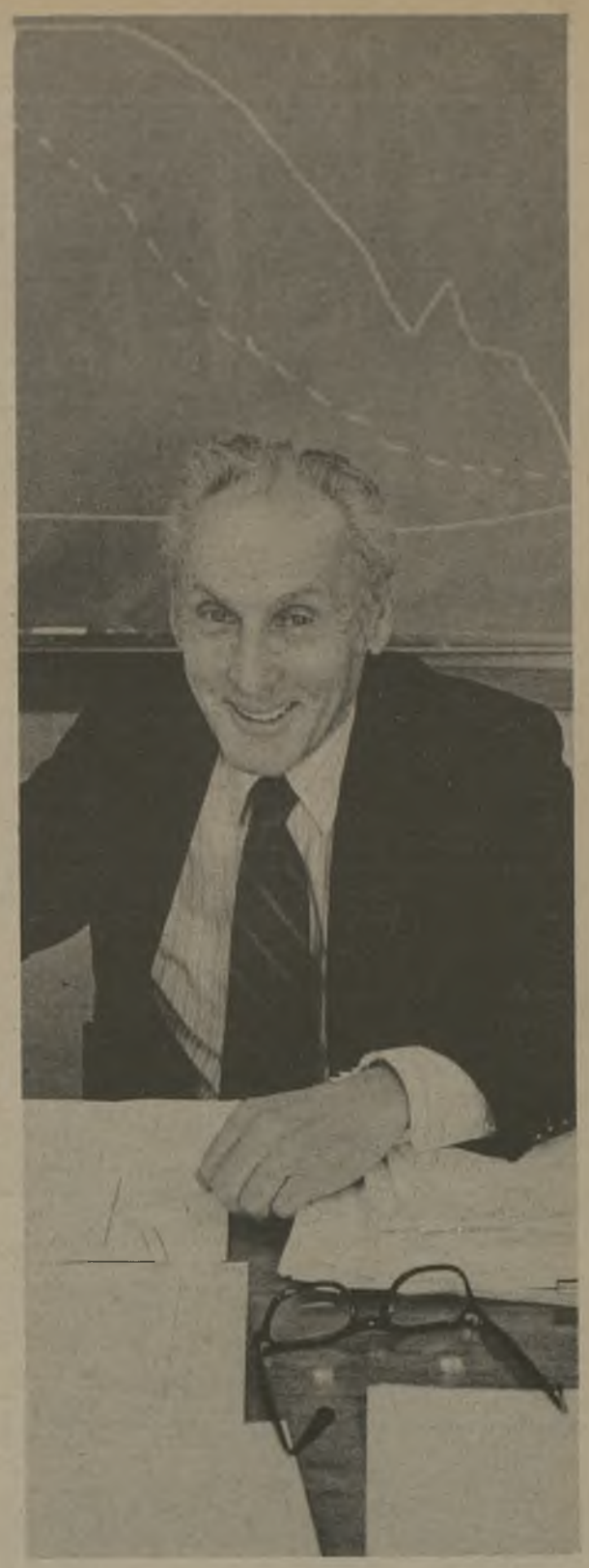
In the industrial countries birth-rates are now generally so low that, on a stable basis, they would not replace the population, said Davis. For this reason the advanced nations are sometimes said to have 'solved' their problem of population growth. However, they cannot escape the consequences of the Third World's unprecedented population increase. They cannot ignore the poverty or the demands of the Third World for loans, grants, food, and technical assistance. Above all, they cannot ignore the almost irresistible pressure for migration from the less developed world.

Davis says that the deteriorating international economic situation can be seen clearly in the data on land and energy. In the Third World the number of people per square mile of arable land is now more than twice the number in developed countries, while the number of agriculturists per square mile of arable land is seventeen times the number in industrial nations.

Although the cities of the Third World are increasing in size at a dizzy pace they are not able to draw off the natural increase of population in the countryside, as the cities did during the early growth of underdeveloped countries. The reason is that cities today in less-developed countries are growing by their own excess of births over deaths, not simply by rural-urban migration. The result is that people are being stacked up in the countryside.

"At the same time the price of energy is causing disastrous deforestation and draining foreign exchange in many less well-developed countries. This is in spite of the fact that they use only one-tenth as much fossil energy as the industrial nations.

Hamstrung by mindless population growth, said Davis, the Third World countries seem to be falling further behind, which is the root cause of the so-called North-South conflict. Although new loans may be made to enable the poorer countries to pay interest on old loans, the probability is that most of the debtor countries will never repay the loans. They are getting deeper into debt, and in many cases deeper into political instability.



There is no painless way to curb population growth; to think there is, is to stick one's head in the sand.

—Kingsley Davis

"It is little wonder that throughout the Third World millions are seeking to migrate to advanced countries. Many succeed, creating ethnic minorities competing for jobs with the poorest of the native workers, taxing schools, overloading schools, welfare agencies, and health facilities. They come both legally and illegally, and their potential number is seemingly endless."

Davis calculates that if the 38 poorest countries of the world were to achieve ZPG by out-migration, the net number of emigrants each year would be 31 million. This would be a larger movement in one

continued on next page

Aid for new projects in curricular development

Provost's Innovation Fund aims to fill gaps in undergraduate education

The Provost's Innovation Fund for Undergraduate Education is primarily intended to encourage new projects in curricular development and improvement. Its purposes are academic, defined in fairly restrictive terms, rather than more broadly educational. The strengthening of the undergraduate curriculum is its main goal; improvements in support activities like academic advising may from time to time be appropriate for funding, but are generally considered secondary to more strictly curricular projects.

The Innovation Fund is expected to help meet those important needs in undergraduate education that do not seem to be readily met in the normal course of events. Priority in funding will be given to proposals that are likely to reach significant segments of the undergraduate population, especially in areas where there is a demonstrable need.

For example, seed money could be provided for the development of courses which would meet distribution requirements in areas 6, 7, and 8 for students who are not majoring in the natural sciences or engineering; courses that bridge the natural and social sciences and the humanities; new Western Culture tracks; courses in non-Western Cultures which will fulfill distribution requirements; pilot ventures offering advanced research or writing opportunities; and other special academic projects for undergraduates.

The Innovation Fund is, by necessity, limited both in its scope and in the level of support it will be able to provide. Thus, many worthwhile general contributions to the educational and intellectual life of the university will be outside its intended purposes. Nor is the fund expected to substitute for existing resources at the departmental and school levels or replace the yearly university budget cycle as the main avenue for obtaining incremental funding. On the contrary, applications will be strengthened by promises of matching funds from department, program, or school. Therefore, requests for summer salary to develop narrowly defined departmental courses are not likely to be funded nor are applications to support conferences, lectures, special interest publications, and the like.

The Innovation Fund is primarily intended for the use of faculty and academic officers of the University. In exceptional cases, applications from students and staff may also be considered for projects that stand to benefit the undergraduate population at large (the Advising Associate program, for instance, is the type of activity that could be of interest). As a rule, one-time funding of less than $10,000 can be provided, but larger sums and budget base monies may also be made available to support efforts of particular importance.

Application and Review procedures. The Innovation Fund goes into effect in 1983-84. There will be three review cycles, one for each quarter of the academic year. No applications will be considered outside of this schedule. One may apply during a given quarter for support in the next or any subsequent quarter within the following two years. The application schedule is as follows:

Application Deadline	Decision Date
October 15	November 15
January 15	February 15
April 15	May 15

Funding proposals should be submitted in writing, stating in a few pages what the applicants intend to do, why, and how. We shall ask for additional clarification if necessary. We intend to keep our review procedures simple and not time consuming. Based on experience, these procedures may be revised to better serve all concerned.

Applications should be addressed to Herant Katchadourian, Vice-Provost for Undergraduate Education, Building 10, Stanford. They will be reviewed by the Coordinating Committee for Undergraduate Education whose members are Carolyn Lougee, associate dean for undergraduate programs, School of Humanities and Sciences; Gilbert Masters, associate dean, School of Engineering; Irwin Remson, representing the School of Earth Sciences; Sally Mahoney, registrar; and Herant Katchadourian (chair). The Committee will forward its recommendations to Provost Hastorf, who will make the final decisions.

Immigration pressure grows, as does conflict of young, old

continued from page 3

year than the total migration into the United States during the 60 years from 1870 to 1930 when U.S. immigration was at its peak.

"Naturally, the industrial countries will never permit such a flood across their borders. Accordingly, they face a world in which resources are not only becoming scarcer but also more unequal. The demand for migration will probably be so insistent, both in the countries of origin and by employers looking for cheap labor in the industrial nations, that a sizable migratory movement will occur.

"One kind of movement that will probably continue is the admission of so-called 'guest-workers,' who are supposed to return home at the end of a specified period. Experience shows, however, that guest-workers often find ways of staying beyond their time limits, and if they do go home it is often with negative economic consequences to their native economy.

"Contrary to general belief, emigration usually fails to cure the problem of chronic unemployment so characteristic of sending countries, and when workers return home due to recession, the problem is aggravated.

"In view of the lack of benefits to 'people exporting' countries, policies encouraging emigration appear to be misguided. A far better solution to the problem of overpopulation, in terms of both economic and human costs, is fertility control. Reliance on emigration is rather like taking aspirin for a toothache; there may be temporary relief, but the basic problem remains."

In addition to the problems created by explosive population growth in the Third World, the industrial nations face a new situation at home—the aging of their populations, says Davis.

In the United States, mainly as a result of low birth rates, the proportion of the population aged 65 or over has risen from 4.1 percent in 1900 to 11.3 percent today, and it is expected to rise to 17 percent in 2030. In Sweden it is already 16.1 percent.

The consequences of an aging population depend not only on the number of the elderly, but also on policies adopted with respect to them. In advanced nations generally, there has been a tendency for the elderly to be withdrawn from the labor force even when they are able and willing to work. Their support has increasingly been shifted from earned income and from family members to impersonal agencies such as Social Security, pension funds, and saving.

As a result there is little restraint on their needs and demands, as there was when families were responsible for them.

"In the United States, the income of the elderly has been rising faster than that of most other age groups, especially that of young workers.

"As a result there is a sort of class struggle going on between the generations. The elderly naturally want to get as much as they can from the economy even though they are not working. The young naturally want to pay as few taxes as possible.

"It is the young workers who are being squeezed hardest, because they are the ones who are supposed to be having children, to be buying houses, to be contributing to their own future welfare and security, as well as producing goods and services for the population as a whole.

"The support of an idle elderly population is for them an inevitable burden, no matter how disguised and impersonal it may be.

"As a consequence, to make ends meet, young workers are increasingly postponing marriage, and after marriage, the wives are increasingly entering the labor market and are reducing their fertility.

"Ideally, if abundance prevailed, the elderly could all retire at an early age and the younger labor force, working only a four-day week, could take care of them and themselves.

"Instead, under conditions of increasing resource scarcity, we may have to return to the ancient policy of keeping the old at work as long as they are able, using part-time arrangements as necessary, and paying wages proportional to their productive contribution.

"If pursued, however, this policy will encounter massive resistance. It will be resisted by the elderly themselves, many of whom (if they continue working) will want the same high pay they built up by seniority.

"It will be resisted by the young, who under the commonly believed myth that there is a fixed job-pool, think that the retirement of the elderly will create more jobs for the young.

"It will be resisted by the labor unions, which count early retirement as a fringe benefit. It will be resisted by business and industrial firms which wish to replace expensive senior workers with young and cheaper ones.

"In the past family solidarity was the force that minimized the struggle between the generations and provided a division of labor by complementarity. In contemporary industrial societies, however, changes in the family and a simultaneous aging of the population have shifted the context of intergenerational relations to the wider economy."

Where will it all end? Davis was asked. Will the world's population keep exploding till there is widespread starvation?

"I don't think that lack of food will be the limiting factor. There are several possible paths ahead. One has a familiar ring, because it rests on the tautological proposition that *if* people take notice of the dangers ahead and take concerted action to avoid the danger, they will succeed.

"If the Third World were to institute effective fertility control policies overnight, the world's population problem would not be solved, for that would have required fertility control long ago, but at least the worst results would be avoided.

"It is more likely that there will be a decline in fertility in most of the less-developed countries due to altered conditions, and that the interim population growth will be wholly or partly wiped out by a rise in mortality, due either to warfare or deterioration of health resources.

"The earth can probably support a larger population, such as the six billion predicted for the year 2000, but it may have to do so in ways that seem strange to us. It may have to use advanced technology to support more people at a low level of living. We are used to associating high technology with high consumption. We may have to get out of that habit."

* * * *

When Davis received the highest award of the American Sociological Association last year, the citation summed up his career.

He has had "a profound effect upon the profession and upon social policy in a scholarly career of nearly four decades," ran the citation. "His voluminous works cover such diverse fields as demography, urbanization, development of Third World countries, family and youth, social statification and theory."

He is now writing a book on the economic and social consequences of underlying demographic changes in industrial societies.

"It is slow going," smiles Davis. "There are so few demographers and so many things to do in this exciting field."

Sally Ride studied space here before going there. . .

When Sally K. Ride, age 30, becomes the first U.S. woman to soar into space she will be the first astronaut to have already explored, in the laboratory, the physical nature of outer space.

Ride, a Stanford Ph.D. whose expertise is radio astronomy, will fly on the seventh scheduled mission in the space shuttle program. She will be a specialist aboard the Challenger space shuttle. Along with Air Force Lt. Col. John M. Fabian she will handle scientific tasks which bear on her own years of research.

Arthur B. C. Walker, Jr., professor of applied physics at Stanford, supervised Ride's thesis work for her doctorate. Walker explained the nature of Ride's research:

"She studied the interaction of interstellar grains by means of X-rays. The space between the stars is not a complete void—it is filled with material called the interstellar medium. It consists of gas and small grains of dust which are exceedingly small, in fact microscopic in size.

"The nature of those dust-grains, how large they are and what they are composed of, has been a problem for astronomers for years. One of the recently-discovered techniques for studying interstellar grains is to observe their interaction with X-rays and to see how they modify the X-rays from objects which are shining behind the grains.

"In other words, the X-rays are pitted by objects in space and as they traverse interstellar space to reach the earth the interstellar dust-grains modify the X-rays. This means that by studying how the X-rays are modified we can determine the structure and composition of the dust-grains."

Asked whether Ride had aimed X-rays into space, Walker replied, "No, she analyzed how one would interpret the observation. The X-rays are coming from objects in space, from the stars and other sources.

"We observe those X-rays because the wave-lengths of the X-rays and their spatial distribution is modified by the presence of the interstellar dust-grains, so by studying how the X-rays are modified, compared to how we think they would have been if the dust-grains had not been there, we can make determinations about the nature of the grains.

"Sally Ride made a significant contribution to these studies."

John F. Madey, senior research associate in the Hansen Laboratories, was a research associate of Ride's. "All of us here are delighted at her selection to be the first American woman in space. She was very popular here and highly respected."

"After Sally had finished her Ph.D. work she received an appointment as a postdoctoral fellow. She published two theoretical papers during that time on laser-related subjects.

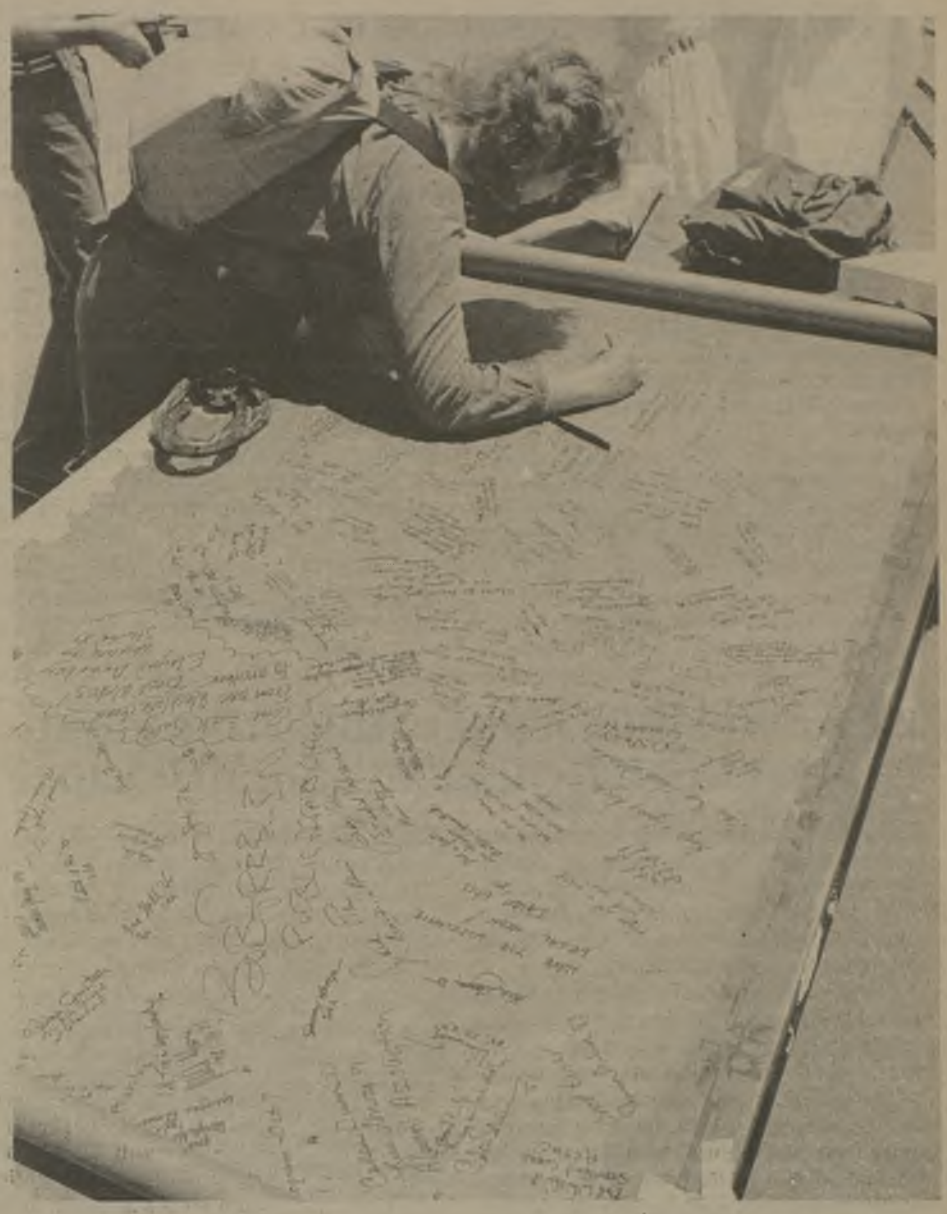
"She worked closely with another member of our group, Bill Colson, who is now at UC-Santa Barbara. They were co-authors of those papers.

"At the time she was here the intramural sports program in the department was very strong and she was an active participant in it. She helped to raise our department's team to a position of eminence.

"Sally has a strong competitive urge. She wants to be up at the top, whether it is in sports, in academics, or whatever."

Peter F. Michelson, acting assistant professor of physics, was another research associate of Ride's: "She was very popular here, and highly respected. She was far from bookish and was into every sort of sport or games that was around."

The space shuttle program is expected to carry, in the future, a large telescope into orbit. This will be a valuable instrument for studying X-ray stars. Ride's research will help form a valuable base for the work.



Stanford sophomore Elizabeth Menning signs a campus scroll which will he sent to Sally Ride, America's first woman in space, who holds four Stanford degrees.
NEWS SERVICE PHOTO BY CHUCK PAINTER

. . .Tennis foe Hargadon feels the gentle touch of her humor



Sally Ride—'really excited about what she's doing, not just going up'

Sally Ride, America's first woman in space, is "attractive, bright, and stable, with a good sense of humor," says Stanford Admissions Dean Fred Hargadon.

Hargadon admitted Ride to Swarthmore as a freshman, then changed institutions and admitted her to Stanford as a transfer student in 1970.

They remained close friends as she went on to earn four Stanford degrees—bachelors in English and physics, plus a master's and doctorate in physics.

"Whatever she does, she does well," Hargadon says. "She has better 'on' and 'off' switches than we do. If she plays tennis she does that well; if she does physics, she does that well, too.

"The press makes more of her being the first American woman in space than she herself makes of it.

"I don't think she has a star's temperament, so I suspect she's finding all the publicity not only unusual but difficult.

"She's a very sincere, straightfoward person. But I imagine her being straightforward and confident probably comes off to some in the media as being 'cool.' She's confident because she's knowledgeable about what she's going to do."

When asked whether she weeps under stress, she suggested the question be directed to one of her male colleagues, for example.

In talking with Hargadon about a previous problem on a Shuttle flight, "she made it seem like a flat tire on a bike," he recalls. "She didn't think it was any big deal."

Hargadon has stayed at the Ride home with her parents. "It's a house where they have an awful lot of fun and laughter." He's talked recently with her parents, who are "probably under seige from the media."

Hargadon visited Ride in Houston. "She's really excited about what she's doing, period—not just going up," he says.

"She really appreciates the faculty she had here. No doubt she was a very capable person coming in, but there's no doubt she gained a lot from the faculty here. There's a good deal of mutual respect."

When Ride called Hargadon in August and asked him to send her a Stanford banner for the flight, he sent her two different sizes of the rectangular banner with Stanford in block letters.

He was invited to watch the launch June 18 and will stay for the return landing. He'll take a huge scroll signed by Stanford colleagues saying "from the Foothills, to Outer Space, Stanford is with you Sally Ride," which will probably be given to her parents.

Hargadon remembers his one tennis match with Ride, who was a nationally ranked player. "I don't think I gained a point," he says.

It all came back when he got the official invitation for the launch. It was signed "40-Love, Sally."

Score one for Ride's sense of humor.

Accidents and injuries

Accidents and Injuries Occurring During Week of May 22-27

Cause of Accident	Number	Number of Days Off
Contact with object		
Cut by sharp object	2	0, 0
Lifting improperly	1	5

Commencement: record 15,000 to hear Schultz, see protests

A record-breaking crowd of 15,000 will fill Frost Amphitheater to the brim when Secretary of State George Shultz delivers the featured address at Stanford's 92nd commencement at 10 a.m. Sunday, June 12.

Currently on leave as a professor in the Stanford Graduate School of Business, Shultz will face a coalition of groups protesting Latin America, Middle East, South Africa, and human rights policy.

Graduates will be urged to wear sashes to symbolize their opposition to Reagan administration policies. "There won't be any disruption during the ceremony," one spokeswoman for the protest coalition said.

Admission to Frost is by ticket only. About 2,800 graduates are expected to attend, an all-time high. (Berkeley and USC likewise have reported a surge in graduates attending commmencement this year.)

About 500 faculty are expected to march in the colorful procession. The amphitheater itself has been extensively rebuilt to enlarge its capacity.

Participating graduates have received three free tickets each for use by their families and friends. According to *The Stanford Daily* one student traded an Atari computer for three additional tickets and initial prices have ranged as high as $25 apiece.

Individual tickets will be checked and taken at the Amphitheater gates, which will remain open only from 8:30 to 10 a.m., when the main ceremony starts.

Frost will be secured, starting Tuesday. Signs carried by demonstrators will be permitted so long as they do not obstruct the view of others and are not on sticks.

An estimated 4,500 degrees will be conferred by President Donald Kennedy, who also will address the class. Following the Frost ceremonies, diplomas will be handed out in 37 separate locations across campus. Total attendance is estimated at 19,000, an all-time high.

Formal portions of the commencement weekend program include an address by Prof. John G. Gurley, economics at Phi Beta Kappa initiation ceremonies at 8 p.m. Friday, June 10 in Dinkelspiel Auditorium.

The Rev. David H. C. Read of the Madison Avenue Presbyterian Church, will deliver the baccalaureate sermon at 9:30 a.m. Saturday, June 11, on the Inner Quadrangle. One of America's leading preachers, he is the author of 25 books and numerous magazine articles, and gave the 1966 baccalaureate here.

Dedication of the Senior Class plaque will follow at 10:45 a.m. Speakers at Class Day luncheon in the Bowman Alumni House Grove will include President Kennedy, Alumni Association Director William Stone, Admissions Dean Fred Hargadon, and Profs. Eleanor Prosser, drama and English, Gil Masters, civil engineering, and William Durham, anthropology.

This year's class presidents are Joe Del Hierro, Mary Ruckelshaus, Katy Dore, and Kevin O'Beirne.

The president's reception for graduates, faculty, and alumni will start at 5:30 p.m. Saturday at the President's House, 623 Mirada.



Commencement coordinator Nan Bentley of University Events and Services reports about 125 students will help in this year's ceremonies. They serve as flag bearers, ushers, chair and sound crew, among other functions.

Dean Wessells names Hilgard, Wright, Goodenough to hear Mosher grievance

Three nationally prominent scholars will review the dismissal of Steven Westley Mosher as a Stanford graduate student, Dean Norman K. Wessells of the School of Humanities and Sciences has announced.

Serving as grievance officers will be emeritus Profs. Gordon Wright and Ernest Hilgard of Stanford and Prof. Ward Hunt Goodenough of the University of Pennsylvania. Currently on sabbatical leave in Hawaii, Goodenough is curator of the Oceania Ethnology Museum at Pennsylvania.

Wright is former president of the American Historical Association, Hilgard former president of the American Psychological Association, and Goodenough is former president of both the American Ethnological Association and the Society of Applied Anthropology.

Mosher was dismissed as a Ph.D. candidate for "illegal and seriously unethical conduct" while in China that "endangered his research subjects," according to an 11-0 vote of the Stanford anthropology faculty Feb. 24. Mosher has blamed his expulsion on a popular Taiwan press article he wrote documenting forced abortions in China and on "slanderous" allegations by his former wife.

According to wire service reports to Stanford News Service, Mosher's grievance maintains he was deprived of his rights under the University's regulations governing student conduct.

Under the Univesity's student grievance procedures, Wessells asked the three scholars to "review the case thoroughly and provide me with a report of your review, your recommended findings, and the way you recommend that I rule" on the grievance. Mosher appealed his dismissal April 25.

While the procedures suggest that grievance proceedings be completed, if possible, within 30 days, Wessells asked the group to submit its report by June 30.

"The report document itself should be written so that it can be made public or a summary document also should be provided that can be made public without endangering innocent third parties," Wessells said.

Further appeal is possible to the vice provost and dean of graduate studies and research, Gerald Lieberman. After that, students may request President Donald Kennedy to review the case.

Antiapartheid coalition protest

Members of the Stanford anti-apartheid coalition have drawn up and are circulating a petition against -apartheid to be presented to Secretary of State George Shultz while he is on campus to deliver the 1983 Commencement speech. The petition asks that Dennis Brutus be given political asylum in the United States, that Nelson Mandela be freed from prison, and that the ban on Winnie Mandela be lifted.

Dennis Brutus is a South African poet and athlete who has been teaching at Northwestern and has been served with deportation orders. Jailed since 1961 for his political activities, Nelson Mandela is a leader of the African National Congress. His wife, Winnie, also active in the A.N.C. has been banished to a remote area where she is only allowed the company of one person at a time.

The petition is being addressed to Secretary Shultz since he represents the Reagan administration which has declared a policy of constructive engagement with South Africa. In reality, it is a policy of material support and friendship which has resulted in increased collaboration with the white South African regime by both public and private investors from the U.S.A.

The member organizations of the coalition are: Stanford African Students Association, Southern Africa Liberation Solidarity Committee, Black Student Union at Stanford, Amnesty International Stanford group, and Social Education and Action Committee of Stanford Memorial Church.

Copies of the petition are available upon request from the round room at Memorial Church (415) 497-1762.

Ph.D. orals

WEDNESDAY, JUNE 8

Loren F. Stokes, electrical engineering, "Resonant Single Mode Fiber-Optic Sensors" 2:15 p.m., Applied Physics 200.

FRIDAY, JUNE 10

David B. Tuckerman, electrical engineering, "Heat Transfer Microstructures for Integrated Circuits," 2 p.m., McCullough 240.

Mosher charges anthropology faculty 'secretly peddle' report to press

Following is an open letter to Donald Kennedy from Steven W. Mosher, former Ph.D. candidate in anthropology.

President Kennedy:

On February 24 of this year the faculty of the Department of Anthropology voted to terminate my doctoral candidacy. The only public explanation they offered for this unprecedented act—and this only after a lag of several weeks—was a vague and unconvincing reference to "illegal and unethical" behavior.

There can be only one explanation for their unjustified and ultimately irrational action: I was denied my Ph.D. in retaliation for my revelations concerning forced abortions and infanticide in the People's Republic of China, which deeply offended faculty members.

On April 16 I sent a registered letter to Norman Wessells, the dean of the School of Humanities and Sciences, protesting this unfair action. To date, over a month later, I have received no response to this appeal, not even so much as an acknowledgement that it has been received. Since University procedures establish 30 days as the period of time in which the dean has to rule on such an appeal, I am puzzled by Dean Wessells' inaction. Is it the University's intention to ignore my appeal?

Whatever the explanation for the administration's behavior, I wish to inform you that in my opinion it is no longer possible—if indeed it ever was—for my appeal to receive a fair and unprejudiced hearing from Dean Wessells and others in the administration, including yourself. The irresponsible, not to say contemptible, behavior of certain faculty members of the Department of Anthropology has brought this about.

Up until several weeks ago anthropology faculty members, with the exception of the chair, Clifford Barnett, consistently stonewalled the press. Although this ploy was primarily intended to veil their actions from public scrutiny and to protect their sources, it had the unintended side-effect of allowing the appeal process to go forward in an atmosphere clear of the rumor mongering that had marked the departmental investigation. Unfortunately, this is no longer the case.

Stung by the growing wave of criticism that their decision has generated, as many as a half-a-dozen faculty members decided to grant secret interviews to reporters from *The New York Times*, *Science*, and perhaps other news outlets as well.

After having extracted from these correspondents promises of complete confidentiality, they proceeded to press them with the same slanders and distortions that they cooked up in their "secret" report. In short, while publicly claiming that the release of the report would "harm innocent persons," they secretly peddle its contents to the press. It would be surprising if they were not similarly slandering me to others within the Stanford community.

That such conduct is cheap and despicable goes without saying. But it is more than that. It is severely prejudicial to the appeal that I filed with the university administration last month, making it unlikely that that appeal will receive a fair hearing.

I therefore write to request that Stanford University at once acknowledge its fault and error in permitting the anthropology faculty to undertake an investigation that resulted in my explusion from the University and in condoning other faculty actions, including that given above.

I further request that Stanford University immediately and without delay take the steps necessary to grant me a Ph.D. in anthropology on the basis of my outstanding academic record, research accomplishments, and publications, and award me substantial financial compensation for the harm Stanford has caused me.

Sincerely
Steven W. Mosher

Energy savings of $250,000

Savings of over a quarter of a million dollars annually may result for a project to improve energy management at Stanford.

A new $1.6 million computer-based control system will measure and regulate the production and distribution of electricity, steam, and chilled water throughout the campus.

The Energy Management and Control System (EMCS) will replace the existing Honeywell/IBM system, which has become increasingly difficult to maintain and support. The new system will benefit from recent advances in hardware, software, and microprocessor technology. In addition, the EMCS will have the flexibility to implement the more sophisticated energy management strategies that are dictated by rising energy costs.

The EMCS will consist of a computer, located in the Central Energy Facility, that is connected through a network of microprocessor base units to sensing devices and controls for fans, pumps, and valves around campus.

"By measuring and scheduling on a more timely basis, we will be able to tailor precise changes in control strategies," said Dennis Antweiler of Stanford's Central Energy Facility. "It will be a very versatile system."

Antweiler is a member of a team of engineers working on the project that includes William Macomber and Eric Swenson representing Facilities Project Management, Byron McDonald from Operations and Maintenance, and Karl Johnson of the Energy Program Office.

Since last fall, this group has evaluated proposals for the project from 17 companies in the field of large-scale distributed processing systems. Three final candidates have been recommended: Staefa Controls, MCC Powers, and Ronco/Beckman.

If final project approval is received at the June Board of Trustees meeting, these vendors will supply firm pricing for the design engineering, hardware, installation, start-up, and testing of the EMCS system. A contract will be awarded in September, and the entire system should be in place by December of 1984.

The project will generate savings by cutting down on energy use in buildings or portions of buildings that are unoccupied. The existing system is limited in its ability to measure and control energy. Meter data is now collected manually, and generally only once a month. If there is a malfunction in a heating or cooling system the meter data might not show the problem until readings are taken the following month.

The present system is capable of turning a given fan, pump or valve on and off a maximum of twice daily, and is only able to distinguish between weekend and weekday schedules. Finally, its ability to control single rooms is very limited: usually the heat or air-conditioning in an entire building has to be on or off.

The new EMCS will be much more flexible. It will have a virtually unlimited number of daily on-off setpoints, as well as different schedules for each day of the week.

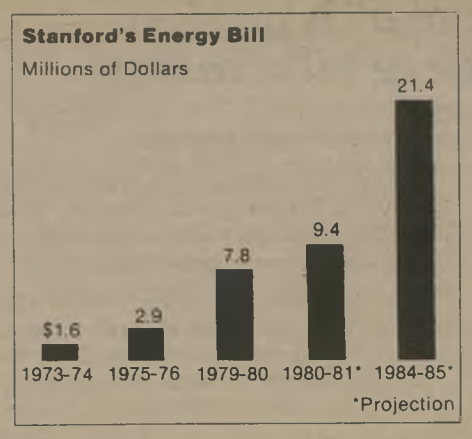
An improved data-gathering system will be able to provide on-demand readings of temperatures, pressures, flow rates, and other conditions in the buildings. Information will be presented in a variety of "user friendly" formats such as color graphics, building schematics, and charts.

The second phase of the EMCS project will depend heavily on the new system's capacity for growth. The project plan calls for using the central computer facility to assume control over more energy-using equipment than the present system is capable of handling. In addition, many more individual rooms will be independently scheduled. The EMCS will also be capable of proportional control over some equipment instead of simply turning it on and off.

Centralized energy management can also create intangible savings through improved productivity and reduced maintenance. The EMCS will greatly simplify the task of pinpointing and correcting a problem. Indirect cost savings from a similar system at MIT have been estimated at more than $1 million annually.

Project engineering manager William Macomber noted that the Energy Management and Control system will actually be more dependent on individual building energy managers who work in each building than the present system is.

"We're predicating the success of the whole project on tighter scheduling," Macomber said. "That means the input of the building energy managers will be even more important, because they can best determine the optimal schedules for their buildings."



ENERGY CONSERVATION AT STANFORD

Hart backers plan rummage sale Saturday

The Stanford chapter of Students for Hart, a national organization of college students who support Democratic presidential candidate Gary Hart, is planning a large rummage sale Saturday, June 11, to raise money for their candidate.

The sale will run from 9:30 a.m. to 6 p.m. on the intramural athletic field between the El Camino Real and Stanford Stadium.

Hart, a U.S. senator from Colorado, spoke at Stanford in April and was warmly received by a standing room only crowd in Kresge Auditorium. This visit sparked the formation of the Students for Hart group, which now has a mailing list of over 200 students.

The students anticipate their annual summer exodus from their dorms will produce a lot of unwanted or unstorable items. "We may not have much in our checkbooks to give to Hart, but we do have a lot of plants and used record albums," spokesman Jeff Phillips said.

"Besides it goes along with Hart's grassroots campaign philosophy." Hart is the only candidate who has announced he will not accept donations from any special interest political action committees or the PACs as they are popularly known. Instead he is relying on many small individual contributions.

Anyone wishing to donate items should call 327-7133 to request pick-up of the articles or bring them to the athletic field the morning of the sale.

This summer Students for Hart will be networking their hometowns to find volunteers for the 1984 primary campaign and to spread the word about Hart's issue-oriented campaign which he calls "a campaign of ideas."

Civil engineers build small energy conservation lab behind old Firehouse

Twenty Stanford undergraduates are learning the practical side of energy conservation in a small laboratory they helped build as part of a class in civil engineering.

The students—not all of them engineering students—have put up a laboratory to test such things as solar photovoltaic cells, solar water heaters, and passive house heating. They are also experimenting to find out how much heat is lost through the cracks in a normal house, and how much air pollution is created by such things as indoor kerosene heaters.

The lab, located behind the old Firehouse on campus, is its own test station. Every part of it is used for experiments.

"The purpose of the lab is to look at various aspects of energy conservation in buildings," said Gilbert Masters, adjunct professor of civil engineering, who runs the class.

"We are not doing anything original, we are just catching up with what others are doing," he said. "It's a teaching lab. I hope in the near future to do original work."

The course is one of two Masters teaches on energy. The other is more theoretical. Masters said that this course is appropriate for non-engineering students who have some affinity for numbers. He teaches what mathematics they need in the course.

The students are working on ways to measure the amount of heated air that leaks out of buildings. Masters said he believes as much as $30 billion is wasted in this country on heating air that eventually flows out the cracks of buildings, around windows or doors.

One lab technique uses a blower door, a door with a large fan attached, which is wheeled up to the door of the test building. The fan blows air into the building, increasing pressure inside. By measuring the inevitable decrease in pressure over time, the students are able to determine leakage.

The students have used this to test various Eichler development houses in the Palo Alto area.

Another technique involves filling the building with a harmless gas, sulfur hexafluoride, and analyzing the air as the gas leaks out.

The students are also testing a large, commercial kerosene heater in one of the lab rooms to determine the amount of carbon monoxide produced. The heaters are illegal in some states, including California, but still sold widely.

One manufacturer of one heater has sued Consumers Union for a magazine report calling the heaters dangerous. Masters and his students are duplicating one of CU's tests.

The lab is also testing whether heat exchangers would work in ventilating rooms while retaining heat or air conditioning.

Students are testing several passive methods of home heating using solar energy.

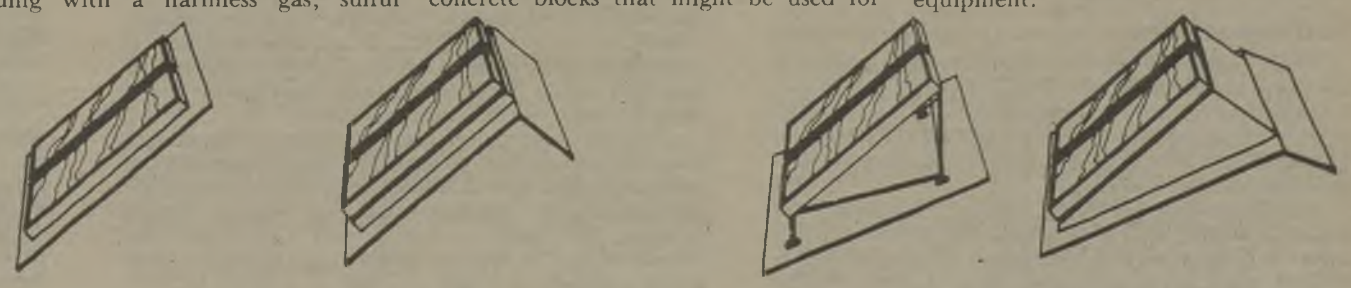
One method involves a series of concrete blocks that might be used for the floor of rooms. The idea is that the blocks would be heated by the sun's rays and retain their heat through the night.

Master's lab has a series of such blocks testing how deeply the heat is absorbed and how long it is retained.

Another idea is called a Trombe Wall, named for its inventor, which consists of a concrete wall just behind a window, heating up the stones.

The lab also tests solar water heaters and has an array of solar voltaic cells, which produce about 230 watts of direct current. The current goes into a car battery and a converter which operates the lab radio.

Money for the lab came from the Wheeler Fund to the Energy Institute, the department of Civil Engineering and the dean of the School of Engineering. Several companies have donated equipment.



A Collectors mounted directly to roof

B Collectors mounted to weatherproofed platform

C Collectors Mounted to Rack

D Collectors Mounted to Dormer

Weapons-related research protest continues with Ellsberg talk, march

Noted anti-nuclear activist Daniel Ellsberg will address a noon rally Wednesday, June 1, in White Plaza at Stanford.

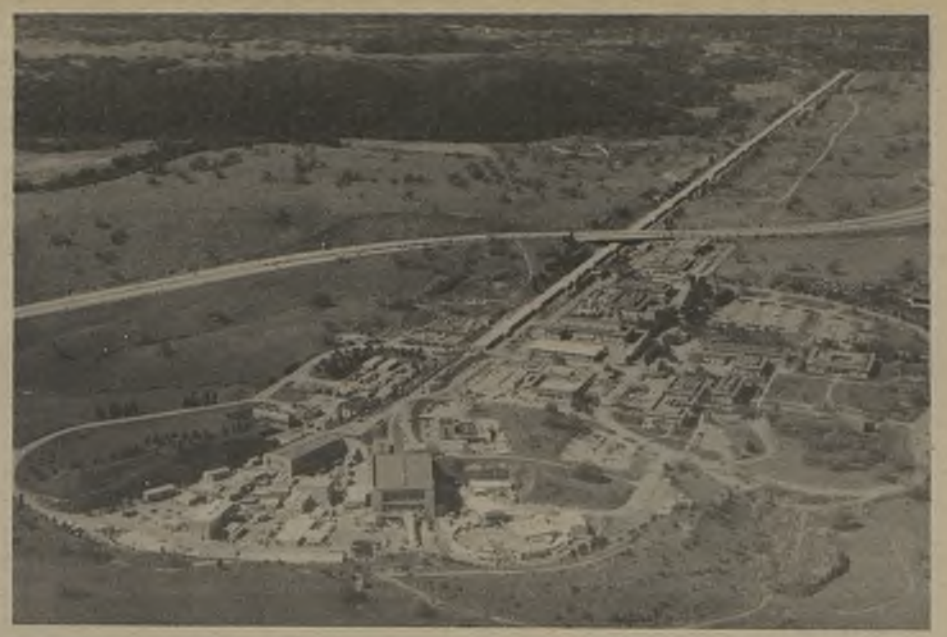
Also speaking will be Mary James, a graduate student and staff member at Stanford Linear Accelerator Center.

Following the rally, the opponents of a proposed weapons-related research project plan a "Dead Week Death March" to the office of University President Donald Kennedy and Dean of Graduate Studies and research Gerald Lieberman. The protesters will deliver "death certificates" for alleged "complicity in the nuclear arms race" for their unwillingness to stand in the way of the proposed research project at the Stanford Synchroton Radiation Laboratory.

The protest follows a 7-2 decision May 23, by the Committee on Research, that prevailing research policy is adequate to handle the proposed research project.

Jon Adelstein, a leading student opponent of the proposed research project, said: "The committee is unwilling to protect Stanford researchers from being placed in a position of moral compromise.

"It will allow their academic freedom—the freedom to assure that their work is consistent with their conscience—to be violated. Many students do not intend to accept this passively; we will struggle to defend the integrity of our University."



Research principles 'myopic, irresponsible' for nuclear weapons—Mairson

The following opinion on the SSRL research dilemma was contributed by computer science graduate student Harry Mairson.

Much of the tremendous controversy that has surrounded the proposed nuclear weapons research at the Stanford Synchrotron Radiation Laboratory (SSRL) has centered on the so-called "end-use" policy of the University.

This policy is that there should be no such policy: the "Statement of Principles Concerning Research," adopted by the Faculty Senate in 1971, and quoted in Donald Kennedy's recent address to the Academic Council, states that appraisal of proposed research should be "based on (its) scholarly and educational merits. . . and not on speculations concerning the political or moral impropriety of the uses which might be made of its results."

As a member of the University and as a researcher looking forward to an academic career, I am offended by the invocation of these principles by the Stanford administration and Dr. Kennedy, especially in the context of proposed nuclear weapons research at Stanford.

What disturbs me most about the university policy is that end use is *not a valid criterion* by which a research proposal can be judged. It's not that Dr. Kennedy or the Committee on Research disagrees with me on weapons research at Stanford: they simply find my end-use arguments *irrelevant* to University decision-making! I might as well object to the proposed research on the equally irrelevant basis of the poor pitching staff of the Boston Red Sox.

The "Statement of Principles" goes on to assert that the responsibility of *individuals* that research and applications be consistent with personal judgment and conscience is reinforced by the "no end-use" policy.

What, then, should those who have end-use objections do? Dr. Bienenstock, the SSRL director, can reject the weapons research proposal if he is willing to single-handedly face down the government agencies that fund his laboratory, but what is everyone else to do? Vote with their feet and leave Stanford? Our University, given the policy, cannot *as an institution* address the problems of political and social impropriety of its research.

Now of course, the Stanford "no end-use" policy was not created to stifle free expression, but rather to preserve some time-honored standards of all universities. Briefly stated, these standards are that individual scholars should be free to select any subjects of research and to seek support from any source, in accord with openness and freedom of publication. The search for knowledge leads one to unexpected places, so researchers should be given free rein to proceed with the March of Science.

Furthermore, to foster this freedom, the University should not take a stand on national or global political issues: Stanford is a forum for individual research and opinion, but should not involve itself as an institution in a political issue beyond the campus borders.

Nobility of intent

While I genuinely trust that there is nobility of intent in the above standards, I believe they trivialize and romanticize the true relation of the University to the world around it. As a result, I find the application of the "Statement of Principles" in the context of nuclear weapons research to be myopic and irresponsible.

Let's begin with the March of Science argument, that scientists should be free to choose the subject of their research. Stanford already has strict conduct regulations in medical experiments concerning what may be done to human and animal subjects. I presume researchers would not be allowed to, say, interface a computer to the brain of a terminally ill patient. Universities have restricted or controlled recombinant DNA research because of potential hazards to the community. For example, Harvard retreated on this issue during the early 1970s in the face of objections of the Cambridge City Council as well as researchers within, notably biologist George Wald.

The "end-use" judgment is simply an extension of those principles which already have a strong foothold in the medical community. While medical ethics restrict experimental *conduct* and not later *application*, what ties the two together is responsibility. Conduct is not an issue at SSRL, since no one will be hurt as a pure consequence of the experiments therein, but the responsibility is that of Dr. Bienenstock, the scientists providing support to the experiment, and the entire University community.

Yet when Robert Oppenheimer exclaimed "Mr. President, there's blood on my hands" to Harry Truman after Hiroshima, I think Dr. Oppenheimer, while not flying the Enola Gay, was expressing some misgivings about his conduct. Do we remain blameless because nuclear detonation will not occur *in* the laboratory, but perhaps sometime later *on* it, as a result of nuclear weapons experiments conducted there?

But how are we to judge where research will lead? Better, says Dr. Kennedy, that one not judge: he told the Academic Council that "the search for knowledge leads to unexpected places; no research can safely be expected to be free from harm."

To what "unexpected places" does Dr. Kennedy think nuclear weapons research will lead? This research proposal is not like Democritus postulating the atom, millenia ago. Democritus was conducting pure research, but his Office of Military Appropriations in the Energy Department, which will fund the SSRL proposal, is not.

End uses won't disappear

It is patently obvious where nuclear weapons research will lead: to the further development of nuclear weapons. It is blind and absurd to ignore the fact that weapons research will in this case strengthen the political hand of the weapons establishment, a National Security Council that is ignorant of foreign policy, and an arms control team that opposes arms control. Of course, as a positive byproduct, it will supply needed funding to the University.

So now that Stanford has decided to ignore end use, has end use gone away? Certainly not. Now end use is defined by forces outside the University. By providing funds for certain research and denying funds for others, the Defense Department and other funding agencies define for the University what its end use will be.

As an example in my own field, computer science, there has been explosion of research and interest in computer systems. The fact that the Defense Department has been making multimillion dollar computer equipment grants is not entirely coincidental. Research areas in computer science, or any other field, do not rise and fall in prominence purely on the basis of their "inherent intellectual value." They respond to the marketplace, and to the government—to the end uses of others.

Principal investigators like SSRL Director Bienenstock cannot continually take on alone the Energy Department, so unless the University is willing to fulfill its institutional responsibility to negotiate with the relevant funding agencies, the University will be told what to do. The "freedom" that Dr. Kennedy defends is not much more than that of a puppet on a string.

If the Stanford administration was truly concerned about the freedom of its researchers, it would be better to challenge the funding policies of the federal government, for example, the decline in "peer review" funding as opposed to "project" funding. It would be better to defend Stanford laboratories against the invasion of military-oriented research projects, *if the University community objects to them*, and get Dr. Bienenstock off his current hot seat, having to choose between irate lab scientists and irate funding patrons.

Scientists denied forum

Universities have not always been so noncommital and nonjudgmental on questions of end use, and have in the past been quite willing to become institutionally involved in national and global politics, especially during times of national crisis.

The outstanding examples of such involvement are the Manhattan Project at Los Alamos and the development of radar at the MIT Radiation Laboratory. To European physicists such as Einstein, Fermi, Szilard, von Neumann, the Bomb was not just an advancement in human knowledge, but part of a desperate race with the Nazi war machine. To say "end use" was on the minds of those physicists and the institutions they represented is an understatement. For their service to the nation, these institutions have been richly rewarded: as an example, SLAC was built in 1958 at a cost *then* of 100 million dollars.

So academic institutional contributions to political issues is nothing new. It's part of what put Stanford on the map. Now, when the dangers of a nuclear exchange are frightening, it is time for the scientific community and the institutions of which they are a part to make an altogether different contribution, one which if anything *threatens* the source of funds. Stanford's current policy on end use may preserve its funds, but stifles this important contribution.

The weakest arguments for the current policy come from Dr. Kennedy's appraisal that end-use judgments are "knotty," "tricky and difficult," that "once you begin making value judgments about the possible outcomes of scientific work, there is no place to stop," and finally that the issues were definitively settled by the Senate in 1971.

Who said end-use judgments were easy? That is why they deserve detailed attention. Where do we stop making value judgments about scientific work? The responsibility of each generation of scientists is to answer exactly that, in accordance with what they believe and the predicament of the world around them.

Finally, why should the 1971 "Statement of Principles on Research" be the Mosaic end-all of decision making in this area? Just as historians come to new and different understandings of history, influenced by the contemporary issues and controversies surrounding them, the scientists must constantly reevaluate their institutional relationship with and contribution to society. Perhaps in 1943 it was reasonable for universities to participate in weapons research, and maybe the "Statement of Principles" was a legitimate expression of Stanford's policies in 1971. Twelve years later, with the threat of nuclear war much greater, it is not so appropriate.

A dynamic University must change to deal with the global community around it, and the desires of the community within it. Stanford's irresponsible "no end-use" policy, especially in the context of the nuclear weapons research proposal, does a disservice to both communities. It denies a legitimate forum to Stanford scientists who wish to participate in the decision making of the University. I believe that role, and that responsibility, is our fundamental right.

Kennedy meets with SLAC faculty while 50 workers make silent protest

Continuing their protest against weapons-related research, approximately 50 SLAC workers stood by peacefully as Stanford President Donald Kennedy arrived for a meeting with SLAC faculty members Thursday night, May 26.

The workers had requested a public meeting with Kennedy to discuss concerns about proposed weapons-related research at Stanford Synchrotron Radiation Laboratory, which uses the SLAC beam for its experiments. Kennedy instead arranged to meet with SLAC's faculty members and about a dozen invited guests.

Approximately 20 of the 31 SLAC faculty members attended the private meeting.

The protestors, gathered outside the building in which the meeting was held, quietly carried placards, including "Weapons Work is for Wimps," "Hell No, We Won't Glow," and "Welcome to SLAC—We Build Nuclear Weapons."

Robert Mayer, vacuum technician at SSRL, told reporters he was upset about a May 23 meeeting of the Faculty Senate's Committee on Research, in which proponents of a proposed research project at SSRL "were given 45 minutes to espouse the scientific merits of their proposal, while we got only five minutes to present our views. They should at least consider what we have to say."

The committee voted 7-2 to continue the University's 12-year-old research policy, which states projects are judged only on scientific merit, not possible end results.

One protestor, a visiting scientist from West Germany, claimed Thursday night that "indirectly other countries are supporting research that is not in their interest" because "a high percentage of SLAC workers are foreign visiting scientists."

SLAC faculty member Roger Miller said before the meeting with Kennedy that he expected divergent views to be presented. About half the SLAC faculty signed petitions earlier protesting a proposed weapons-related research project at SSRL.

"SSRL was set up with the understanding it would have a symbiotic relationship with SLAC," he said. If SSRL performs the proposed research, "the relationship will no longer be symbiotic—it will be very damaging to SLAC." Under such circumstances, SLAC's relationship with SSRL should be "severed," Miller added.

The protestors, who said they were a loose coalition of workers including many staff physicists, passed out copies of comments received from a questionnaire they sent members of the SLAC community.

"If we are to be prostitutes, we may as well do it at the big weapons labs and get paid accordingly," one wrote.

Another said: "Perhaps the true patriot is the one who does not march in lockstep with the government. We have all hidden here in our scientific Eden, and now the snakes have slithered in, with offerings of money, or maybe threats of no money. In any case, Eden is gone."

A third commented: "The pure research orientation of SLAC is one of the most important reasons for working here. It is positive, constructive. Regardless of monetary and other benefits, I have never (and will never) considered working at facilities which contribute to the development of nuclear and other weaponry."

Professor points to issue of 'involuntary servitude'

continued from page 1

"Moreover, they reported that all of those projects which had been described by the Department of Energy as 'weapons-related' offered a wide variety of potential applications unrelated to weapons and were of considerable scientific merit."

The controversial proposal was developed by scientists at Lawrence Livermore, Sandia, and Los Alamos National Laboratories, who seek $5 million in funds from the Department of Energy's Office of Military Applications. An additional $1 million from the University of California would support UC faculty research on the same beam line.

Four members of the Committee on Research read 12 currently funded Stanford research proposals selected from all current projects sponsored by the Defense Department, NASA, and the Department of Energy. Most of those projects chosen had titles suggesting possible military applications.

"Neither the scientific quality nor the degree of 'weapons-relatedness' of the (National Laboratories-UC) proposal appeared to differ significantly" from this group of 12 current Stanford projects, Meindl said.

Stanford President Donald Kennedy has repeatedly backed present research policy, which sets no limits based on prospective end use. He did so again Thursday, May 26, at a meeting with SLAC faculty and an invited group of about a dozen staff members concerned about "involuntary servitude."

Asked if it were possible for a departmental faculty to adopt more restrictive rules than the University as a whole, he replied that this may be conceivable, in theory. But he strongly questionned such a course of action, pointing out that this could have consequences among those "3,000 miles to the East" who vote on research appropriations. The proper forum for research policy remains the Faculty Senate.

According to Prof. David Leith, SLAC faculty secretary, there still was a great deal of dissatisfaction that Kennedy and the Committee on Research had not responded adequately to the issue of "involuntary servitude." Present policies were based on decisions by principal investigators acting as individuals, not as part of large interrelated organizations.

In an interview Tuesday, May 31, Prof. Gregory Loew of SLAC noted that the 1971 Faculty Senate statement of principles says, in part:

"The. . . principles circumscribe the University's role with respect to University-connected research. They in no way diminish, and indeed they reinforce, the individual researcher's personal responsibility to assure that the sources of funding for his research, and its perceived applications, are consistent with his judgment and conscience."

In the case of the national laboratories-UC proposal, Loew said, the application is openly declared—not just perceived.

Prof. Roger Miller of SLAC said he was "a little surprised at the headlines" after Thursday's session at SLAC, which emphasized that the faculty might adopt restrictions based on end use. But when the closed meeting ended, the situation was confusing with "five people talking all at once," he said.

Miller said he was considering the possibility of suggesting a SLAC faculty meeting to discuss modifying the present operating agreement with SSRL. Others still feel it would be better to seek a change in University-wide research rules through the Faculty Senate, he said.

"My own feeling would be to seek restrictions with respect to nuclear weapons," he said. "But it certainly isn't obvious that we can get a majority."

He and several others contacted at SLAC planned to attend a discussion with researchers from Lawrence Livermore on the controversial proposal at SLAC Tuesday afternoon, May 31.

Scientific merit should be major issue, says committee chairman Meindl

Following is a May 31 memo to the Senate of the Academic Council from James D. Meindl, chairman of the Committee on Research, on Senate Charge to Committee to Study Weapons-Related Research:

On March 31, 1983, the Senate adopted the following resolution:

"That the Committee on Research study the volume and character of weapons-related research at Stanford. It is desirable that a preliminary report of issues and procedures be delivered to the Senate during the spring quarter of 1983."

In response to the Senate's charge, the Committee on Research (C-Res) attempted to define "weapons-related research," but did not succeed. We concluded that virtually all research done at Stanford could conceivably have some military application.

Moreover, concern was expressed by Committee members that a review of the University's research projects according to selected subject matter is inappropriate, assuming all projects conform to research policies, especially those related to secrecy.

The Committee then reviewed trends over the past 10 years in the volume of Stanford's government sponsored research expenditures, to determine if the proportion of research funded by various federal agencies has changed significantly. Attached for the Senate's review are a table and a graph showing Stanford's sponsored research expenditures by government funding agency for the 10-year period 1972-73 to 1981-82. (These will be printed next week—Editor)

An analysis of these data indicates that the proportion of research funded by the Department of Energy (DOE) and the Department of Defense has increased somewhat, while the proportion of support from the National Aeronautics and Space Administration, National Science Foundation and Health and Human Services has declined slightly over the past 10 years. However, no conclusions regarding changes in the volume of "weapons-related research" can be drawn from these data.

To study the "character" of weapons-related research, a subgroup of four members of the Committee read 12 currently-funded Stanford research proposals selected from all current projects funded by DOD, NASA, and DOE. Most of the proposals they chose to review had project titles suggesting military applications.

The findings of this review were that all of the projects appeared to be of high scientific quality, and while each could have potential defense applications, all offered a wide variety of nonmilitary uses.

Because the Senate's charge to the Committee was prompted by a sepcific proposal (referred to as the "PRT" proposal) made by a consortium of researchers (from several University of California campuses, Los Alamos Labs, Sandia Corporation, Lawrence Livermore National Laboratory) for research to be conducted at the SSRL, the Committee devoted considerable attention over the course of several meetings to that particular proposal and associated issues dealing with the relationship of SLAC to SSRL.

Several Stanford faculty members affiliated with SSRL who had read the PRT proposal were invited to three different Committee meetings to describe the proposed research.

Based on the analyses presented to the Committee by Professors Bienestock, Lindau, and Spicer, the C-Res subgroup referred to above agreed that neither the scientific quality nor the degree of "weapons-relatedness" of the PRT proposal appeared to differ significantly from the 12 proposals they had reviewed.

The vast majority of the PRT proposal was reported by the SSRL faculty to be very basic research; moreover, they reported that all of those proposed projects which had been described by the DOE as "weapons-related," offered a wide variety of potential applications unrelated to weapons and were of considerable scientific merit.

The Committee also heard from several Stanford faculty, staff, and students, most of whom are affiliated with SLAC, who opposed the proposed PRT project on the grounds that weapons research is inappropriate in a University setting and that SLAC heretofore had been a single-purpose facility, not engaged in weapons research.

Some individuals at SLAC who are morally opposed to "weapons research" expressed concern that they would be forced into "involuntary servitude" (since SLAC delivers the electrons for SSRL's research) by having to "participate" in weapons-related research if the PRT proposal is accepted by Stanford.

In executive session at our May 23rd meeting, the Committee adopted the following resolution, by a vote of 7 in favor and 2 opposed:

Resolved: That the Stanford statement of Principles Concerning Research, as adopted by the Senate in December, 1971, is adequate to handle the current SSRL-SLAC controversy regarding the PRT proposal.

In reaching their decision, the majority of the Committee reaffirmed University policy that research projects should be judged on scientific merit and not on potential applications.

The minority view was that the University's current policies do not adequately address the issue of "involuntary servitude."

In view of the difficult questions raised by these issues, the Committee agreed unanimously to recommend that the Director of SSRL develop means of monitoring the research activities performed at SSRL during periods of any user's "dedicated time" on the beam lines to be sure that the research actually performed is consistent with the research as proposed. This recognition applies not just to the PRT proposal (if it is accepted), but to *all* research done at SSRL within any user's guaranteed time on the lines. The director of SSRL will be asked to report to the C-Res the means by which this recommendation will be implemented.

We trust that the actions taken by the C-Res respond substantively to the Senate's charge. Unless otherwise requested by the Senate, no further action by the Committee is planned during this academic year.

Simplot, Treybig, Kurtzig, Dixon draw 1,200

Silicon Valley fever spreads in new student generation

Silicon Valley fever is spreading.

A new generation of student entrepreneurs and community capitalists—1,200 strong—cheered their elders and their peers at the second annual student-run conference on entrepreneuring at Stanford, May 21.

In Memorial Auditorium, where Yippie leader Jerry Rubin once told a stomping student crowd to burn books and kill their parents in the late 1960s, the new generation gave a standing ovation to J.R. Simplot, Idaho pig farmer who invented the frozen French fry and parlayed hogs into a high-tech fortune.

"I've been to China and Russia, and they haven't got one thing we want," he said, to wide applause.

"Entrepreneurs are what built America. Make democracy work for the future, as long as we can see it." Together, capitalism and democracy can "produce utopia for many millions more people.

"Individuals make jobs, not the government. Entrepreneuring is what puts people to work.

"You've got to get big to stay competitive," he advised. "Don't sell out. Hang on."

For a better life, the 74-year-old recommended "stop sucking on cigarettes," stay off booze, and "stay in shape, stay running." More applause, followed later in the day with soft drinks, bottled water, wine, and cheese.

"You're the most enthusiastic, bright-eyed group of people I've ever met," Simplot observed.

Two Stanford alumni who likewise founded their own companies also urged balance in personal life.

"Think about developing your own abilities and skills," said Jim Treybig, founder of Tandem computers. The first few people in a new venture "set the tone of the company forever."

"My long range plan was to start a family," confided Sandra Kurtzig, founder of ASK Computer Systems. The part-time job she started in her apartment took only 20 hours a day. "Four hours was enough to start a family," she smiled.

Her father refused to accept stock in her company in return for a loan, saying he'd just papered his bathroom. But eventually, he paid much more buying stock in a public offering, she chuckled.

Keys to success

The key to success was similar: "Hire the best people. . .better than yourself," she advised. A good outside board of directors, a sharply focused product, and a belief in yourself also are important. "If you want insider advice, just call a staff meeting."

Friday beer busts, a highly publicized feature of both Tandem and ASK, help keep communication channels open as the company grows, they agreed.

Treybig still interviews prospective employees every week and said his company "works hard not to have divorces" among its workers. A former four-pack-a-day smoker, he's now a confirmed jogger.

David F. Dixon, founder of the United States Football League, said ethical concerns are good business practice. He called the injuries in football "a national disgrace," and said his league hoped to have at least one person working full-time with researchers to see how these can be reduced.

While Al Davis is "one of the most progressive men in any sport," his decision to move the Oakland Raiders to Los Angeles was "a disgrace" to fans who filled Oakland stadium to capacity. Sports have a social obligation, especially since they are "very subsidized by the public," Dixon observed.

Nolan Bushnell, founder of both Atari and Pizza Time Theater, said robotic football could become a reality, both on the playing field and in home game rooms, where players could simulate "George Plimpton without bruises."

Instead of being restricted to the weekends, friendly touch football games could become an everyday occurrence in a more leisured future, he added.

As early as 1987-88, America may see its gross national product booming ahead 15 to 18 percent annually, with "tremendous labor shortages" that could be solved only by "opening the Southern border."

In the fast emerging "robotics age," he added, "it may be possible to eliminate an awful lot of the poverty in the world in our lifetime."

Linking computer aided design to computer assisted manufacturing may produce a "cornucopia of consumer goods" with real deflation in prices. "A new car could be cheaper than a physician's house call."

He urged entrepreneurs to avoid "the paralysis of perfection." Likening people to computers, he said "You are a collection of program bugs. That's your personality. Anyone who does it exactly right becomes boring."

Both he and William F. Miller, president of SRI International and a Stanford Business School professor, said entrepreneurs are engaged in "creative destruction" of established industries.

"Every time you destroy jobs, you improve the welfare of the nation," Bushnell said. "Jobs have to be thought of as transitory phenomena."

Miller, speaking at one of 40 workshops, said that throughout history "new technologies create more jobs than they destroy," after some "blips" in conversion.

In sheer numbers, the gains in electronics may prove small in comparison to the "spillover" to other services. As Pacific Telephone has become highly automated, its work force has doubled, as more services have been added. A similar change is taking place in banking.

The quality of workers will be more important than sheer numbers, Miller said. Rate of change in jobs far exceeds the proportion of new workers, which means industry must help present employees develop new skills.

Between now and 1990, only 10 percent of the total work force will come from new employees, Miller said. Three-fourths of those who will be employed in the year 2000 already are on the job.

Yet 25 percent of the jobs will change by the end of this decade, and 40 to 45 percent will be different by the year 2000.

Paradoxically, for the first time in two centuries, the present student generation in the U.S. will not surpass or even equal its parents in educational skills, he said.

In a recent international comparison of 17-year olds in 19 subject areas, Americans were not ranked first or second in any field and came in dead last in seven among youths in industrialized countries, he noted.

Increased support for education from business and

continued on next page

Linking computer-design to computer-assisted manufacturing could produce a cornucopia of consumer goods. A new car could be cheaper than a physician's house call.

—Nolan Bushnell



Ellen Lapham, president of the Syntauri booth at the entrepreneurial conference

PHOTOS BY STACY GEIKEN

Entrepreneurs. . .

continued from page 10

all sectors of society will be needed to "avoid a Luddite movement" and keep the U.S. competitive in world markets, Miller said.

SRI has compiled more than 1,000 examples of successful "grass roots" cooperation by the private and public sectors to meet this and similar challenges, he said to help spur retraining, he suggested, the government might provide unemployed workers from declining industries with "vouchers" to be used in training by new employers, who could apply them as tax credits.

This would put retraining in the same category as research and development.

Industry will bear major responsibility for retraining workers, he added. Through purchasing policy, it can demand more "user friendly" equipment or demand appropriate educational support for new equipment.

Some of the states and industries most affected by the decline in "smokestack" manufacturing are now developing the "most imaginative" ways of meeting competitive challenges, he added.

Creative view of shortcomings

Students were urged to take a similarly creative view of their apparent shortcomings by Michael Boone and John Halamka, Stanford undergraduates now deep in their own ventures—Boone Computers and Colossus Computers.

"Being naive is an advantage," Boone said. People are glad to provide "free help for the young." Instead of being paralyzed by potential pitfalls, highly motivated and energetic young entrepreneurs may simply forge ahead, learning quickly from their initial mistakes.

Started in a Stanford dorm room, and backed by a venture capitalist, Boone's firm now employs 15 people and introduces its first product line in June. This includes a very sophisticated computer simulation of the Pebble Beach golf course.

Halamka, a Stanford senior, has done consulting work for Arthur Laffer, Milton Friedman, Edward Teller, and McGraw Hill. He recently signed contracts totaling $300,000.

Another software entrepreneur, Marcia Klein of The Learning Company, said children can learn concepts much earlier than previously thought. Programs designed for seven-year-olds are attractive to three and four-year-olds. The subjects include logic, math, spatial relations, and matching.

Based in Portola Valley, TLC has nine programs, 15 staff, sales of more than $1 million and hopes to be "a fairly major player" in a market projected at $1 billion by 1987, Klein said.

The Stanford Business School interns are helping develop a long-range business plan for TLC.

James Levy, founder of Activision, told a news conference that "lean and hungry" students make "the best entrepreneurs."

Stanford is "terrific" to provide an umbrella for students, who formed the Center for Entrepreneurship this year with initial grants of $1,500. Once started, the University should "get out of its way," Levy suggested.

Simplot felt entrepreneuring should be emphasized in curricula as early as the first grade. Dixon said he's encouraged Tulane, Loyola, and the University of New Orleans to follow Stanford's example.

Student spirit commended

Howard Head, inventor of the Head ski and Prince tennis racket, said universities should not take the lead in developing entrepreneurial centers. "This should come from the primitive, naive spirit of students."

Head, a featured speaker at last year's conference, said "the best ideas come out of good needs of your own." Too much knowledge and experience can block creativity.

Education doesn't promote spark, drive and risk-taking, Head added. Some of the most creative engineers were biologists and physicists as undergraduates.

Prof. Karl Vesper of the University of Washington, a Stanford engineering alumnus who serves with Head as an adviser to the Stanford entrepreneurs, said student interest in entrepreneuring "has to be triggered. That is not happening at most schools." He cited Babson College as an outstanding exception.

Since 1967, Vesper said, the number of colleges offering courses for entrepreneurs has risen from about a half dozen to 160. The number involved in research on entrepreneurialism has grown from three to about 40 or 50.

"Teaching rose rapidly from student stimulus," he said. "Research will provide a more permanent home."

Levy of Activision said business school curricula are "not structured to deal with entrepreneurs." Courses emphasize control and measurement.

Treybig of Tandem suggested that Stanford should "get more aggressive" in emphasizing creativity and productivity.

Both he and Levy emphasized that Silicon Valley has "a fantastic support system" for entrepreneurs that is "hard to create anywhere." It might come in time to Austin, Texas.

In West Germany, Treybig noted, people "aren't proud to be president of a four-person firm. Here, even if you fail, you can be proud.

Companies are not abandoning Silicon Valley, Levy said. Some are expanding manufacturing elsewhere, but "the brainpower and corporate structure are tightly wired in here. . .I don't want to go anywhere else."

Stanford Engineering Dean William Kays told the conference, "in all my years here I can't remember any activity that has excited so much interest in both students and the surrounding community. It is evidently filling a need that we didn't know existed."



J.R. Simplot, opening speaker at the conference, was an Idaho pig farmer who invented the frozen french fry and parlayed hogs into a high-tech fortune

Kays noted a paradox in the conference dedication to the late Fred Terman, former Stanford engineering dean, provost, and popular "father of Silicon Valley."

"Fred was not himself what I like to think of as an entrepreneur," Kays said. "Central to entrepreneurship is both the willingness and eagerness to take a risk.

"That was not Fred Terman. Fred only bet on things when the probability of success was close to 100 percent. There was no risk at all.

"Fred studied a problem with a thoroughness that you would have to see to believe. So he always knew the facts. Fred did very well for himself. He wrote books for a newly emerging market about which he knew all the facts (radio engineering, and then electronics), and then he invested the proceeds in some of the enterprises of his students.

"He picked far out, risky people to back like Bill Hewlett, David Packard, Russell Varian (the founders of Hewlett-Packard and Varian Associates). But Fred did help create an environment in this valley where entrepreneurship abounds."

We are moving from an economy which rested on the motor car to one which rests on the computer. Now that economy is shifting from being hardware driven to being software driven.

—John Naisbitt

Stanford President Donald Kennedy told the conference: "Much of our current economic vigor depends upon the jobs created and technologies developed in the venture sector of this economy. To have a good idea, to get others to share some risks in its behalf, to stick with it until it's worth something, and then to persuade everyone else that it is—these things take a lot of personal courage and initiative. I suspect you all rate these qualities high on the list of virtues. I certainly do."

But, Kennedy added: "Not everyone is in the position to have a great commercial idea, or to benefit from the good ideas of others. Whether we like it or not, American society is not, probably never has been, a perfect market in which the benefits of entrepreneurship are distributed broadly and there are no external costs.

"That is why it is not enough merely to do well by doing good. It is especially important for those of you who are focused on that kind of success, and very likely to achieve it, to remember that you have a more direct obligation to the society at large, and especially to those less fortunate than you, that is not discharged merely by the success of your ideas, or even by the tax revenue they generate. Ironically, the more successful the idea, the more this is true.

"So I hope you will think about the need to devote some of the personal energy and creativity you bring to the business of innovation to the public good in other ways as well."

In a special message to the conference, President Ronald Reagan said: 'As you move toward fulfilling the goals and dreams of the future, your vision and commitment will play an important part in maintaining this nation's health and vitality.

"What you conceive of now can be the reality of America and the world in an era yet to come."

About 625 of those attending came from the community. About 120 student volunteers helped run the program, in which another 325 or more students participated. Workshop speakers, their guests, and press brought attendance to 1,200.

Besides the conference, the Stanford Center for Entrepreneurship places student interns in startup companies, provides consulting through the Business Development Association of the Graduate School of Business, arranges on-site tours of Silicon Valley venture firms, and publishes a newsletter, *Entrepreneur*.

In its premier issue, Stanford alumnus John Naisbitt, author of the best selling book, *Megatrends*, notes that the U.S. now is "in an incredible entrepreneurial explosion," similar to the one which occurred when the country shifted from agriculture to an industrial base.

"We are moving from an economy which rested on the motor car to one which rests on the computer," Naisbitt says. "Now that economy is shifting from being hardware-driven to being software-driven.

"There are two things different this time around. The first is women: as many as a third of the companies formed are created by women. (The second is) young people—the 14-year-old who writes software programs, then incorporates and sells stock."

The Student Management Committee of the Entrepreneurial Center is headed by Thayer Wendell. Conference cochairs were Mary Van Maren and Bruce Johnson. Further information may be obtained by writing the Stanford Center for Entrepreneurship, Post Offie Box 3678, Stanford, Calif. 94305 or phoning (415) 497-9651.—Bob Beyers

Universities' two-year confrontation with N.I.H.

Donald Kennedy 'vexed' in long struggle over indirect costs

Following is a widely circulated position paper on the NIH proposals on indirect cost by President Donald Kennedy.

For two years now, the National Institutes of Health have been trying, by administrative means, to compel a reduction in the reimbursement of indirect costs NIH owes universities under established government rules.

Last year, an arbitrary 10 percent reduction in recovery was proposed; it was averted when the Congress recognized the effort for what it was and instructed the agency not to do it. This year the attempt has been renewed in a more complex disguise: NIH proposes to reduce indirect cost recovery by a formula that would decrease reimbursement in proportion to the ten-year history of indirect cost recovery in each grantee institution.

Now, this is not the first time that the universities and the government have addressed the problem of indirect cost. It has been repeatedly recognized that the indirect costs of doing research are *real* costs, even though they cannot be specifically identified with individual projects.

The universities are spending real dollars to pay them, and therefore—if they are not reimbursed—university general funds must support them. The cost-accounting principles used to calculate these costs, and thus to set the recovery rate, have been worked out over the course of years of negotiation between the universities and the government. The Office of Management and Budget is not exactly noted for its soft, cozy approach to how the government's money should be spent, and the cost-accounting principles are OMB's.

But because the costs are *indirect*, they naturally arouse some suspicion in members of Congress and others who encounter them for the first time. That is why numerous studies of their appropriateness have been ordered and performed by the General Accounting Office and by independently auditing firms.

In each case, these studies have documented both the reality of the costs and the appropriateness of the accounting principles under which they are reimbursed. And the reimbursements are made only after government-conducted audits of actual expenditures at the recipient universities.

So why, after all this history, are there now questions about indirect costs?

The answer is that one government agency among many—NIH—has set itself some goals for research support that are impossible for it to accomplish within the resource limitations established by the president's budget.

It has decided unilaterally that the number of grants is somehow more important than adequately funding research according to the recommendations of study sections and in accordance with accepted cost principles. This will result in the awarding of greater numbers of grants, at the expense of university general funds and the quality of research.

It is, in other words, a new and creative form of forced cost-sharing. For a university like (Stanford), the largest single source of unrestricted revenue is tuition; therefore the effect of a failure to reimburse the real costs of research is to move student tuition dollars to the support of faculty research.

NIH has made its proposal superficially attractive to a few principal investigators, who see it as a way to increase their own research support. Others, who understand that it will merely require the reallocation of tuition income from such other expenses as faculty salaries and building maintenance, are less enchanted with it.

Abrogation of an understanding

What bothers the universities most about this proposal is the understanding it abrogates. Years of faithful institutional effort went into the negotiations of the cost principles in OMB Circular A-21, and—before that—into building an understanding with Congress and the Executive Branch about the legitimacy of indirect costs.

A-21 represents a compact with our government. We are not free to change the accounting principles, or to alter OMB's disallowances of what we regard as legitimate costs. But, it now turns ut, a single government agency can apparently jettison the agreement when it pleases.

Appeals to OMB, to the Office of Science and Technology Policy, and to the Secretary of Health and Human Services have elicited sympathetic hearings and helpful comments, but no insistence that NIH alter its budget proposal. We have, in effect, been told that it is up to Congress to insist that the Executive Branch play by its own rules.

What justification does NIH present for this extraordinary action, apart from its desire to fund a larger number of grants? It asserts that indirect costs have risen at an unacceptably high rate: they have used phrases like "out of control" and "disproportionate growth," enhancing the impression that something untidy and quite possibly illegal is going on. In fact, there are a number of perfectly good explanations for the increases that have occurred in indirect cost rates.

First, costs in universities that are more intensively associated with research than with other activities have been growing faster than the rate of inflation. This alone will increase the indirect cost rate.

Second, in funding the *direct*—cost component of research proposals NIH has consistently understated the actual rate of cost rise. That will make indirect costs rise faster than directs.

Third, equipment sharing and increasingly complex research requirements have resulted in more pooled costs that are legitimately attributable to the indirect cost categories.

Finally, better management and improved identification of costs—required by government rules—has often resulted in the identification of more costs that must be allocated to research. In fact, the indirect cost rates charged by universities are far below those charged by private industry or by non-profit, non-academic research organizations. It is simply not legitimate to argue that increases in the indirect cost rate over a period of years amount to a wrong that must be put right.

Now let me turn from the *general* issue of indirect costs to the *specifics* of the proposal NIH has made. The NIH formula would base each institution's indirect cost reimbursement on a level equal to its average percentage of total costs over the last decade.

In other words, institutions that have experienced significant rises in indirect costs over the preceding 10 years will be affected heavily, whereas those that have experienced little increase will be held harmless. There are a great many things wrong with this proposal, but three are especially disturbing, and I want to discuss them in turn.

1) The proposed formula would impact different kinds of institutions differentially, and unfairly.

In essence, the formula selected by NIH will be hardest on institutions that have kept careful track of indirect costs and done the cost-accounting studies necessary to identify and allocate them.

Some senate institutions, for example, have lower indirect cost rates because reimbursements from the federal government are not returned directly to the university; instead they go directly to the state treasury. Those universities therefore have had little incentive to fund the cost-accounting activities necessary to justify realistic overhead rates and as a result their rates have been low, and relatively constant.

It would be a bizarre public policy indeed to reward such historical accidents at the expense of other institutions, but that is exactly what the NIH proposal will accomplish.

At the same time, the proposal is likely to penalize selectively those places that have achieved the highest quality. Partly as a result of NIH support, the most powerful programs of biomedical research have grown up in the nation's major academic health centers. These are the institutions that would pay the largest share of the reimbursement—shortfall—although *all* universities will feel substantial negative impact.

2) The formula will be cumbersome and difficult to administer.

Though it purports to be simple, the new and unprecedented formula proposed by NIH is in fact very complicated, and will prove highly problematical to administer in actual practice.

Total cost is not a generally recognized base to which we could apply the rate, and such a base would create substantial inequities among the individual projects. Nothing is said about the differential indirect cost recovery rates between off-campus and on-campus projects, or what they would be under the new formula.

No plan has been produced that would allow for exclusions from the base, for such items as equipment or subcontracts. No recognition is given to over or under recoveries from prior periods.

And what would be done about institutions that have actually showed declining rates since the recent revisions in OMB Circular A-21? Would these be reimbursed at a figure *above* their current negotiated rates?

The frantic haste with which this proposal has apparently been gotten together allowed its authors no time to think through how it might be applied in the real world.

3) The formula was arrived at unilaterally, without adequate consultation.

In its instructions to NIH a year ago, the Congress said (in the report of the House Committee on Appropriations)

"The Committee is persuaded that indirect costs are a legitimate component of the costs incurred in performing biomedical research and should be adequately reimbursed."

The Committee went on to identify the perception that federally sponsored research may be bearing more than its fair share of these costs, and accordingly it instructed the Secretary of Health and Human Services

". . . In cooperation with the NIH director, to make a careful review of this matter, including consultation with the universities and other research organizations most directly affected, and to submit a report setting forth conclusions and appropriate recommendations to the Committee for discussion in advance of hearings on the 1984 budget request."

Shortly after that language appeared, the presidents of the university associations wrote to the Secretary of Health and Human Services, urging the department work with us to carry out the directive of the Congress, and proposing an organization from the universities' side.

Nearly two months later, we received a letter from the Assistant Secretary for Health stating NIH's intention to consult; but the next real contact did not occur for another three months, on Feb. 14.

Then several of us were given three days notice to attend a meeting in Washington—at which, the agency announced, it intended to lay before us five different "policy options" for reducing indirect cost recovery! In effect, we were asked which of several surgical approaches to amputation we preferred.

My colleagues attended the meeting, but only after notifying the Assistant Secretary for Health and the Director of NIH that they were participating under protest. Those representing the universities who were able to get there on short notice tried to get NIH to change its position, but to no avail. It is thus misleading—indeed, disingenuous—to claim that the formula NIH is now offering results from any consultation with the universities.

To the contrary, consultation was avoided for as long as possible, and the meeting of Feb. 17 was hastily arranged just before NIH's reauthorization hearing was scheduled to take place. One can only surmise that NIH was embarrassed by its failure to comply with the instructions of Congress; it certainly had something to be embarrassed about.

Kennedy's long perspective

Let me conclude with one more general observation. If I sound vexed in these remarks, it is because I am. The vexation emerges out of my long respect for the National Institutes of Health, and its relationship to the conduct of biomedical research in the country.

I have viewed that relationship from a number of perspectives: as a biology graduate student; as an NIH grantee for 25 years; as a professor and then chairman of a distinguished biology department; as a senior consultant to the Office of Science and Technology Policy in the White House, and then as head of a sister agency in the Public Health Service; and finally as the provost and president of a major research university.

From every one of these viewpoints, the NIH appears as an institution of extraordinary worth. It pioneered in the development of the peer review system of scientific evaluation, brought the status of biomedical research in the nation's universities to its present extraordinary level, and developed an intramural program in which generations of distinguished investigators received their first exposure to science. We of the academic community have reposed our trust and hope in it through parts of five decades now.

Were this merely an argument about how many grants NIH should fund, or how it should balance its intramural needs against its extramural ones, it could be put down as another friendly family dispute.

But it is not about that; instead, it entails a unilateral abrogation of enduring understandings among three parties: NIH, the universities, and the investigators. It will not escape your notice that this issue is almost ideally structured to stir up differences between university administrators and their own faculty colleagues, as well as between the government and some of its most valuable client institutions.

The universities are perfectly prepared to reassess any aspect of the indirect cost recovery provisions on a government-wide basis, in the same way we have in the past. But I do not think we should be asked to suffer huge and unexpected losses as a consequence of a unilateral agency action which is arbitrary, unfair, and undertaken without consultation. It was the Congress who ordered the consultation, and it is the Congress that now must put things right.



John Kaplan

Kaplan sees no quick fix for heroin law, policy

On the whole, our present policies on heroin are about as good as we're going to get," a Stanford expert concludes after an exhaustive study.

"Heroin maintenance won't work and free availability would be even worse. Increased law enforcement may not prove very cost effective," says Prof. John Kaplan of the Stanford Law School.

"The choices are difficult, and none is very promising," he concedes in a new book, *The Hardest Drug: Heroin and Public Policy* (University of Chicago Press, 247 pp., cloth, $20).

"Decriminalizing heroin use might be a short step toward reducing this tough, long-term national problem. But even this might not work.

"Heroin users who commit other crimes should be prosecuted for their acts, and heroin addicts who do so should at least be coerced into drug treatment programs."

A former federal prosecutor, Kaplan is an expert on criminal and constitutional law, and author of "Marijuana: The New Prohibition." His research was supported by a grant from the National Institute of Law Enforcement and Criminal Justice.

"Although there is hope that the cumulative effect of many small improvements may eventually lower greatly the cost of heroin in our society, it looks very much as though no dramatic change will rescue us from the problem," he declares.

Withdrawing criminal sanctions from otherwise law-abiding heroin users may permit the development of informal social controls governing its use, Kaplan believes. "An increasing percentage of heroin users today are moderate, controlled users, most of whom—along with some addicts—do not pose any special risk of crime."

When heroin users commit a crime, coerced treatment is "a much more cost-effective means of reducing both his heroin use and the crime produced by such use than are the usual processes of criminal law," he adds.

Even so, he concedes, "we have hardly begun to discover which kinds of treatment work best with what kinds of addicts." Therapeutic communities, minimal treatment beyond routine monitoring, and maintenance on methadone or other opiates each may help different people.

"Even something so simple as escorting an addict from the courtroom to the treatment program makes a great difference in the retention rate," Kaplan reports.

"We may develop outreach programs which contact addicts or heroin users before they come to official attention. In one experiment, youth workers were able to catch a heroin epidemic at its very beginning. Without significant coercion, they talked many of those who were becoming dependent into treatment before the worst personal and social effects of addiction had surfaced."

Contrary to the popular image of the heroin "pusher," Kaplan says, "the sellers of heroin use considerably less pressure and inducement to market their wares than do most marketers of automobiles, detergents, toys, and breakfast cereals.

"Most commonly, heroin use spreads within a peer group in areas where its use is already endemic. Typically, these are core areas of our large cities where there are always more heroin users and sellers than the police can apprehend or the courts process.

The inevitability of addiction is another myth, he declares: "It is now clear that there exists a sizable population of nonaddicted but regular heroin users who seem well integrated into society and in many ways are indistinguishable from the rest of the population. These users bear the same relationship to heroin addicts as normal drinkers do to problem drinkers or alcoholics."

Contrary to the popular view, "heroin addiction is neither continuous nor permanent," he adds. "Less than half of the addicts who have been on the street for a year will have used an opiate daily during the entire period.

"Often the addict will go through voluntary withdrawal because the buildup of his tolerance has made his habit too large and expensive. . . . Many addicts permanently give up heroin at an early age and after a relatively brief period of addiction. . . . Like smokers and alcoholics, heroin addicts are not quite so intractable as we have thought."

Even though as much as half the street crimes in Manhattan in 1971 involved heroin addicts or users, "the causal connection between heroin and property crime has been grossly exaggerated in the past," he adds.

"Virtually every study of the onset of addiction shows that, on the average, the addict's first arrest precedes his first use of heroin by about one and a half years. Rather than causing crime, heroin use has merely been adapted by various criminalistic groups."

But addicts on a "run" of heroin use can be prodigious thieves, he adds. One Baltimore study showed 237 addicts committed more than 500,000 crimes during an average of 11 years on the street.

In 1971, there were approximately 500,000 drug arrests, of which roughly a quarter probably involved heroin use or trafficking. Six years ago, estimates of the total heroin addicts ranged from fewer than 150,000 to more than a million.

The most popular estimate of the total cost of heroin addiction in the U.S. is about $10 billion annually. All these numbers "may well be wildly in error," Kaplan cautions.

"The drug area is full of surprises." Where Western Europe seemed virtually immune to heroin five years ago, in 1981 it consumed more heroin than the U.S.

Similarly, seven years ago, few would have predicted that cocaine would bring more money into the illegal market than heroin. Yet that has happened now.

The way it was....

75 YEARS AGO (1908)

Yamato Ichihashi, a Japanese graduate of the class of 1907, was appointed an assistant professor in the Department of Economics. The appointment was the first of its kind on the Pacific Coast and was in line with President Jordan's repeated declaration for equal rights to the Orientals. Ichihashi was thoroughly qualified because of his extensive acquaintance with the political and economic history of both the United States and Japan.

* * * *

A resolution of the Board of Trustees instituted an era of absolute prohibition of the use of liquor on campus and in student boarding houses off campus under penalty of suspension. A second resolution provided for the annulment of leases of property upon which the liquor regulations were violated and made the whole fraternity liable for the acts of each member.

* * * *

The Board of Trustees considered President Jordan's proposal to change the University into a postgraduate institution and decided that Stanford would never put itself out of touch with the common school system. It was felt that such a radical innovation could not be made until the secondary school system was vastly improved, and the high schools could offer freshman and sophomore courses.

50 YEARS AGO (1933)

As a result of the new policy which increased the number of coeds at Stanford, the new Stanford Union, which had been a men's residence, Madrono Hall, and the old Sigma Kappa house were designated for the use of women students who could not be accommodated in Roble Hall.

* * * *

The Pacific Coast Conference voted to permit radio broadcasting at football games with the institutions holding complete control of sponsorship and distribution. The losing battle against broadcasting was led by Stanford University.

25 YEARS AGO (1958)

Work began to lengthen Stanford's Mark III linear electron accelerator to 310 feet and step up its power to more than a billion volts.

* * * *

Stanford s new campus in Germany, in the village of Beutelsbach near Stuttgart, was formally opened with the arrival of 63 students for the June to January session. Stanford was represented by President Wallace Sterling, his assistant, Frederic O. Glover, and Prof. Robert A. Walker, chairman of the Committee on General Studies. Representing the German government at the ceremonies were Dr. Gebhard Mueller, minister-president of the state of Wurttemberg-Baden, and Dr. Peter Boerner, former director of the Goethe Museum in Dusseldorf, who had been appointed resident director of the campus.

* * *

Eleven foreign students were selected to attend Stanford in the fall as a result of funds subscribed by the student body to cover both tuition and housing. They were from Japan, Scotland, Yugoslavia, Lebanon, Poland, Australia, Germany, Egypt, England, and France.

Compiled by Catherine Peck
The Stanford Historical Society

Letters to the editor

CHAD pledges due June 20: Jan Skrove

Editor, *Campus Report*:

Most of you are aware that the Combined Health Agencies Drive (CHAD) is currently taking place on the Stanford campus. The University has but two campaigns during the year, and both of those are undertaken with absolutely no personal solicitation. CHAD is held in the spring and United Way in the fall. Last year both campaigns were extremely successful, and thanks to the generosity of the Stanford community, $45,234 was raised during the 1982 CHAD campaign. Hopefully, this year with medical costs rising so rapidly, we can surpass that amount.

CHAD lists 15 agencies which it supports and the money it receives through the generosity of the donors on the campus, at the Medical Center, and at SLAC gives vital support to medical research, education, and service programs of those agencies.

I would like to remind those of you who prefer to pledge your gift that the deadline for getting pledge cards to the Cashier's Office is June 20, in order that they may be processed in time for the July paycheck. Naturally, persons preferring to send a check are not bound by this deadline. However, no matter how we decide to donate the gift, the pledge card enables us all to contribute to the agency or agencies of our choice in the county of our choosing.

I would also like to add that although the May 23 letter from Dr. John Nicholls, chairman of Stanford CHAD, suggested that CHAD be contacted directly by anyone wishing to receive additional materials, I would like you all to know that I have the materials you may be missing and will be happy to send anything you need if you will call me at 7-2862.

Let me close on a happy note by informing you that as of May 26 the Cashier's Office had already received a total of $31,080 in pledges and cash donations to CHAD. With the support of us all we may well exceed last year's figures.

Jan C. Skrove
Office of Public Affairs

Medical Center MEMO

Eating disorders addressed by June conference

A conference on eating disorders, sponsored by Stanford's department of psychiatry and behavioral sciences, is scheduled for Saturday, June 25.

The behavioral medicine program is presenting the day-long conference in response to growing community concern about obesity, anorexia and bulimia, to broaden public understanding of such disorders and describe the most current treatments available, said Dr. Stewart Agras, director of the program and one of the speakers at the conference.

Anorexia, a condition usually found in girls and women, is characterized by a distorted body image and resultant adherence to a rigid, extreme diet which leads to excessive weight loss. Bulimia, also primarily affecting women, tends instead to compel people to eat excessive amounts of food. Most binge and then purge themselves of the food by inducing vomiting, or taking laxatives or diuretics.

Ongoing research continues to question what connections exist between the two disorders, or if in fact they are different facets of one illness.

At the conference, Dr. Agras will give an overview of eating disorders and will specifically address obesity. Speaking on bulimia will be John Bachman, Ph.D., director of the behavioral medicine clinic. Dr. Barr Taylor, associate director of the program, will discuss anorexia nervosa. All three regularly see patients in the eating disorders clinic.

In addition, other faculty and staff from the clinic will participate in afternoon small group discussions of each of the topics.



The conference will respond to growing public concern about obesity, anorexia and bulimia.

—Stewart Agras

The conference, scheduled to last from 9:30 a.m. to 4 p.m., will be held in M104 of the medical school. Pre-registration is recommended, as space is limited. A fee of $50, or $75 a couple, will be payable at the door.

Lunch will be available for purchase at the medical center and on campus.

For further information or to register, call 497-7871.

Medical School proposes center for NMR research

A new center to explore applications of nuclear magnetic resonance (NMR) in medical research and practice received unanimous approval Friday by the executive committee of the Stanford University School of Medicine.

"NMR, co-invented by Stanford's Nobel laureate Felix Bloch in the mid-forties, has evolved into one of the most extraordinary body-imaging tools of the future," said Dean Dominick Purpura. "It's therefore fitting for Stanford to establish a center dedicated to the continuing development of NMR."

The proposal for the new center, estimated to cost $3.3 million, will now move through the University administrative review process before it is submitted to the Stanford Board of Trustees for approval in the fall, said Purpura.

"I view the development of the NMR center as a component of a much broader based program in molecular and genetic medicine which is currently in the planning stages," Purpura said. "Clearly we are preparing for entry into the twenty-first century with an approach that would permit rapid transfer of basic science information to the clinical domain.

"NMR is but one aspect of molecular medicine and an important one. The proposed NMR Center will be the first of its kind anywhere, and Stanford should maintain this leadership as a tribute to Professor Bloch."

New to medicine, but long used by physicists and chemists, the analytic technique of NMR depends on the ability of chemical elements to respond to intense magnetic fields and bursts of radioenergy by emitting signals that indicate the structure of molecules or the state of health in human organs. NMR needs no hazardous X-rays, no injections, no drugs and no surgery to perform its detective work. In medical jargon terms, it is noninvasive, and therefore safe.

In 10 minutes or less, NMR can produce computer-generated images of cross sections of a patient's whole body, or of a single organ, more completely than CT and PET scanners can. Moreover, it can deliver chemical as well as physical information.

"The technique has enormous potential as a tool for diagnosis and for evaluating biochemical changes in the body during treatment," Purpura said. "It will have a particularly dramatic impact on the analysis and treatment of a variety of neurological and psychiatric disorders because of its ability to image metabolism in different brain areas noninvasively."

NMR instruments use extraordinarily intense magnets cooled by liquid helium to temperatures of about 450 degrees below zero. The magnets generate fields more than 40,000 times as intense as the earth's magnetic field.

Stanford already has a strong program investigating biological applications of NMR under the direction of Dr. Oleg Jardetzky, professor of pharmacology. The program is already building one of the most powerful laboratory magnets in the world to generate magnetic fields nearly 300,000 times more intense than those of the earth. The powerful new NMR magnet will be used for biochemical studies, not for human patients.

But both this instrument and three additional NMR machines will be housed in the proposed center. The building will be shielded from outside radio waves,



Dominick Purpura

while a different type of shielding will prevent the scanners' magnetic fields from affecting electronic equipment in the immediate area.

Stanford researchers will use the clinical NMR machines for body-imaging studies, and metabolic studies, looking at how disease changes the body's use of energy. Metabolic changes in the body often occur before any change in anatomy that could be picked up by using X-rays, Purpura said.

The proposed NMR center, whose use will not be limited to biomedical researchers but will be available to all University departments, will be governed by a policy board, Purpura said. A three-member directorate with one member designated as the director will guide the day-to-day operations.

The directorate and governing board will represent the basic sciences, the radiology department and other clinical departments.

Funding for the proposed center will be sought from private sources and federal government, he added.

—Spyros Andreopoulos

Building for the Future

What's new with SUH modernization?

The Architectural Review Board of the City of Palo Alto met at SUH last week for a briefing focused on the exterior design of the hospital modernization.

Architect James Jonassen of The NBBJ Group, Palo Alto, described the massing and shape of new construction and possible landscaping plans.

Two triangular portions that will house eight new nursing units, an interior courtyard, and a rectangular portion for diagnostic and treatment functions, comprise the new construction. An atrium will connect the new areas to the present hospital. One floor of the four-story building will be below ground level, so the height of the new construction will be similar to the present buildings.

Members of the Architectural Review Board expressed opinions about the aesthetic character of the design, some describing it as "monumental," others as "elegant." All agreed that it showed a "clear expression of function."

The board members will officially review the plans later this year as they are developed.

Interior design services for the hospital modernization will be provided by the firm of Marquis Associates, San Francisco.

The selection was recommended by the hospital's interior design selection committee and announced by Elvia Garwood, director of the modernization.

Marquis Associates was responsible for the interior design for the Green Library restoration on campus, particularly the rotunda. They are the architects and interior designers for the Braun Music Center on campus, and also designed interiors for the Governor's Corner student housing.

The interior designers will work with the hospital modernization staff and the architects in selecting colors, materials, finishes and furniture for areas such as the atrium and public areas, cafeteria, nursing stations, patient rooms and offices.

Editor's note: This column will appear periodically to keep readers informed of the status and progress of the hospital modernization.

Services for Feigen

The Stanford community is reminded that memorial services for Dr. George Feigen, who died at Stanford University Hospital May 22, will be held 4 p.m. Thursday, June 2, in the upstairs lounge of Tresidder Memorial Union.

Feigen was a physiologist who joined the Stanford faculty in 1949. His wide-ranging interests joined the fields of immunology and pharmacology in more than 44 years of teaching and research.

Feigen died at the age of 66, after suffering a ruptured aorta.

It's okay to let child in parents' bed, says Rosenfeld

Many children apparently crawl into their parents' bed when scared or sick at night, and that's not necessarily a bad thing, a Stanford University researcher contends.

The opinion of Dr. Alvin Rosenfeld, assistant professor of psychiatry and behavioral science, follows a study of 576 children aged two to 10. The view differs from that of renowned pediatrician Benjamin Spock, who wrote the all-time best-selling guide for parents.

"Better not to let the child in your bed," wrote Spock in the 1976 edition of *Baby and Child Care*, ". . .always bring him promptly and firmly back to his own bed."

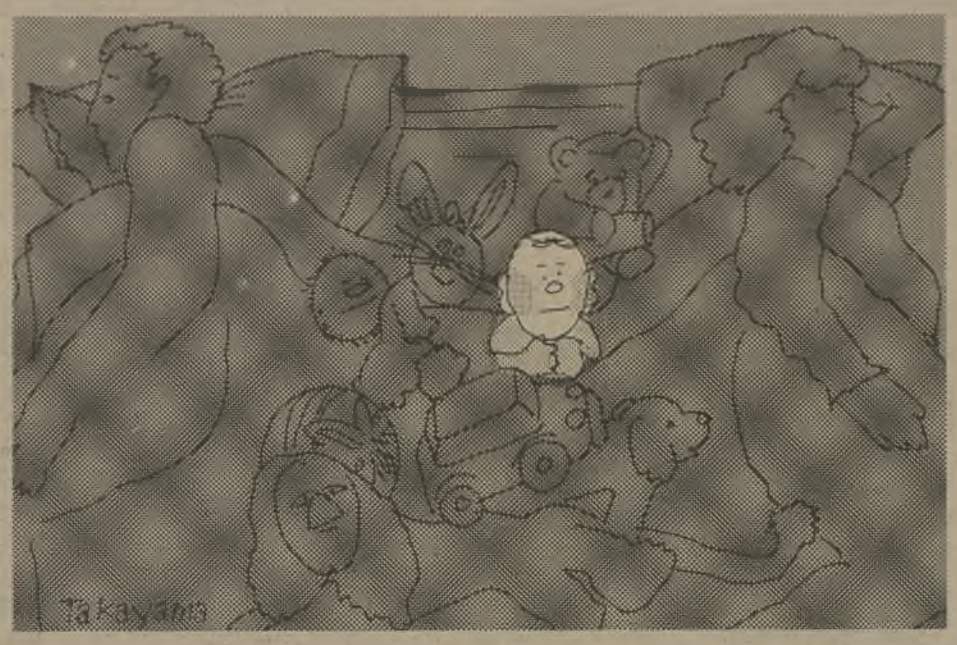
Rosenfeld believes that letting a feverish or frightened child stay in the parents' bed for a while can sometimes be helpful. Far too much attention, Rosenfeld said, has been paid to actions rather than the attitudes which motivate them.

"And Dr. Spock agrees," said Rosenfeld who has been corresponding with the noted baby doctor. In a recent hand-written letter, Spock told Rosenfeld:

"I agree entirely that the pathological effect of any parental procedure comes from the attitudes, not the procedure. But how do you explain that in a book for all parents?"

Explain for the public is what Rosenfeld now is trying to do.

"I believe my study is important, because we are just beginning to do real research on children's sexuality—on relationships and the foundations of intimacy. Most sexual research to date has really been animal research in the sense that it looks at biological or mechanical data, not at information about how



people feel about each other or the needs and wishes that sexuality fulfills.

"Many psychiatrists can cite instances of patients who have behavior problems who slept with their parents when children. But no one before has studied how typical, non-pathological families behave in this context."

Rosenfeld's study, published in August 1982 in the *Archives of General Psychiatry*, was conducted at two daycare centers and a summer camp in an affluent community near San Francisco. It is one part of a much larger study of sexual and affectional life in normal families.

The study showed that 68 percent of the children came to their parents' bedroom when they awoke ill or frightened, and 92 percent of the parents let their children come into their bed.

None of the families reported serious behavior problems, Rosenfeld said. The vast majority of parents said they were able to return their children to their own beds during the night, after the youngsters were reassured.

"I'm not contradicting Dr. Spock, who must be respected for humanizing child care in America. I'm simply trying to state that responsible parents must be the judge of what is best for their own child, and I think this study is an indication that they are.

"People look to so-called experts for answers, and these authorities need data on which to base their answers."

He said that one misconception on the effects of co-sleeping or other childraising procedures stems from taking extreme cases where the child comes to psychiatric attention. These cases are then pointed to as examples of how a practice is supposed to be detrimental.

"I can recall a colleague who told of a patient who became a pornographic filmmaker after sleeping regularly in his parents' bed and watching them have sex about 1,800 times during a 15-year period.

"Of course that is harmful. Sex is much too confusing, exciting and stimulating for children to view. And taking your child into bed every night for 15 years is certainly highly pathological. It also shows no common sense, which is what we're really talking about.

"But parents shouldn't panic if their children stumble in on them when they're having sex; that's an isolated, undoubtedly unavoidable incident which need not be a cause for alarm. And if the parents do not overreact, there is no reason to believe their children will ultimately suffer.

"The basic rule of thumb should be that parents should do what is comfortable for them in a deep sense. If they truly feel comfortable having their children see them nude, for example, it might be appropriate behavior within the family. Finnish people are raised that way.

"But parents shouldn't walk around nude feeling uncomfortable just because intellectually they believe it would be a good idea and will somehow make their children free."

—**Mike Goodkind**

...News Notes...News Notes...News Notes...



June Ogilvie, R.N., *clinical nursing coordinator on W2A for the past 21 years, has been given the Outstanding Orthopedic Nurse Practice Award.*

The National Association of Orthopedic Nurses (NAON) honored her at their third annual Congress in Reno last week (May 22-26) for her "sincere concern for high quality health care of the orthopedic patient." She was characterized as showing special skill in caring for such patients and maintaining rapport with staff at all levels, and in demonstrating an ongoing desire for personal and professional growth.

Besides receiving an honorary plaque and special recognition at the meeting, Ogilvie will also be cited in NAON publications.

The **Lane Medical Library** *has announced that searches will be conducted free of charge for users during the month of June on the* **Protocol Data Query (PDQ)** *database.*

Developed by the International Cancer Research Data Bank Program of the National Cancer Institute, PDQ contains descriptions of **active** *cancer therapy protocols supported by the National Cancer Institute. PDQ currently contains about 700 descriptions of clinical investigations of anticancer agents and treatment modalities.*

Each PDQ record provides the protocol Objective and Entry Criteria, along with a list of the investigators to contact at institutions that are using the protocols. PDQ is updated every month.

For further information contact Valerie Su or Gloria Linder, at 497-6831.

* * * *

The Blood Bank has a new nursing supervisor, **Polly Burn**, *effective May 31, 1983.*

She is currently the blood bank's apheresis coordinator and has served as a chairperson for the California Blood Bank Systems Apheresis program.

* * * *

Beginning this week, **Blake-Wilbur Road**, *in the area next to the Cancer Biology Research Building, will be* **closed to through traffic** *because of southwest parking lot expansion, said Hilary Ryniewicz, director of Safety/Security Services.*

He estimated the project will take six to eight weeks to complete. The road extends from Campus Drive North to Pasteur Drive. During this time, access to the southwest corner parking lots of the medical center will be via Jordan Way.

Ryniewicz pointed out that this construction will ultimately result in increased parking availability, hoped to outweigh the temporary inconvenience it causes.

Letters to the editor

Chiropractors treat back pain, too

Editor, *Medical Center Memo*:

While I do appreciate your sincere approach in uncovering a little more about backs and the problems associated with them (May 25, "So Many Aching Backs: What do the Experts Say?"), I find it unbelievable to the point of being ridiculous that you did not even allude to chiropractic care! Chiropractors are to a spine what dentists are to teeth!

Contrary to certain popular rhetoric, chiropractors have been successfully treating back problems (and oftentimes visceral problems as a consequence) without surgery and drugs in most all cases. They are also tuned into the value of nutrition and stress preventative measures to avoid back problems from occurring. They are the "experts" you should be interviewing.

If you were interested in learning more about chiropractic and its application, I would be happy to discuss it with you.

Again, I appreciate your intention, yet I could not refrain from personally expressing my concern.

Sheila Kahler
Medical Records

P.S. Did you know that chiropractic students, hour for hour, spend as much and sometimes more time in studying such courses as radiology and anatomy as do medical students as part of their required training?

Medical Center Calendar

WEDNESDAY, JUNE 1

Dept. of Structural Biology seminar: "Mechanisms of Control of Gap Junction Conductance in Early Embryos"—Dr. Andrew Harris. Noon, D102.

Gala Video Screening of "The Hypocritic Oaf." Don't miss this chance to see your favorite medical musical stars on the silver screen. 7:30 p.m., Fairchild Auditorium. Everyone welcome!

Div. of Orthopedic Surgery grand rounds: "Anatomy—Foot and Ankle, Surgical Approaches"—Dr. Gary Watson, 7:30 a.m.; and "Osteosarcoma—Adjuvant Chemotherapy"—Dr. Michael Link, 8:30 a.m.; M114.

Dept. of Biochemistry seminar: "Regulation of Early Development in *Xenophus laevis*"—Dr. John Newport (UCSF). Noon, M316.

Dept. of Clinical Social Work and the American Cancer Society program: "I Can Cope"—intended for cancer patients and their families. Wednesdays through June 22, 5:30 to 7:30 p.m., TF-122c. For further information or to register, call 497-5091.

SUH Auxiliary Volunteer orientation meeting: 9:45 a.m., W001. To register, call 497-6636.

Hematology support group: meetings for patients with leukemia, myeloma, hemophilia and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

THURSDAY, JUNE 2

Div. of Otolaryngology/Head and Neck Surgery grand rounds: "Bilateral Neck Dissection: To Operate or Not"—Drs. Willard Fee, Nelson Powell, Steve Dennenberg, Chris Daniells, and Clough Shelton. 6:15 p.m., Wang Library R117.

Dept. of Biochemistry seminar: "Rho Termination, Retroregulation, and RNA Processing"—Dr. Terry Platt (Yale). Noon, M316.

Staff Recognition Reception: for five, 10, 15, and 20-year employees of the Medical School. Hosted by the Dean's Office and Human Resources Group. 3 p.m., Fairchild Auditorium.

Dept. of Pharmacology seminar: "Cellular Availability of Liposome Encapsulated Agents"—Dr. Frank Szoka (UCSF). 4:15 p.m., R358.

Dept. of Medicine grand rounds: "Hypersomolar Diabetic Coma"—Dr. Larry Crapo. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JUNE 3

Div. of Child Psychiatry grand rounds: "The Meaning of Fairy Tales"—Bruno Bettelheim, Ph.D. (visiting professor emeritus of psychiatry). 11 a.m., Faber Auditorium, CHAS.

Dept. of Pediatrics grand rounds: "Biliary Atresia"—Drs. Stephen Shochat and Barbara Carroll; case presentation by Dr. Mary vander Velde. 8 a.m., M106.

SATURDAY, JUNE 4

Stanford Medical Alumni Association and the School of Medicine present: A symposium, "Creativity and Early Experience." 8 a.m., Fairchild Auditorium. For further information or to register, call the Medical Alumni Office at 497-5064.

Annual Hematology Research Symposium. 9 a.m. to noon, M114. For further information, call 497-5007.

MONDAY, JUNE 6

Dept. of Medical Microbiology seminar: "Characteristics of the Infectious Agent of Creutzfeld-Jakob Disease"—Dr. David Kingsbury (Naval Biosciences Laboratory, Oakland). 1:15 p.m., M114.

Dept. of Psychiatry and Behavioral Sciences lecture: "Benzodiazepin and Gaba-Receptor Interaction in Mammaliam Brain"—Dr. A. Guidotti (Laboratory for Preclinical Pharmacology, NIMH, Bethesda, Md.) 3 p.m., M114.

TUESDAY, JUNE 7

Dept. of Genetics seminar: "Cloning in *Streptomyces* with Phage Vectors"—Dr. Keith Chater (John Innes Institute, Norwich, England). Noon, M106.

Nursing grand rounds: "Monoclonal Antibody Therapy." Presented by nursing staff of Cancer Research Center B. Aspects discussed will include basic immunology, development of the therapy, and monoclonal antibody treatment at Stanford. 3:30 to 5:30 p.m., M104. *See related story in this issue.*

Dept. of Biochemistry seminar: "Roles of Coated Vesicles in the Exocytic Transport of Acetylcholine Receptors and Acetylcholinesterase"—Dr. Richard Fine (Boston University). Noon, M316.

Dept. of Dermatology: "Anti-histamine Therapy: Recent Advances"—Dr. Malcolm Greaves (Institute of Dermatology, London, England). 10 a.m., R136.

THURSDAY, JUNE 9

Dept. of Dermatology: "Arachidonate Metabolites: Role in Inflammatory Disorders and Psoriasis"—Dr. Malcolm Greaves (Institute of Dermatology, London, England.) 8 a.m., R136.

Dept. of Psychiatry grand rounds: "Facing Nuclear War: Our Responsibility as Physicians"—Dr. Gary Lapid (President of Mid-Peninsula Physicians for Social Responsibility). 7 p.m., Fairchild Auditorium.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Death of intern confirmed suicide

The death of a Stanford University Hospital intern has been confirmed as a suicide, according to the San Mateo Coroners Office.

The Office had been investigating the case of 30-year-old Lorraine Johnsrud since she was found dead in her Menlo Park apartment by police May 6.

The death certificate cited Desipramine intoxication as the cause of death. Desipramine, generically known as Norpramine, is commonly used as an antidepressant drug. It affects the respiratory system as well as the heart.

Johnsrud had been severely depressed in recent months, and had been receiving professional help, colleagues said.

Experts consider state of the heart

Two Stanford faculty members will participate in a conference on "The State of the Heart," Friday, June 3 in Monterey.

Dr. John Farquhar, director of the Stanford Heart Disease Prevention Program and professor of family, community and preventive medicine, and Dr. John Schroeder, director of the hospital's coronary care unit and associate professor of medicine, will take part in the day-long program, sponsored by the Mid-Coast Health Systems Agency, Santa Clara County Health Systems Agency, and Central Coast Area Health Education Center.

Intended for policy makers, health care professionals, business people and educators, the conference addresses, among other concerns, how to promote health and prevent heart disease, methods available to diagnose and treat heart disease, alternatives to surgery, how individuals can affect public policy, and the costs and benefits of new technologies.

Speakers besides Schroeder and Farquhar include Dr. David Fletcher, currently on active duty in the U.S. Army, assigned to the Preventive Medicine Activity at Fort Ord; and Dr. Bernard Towers, co-director of the Program in Medicine, Law and Human Values at U.C.L.A.

The conference will take place from 11:30 a.m. to 4:30 p.m. at the Monterey Holiday Inn, 2600 Sand Dunes Drive, Monterey. Preregistration is recommended, and a fee is charged. To register or for further information, call the Mid-Coast Health Systems Agency at (408) 757-2044.

Nurses discuss monoclonal antibodies

Nurses skilled in caring for patients undergoing experimental cancer therapies will share their insights 3:30 p.m., Tuesday, June 7, during a nursing grand rounds presentation on "Monoclonal Antibody Therapy"—the experimental harnessing of a patient's immune system to help fight his cancer.

"It's the concensus on our unit that the general population has been reeeiving mixed messages on monoclonal antibody therapy," said Patricia Kinney, a nurse in Stanford University Hospital's Clinical Research Center, which will sponsor the program in room M104 of the Medical School. "Our presentation will, we hope, clarify some misconceptions and reinforce the need for such medical reserach."

Touted in the national media as "magic bullets" to battle cancer, monoclonal antibodies have raised the hopes of cancer patients and physicians alike that an effective therapy for previously untreatable cancers may be in the offing, Kinney said.

In their enthusiasm over early successes with the specially tailored proteins, created through the fusion of mouse and human cancer cells, many cancer sufferers gloss over the fact that, so far, the antibodies have been useful in only a very few patients who are suffering from a few specific types of cancer, said Kinney.

"One of the toughest parts of being a nurse working in these studies is telling a patient, 'No, it hasn't worked for you,' or 'No, you don't have the type of cancer that can be treated with monoclonals,' " she said.

Though these patients are told that the treatment is experimental, and most have already exhausted conventional forms of radiation and chemotherapy without success, expectations that the new therapy will work for them are high, she said, and require special sensitivity on the part of the nurse.

Blending that sensitivity with strong research skills presents special challenges to the nurses on the unit, Kinney said.

Though directed towards nurses, who can earn continuing education credit for attending, the program is open to the public. Basic immunology, the development of the antibodies, responses to treatment and the nursing care will be discussed.

New book teaches medical Spanish

A new Spanish guide has just been published, *Medical Spanish: The Instant Survival Guide*.

Coauthored by Susan Lister, a regular instructor of medical Spanish at SUMC and Children's Hospital at Stanford, and her colleague, Cynthia Wilber, the spiral-bound manual offers more than 300 pages of questions and responses to various medical situations. Sections include "Emergency Information," "Patient Information," "Procedures," and "Equipment and Supplies," among others.

The authors decided to compile the guide, said Lister, because for years medical personnel have besieged them wanting to know how to communicate with their Spanish-speaking patients. "The problem is compounded because many of the patients pretend they understand English when they don't," Lister said.

The resultant lack of communication, she explained, can range from inconvenient to life-threatening. For example, parents who do not understand English will not know that the drops the doctor prescribed for their child are intended for ears rather than nose or eyes.

And more serious situations can occur, such as the baby born diabetic, whose mother nods as if she understands the nurse's instructions on the baby's diet and drugs. In this instance, the mother cannot comply with vital requirements for her baby's well-being.

The book is available at Stacey's Bookstore and the Stanford Medical Bookstore, both in Palo Alto. A booksigning will take place at Stacey's, 2 p.m., Saturday, June 4.

For further information on the manual, or on participating in the medical Spanish course Lister teaches, call her at (408) 338-3252.

Senate 'did a thoughtful job' in resolving Hoover controversy, Kennedy says

continued from page 1

something so important without their own representation" on the committee.

"The Senate did a thoughtful job," Kennedy said.

Prof. John Manley, political science, who organized a petition drive criticizing the Hoover as "a partisan organization" said he was "absolutely delighted" with the outcome.

"This points the way toward establishing a responsible forum within which our concerns can usefully and responsibly be explored," he said.

Manley and Prof. Ronald Rebholz, English, obtained 84 faculty signatures, of which 76 were made public, urging an "immediate and independent inquiry" by the trustees of the relationship. Students and other backers obtained an estimated 1,500 signatures on a similar petition to the board.

Petition preamble criticized

During the debate, several faculty members sharply criticized the petition's preamble, which stated that "the existence of a partisan organization, whether liberal or conservative, within the University, raises grave questions concerning the academic independence, integrity, and national reputation of the University." The Senate adopted a substitute motion with no preamble.

Rebholz said the outcome was "quite surprising. Overall, I was quite pleased," although "I would have liked to see divorce held out as a possibility" between the two institutions.

Prof. Alphonse Juilland, French, almost singlehandedly organized a counter-petition, signed by 131 faculty, saying an investigation of alleged partisanship by Hoover would be a "grave threat. . . to academic freedom."

After quietly observing the debate, Juilland said he was "satisfied" the motion adopted "did away with the political dimension of this debate." He and Manley smiled, shook hands, and said they might get together for a drink at the Faculty Club.

The outcome fulfilled Kennedy's hopes, expressed to alumni attending the May 14 campus conference, that the debate "will be forward looking and productive, and concentrate upon how the Hoover Institution and Stanford can improve a relationship that has been increasingly valuable to both.

"The important issues, it seems to me, have to do with governance and appointments, and not with who has what kind of politics. Consideration of the latter not only is an improper criterion for appointment or evaluation under our principles of academic freedom; it can also turn a discussion into one that is unnecessarily strident on both sides."

Hoover Institution Director W. Glenn Campbell said Friday, May 27: "The Stanford University Board of Trustees is the proper place to conduct any review of the relations between the Hoover Institution and Stanford University.

"I wish to take this opportunity to thank the many distinguished professors at Stanford University who signed the petition organized by Profs. Juilland, John McCarthy, and Oleg Sherby which deplored and opposed as a grave threat to academic freedom an investigation of the alleged partisanship of the Hoover Institution.

"Academic freedom has been rigorously adhered to in the years that I have been director of the Hoover Institution and will continue to be.

"Finally, let me state how proud I am of the internationally renowned scholarly staff of the Hoover Institution who, during a lengthy and difficult period of unwarranted attacks, acted with restraint and forebearance."

On May 19, Campbell said "I am confident that in the discussion of governance, President Kennedy will inform the Academic Senate, and the Stanford community in general, of the many binding resolutions and agreements that have been entered into by the Stanford Board of Trustees, the Hoover family, and the Hoover Institution Board of Overseers, which have been scrupulously followed during the years that I have been director of the Hoover Institution.

This includes the appointment procedures that have been worked out over the years between the president of the University and the director of the Hoover Institution based on the above resolutions and agreements."

* * *

Opening the Senate debate, Rebholz noted that a 1962 Board of Trustee resolution requires that the director of the Hoover Institution must be "previously approved" by the trustees of the Hoover Foundation, Inc., a New York corporation.

The present charter also specifies that the director "must be a man who reflects the purposes of the institution. He should be of an age which gives him a substantial period of service before the retirement age of 65," Rebholz observed. "Surely, looking to the future, any inquiring body should ask if those specifications should be changed."

The director's power of appointment also should be questioned, Rebholz said.

Hoover operates as "an independent institution within the frame" of the University. Senior fellows, the highest ranking scholars at Hoover, are subject to review by the president of the University. Any appointments made jointly with Stanford's regular academic departments are subject to normal faculty review. Others are not.

Manley, speaking as a Senate guest, said concerns had been raised that if departments continued to seek help from Hoover in making joint appointments, the Institution might at some point feel free to suggest or demand "reciprocity."

"Does it sound reasonable to you that if we allow the existence of an organization like Hoover, with its millions of dollars and other resources, that Hoover will give and give and give and not, some day, expect something in return?" he asked.

"Millions of dollars from right wing and from conservative donors have poured into Hoover and established within Stanford University the leading conservative think tank in the country," he said.

"As long as the Hoover Institution, as a research organization, remains part of Stanford, it will continue to divide the Stanford community, embarrass those who believe the University should be nonpartisan, endanger the political independence of the University, and call into question the most precious asset a university can have—reputation and legitimacy among the American public."

Counter-petitioners comment

In a written statement to the Senate, Juilland, McCarthy, and Sherby strongly supported Kennedy's statement that "the important issues have to do with governance and appointments, and not who has what kind of politics."

"We are also satisfied that the petitioners now concede that political considerations have no bearing on the debate," the three counter-petitioners added.

They also agreed with emeritus Prof. Philip Rhinelander, who served briefly as acting director of Hoover in 1959 that "there is more diversity of opinion among the fellows of the Hoover Institution today than there was 25 years ago. Hence there is less reason to be concerned over the 'partisan' character of the Institution. . . .

"The notable progress made by the University over the past 25 years is ample evidence that its academic prestige has not suffered from its association with the Hoover Institution, which has been widely known for having a special orientation."

Before the substitute resolution was introduced, Sherby told the Senate that "the inquiry has become a political football. If we go ahead at this time, it will be viewed as a politically motivated move.

"This will be terribly unfair to the people at Hoover. . . the political aspects will prevent any serious discussion of the governance issues, which are in-house matters, not national political matters."

Prof. Leon Rosenberg, medical microbiology, expressed concern over "institutional partisanship" by Hoover.

"I believe an educational institution needs to be a custodian of heterodoxy. . . to be partisan institutionally to the most powerful force in society is a very dangerous position for an educational institution."

Prof. Gerald Gillespie, German, said the preamble of the original petition was "extremely loaded." Its adoption would "send shock waves around the country and internationally." Hoover scholars would be viewed as "some kind of tainted group," much in the manner Sen. Joseph McCarthy sought to portray the Harvard faculty in the 1950s, he warned.

Prof. Jonathan Roughgarden, biological sciences, said: "I don't see a prima facie case that the Hoover Institution is a political action group. I don't find the evidence convincing."

But the apparent anomalies of governance and appointments are "very persuasive" and worthy of further investigation, he added.

Prof. Robert Hall, economics, a senior fellow at Hoover and Senate guest, said it was "remarkable how few conservatives there are at Hoover." The senior fellows play a central role in its appointment process, which he described as "a piece of the University not under faculty control."

Prof. Carl Degler, history, argued that the preamble of the original petition was "not part of the motion," but acknowledged that "an atmosphere stands behind that resolution. . . . We can't be bound by the atmosphere in which we meet."

Kennedy commented that, in the public's perception, it might not be possible to separate the preamble charging Hoover is "a partisan organization" from the request for an inquiry.

Prof. Robert White, electrical engineering, said there was no reason to question Hoover's integrity on political grounds. He noted that "three-fourths" of Manley's and Rebholz's argument amounted to political analysis.

Trustee role debated

Kennedy then declared *The Stanford Daily* "quite faithfully" reported what he said in a May 17 interview. This quoted Kennedy as saying the trustees probably would ask "an eminent visiting committee to look at the relationships and give us some advice."

While this is "a reasonable thing to do," Kennedy added, there was "no commitment on the timetable or the charge" to such a committee in his discussions with Kimball.

Rebholz said the trustees should not participate directly in the study because "there's too much overlap (in membership) with the Hoover Board of Overseers. I like the idea of visiting scholars."

Prof. G. L. Bach of the Graduate School of Business, a faculty representative in 12 of the 15 Senates since 1968, then introduced the motion which his colleagues subsequently adopted, after making several changes in wording.

Prof. Sanford Dornbusch, sociology, said there should be no investigation of political bias. The problems are those of governance and appointment, he said, recalling the 1960 "tumult" among the faculty to disavow the specific political goals of the Hoover Institution.

Two decades ago, Dornbusch publicly said a high proportion of Hoover's scholarly work was "garbage," he recalled. "The quality of research has improved enormously. Some of the great scholars at Hoover are among the most distinguished at the University. It is by no means the monolithic institution it once was."

Profs. Paul A. Robinson, history, and Victor Fuchs, economics, both supported Dornbusch. The words "governance" and "appointments" were inserted as a friendly amendment in Bach's resolution.

Roughgarden felt budget matters should be included in the proposed study. Prof. Elizabeth Cohen, education, said the Hoover Institution's annual report appeared "quite shocking" in lacking evidence of affirmative action. Hall replied that the Hoover had proportionately more women and blacks among its scholars than does the Stanford faculty.

As the customary 5:30 p.m. deadline approached, Bach's motion was fine tuned as a substitute for the one proposed by the petitioners. When Prof. Alexander Fetter, physics, Senate chairman, called for the "ayes," there was broad assent among more than 30 voting representatives. But there was one clear "nay," not immediately identified.

What one reporter had dubbed "the great debate" of spring quarter was over. Several reporters from off campus media, barred from the meeting but listening outside as it was routinely recorded, came in to get quick comments from the principals.

continued on next page

Senate report

Senate adopts nonpartisan resolution on Hoover study

FIFTEENTH SENATE REPORT NO. 13

Summary of actions taken by the Senate
May 26, 1983

At its meeting of May 26, 1983, the Senate took the following actions:

1. The Senate accepted by acclamation a resolution honoring Professor George Leland Bach on his retirement after an unparalleled record of service to the Senate of the Academic Council. Professor Bach was given a standing ovation.

2. The Senate passed, by a divided voice vote, the following amended resolution, which was proposed as a substitute motion for the petition under discussion at the meeting:

> This Senate urges the President to consult with the Board of Trustees with a view to appointing a committee in the near future to explore and reassess the relations between the Hoover Institution and the University, including governance and appointment procedures, with the goal of promoting more effective and cooperative relations.

MINUTES OF THE FIFTEENTH SENATE OF THE ACADEMIC COUNCIL
May 26, 1983

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, May 26, 1983, beginning at 3:18 p.m. in Room 180 of the School of Law with A. L. Fetter, chair, presiding. Present were 38 representatives, 11 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting held on 5/12/83 (SenD#2522) were approved as submitted.

Report of the Steering Committee

In the report of the Steering Committee, A. L. Fetter, chair, called attention to the agenda for the last meeting of the Fifteenth Senate on 6/9/83. There will be a report from Benefits on alternatives to TIAA-CREF, a report from C-AAA on the transcript reflection of foreign language proficiency, and the Committee on Research will present its preliminary report on weapons-related research at Stanford. That committee's recent work on copyright policy will not require Senate action and therefore will be reported in the Annual Report of the Committee on Research for 1982, to be presented to the Sixteenth Senate in the fall.

Report of the President

President Kennedy presented no formal report. He did confirm his comments, made in response to a question at the 5/12/83 Senate meeting, that the Woodrow Wilson School at Princeton is an interdisciplinary doctoral program and the Kennedy School at Harvard is a graduate faculty like other graduate schools. There were no questions for the president.

Report of the Provost

The provost reminded the Senate that at the time of the reorganization of the Office of the Undergraduate Dean, he had promised that budget savings from that change would be used to create a Provost's Innovative Fund for Undergraduate Education. He announced that the fund now exists, and invited applications for it. A review committee chaired by the Vice-Provost for Undergraduate Education, H. Katchadourian, includes C. Lougee (Associate Dean of Humanities and Sciences for Undergraduate Programs), G. Masters (Associate Dean of the School of Engineering), I. Remson (School of Earth Sciences), and S. Mahoney (Registrar).

While the fund is limited, proposals are invited from faculty and administrative officers for new courses and academic programs. Most grants will be for amounts of up to $10,000 of one-time money, but for some special projects larger sums and even budget base monies may also be available. Applications will be received on a quarterly basis next year, on the 15th of October, January, and April. Decisions will be made within one month.

Resolution to Honor George Leland Bach

At the close of his remarks, Provost Hastorf deferred to Professor E. Webb, Associate Dean of the Graduate School of Business, for an expression of recognition of Professor George Leland Bach's unparalleled record of service to the Senate of the Academic Council. The full text of Dean Webb's comments was as follows:

> Mr. Provost. . .Mr. Chairman:
> The formal agenda is not without significant business, and I should like to add one piece to it. Today is the penultimate Senate meeting to be attended by the senior member of this body, indeed, the senior member of the Senate over its full course of history since 1968.
> In 1968, Professor George Leland Bach was a member of the enabling body that put together the form of what became the Senate of the Academic Council. He has served on all but three of the fifteen senates that have convened since 1968. As a member of the Advisory Board, he served through that unique period of 1967 through 1972 and later, in less troubled times, from 1976 through 1979.
> For many of us, Lee Bach has been Stanford's intellectual super-ego. His presence has elevated the quality of discussion in all deliberations—not only for his direct contributions, but also for that flinty core of intelligence and selflessness that has driven the rest of us to be more thoughtful and more temperate than we otherwise would have been. We have done better because we did not want to be embarrassed before his very superior quality. We at Stanford have been fortunate to have him as our colleague.
> Mr. Chairman, I would like to note for the record the appreciation of the Senate for its most distinguished colleague, Professor George Leland Bach.

Dean Webb's resolution to honor G. L. Bach was approved by acclamation, and Professor Bach was given a standing ovation.

Petition on the Relationship between Hoover Institution and Stanford University

In introducing the major business of the meeting, Chairman Fetter observed that the Steering Committee had invited a number of guests for the discussion and would like the Senate's consent in granting them the right to speak. Permission was granted by consensus.

Chairman Fetter then expressed the Steering Committee's wish that the discussion begin with a few short presentations, and that debate be encouraged for a reasonable period before amendments or other legislative actions were proposed. He also reiterated President Kennedy's comments that the relationship between the Hoover Institution and Stanford University is an important one and that the debate would be better focused on substantive matters than on who has what political bent; the future of the Hoover/Stanford connection matters more than its present or its past. He then invited Professor R. Rebholz to open the discussion.

R. Rebholz began by expressing his gratitude that President Kennedy had said that, in the normal course of events, the Board of Trustees might institute a study of relationships between the Hoover Institution and Stanford.

He concentrated his remarks on questions that such a review committee should ask. These included questions concerning governance, appointment procedures, and the Hoover Institution's apparent political mission, all of which he termed anomalies in comparison to any other unit connected with the University. He specified such anomalies in the areas of governance and appointments as

1) the procedure by which the Director of the Hoover Institution is appointed,

2) the specifications of the kind of person to be appointed to the directorship and the kind of tenure to be conferred (i.e., administrative tenure rather than academic tenure), and

3) the power of the director to control unilaterally a budget of over $8 million and to propose appointments for Senior Research Fellows and Research Fellows with no reference to any faculty committees.

Finally, he focused on what he termed the Institution's political mission, citing its publications which provide the knowledge base for current conservative government practices and also influence public opinion toward a conservative view. His final question was whether or not such an institution is compatible with a politically independent university which does not engage in partisan activities.

He concluded his presentation by moving the following resolution:

> The Academic Senate urges the Board of Trustees to initiate an immediate and Independent Inquiry, including a public report, on the relationship between the Hoover Institution and Stanford University.

The motion was seconded by A. Mellor.

The second presentation in support of the petition was made by a Senate faculty guest, Professor J. Manley. He focused on the three major beliefs which led to his initiative in promoting the petition:

1) The Hoover Institution, in asking reciprocity for budgetary assistance to a department, is a potential political influence on departmental appoinments and even on the curriculum itself.

2) The Hoover Institution is a University anomaly with respect to recruitment practices, funding, research focuses, and its public relations efforts to influence public policy.

3) The legitimacy of Stanford as an objective nonpartisan institution dedicated to the search for truth is jeopardized by implication because of the partisan mission of the Hoover Institution. At the same time, the Hoover's influence is enhanced because of its connections with a nonpartisan major university.

Following the two presentations by the initiators of the petition, the discussion was opened with a statement of opinion from J. Gere. He commented that this request for an inquiry had generated an unusual amount of interest and had become a political football with petitions and counter-petitions. Signers of such petitions have a variety of motives. The in-house matters of governance and appointments are the significant issues—not the widely-publicized national political slant. Adoption of this resolution would be widely viewed as politically motivated. It would be better to give the Board of Trustees an opportunity to review the Hoover/Stanford relationship in the normal course of events, focusing on matters of governance and appointments, without the damaging negative emphasis on politics and the resultant widespread publicity.

G. Gillespie endorsed Gere's observations that the petition was prejudicially framed, most particularly the preamble. Endorsing such a politically-loaded resolution, he predicted, would send shock-waves through this and other universities. If a study is needed, it should be approached differently.

J. Roughgarden added that inquiries ought not be undertaken without the prospect of revisionary findings, and that political bias should feature only if the organization is found to function as a politically active group. That case is not convincing. The anomalies of governance and appointments, on the other hand, are persuasive. On those grounds, as well as on the matter of funding, there appears to be reason to study the relationship between the Institution and the University.

Guest R. Hall, Professor of Economics and Senior Fellow at the Hoover Institution, commented on some of those relationships:

1) The faculty does not review the Hoover Institution and it is not clear that the faculty should. The president and Board of Trustees do run the Institution, but it is rightfully not under faculty control.

2) The politics of individuals in the Institution are irrelevant in this matter.

3) Writing to influence public policy is not a major part of the activity of Hoover scholars and is not unique to them.

4) The success of Hoover's efforts at fund-raising has been of great benefit to a number of Stanford departments.

He concluded by agreeing with earlier comments that the preamble of the petition was quite out of order, but that he personally did not oppose an impartial review of the Hoover/Stanford relationship. He also expressed his own conviction that the Hoover Institution is a very important element of Stanford University which ought to be retained.

There was then considerable difference of opinion expressed concerning whether or not the politically-loaded preamble of the petition could be separated from the resolution, which had been presented independent of it by R. Rebholz at the start of the Senate discussion. The point was made by several that public perception and un-

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Senate/ continued from page 18

derstanding would inevitably link the resolution with the petition's preamble, even if the Senate made an effort to disavow the preamble. The conviction was that the widespread publicity given the petition would color the interpretation of a Senate adoption of the resolution, even if it were accompanied by a disclaimer of the preamble of the petition.

President Kennedy was asked, as a point of information, to clarify the plans of the administration and the Board of Trustees regarding a projected study of Hoover/Stanford relationships. He responded that this had been discussed in the context of long-range planning prior to the appearance of the petition, and that it was the intent of the president of the University and the president of the Board of Trustees to explore the matter. There has not yet been any commitment or vote by the Board.

L. Rosenberg expressed his reasons for supporting the petition for an inquiry. Political disagreement with the Institution played no part in his support of the petition. The Institution is perceived as an intergral part of Stanford. Institutionalized partisanship, as displayed in the Institution's Annual Report, is one of the most dangerous influences that can arise in a university.

To a question for information on the meaning of the term "Independent Inquiry" in the resolution, R. Rebholz responded that, in his opinion, the review should be conducted by appointees who were not members of the Stanford Board of Trustees or the Hoover Board of Overseers. He favored President Kennedy's suggestion of a group of visiting scholars appointed the President in consultation with the Board of Trustees.

There was some discussion of the differences between procedures for the appointment of senior researchers at Hoover and, for example, adjunct faculty members who do research. R. Hall expressed the view that, for senior appointments, the procedures were like those for regular faculty at the early stages, culminating with a review by an appointments committee once they reach the President's office. Junior appointments, however, are made entirely within the Institution and are not reviewed (as are faculty junior appointments) at the level of provost, Advisory Board, president, and Board of Trustees.

At this point in the discussion, G. L. Bach proposed a substitute motion, as follows:

> This Senate urges the President to consult with the Board of Trustees as to the advisability of their appointing a committee to explore and reassess the relations between the Hoover Institution and the University, with the goal of promoting more effective and cooperative relations.

He called attention to the substitute motion's politically neutral and positive rather than negative tone. The motion was seconded by J. Gere.

In the discussion of the substitute motion, S. Dornbusch considered the possibility of proposing an amendment based upon a different substitute motion which he had in mind. Giving some background for his thinking, he commented that the quality of research at Hoover has improved enormously over the years and that the direction of change at the Institution has been all to the good. Over the years, both Hoover and Stanford have changed for the better. There is historical reason for the governance and appointment patterns at Hoover in the special relationship of ex-President Hoover to the University. Focus on political bias, policy orientation, etc. should play no part in any review. These considerations has led him to formulate the following substitute wording:

> The Academic Senate wishes to express its approval of the proposed study under the auspices of the Board of Trustees of the governance and appointment procedures of the Hoover Institution.

He concluded with the statement that, though the historical reasons for the relationship between Hoover and Stanford are clear, times have changed, as have the two institutions. Now is a healthy time to reassess the relationship, especially the aspects of Hoover's governance and appointment procedures which are anomolous in the University. This should be done without any focus on political bias or sources of funding. Finally, he pointed out that both substitute proposals say that good can come from an investigation and both try to limit the scope of that investigation.

P. Robinson objected to the Bach substitute motion phrasing as not strong enough in urging an investigation. He believes there are grounds for inquiry, and reported that his senior departmental colleagues concur with that view.

V. Fuchs also supported the Dornbusch proposal as singling out the right issues about which to ask questions at this time: governance and appointment procedures.

B. Roth proposed not limiting the inquiry to just those two aspects of the relationship.

G. Bach commented that the differences between the two substitute motions were very small. Three important differences were:

1) The Dornbusch proposal presumes a study while the Bach proposal urges consideration of the possibility but permits a joint decision;

2) The Dornbusch proposal ties the inquiry explicitly to two topics. This seems too limiting.

3) The Bach proposal emphasizes a two-way street to better relations on both parts.

Several comments were made about the of possibility interpreting the term "governance" to include budget matters, affirmative action, etc. and about the meaning of terms used in one or the other of the resolutions.

S. Dornbusch then proposed a friendly amendment to the Bach motion: inserting the phrase "including governance and appointment procedures" after the word "University." This amendment was accepted by G. Bach and J. Gere.

Several other friendly amendments were proposed in sequence and given careful consideration. One proposed by C. Degler added the phrase "in the near future" after the word "committee." This, too, was acceptable to Bach and Gere. Two other proposals were not accepted as friendly amendments. One of these was later proposed by P. Robinson as a formal amendment, seconded by Rebholz. The motion was to delete the phrase "as to the advisability of" and replace it with the phrase "with a view to." This amendment passed on a divided voice vote.

Finally, R. Rebholz proposed the second rejected friendly amendment as a formal amendment. It was seconded by B. Roth. This amendment proposed the deletion of the words "and cooperative." The voice vote on the amendment was indecisive. On a show of hands, the motion failed by a vote of 22 to 15.

The Bach motion in its final amended form read as follows:

> This Senate urges the President to consult with the Board of Trustees with a view to appointing a committee in the near future to explore and reassess the relations between the Hoover Institution and the University, including governance and appointment procedures, with the goal of promoting more effective and cooperative relations.

Put to a voice vote, the amended substitute motion passed with a single dissenting vote.

There being no unfinished or new business, the meeting adjourned at approximately 5:25 p.m.

Clara N. Bush
Academic Secretary

No willful violations of consulting policy found in random survey of faculty

Report of the Internal Audit of Faculty Members' Outside Consulting Activities During 1981-82
Submitted by Albert A. Hastorf and Gerald J. Lieberman
May 25, 1983

An internal audit has been conducted by the Provost and Vice-Provost and Dean of Graduate Studies and Research of 60 randomly-selected faculty members' outside consulting activities during 1981-82.

The purpose of the audit was to keep members of the faculty alert to the limitations on outside professional activities as posed by Stanford's consulting policy and to determine if violations of the policy among the sample had occurred which might warrant a similar survey among the larger number of the faculty.

The results of the audit indicated that there were no willful violations of Stanford's policy by the 60 faculty surveyed. The only problems uncovered were three cases of consulting which each exceeded very slightly the 13-days-per-quarter limit permitted by the consulting policy.

A certain amount of "averaging" between quarters is permitted by policy as long as one's consulting activities for the three quarters do not exceed 39 days per academic year.

None of the consulting activities of the three faculty involved equalled or exceeded 39 days for the academic year. However, any such averaging of time between quarters requires the prospective approval of the relevant department chair/deans, which had not been requested in these three cases. A follow-up with the relevant chair/deans indicated that in all three cases such approval would indeed have been granted had it been requested.

The 60 faculty in the sample were selected on a statisticaly-random basis from among all Stanford faculty on active duty during 1981-82 (including only the basic sciences faculty in the School of Medicine). Distribution of school of those surveyed was as follows:

Engineering	14
H&S	28
Law	3
GSB	5
Education	4
Medicine	3
Earth Sciences	3
TOTAL	60

A total of 26 (43 percent of the total) reported that they had not engaged in any consulting activities last year; 26 (43 percent) reported that they did act as consultants less than 13 days in any one quarter; 5 (8 percent) indicated that they had consulted 13 days in at least on quarter; and 3 (5 percent) exceeded the 13-day limit in any one quarter as discussed above. None consulted as much as 39 days during the academic year, which is the three-quarter limit imposed by Stanford's policy.

In addition to questions regarding both the level and general nature of their consulting activities, the faculty were asked the following three questions for the purpose of assessing whether modifications to the current policy might be warranted with respect to the nature of faculty members' arrangements with outside companies and/or disposition of intellectual property rights resulting from University research activities:

1) Were there any formal agreements between Stanford and the company for whom you consulted during 1981-82 which involved you in your role as University faculty member?

2) Were you the creator or inventor of any intellectual property which was licensed by Stanford to the company for which you consulted during the period of your consultation?

3) Did you hire or directly supervise any Stanford students in outside consulting activities while simultaneously acting as the student's adviser at Stanford or participant on the student's dissertation committee?

For any affirmative answers to the above three questions, the faculty were asked to provide explanations.

In response to question No. 1, five of the 60 faculty responded that they had acted as both consultants and as departmental liaisons for those companies participating in the faculty member's departmental industrial affiliate programs. No problems or improprieties were uncovered by responses to this question.

There were no affirmative responses to question No. 2 above. However, in response to question No. 3, eight of the respondents—almost one-fourth of all those who consulted last year—indicated that they had hired or supervised their students in outside consulting arrangements last year.

It should be noted that in December 1982, the faculty consulting policy was modified by the Senate to include a requirement for department chair or deans to approve on a prospective basis any outside consulting activities involving a faculty member and his/her Stanford students.

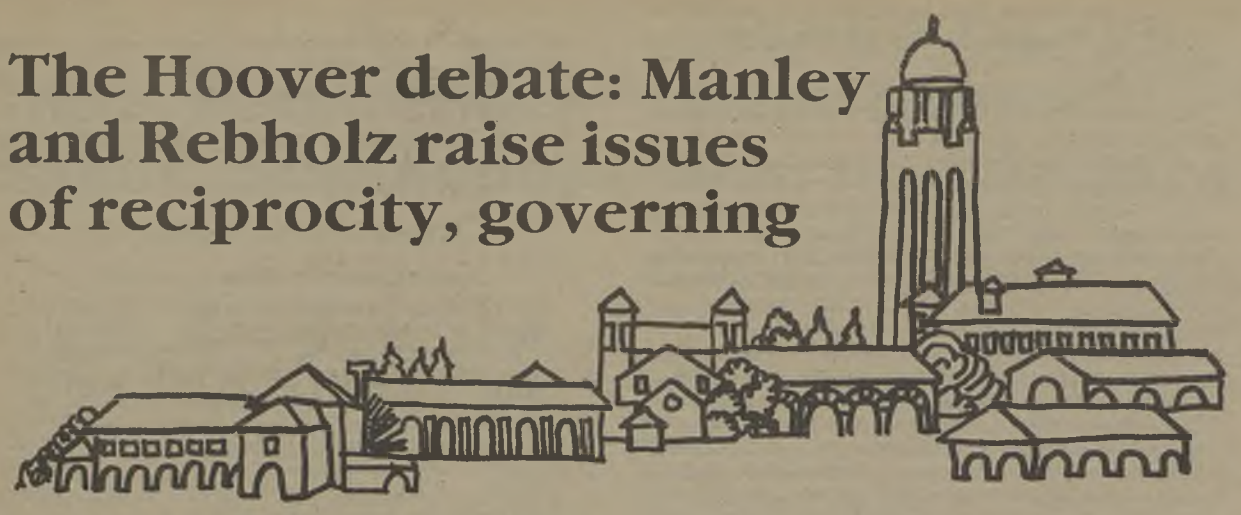
In view of the somewhat surprisingly large proportion of faculty who involve their students in their outside consulting activities, the recent change in the policy appears to have been a wise and timely action. No other policy changes were determined to be warranted based on responses to the above questions.

Overall, there were no significant problems uncovered by the internal audit. The three cases of minor excesses of the 13-day-per quarter limit could have been avoided had the involved faculty members reread the policy statement to be reminded of the need to prospectively inform their department chair/dean of their plans to "average" their consulting time between quarters.

All faculty are urged to reread the policy statement on a periodic basis, as it is the responsibility of each individual engaged in any such outside activities to be aware of both the spirit and the letter of the policy.

The internal audit served the purpose for which it was intended by reminding the faculty of their University obligations vis-a-vis policy limits on their outside professional activities. No violations of the policy were found which warrant a broader survey of the faculty at this time.

The Hoover debate: Manley and Rebholz raise issues of reciprocity, governing



Remarks by Prof. John F. Manley before the Faculty Senate May 26, 1983

Last week, in an encouraging response to those who were concerned enough about this University and Hoover to sign the petitions, Donald Kennedy, when asked whether or not a study would be made, told the Stanford *Daily* that the Board of Trustees would probably appoint an eminent visiting committee of distinguished persons from inside and outside the University.

Today I want to speak to Don Kennedy's proposed study, but I also want to suggest three reasons why I believe such a study should ask whether or not the continuation of Hoover as a research organization within the University is compatible with the best interest of Stanford.

I do not want to prejudge the answer to this question. It seems vital to me that the University community have ample time to discuss and reflect on such questions, and that supporters of Hoover have an opportunity to state *their* case in a Trustee-appointed, responsible forum.

But I believe that the activities of Hoover, and the actual and potential threat to the University posed by these activities, force us to ask some fairly fundamental questions, and I would like to tell you why. There are three main reasons.

The first reason why we should define "governance" broadly and explore the basic issue of Hoover's relations with Stanford deals with thp integrity of the academic departments that comprise the University.

Since the debate over Hoover began, I have often been asked what started it all? Why now? I have usually replied that I looked at the 1982 *Annual Report* of the Hoover Institution, and invited others to do the same.

What I have not discussed publicly, until today, is what led me to look at the annual report in the first place. Because the event that sparked my concern has been discussed in the Stanford *Daily* by Seymour Martin Lipset, and because the event involves Hoover's internal role in the departments, I think you should contemplate it as you reflect on the propriety of Hoover's activities inside as well as outside Stanford.

Hoover help on job offer

As my colleague Marty Lipset—a Hoover senior fellow as well as a professor of political science—told readers of the May 4 *Daily*, a colleague of ours in political science received a job offer last fall and, as part of the effort to meet that offer, Hoover was asked to help.

At this time, as Lipset also disclosed in the *Daily*, another colleague of ours expressed fears that if we continued to go to Hoover for various things, Hoover might at some point feel free to suggest or demand "reciprocity" from us. He feared a quid pro quo.

Whether Hoover raised the question of reciprocity in reaction to my colleague's comments remains in doubt, but what is not in doubt is the crucial fact that Hoover *did* raise it.

What happened in essence is this.

When Glenn Campbell was first approached, he responded favorably. Then, a few days later, Campbell informed the department's representative that after consultation with some senior colleagues, who were concerned about the department's lack of "reciprocity" for Hoover people, the answer was no—they would not help in this case. They even went so far as to mention a specific name as the prime example of lack of reciprocity—from which I drew the conclusion: you play ball with us, we'll play ball with you.

The only problem is that we are not playing ball, we're playing with departmental appointments and, as Hoover people increasingly request teaching appointments, we are playing with the curriculum itself.

When Hoover's response was reported to the department I felt that it was *improper*, and so informed my colleagues. It seemed to me that relations between the department and Hoover had just been politicized, and that this threatened to undermine generally accepted academic procedures.

How could members of the department consider future Hoover requests without in the back of our minds wondering what it might cost if we turned Hoover down?

By citing "reciprocity," did Hoover decline the department's suggestion on the individual's merits or abilities or value to Stanford, or did they say no because we had not gone along with one of their earlier proposals?

You deserve to know too that since then the Hoover senior fellow who was mentioned as the example of lack of "reciprocity" has circulated a letter arguing for appointment as professor of political science (by *courtesy*) to the entire department, with copies to Donald Kennedy, Albert Hastorf, Norman Wessells, and W. Glenn Campbell, his boss. I tell no tales out of school when I say this issue is very much alive in (and out of) my department.

Let me ask you this: does it sound reasonable to you that if we allow the existence of an organization like Hoover, with its millions of dollars and other resources, that Hoover will give and give and give and not, someday, expect something in return?

Politics in appointment

Can we expect to take and take and take and not someday be asked to give a little something back? Yes, the things Hoover proposes seem innocuous. The joint appointment they suggested to my department is not without merit. The only problem is: merit is hardly the issue. Politics is. And, not so subtly, the University and the credibility of its appointments process are at stake too.

The second reason we should ask what relationship, *if any*, should exist between Hoover and Stanford concerns the question: Why is Hoover singled out? We all know that there are lesser institutions of higher education in the east that have had ties to liberal Democratic administrations, so what's the matter with Hoover and the Reagan connection?

Doesn't Hoover just balance the liberal bias of the faculty generally?

Aren't other programs of the University partisan too? Why come down hard on Hoover—because it's conservative? That doesn't sound fair to most of us.

Hoover argues that it is not much different from other parts of the University or from other university programs, so why pick on us?

The fact is that Hoover is in no way comparable to such University programs as student-oriented Chicano programs, feminist studies, SWOPSI, Afro-American studies, CROW, conservative and liberal student organizations, and the like.

Hoover is not just another University program. *It is a multi-million dollar research institution.* To compare Hoover with these rather anemic and underfunded student programs that are normal parts of a university's pluralism is hardly plausible. These programs serve a variety of educational purposes for the students, and they are hardly comparable to an institution that can justly claim to have supplied the president of the United States with a great deal of the policy research on which he ran for office, and the expertise and personnel with which he staffed his presidency.

These crucial differences aside, let us, for the sake of argument, consider the contention that Hoover is just another part of the University, and should not be singled out for special attention. The problem here is that Hoover *is* in fact unique. It is not just another department. In fact, as near as I can tell it has little in common with a regular department.

1) *Recruitment*: the University has relatively little control over appointments at Hoover. The president of the University does have a say in the appointment of senior fellows (many of whom are Stanford faculty to begin with) but neither he nor the Board of Trustees has control over appointments of research fellows—and these make up about two-thirds of Hoover's professional staff. It appears that most of Hoover's staff is hired (and fired) by Glenn Campbell.

2) *Funding*: Most of Hoover's money comes directly from outside private sources, not from regular University funds. As far as I know Glenn Campbell decides how to spend the money at his disposal: if he wants to share this power, he can presumably share it; if he wants to hoard it and act like an old-time political boss, what prevents him from doing so? The University community, which has a stake in how Hoover is governed, has no information on these kinds of questions.

Most of Hoover's $8.4 million budget this year (over $9 million projected for next year) comes from funds earmarked for Hoover but administered by the University, and from funds solicited by full-time Hoover fundraisers from individual, corporation, and foundation sources.

What department receives the bulk of its money this way?

What department has a $9 million annual budget?

What department has full-time fundraisers?

Who gives this money? Why do they give it?

Do any of you know the answers to these questions?

3) *Research*: In addition to recruitment and funding, Hoover is special because of what it does: it is a library and archive, but the lion's share of its budget goes to support research and publication and a large public relations staff that disseminates the results of this research all over the U.S. and in several foreign countries as well.

What department has a full-time PR officer and staff whose task is to funnel the results of departmental research into the mass media and thereby affect political and policy discussion?

Look at the 1982 *Annual Report* and you will see an account of the Institution's impressive efforts to affect public opinion:

"Dissemination of research fundings in newspaper editorial essays, or op-ed articles, continues to be a major outlet for the ideas, opinions, and research results of Hoover fellows and authors. When this program was first begun in 1977, 17 articles were published. During the past year, over 240 articles carrying the by-lines of the Institution's scholars appeared in newspapers throughout the country. The same article is often carried in many newspapers, thereby greatly broadening the audience." (p. 66)

Why do you think Hoover is doing all this? Do you think any of this could qualify as political? Do you know any department that does these kinds of things on the scale of Hoover? Do you think it helps Hoover to be associated with Stanford in getting this material placed in the media? Do you think this material is evenly balanced ideologically, or is it perhaps part of the reason why conservative money is channeled into Hoover in the first place?

The conclusion I reach is that Hoover is special; that is why it is singled out.

The third reason why we need a study of Hoover, and why we should ask whether Hoover as a research (and propaganda) machine is compatible with the University is the most subtle and difficult of all, but it is also the most important. It concerns the legitimacy of the University.

I've been spending a good deal of time lately trying to break the following syllogism, and if the implications of this syllogism are correct, we really ought to pay attention to the questions it raises.

No one questions that there are many fine people at Hoover. Some of the Stanford faculty who have joint appointments with Hoover I count as my friends. Nor does anyone doubt that Hoover provides many benefits to Stanford beyond a fine library.

Benefits from University

The problem with Hoover does not lie here. It lies in what Stanford confers on Hoover, in the benefits that Hoover derives from its association with a great and prestigious university, and in the fact that Hoover is a political and partisan organization.

Let me explain.

We all know that one of the most precious things a university has is its legitimacy. Universities are special places in our society: they are looked up to because they embody the values of objectivity, nonpartisanship, and the nonpolitical search for knowledge.

In this regard, it is incalculably valuable to Hoover to be associated with a great university. In this relationship, Hoover brings benefits to the University, but the University also provides vitally important, if intangible, benefits to Hoover. By its connections with a great university Hoover's legitimacy, reputation, and influence are all immeasurably enhanced. *And so too is Hoover's ability to push its cause.*

Some look at this and say: What's to worry? They look and see the benefits Stanford and Stanford faculty reap from an ever-expanding and ever more wealthy Hoover.

I look and I see a threat to the most important thing we have.

If Hoover and Stanford are joined ever more closely, and if Hoover engages in partisan activities, is not Stanford necessarily implicated in such activities?

If Stanford is of incalculable value to Hoover, and if Hoover engages in the pursuit of partisan political causes

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Remarks by Prof. Ronald Rebholz before the Faculty Senate May 26, 1983

Last week President Kennedy told the *Stanford Daily* that the Board of Trustees will probably ask an eminent visiting committee, supplemented by some people from within the University, to study the relationships between the Hoover Institution and the rest of Stanford University. I am grateful for that statement, because it means that today's discussion might focus on the questions that committee should ask. I think it is still worthwhile to move the resolution before us to add the Senate's support for the appointment of such a committee, and I will move it at the end of my remarks.

I ask the chair's and the Senate's indulgent permission to speak for about 10 minutes on behalf of the resolution because it will take me that long to isolate what I see as the major questions about the relationship between the Hoover Institution and Stanford University in terms of several anomalies which characterize that relationship and give rise to those major questions. The anomalies are first of all in governance and appointments which are intimately related and have to be discussed together. Donald Kennedy emphasized this area of concern in his statement of May 17. The other anomaly concerns the political mission to which Hoover, as an Institution, is apparently committed.

I. Governance and Appointments. The first major anomaly in the area of governance and appointments is the procedure by which the Director of the Hoover Institution is appointed. That procedure was defined by the Board of Trustees on May 20, 1959, in paragraph 7 of a statement concerning the Institution which is the most important of what Glenn Campbell referred to in *Campus Report* (May 25) as the "many binding resolutions and agreements that have been entered into by the Stanford Board of Trustees, the Hoover family, and the Hoover Institution Board of Overseers." I will hereafter refer to that statement as the Institution's "charter," and I quote from it:

The Director of the Institution shall be recommended to the Board of Trustees by the President of the University for appointment by the Trustees. He shall have been previously approved by Mr. Hoover. Such recommendation of the President shall not require approval of the Advisory Board of the Academic Council of Stanford University.

That paragraph was amended by the Trustees on May 17, 1962, to read: "He shall have been previously approved by Mr. Hoover, and after Mr. Hoover's decease by the Trustees of the Hoover Foundation, Inc., a New York Corporation." To the best of my knowledge, that paragraph still determines the procedure for appointing the director. Certainly it determined the procedure for appointing the current director, W. Glenn Campbell, on November 19, 1959. At a minimum, Herbert Hoover had the power of veto over the appointment and did not choose to exercise it. If the memories of my colleagues who were here at the time are reliable, Mr. Hoover virtually dictated the appointment of Mr. Campbell to President Wallace Sterling. Those who conduct the inquiry we ask for in the petition surely must ask the question of the propriety of allowing an outside person or body to have the power of veto over the appointment of a major academic officer of the university, and must therefore ask whether such an arrangement is indeed binding.

The second anomaly in this area is the charter's specifications of the kind of person to be appointed and the kind of tenure he will receive:

The director must be a man who reflects the purposes of the Institution. He should be of an age which gives him a substantial period of service before the retirement age of 65 years. . . . The director shall have tenure as long as he satisfactorily discharges his responsibilities. This is administrative tenure, comparable to that of the President of the University, and not academic tenure. . . .

Any inquiry should raise the question of the propriety of these specifications. Was Mr. Hoover determined to ensure the appointment of a director who reflected his purposes for the Institution? Was the change from academic tenure, which I believe the previous incumbents possessed, to administrative tenure made to exempt Mr. Hoover's candidate from scrutiny by the Advisory Board? I believe the answers to these questions are *yes*. The result is a director who, I will argue, espouses Mr. Hoover's purposes, has done so for 24 years, and whose appointment has never been reviewed by any member of the faculty. Surely, looking to the future, any inquiring body should ask if those specifications should be changed.

The third anomaly in the area of governance and appointments is the power of the director. The director controls a budget of over $8 million dollars, only one-third of which is used for the maintenance and expansion of the archive. His power over the budget is enshrined in the charter and, according to Thomas G. Moore's statement in the *Campus Report* of May 18: the director uses that power: "the director allocates the funds."

The charter also empowers the director to recommend appointments of the staff of the Institution directly to the President who then proposes those appointments and promotions to the Board of Trustees. Furthermore, and I quote, "There will be no reference to any faculty committees between the President and the Trustees."

Lyman-Campbell agreement

As I understand the recent history in this area of appointments, President Lyman and Mr. Campbell agreed in 1971 to modify the procedure with respect to Senior Fellows, so that now the President refers Mr. Campbell's candidates to the vice-president for Public Affairs who in turn appoints an ad hoc faculty committee to review the appointments before the President recommends them to the Board. But with respect to the 30 senior research fellows and the 10 research fellows, so far as I can tell the President has no role in the procedure, except to be informed of the director's intentions.

The final hiring authority for 40 of the 68 fellows resides in the director. As to the suggestion of John Moore, the associate director of Hoover, in the *Campus Report* of May 18, that review of these appointments is unimportant because they are term appointments of five years or less, those term appointments must be renewable. Otherwise men like John K. Emmerson, Paul C. Roberts, Edward Teller, Sidney Hook, and Robert Hessen, all of whom have held the position for more than five years, would no longer be senior research fellows.

It is impossible to find an analogue in the rest of the university for this procedure and extremely hard to invent one. I can only compare the director's appointment of a senior fellow to a dean's appointment of someone to a department with a review by an ad hoc faculty committee appointed by a public affairs officer but without a review of the appointment by the provost or the Advisory Board. The director's appointment of a senior research fellow or research fellow I can only compare to a dean's bypassing even the president. The director's power is in these instances virtually that of a co-President, to whose administrative tenure the 1959 regulations compares the director's.

Again, looking to the future, any inquiring body would want to question the propriety of the director's power over appointments. They would want to ask, I should think, why these appointments bypass the provost and the Advisory



Board when the latter are involved in reviewing what seem to be the most short-termed and relatively minor appointments to positions in teaching, research, or both.

When we step back and look at this entire set of anomalies in Hoover's governance and appointments, we must ask, and I should think any body of inquiry should have to ask, the reasons why they exist. The obvious answer is that Hoover as a research institution has a purpose which is different from that of the rest of the University. But what, we and any body of inquiry must further ask, is that purpose and does that purpose in fact necessitate these anomalies in governance and appointments?

Political Mission. Herbert Hoover, in the first paragraph of the charter, gave his answer to the first question. They include the now famous statement that:

The purpose of this Institution must be, by its research and publications, to demonstrate the evils of the doctrines of Karl Marx—whether Communism, Socialism, economic materialism, or atheism—thus to protect the American way of life from such ideologies, their conspiracies, and to reaffirm the validity of the American system.

The document contains other, less famous statements by Herbert Hoover about the political ideals and causes the Institution must espouse in its research and publications:

Ours is a system where the Federal Government should undertake no governmental, social, or economic action, except where local government or the people cannot undertake it for themselves.

The over-all mission of this Institution is. . .to. . .sustain for America the safeguards of the American way of life. This Institution is not, and must not be, a mere library.

When the entire document of May 21, 1959, was published some 10 months later in the *Stanford Daily* of March 29, 1960—apparently as the result of some investigative reporting by the *Daily*—the outrage of the faculty led to the Trustees' disclaimer that they "did not contemplate that Mr. Hoover's statement. . .would be interpreted as university policy" and that they stood for the principle of academic freedom. And I know that it has become a commonplace to insist that the Institution either never took seriously Mr. Hoover's definition of the Institution's purpose or that the Institution has transcended that definition. But I think we and any inquiring body must ask whether or not that commonplace is true.

Institution seeks influence

I want to emphasize the importance of this question being in the charge of any body of inquiry by arguing that there is a prima facie case for a second crucial anomaly in the relationship between the Hoover Institution and the rest of Stanford University: that Hoover, as an institution, seeks to influence political policy along lines which are ideologically conservative and thereby remains loyal to its founder's objectives.

I want to underscore one point in this position before I argue on its behalf. I am going to discuss the institution as *institution* because I think the institution and its objectives are to some extent different from its members and their individual objectives.

While this distinction may seem paradoxical, I think it is valid because of the powerful role which the Director and his immediate assistants play in appointments and in allocating the institution's funds. It is therefore entirely possible for individual fellows of the Institution to engage in research and publications which are not intended to influence policy and are not conservative in ideology, while the Director and his immediate assistants are shaping the Institution's dominant role of influencing political policy along conservative lines.

Here I think the statement, quoted in the *Daily*, April 19, of Prof. Alex Dallin, for seven years a Senior Fellow at Hoover, is crucial. "Professor Dallin said he left Hoover in part because he perceived violation of academic standards by an 'inner sanctum' of conservative activists whom he

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Manley. . .

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does not Stanford necessarily help push such causes? Is our value as a University not employed on behalf of a political mission that the University, as such, has no business advancing?

Some look at these questions and shout: liberals! Your motives are suspect. Witch hunt!

This is a curious response for academics to make. By calling attention to the motives of the questioner one conveniently deflects attention away from the question. The issue now does not concern the validity of the initial question, but the motives of those who ask it.

I cannot stand here and tell you that Hoover's conservatism has nothing to do with my concern. I cannot stand here and tell you that if Hoover were a liberal think tank I would be raising these questions.

But I can say that if Hoover were liberal and if it were engaging in the kinds of political activities for the left that it performs so successfully for the right, someone would damn well wonder what such an organization is doing on a university campus—and they would be correct.

The bottom line is this.

I believe that millions of dollars from right wing and from conservative donors have poured into Hoover and established within Stanford University the leading conservative think tank in the country.

This necessarily involves Stanford University, directly and indirectly, in aiding the political cause of conservatism. I believe that as long as the Hoover Institution, as a research organization, remains part of Stanford University, it will continue to divide the Stanford community, embarrass those who believe the University should be nonpartisan, endanger the political independence of the University, and call into question the most precious asset a University can have: reputation and legitimacy among the American public.

You have an opportunity to consider supporting a responsible study of such questions. I do not know how you will vote. But I appreciate the opportunity of appearing before you and expressing my concerns. We all care deeply about this University, on that much we can agree, and I hope you take steps to protect it from becoming overly connected to one political faction and used in ways that will, in time, erode the very thing that makes Stanford an attractive target for capture: our reputation as a nonpartisan institution, on which nothing less than our legitimacy is based.

Harwood: Petitioners used a double standard of partisanship

Following is a paper on the Hoover controversy by Edwin Harwood, a national fellow at the Hoover Institution:

A week or so ago, one got the impression that the "partisanship issue" had been eclipsed by the "governance issue" in the Hoover controversy. Yet in their May 25th *Daily* article, "Hoover and Academic Freedom," Rebholz and Manley suggest that the partisanship issue is still very relevant. If Hoover is involved in political activity, they assert, this "contradicts the University's commitment to nonpolitical activity." Elsewhere they suggest that Stanford ought to be committed to "nonpolitical, nonpartisan and politically independent values."

All along the organizers and other faculty who signed the petition have claimed not to have been motivated by any partisan bias in their demand for an inquiry into Hoover's ties to Stanford. No doubt some of the signers were sincere in claiming not to have been motivated by political partisanship—"a liberal witch-hunt of conservatives" as Stanford professor Alphonse Juilland expressed it.

But is this true for all or even most?

It is quite proper to ask this question because it bears on the issue of whether a double standard is being applied to Hoover and whether Hoover has been singled out primarily because a number of Hoover Fellows do in fact take policy positions perceived as being conservative by others.

Among those leading the Hoover petition drive is Prof. Ronald Rebholz. In 1971, Rebholz was among the signers of an "amicus curiae brief" delivered to the Stanford Advisory Board which was investigating the case of Bruce Franklin, a professor who was eventually dismissed from Stanford for inciting individuals to violent activities. In fact, of the 38 signers of the 22 page Franklin brief, the names of 11 appear on the Hoover petition.

Now, the sincerity of *this* group can legitimately be questioned. Rebholz and other Hoover petition signers claim to be concerned about the threat that Hoover's alleged political partisanship poses to Stanford's "reputation" and "academic integrity."

Yet, Rebholz and the other 10 faculty who signed both documents argued that Franklin's incitement to others to engage in violent disruption was merely the exercise of his free speech. In their view, it wasn't Franklin's ferocious demagoguerie or incitement to mob violence that posed a threat to Stanford's reputation or academic independence, but rather Stanford's efforts to remove him!

That 1971 brief contains some interesting remarks. The signers affirm that "it is generally conceded that every sort of political opinion not only has the right to be heard but has the right to assume rude forms, even the nonmalicious slander of public personalities. In our kind of political system it would seem that the politician, as Bernard Crick has noted, necessarily 'lives in a world of publicity,

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Juilland, McCarthy, Sherby comment

Following is a memo to the Faculty Senate from Profs. Alphonse Juilland, French and Italian; John McCarthy, computer science; and Oleg Sherby, materials science engineering:

We are gratified by President Kennedy's "Comments on the Hoover petition," which should put to rest the turmoil stirred up by the political charges made by Professors Rebholz and Manley, and clear the air for a fruitful discussion of relevant issues. We are also satisfied that the petitioners now concede that political considerations have no bearing on the debate (*Daily*, May 18). We urge the Senate to discuss the issues in the spirit of President Kennedy's statement of May 17:

The important issues, it seems to me, have to do with governance and appointments, and not with who has what kind of politics. Consideration of the latter not only is an improper criterion for appointment or evaluation under our principles of academic freedom, it can also turn a discussion into one that is unnecessarily strident on both sides.

As for our views concerning an inquiry into the Hoover's governance and appointments, they are best expressed in the cogent letter addressed to President Kennedy by Professor Rhinelander, who concluded that:

The current requests for an inquiry seem rather to assume that the issues raised have never been recognized and therefore should be looked into. But such an assumption is mistaken. A new inquiry would merely repeat former inquiries without adding anything of significance, as far as I can see.

The facts invoked by Professor Rhinelander in support of his conclusion appear to us extremely persuasive:

1. There is more diversity of opinion among the fellows of the Hoover Institution today than there was 25 years ago. Hence there is less reason to be concerned over the "partisan" character of the institution now than there was then.

2. Commitment to a partisan position or partisan ideology can seriously threaten the "free market of ideas" when such commitment is concealed or misrepresented. But we have the opposite position here. The current objection is that the Hoover Institution's links with the Reagan administration have been publicized too extravagantly, not too little. Thus nobody could claim to have been misled or deceived.

3. The notable progress made by the University over the past 25 years is ample evidence that its academic prestige has not suffered from its association with the Hoover Institution, which has been widely known for having a special orientation (*Campus Report*, May 18).

However, if further study appears desirable, we believe that it could be best handled by asking President Kennedy to look into the situation in the context of existing agreements between Stanford's Board of Trustees and Hoover's Board of Overseers, and let us know what action, if any, he considers appropriate.

Rosenberg concern for partisanship

Following is a partial, rough text of remarks by Prof. Leon Rosenberg, medical microbiology, to the Faculty Senate May 26:

The so-called conservatism of individuals is *not* what concerns me.

The issue which concerns me is institutional partisanship. My example is taken from the annual report of the Hoover Institution.

When the Institution sponsors a seminar—the Hoover Seminar—which brings to the Institution the councillor to the President, the Secretary of Defense, the Deputy Assistant to the President, the Secretary of Transportion, the former Assistant to the President for National Security Affairs, and the Associate Director of the Office of Management and the Budget—that is the entire list taken from the director's annual report—then I am concerned. The Institution is proudly displaying its Washington connections.

I believe an educational institution needs to be a custodian of heterodoxy. I strongly believe that to be partisan institutionally to the most powerful force in society is a very dangerous position for an educational institution.

And I should interject that my concern is Stanford University and its image. If the Hoover Institution has been imprudent, a question about which I'm certain many would disagree, that is not my concern.

After the description of the Hoover Seminar, attention is called in the annual report to a "Washington Seminar." I was interested to know if the attendees at these seminars were also selected in a manner suggesting partisanship and tried to find out the guest list. Several phone calls were unavailing.

I then concluded that the petition which brought this question to the Senate was entirely appropriate.

I agree that there is, and always has been, a partisan image associated with Hoover—one which he gave to it in the oft-quoted remarks which describe its mission.

The current Washington connection—of which the Institution may, of course, properly be boastful—to my mind raises serious questions for the University, which should cause the University to review and reconsider the rules under which the two institutions interact.

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was unable to influence from inside the Institution." It is possible to be "in" Hoover without being representative "of" it.

Let me make my case by a brief look at the record. In the same March 29, 1960, issue of the *Daily* which published the charter, Glenn Campbell, in an interview, is quoted as saying that the change of Hoover's title from library to institution reflected its transformation to a center for a dynamic research program and his determination to build up Hoover's reputation as an institution for research and publication.

The research, he said, would portray the growth and spread of Communism. The publications would be designed to give aid to government policy formation. Asked about the famous passage from Herbert Hoover's statement, he replied: "I see nothing wrong with it, do you? There are evils in Marxism and I hope we expose them."

When Hoover's new domestic program was announced in 1972, Martin Anderson, who proposed it, said *(Daily*, 8/8/72) "We are now faced with very serious troubles at home in a large number of areas" and went on to suggest that the mission of the program would be to address the causes of those troubles and, by implication, remove them.

The *Daily* of 1978 paraphrased Thomas G. Moore's hope that the institution's frequently conservative viewpoints were already having some influence on Government attitudes, especially in areas of deregulation.

In Hoover's annual report of 1981, Glenn Campbell said that the "highlight of the year was the election of honorary fellow Ronald W. Reagan as President of the United States."

The Annual Report of 1982, which is in today's Senate materials, speaks for itself. By running my eye down the pages I count the word "Reagan" 36 times, not including synonyms like "the president" or "the White House." There are six pictures of President Reagan; at least seven of his advisers appear in the pictures (sometimes more than once).

The elaborately printed center-section (pp.24-29) quotes the President as saying: ". . . those of us who are involved in government owe so much to the Hoover Institution. Under the leadership of your able director, Glenn Campbell, and with hard work and diligence, you built the knowledge base that made the changes now taking place in Washington possible." Mr. Campbell quotes much of the passage on p. 11, and goes on to boast that, since January 1981, more than 30 scholars and former fellows have served in positions in the executive or legislative branch of the federal government or as members of boards and commissions (pp. 12-13).

These features of the Report reveal a good deal of the Institution's ideological position. The section *Publications and Public Affairs Program* reveal some of the ways it makes that position influential. I am thinking primarily of pp. 64-67 in which in the Institution's methods of "research dissemination" are catalogued.

For me this account reaches a climax at the bottom of p. 66 where we are told of the growth of the the op-ed program. It is hard for me to imagine any department or school of this university boasting of the number of newspaper editorial essays its members had published, and the difficulty resides in my perception that no department or school shares Hoover's political mission.

Since the debate on Hoover began this year, several people have tried to downplay the Annual Report as a p.r. document not to be taken seriously. I think this view is mistaken, because the Report is clearly an indication of the Director's and the Institution's political objectives and ideology.

If the report is also an instrument of public relations, and probably it is, we must ask to what areas of the public it seeks to relate. I think of two: donors to whom the report's ideological bias would appeal; and the media, who seek the "views of Hoover scholars on current events," as Mr. Campbell says on p. 19, and who do so, I think, when they want a conservative perspective on a controversial political issue.

I would suggest that Hoover uses its report, among other instruments, deliberately to create its perceived reputation as a conservative think-tank in order to influence political policy through the media as well as through the political figures and institutions for whom it provides the knowledge-base.

If there is, as I have argued, a prima facie case for the Hoover Institution's being anomalous in its having a political mission, then the reason for its anomalies in governance and appointments becomes clear: the Institution needs a Director with an ideology which Mr. Hoover or his institutional surrogate approves, and the Director needs a large budget, which he controls, and the right to appoint, with virtual autonomy, the fellows of the Institution so that the Institution can carry out its political mission.

If this analysis is correct, the major question for a body of inquiry to ask is whether or not such an institution is compatible with Stanford University's proper insistence that, as a University, it is politically independent and does not engage in partisan political activities.

To those who have said that I would not favor a comparable inquiry into a department or into an institution like Hoover with a liberal bias, I can only respond, with respect to departments, that no department of this university has the anomalies of governance, budget, appointments, and political mission which characterize Hoover.

With respect to a liberal institution like Hoover I would want to see if it were as anomalous and as compromising of the University's integrity as I consider Hoover. If it were, i think it would warrant a comparable inquiry.

I move the resolution before you:

The academic senate urges the Board of Trustees to initiate an immediate and independent inquiry including a public report, on the relationship between the Hoover Institution and Stanford University.

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calumnity, distortion, and insult,' " (p. 10, Brief, Amicus Curiae, Nov. 9, 1971).

Is this to be taken as a defense of even the most rabid and vicious demagoguerie? More to the point: would Franklin's supporters have rushed with a similar Amicus Curiae brief to the defense of a Klu Klux Klan adherent or Nazi who incited students on campus to "thrash" property and who peppered his writings and speeches with justifications for racially motivated violence?

Franklin went quite beyond mere "distortion and insult" as any familiar with his speeches on the Stanford campus will recall and the targets of his apoplectic fury were not just limited to politicians. But the crucial point is that he was found after due academic process to have incited others to engage in violent *acts*.

For his defenders to argue that his conduct was the innocent expression of free speech when it posed such a clear threat to the legitimate academic functions of the university is so patently ludicrous as to suggest a *prima facie* case for assuming that their motives in backing Franklin were primarily partisan and that it was not the issue of "free speech" as much as the fact that Franklin was a man of the Left that prompted their support; indeed, Franklin made no bones about being a man of the very extreme Left.

Is this group really committed to the value of Stanford remaining "nonpartisan" and "nonpolitical"? If it is, then why did Rebholz and the other 10 faculty have no objection to Stanford taking a partisan position on certain matters back in 1971? On page 6 of the "Amicus Curiae brief," they affirmed that where there are questions "which are essentially educational but which have political implications. . . the university cannot remain neutral if it is to remain faithful to the principles that justify its existence."

One has to cut through some tortured phrasing to get to the point but the point appears to have been that "war-related research" and "recruitment by the military and military contractors" were presumably areas where the university could take a politically partisan stand as an institution. Although the wording is murky at points, there is a hint that the university might also establish a policy that would abridge an individual's freedom to do research that was "war-related."

Institutional partisanship

The fair question to raise is the obvious one: who is to decide which "principles" "justify the university's existence" such that Stanford *as an institution* could legitimately take a partisan stance and infringe on the right of individuals to conduct research relating to national defense or to come on to the campus to recruit for the military or firms that held defense contracts? Surely it could be argued with even greater validity that defense related research in support of our free society against totalitarianism is fully consistent with academic freedom since such freedom cannot survive unless the free society also survives.

You can't have it both ways. Either the university and its individual institutional parts can take a partisan position on anything it desires or it can't.

As the Hoover controversy began to develop momentum, Rebholz and Manley came to the view that a center may not need to have expressed its partisanship in an official way to be considered partisan.

Thus, in their May 10 *Stanford Daily* article, they remark that "just because (an) Institution does not take formal positions on issues, does this make it nonpolitical?" They answer: "Perhaps. But we doubt it."

More recently, in the May 12 issue of the *The Stanford Daily*, Manley appears to have resolved any doubts on this point. Noting that institutions like Brookings, the American Enterprise Institute, among others, do not, as far as he knew, take official positions on issues, he asks, "can anyone seriously believe that because these organizations don't take stands on issues, they are not political? . . . Just because these organizations are comprised of individuals and do not take stands on issues hardly makes them apolitical research organizations."

While I am reluctant to provide helpful pointers to the opposing camp, I must say that I think Manley and Rebholz have taken their saw and turned it on their own limb in moving the argument in this direction because if *official* partisanship by an institution is no longer at issue, what kind of partisanship is?

I see only two alternative conceptions of partisanship open to them:

1) that an institution is improperly partisan when too many of its resident scholars express partisan views of a certain complexion.

In this view, an institution is improperly partisan because of its lack of diversity or balance. (Manley and Rebholz give no help to their camp, by the way, when in rebutting Prof. S.M. Lipset's contention that Democrats outnumber Republicans, they claim it is necessary to know whether these Democrats are liberal or conservative to determine if Hoover is sufficiently diverse politically. (May 18th *Campus Report*). *If the partisanship of Hoover fellows is immaterial, as Rebholz and Manley state repeatedly, why rebut a point that will reinforce their opponents suspicions that they are in fact concerned about Hoover's political diversity?*

2) that when some more powerful or dominant group within the institution enforces its viewpoint on others either through the appointment or promotion process or more directly by dictating the political "line" others must adhere to, then it is partisan in ways inconsistent with the value of academic independence.

If the second condition existed, it would be wholly legitimate for the academic community to be concerned. But if the evidence suggests no more than that the first type of partisanship exists, then the demand for an inquiry into Hoover can quite properly be viewed as an attempt to abridge Hoover Fellows' academic freedom.

Manley and Rebholz have not provided any evidence that the second alternative holds in the case of the Hoover Institution beyond their bald assertion (May 10 Stanford Daily) that some Stanford faculty and the media "discern in Hoover a large and dominant core which sets the tone and tends to pursue overwhelmingly a fairly consistent political line."

Do they mean to imply that some Hoover adminstrators enforce their political views on other Fellows? How has this been done? Has the Hoover Press been instructed to make sure that manuscript submissions meet certain political criteria? Were candidates for appointments required to pass a political test?

Such innuendo is fine for drumming up business for a petition drive. But in demanding an inquiry before having material evidence in hand to support their allegations, their action raises quite legitimate fears that what is involved is a fully partisan undertaking—in short, a witch-hunt.

The fact that a double standard is being applied to Hoover, despite the petitioners' claim that *liberal* partisanship in a research center or institution would also pose a threat to the university, has already been raised and by itself is cause for concern.

But the much more troubling issue is the threat to academic freedom that Manley's and Rebholz's concept of partisanship poses, especially when there are good grounds for suspecting that some among the petition signers, including Rebholz, were themselves motivated to ask for the inquiry because of partisan political bias. (This was, indeed, suggested in the May 16th *Los Angeles Times* editorial on the controversy. But I am very reluctant to rest a case on editorial commentary from outside the campus. For me, the Franklin Amicus Curiae brief is alone quite sufficiently damning.)

If the Faculty Senate does decide to pursue the "partisanship" issue, the inquiry could well leave our nation's academic community with the suspicion that Stanford allows its machinery of governance to be used for partisan political vendettas. And if that proves to be the case, then Stanford's academic integrity and national reputation will truly be at risk.

Gere: Stodgiest colleagues read *Daily*

Following are rough notes used by Prof. James Gere, civil engineering, in speaking to the Faculty Senate May 26:

Normally, a request for an inquiry on this campus would be met with a casual shrug and a reaction of "sure, why not? It can't do any harm." However, this particular request for an inquiry is clearly unusual, and it has not been met with a shrug by anyone that I know.

Instead, I have noticed even my stodgiest colleagues reading *The Stanford Daily* to get the latest reactions. Editorials have appeared in several local newspapers, and *The New York Times* and *The Washington Post* asked to attend this meeting.

Reasons for this attention are clear. Staff of the Hoover Institution have been called to Washington in various roles and ideas generated at Hoover have been drawn upon by people in political positions. President Reagan has drawn upon Hoover in a variety of ways and has praised its accomplishments.

Research has influenced policy—isn't that the goal of research?

It seems clear that it is because of these ties with the Reagan Administration that so much attention has been drawn to this resolution. The public is not the least bit interested in matters of governance and appointments, which is what an inquiry should be about, as President Kennedy has said.

Some of the people who signed the original petition, calling for an inquiry, no doubt had legitimate concerns for governance and appointments.

Others, I'm sure, saw the petition as a chance to take a swipe at an organization that happens to be viewed favorably by the Reagan Administration, which they don't like.

Those of us who signed the counter-petition also had various motives. Some were seriously concerned about the welfare of the University; others no doubt saw it as a chance to swipe back.

No matter what the motives of the signers, we have to face the hard fact that the inquiry has become a political football. If we go ahead *at this time*, it will be viewed as a politically motivated move. It will certainly appear in the papers in that light.

I believe this will be terribly unfair to the people at Hoover, and I believe the political aspects will prevent any serious discussion of the governance issues, which are in-house matters, not national political matters.

Instead of "initiating an immediate and independent inquiry," as the resolution calls for, which is a very intimidating and threatening thing to do, I prefer that we oppose the resolution and instead give the Board of Trustees, as part of its ongoing process of continually reviewing University policies, an opportunity to review its relationships with the Hoover Institution at some future time, focusing on matters of governance and appointment. This is something that I am led to believe they planned to do anyway.

I am convinced that the adoption of this resolution by the Senate will do unnecessary harm to both the Hoover Institution and Stanford University, and I oppose the resolution.

Juilland: We're all overexposed

Following is a May 23 statement by Prof. Alphonse Juilland to Prof. Alexander L. Fetter, chairman of the Academic Senate.

I wish to thank you for the courtesy of inviting me as a guest to the Senate meeting of May 26. Please note that I do not intend to participate in the debate on the Hoover question.

Profs. Manley, Rebholz, and myself share at least one thing in common: we are all three overexposed. For weeks now, we have been conducting our debate in the media. We had our say, and an abundant say it was. Our respective positions are well known to the Senators, who have read or heard every argument and counter-argument we could muster. At least for myself, I do not think that I have anything of substance to add, unless it be scoring debaters points or delivering assorted pieces of florid rhetoric. I feel that I have reached the fatidic point at which discretion becomes the better part of valor.

I believe that the best service Profs. Manley and Rebholz as well as myself can now render the University is to allow the Senate to discuss the issue in peace, without interference on our part.

I shall be an interested and attentive listener; but I promise to keep quiet.

Reservations, optimism as debate ends

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Gillespie still had some reservations: "If we start attacking covenants, it could have a chilling effect on donors of all persuasions," he said. "Universities always evolve. . . the Hoover Institution has moved from an incredibly narrow focus. For people to go and dig up corpses of the past is rather sad. The mania to investigate disturbs me."

Manley was more optimistic: "The people who raised questions had their concerns considered and seriously responded to," he said.

"Kennedy's interview with *The Daily* really defused it," another outside journalist observed. The president told a small cluster of reporters that he "would not have supported the original version" but was "perfectly comfortable" with Bach's substitute, as passed.

—**Bob Beyers**

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

implementing such plans; maintain files; attends wkly mtgs of mgrs; participates in O&M policy decisions; prep monthly, quarterly & annual reports; QUALIFICATIONS: BA or BS in Acctg or Business Admin preferable; MBA desired but not required; exp w/ ADP applications w/ special emphasis on Hewlett-Packard hardware & software.; C08; $2464-3139.

36306-AW (JCC:2420) SPONS PROJ ADMIN II: Performs basic proposal & award review & admin; assisting exp'd Contract Officers; does analytical special studies related to sponsored agreements; assts Dir, Assoc Dir & staff in determining needs; developing solutions & procedures to deal effectively w/ specific & genl problems/requirements related to research admin; analyzes & interprets sponsor requirements, gov't regulations & Univ policies & procedures; QUALIFICATIONS: exp in res univ or similar environ; excel writing skills; demonstrated ability in analytical problem-solving; knowl of basic acctg; some knowl of federal gov't organization & admin procedures; some acquaintance w/ tech of financial & economic analysis; BA or equiv exp; MBA desirable; ability to travel for periods of up to a wk.; C06; $1854-2312.

31841-VW (JCC:3148) DEVELOPMENT OFFICER II: Respon for coordinating annual fund & large gift programs in a given geographic territory, incl Spec Gifts, Personal Solicitation & Phone Appeal programs; establish a high level of visibility & involvement w/ approx 300 volunteers; educate volunteers to univ programs & prov nec training; answer questions & complaints; keep volunteers informed of program progress situations & indiv that would prov financial support & have the skills to deal w/ them effectively; represent Stanford in the field in a variety of ways which could have important impact on a prospective donor's attitude toward Stanford & support the Univ; QUALIFICATIONS: ability to establish & sustain an effective volunteer relationship; ability to describe Univ goals; demonstrated understanding of financial/tax implications as it relates to gifts & gift procurement; good mgmt & admin knowl; good interpersonal skills; knowl of sales & nontangible marketing; excel written & verbal skills; college exp helpful but not required.; C07; $2113-2724.

26672-AW (JCC:5108) PROGR SCIENTIFIC II: Fixed term 6/1/83-8/31/84; prov support to microcomputer-related projs administered by IRIS div w/in CIT; asst w/ setup & operation of micro lab for software/-hardware demonstration & evaluation; write procedures & documentation; asst w/ training & scheduling of lab assistants, prov consulting to lab users; asst w/ planning & implementation of micro-mainframe commu & file transfer serv; asst w/ tech investigation of special applications of microcomputers, particularly in Humanities; QUALIFICATIONS: Bachelor's degree and/or equiv exp; approx 2 yrs micro & mainframe applications computing exp in an academic environ; exp w/ micro commu/file transfer software; exp in tech writing & procedures writing, class teaching, etc; excel oral & written commu skills; exp giving directions & overseeing others; knowl of Stanford academic computing needs extremely helpful; knowl of Humanities applications; proj related exp.; C06; $1854-2312.

26673-AW (JCC:5108) PROGR SCIENTIFIC II: Fixed term 6/1/83-8/31/84; prov support to microcomputer-related projs administered by IRIS div w/in CIT; conduct res in the use of microcomputers by the academic community; coord eqpt deliveries, assembly, inventory, troubleshooting & maintenance; develop curriculum for, & teach, a range of micro-related courses, particularly related to IBM PC; define & document procedures; asst w/ newsletter; res info & write short doc for users on various micro-related topics; QUALIFICATIONS: Bachelor's degree and/or equiv exp; approx 2 yrs evaluation res exp incl needs assessment, design, implementation, analysis & reporting; familiarity w/ quant & qual tech; approx 2 yrs computing exp in academic environ, using mainframe & various micros; exp w/ micro commu/file transfer & text proc software; mainframe exp incl use of text editor/formatter, data base sys, statistical programs; knowl of Stanford acad comp needs & of Humanities applic; excel written & oral commu skills; exp in writing procedures, etc.; C06; $1854-2312.

19167-JB (JCC:6412) SCI & ENGR ASSOC II: Work on the development & maintenance of linear accelerator & associated free electron laser experiments; design & oversee construction & implementation of part of the accelerator, cooling sys, control & measurement subsys & instruments; design some of the accelerator vacuum & mechanical sys; become familiar w/ the operation of the linac; QUALIFICATIONS: must demonstrate a broad spectrum of knowl & interest in analog & digital circuitry as well as vacuum & accelerator technologies.; C99; $2113-OPEN.

29449-LL (JCC:1964) UNIV MANAGER I: Mgmt of the Admissions Offc staff & procedures when the Dir is out of the offc (8-10 wks/yr); initiation, implementation & evaluation & oversight of programs & projs for minority recruiting; initial evaluation of one-half (2,500) of the applications to the program; interviews of candidates or prospective applicants to prov info about the program; professional representation of the School to various publics; supvn of an interna'l applicant academic expert & oversight of the academic evaluation of all interna'l candidates; supvn of a sec/receptionist; QUALIFICATIONS: prior managerial exp; ability to relate well to professional school applicants; strong commu & interpersonal skills; MBA or other approp master's degree; prior exp in a univ setting in admissions; familiarity w/ MBA programs; exp in working w/ minority group applicants strongly preferred.; C07; $2113-2724.

21693-AW (JCC:2270) FIN/MGMT ANALYST III: Respon for developing fiscal programs of O&M which amount to about $16 million for both cost ctrs & the Univ Operating Budget; full respon for budget prep, data collection, problem solving analysis; the formulation & evaluation of alternate solutions; the prep of periodic or special reports whether manual or data processing; capable of supvn & directing the work of 2 people in Service Ctr Acctg group; interfaces w/ other financial areas of the Univ; interprets their requirements, develops a plan of action for O&M & gives direction to other O&M mgrs on

Bargaining Unit

39483-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; handling & restraining of mice, admin of medications, tumor implantation & collection of blood; a variety of immunological tech required incl cell separations, immunofluorescent staining, radioactive labelling of cells, cellular cytology assays & radioimmunoassays; maintenance of continuous cell lines & tissue culture tech; working knowl of immunology for prep of protocols, & analysis of experimental data; QUALIFICATIONS: some lab exp nec particularly in area of immunology & biological sci; knowl of immunology highly desirable; an animal model to verify modification of disease by interferons & monoclonal antibodies will be studied; good judgment & explicit lab notebooks are critically important.; A24; $ 8.65.

32124-TC (JCC:5652) LIFE SCI TECH III: TMS Unit; certified X-ray Technologist to work in radiology res labs; may be requested to work an occasional night or wkend; procedures are mostly animal related; computerized Tomography, digital imaging, as well as routine radiograph are employed in res labs; willing to perform all aspects of lab work; QUALIFICATIONS: CT exp as well as some spec procedure (angio) exp strongly desired; grad of an approved A.R.R.T. program; A.R.R.T. registered; have Calif License.; A30; $ 9.97.

94713-JM (JCC:6696) PR S&E TECH MECH TMS Unit; assemble klystron guns for production & R&D; coat cathodes; outgas gun parts & assemblies; sinter cathodes; operate hydrogen & vacuum furnaces & induction heaters; maintain vacuum sys & eqpt needed in gun production; braze, spot weld, heliarc weld & solder; QUALIFICATIONS: AA degree or equiv; several yrs exp working in clean room environ; must have solid knowl of operating principles & use of helium leak detectors, RF induction heaters, brazing furnaces & vacuum pumps; familiar w/ all phases of klystron production brazing soldering, heliarc & spot welding, outgassing, ceramic spraying, sintering.; A39; $2148. APPLY AT SLAC

39119-JB (JCC:8606) BUILDING SYSTEMS TECH: TMS Unit; 8:00-4:30; Under min supervision of a shop suprvr performs HVAC; pneumatic & elec control instrumentation system work in the design, installation, maint, operation, monitoring & balancing of equipt & controls of complex building systems; maint records of operations such as pressures, temps, flows & service functions performed; periodically test, adjust & calibrate pneumatic, electric & elect controls; maint, inspect, diagnose & make repairs to steam, water, refrigerant & air dist systems; QUALIFICATIONS: 2 yrs control system app, installation, calibration & operation; certifiable training & education in control theory inc electronic controls & computer automated systems; completion of a recognized air cond apprentice program/at least 6yrs exp in total bldg syst maint & repair, 1yr of exp must include maint & repair of central multizone a/c systems; A37; $11.80.

Nonexempt

31172-PM (JCC:1755) LIBRARY SPEC II: Fixed term, 6/1/83-5/31/84; performs duties in Catalog Dept; processes monographs on-line, incl searches MARC & RLG files, compares book to bibliograph record, transfers matched bibliographic records to on-line acquisitions records; prepares authorities incl: prepares name headings by searching SUL card catalog, LC name authorities microfilm edition or on-line source & types authority card, series headings prepared by searching card catalog LC monographic series printed catalogs & creates authority record for SUL card catalog; files in SUL card catalog; keeps daily production statistics; QUALIFICATIONS: typ 40; work w/ good judgment based on good understanding of processing policies; prev exp w/ RLIN II or other automated sys; prev lib exp, preferably in technical processing operations; high degree of accuracy in typing; ability to lift heavy catalog trays (approx 15 lbs.); reading knowl of at least one non-English Western European lang; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $1310-1373.

31174-PM (JCC:1755) LIBRARY SPEC II: 50%, 8-12 noon; some evening & wkend work; performs duties in the Physics Library; respon for opening the Lib, for all set-up procedures & for staffing the serv desk 8-12; answers info'l, directional & reference questions using printed & automated sources, incl RLIN II; maintain & compiles circulation statistics for annual report & for SUL sampling statistics; in charge of the reserve shelves; prep overdue notifications & deals w/ patron appeals regarding bills, problems, etc; QUALIFICATIONS: typ 40; require prev lib exp; ability to commu well & work w/ people; typing skills; ablity to use RLIN or other automated sys; sci bkground; knowl of SUL resources & programs desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $655-687.

33504-PM (JCC:1755) LIBRARY SPEC II: Searching on RLIN & in other bibliographic tools for cataloging records; inputting records, as revised by catalogers, into RLIN; initiate & follow-up on FASTCAT & TEMPCAT procedures for titles w/out acceptable records; maintaining files & documentation; revising filing in main catalog, & filing, unrevised, into dept files; training new staff; QUALIFICATIONS: typ 45; ability to exercise judgment & initiative in relation to complex tasks; accuracy & attention to detail; ability to set work prior that meets the needs of dept; prev cataloging exp desirable, esp w/ automated sys; good typing & filing skills; RLIN exp desirable; contact: Dick Miller, 497-6401.; B12; $1310-1373.

31176-PM (JCC:1763) LIBRARY SPEC III: Performs duties in Serials Dept; supv day-to-day operations of Continuations/Maintenance Unit of Serials Records Div; receiving & claiming serials mat'ls & processing invoices for serials mat'ls; maintains corresp pursuant to completion of reception/claims & invoice-processing tasks; supv 3 Lib Specialists; supv & performs manual & on-line claiming of missed issues, defective issues & lapsed subscriptions; prov bkup to Head, Serials Records Div; QUALIFICATIONS: typ 45; require prev tech processing exp, prev supvry exp, demonstrated ability to commu effectively, both orally & in writing; demonstrated clerical & organizational skills; ability to learn RLIN II or other automated sys; prev exp in serials records work desirable; contact: Bob Johnson, Green Library, Room 223 (497-3152).; B14; $1440-1514.

31175-PM (JCC:1771) LIBRARY SPEC IV: Within the guidelines of established policies & procedures & subject to close review until these are learned, performs the following duties in Swain Lib of Chemistry & Chemical Eng: Oversees day-to-day operations of the lib, including acquisitions, catalog maint, circulation, course reserves & serials, responsible for the lib in the librarian's absence; suprvs 1.75 lib specs; provides reference services in the chemical sciences using the printed & online ref tools (RLIN, DIALOG, SPIRES); QUALIFICATIONS: Previous lib exp; public service exp & suprv exp; know of/or exp in the sciences (pref in chemistry); prev automated systems or RLIN exp; know of German; type 40; contact Bob Johnson, Green Lib, Room 223 (7-3152).; B16; $1593-1671.

39454-PM (JCC:2078) ADMIN ASST I (N): Assist Business Mgr of Dept of Family, Community & Preventive Medicine in the admin of all common serv of the Dept; manage all research grants & operating Budget; prep budget reqs, handle details of monitoring & reporting process, financial analyses & forecasting; handle all purchasing of scientific eqpt; personnel admin for faculty, exempt & non-exempt staff; prep, interpret & apply all policies & procedures for the smooth running of the Dept; QUALIFICATIONS: exp in Univ/Hospital admin procedures & policies; res grants & contracts admin exp, preferably at Stanford; exp in budgeting & forecasting; demonstrated supvry ability; proven interpersonal capabilities & commu effectiveness; typing nec to handle confidential mat'l; send appl/resume to Cindy Spain, HRP Bldg., Room 105C.; B16; $1593-1671.

36386-BP (JCC:2202) ACCOUNTING ASST II: Prov tech support for univ capital eqpt inventory control sys; asst in maintaining the sys in current status thru use of WYLBUR text editing via on-line computer terminal & related software sys currently under development; respon to inquiries regarding govt & Univ inventory procedures, schedules, forms use, etc; maintain univ property mgmt files; screen purchase orders for all capital eqpt purchases; asst in daily screening & approval Purchase Reqs & Capital Eqpt Inventory forms; prov assistance & guidance to student help; QUALIFICATIONS: light typing; use of electronic calculator required; accuracy & demonstrated ability to perform detailed acctg functions; good oral & written commu skills required; send appl/resume to M. Willis, 200 Encina Hall.; B12; $1310-1373.

31504-PM (JCC:2438) OFFICE ASST TRNEE: Respon for the maintenance of the Alumni Files; files must be comprehensive, complete & accurate; code various Alumni transactions on coding sheets in a legible manner; batch coding sheets for submission to data entry; review edits for errors & correct as required; file info cards alphabetically; answer inquiries fr Univ offcs, alumni & friends regarding info contained in file; interpret Univ policy relative to confidentiality of info contained in file; QUALIFICATIONS: typ 45; neat & legible handwriting; knowl of English alphabet; knowl of basic offc procedures; handle phone calls in a professional manner; willing to interchange job assignments; send appl/resume to Liz Trujillo 301 Encina Hall.; B00; $1078.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, June 7 in Room 270, Tresidder Union.

The sessions are open to all new employees without preregistration.

26641-BP (JCC:2454) OFFICE ASST II: Prov data entry for computer documentation; asst in production work on doc, & act as bkup for graphic artist; act as interface w/ print shops, delivering camera-ready copy to Word Graphics, picking up completed jobs, & delivering various doc to campus depts as needed; maintain master & online files; asst CIT instructors w/ courses, incl bursting, trimming, & stacking handouts, passing out course mat'ls at first sessions of classes; QUALIFICATIONS: typ 40; requires good genl offc skills & solid command of English lang; able to work on several projs simultaneously; knowl of & exp w/ WYLBUR text editing & SCRIPT text formatting sys required; SPIRES knowl & exp in the use of 3800 printer desirable; knowl of typesetting, printing, photography, & photo layout tech desirable; requires good commu & arithmetic skills; contact: CIT-Human Resources Offc, Pine Hall, Room 175, 497-9656.; B09; $1130-1189.

39283-BP (JCC:2454) OFFICE ASST II: 50%, 10-12, 1-3 preferred; serv as receptionist in the Dept of Residential Education; answers phones; opens & sorts mail; answers genl questions; scheduls appts; assts in the process of assigning students to housing; typ corresp, reports, forms, etc; maintains a variety of files requiring a knowl of the subj & purpose of each file; checks, updates & maintains lists & rosters; operates various offc machines; accepts rent & housing deposits; assts in petty cash & program records, etc; QUALIFICATIONS: ability to understand & explain complex housing sys & to enforce Univ policies; ability to work w/ diverse groups of people; work w/ numerical detail accurately & quickly; accuracy & thoroughness in written & oral commu; typ 45; send appl/resume to Chris Griffith, Escondido Village Office.; B09; $565-595.

30456-PM (JCC:2462) OFFICE ASST III: 50%; prov clerical assistance to the sec of a large research group consisting of 2 faculty members as well as several visitors, postdocs & grad students; typing drafts of manuscripts & ltrs; work on word processor, xeroxing, filing & genl reception duties; maintain offc supplies; lib searches; carry out errands, etc; QUALIFICATIONS: typ 50 tech typing exp or willingness to learn; knowl of computers & word processing eqpt desired; excel organizational skills required; ability to work independently & set own prior; send appl/resume to Dena Polyhronakis, Dept of Physics, Varian 108.; B11; $623-655.

39280-BP (JCC:2470) OFFICE ASST IV: 50%; help develop, organize, publicize & evaluate a variety of edu, social & cultural programs in the village; asst in neighborhood coordinator selection process; asst in planning & implementing the orientation for new residents; implement workshops/info sessions on program organization; serv as liaison w/ other Univ offcs; asst in prep of Village Handbook & the Village Express; prep & distribute minutes fr neighborhood coordinator mtgs; serv as receptionist, sec & coordinator in Village Ctr; select, train & supv the volunteer staff; act as a resource/referral person for residents; edit & typ corresp, rprts & Univ forms, etc; QUALIFICATIOINS: typ 45; successful exp in developing & implementing programs, initiating projs, working w/ groups of college students & faculty of ethnic bkgrounds; promoting events & encouraging participation; commu effectively both orally & in writing; send resume/appl to Patricia Brandt, Escondido Village Office.; B14; $720-757.

895-BP (JCC:2554) SECRETARY II: Secretary to faculty members at new Center for the Study of Language & Info; type correspondence, manuscripts & reports; prepare Univ forms; answer phones; make appointments & travel arrangements; run errands among Univ depts; use computer/word processing system for text-editing; additional responsibilities as

continued on next page

Permit for hazardous wastes facility drafted by Health Services Dept.

The Department of Health Services, Hazardous Waste Management Branch, has drafted a Hazardous Waste Facility Permit for the following facility:

Quarry Road and Campus Drive, Stanford University, Stanford, Calif. 94305.

The permit will authorize this facility to store and/or treat hazardous wastes under specific conditions to assure safe operation of the facilities.

This notice hereby invites comments before final issuance of these permits. Anyone wishing to submit comments should do so by either: 1) submitting written comments within the next 45 days to the address listed below, or 2) submitting verbal comments during a public hearing, to be held at 9 a.m. Tuesday, June 14, at the State Department of Health Services, 2151 Berkeley Way, Room 136, Berkeley.

All comments will be taken into consideration in preparing the final permit. All comments will be addressed in writing in the Administrative Record and available to the general public.

The draft permit and application form, operation plan, and supplements submitted as required are available for public review at the Berkeley Regional Office, Hazardous Waste Management Branch, 2151 Berkeley Way, Berkeley, Calif. 94704, between the hours of 8 a.m. and 5 p.m., Monday through Friday. The office phone number is (415) 540-2043. Written comments should also be sent to this address. The contact person is Blake Spears, permit coordinator.

Description of Facility

The facility operations involve consolidation and storage of hazardous wastes prior to transfer to a recycling facility or to a disposal site. Wastes will be those generated by research labs, teaching labs, maintenance procedures, and various other sources. All wastes will be stored in containers.

Types and Quantities of Wastes

The facility will handle all types of hazardous wastes except biohazards, radioactives, or explosives. The general categories of wastes and the rate capacity of the respective storage areas are:

Storage Area	Rated Storage Capacity (gal.)
Oxidizers	90
Poisons Irritants Toxics	90
Reactives	90
Corrosives	90
Flammables Combustibles	2,000

The facility is prohibited from handling the following types of wastes: a) forbidden and Class A explosives as defined in Section 173.51 and 173.53, Title 49, CFR; and b) any hazardous waste not listed in the approved operation plan.

Explanation of Draft Permit Conditions

The application, operation plan, and supplementary documents have been reviewed and found to be complete.

All conditions and terms of the permit are required under Division 20, California Health and Safety Code Chapter 6.5 and Title 22, Chapter 30, California Administrative Code.

The General Conditions, Section III, contain requirements which provide for:

a. Item 1—list of acceptable wastes
b. Item 2—list of prohibited wastes
c. Items 3, 4, 5—safe operation of the facility
d. Items 6 and 18—recordkeeping and reporting
e. Item 7—waste analysis plan
f. Item 8—security
g. Item 9—inspections
h. Item 10—personnel training plans
i. Item 11—management of ignitable, reactive or imcompatible wastes
j. Item 12—location standards
k. Items 13, 14—equipment requirements
l. Item 15—required aisle space
m. Items 16, 17—contingency plans
n. Item 19—closure plans
o. Item 20—financial responsibility.

The Storage of Wastes, Section IV, contains specific requirements for storage.

Warning about excessive consulting

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a wise and timely action," Hastorf and Lieberman observed.

Five of the 60 faculty surveyed said they had acted both as consultants and as departmental liaison for companies involved in industrial affiliate programs with the University. No problems or improprieties were uncovered in these cases, however.

The internal audit was designed to remind faculty of their University obligations under present consulting policies, Hastorf and Lieberman said.

In March, 1978 the University reimbursed about $128,000 to the federal government from unrestricted funds after a random sample survey showed excessive consulting by those engaged in government-sponsored research.

At that time, University officials warned that any future instances of excessive consulting could lead to the recovery of funds directly from the individuals involved.

"The faculty should reread the policy on consulting activities so they're aware of its content, particularly if anything appears that might be of concern," Lieberman suggested.

He emphasized the need to inform department heads or deans in advance if there were plans to average consulting time over more than one academic quarter or to employ graduate students outside the University.

By chance, Lieberman himself was among those included in the survey. Results were published in the June 1 issue of *Campus Report*, the University's weekly newspaper for faculty and staff members.

Jobs/continued from page 24

Center expands; QUALIFICATIONS: Type 60; good sec skills; well organized; exp w/computers or word-processors desirable; willingness to take on new responsibilities as position develops; Send app/resume to Joyce Firstenberger, Ventura 16.; B11; $1246-1310.

31941-PM (JCC:2554) SECRETARY II: Genl sec duties for Dir of Class Agents, Reunion Giving, & Student Development Program; frequent interactions w/ other staff members & w/ student & alumni volunteers; asst w/ telephone; preparing copy & coordinating an annual series of mailings to some 60,000 alumni; QUALIFICATIONS: excel commu skills; reliability & accuracy essential; prior word processing exp desirable (Lexitron sys); typ 55-60; editorial skills; ability to compose corresp for review; contact: Liz Trujillo, 301 Encina Hall.; B11; $1246-1310.

27144-PM (JCC:2554) SECRETARY II: Act as joint receptionist; answer phone; refer visitors & calls to approp person; busy office; need good judgment in making referrals; sort & route dept'l mail twice a day; prov sec'l serv for 4 anesthesia faculty, incl genl corresp, typ fr handwritten mat'ls, maintain files, transcribe med terminology fr dictating machine, prep mat'l for slides; key operator for Xerox copying machine; respon for Sony recorders for genl dept'l use & on-call beepers; QUALFICIATIONS: typ 55; willing & able to work well w/ other secs in a close environ; important for work to be accurate, neat & well organized; able to handle emergency situations, i.e. cardiac arrests; contact: Adena Goodart, Med Ctr S-236, 497-7555.; B11; $1246-1310.

43516-PM (JCC:2562) SECRETARY III: Prov sec'l & admin support for the teaching, clinical & research efforts of the Div of Genl Internal Med; transcribing & typing corresp, complex med mat'l, statistical rprts, etc. using word processing eqpt (Xerox 860), a computer sys (SUMEX) & an IBM Sel typewriter; composes original ltrs; coord mtgs; develop schedules & coord Stanford Voluntary Clinical Faculty for Internal Med Clinic; processes & maintains personnel & payroll records; reconciles budgets; enters financial data using SuperCalc; respon for petty cash, genl offc organization, distributing mail, ordering supplies, etc; QUALIFICATIONS: typ 65; outstanding organizational skills; good typing, proofing, & transcription skills required; perform detailed work accurately & independently; work under pressure & w/ a variety of people is essential; familiarity w/ statistical typing, & med terminology required; contact: Anne Gaddy, Med Ctr S169, 497-7404.; B14; $1440-1514.

43509-PM (JCC:2570) SECRETARY III: Respon for the mgmt of Div offc; incl knowl, interpretation & application of Univ & Med Sch'l policies & procedures; serv as source of policy advisement for Div Head; asst in prep of dept'l & grant proposal budgets, monitoring budgets of grants of the Div faculty; respon for completing all appt & personnel forms; organize & manage fellowship program, assisting fellows & maintaining their files; supv student clerical staff; ordering supplies for 4 technical labs; typ & edit grant proposals, manuscripts on Xerox 860 wordprocessor; QUALIFICATIONS: typ 55; prev Stanford & Med Sch'l exp preferred; excel typing & verbal skills; willinness to learn Xerox 860 wordprocessor; contact: Chrissy O'Keeffe, 497-7801.; B14; $1440-1514.

42629-PM (JCC:2596) SECY II-SPEC: Provide sec support for Clinical Faculty; type from dictated notes (clinic notes & patient related correspondence); sends letters to referring physicians; performs clerical duties necessary to properly register patients into billing system; interviews patients for financial & insurance info; heavy phone communication w/patients; QUALIFICATIONS: Type 65; med terminology & tape transcription in finished form; 2 yrs exp in medical environment w/emphasis in med terminology; ability to interact w/public & willingness to learn word processor; ability to produce high quality typed documents; Contact: Phyllis Friedman, Dept of Neurology, Med Ctr C338, Stanford, CA 94305, 497-5072.; B12; $1310-1373.

32395-PM (JCC:2596) SECY II-SPEC: 50%, 8-12am; typ manuscripts for publication; typ corresp & routine purchasing reqs, & manage mailings; schedule mtgs; arrange travel itineraries; advances & complete expense reports; answer phones; take messages; make appts; handle orders for reprints & do offc filing as required; some budget monitoring & records keeping; do routine personnel appt forms, & maintain personnel records & files; QUALIFICATIONS: Typ 60-65; ability to learn tech lang & automated sys; exp on Xerox 860 & familiarity w/ word processing desirable, but not nec if willing to learn; contact: Gina Johnson, 497-6198.; B12; $655-687.

31437-PM (JCC:2672) MED SERV ASST III: 100% performs clerical duties nec to properly register patients into Faculty Practice Program; interview patients for financial & insurance info; receives & documents patient cash payments; works under the direction of the Clinic Chief in Psychiatry Clinic to accomplish the clerical functions of the patient care provided in ambulatory setting; patient appt setting & heavy telephone commu w/ patients, physicians & other depts; QUALIFICATIONS: typ 35-40; 1 yr exp in a med setting; med terminology desirable; able to interact w/ the public; bilingual ability desirable; contact: Sandy Bacon, SUMC, TD114.; B11; $1246-1310

Economist Schultze dismisses 'myths' about America's competitive edge

Economist Charles L. Schultze charged that many of the arguments supporting the creation of a new industrial policy for the United States are not valid and urged caution in adopting any new policy.

Schultze, who was chairman of the Council of Economic Advisers under President Carter, was keynote speaker at a conference celebrating the 10th anniversary of the Stanford Business School's Public Management Program on Saturday, May 7.

Schultze is Distinguished Professor of Research at the school.

He said advocates of a new industrial policy "subscribe to the idea that in the last 10 years the U.S. has been deindustrializing and is continuing to do so. There has been an absolute decline in heavy manufacturing and a sharp decline in the share of U.S. output going to manufacturing."

There is also belief, he said, that management and labor are not capable of making the transition to modern high technology without assistance; that the U.S. is losing its competitive edge in the world because of a lack of leadership; and that other countries, most notably Japan, have highly successful industrial policies in which "government select the winners in the technological race, building them up with heavy subsidies, while maintaining a core of traditional heavy industries."

Charging that such beliefs are myths and that a policy based on them would fail, Schultze said that in the 1970s, U.S. industrial performance was equal to or superior to virtually all other industrialized nations. He cited statistics to demonstrate his point:

* Employment rose by 26 percent, compared with 12 percent in Japan and minus two percent in Germany.

* The level of manufacturing output in the U.S. was equal to or better than any nation except Japan.

* Manufacturing employment rose by five percent in the U.S. and was unchanged in Japan.

* Real value of U.S. exports doubled in the 1970s.

"Where the U.S. did fall down was in two major industries: basic metals, particularly iron and steel, and automobiles—two industries with basic, long-term structural problems," said Schultze.

He said no country in the world had economic growth in the 1970s equal to that of the 1960s.

Rental housing

HOUSING AVAILABLE

□ **Regularly avail:** 1 to 3BR furn & unfurn apts & twnhses & 3BR/2BA hses in Menlo Pk. & Palo Alto in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049.

□ **Beg. Aug. '83:** Medit. style hse in Crescent Pk, Palo Alto, 3BR/3BA, DR, encl. yd, baby grnd piano, W/D. $1590/mo. incl. water & grdnr. Call COLLECT (602) 299-4499.

□ **NOW:** Hawaii, Kauai. Lovely, furn twnhse, 2BR/2BA. Pool, tennis. Priv. club atmosphere. $50/day. Call Howarth, (415) 591-5190.

□ **July 26 to Aug. 31, '83:** Spac. Vict. 4BR/3BA hse. Gourmet ktchn, LR, DR, FR, lrg. yd. Close to dwntwn Palo Alto, Rincon. Pk, pool, tennis, library. $875/mo. call 328-6794, eve.

□ **June 18 to Aug. 12:** Summer rent. Fully furn hse, 4BR, study, pool, hot tub. $1200/mo. incl. util. Call 493-3661, eve; 854-5900, day.

□ **Aug. '83:** Fully furn hse, 2BR/1BA, study. 10 min. to Stanf. by car. $700/mo. Call Berman, 493-1571.

□ **NOW:** Summer rent. Alpine Meadows, Tahoe. Nice cabin, 3BR/1½BA, W/D, phone, sleeps 10. $180/wk. Call 493-4139, eve.

□ **July 1, '83 thru June 15, '84:** Fully furn hse, 4BR/2BA, basic ktchn equip, some linens, grdnr. $1100. Call Colleen Hull, 326-6438.

□ **June 11 for 1 yr:** 1BR furn apt. Walk to Stanf & Med Ctr., shop ctr, theaters, restaurants. Pool, jacuzzi, sauna, 24 hr. Indry. Roll-top desk. $550/mo. Call (415) 538-9444, early a.m or very late p.m.

HOUSING NEEDED

□ **Beg. June 15 for 1½ mos:** Recently retired Prof. from Oregon seeks moderate price 1BR (or shared 2BR) apt. Reasonably close to Stanf. Write: Dr. Allan Kittell, History Dept., Lewis & Clark Coll., Portland, OR 97219, or call (503) 244-1616, x507.

□ **July 1 or early Aug., thru June 30, '84:** Adult physician cpl., nonsmokers, no pets, desire hse or twnhse, furn or unfurn, min. 2BR, Palo Alto, Menlo Pk, Los Altos, Mt. View. Pay $800 to $1100/mo. Call eves, (415) 333-0168.

□ **Beg. Fall Qtr (flex):** Visit. prof. from Northwestern U. is seeking hse/apt, at least 2BR, on or nr campus. Call Prof. Rosenblatt, 497-9325, day; 856-3552.

□ **June, July, Aug.:** 4BR hse in Stanf-Woodside-Palo Alto area needed for computer programmers living & working in hse. Call (415) 369-4671.

□ **July 15 to Sept. 15:** Visit. prof. from Paris seeks hse to rent in Palo Alto, Menlo Pk, Los Altos area. Poss. EXCHANGE 4BR apt. & car, 16th Arrondisment dist. Write Jean Vuillenin, 76 Rue de la Tour, 75116, Paris, France. Call 504-33-79.

□ **July 16 to Aug. 28, '83:** Visit. fac. cpl, former Stanf. visitors, desire HOUSESIT or rent arrang. for above per. seek 1BR or more. Call C. Holahan, (512) 471-3033, day; (512) 346-2220, eve.

□ **June thru Sept.:** HOUSESITTERS avail. Florida parents spending summer in Los Altos. No fee. Call Janice Carr, 941-4486.

□ **Sept. '83 to Aug. 31, '84:** Visit prof, wife, 3 children seek to rent 3-4BR furn hse on or nr campus. Up to $1500/mo. No pets, nonsmokers. Call 497-3480, day; 856-0534, eve & wknd.

□ **Aug. 1 (flex) for 1-2 yrs:** European visit. prof, wife, 2 dghtrs (14 & 8) seek 3BR hse, furn or unfurn, on or nr campus. Nonsmokers, no pets. Local refs. Call 497-9258, day; 321-9539, eve.

□ **Sept. '83 to May (or Aug.) '84:** Fac. husband seeks furn 1BR apt. Careful, nonsmoker, no children or pets. Local refs. Call 969-4442, x4117, day; (415) 834-9143, eve.

□ **Beg. end Sept. for 6 mos:** Norwegian visit. scholar, husb, 1 child seek fully furn. 1-2BR hse or apt. nr campus. Nonsmokers. Call Marilyn Yalom, 497-1994, day.

□ **Sept. 1, '83 to mid-Apr. '84 (flex):** Sabbatical physician, wife, children 15 & 12, seek 3BR hse. Stanf. area, furn. to rent. Or EXCHANGE N.W. contemp hse, 4BR, study, FR, view, Portland, OR. Call COLLECT (503) 222-2464.

□ **June 18 to Aug. 1 or Sept. 1:** Dutch prof, NRC assoc. at Ames, Moffett Field, wife & dghtrs 16 & 19 seek furn. hse. Call Dr. Voogd, 961-4054, eve; 965-6174, day.

□ **Beg. July 1 for min. 1 yr:** M.D. assoc. w/Stanf. Med Ctr seeks to lease hse or condo w/min. 3BR in or so. of Palo Alto area. No children or pets, not cost limited. Call (619) 450-1133, or write: John Connolly, 8652-1 Villa La Jolla Dr., La Jolla, CA 92037.

□ **Sept. 1 for 9 mos.:** Visiting scholar, wife, 1 child seek 2-3BR furnished house or apt. near campus. Nonsmokers, clean living, home-owners. Will care for plants, pets. Local refs. Call (314) 875-2858 COLLECT, eves.

□ **Sept. 25, '83 to Mar. 25, '84 (flerx):** Visit. Canadian physician & wife (no children) seek 1-2BR furn apt, small hse or HOUSESIT. Prefer within 10 min. to Stanf. Med. Ctr. Refs. avail. Call (403) 432-3912, day; day; (403) 439-5135, eve.

□ **July '83 to Dec. 31, '83:** Visit. prof, wife, 2 children seek furn. 2-3BR hse or apt in Stanf.-Palo Alto area. Call Susie or Michelle, 497-2218, day.

□ **Beg. June or July for 1, 2, or 3 mos:** Mature, resp. cpl. (husb. is architect), seek summer residence in Palo Alto area. Maint. & archic. serv. in xchnge for hsesit. is nego. Own home in S.F. Call (45) 567-0722.

□ **Sept. '83 to May '84:** Visit prof. on sabbat. at Stanf. & spouse w/dog, seek furn. 2BR hse in P.A., Menlo Pk., Stanf. Nonsmokers. Call (413) 545-0685 (work) (COLLECT), (413) 367-2286 (home), Amherst.

□ **July 19 to Aug. 13:** Seeking 5BR furn hse w/pool for visit. senior exec., wife & 2 children. Call Heidi Henauer, 856-6144 (day).

□ **Sept. 15 (flex) thru May or longer:** Creative writing instruc. seeks small, quiet cottage or apt. Prefer work-for-rent arrang. Local refs. Call John Daniel, 854-7729, a.m. or eve.

□ **June 15 to Aug. 22:** Institute for Humane Studies seeks 1BR furn. apt. or studio for visit. scholar. Call Joan Storm, 323-2464.

□ **July 13 to Aug. 22:** Institute for Humane studies seeks 2BR furn. apt. or hse for visit. scholars. Call Joan Storm, 323-2464.

□ **July 1 to Aug. 26:** Institute for Humane studies seeks 4-5BR furn. hse in Menlo Park for visit. scholars. Call Joan Storm, 323-2464.

□ **June 19 to Aug. 27:** Faculty cpl seeks to hse or apt-sit or to rent quarters nr campus, especially from weaver or spinner. Faculty Fellow in Astro & Aero. Write: Hays, Box 12, Brownsboro, Al. 35741, or call (205) 776-3940.

□ **May 25 to permanent:** Resp. quiet, prof. male, 30, seeks apt., rm, or cottage. Nonsmoker, 15-yr Portola Valley resid. Must have gar. Call John, 851-3185 (eve), (408) 995-6222 (day).

□ **Beg. June 15:** SUH med. tech, female, seeks quiet unfurn. hse. or apt. Nonsmoker. Call 497-6671 (day), 328-4759 (eve).

□ **Jan. to Feb. '84:** Visit. prof, Winter Qtr. needs furn. studio, 1BR apt., or hse-sit situation. Call 497-4487.

□ **Beg. June 15:** Stanf. staff woman w/dog seeks unfurn. small hse or cottage for long term rent. Nonsmoker, refs. avail. Call Sylvia, 854-3300, x2277 (day) or 969-1870 (eve).

□ **July 1 thru Oct.:** French exchange studnt, bilingual, computer sci. major, nonsmoker, needs rm & hse priv. w/good family. Employed by local firm for work/study prog. Call Diane, (415) 348-9181.

□ **Aug. '83 to July '84:** Visit. prof. from Canada seeks to rent hse in good sch. nghbrhd. Call COLLECT (416) 651-0228 or write Marshall Walker, 24 Turner Rd., Toronto, M6G 3H6, Ontario, Canada.

□ **Beg. July '83 Indef:** Single prof. woman, will pay to $500/mo. for campus hsng, during owner's absence. Will care for grden & pets. Call 328-8627.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

□ **July 1 to Aug. 31, '83:** Furn. hse. 3BR/2BA, FR, bike to Stanf. Nr. Com. Ctr, pool, tennis. $950/mo. + util. Call Nancy or Gordon, 497-3518, day; 493-8927; eve.

□ **June 18 to July 31, '83:** Los Altos fully furn. hse. 3BR/1BA, deck, fenced yd., nonsmokers. 15 min. to Stanf. $700/mo. Call 948-5659, after 4 p.m.

□ **Mid-June to late Sept.:** 60 acre ranch sublet. 4 out of 5 BRs avail. Furn. Portola Valley-Woodside, vistas, nr. rec. areas. $225 to $300 per rm, per mo. 3BA, W/D. Call (415) 941-9016, 7-9 am, 9-11 pm.

□ **June 15 to July 30:** PARIS. Apt, 1BR, furn. W/D, DW. 16th Arrondisment. Wish to EXCHANGE for similar accommodation nr Stanf. Call 497-3555, day.

□ **June 15 to Aug. 31, '83:** Sublet, 2BR/1BA furn apt, 1st flr, College Terrace. $635/mo. + util. Call 493-0543.

□ **Aug. 1 mo. only:** Fully furn. hse, 3BR/2BA, Crescent Pk, Palo Alto. $900. Call 328-2677 (eve).

□ **July & Aug.:** Sublet; nice, bright, furn. 2BR apt. in Menlo Pk. $700/mo. Call 323-4502 (eve).

□ **Jan. '84 to June (or Aug.) '84:** Peter Coutts Hill, 2BR/2BA + study, frpl, gar., pool, jacuzzi. Bike to Stanf. Use of car for insur. Fully furn. $1050/mo. call 493-6273, eve or wknd; 497-0833, days.

□ **Aug. 7, '83 to Sept. 3, '83:** 4 wks; fully furn hse, mid-twn Palo Alto, 3BR/1½BA, den, playrm, play-yd, lovely patio. $975/mo. incl. phone, util, lwn. serv. Ideal for yng. fam. No pets. Call Lee or Judy, 321-0250.

□ **July 15 to Aug. 15:** Artists apt. in NYC, to sublet, 1BR/1BA, 1st Ave. between 7th & St. Marks. 3 cats for companionship. $450. Call N. Langmuir, 497-4184, days; 327-4649, eves.

□ **June 15, '83 to Aug. '84:** SHARE 2BR old Palo Alto apt, easy bike to campus. Partly furn, sunny, W/D. Seek female grad studnt or other SU affiliate. No pets. $320/mo. incl. util. Dep. req. Summer rent thru Sept. considered. Call 322-8788, a.m., or after 5 p.m.

□ **Sept. '83 to Sept. '84:** Shorter term poss. 2BR/2BA Oak Creek apt nr Stanf. & hosp. Fully furn. incl. linens, dishes, AEK. Pool, tennis, sauna, jacuzzi. $1100/mo. Call 497-1968, day; 493-0894.

□ **June 7 to mid-Sept. '83 (flex):** Lrg. fully furn. hse in Palo Alto, 2BR/1½BA, DR, LR, color TV, grdn, quiet, nr shops, walk to prk, tennis. 10 min. to Stanf. $650/mo. + util. Call 857-1479.

□ **NOW:** Female nonsmoker to SHARE 3BR hse in Sunnyvale, 15 min. to Stanf. $300/mo. + dep. Call (408) 720-1311, eve; 497-6252 (Lynda).

□ **June 30 to July 30:** 1 mo. rent; So. Palo Alto hse, secluded, low-maint. grdn. Nr. shops, tennis, parcourse, bus, park, library. Nonsmokers. Cpl pref. $750 + sec. dep; incl. util. Call Helen, 324-1710, day; 494-2624, eve.

□ **Sept. to Dec. 15, '83:** Furn. 1 or 2BR apts, luxury, lrg. pool, sauna, jacuzzi, tennis, racquetbl. Dep. req. Adult complex. 1 apt. A/C. Refs. $600/mo. Rte. #280 to Stanf. Call Prof. Arnold, 968-0951.

□ **NOW:** 1BR luxury unfurn apt. Pool, sauna, tennis, Willow Rd. nr. campus. $750/mo. Call (408) 867-9187.

□ **Aug. '83 to Aug. '84:** Portola Valley, walk to schls; 3BR/2BA, 2 frpl, multi level hse; decks, lrg pool w/solar heat, wooded hill-side acre. Stained glass, oriental rugs, sculpture, art. Use of car nego. $1600/mo. Call 851-8743.

□ **Sept. '83 to Sept. '84:** Spac. furn hse in Palo Alto, 2BR/1½BA, study (or 3rd BR), FR, fenced yd. Quiet st. mid-twn, nr. shops, schls, transp. Poss. use of car. $1000/mo. Call 854-2306, days; Barbara. 857-1494, eve.

□ **NOW:** Excep. lovely campus hse, unfurn, 3BR/2½BA, study, all appl. Avail. for fac. or staff. $1200/mo. incl. garb, water, grnds care; dbl carport. Call Helen Meyer, 497-3453, day.

□ **Beg. June 1:** Male or female to share furn. 2BR/2BA Oak Creek lux. apt. Patio, piano, tennis, pools. Foreign visitors welcome. Walk to Stanf, Palo Alto, Menlo Pk. $465/mo. Call 326-7266.

□ **Beg. July 1:** Fully furn hse, 3BR/1BA & sep. shower, DR, bkfst nook. Quiet creekside st., bike to Stanf. $1200/mo. Call Larry, 324-2469, Eveleen 322-6985, eves or wknds.

□ **June to Sept:** House to sublet. 2BR, lrg yd, quiet, cool. $700/mo. + util. No pets. Call J. Murphy, 857-0438, eve.

□ **NOW:** For rent in France, in Orsay, 15 mi. so. from Paris, nr. univ., CEA, CNRS. Lrg hse, furn, 4BR, 2LR, frpl, cellar. Call (408) 248-7303.

□ **July 1 or sooner, for 1 yr:** Exec. twnhse for writer/-scholar: 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min. to Stanf. Cpl or single adult only. No pets. $1300/mo. Owner going to Harvard. Call 494-0452.

□ **July 1 (flex) to Sept. 1 (flex) '83:** Furn. 2BR/2BA hse on campus. Study, FR, deck, garden, frpl, piano. No pets. Nonsmoker. $800/mo nego. for light grdng. Call Ed Brown, 497-4439, day; 493-3748.

□ **NOW:** To rent for 1 yr or more: beautiful hse, 5BR/2½BA, furn. or unfurn. in ISRAEL, in Beer-Sheva, 5 min. drive to Univ/Hosp. Call Prof. Rosenblatt, 497-9325, day; 856-3552, home.

□ **NOW:** Lease 1 yr. or longer. Lrg. hse on 4 acres in Woodside. 3+BR/3BA, fam. ktchn, horse facil., privacy. Refs. req. $2250/mo. Call 327-3505, day; 851-8393, eve.

□ **June '83 to June '84:** Hse in Mt. View, 3BR/1BA, kitchen w/appl., patio, gar., yd w/ dog run. New carpet & maint. 7 mi. to Stanf. Req. 1st & last mo. rent & 1 yr. lease. Call Mrs. Schatzki 494-6135.

□ **Beg. July 1, 6 mos. lease:** Apt. to SHARE. Seek female staff or grad. studnt for 2BR/2BA apt w/recent Stanf. grad, female. 2.5 mi. to Stanf., 3 pools, sauna; on Alma nr. E. Meadow in Palo Alto. $350/mo. incl. water, garb. Call Risa Forister, 497-2021, day.

□ **Beg. July '83 to beg. Apr. '84 (flex):** Fully furn hse, 3BR/2BA, AEK, W/D, Steinway, 2 studies, frpl, pool, fenced yd. Nr. Med. Ctr, bike to campus. $1500/mo. (nego) incl. pool serv, grdnr. Call 497-1348, day; 325-4533 (lv. message), 322-9866, eve.

□ **Beg. June 10:** Palo Alto, old town; furn. 2BR/2BA apt suite to SHARE w/grad student or other Stanf male. Quiet, conv. to Stanf. & dwntwn. Pool, lndry, stor. for bike, encl. prkng. $385/mo. incl. util. Call Dan Stephan, 324-1552, 859-2185, wkdays.

□ **Beg. June 1, '83:** One unfurn. BR avail. in 3BR Menlo Pk hse. Rest of hse furn, W/D. Seek female nonsmoker. Close to Stanf, dwntwn Menlo Pk. $216.67/mo. Call Denise or Aria, 324-0174, eve.

□ **June to Sept. '83:** Summer rent; TAHOE; modified A-frame chalet, 2BR + loft/1½BA, AEK, DR, LR w/frpl., W/D, cable TV, deck. Nr lake, tennis, casinos. No pets or sublet. $600/wk, $1100/2 wks, $1750/mo. Call Marsha (415) 563-3156.

□ **Beg. July to beg. Sept:** OXFORD, Eng. Centrally sit. hse, 4BR/3BA, lovely garden, gar. Call 857-9384.

□ **Mid-June to end Aug. '83:** Portola Valley, 3BR rustic hse in woods, fully furn, piano, W/D. $525/mo. + util. + care of pets. Call 497-3486, day; 851-1986.

□ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

□ **Aug. 19:** Luxury 1BR furn. campus apt. Lrg. closets & windows. Priv. patio. $875/mo. incl all util. Call Shirley, 856-6049.

□ **July 3 to Aug. 5 (flex):** Lovely campus hse, 2BR/2BA, LR w/piano, DR, study, AEK, closed porch, patio, grden. $650 incl. grdnr, water, garb. for neat tenant caring for cat. Call 497-4359, morn; 857-0657.

□ **June '83 to June '84 (flex):** Lrg. unfurn hse in Ladera, 3 mi. to Stanf. 5BR/3BA, AEK, 3 frpls., FR, lrg. deck. $2000/mo. Call (415) 854-0281.

□ **Fall Qtr:** Lovely campus hse, fully equipped. Grdnr, pool & clean. serv. Solar pool. Nonsmokers, no pets. $1270/o. Call 857-1497.

□ **NOW:** Tahoe-Donner hse, 4BR/3BA, hot tub, deck overlooking Nat'l Forest. Hiking, tennis, golf, Donner Lake access. $450/wk, $200/wknd. Call 324-8559.

□ **June 11 to July 19:** Fully furn hse in old Palo Alto. 5BR/2½BA, mdrn ktchn, fenced yd, game rm (sep. from hse), housekeeper. $1000 (nego). 1 mi. to campus. Call Vickie, 327-5339.

□ **Beg. July 15 (flex):** Furn hse mid-twn Palo Alto, 3BR/2BA, quiet off-st. loc., nr elem. sch. Nonsmokers, pets nego. Lease 1 or 2 yrs. $1000/mo. Call eves (408) 735-1441.

□ **Aug. '83 to July '84 (nego):** Paris apt., quiet loc., nr Forum-Pompidou. 2-level on top flrs; 1BR/1BA, LR, study, DR, AEK, W/D. Fully furn. in rstored 18th c. bldg. $700/mo. Call (415) 864-5011.

□ Mid-June through summer or longer: Half of 2BR furn. hse. near campus. Pref. quiet nonsmoker. Reduced rent during summer in return for feeding cats while owner is on vacation. Pat Black, 497-2558 or 327-1858.

Lively Arts 1983-84 season to offer variety of concerts for all tastes

The Lively Arts at Stanford will present 30 artists and ensembles in 37 performances during the 1983-84 concert season, according to Vicky Holt, director of Stanford's University Events and Services.

"This will be our 14th season and we have made arrangements with many of our artists to provide special programming for our audiences," she said.

Highlights include: the Wednesday Chamber Series featuring works by 20th Century composers; the Kalichstein/Laredo/Robinson Trio giving three concerts in honor of Brahms' 150th Anniversary; the Guarneri String Quartet performing with clarinetist David Shifrin the Brahms' "Clarinet Quintet"; pianist Peter Serkin performing the last six Beethoven piano sonatas; a chamber ensemble series; the Intimate P.D.Q. Bach; and jazz pianist Claude Bolling, who is making his first U.S. tour.

There will be 15 chamber music recitals, 11 solo recitals, six dance performances, one lecture, and five special concerts. The performances have been divided into seven series and five special events.

"Because of the strong interest in chamber music amongst our subscribers, we will present four chamber series," Holt said.

Chamber music

The *Chamber Ensemble Series* includes the Paillard Chamber Orchestra (Oct. 14); I Solisti di Zagreb (Feb. 8); the King's Singers (March 10); the Musicians of Swanne Alley (March 11); and the Philip Jones Brass Ensemble (April 8).

The *Sunday Chamber Series* includes the Guarneri String Quartet performing the Brahms Clarinet Quintet with clarinetist David Shifrin (Nov. 13); the Bartok Quartet in a program of Haydn, Bartok, and Beethoven (Feb. 5); the Borodin Trio joined by clarinetist James Campbell, violist Jerry Horner, and violinist Mimi Zweig in a program of Prokofiev, Mozart and Shostakovich (Feb. 26); the Philip Jones Ensemble (April 8); and Elly Ameling (April 15).

The *Wednesday Chamber Series* includes the Concord Quartet performing Noam Sheriff's String Quartet (1982) (Oct. 26); the Guarneri String Quartet performing Witold Lutoslawski's String Quartet (1964) (Nov. 16); Music from Marlboro in a program of Haydn, Kreisler, and Schumann (Feb. 1); the Emerson String Quartet in a program of Beethoven, Dvorak and Maurice Wright (Feb. 22); the Fitzwilliam String Quartet playing Shostakovich's Quartet No. 8 (April 4); and the Kronos Quartet (May 2).

Brahms' anniversary

The *Brahms' 150th Anniversary* Series with the Kalichstein/Laredo/Robinson Trio will present three concerts: Brahms and His Archenemy (Nov. 2), Brahms and His Friends (Nov. 4), and Brahms and His Idol (Nov. 6).

The *Piano Series* will feature Peter Serkin performing the last six Beethoven sonatas (Jan. 13 and 15); Stephen Bishop-Kovacevich (Feb. 12); and Cecile Licad (April 29).

Lutenist Julian Bream (Nov. 7), cellist Carter Brey (Jan. 20), violinist Ani Kavafian (April 18), and trumpeter Stephen Burns (April 27) will be included in the *Solo Series*.

The *Dance Series* will include four performances by the Pilobolus Dance Theater (Nov. 31, Dec. 1, 2, and 3) (subscribers may choose one); the Ririe Woodbury Dance Company (Jan. 27); and the Margaret Jenkins Dance Company (May 4).

There are five special concerts, including jazz pianist Claude Bolling on his first American tour (Oct. 16), the Intimate P.D.Q. Bach (Oct. 31), author Maya Angelou (Jan. 12), jazz vocalist Susannah McCorkle (Feb. 4), and Mime Musica (March 17).

Subscription prices range from $34.50 to $73, with student series priced from $25.50 to $55.

"As was the case last year, we expect many of our events to sell out on subscription, so we encourage people to take advantage of this opportunity and order their series early," Holt said.

For more information and a free brochure call the Lively Arts Office, 497-2551.

Fallen Leaf Lake singles weekend

"On Being Single," a long weekend June 9-12 at Fallen Leaf Lake sponsored by the Stanford Singles Club, still has openings for men who would enjoy the opportunity to discuss with about 75 other men and women the joys and dilemmas of being single.

This is the eighth annual such weekend sponsored by the group. Leaders will be Rochelle Myers, M.A., Tom Trent, M.A., and Evie Delunas, Ph.D.

On the agenda for discussion are such topics as "Sex—They Changed the Rules Since I Played the Game"; "Making Life Itself a Work of Art"; and "Why Can't They be Reasonable—Do It My Way?"

Free afternoons may be filled with tennis, hiking, volleyball, bridge, or backgammon—or just loafing. Also on the agenda are sumptuous meals, evening lectures, singing, dancing, and relaxing.

Since the first On Being Single weekend, the Stanford Singles has grown into a club of more than 600 men and women, including many Stanford faculty and staff. The monthly calendar includes events in the Bay Area and elsewhere.

For more information on the weekened or the club, call Linda Lohse at 851-7350 or write P.O. Box 5815, Stanford, Calif. 94305.

Come play jazz Wednesday nights

The Stanford Jazz Band, under the direction of Stanford senior Jose Bowen, will host a Wednesday night reading band during Summer Session. All interested musicians are asked to attend the first meeting on Wednesday, June 22, at 7 p.m. in Annex B-1 behind the Knoll.

Sponsored by the Department of Music, the summer band will meet every Wednesday night from 7-9 p.m. to read through old and new tunes from the Stanford Jazz Band Book. Everyone is welcome and no auditions are required.

For more information, call Jose Bowen: 327-6248.



'Sarah in the Studio' by Sue Gussow

Djerassi artist Sue Ferguson Gussow shows work at Museum beginning June 7

An exhibition of paintings and pastels by Sue Ferguson Gussow, Pamela Djerassi visiting artist at Stanford University, opens Tuesday, June 7, in the Stanford Museum.

A figurative painter, Gussow is a professor at the Cooper Union in New York City, and has served on the faculties of Columbia University, New York University, and Parson's School of Design.

Her work has been exhibited at the Museum of Modern Art in New York, at the Brooklyn Museum, and elsewhere in the U.S., Europe, and Japan. She was represented in "Graphics USA" at the Hermitage Museum in Leningrad.

Her paintings and drawings are included in numerous public and private collections, among them, the Seattle Art Museum, the Philadelphia Free Library, the Dallas Museum, the New Orleans Museum, and the CBS Building in New York. Gussow's work is discussed fully in *Twenty Figure Painters*, published by Watson-Guptil.

The exhibition in the Stanford Museum's Contemporary Gallery closes August 14. The Stanford Museum is open



Sue Ferguson Gussow

to the public Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday from 1 to 5 p.m. It is closed Mondays. Admission is free.

Football season tickets for faculty and staff are still available

Don't miss out! 1983 Stanford football season tickets are still on sale, but are going quickly.

This year Athletics offers a variety of ticket plans for faculty-staff: regular reserved seats, a new "First-Time Season Special," family plan seats and economic group rates.

For more information call (415) 497-1021 locally or call toll free (800) BEAT CAL. Visa and Mastercard are welcome.



"Don't Walk," a painting by Boris Ilyin

Ilyin paintings shown at I-Center

Recent oil, acrylic, and watercolor paintings by Russian-American artist Boris Ilyin will be on view at Stanford's International Center June 3-30.

The versatility of Ilyin's technique in several media and the variety of his subject matter are striking. He ranges from painstakingly sharp focus to loose washes or impasto, and from brilliant color to a severely subdued palette in his work.

He paints sympathetically whimsical studies of people or peeling Roman villas or the dry and lonesome northern California hills. Gradually the viewer can discern the spirit that pervades his work—an expectation that one must come upon the truth, as it were, from behind: that an empty hill cut by deer trails should be studied intently for its secret, that laundry hanging over a classical Italian doorway encapsulates the human condition.

Ilyin's work has been exhibited in San Francisco and throughout the U.S. and is in many collections here and in Great Britain and France. He will be honored at a reception at the International Center from 5-7 p.m. Friday, June 10.

Born in Russia at the time of the Revolution, Ilyin came to the U.S. with his parents when he was five. He attended San Francisco schools and graduated from UC-Berkeley in International Relations.

During World War II he served in the European Theater and just before the German surrender was assigned to General Eisenhower's headquarters as a Russian linguist signal officer. Some of his experiences of this period were used in a novel, *Green Boundary*, which Ilyin wrote just after the war while studying at Stanford for his M.A. Here he also taught at the Creative Writing Center under Wallace E. Stegner.

Ilyin's interest in writing was interrupted by international events in the 1950s. He spent several years in intelligence service and served in the U.S. Foreign Service both in Washington, D.C. and in Europe. His interest in painting, however, continued without pause after the age of seven when he began studying with Peter Ilyin, a relative and a noted San Francisco portrait painter. During university studies and the war and throughout his years of foreign service, in such scattered locations as Joplin, Mo., Fort Benning, Ga., and Falls Church, Vir., and at countless places in Germany, France, Switzerland, and Italy, the artist painted whenever a paintbox and a few hours were available. Retiring in 1969 to San Rafael, Calif., he has at last been able to give painting his full attention.

Amsterdam Werktheatre topic of lecture

Shireen Strooker, famous actress and director, will discuss her work with the world-famous Amsterdam Werktheatre Friday, June 3, at 1:30 p.m. in Rm. 205, backhall of Memorial Auditorium.

The Werktheatre is one of Europe's leading experimental theatre companies, specializing in improvisational techniques and social drama. Much of their work is developed from the actors and is not bound to a pre-existing script.

The company, which has lived collectively for the past 10 years, performs in every conceivable venue—from leading theatres in Europe to hallways in hospitals, from the streets to factories and assembly lines.

The company has made several films which have received critical acclaim, including the Prix d'Italia for *In for Treatment* in 1982. Part of Strooker's presentation will include film clips from the company's work.

Since coming to the U.S. last fall, Strooker has been on the faculty of the Theatre Department at UC-Berkeley, where she has worked on several performance pieces.

Her lecture-discussion will be in English.

S.F. Suite Story unique fundraiser

Four of San Francisco's landmark hotels will offer the public a rare look at their exclusive luxury suites on Thursday, June 23.

The St. Francis, the Mark Hopkins, the Fairmont, and the Hyatt Regency will tell the "Suite Story of San Francisco" as an unusual fund-raising event for the Committee for Art at Stanford.

Rooms which have sheltered presidents, royalty, prelates, and stars will be on view for a total cost of $15 in advance ($20 on the day of the tour if tickets are still available). Ticket price includes refreshments and transportation between hotels. Send check to: Committee for Art at Stanford, Stanford Museum of Art.

For further information, call 497-2997.

Help Center helps cope with divorce

The Stanford Help Center has planned a noontime workshop called "Why Can't I Get Over It—Coping With Divorce" for Wednesday, June 15, at Galvez House.

Licensed clinical social workers Sue Thompson and Kay Martin will be guest speakers, discussing normative phases in the separation/divorce process, children's emotional responses, social pressures, and how to recover.

To reserve a place in the workshop call the Help Center, 497-4577, by Monday, June 13. Participants may park at Angell Field and go to the back entrance of Galvez House.

All Help Center workshops, seminars, support groups, lectures, and counseling sessions are free to employees of the University, Medical Center, SLAC, and Children's Hospital and their immediate families.

Youth orchestral summer workshops

The El Camino Youth Symphony Association will sponsor a series of music workshops in July on the Stanford campus.

The workshops, under the direction of ECYS music directors Prof. Arthur Barnes and Sara Salsbury, are open to all students of orchestral instruments from beginning to advanced levels.

Classes offered include group instruction in technique for beginners, theory, ensemble playing, chamber music, and a repertory orchestra.

For details on dates, times, and registration fees call the orchestra manager at (415) 493-3946.

Tresidder exhibits class of 1983 art

Stanford University's Senior Class Art Show is on display now through June 15 in the upper lobby at Tresidder and in the Coffee House.

Ten talented seniors reveal their creative talents through a variety of art forms: oil paintings on canvas, ink drawings, photographs, sculptures, and comic strips. Some works are for sale.

The public is invited to a special reception from 4 to 6 p.m. Friday, June 10, in the Tresidder upper lobby.

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., June 1, to cover the week of Mon., June 6, through Sun., June 12. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, JUNE 7

Center for East Asian Studies Colloquium: Prof. Wang Yuquan, a Lace Scholar affiliated with the Institute of History, Chinese Academy of Social Sciences, will speak on Ming history. 4:15 p.m. Room 238, Lou Henry Hoover Bldg.

FRIDAY, JUNE 10

Psychiatry & Clinical Faculty Association: "A Fate Worse than Death: The Fear of Changing," by James Bugental Ph.D. An existential-humanistic perspective on the process of change in psychotherapy. 8 p.m. Fairchild Aud.

SATURDAY, JUNE 11

University Public Worship, Baccalaureate: Speaker: The Rev. David H.C. Read. 9:30 p.m. Inner Quad.

Calendar

VISITORS FROM OTHER COUNTRIES

June 6: Group of 15 from Latin America— "Domestic Considerations on Foreign Policy" study group. Tufts-Fletcher School of Diplomacy.
Mr. Andreas Unterberger: managing editor. *Die Presse*. Vienna.
Mr. Julio Columbi Neto, Planning and Control of State Enterprises (SEST) ministry of planning. Brasilia. Brasil.
June 7: Ms. Barbro Berg, development officer. National Board of Universities in Sweden.
Mr. A. W. Findlay, deputy registrar. Macquaire University. Australia.
June 8: Mr. Suman Dubey, managing editor. *India Today*. New Delhi.
Mr. Kess Lunshof, chief parliamentary editor. *De Telegraaf*. The Hague. Netherlands.
For further information call International Visitors. 497-1984. Maria Bun.

EXHIBITS

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. . Louis Lurie Rotunda, Green Library. April 25 - June 30.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

Master of Fine Arts Exhibition. Tues.-Fri.: 10 to 5 p.m.; Sat. & Sun. 1 to 5 p.m. Stanford Art Gallery (next to Cummings Art Bldg.). May 17 - June 14.

Arthur Schnitzler 1862-1931, Documentary Photo Exhibition. Cecil H. Green Library, West Wing Corridor. May 23June 30.

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning, development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23July 28.

Boris Ilyin, exhibition of recent oil, acrylic, & watercolor paintings. Reception, Friday, June 10, 5-7 p.m. Bechtel International Center. June 3 - June 30.

CAMPUS REPORT

Volume XV, Number 36 | A publication for Stanford University faculty & staff | June 8, 1983



Spring has been a long time coming, but a sure sign of it is a Stanford class meeting under a tree instead of under a roof. Above Prof. Bob Sinclair, materials science engineering, conducts a class—with all students paying strict attention, of course—on a comfortable patch of lawn.

Commencement advice: Come early, and bring your ticket

Come early and bring your ticket is the advice for those planning to attend Stanford's 92nd commencement at 10 a.m. Sunday in Frost Amphitheater.

Featured speaker will be Secretary of State George Shultz, on leave as professor in the Stanford Graduate School of Business. He will deliver a foreign policy address, Stanford Department officials have advised.

A coalition of groups opposed to Reagan administration foreign and human rights policies plan a memorial service on the fields outside Frost, starting at 8:30 a.m. Featured speaker will be Robert McAfee Brown, former Stanford professor of religion.

The protest groups include the Stanford Central American Action Network, the Stanford Disarmament Lobby, the Committee on Justice in the Middle East, the Coalition Against Apartheid, and a coalition of Third World Groups. Organizers have stressed they do not intend to disrupt Shultz's speech.

A record-breaking crowd of 15,000 is expected to fill Frost to the brim. Admission is by ticket only. About 2,800 graduates are expected to attend, an all-time high. About 500 faculty are expected to

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Faculty Senate looks at reapportionment

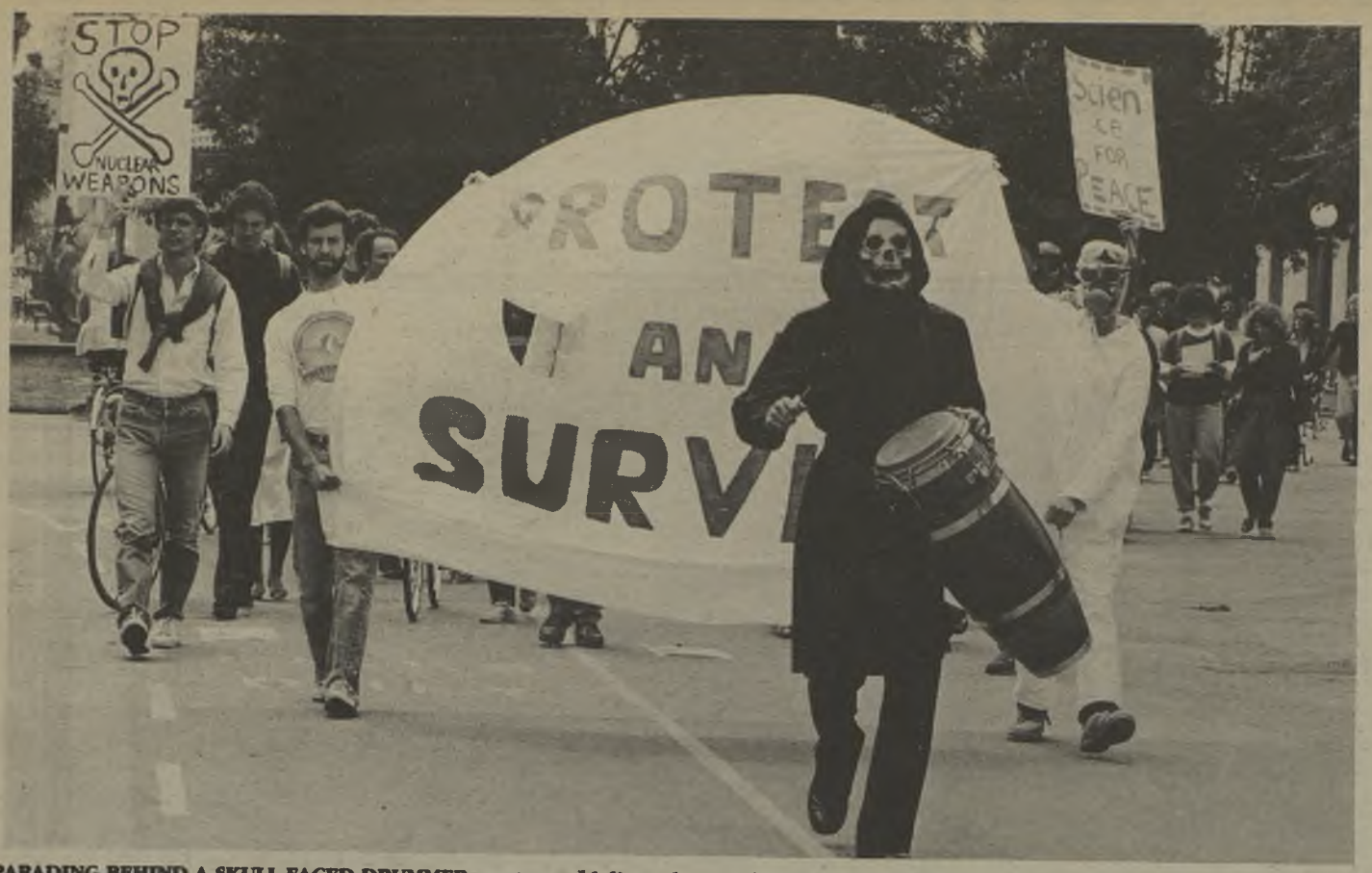
Formation of a 12-member committee to consider reapportionment of the Stanford Faculty Senate will be discussed at the Senate's last meeting of the 1982-83 year Thursday, June 9.

The primary task of the proposed Ad Hoc Committee on Senate Representation would be to recommend the total number of voting representatives, their distribution among major constituencies, and methods by which the Senate should be reapportioned every five years.

As recommended by the Faculty Committee on Committees, the new group would include 12 voting members, one from each of the current electoral units in the Senate. Academic Secretary Clara Bush would serve ex-officio, without vote.

Formed in 1968, the Senate includes 35 voting members, plus the president, provost, deans of the seven schools, vice provosts responsible for overseeing undergraduate and graduate education, and the academic secretary.

The Committee on Committees recommends that the ad hoc group report its recommendations on reapportionment to the Senate no later than Nov. 10 and the remainder of its recommendations, if any, by Jan. 26, 1984.



PARADING BEHIND A SKULL-FACED DRUMMER, protesters delivered more than 100 "death warrants" to the President's Office at Stanford Wednesday, June 1, opposing proposed weapons-related research at the Synchrotron Radiation Laboratory.

Rhode named Yale fellow

Associate Prof. Deborah L. Rhode of the Stanford Law School has been elected a fellow of the Yale Corporation, the governing body of Yale University.

Rhode earned both her undergraduate and law degrees at Yale, which she entered in 1970, the year after coeducation was introduced at the formerly all-male institution.

She came to Stanford in 1979 after a year as clerk to Justice Thurgood Marshall of the United States Supreme Court.

Rhode's chief research interests are legal ethics and constitutional law, on which she has published several articles.

She was elected by a mail ballot of Yale alumni to the seat previously held by Bayless Manning, dean of Stanford Law School from 1964 to 1971.

Rhode, whose term of office runs for six years, will be the first member of the Yale Corporation to have been a female undergraduate at the university—"a perspective," she says, "I believe should be represented."

While at Yale, she served as president of the varsity debate association, played women's varsity tennis, and was elected to Phi Beta Kappa. She graduated in 1974 *suma cum laude* with distinction in political science.

She also excelled in law school, where she edited the *Yale Law Journal* and directed the moot court board, as well as working as an intern in a poverty law office.

At Stanford, Rhode teaches courses in contracts, sex discrimination, and professional responsibility. She also serves on the board of directors of the Stanford Public Interest Law Foundation (SPILF).

She is in addition a cooperating attorney for the American Civil Liberties Union in San Francisco.

Rhode is married to a Yale classmate, Ralph C. Cavanagh, who is an attorney for the Natural Resources Defense Council in San Francisco.

Bob Street named vice provost of computing, info systems

Prof. Robert Street, civil engineering, has been appointed vice provost for academic computing and information systems on a half-time basis, effective July 1, Stanford Provost Albert Hastorf has announced.

Street will be responsible for overseeing and planning all aspects of academic computing, including both instructional and research needs. He will recommend the resources needed, means for funding, and organizational structures for classroom computing, unsponsored and sponsored research computing, and word processing for faculty and students.

Key responsibilities of his office will include determining configurations needed for hardware, software, and support services, as well as networking needed for these functions.

Important coordinating jobs will include planning related to campus-wide cable TV systems, telecommunications, and library automation.

Street's office will be in Building 10, the President's and Provost's Office. His organization will include the Low Overhead Time-Sharing Facility, directed by Prof. Ralph Gorin; the Network Development Division under William Yundt; and the Office of Instruction and Research Information Systems (IRIS), directed by Michael Carter.

Street will continue his research on numerical simulation of turbulence in fluid flows and will teach one class in the Department of Civil Engineering.

Street currently serves as associate dean for research in the School of Engineering, a position he has held since 1971, and as professor of fluid mechanics and applied mathematics in the Department of Civil Engineering, since 1972.

Except for three years as an officer in the Navy's Civil Engineer Corps (1957-60), he has been at Stanford continuously since 1952. He received his Master of Science in civil engineering (with no Bachelor of Science) in 1957, followed by a Ph.D. in 1963.

While rising from assistant to full professor, he also has served as department chair, acting dean of engineering, and acting vice provost for research in the University.

Hayakawa picks Hoover as repository

Former Senator S. 1. Hayakawa has selected the Hoover Institution at Stanford University as the repository for his papers, Institution Director W. Glenn Campbell announced Tuesday, May 31.

The S. 1. Hayakawa Collection totals over 300,000 documents and covers his career as the U.S. Senator from California, 1977-1983, and as a nationally acclaimed educator and semanticist.

His papers will provide future scholars with primary source material on many public issues, especially those in which he took a special interest, such as the environment, agriculture, nutrition, African affairs, East Asian and Pacific affairs, education, and the future of small business.

Campbell commented: "I am particularly pleased that Dr. Hayakawa has decided to deposit his papers at the Hoover Institution. They will join those of other distinguished Californians who have served their country in elected office, including Presidents Herbert Hoover and Ronald Reagan."

Gutenberg bus twice daily; $2.25 fee

The results of the Gutenberg Express survey and expressions of interest from the campus community indicate strong support for continuing the Gutenberg Express service between the Stanford and UC-Berkeley libraries, even with some sort of fee structure.

Since that March survey, various schedules and fee structures have been reviewed toward meeting the objectives of transporting library materials between the two libraries and of providing users of the respective libraries a source of transportation.

A revised Gutenberg Express service starting July 1 will include expanding the capacity of the vehicle from an 11-passenger van to a 32-passenger bus and limiting the service to two round trips per day follows below.

The charge for this service will be $2.25 for each one-way trip and will be on a cash basis. Because of the expanded capacity of the bus, reservations for daily trips will not be necessary after June 30.

For additional information about this service, please contact Joe Jezukewicz, Stanford University Libraries (7-2018).

	Departs UCB	Arrives Stanford	Departs Stanford	Arrives UCB
A.M. round trip	7:15 a.m.	8:25	8:30	9:40
P.M. round trip	4:30 p.m.	5:40	5:45	6:55

Albrecht elected

Jack Albrecht, assistant director of facilities and services, has been elected to the Executive Committee of the Western Association of College and University Business Officers for the 1983-84 fiscal year. He has been a member and chairman of several of the organization's committees during the past 12 years.

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Mystery of sharp drop in world productivity rate

by Donald Stokes

During the last 10 years there has been a dramatic drop in the rate of productivity growth all over the world, including Germany, Japan, and the Communist countries.

Nobody knows for sure why it has occurred.

Charles L. Schultze, distinguished visiting professor of research at Stanford's Graduate School of Business, drew attention to this in a campus interview.

Schultze served as chairman of the Council of Economic Advisers under President Carter from 1977 to 1980. He is a senior fellow at Brookings Institution.

Schultze, a scrappy feisty man, ran over the whole scene of economic problems in response to a series of questions.

"We have long-term problems for which I don't have any panaceas," he said. "One of the difficulties with politics is that candidates try to come up with magic solutions. Usually they do more harm to the patient than the malady.

"One of our biggest long-term problems is productivity growth, the growth of output per person. This is true not only for the U.S. but all over the world.

"There has been a slowdown in productivity growth not only in the free world but apparently in the Communist countries as well. It is true for countries such as Germany and Japan.

"Actually, Japanese productivity growth has come down more sharply than most others, though it did start off from a much higher base than most other countries. Their productivity in the 1960s grew at about eight percent a year, while more recently it has come down to three percent.

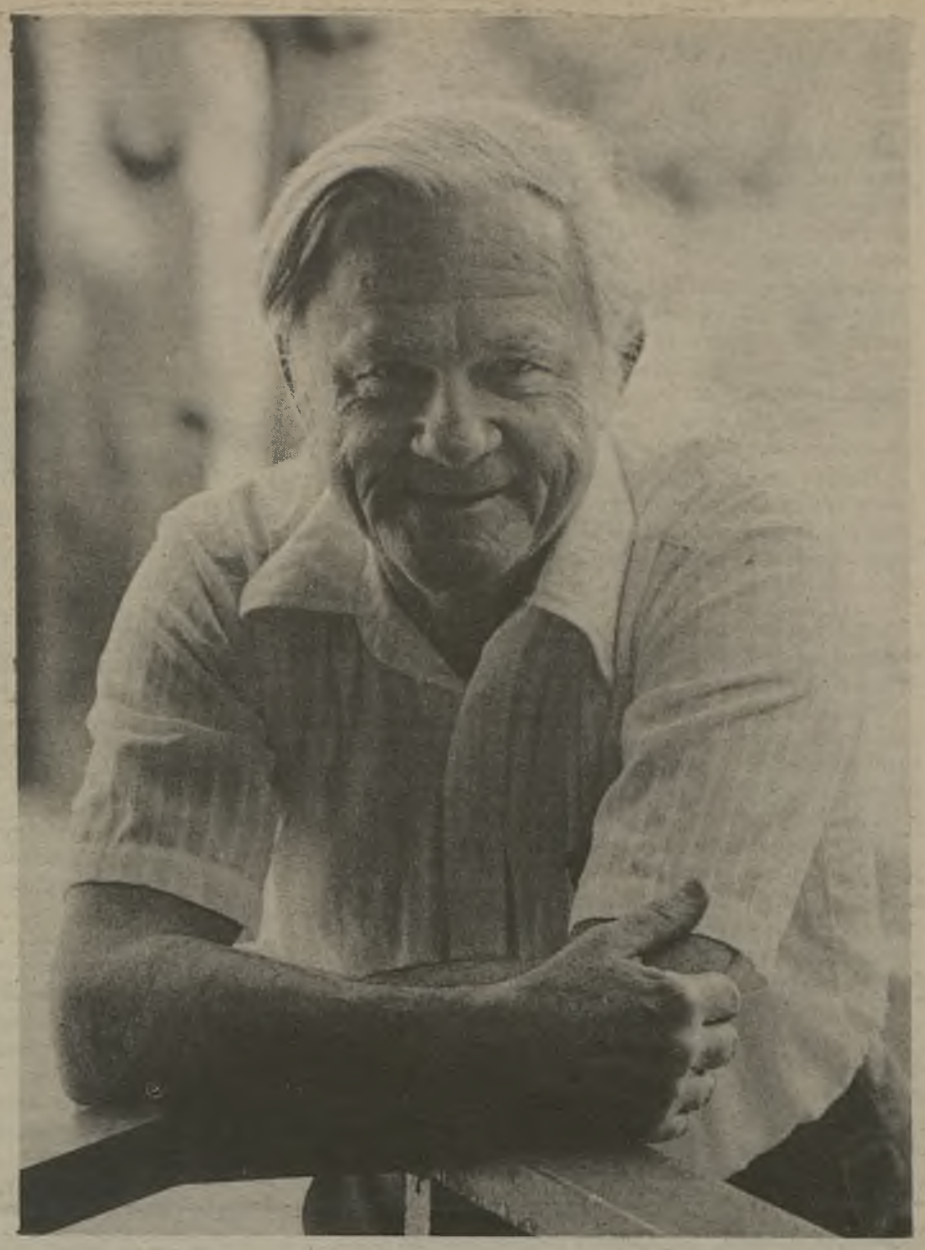
"In my judgment, the more an economist knows about the problem, the less certain he is why it has happened. We know some of the factors, but an important part of it is a mystery.

"That is one of the problems with Reaganomics—they promise to have a cure for lowered productivity. But there are no quick or sure solutions. We can work away at it, do a number of things with real but modest results.

"There are questions of investment incentives, a long-term policy on science education, support for basic research and development, getting the government's heavy hand out of areas where it is interfering too much, without at the same time abandoning those things which have to be done.

"None of this can be done overnight. They have to be worked at over the long term.

"Once we have gotten the recession behind us, gotten more people back to work, the long-run problem is a return to growth in living standards, which in turn depends on an increase in productivity."



In my judgment, the more an economist knows about the problem, the less certain he is why it has happened. We know some of the factors, but an important part of it is a mystery.

—Charles L. Schultze

If Schultze were President Reagan's adviser, what advice would he give today?

"The first necessity is to enact now a substantial reduction in the budget deficit, *not* so much to take effect this year but to become effective principally in 1985 and later years.

"Second, for the Federal Reserve Board to be flexible in its approach. If the Congress enacts credible measures to cut the budget deficit, the Fed should carefully but actively promote the lower interest rates which will then be consistent with noninflationary growth.

"Then there must be a readiness to reduce the speed of the defense buildup, and to compromise on increased taxes for 1985 and beyond.

"These are all necessary in order to promote a sustained economic recovery.

"There are some things we should *not* do. I am a little worried that we may fall into the trap of thinking that we have to imitate the Japanese and institute what might be called 'an industrial policy' for the United States, with the Reconstruction Finance Corporation to protect declining heavy industries and to subsidize newer high-tech industries.

"If unemployment stays as high as I think it will, there is going to be temptation to seize on such a policy as the answer to our problems.

"I hope we don't do that because it is not the sort of thing we could do well. The Japanese do some of it, but it is not the main reason for the success of the Japanese, in any case. The Japanese succeeded because they invested about 30 to 35 percent of their national income, and they had a marvellous system of labor-management relations. It was not because their government was so good at picking winners."

The U.S. invests only about 18 percent of its output, while Europe invests over 20 and the Japanese 35 percent. Is reinvestment the key to better performance?

"The total savings rate in the U.S. has not changed very much during the last 100 years—that is if you include both business and private saving. It would be helpful in the long run, but not right now during the beginning of recovery, to have an increase in saving.

"But how do you do it? Real interest rates to savers are already higher now than they have been for a long time, and some of it is tax-free."

Perhaps the American psyche leans more to living on credit rather than to saving?

"Probably what would be of most use is something that is politically impossible. That is not so much to give still further rewards to savers, but instead to remove the present tax subsidies for consumer borrowing.

"We allow people to deduct from their tax returns the interest payments on consumer instalment loans, mortgages, and other forms of borrowing. That doesn't make much sense.

"My guess is that if you could get over the political difficulty of repealing or reducing the deductions, then additional saving would be encouraged. But there is no current prospect of that happening."

Defense procurement will leap 26 percent this year to $83 billion and to $147 billion in 1986. Isn't there a danger of this causing inflation or diversion from investment in core industries?

"If you take the smallest realistic proposal floating around for defense spending increases, which I think is that of the House Democrats, they suggest a four percent inflation-adjusted increase a year. Contrast that with the Reagan proposals—there you have the likely upper and lower bounds.

"If you trace out the results of those two different paths to 1988, the difference between those two would then be about one percent of GNP. That in itself is not going to cause inflation. The real problem is that what is small in the context of the economy as a whole is very big in the context of the defense industries.

"They will be pushed so hard that we shall see a lot of cost over-runs, inefficiences and bottlenecks in those industries. I don't think this will spill over and cause inflation generally but it could mean significant cost over-runs. This in turn would mean more expensive weapons, paying for which would crowd out of the defense budget a lot of less dramatic items which nevertheless are quite important to military strength."

Will the stronger dollar we've had for the last two years drain off enormous sums because of our dearer exports? In tourism alone Europe expects

continued on next page

Schultze. . .

continued from page 3

to receive record sums from U.S. tourists this year—Britain alone thinks it will receive two billion dollars in 1983.

"The tendency certainly is for a strong dollar to make it harder to sell our goods abroad. A strengthening dollar helps pull down inflation (lower import prices) but also promotes imports and penalizes U.S. exports. We are beginning to feel these effects now. That is one of the reasons why the recession has proved so stubborn.

"It is one, but only one, of the reasons why the American steel and auto industries are in bad shape.

"Having said that, we have to realize that the pressures are mounting. They should be resisted strongly. If governments yield, the consequences for future trade and productivity growth could be seriously impaired."

You have stressed the importance of lowering the budget deficit, particularly for 1985 and 1986. What is the best way to do that?

"It will have to come from lower outlays for arms and by tax increases. Civilian programs have already been sharply cut. Some of the entitlement programs might perhaps be shaved further, but I doubt if that is at all likely in the near term.

"What we need is a firmly enacted tax increase that takes effect in 1985 and 1986. With the economy just beginning to recover we don't want a tax increase to take effect now. But as the economy strengthens in subsequent years the budget deficit will be too big.

"It is important to enact, this year, a future tax increase so that the financial markets know the future is being taken care of. The markets need to know right now what the road ahead will be.

"At the moment everybody knows in a broad sense what has to be done, but there is little agreement on how to do it. There seems to be an impasse."

You are in favor of an easier money policy?

"The Federal Reserve Board eased money policy about eight months ago. The main requirement for the next year or two is that they be flexible, and not stick to rigid adherence to so-called monetarist principles that look only on the speed with which the money supply grows.

"If actions are taken to cut the budget deficit, the Fed should be willing to do what is necessary to finance a moderately good recovery with real interest rates coming down some.

"A combination of reductions in out-year budget deficits and such flexibility on the part of the Fed is what we need."

"The strong dollar also means that other countries, in order to protect their own industries, have had to keep their own interest rates higher than they wanted, and this makes their recessions longer than they had expected.

"Our excessively high interest rates and the other factors that caused the overvalued dollar harmed everybody."

On the opposite side of the coin, the cheap yen of the Japanese continues to cut into basic American industries. Latest to go to the wall is Caterpillar, which is fighting a duel to the death with the Japanese.

"The Japanese have just the opposite problem to us. The Japanese save a tremendous amount, and now there is not enough private investments to absorb that saving. The Japanese need to run a larger budget deficit to offset that 'excess' saving. Because they won't, two things happen; their export surplus tends to swell and their own economic growth slows down.

"We and the Japanese ought to look in a mirror and do the opposite of what we are doing. We ought to cut our prospective budget deficits, while the Japanese ought to increase theirs.

"The results would help reduce protectionist pressures all over the world.

"So you can legitimately criticize the U.S. for having a budget policy that ensures huge deficits in the future. But the Japanese are not running a large enough deficit."



We and the Japanese ought to look in a mirror and each do the opposite of what we are doing. We (Americans) ought to cut our prospective budget deficits, while the Japanese ought to increase theirs. The results would help to reduce protectionist pressures all over the world.

—Charles L. Schultze

How did the international bankers get themselves into this mess, with the huge loans to Third World countries that can never be repaid?

"I am no defender of theirs. They made mistakes. But in some ways they take a bad rap. It really started when OPEC took in billions they were not spending, partly taking it out of the pockets of the Third World.

"They put the money in the banks, who did what banks do, they loaned it out to countries which needed it, among other things to pay for the dearer oil.

"If we had not had a worldwide recession, and if U.S. interest rates had not risen so high, we wouldn't have seen such a big problem, except in the cases of Mexico, Nigeria, and a few other oil exporters. Those were the two factors that precipitated the crisis.

"In any world recession, exports of raw materials get hit particularly hard, so this hit all the debtor nations where it hurt.

"Yes, there were some bad loans made, and the ones to Mexico probably came under that heading. Some banks did show poor judgment, but in my view, if we're going to point fingers, they should also be pointed at the government policies which led to interest rates that were higher than necessary.

"I think the huge debts of the Third World can be restructured without any significant country going into default. There will be problems, perhaps some big ones, but I do not foresee any default by an important country."

The Senate Banking Committee has voted without dissent to pump another eight billion into the International Monetary Fund, a sum that would cause roars of protest if it were taken away, from Social Security. This $8 billion is really covering the losses of the private bankers who made the loans. Isn't it unfair for the U.S. taxpayer to subsidize private banks when so many public services are being drastically slashed?

"The alternative is to put a considerable part of the world in a terribly serious economic and political squeeze. Without I.M.F. assistance, both in cash and in helping to restructure private loans the debtor nations would have to squeeze their resources down to the point where there is immense hardship and probably revolution. Not only that but they would shut off imports, and so do great damage to U.S. industry, which depends to a great deal on Third World markets.

"You may say 'Let the bankers go bust.' Well, the bankers have your money, so you may go bust, too.

"We do need to be careful to couple assistance with requirements for sane economic policies on the part of debtor nations. And we ought to try to preserve incentives for banks to be prudent in the future. The 'bail-out' shouldn't turn into reward.

"But there is really no practical alternative to helping those debtor nations. If we don't we shall cripple our own export industries and bring on revolutionary conditions in many areas."

What may outrage the man in the street is that his tax dollars go to bail out a major U.S. bank that pays no income taxes, is saddled with $5 billion of weak foreign loans, but nevertheless has just come up with $400 million to buy up another bank that is also saddled with huge amounts of dubious foreign debts.

"Somebody had to re-lend the money flowing from OPEC. It could have been done by governments, and some more government guidelines would probably have been a good thing. But for the U.S. Government to do it itself—well, you know how that would have worked.

"What were the options? To put the money under the mattress? That would have been terrible. Have government do it all? Decisions by govrnment on loan quality have not given us much cause for confidence. Third, to do what we did, let the bankers who normally deal with this sort of thing conduct their business.

"It led to some mistakes, to some excesses, to some bad loans.

"In an imperfect world you often have to choose among imperfect solutions."

Much depends on whether the price of oil will stabilize or fall further. What do you foresee? Returning prosperity may cause a rise in the price of oil?

"Even if economic conditions improve in the world I don't think oil prices will rise in the way some people think.

"We and the rest of the industrial world now use a lot less oil, relative to GNP, than used to be the case. Consumption will increase but not in the way it used to. If I had to guess I would say that the price of oil is likely to stay stable for a while, and is more likely to fall a bit than to rise. But I want to stress the uncertainty of my forecast in this area.

"If we look farther ahead, say to the 1990s, that may be a different matter, but I don't think there is much of a chance in the near term for a big resurgence of oil prices—barring a new political upheaval in the Persian Gulf.

"One of the major factors in the oil situation during the last 12 years has been the growth of non-OPEC oil. It used to be that OPEC was the dominant producer. Today it produces less than half of the world's oil exports. We have seen production come on stream from the North Sea, Mexico, the North Slope, and so on."

There seems to be covert protectionism spreading among the nations—is that going to hold back world recovery?

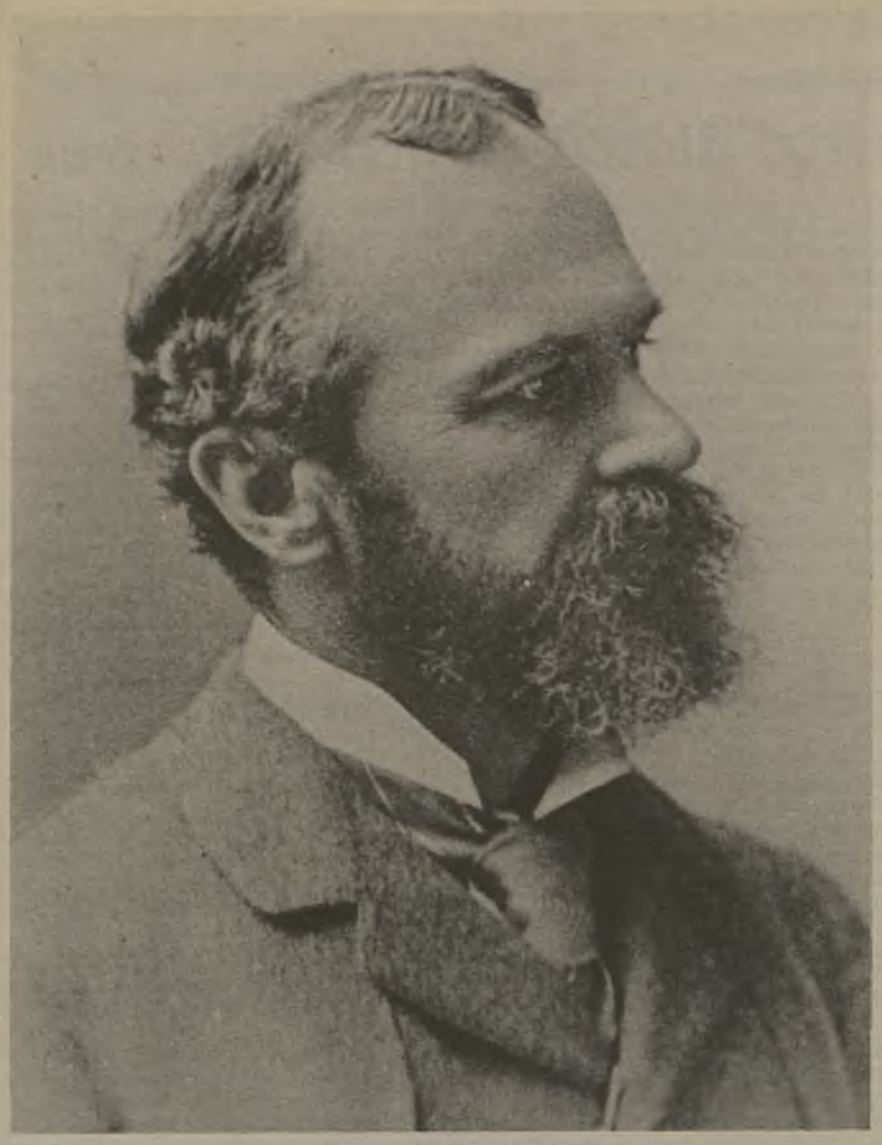
"When you consider how long the recession has lasted and how many people are unemployed, it is really remarkable that moves toward protectionism have been so limited.

"In the O.E.C.D. countries today there are between 33 and 34 million people out of work. In view of this it is surprising how little protectionism has gained.

"If you had told me eight or nine years ago that nations would be dealing with unemployment on the present scale—with France and Germany facing up to eight to 10 percent out of work—I would have expected protectionism to be far more of a political concern.

"The same applies to this country, where unemployment is worse than it has ever been since the Depression 50 years ago.

"I think we all deserve a little bit of self-congratulation that additional protectionism has been kept to such low proportions.



The faculty are young and vigorous (students about 1,500 in number). No one is rich, life is ultra simple, all the essential higher needs are provided for (good music, for example, on an abundant scale). In short the place is a sort of utopian socialistic community such as visionaries have dreamed of.

—William James on the Stanford of 1906

Stanford letters of William James revealed after 77 years

by Donald Stokes

Newly discovered letters written 67 years ago by William James, the famous philosopher-psychologist, give fresh insights into his frail health, his views on Stanford, and his experiences during the 1906 earthquake.

They reveal that he was relieved by the closing ot the University following the quake, because he feared that his health would not have permitted him to fulfill his contract to lecture for the remaining two months of his engagement.

He was lyrical in his praise of Stanford, which he described as "a kind of utopian socialistic community such as visionaries have dreamed of." He forecast that Stanford would grow richer year by year "and possibly will be the richest university in the world."

James came to Stanford at the age of 64, when he was world-famous for his work in philosophy and in psychology, though he detested being referred to as a psychologist.

He accepted an invitation from Stanford's first president, David Starr Jordan, to lecture during the academic year 1905-6. He was then an eminent member of the Harvard faculty, and came to Stanford as what would now be termed a visiting professor of philosophy.

The letters which have just come to light are those which James wrote while at Stanford, and were addressed to a Prof. Ferrari in Rome, who had for a good many years been translating James' works into Italian. Though the two men had never met they had built up a friendship.

The letters were discovered by Frank Low-Beer, of Vancouver, British Columbia; he had received them earlier from an acquaintance in Rome. Low-Beer mailed them to Prof. John D. Goheen, Stanford ombudsman and professor emeritus of philosophy. Low-Beer was formerly a student of Goheen's.

On Jan. 30, 1906, just six weeks before the great earthquake struck northern California, James wrote to Ferrari:

"I received your letter of the 20th of December 10 days ago but have been too busy to answer it until today. I have been here three weeks, and am to stay until June, if my health holds out, lecturing on the elements of philosophy to an audience of 450 very earnest students three times a week. An interesting task artistically, but not an easy one. Nature and climate here are south Italian.

"The little university, founded in 1884 by a millionaire of California and his wife, and endowed with all their fortune, in memory of their dead son, is beautiful and convenient in every material way, and will grow richer year by year (having enormous possessions in land, which is gradually coming into the market) and possibly will eventually be the richest university in the world.

"The faculty are young and vigorous (students about 1,500 in number). No one is rich, life is ultra simple, all the essential higher needs are provided for (good music, for example, on an abundant scale). In short the place is a sort of utopian socialistic community such as visionaries have dreamed of.

"The only drawback is the great historic vacuum characteristic of our new states, absolute silence before 50 years ago, and a certain social insipidity owing to the fact that we are all *novi homines* together. Ah! You owe a great deal in Italy to your wondrous past, always with you in echo. . . . "

James' mention of his health refers to the fact that he had for several years been suffering from heart trouble and other maladies. For this and other reasons he had turned down dozens of lecture offers and profered appointments from universities all over the world.

His emphasis in his letters on the good climate in California suggests this may have been one reason for his acceptance of the offer from Stanford. A stronger reason is probably the friendship he had formed with Stanford's President Jordan.

James had regularly undergone a treatment which today seems bizarre. He had received injections of the lymph glands of goats, and he was convinced that they had done him much good.

The 1906 earthquake on April 16 caused extensive damage to Stanford. James wrote to Ferrari a week later, on April 23:

"Between Vesuvian eruptions and Californian earthquakes, there seems hardly room on the earth for people who wish to lead a quiet, undistracted life. My wife and I have suffered no harm and *very* little material loss, but the University of which I wrote you is damaged badly, and has had to stop work and let the students go home, a month earlier than the natural end of the semester.

"I am glad, for I am very tired cerebrally, and my wife's presence is needed at home. We can probably find 'transportation' in a week, but there is no money, banks are closed and, as for poor San Francisco, it is practically wiped off the map. A better city will grow up on the spot.

"This University is not crippled pecuniarily—most of the ruined parts are more ornamental and need not be rebuilt for an indefinite time. The working parts will be ready again in the autumn. I hope that Vesuvius has not ruined or killed anyone dear to you.

In your letter of March 28 you ask for information how such places as Stanford 'poussent.' It is not a *town*—but a town of 10,000 inhabitants has grown up in 10 years at its gates, a mile away. You will probably find in Munsterberg's book *Die Amerikaner* (or in translation *The Americans*) some

continued on next page

Letters to the editor

Thomas Grey responds to 'hysterical diatribes' from Hoover

Editor, *Campus Report*:

Hoover Fellow Edwin Harwood writes both offensively and ignorantly in his contribution to the current Hoover controversy (*Campus Report*, June 1).

Mr. Harwood says that Ron Rebholz is insincere in criticizing Hoover because Prof. Rebholz signed a brief in 1971 which argued that for the University to dismiss Bruce Franklin would violate academic freedom. Mr. Harwood characterizes this position as "so patently ludicrous as to suggest a *prima facie* case for assuming that (the signers') motives in backing Franklin were primarily partisan. . . .

I don't know or care what Ron Rebholz's motives were then or are now, just as I don't know or care whether Prof. Juilland's elegant and cogent advocacy is motivated by abstract devotion to academic freedom, or by some low and secret lust to have a coven of right-wing scholars working busily nearby. Both of them probably have mixed motives, as seems usual in such matters with members of our species.

What is both offensive and ignorant is for Mr. Harwood to say that the position taken in the 1971 brief was so "patently ludicrous" as in itself to cast doubt on the motives of its signers. I didn't sign the brief, because I disagreed with some of it, but I did agree with its central claim that the charges against Franklin couldn't be sustained consistent with the First Amendment, and I said so in an appended statement.

Recall a little history, which now seems from a time very long ago, if not from a galaxy far away. Franklin was fired for three speeches he gave on campus. In the most damning of them, he told a crowd of students that the University Computation Center should be "shut down," and the students thereafter broke into it and damaged it.

There was a good argument, a persuasive one to me as a constitutional lawyer, that his words were ambiguous between a call for imminent unlawful trespass and a call for a lawful boycott or strike, tactics that had been discussed in immediately preceding meetings with Franklin present. I thought First Amendment values required resolving such an ambiguity in favor of free speech. The Advisory Board thought that Franklin had intended to get the students to break into the Center, or if he hadn't so intended, at least he had created too great a risk of their so interpreting him.

After the Board's decision came out, there was a Law School panel at which I and two colleagues, Franklin's lawyer, and Prof. Alan Dershowitz of Harvard, debated whether the judgment was consistent with free speech law or not. Two thought it was; three thought it was not. No one thought that either position was "patently ludicrous." The A.C.L.U. brought suit on Franklin's behalf, and the case is still kicking around the courts.

With respect to Franklin's two other speeches, the Board found illegal incitement rather than constitutionally protected advocacy only by a divided vote. Among the dissenters in both cases was a biologist named Kennedy. If he still suffers from a penchant for taking "patently ludicrous positions" to mask leftist partisanship, then Hoover is in big trouble.

For what is it worth, I can add that my colleague, John Kaplan, a signer of the Juilland petition in the Hoover controversy, also signed an A.C.L.U. brief in 1971 that supported some of Franklin's arguments. But he was young and foolish then.

I didn't like Franklin or his politics, and I remember thinking that the University would probably be better off if he were not around, despite his vitality and undoubted talent. I am coming to have similar thoughts about the Hoover Institution as I read more and more of the hysterical diatribes the present controversy is evoking from within its walls.

Thomas C. Grey
Professor of Law

Sponsored researchers have their due

Editor, *Campus Report*:

The *Campus Report* having devoted a full page to President Kennedy's position paper concerning indirect costs and the NIH, may I once again add just a few more paragraphs?

President Kennedy says, "Because (these) costs are *indirect*, they naturally arouse some suspicion in members of Congress and others who encounter them for the first time." Is it possible that members of Congress, and others in Washington who encounter these costs for the N-th time, might also be a little suspicious because the University itself does *not* explicitly impose these same indirect costs on its own money—only on government money?

President Kennedy further asks: "Why, after all this history, are there now questions about indirect costs?" Well, again, maybe this has something to do with the University's own apparent unwillingness to explicitly recognize the reality of indirect costs in its own budgeting, through an explicit overhead recovery on its own funding sources.

As a long-term member of the Stanford community, I do explicitly support the reality of indirect costs; the probable fairness and accuracy of the University's indirect cost rate; and the validity of all of the arguments that the president raises in this recent position paper. But, if President Kennedy also wants those faculty members on campus who are engaged in sponsored research to feel that we are being treated with visible fairness and equity, the University is going to have to go to a system in which *everyone* on campus explicitly and visibly pays for indirect costs—*not* just we sponsored researchers.

A. E. Siegman
Director, Edward L. Ginzton Laboratory
Professor of Electrical Engineering

Accidents and injuries

Accidents and Injuries Occurring During Week of May 30-June 3

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	1	0
Cut by sharp object	1	0
Other	1	2
Overexertion	2	(5, 1)

William James. . .

continued from page 5

account of Stanford as well as of our other academic life in America. The U.S. are on the whole in a healthy condition as far as the higher institutions go. I know of no authentic general account in print. . . . "

The opening reference in the letter above to "Vesuvian eruptions" clearly refers to the major eruptions which occurred in Ferrari's Italy from Mount Vesuvius; they continued all through 1906 and caused serious damage.

James had written an earlier letter on Feb. 1, 1906, to his brother Henry James, who had for many years been recognized as a leading novelist, resident in London. This letter has been published in *The Letters of William James* (Atlantic Monthly Press) edited by his son Henry.

Though the two James brothers were deeply fond of each other, William had often been less than fulsome in his praise of Henry's novels. Some researchers, who include Prof. Tom Moser of Stanford's English Department, speculate that Henry may have felt it necessary to put the Atlantic Ocean between him and his brother in order to develop individually, away from the shadow of his eminent brother.

The Feb. 1 letter gives some point to this theory: "BELOVED H.,—Verily 't is long since I have written to thee, but I have had many and mighty things to do, and lately many business letters to write, so I came not at it. Your last was your delightful reply to my remarks about your 'third manner,' wherein you said that you would consider your bald head dishonored if you ever came to pleasing *me* by what you wrote, so shocking was my taste.

"Well! only write *for* me, and leave the question of pleasing open. I have to admit that in *The Golden Bowl* and *The Wings of the Dove*, you have succeeded in getting there after a fashion, in spite of the perversity of the method and its *longness*, which I am not the only one to deplore.

"But enough! let me tell you of my own fortunes! . . . have now given nine lectures to 300 enrolled students and about 150 visitors, partly colleagues. I take great pains, prepare a printed syllabus, very fully; and really feel for the first time in my life, as if I were lecturing *well*. High time, after 30 years of practice!

"It earns me $5,000, if I can keep it up till May 27th; but apart from that I think it is a bad way of expending energy. I ought to be writing my everlastingly postponed book, which this job again absolutely adjourns. I can't write a line of it while doing this other thing. (A propos to which, I got a telegram from Eliot this a.m., asking if I would be Harvard Professor for the first half of next year at the University of Berlin. I had no difficulty in declining that, but I shall probably not decline *Paris*, if they offer it to me year after next.)

"I am expecting Alice to arrive in a fortnight. I have got a very decent little second story, just enough for the two of us, or rather amply enough, sunny, good fireplace, bathroom, little kitchen, etc., on one of the three residential streets of the University land, and with a boardinghouse for meals just opposite, we shall have a sort of honeymoon picnic time. . . .

"You've seen this wonderful spot, so I needn't describe it. It is really a miracle; and so simple the life and so benign the elements, that for a young ambitious professor who wishes to leave his mark on Pacific civilization while it is most plastic, or for *anyone* who wants to teach and work under the most perfect conditions for eight or nine months, and *who is able to get to the East, or Europe, for the remaining three* I can't imagine anything finer.

"It is Utopian. Perfection of weather. Cold nights, though above freezing. Fire pleasant until 1 o'clock a.m., then unpleasant. In short, the 'simple life' with all the essential higher elements thrown in as communal possessions. The drawback is of course, the great surrounding human vacuum—the historic silence fairly rings in your ears when you listen—and the social insipidity. I'm glad I came, and with God's blessing I may pull through. . . . Keep well. Your loving, W.J."

Although William James wrote the monumental *The Principles of Psychology* and several other works on psychology, the center of his interests were religion and philosophy. Toward the end of his life (he died in 1910) he became irritated by being referred to as a psychologist.

In one of the last of the newly-discovered letters, written at sea aboard the ship *Saxonia* on Oct. 7, 1908, he explained the final focus of his interests. " . . . Of late I have become exclusively occupied with metaphysics, and to some extent with sociology, to say nothing of health and the salvation of my soul (?) in case my body gives out, and all that psychology belongs so much to a past epoch of my life, that I feel out of connection with it, and nothing occurs to me in the way of a message to your Italian compatriots." (Ferrari had asked him to write a preface, and Ferrari was himself a psychiatrist.)

The letters now discovered are to be placed in the permanent archives of Stanford University.

Reservoir of public confidence in institutions runs low

Americans show "disturbing signs of deep and serious discontent" with their social system, two veteran analysts of public opinion believe.

Prof. Seymour Martin Lipset of Stanford and William Schneider, resident fellow at the American Enterprise Institute, tell why in a new book on *The Confidence Gap: Business, Labor, and Government in the Public Mind* (the Free Press 434 pp., cloth).

"The U.S. enters the 1980s with a lower reserve of confidence in the ability of its leaders" to deal with social, economic, and political problems than at any time in this century, they declare.

As a result of strains experienced in the past 15 years "our institutional structure is less resilient than in the past.

"Should the 1980s be characterized by a major crisis, the outcome could very well be substantial support for movements seeking to change the system in a fundamental way.

"Serious setbacks in the economy or in foreign policy, accompanied by a failure of leadership, would raise greater risks of loss of legitimacy now than at any time in this century."

Concentration of power

While Americans still believe in the legitimacy and vitality of the American system "what bothers the public is the apparent growth of concentrations of power and the cynical, self-interested abuse of power by government, businesses, and labor leaders," they declare.

Confidence in major companies remains higher in the U.S. than in nine European countries and Japan. And the overall level of confidence in U.S. institutions last year was higher than any other country surveyed except Ireland. Britain, Denmark, Spain, West Germany, Belgium, Holland, France, Japan, and Italy followed, in that order.

"One reason why most Americans still feel positive about the country is that, despite all the troubles the country has gone through, the overwhelming majority say things have gone well for them in their lifetime and they are doing better than their parents did," Lipset and Schneider observe.

But by the fall of 1982, with unemployment above 10 percent, confidence in the leaders of 10 major institutions had reached the lowest level ever recorded in any U.S. survey.

"Confidence in institutions seems to be more a social than a personal judgment," they explain.

"Recent research has found strong and direct links between political cynicism and exposure to negative information in the media."

Problems are real

But the problems facing the country are real—not solely or primarily the result of the way media handle news or the result of a series of inadequate presidents.

"There is simply less for the country to feel confident about," they note. The power and influence of the U.S. has declined since Vietnam. Unemployment, inflation, and slow economic growth have become apparent to the public.

Despite strongly felt complaints about government waste, "the desire for the government to intervene in beneficient ways" has not diminished, they note. While more skilled and intelligent leadership is necessary to restore confidence in government, these may not be enough.

News media, especially broadcasters, have found "bad news" is more effective in competing for public attention. Politicians may foster defeatest views as a form of self-justification.

If ideological polarization of the two major political parties continues, they will be less and less likely to find areas of consensus, agree on solutions, or even accept each other's apparent successes.

From 1966 to 1981 "the people running organized labor" averaged the lowest confidence rating of any institutional leaders. Only 15 percent of the public expressed "a great deal of confidence" in labor leaders, on the average.

Labor union membership as a proportion of the nonfarm workforce has dropped from 35 percent in 1954 to 21 percent in 1980. Where unions won 59 percent of NLRB elections in 1960, now they win only 45 percent.

While labor gets more credit than business for supporting socially progressive causes, "opinion polls suggest that unions should do moreto police their internal operations and to reduce the widespread impression that corruption and lack of democracy characterized their internal governance," they add.

Between 1966 and 1981, confidence in business leaders fell faster than the leaders of any other major institution. "Business is perceived to be motivated exclusively by considerations of self-interest," the researchers note. The public also does not like the concentration of power through ownership and concentration of economic resources.

Attack on business

The spearhead of the attack on business today comes not from labor but from "the New Politics liberal left, the intelligentsia, and affluent college-educated professionals who are basically critical of the materialistic emphasis in society, which they see fostered by business," they observed.

The public prefers "checks and balances" and small-scale institutions to curb potential abuses of power. "Institutionalized conflict, regulation, labor-management strife and hamstrung government" are favored, even though these may raise cost, inhibit effective action, and retard economic growth.

"The invidious sentiments expressed about large organizations reflect a general anti-elitist, anti-power ideology much more than a sense of personal maltreatment," Lipset and Schneider declare.

Our institutional structure is less resilient than in the past.—Seymour Martin Lipset and William Schneider

"The experiences of the late 1960s and early 1970s—an unpopular war, social unheaval, racial polarization, and scandal in high places—served to confirm and intensify the fear that people 'running things' were abusing the public trusts....

"It is the self-interested quality of labor, business, and the government and the fact that they represent visible concentrations of power that turn public opinion against them.

"The institutions that consistently do best in the confidence ratings are those most clearly identified as altruistic: science, medicine, education, the military and religion.

"Professionals in these fields are not highly regarded simply because of their expertise; lawyers, after all, are experts, but they tend to be rated relatively low....



Seymour Martin Lipset

They appear to be willing to sacrifice their own interests for the well being of others as (as people) whose financial reward is incidental to the true motivation of their work.

"Most Americans continue to feel positively about the basic character of the country's political and business institutions, while entertaining serious doubts about their performance."

Lipset is the Caroline S.G. Munro professor of political science and sociology and a senior fellow at the Hoover Institution. He is president of the American Political Science Association.

Jobsite accidents cost $8.9 billion annually, study shows

Jobsite accidents cost $8.9 billion annually in industrial, utility, and commercial construction, according to a study by the Stanford Department of Civil Engineering for the Business Roundtable.

This total, which includes both direct and indirect costs, amounts to 6.5 percent of the $137 billion spent on this kind of construction (in 1979 dollars).

Reasonable reductions in the frequency and severity of accidents could lower this loss by as much as $2.75 billion annually, the study indicates.

How such savings can be achieved will be discussed at a conference on "Cost Effectiveness Through Safety Management" at Stanford June 28. Sponsored by Stanford's Construction Institute and the Western Council of Construction Consumers, the conference is intended for owners, construction contractors and subcontractors, and others interested in reducing accident costs.

The conference registration fee is $75, including lunch. Reservations should be made by June 13 to assure space. Further information may be obtained by calling the Construction Institute at the University (415) 497-3923.

Personnel update

Group life insurance information sent

Participants in the new Group Life Insurance plan will soon receive information packets, according to Jeannie Thomas, manager of benefits and records.

There are two separate communications. One is being sent to all faculty and staff who have enrolled in the new plan.

This contains a Summary Plan Description describing the major features of the plan and a Certificate of Insurance detailing the plan's provisions in more technical terms. Also included is a copy of the individual's completed enrollment form which should be attached to the certificate and kept with other important legal documents.

A second communication is being sent to those eligible faculty and staff who have not completed the enrollment process and, therefore, have been enrolled automatically in the "free" $5,000 coverage.

This contains a Summary Plan Description, a Certificate of Insurance, and a blank enrollment form. Faculty and staff receiving this communication are asked to complete the beneficiary designation section of the form to insure that the appropriate person will receive the benefit from this plan if the faculty or staff member dies while coverage is in effect.

Anyone who has not received a mailing by June 10 should contact the Office of Benefits and Records at 7-1776 or 7-1777. Employees at SLAC should contact the SLAC Benefits Office at 2357.



Foundation president's concern:

Teaching hospitals may lose social relevance

Academic medical centers are going to get smaller and their hospitals less socially relevant in terms of the poor and inner-city needs, Dr. David E. Rogers, president of the Robert Wood Johnson Foundation, predicted here Saturday.

University hospitals, in an effort to survive, will examine services that produce deficits and try to eliminate them, and expand those services that pay well, Rogers predicted.

He cited a recent Urban Institute analysis suggesting that the first to get the ax will be services for the poor—among them home care, family planning, rehabilitation and social services. Next on the hit list would be burn care units, neonatal intensive care units, and out-patient departments with community orientation.

Such cutbacks would affect the poor severely, he added, because although academic medical centers and their hospitals make up only 5.6 percent of the nation's hospitals, they deliver a disproportionate share of 47.2 percent of charity care.

Rogers discussed the gloomy future as well as the challenges facing academic medical centers at the annual meeting of the Stanford Medical Alumni Association. The Princeton, N.J. based Robert Wood Johnson Foundation is one of the largest in the nation, interested in improving health care in the United States.

"We will see progressive shrinkage in the size of basic science departments and top heavy clinical faculties," Rogers said. Faculty clinicians will be recruited largely for their abilities to attract patients with problems which result in high fees and good hospital reimbursement rather than teaching or research skills.

While 20 to 30 major academic medical centers, including Stanford, will be able to continue—even expand—their biomedical research capabilities, Rogers said, most others will shrink progressively. The latter will become increasingly training institutions for doctors, more reminiscent of pre-Flexnerian days, with less and less resemblance to other university graduate programs, and more tenuous university ties.

"It seems to me clearly evident that the nation is at present unwilling to pay the full costs of all the research," he said.

In addition, because of the oversupply of physicians and the high costs of care created in part by high technology and overspecialization—government at all levels, and the public, will demonstrate a progressive unwillingness to pay all of the costs to sustain those features which distinguish the academic medical center, like medical education, residency training, research and scholarly pursuits.

"In an effort to stay afloat, many academic medical centers will begin to expand all high technology areas—open heart surgery units, pathology laboratories, intensive care units, CT scanners and radiotherapy units," he said. "These generate respectable revenues.

"They will create or spin off or unbundle potential profit-making enterprises, or establish satellite clinics or affiliations with smaller hospitals and HMOs and other health delivery plans to ensure an adequate flow of patients. They may get involved in the construction of facilities for fee-for-service ambulatory care, preventive health services, or health spas.

"Faculty and hospital board meetings will increasingly resemble the annual stockholder meetings of multi-national corporations."

Rogers said "it would be a dreadful mistake if academic medical centers became just another profit-making institution."

"The most compelling long-term justification for their existence lies in their championing of certain values," he said. "Like the churches, they have been at their best when they have served as important, powerful spokesmen for good science and the humanistic values which characterize a caring responsible society."

Until happier days return, Rogers suggested that academic medical centers should turn the spotlight on their unique social purpose—the training of young men and women to be the doctors of tomorrow.

"In the rush for bigness, medical students have almost been forgotten," he said. "More attention to the care and feeding of medical students should be given, more rewards to faculty for paying attention to them, more concern for their attitudes toward science, for the values they acquire, and the ways they approach the care of the sick.

"Despite the costs, academic centers should stoutly maintain their traditional mission of caring for the less fortunate. Over time this will compel public support.

"If academic centers abandon this mission, I'm afraid they will become simply another indistinguishable part of our profit oriented society and the medical profession, the doctors we turn out, and society, will be the poorer for it."

"Reestablish the commitment to make the health professions in general mirror the social, racial and cultural makeup of our society," Rogers admonished. "We made a good start but we are faltering."

Rogers said academic centers should also seriously address the problem of the oversupply of tertiary care oriented superspecialists.

These young, elegantly-trained superspecialists are populating well-financed suburban hospitals and taking paying patients away, he said. Academic centers are now far less referral institutions than in times past.

"It is killing you," he told the audience. "The crying need is for more generalist physicians."

—Spyros Andreopoulos

Editor's note: See related box, "Profile of the troubled academic medical center," and find additional coverage of the Medical Alumni Symposium in this issue.

"Despite the costs, academic centers should stoutly maintain their traditional mission of caring for the less fortunate. Over time this will compel public support."

—David Rogers



photos by Stacy Geiken

Rogers addressed the annual meeting of the Stanford Medical Alumni Association.



David Rogers

Profile of the troubled academic med center

The difficulties facing academic medical centers:

- **problems posed by their unique interface with the public.** Not only the educators of all U.S. trained doctors, and generators of most of the new biomedical knowledge, academic centers have carried disproportionate responsibilities for delivering medical care to the poor.
- **problems posed by their locations.** More than one-quarter of the major academic medical centers reside in the inner city centers of some of the most troubled, financially stressed, large cities. The loss of services, people, and private physicians has added to their woes. Stanford is spared of this particular problem.
- **problems posed by their size.** Although their growth has been prompted by new research ventures and clinical responsibilities, it has thrust these institutions into the world of big business. Their governance, stemming from university traditions, has left them poorly equipped to deal with the complex arena into which they have been propelled.
- **problems posed by the enthusiastic and uncontrolled training of subspecialists rather than generalist physicians.** Thanks to their own training programs, academic medical centers are far less referral institutions than in times past, and they must try harder to get patients needed for their programs.
- **problems posed by the failure of government and private medicine to fix responsibilities for the equitable delivery of medical care.** This has led to governmental pressures on academic medicine to take on a whole series of new tasks like operating central city emergency services, neighborhood health centers, drug abuse programs, family planning and the like, rather than having these tasks shared by medicine as a whole.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Blood Center to screen donors for possibility of AIDS

All blood donated to the Stanford University Blood Center will be screened starting July 1 for an abnormality frequently associated with AIDS, the center's medical director said Friday.

AIDS, short for Acquired Immune Deficiency Syndrome, is a deadly family of immune disorders whose elimination was billed last week as the "No. 1 priority" of the U.S. Public Health Service.

Dr. Edgar Engleman, assistant professor of pathology and medicine and medical director of the blood center, said the screening test was made possible by equipment and high technology already used in research at the center, and will raise the cost of each blood product by only $6, to a total of up to $64.50 per product.

Based on a pilot study of 200 patients, Engleman estimates that between one and two percent of Stanford's 18,000 blood donors will be excluded on the basis of the screening. Not all the donors thus excluded have AIDS, Engleman emphasized. In fact,the majority may be completely healthy, because the screening method is not perfect. "But it's the best method available," he said.

Although several methods of screening blood have been discussed nationally, none—so far—have been selective enough to screen out only those donors with AIDS.

Precious resource

"Most of the proposed screening methods would eliminate between 15 and 50 percent of the donors, and only a tiny fraction of those actually have AIDS," Engleman said. "Blood is such a precious resource that we need to be fairly certain that our screening process is highly selective to make screening worthwhile."

Engleman said the testing was begun as a precaution, not because there have been any known cases of AIDS in Stanford blood recipients. The blood center already has begun other precautions, such as asking potential donors from groups at high risk for contracting AIDS not to donate blood. Such high risk groups of potential donors include homosexual men who are active with multiple partners, intravenous drug abusers, and Haitian immigrants.

The test Stanford will use examines infection-fighting white blood cells called "T-cells" that drop to abnormally low concentrations in the blood of about 95 percent of all AIDS victims. Such patients also experience a dramatic change in the ratio of two subgroups of the cells called "helper T-cells" and "suppressor T-cells." Healthy donors have more helper T-cells than suppressor cells but, for an unknown reason, that ratio is reversed in AIDS patients, Engleman said.

Using monoclonal antibodies—specially manufactured proteins—and a space-age research tool called a fluorescence activated cell sorter (FACS), Engleman and his colleagues can detect the subtle clues in the blood of donors who may have contracted AIDS without realizing it.

The technique has been used in the past to confirm AIDS diagnosis, but its cost of between $150 and $200 per test made it impractical as a screening tool. By simplifying the test and increasing the volume of tests in each batch, Stanford can reduce the cost to the $6 level, he said.

Although the technology is available to other blood banks, few have the equipment or expertise to make their own monoclonal antibodies, said Engleman, who sees Stanford's upcoming screening program as an interim tool to be used until researchers can develop a simpler and cheaper test that is just as effective.

"As soon as a better test comes along, we'll be willing to use it," he said. "In the meantime we're using existing technology to try to prevent the spread of AIDS."

—Deborah Franklin

Pianist, neurobiologist and geneticist chide society. . .

Imbued with the music of a hundred rehearsals, a concert pianist approaches the stage. He has memorized hundreds of thousands of notes, *felt* them at the deepest level of understanding and is ready to touch the soul of the listener with passion, whimsy or pathos. As he touches the keys, the audience, the concert hall disappear from his consciousness. He becomes the music, and the music plays itself, pulsing, undulating to a rhythm that swells from within. Then the block comes.

"The performer makes some type of mistake, often undetectable, sometimes inaudible," said Lorin Hollander. "At times he can take it in stride and go on as though nothing has happened. But other times, panic sets in." The critical judge, the mythical listener who is all knowing and all powerful, arises from the performer's powerful imagination, blocking any further creativity.

Such blocks to creativity can arise and be just as destructive to "performers" in any field, said Hollander, who suffered his first block of stagefright at age eleven, when he played his first concert at Carnegie Hall.

At a meeting of Stanford Medical School alumni Saturday, Hollander shared the stage with Nobel laureates David Hubel and Joshua Lederberg as the three peeled apart the anatomy of creativity.

Though their fields are disparate—Hubel a neurobiologist, Lederberg a geneticist, and Hollander a concert pianist—all are teachers, eager to identify the roots of creativity so that they can nurture it in their students.

"We have a problem," Hollander said. "We are not nurturing creativity in children. Indeed, it seems that in our educational system, the creative process of children is being destroyed."

"I think boredom is important," Hubel said. "Giving students a chance to get bored enough to think up problems may be critical. If there's one thing important to creativity, it's being saturated in a problem most of the time, most of the day," said Hubel.

He pleaded for letting creative people immerse themselves in uninterrupted time to think. Creativity needn't decline as one gets older, Hubel suggested, "but it takes a certain amount of stubborness against the outside world."

In the years since his Nobel award winning work deciphering the genetic tricks of bacteria, Lederberg, who left Stanford in 1977 to become president of Rockefeller University, has spent part of his time researching the biographies of scientific discoveries and the people who make them.

The work has been "interesting, but not enlightening," Lederberg said. Even keeping detailed lab notebooks of his own group's work in hopes of chronicling the leaps of creative insight that marked a major reversal in a theory or dogma, proved unfruitful.

"In a few moments of discourse, the whole frame of discussion changed so much that we couldn't write it down five minutes later," he said.

Lederberg cited a question taken from a college entrance exam as the kind of trap that trips up the creative student. Though the test givers were seeking a single "obvious" definition for the word "nucleotide," any student who looked a layer deeper into the definition, could have realized that all of the options given might be considered correct.

"I suggest that we have a world full of special traps like this for the special and creative student," Lederberg said. "There's a penalty for thinking."

Instead, Lederberg cited his own experience as a 22-year-old graduate student as an ideal form of learning.

After two years of medical school, Lederberg did graduate work at Yale University that challenged the age-old dogma that bacteria have a very limited genetic make-up, and reproduce simply by dividing—without the help of a mate.

By mixing two different colored strains of bacteria together and growing the hybrids in a culture dish, Lederberg made a radical discovery.

Months later, he found himself at a gathering of expert geneticists, where he could meet each criticism and challenge to his theory head on, without waiting for the delays of debate in the medical literature.

"Imagine a 22-year-old coming up and saying, 'Look you guys, you haven't been noticing all these years—bacteria do have sex!' "

Such a willingness to challenge dogma, though necessary to creative solutions, is easily squelched in today's elite universities, he said.

"Our institutions today probably do a very good job as filters, making sure that we get the best and the brightest students. But I'm not so sure that we do a very good job as nurturers."

Hollander cited a Moslem mystic who wrote, "Look not for the devil in the desert, but in the over-critical teacher." Early criticism is often internalized and projected back much bigger than life, he said. Like a snail in its shell, a child withdraws at early criticism and the scars can remain into adulthood.

Far from eliminating grades and criticism, Hubel and Lederberg—who admitted to earning "poor C's" in some graduate courses—agreed that criticism should be fair and tempered with praise.

"We don't want to eliminate the game, but let the child see what the game is," said Hollander. "Life gives grades, but let's let the kids learn the relative importance of grades."

An education in the arts can permit the freedom of expression, said Hollander, that can help an adult or child face down the critic within himself, to permit creativity to bud and flower.

—Deborah Franklin



"We are not nurturing creativity in children. Indeed, it seems that in our educational system, the creative process of children is being destroyed."

—Lorin Hollander

SUH modernization: spri

Stanford University Hospital is embarking on a comprehensive modernization designed to meet the ever-increasing demands for the most up-to-date technological facility within an environment of warmth and comfort. The goals of the modernization are to provide adequate space for the necessary patient care and support services, and to upgrade facilities to meet the needs required of a leading teaching institution.

Many people—medical staff, professional and administrative staff of the hospital, and consultants—are participating in the extensive planning of the modernization area by area. The plans and justification for the project were recently submitted to state and local agencies in a Certificate of Need application. They will be reviewing the documents during the coming months.

Because of the size and complexity of the project, the Medical Center developed this report to keep readers informed about its status and progress. Future issues will discuss more details, and describe the impact of these plans on patients, physicians, staff and the community. We hope this will begin to answer some of your questions.

What is the hospital modernization project?

The project is both renovation and new construction.

It is designed to take place in three stages, beginning with completion of the Phase I building, an addition at the north end of the hospital that was opened in 1978 but left partially unfinished.

New construction will be the next step, stage two, adding a four-story 349,000 square foot building which will include a diagnostic and treatment wing and eight new nursing units. The new contruction will be located immediately adjacent to the present hospital building and include a connecting atrium.

The number of licensed beds (663) will remain the same, except for the addition of six neonatal intensive care beds. Construction of the new nursing units will allow the hospital to use several more beds than can be used now. More patients will be accommodated as the number of functional beds is increased from 633 at present to 669. The number of adult medical/surgical beds available at the main center (excluding Hoover Pavilion) is expected to increase by about 110 beds.

The new nursing units will include more private rooms, better facilities for examination and treatment of patients, and quiet areas for family and physician consultation.

The new construction will include a surgical suite with 20 new operating rooms. The present 14 operating rooms will be closed and the space renovated for other needs. Clinical laboratory functions now in 15 different locations will be centralized in one area. A centralized materials management area will be developed, and the heliport moved from Welch Road to the roof of the new diagnostic and treatment wing.

In stage three, nursing units in the original building will be improved and some of the two-bed rooms will be modified to private rooms. Other areas in the original building, such as Labor and Delivery, will be remodeled and expanded.

Why is the modernization needed?

Stanford University Hospital is at present seriously constrained by lack of space and flexibility. It was designed almost 30 years ago, before the dramatic improvements in medical services.

Biomedical research in both basic and clinical areas, and revolutionary improvements in technology have brought more effective treatments in areas such as intensive care, neonatal care, cardiovascular surgery, chemotherapy, radiation therapy and immunology. These changes have brought to the hospital greater numbers of patients with serious and complex medical problems. The great need is for modern technological facilities designed to accommodate their care.

As both a university hospital and a community hospital, Stanford provides a broad range of services that have made it world renowned. However, a 1973 facilities assessment study pointed out that the hospital was underdesigned for the new services it was providing, and operating at that time at 50 percent over maximum reasonable capacity. The hospital has, for example, only about half the square footage per bed found in an average modern university teaching hospital.

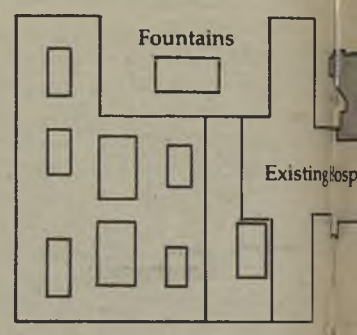
A 1976 building project designed to alleviate some functional deficiencies was left partially unfinished when financing was not adequate and building codes changed. Those areas need to be finished to meet present state agency and accreditation requirements.

How will the plans for the New Children's Hospital at Stanford affect the modernization program?

Stanford University Hospital and Children's Hospital at Stanford agreed in 1982 to consolidate the pediatric facilities of these institutions, which are now located about a mile apart and separated by a major thoroughfare. Comprehensive pediatric care will be centralized in the New Children's Hospital at Stanford which will be built adjacent to the new construction planned at Stanford Hospital. The new facility will better provide a distinctly child and family oriented environment.

The New Children's Hospital Board will select an architect and develop plans for the new hospital separately from the Stanford Hospital modernization. Separate public review and approvals will be sought.

The new facility will consolidate the 60 beds of Children's and the 44 pediatric beds of Stanford Hospital and will provide a full range of



Building for

Annual Report highlights medical center's exciting new directions

New construction to modernize Stanford Hospital, a new comprehensive children's medical center, improved clinic services, and a major program in molecular and genetic medicine are part of the "Building for the Future" theme of Stanford University Medical Center's 1983 Annual Report.

"The school, hospital, and clinics are all engaged in new, well-articulated programs," writes vice president for medical affairs Dr. Lawrence Crowley.

Building for the future is not limited to brick and mortar, he adds. It includes stronger relations with the community, new ties with Children's Hospital, and academic and service-related programs as well as mechanisms for change.

Such mechanisms are essential at a time when external factors are affecting the way academic medical centers will be shaped, organized and managed.

How Stanford Hospital, the faculty practice and the medical school will balance their efforts and the direction they will take are the subject of study by a long-range planning group, Crowley notes. The issues are how to attract and retain the necessary patient populations in the hospital and clinics, "how to maintain our position as a major research center in the basic and clinical sciences, and how to best educate tomorrow's leaders in medicine."

Stanford is completing a $14 million Cardiovascular Research Building, and a $6.5 million modernization program of its outpatient clinics, the base of the faculty's medical practice. It will begin a $125 million modernization of its hospital to serve the needs of patients and their physicians more effectively. (*See related report.*)

The project will be done in phases and construction will begin as soon as state and local agencies approve the plans. They include a new diagnostic and treatment wing, surgical suites and eight new nursing units. Eventually space in the present hospital will be modernized as functions move to the new building.

In addition, the School of Medicine contemplates the development of a major program and building for molecular and genetic medicine, and a center for nuclear magnetic resonance to explore the analytic and diagnostic potential of the technique.

"Building for the future, however, does not necessarily mean becoming bigger," Crowley cautions. "We hope that our building program will make us more effective, better consolidated, economical to manage. If we can become a more compact, efficient unit I'm convinced that the Center will also become more stimulating intellectually and better positioned to provide medical and scientific leadership for many decades ahead."

The report includes interviews with Dr. Dominick Purpura, dean of the school of medicine; Sheldon King, executive vice president and director of the hospital; and Donald Tower, executive director of the university clinics and faculty practice program.

All three, according to Crowley, are strong academically-oriented executives who have been here long enough to get a feel of the place and to make plans for their own areas of responsibility.

According to the report, both hospital and Stanford clinics have made major improvements in billing procedures, traditionally problem areas for patients.

The problem wasn't as simple as it seems, however. In the clinics alone, the report notes, it involves 40,000 patient accounts, with 250,000 insurance forms, 300,000 bills to patients, and 2,000,000 individual charges processed annually.

The clinics have also instituted a patient relations program, decentralized and simpler patient registration system and procedures to analyze operating and administrative costs.



Lawrence Crowley

The goal, concludes the report, is "making the Stanford clinics competitive with other group practices in terms of service."

Copies of the Annual Report are available from the Office of Medical Development, 780 Welch Road, telephone 497-7305. —Spyros Andreopoulos

ing 1983 progress report

ambulatory care clinics. Both hospitals share a common medical staff, whose members serve on the Stanford medical faculty.

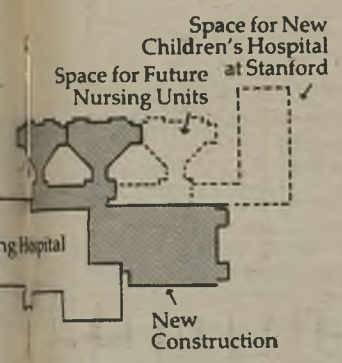
The Stanford modernization plans have been designed to continue to accommodate the pediatric service needs, such as operating rooms and diagnostic facilities.

What will happen to Hoover Pavilion?

The hospital modernization is the first step of a Medical Center long-range plan which envisions consolidation of several patient care sites at the main center.

When completed, the modernization project will allow the closing of approximately 90 beds at Hoover Pavilion, a 50-year-old, 189-bed facility located about one mile from the main center. The long-range plan calls for moving all patient care services from Hoover to the main center. Construction of four more nursing units in addition to those planned in the present modernization project would be necessary to consolidate the Hoover care entirely in the main center.

Consolidating patient care will help the hospital avoid duplication of high cost and high technology equipment, and also avoid unnecessary patient transport and potential disruption of care.



for the Future

What will the modernization do to hospital room rates?

Debt service on the project is expected to total about $47 per patient day, considerably less than similar projects of other major university hospitals. However, the hospital has recognized and planned for the need to modernize and replace its facilities, and these plans have been incorporated in the current rate structure. Through 1991, the hospital expects to keep its rate increases on the average less than one percent above its rate of increase in operating costs.

Cost increases, which reflect inflation and increased intensity of services, are expected to average about eight and a half percent per year, while rate increases are expected to average slightly over nine percent a year through 1991. Therefore, patients will not incur any significant increase in charges as a result of the modernization.

What will the project cost?

Cost estimates are $79.2 million for construction or $114 million with equipment, architects' and contingency fees included. The hospital will invest $55.9 million from funds on hand and earned during the course of the project which are reserved for capital improvements. Donations are expected to provide a total of $15 million of that amount. The balance of the project costs will be provided by a tax-exempt bond issue in 1984.

Why not just remodel the present building?

Intensive studies have concluded that the proposed project is the most cost effective and affordable solution to the hospital's needs. The 1959 building is a concrete structure that complied with the building codes and needs of the mid-fifties. Remodeling capabilities have been limited by changes in building codes that increased seismic safety standards.

Although the original building will be remodeled and updated for some services, it cannot be adequately modified to meet the future needs of critically ill patients. New space is the only way to alleviate many of the space problems of the present and also allow greater flexibility for meeting future needs.

The completion of the unfinished addition, with modest remodeling of some areas, would address only a minor portion of the present needs. It would not upgrade the 1959 facility and would provide no possibility to plan for or accommodate the future.

What is the timetable for the project?

State and local approvals of the modernization require a lengthy review process. Following these approvals, the first stage of the project completing the Phase I building, is expected to begin in May 1984. Construction of the new diagnostic and treatment facility and the nursing units is planned to begin later in 1984 and be completed by the end of 1986. Then space vacated in the original building would be renovated, work that is expected to continue into 1988.

What's happening with the project right now?

On March 30 Stanford Hospital filed a Certificate of Need application with the Office of Statewide Health Planning and Development in Sacramento and with the Santa Clara County Health Systems Agency in San Jose. The 400-page document includes financial feasibility studies, space plans, and extensive documentation of need for the project. The agencies will review those documents during the next several months.

Initial work is under way to prepare an Environmenal Impact Report which will be submitted to the City of Palo Alto later this year.

The NBBJ Group, an architectural and planning firm, is developing the project plans. The firm of Morse/Diesel, Inc. has responsibility for construction management. These planners, working with groups of hospital administrative staff, nurses and physicians, recently completed the schematic designs. A report on the schematics and a firm construction budget will be made to the Stanford University Board of Trustees in June.

Next: **How will these plans meet our needs for the future? What will happen to parking? Will there be more private rooms for patients?**

Copies of this Progress Report are available from the Medical Center Office of Communications, Stanford, California 94305; or call 497-6911.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JUNE 8

Div. of Surgical Pathology conference: "EM Diagnosis of Tumors"—Dr. Richard Kempson. 8 a.m., L201.

SUH Auxiliary meeting: for members interested in participating in the tour docent program to begin in September. 10 a.m., Fairchild Auditorium Lobby. For further information, call Linda Northway at 497-6389.

Dept. of Clinical Social Work and the American Cancer Society: "I Can Cope," a program for cancer patients and their families. 5:30 to 7:30 p.m., TF-122c. To register, call 497-5091.

Hematology Support Group: Meeting for patients with leukemia, myeloma, hemophilia and other hematological diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

THURSDAY, JUNE 9

Dept. of Dermatology lecture: "Arachidonate Metabolites: Role in Inflammatory Disorders and Psoriasis"—Dr. Malcolm Greaves (Institute of Dermatology, London, England.) 8 a.m., R136.

Dept. of Psychiatry grand rounds: "Facing Nuclear War: Our Responsibility as Physicians"—Dr. Gary Lapid (president, Mid-Peninsula chapter, Physicians for Social Responsibility). 7 p.m., Fairchild Auditorium.

Dept. of Medicine grand rounds: "NMR"—Dr. Alexander Margulis (chairman, dept. of radiology, UCSF). 8:30 a.m., Fairchild Auditorium.

FRIDAY, JUNE 10

Second video showing of "The Hypocritic Oaf." Sponsored by Office of Public Events. 3:30 p.m., Fairchild Auditorium.

Dept. of Pediatrics grand rounds: "Contraception in Teenagers"—Dr. Iris Litt. Case presentation by Dr. Mary vander Velde, intern in pediatrics. 8 a.m., M106.

Dept. of Psychiatry and Behavioral Sciences: "A Fate Worse Than Death: The Fear of Changing"—Dr. James Bugental. 8 p.m., Fairchild Auditorium.

Div. of Child Psychiatry grand rounds: "What Ever Happened to. . .Followup of Clinical Presentations 1982-1983"—Dr. Charles Zeanah et al. 11 a.m. to 12:15 p.m., Faber Auditorium, CHAS.

Dept. of Gynecology and Obstetrics grand rounds: "The Role of Hypoxic Cell Radiosensitizers in Gynecologic Cancer"—Dr. Samuel Ballon. 8 a.m., A336.

SUNDAY, JUNE 12

Medical School Convocation Ceremony: 2 p.m., Alumni Green. The public is welcome.

TUESDAY, JUNE 14

Dept. of Medical Microbiology seminar: "Mechanism of a Synthetic Immuno-Regulator in Augmenting Phagocyte Microbicidal Action"—Dr. Christine Morrison (Loyola). 11 a.m., D300.

WEDNESDAY, JUNE 15

Div. of Orthopedic Surgery C. Howard Hatcher Memorial Visiting Professorship lecture: "Sublaminar Wiring as an Adjunct to Scoliosis Surgery"—Dr. John Hall (professor of orthopedic surgery at Harvard, and president of Boston Children's Medical Center medical staff). 8 a.m., M114.

JUNE 15 through JUNE 17

Departments of Pediatrics, Obstetrics, and Dietetics: "Nutritional Care of High Risk Obstetrical Patient and High Risk Infant." 7:30 a.m. to 8 p.m., Fairchild Auditorium. For further information, call 497-5711.

SATURDAY, JUNE 18

Dept. of Medicine Appreciation Day for Referring Physicians. 7 a.m. to 5 p.m., M classrooms, medical school. For further information, call 497-5453.

JUNE 20 through JUNE 23

Dept. of Pharmacology Second International Symposium on the Biochemical Basis of Drug Action. To be held at Fairchild Auditorium. A fee will be charged. For further information or to register, call 497-6834.

SATURDAY, JUNE 25

Eating Disorders Conference: sponsored by the Dept. of Psychiatry and Behavioral Sciences. A one-day conference to inform parents and the community about modern treatments for obesity, bulimia, and anorexia nervosa. The public is invited, and a fee is charged. 9:30 a.m. to 4 p.m., M104. For further information or to register, call 497-7871.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.



Trevor Clay

British leader to give nursing talk

Nursing administration invites Stanford registered nurses to the third distinguished lecture series dinner featuring Trevor Clay, June 16 at the Stanford Faculty Club.

Clay, who will speak on "Emerging: Visions of the Future," is general secretary of the Royal College of Nursing, United Kingdom. He is internationally known as a leader of nurses.

Besides his post at the Royal College of Nursing, Clay's professional experience has included nursing and administrative positions at the Camden and Islington Area Health Authority, the North London Group Hospital Management Committee, Whittington Hospital, the North West Metropolitan Regional Hospital Board, Guy's Hospital, and the psychiatric unit at Queen Elizabeth II Hospital in Hertfordshire.

He received his training at the George Eliot Hospital, the Bethlem Royal and Maudsley Hospital, and Brunel University. His professional activities in Great Britain have included membership on the Staff Side of Nurses and Midwives Whitley Council and its Negotiating Committee, the National Staff Committee for Nurses and Midwives, and the Council of National Representatives, International Council of Nurses.

In addition to various articles in nursing journals, Clay has published a thesis in England on "The Workings of the Nursing and Midwifery Advisory Committees in the National Health Service since 1974."

Clay will visit and consult with several groups at SUH prior to his June 16 address.

The distinguished lecture series was conceived as a way for nursing administration at Stanford to honor staff nurses for professional excellence. Previous speakers have included Jo Eleanor Elliot (1982) and Barbara Nichols (1980).

This year's event will begin at 6 p.m. with no host cocktails, and dinner will be at 7. A $5 donation is requested. For further information or registration forms, call Betty Bland at 497-5181.

Med School musical shown one more time

Don't miss your chance!

The final video showing of "The Hypocritic Oaf," the Stanford medical student/faculty musical, will take place 3:30 p.m. Friday, June 10, in Fairchild Auditorium. The screening is free of charge, and the public is invited.

...News Notes...

Spotlight on...



Dr. Robert Glaser, *president of the Henry J. Kaiser Family Foundation and Stanford consulting professor of medicine, has received the University of California at San Francisco's medal "for outstanding contributions to health education, community health care and public service."*

University officials specifically commended Glaser, one of five Bay Area men and women to receive the medal, for his leadership in establishing several UCSF programs, including the Joint Program in Bioethics, which has spawned the new division of medical ethics there.

In his Kaiser Foundation post, Glaser has supported research at UCSF on the Medi-Cal program, on changes in medical care costs, and on the application of psychiatry and behavioral sciences to other areas of medicine.

Glaser served as dean of Stanford Medical School and vice president for medical affairs from 1965 to 1970, and as acting university president in 1968.

You should know...

The **Hospital billing system for outpatients** *has changed, announced Suzanne Cameron, assistant director of hospital finance. As of June 1, SUH is sending bills for outpatient services directly to patients, who will then be responsible for filing claims with their private insurance companies. The policy also affects the medical benefits of most hospital employees.*

The change has been made to align SUH's outpatient billing system with that of the Faculty Practice Program. Cameron noted that this procedure is standard among area community hospitals and clinics as well.

Some outpatient services will **not** *be affected by this change, however. SUH will continue to bill Medicare, Medi-Cal, California Children's Services, Blue Cross, industrial compensation claims, health maintenance organizations (such as Kaiser and TakeCare), and services for housestaff and their families.*

In addition, the hospital will still bill insurance companies for emergency room visits, outpatient surgery, dermatology day care, and kidney dialysis.

Cameron noted that bills now include instructions on submitting claims to insurance companies. A patient communications representative is also available to answer questions Monday through Friday from 10 a.m. to 3 p.m., at 497-5621.

Payment to SUH is due within 30 days of billing.

* * * *

The **Lane Medical Library** *is participating in the trial of a computer system which makes the full text of a number of biomedical journals available on-line. The system is developed by Elsevier Science Publishers and Bibliographic Retrieval Services.*

The biomedical research journal IRCS Medical Science is now available simultaneously on-line and in paper form. All articles from January 1982 to the present are now in the base, and 1981 is being added. Tables are also mounted on-line in this database.

In addition, a large primary database is being developed which will consist of the full text of 12 of Elsevier's top biomedical journals. This is the first full-text database in biomedicine. Journals are being incorporated continuously in this base, and an initial file of *Biochimica Et Biophysica Acta* and *Brain Research* is being made available to the university and industrial test sites. Material will be added to this file regularly each month.

The system provides that users will be able to search these bases without any formal training. The documentation and computer prompts are sufficient for users to access these files directly and set up and carry out their own searches immediately.

The trial period at Lane will last through July. Passwords and instructions can be issued to users who want to try out the databases themselves, or librarians can conduct searches for them. Participation may have to be limited. Those interested should call Gloria Linder, at 497-6831.



Charles Barnett in 1974

Barnett dies of heart attack

Dr. Charles Barnett, emeritus professor of medicine, died at SUH of cardiac arrest Sunday, June 5, following hospitalization for a longstanding heart condition. He was 79.

A nationally recognized authority on venereal disease, Barnett was director of the general medical clinic for many years after Stanford Medical School moved to Palo Alto from San Francisco. As part of his faculty role for nearly 30 years before the move, Barnett directed the syphilis clinic.

From his 1969 retirement until about two years ago, Barnett served part-time in the outpatient medical clinic.

After receiving his A.B. from Stanford in 1923, Barnett went on to earn his M.D. from Harvard Medical School. He joined the Stanford faculty in 1927. Born in Santa Rosa, he lived until his death on the peninsula.

No funeral services were planned.

Convocation Sunday

This year's Medical School Convocation will take place 2 p.m., Sunday, June 12, at Alumni Green outside the Fairchild Auditorium. Dr. Allen Barbour, associate University ombudsman at the medical school, will be the speaker.

Open to all, the ceremony will include the 1983 faculty awards presentations. It will be preceded by a light luncheon, from 12:30 to 1:30 p.m., for those graduating medical school students, family members and faculty who have received tickets in advance.

Acclaimed surgeon is Hatcher Memorial Visiting Professor



John Hall

An internationally-known orthopedic surgeon is this year's C. Howard Hatcher Memorial Visiting Professor, announced Dr. Eugene Bleck, head of SUH's orthopedic surgery division.

This year's visiting professor, Dr. John Hall, is professor of orthopedic surgery at Harvard Medical School and president of Boston Children's Medical Center medical staff. "His major contributions have been in the field of scoliosis surgery, and in children's orthopedics," Bleck said.

"He is also highly regarded as one of the most gifted teachers in orthopedic surgery."

Hall is scheduled to be at Stanford from June 12-15. During that time, he will attend rounds and presentations by orthopedic residents at Stanford and the affiliated hospitals.

Hall will give a lecture on "Sublaminar Wiring as an Adjunct to Scoliosis Surgery," at 8 a.m. June 15 in room M114. Later that day, he will be one of the disputants for the division's four graduating residents' thesis presentations. The presentations are scheduled to be held 1 p.m. at Faber Auditorium, Children's Hospital at Stanford.

The professorship will culminate that evening with a traditional banquet by invitation at the College of Notre Dame.

Established in 1973 as the C. Howard Hatcher Visiting Professorship, it was renamed earlier this year following Hatcher's death in December 1982.

Hatcher was professor of surgery emeritus and former chief of the Medical School's division of orthopedic surgery. He was internationally known for his research of bone diseases, especially tumors of the bone.

Social class power struggles may intensify in communes

by Joel Shurkin

What happens if you take 20 college students, put them into an isolated area, assign them to social classes—lower, middle, and elite—and turn them loose for a long weekend?

Power struggles.

What happens if they decide they will not accept the class structure and form an egalitarian communal society?

The power struggles get worse and a nascent dictator arises.

The exercise is part of Prof. Philip Zimbardo's class on mind control (Psychology 199), which instructs students on the various ways people can influence each other by playing the power game.

The results could be important for educators, Zimbardo said. They show just how unprepared smart college students (and probably most intellectuals) are to cope with strong emotions.

The weekend is part of a "power laboratory," run by the Stanford Psychology Department. Six psychologists and anthropologists helped.

Power labs

Greg White, a former Stanford student, now a psychologist at the Veterans Administration Hospital in Palo Alto, said the power labs originated in the late 1960s when minority groups, generally disenfranchised from power, tried to learn how to attain positions of power. At the same time, those in the elite needed to learn what it was like to be powerless.

The same need to understand power was felt within management of corporations, where those with the most power had radically different understandings of how the company operated than everyone else.

The rise of cults in the 1970s also contributed to the need to understand the uses of power, White said.

"Book learning can take you just so far," he explained.

Twenty students from Zimbardo's class, chosen at random but screened to make sure they were appropriate for the study and that there was a male-female balance, were sent to the youth hostel at Pigeon Point, north of Santa Cruz, for four days. They were joined by two students from UC-Santa Cruz. They were divided into three social classes, each with prerogatives and responsibilities.

A staff of about six from the laboratory went with them to observe.

"The staff had to deal with problems of power and organization," White said.

The experiment began on a Thursday morning with the arrival of the Elites, each of whom thought they were going to be lower class because they were called in first. The exception was a UC student, Allen (not his real name), who would play a crucial role in what happened. Allen had read about similar experiments and guessed that the first group would be the Elites.

Elites meet

Allen immediately assumed a leadership role. At a meeting of the Elites, they voted that all power must be exerted by the group as a whole and decisions must be unanimous. Allen also urged them to have a policy of open communications, and that no decision should be made without the concurrence of the group affected. These rules were accepted and proved to be crucial to the experiment.

The Middles soon arrived. They were ordered to take off their shoes, sign a release form, were searched and required to turn over all their belongings to the Elites. The Lowers came, were subjected to the same indignities, and were then told they would sleep outside the hostel buildings.

They constructed a tent "Reaganville" while the Middles and Elites ate spaghetti dinner inside. Rain threatened.

Class distinctions

The arrangement broke down because the Elites had violated their own rules by unilaterally bridging the gap between them and the Middles. The staff broke up the dinner.

Word got out that if the Elites did not maintain the class distinctions, new Elites would be elected and the old ones would lose their privileges. Not true.

"We thought the Elites had become Middles by turning us into the Elites, by telling everyone that 1) the staff was really making everything happen, 2) if there is anything wrong it was the staff's fault," and 3) "the staff would do horrible things if they decided to abolish the staff system—none of which we ever said to them," White noted later.

"From early on it was very clear that the Elites were quite uncomfortable being Elites, particularly with Allen sticking to his principles," White said.

A meeting ensued, going well into the morning. Allen moderated. The group discussed whether to abolish the class tiers or to rotate the classes. It was decided to keep the present system for a day.

The Middles and Elites decided the Lowers could sleep inside because of the possibility of rain. The Lowers decided to sleep outside rather than accept favors.

By the next afternoon tensions were building, particularly among the Middles. They began to see themselves squeezed from the top and bottom. They were below the Elites but had no real power over the Lowers. They began to believe the Elites and Lowers were in collusion against them.

At one point they threw the Lowers off their best couch and offered it to the Elites, hoping to win favor and to demonstrate superiority over the Lowers.

The weekend project was selected: building a giant sand castle on the beach.

Revolt brews

By 4:30 p.m. Friday, the Lowers and the Middles were in revolt. The Elites, too, were unhappy. Many, like Allen, were bristling over the class distinctions which ran against their egalitarian principles.

The Elites voted to propose a commune. The Lowers and Middles were thus denied their revolution (there was nothing to revolt against), and tensions increased.

After a quiet dinner, with all sharing the facilities, a small meeting with representatives of the old classes was held.

There was a problem: not all of the students were in favor of the cooperative, and not all of them were willing to keep playing along with the majority. An argument broke out over how the cooperative could build the sand castle.

Abolishing the class distinctions still worried many, particularly the fear that the staff would reinstate the classes and dump the old Elites. The meeting bristled.

"Watch them," warned an Elite, "there's a gleam in their eye. . .they're going to try something. . .we do have to supply their food you know. . . ."



'It's strange,' said a Lower, 'but personally I feel more controlled by the anthropologists than by the Elites or the Middle Class.'

"I heard that if something happened to the Elites, that a coin would be flipped, and all the classes would be switched. . .that's what Allen said," a Lower warned.

"That's just Allen's opinion—that's not official rules."

"It's strange," said a Lower, "but personally—I don't know how the other Lower class people feel, but I feel more controlled by the anthropologists than by the Elites, or by the middle class."

"Absolutely, yeah," said a Middle.

"The rules seem to be a way of making sure that there are distinctions. . .the rules are making more of the distinctions than we are," said another Middle.

The meeting was marked by accusations of "power tripping." Allen, who had strongly supported the collectivity, was slowly emerging as the group leader. He would later say it was unintentional, but it caused considerable friction.

The next morning the new collective played some beach games and tried to "relate" to each other.

There was another long meeting that night with a review of what happened.

By Sunday morning, with the experiment coming to an end, emotions were still high. In part it was the friction caused by the class system, in part it was the friction caused by the collectivity. The air finally cleared as the group dispersed Sunday afternoon.

Hostilities emerge

Later, members of the various classes described their feelings. Many of the Elites felt a responsibility to the staff to keep the experiment going. They were also afraid they might be replaced as Elites.

Allen said he wrestled with his conscience about the class system and concluded it wouldn't work. He was surprised to find that the collective didn't work either.

"Hostilities came out of nowhere," said another Elite, "for reasons not clear."

The Middles expressed the most tension.

"It was clear to us that the Lowers would be gunning for everything we had," one said. "We felt we had a lot to lose."

"When the Lowers moved in we felt the distance," said another. "Every person in the group wanted something and what they wanted was everything we had."

They found themselves in the position of trying to boost the power of the Elite so they could increase their power.

"It's amazing how fast we came together as a group," said another.

The class distinctions remained even after the collective was formed, said a Middle.

The Lowers said they were forced immediately into an adversary position and tried to use techniques taught in the class to fight back. They came up with the suggestion the roles be rotated knowing that it would be rejected. But it allowed them to obtain other concessions from the Elites and Middles.

Part of their frustration, however, was that they won what they could win the first night and there was "nothing left to beat up on them for."

"It got very intense," said a Lower, "very personal."

Some dissension broke out within the group between those who wanted to "be nice" and those who wanted to resist.

After the commune was formed "it really got interesting," one Lower said. "Individuals' unconstrained behavior came out—people who were really powerful came out."

Some expressed a real hatred for the Middles.

"I'd rather not have social mobility than be with some of them," said one candidly.

One serious problem was the people who refused to play the role and elected not to do what the group voted to do.

"Power was coming at me from directions I didn't expect," said one student, "and all the tricks worked. That scared me!"

The vote for the collective was another example of power games. The students

continued on next page

Zimbardo. . .

continued from page 13

discovered that one powerful technique was to appeal to "a widely held belief with intensity," making the proposal "almost irresistable."

"How can you argue with collectivity?"

The students assumed that after the commune was formed all would be equal, but they found that natural leaders, like Allen, emerged and that the games of power politics got worse, not better. Knowing the techniques made manipulation easier, but did not offer very much protection.

"All the things we saw out there are here (in the real world), but we didn't notice them," said one student.

What happened is almost a textbook case in power, White said.

The students had trouble understanding how you get bad effects out of good people. They tend to think in terms of malignant people producing bad ends, which did not happen here.

Allen was not malignant. The bad end was the product of predictable group dynamics, White said.

When they formed the collective the "fantasy" was that they could all be equal, he said. "That's never happened; there are always power differences that emerge, individuals that emerge, groups that emerge that are more powerful.

"In order to have everybody equal you would have to have absolutely everybody agreeing at all times on what their individual needs were as well as on their perceptions of what the external environment of the group was like."

When differences began to emerge—when individuals dropped out of the collective, the students were left with the problem of explaining why the egalitarian society failed.

They believed people like Allen, with leadership and charisma, influenced the group to accepting leadership. White said the researchers believe that is only part of the story. The rest is the dynamics of the group.

"If a group has problems that it can't solve, that are really very emotionally trying, groups usually go into one of three kinds of clusters of emotions: they begin to feel dependent and they want a benign leader, or they begin to feel a little paranoid and they want a fighter, or they go into a kind of Utopia, which is one way of thinking about the collective. . . ."

In the Utopia state you get "a cult figure who promises a promised land."

It explains the influence of Allen; he rose to a leadership position not just because of his own power, but because the group needed someone like him to lead them. Confronted with the failure of their Utopia, he received the blame.

C-AAA suggests how language proficiency should be noted

Committee on Academic Appraisal and Achievement
Official Transcript Notation Certifying Foreign Language Proficiency

C-AAA recommends that the notation, "proficiency in (language)," appear on the official transcripts of students whose level of achievement is found, by procedures established by the language departments in consultation with the Associate Dean of Humanities and Sciences for Undergraduate Programs, to be roughly equivalent to knowledge an excellent student can be expected to demonstrate late in the third quarter of the third year of study in that language.

Background

On May 14, 1981, the Senate of the Academic Council established a language requirement for baccalaureate degrees and approved in principle efforts to encourage student study of languages beyond the level of the requirement. Since that time representatives of the language departments and the Associate Dean of Humanities and Sciences for Undergraduate Programs have been considering what level of achievement might represent a "proficiency" worthy of recognition and what means might be established to evaluate that achievement. C-AAA is persuaded that the level described and the methods outlined (below) are suitable for the purpose endorsed by the Senate.

Committee on Academic Appraisal and Achievement, 1982-83

Michael Bratman, associate professor of philosophy
William Durham, assistant professor of anthropology and human biology
C. Therese Ford, junior, individually designed
John G. Gurley, professor of economics
Carolyn Lougee, associate dean of humanities and sciences of undergraduate programs (*ex officio*)
Sally Mahoney, associate provost and registrar (*ex officio*)
Gilbert Masters, adjunct professor of civil engineering
Susan K. Matisoff, associate professor of Asian languages, chairman
Irwin Remson, professor of applied earth sciences and geology
Michael Resnick, senior, human biology
David Youmans, sophomore, undeclared
Thomas Moser, professor of English

Proficiency in a Foreign Language
The Transcript Notation Incentive

Method of Demonstration. A student will demonstrate "proficiency" in a foreign language on a written and oral examination administered yearly by the competent department.

Level. "Proficiency" is understood to be roughly equivalent to knowledge an excellent student can be expected to demonstrate late in the third quarter of his-her third year of study in that language at Stanford.

Recognition. Achievement of this "proficiency" will be duly recorded on students' transcripts.

Availability.

a) *Languages.* The opportunity to demonstrate proficiency will be available only in languages for which the competent department elects to offer the requisite examination. Normally these will be the languages in which a third year of instruction is regularly offered at Stanford. Currently, the languages in which the examination is available are: Chinese, French, German, Greek (ancient), Hebrew, Italian, Japanese, Latin, Russian, Spanish.

b) *Students.* The opportunity to demonstrate proficiency in a foreign language will be available to all students regardless of major, personal language background, or previous formal study.

Procedures.

Chinese or Japanese.

To receive certification a student will be expected to speak, read, and write Chinese or Japanese at a level normally associated with more than three years of well-assimilated training as measured by a proficiency test designed by the department.

On the written part of the examination, the student will be examined on ability to read, write, and translate.

The student will also be subjected to a 30-minute oral examination administered by two faculty members of the department.

In accord with the general sentiment expressed by the foreign language programs here at Stanford, we envision the typical winner of the honor as an outstanding student who has completed the third year of language training, the minimum requirement in language for our undergraduate majors.

French.

In order to receive advanced language proficiency certification, students will be expected to demonstrate:

1) An ability to extract meaning from written and oral sources without vocabulary aids (dictionary or glossary). Minimum proficiency level in this area: a score of 780 on the College Board French Listening-Reading Exam. (CEEB Form TPL).

2) An ability to synthesize and anticipate with regard to the grammar, syntax, and vocabulary of the language. This integrative skill to be tested by: a) A Stanford-normed "cloze" procedure—80 percentile minimum score. b) A prose translation at a level of difficulty comparable to that found in the French press (e.g., *Le Monde*).

3) An ability to exhibit sustained expression of ideas, both orally and in writing. These skills to be tested by: a) Oral interview (15-20 minutes), based on a pre-established format to include: summarizing succinctly a book, a movie, or an event, or supporting an opinion. b) Written sample (one to one-and-one-half pages) displaying organization, varied vocabulary, appropriate use of idiomatic expression, some sense of style, in addition to reasonably correct grammar.

German.

To receive a certificate of advanced language proficiency, students must pass the *Kleine deutsche Sprachdiplom*, developed jointly by the University of Munich (Lehrstuhl Deutschals Fremdsprache) and the Goethe Institute, Munich. The exam tests a broad spectrum of language skills:

1) Speaking freely on a topic selected from several given to the student 30 minutes in advance,

2) Reading aloud a) a prepared text, b) an unprepared text,

3) Translating a passage from English into German,

4) Dictation of a German text,

5) Explanation, in German, of a given text,

6) Grammatical analysis,

7) Questions on several books assigned several weeks in advance,

8) A short composition.

The test is administered by a member of the German Studies Department and an outside examiner from the Goethe Institute in San Francisco.

Greek (ancient) or Latin.

In order to receive advanced language proficiency certification, students will be expected to demonstrate by departmental examination:

1) Familiarity with some of the writing of at least six ancient authors in the original language.

2) Ability to translate fluently from these authors, and from other easy authors.

3) Ability to translate accurately, with use of dictionary if necessary, from authors of greater difficulty.

4) Ability to identify the commoner verse meters, to scan verse in these meters with facility, and to read verse aloud with attention to the meter.

Hebrew.

Proficiency in Hebrew is demonstrated by:

1) The ability to comprehend advanced short stories and news stories from papers such as *Maaviv* (with translations of extremely unfamiliar words provided).

2) The ability to express one's ideas correctly and fluently in written prose.

3) The ability to use a number of difficult grammatical structures correctly.

4) The ability to translate correctly syntactically sophisticated passages.

5) The ability to engage in conversation with relative correctness and fluency at an advanced level.

Italian.

In order to receive advanced language proficiency certification, students will be expected to demonstrate:

1) An ability to understand written and oral material without vocabulary aids.

2) Knowledge of grammar and syntax to be tested by means of a prose translation selected from contemporary writers (Calvino, Moravia, Ginzburg, Sciascia, Pavese, etc.).

3) An ability to express ideas, both orally and in writing, to be tested in the following manner:

a) Oral interview (15-20 minutes), based on a pre-established format to include summarizing succinctly a book, a movie, or an event, or supporting an opinion.

b) Written sample (one to one-and-one-half pages) displaying organization, varied vocabulary, appropriate use of idiomatic expression, some sense of style, in addition to reasonably correct grammar.

Russian.

"Proficiency" in Russian involves:

1) The ability to read belletristic and journalistic prose of moderate difficulty with only occasional recourse to a dictionary,

2) The ability to write essays on a familiar topic without recourse to a dictionary or reference grammar,

3) The ability to speak and answer questions on familiar topics fluently and correctly.

"Proficiency" will be deemed to have been achieved by any student who passes the written and oral proficiency exam to be administered by the Department once a year during the final three weeks of the spring quarter.

Spanish.

In order to receive advanced language proficiency certification, students will be expected to demonstrate:

1) An ability to extract meaning from written and oral sources without vocabulary aids (dictionary or glossary). Minimum proficiency level in this area: a score of 780 on the College Board Spanish Listening-Reading Exam (CEEB Form TPL).

2) An ability to synthesize and anticipate with regard to the grammar, syntax, and vocabulary of the language. This integrative skill to be tested by: a) A Stanford-normed "cloze" procedure—80 percentile minimum score. b) A prose translation at a level of difficulty comparable to that found in the Spanish press (e.g., *La prensa, Excelsior, El pais*).

3) An ability to exhibit sustained expression of ideas, both orally and in writing. These skills to be tested by: a) Oral interview (15-20 minutes), based on a pre-established format to include: summarizing succinctly a book, a movie, or an event, or supporting an opinion. b) Written sample (one to one-and-one-half pages) displaying organization, varied vocabulary, appropriate use of idiomatic expression, some sense of style, in addition to reasonably correct grammar.

Cloze procedure involves deleting every nth word (e.g., 5th, 7th, 8th, or 9th, etc.) from a suitable text and asking students to reconstitute the text in accordance with the contextual (i.e., grammatical, syntactical, lexical) dictates of the passage.

Teenagers are getting their own niche in law—Mnookin

America is slowly evolving a "law of adolescence," says Prof. Robert Mnookin of the Stanford Law School.

Teenagers are beginning to be viewed differently than younger children in abortion and child custody cases, for example.

The U.S. Supreme Court recently held that a Missouri statute was unconstitutional because it provided for a parental veto of an abortion decision made by a teenager who was pregnant, he notes.

Some states give great legal weight to the preferences of those 14 and over in deciding which parent obtains child custody after divorce.

Many states already allow young people to consent to treatment for venereal disease and to secure birth control devices.

A few states have lowered the age for medical consent from 18 to 14 or 15.

While both the "kiddie libber" and the "child saver" each "sings of children's rights, their songs are very different (and). . .the lyrics of both often strike me as garbled," he observes.

"Kiddie libbers" basically want to make children responsible for more decisions, while "child savers" favor greater government intervention in the family.

"In many critical areas, what is best for an individual child or for children in general is usually indeterminate or speculative. It is not demonstrable by scientific proof, but is instead fundamentally a matter of values," Mnookin adds.

Primary responsibility

Admitting his own preference "for the family to have primary responsibility for child rearing," he suggests more public attention should be focused on how power and responsibility for children are allocated—who decides custody, for example, or determines that a child should be institutionalized.

Because of the values involved, and the lack of social consensus regarding them, there are no simple or pat answers to questions of how power and responsibility for children should be allocated.

"Like cigarettes, there are some easy generalizations that may be habit forming but that may be hazardous to public policy," he warns. He suggests stamping a cautionary warning on four propositions, but not prohibiting their use:

1. Legally imposed age requirements should be rejected because age and maturity or competence are imperfectly correlated.

"Some 15-year-olds would be better informed voters than any 40-year olds," Mnookin notes. "Some 13-year-olds would be better drivers than many 19-year olds."

But allowing individual determination of who is qualified must give some person a great deal of discretion to determine competence or maturity. And there are no litmus tests for these qualities, which means the power to make these decisions can be abused and raise profound questions about unequal treatment and cost.

Age-based lines are plainly preferable for voter qualification, Mnookin believes. "We also should be wary of wholesale elimination of age-based lines concerning medical consent. Perhaps the lines should be lowered." Otherwise enormous uncertainty could result, with doctors, judges and others given too much power to make individual determinations.

2. Whenever a parent has a potential conflict of interest with a child, the parent should no longer be permitted to decide on behalf of the child.

"It is certainly true that parents sometimes expose their children to risks and may occasionally seek or withold medical treatment for reasons of their own, apart from any benefits to the child," he acknowledges.

"But my own hunch is that a careful examination of alternative decision-makers may, in many contexts suggest that the parents are more appropriate decision-makers than some disinterested third party—a judge or a professional, like a doctor.

"A doctor must be prepared and willing to offer parents guidance. But in most circumstances it is the parents, not the professional—much less the judge-who must live with and be responsible for the child on a day-to-day basis after the decision is made.

Moreover, parents will often bring to the decision intimate knowledge about the child and the family's values that an outsider may not have.

"Apart from extreme situations, where a decision will abrogate the parent-child relationship entirely or the child's health is put in serious jeopardy, I'm loath to reject parental prerogative simply because of a potential conflict of interest, especially when the child's interest is indeterminate or speculative.

3. When a young person is competent to perform a task, the youth should be given the legal right to decide without parental interference.

"A 16-year-old may certainly be competent to drive a car, date, and engage in sexual intercourse," Mnookin notes. "But should a 16-year-old have the legal right to go to court and enjoin her disapproving, perhaps overprotective parents from prohibiting her from seeing her 18-year-old boy friend?

"Most teenagers are still economically and socially dependent on their parents, and many of us still view the family as the basic social unit.

"Law suits are a very crude and disruptive method of settling disputes.

"Perhaps young persons should have greater legal power to escape parental domination by leaving home. But I find very problematic and inconsistent the liberator's notion that the law should make parents economically responsible for their children after relinquishing all power to discipline them. . . . Under California law, when a young person gives legal consent for their own medical treatment, parents are not legally liable to pay for the treatment.

4. Whenever the law as written might be criminally applied to punish behavior that many believe to be morally blameless, the law must be formally amended.

"Existing homicide statutes, if blindly applied, would subject parents and doctors to manslaughter charges in situations where they chose a course of action or inaction directed at deliberately allowing an infant to die."

While some favor drafting a euthanasia law to cover such cases, in the absence of broad social consensus on the appropriate circumstances, "the legal principle that human life is worthy of protection should remain the primary standard," Mnookin believes.

"To argue that euthanasia is at times morally unobjectionable is not to say that we must legalize it. To legalize it might well allow too many uses, too many mistakes.

"We should avoid the easy proposition that because something is morally justifiable, it must necessarily become an order of law."

Mnookin was one of several faculty speakers May 14, at the Stanford Alumni Association's 51st annual campus conference.



Law suits are a very crude and disruptive method of settling disputes.

It's harder to teach in class than to be physician-Shulman

Classroom teaching is more difficult than being a physician, says a Stanford expert who's studied how professionals work in both these fields.

The toughest tasks experts face are managing complexity and making decisions under uncertain, unpredictable conditions, says Prof. Lee S. Shulman of the School of Education.

The physician trying to diagnose an individual patient has less complexity to manage than the teacher at "ground zero" facing 22 to 40 young people, he contends.

Shulman has worked with others trying to discover the "rules" experts use to manage uncertainty, so these can be taught to young professionals.

While medical textbooks urge young doctors to keep an open mind before making any diagnosis, research now has shown repeatedly that the best practicing physicians start generating a series of possible diagnoses in the first 30 seconds with a patient.

Asked to "think out loud" as they watch videotapes of their own encounters with "programmed patients"— paid actors, trained to simulate symptoms—doctors typically report having two or three working hypotheses in the first half minute.

In two years of controlled studies, "we never could find a doctor who performed the way the textbooks suggested," Shulman says.

It can be very difficult for skilled practitioners to teach neophytes. With few exceptions, "the very best coaches in baseball are not themselves great batters or pitchers," Shulman observes.

Research with physicians showed strong diagnostic skills were very "domain specific"—a doctor who was first rate in hematology might not do very well in gastrointestinal diagnosis, for example.

National board exams were "changed radically" as a result of this finding, Shulman notes. A much larger number of diagnostic problems was included to cover the various domains.

With support from the National Fund for Medical Education, Prof. Roy Mafly of the Stanford School of Medicine now is working on a program where medical students can sit at computer terminals and rapidly generate hypotheses in response to patient information.

Since gathering all the information about a patient usually is impossible, doctors erect a mental framework, organized by hypothesis, and see what fits. "Most of the time it works, and makes for beautiful diagnosis," Shulman says. But when it doesn't, the results "lose all meaning."

Those who think classroom teaching is simply "telling and testing" seriously underestimate the complexities involved, Shulman says.

At the elementary level, teachers are expected to cover "every aspect of Western civilization mandated by the school board" except physical education, which is left to a specialist.

While secondary school teachers may specialize, they may find themselves required to teach subjects far afield from their college major, spending 50 minutes a day with five different classes.

Studying everyday classroom activity can enhance effective teaching, he notes. "Classrooms are economies of 'turns,' of who gets called by the teacher." Here there are three competing theories: 1) calling on volunteers with raised hands; 2) striking at random, "the commando theory of guerilla pedagogy;" and 3) following in complete order, alphabetically or by seat location.

While most teachers believe the third choice is terrible, it's by far the best for improving first-grade reading achievement, Shulman said. It doesn't favor the active few, and minimizes the fear associated with "commando" tactics.

What happens "inside a turn"—between the time a question is asked and a response given—makes a difference in teaching. The normal time lapse is nine-tenths of a second.

When this is extended to as much as four seconds, "a pedagogical eternity," students may give a more sophisticated response to complex questions.

Teaching involves a constant tradeoff between planning and spontaneous reaction.

Where physicians often confront the chaos of the emergency room and hard decisions about the dying, teachers face "a more subtle and insidious stress," especially when "someone's mind is dying slowly in front of you," he observes.

"When teaching is taken as seriously as the doctor's domain of expertise, and when teachers get respect as well as tangible rewards, then we may find the next generation gets a good education. The talent is out there."

Staff employment opportunities

Exempt

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

42502-LL (JCC:5588) LIFE SCI RES ASST I: Production, purification & safety testing of monoclonal antibodies for clinical trials; immunofluorescence cell staining & analysis using a fluorescence activated cell sorter; & monitoring of patient responses to therapy using FACS analysis & ELISA assays; QUALIFICATIONS: handling of small lab animals & radioisotopes required; familiar w/ tissue culture, incl hybridoma production; column chromatography; gel electrophoresis; radioimmune & ELISA assays; requires independence, organization, literature review & development of new experimental techniques; BS or equiv exp; work exp in microbiology, biochemistry, immunology, cell biology or related fields; computing exp helpful.; C05; $1670-2086.

21693-AW (JCC:2270) FIN/MGMT ANALYST III: Respon for developing fiscal programs of O&M which amount to about $16 million for both cost ctrs & the Univ Operating Budget; full respon for budget prep, data collection, problem solving analysis; the formulation & evaluation of alternate solutions; the prep of periodic or special reports whether manual or data processing; capable of supvn & directing the work of 2 people in Service Ctr Acctg group; interfaces w/ other financial areas of the Univ; interprets their requirements, develops a plan of action for O&M & gives direction to other O&M mgrs on implementing such plans; maintain files; attends wkly mtgs of mgrs; participates in O&M policy decisions; prep monthly, quarterly & annual reports; QUALIFICATIONS: BA or BS in Acctg or Business Admin preferable; MBA desired but not required; exp w/ ADP applications w/ special emphasis on Hewlett-Packard hardware & software.; C08; $2464-3139.

31430-TC (JCC:5940) CLINICS STAFF NURSE IV: 50%; Flexible schedule; works under the direction of the Nurse Manager to provide nursing care in the Oncology Day Care Center; includes the administration of intravenous chemotherapy to oncology patients. Assists physicians with exams; QUALIFICATIONS: Must have the ability to work in a high pressure position w/many simultaneous demands being made upon the employee; must have at least 2 yrs applicable exp; must have venipuncture exp; must have valid Calif nursing license.; K04; $1030.50-1114.50.

27293-VW (JCC:1954) UNIVERSITY OFFICER IV: Dir of SLAC & Professor; planning, coordinating & administering the program of SLAC as part of Stanford Univ; also serv as a professor on SLAC faculty; QUALIFICATIONS: extensive & widely recognized exp as a practicing scientist in the field of elementary particle physics; admin exp & knowl of government relations desirable.; N11; $4166-OPEN.

Nonexempt

28284-BP (JCC:2562) SECRETARY III: Sec to Prof in Electrical Engrg; admin res contracts; budget prep, monitoring & projection of spending on contracts & assignment of expenditures between contracts; computer & typewriter prep of tech reports & manuscripts involving high degree of skill in editing & formatting of text will be required after an initial training period (typesetting sys are SCRIBE, TEX); receive & screen call & visitors; sort mail; compose original ltrs, memo, etc for supvr's signature; implement a filing & record-keeping sys; prep time sheets for employees; purchase supplies; QUALIFICATIONS: typ 60; prev exp w/ computer word processing sys desirable; editorial skill & writing ability essential; knowl of tech terminology; knowl of Univ policies & regulations; send appl/resume to Beverly Yates, AEL 107.; B14; $1440-1514.

44387-BP (JCC:2454) OFFICE ASST II: Referral source of genl Univ & Registrar's Offc info for students, faculty, staff & the public both in person & by phone; accurately interpret & answer a wide variety of questions; confirm registration & degrees of current & former students w/ knowl of Privacy Regulations so that approp info is given; actively involved w/ student registration & distribution of student Spouse Cards; input info to computer sys; access student info using Registrar's Offc computer sys; maintain Visiting Scholar info & update dept'l memos using word processing sys; QUALIFICATIONS: typ 35; strong verbal commu skills & ability to work effectively w/ people in a positive, courteous, & tactful manner; accuracy in high volume & detailed work; willingness to learn computer sys; send appl/resume to Diane Shankle, Old Union, Rm 137.; B09; $1130-1189.

40576-PM (JCC:2462) OFFICE ASST III: 50%; Have full responsibility for maint approx 30 budget statements & financial reporting to the investigators involved on a monthly basis; act as back-up for person responsible for purchase requisitioning, travel reimbursements, & hourly payroll; reconcile salary & supply expenditures to monthly expenditure statements; require solving problems w/ old requisitions & check the invoicing for accuracy; acquire knowledge of rules & regulations governing contracts, grants, & Univ procedures; QUALIFICATIONS: Bookkeeping exp needed; knowledge of Univ rules & regulations helpful; computer skills also helpful as we have just acquired an Apple computer; Send resume to Dick Davis, Room S-236 Medical Ctr.; B11; $623-655.

27183-LL (JCC:6810) SOC SCI RES ASST I: 8-5 except 2 days 12-8pm; entering data fr pro-coded forms into computer; editing entered data, data retrieval & simple analysis using standard statistical routines; treadmill & bicycle testing incl application of electrodes, monitoring & recording of electrocardiogram & blood pressure & recording of these data; drawing of blood samples; personal & telephone contact w/ patients to assure timely return & completeness of responses to questionnaires & compliance to home exercise training program; involved some evening telephone calling; QUALIFICATIONS: exp in exercise test monitoring is mandatory; exp w/ computer entry & retrieval highly desirable.; B12; $1310-1373.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, June 14 in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

29478-PM (JCC:2462) OFFICE ASST III: Student Affairs Offc Assistant; prov clerical support to 2 major GSB offices; the Public Mgmt Program, 50%; Mellon Grant 25%; Student Affairs 25%; organize & maintain career files for PMP & assist students w/ their use; maintain & update PMP alumni addresses & jobs info on rolodex & computer; organize Student Affairs files & asst w/ maintenance of GSB sch'l-wide calendar; telephone/Receptionist coverage; prov typing, photocopying & mat'ls distribution, etc; QUALIFICATIONS: typ 60-65; ability to handle confidential info & sensitive situations w/ discretion & tact; excel interpersonal skills & phone manner for dealing w/ students, staff, faculty & the public; strong typing & sec'l skills; incl knowl of MUSE & 1022 Programs on the Digital VT100 computer, or willingness to learn; send appl/resume to Susan Gould, Rm 10, GSB, 415 497-2101.; B11; $1246-1310.

SLAC

95528-JM (JCC:2562) SECRETARY III: Perform a wide range of sec'l & admin duties as follows: typ ltrs; maintain file sys; screen mail; support in connection w/ special lab committee mtgs; record data on word processor; typ tech mat'l using physics terminology; schedule appts & mtgs; make travel arrangements; asst in carry out daily respon; QUALIFICATIONS: several yrs applicable exp; typ 50-60; knowl of spelling, grammar & punctuation; familiarity and/or some exposure in use of word processor; ability to do tech typing or willingness to learn; exp w/ dictaphone & shorthand helpful have excel admin/organizational skills; good interactive skills.; B14; $1440-1514. APPLY AT SLAC

94212-JM (JCC:5108) PROGR SCIENTIFIC II: Operate VAX computer for online data logging, working w/ assistance; mgmt of large data base, most is on tape; construct & run computer programs using data base; interpret output fr programs w/ minimal input fr supervising physicist; supv data aide; QUALIFICATIONS: MS or equiv; physics training; knowl of physics programming (FORTRAN); particle physics training useful.; C06; $1854-2312. APPLY AT SLAC

94259-JM (JCC:8880) Electronic Engr (Microwave): Participate in design, development, modification & evaluation of components for highly stable rf sys; develop strip line circuits & amplfiers up to micromave frequencies; develop phase, amplitude & beam monitor sys for proj; initiate preliminary design approaches & parameters; set up & carry out experimental tests on rf accelerator sys, evaluate results & upgrade sys; QUALIFICATIONS: MS in EE or Applied Physics or equiv; several yrs exp in development & implementation of rf sys, solid state circuits, microwave measurements, phase-locked loops & feedback techniques, digital design techniques & high speed analog signal processing electronics; supvry ability; able to commu both orally & in writing.; C99; $2800-3600. APPLY AT SLAC

91950-JM (JCC:8880) Engrg Physicist: Asst physicists & engrs in design, fabrication, testing & maintenance of particle detector components, such as contributing to all aspects of electronic data acquisitions sys for new end-cap calorimeters of Mark II; preamplication, analog-to-digital conversion, calibration, noise-suppression; QUALIFICATIONS: BA/BS or equiv; several yrs hands-on exp w/ mechanical & electronic properties of particle detector apparatus such as tracking chambers, calorimeters, scintillators, etc; microprocessor applications incl programming; familiarity w/ CAMAC sys; ability to work independently in a intense environment.; C99; $2400-3000. APPLY AT SLAC

Bargaining Unit

31177-LL (JCC:1728) PORTAL MONITOR: 50%; TMS Unit; work schedule varies; perform duties in Meyer Memorial Lib; occupies Portal Monitor Booth at lobby entrance during assigned hrs & examines patrons' briefcases & bookbags, etc to determine that lib mat'ls are properly charge out; enforce lib regulations; transfer turnstile count of patrons to a tally sheet each hr of the day; collects other statistics as approp; answers patrons' questions; open & close bldg as scheduled; other duties as assigned; QUALIFICATIONS: prev public serv exp; punctuality & dependability; atten to detail; ability to perform repetitious tasks for extended periods & maintain accuracy; some college and/or lib exp; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; A09; $6.08.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

Radiation Research Nurse: 8-hr-a-wk position for staff nurse III or IV assisting w/ investigational drug study in dept of radiation therapy; this individual will work under direction & supvn of physician in dept of radiation therapy and a full time research nurse; duties involve administering IV radiosensitizer (phase I, investigational drugs) to outpts, collecting multiple blood & urine samples, monitoring patients for side effects related to drug and/or XRT, and minimal data collection; this individual should enjoy working independently & have flexible time sched; previous exper in med oncology and/or radiation therapy preferred; relief recurring as 2-3 days a wk could be needed when vacations occur; contact Carol Van Riper, 7-5055, or Joann Halsey, 7-6368.

Dawes new SFCU head; election coming

Charles Dawes has been appointed president of the Stanford Federal Credit Union by the Board of Directors.

Formerly a federal examiner with the National Credit Union Administration, Dawes has nine years experience in the credit union industry. He earned an MBA from Southern Illinois University in 1972.

Dawes will meet with members of the credit union at its annual meeting, set for 7:30 p.m. Thursday, June 16, in Tresidder Union 270-271.

Results of the board of director elections, conducted between Monday, June 13, and Thursday, June 16, will be announced at the meeting and presentations will be made by the Board, by the supervisory committee, and by the credit union management.

Members may vote at any branch office.

Five candidates, all incumbents, are running for slots on the board. They are: Maurine Buma, associate controller and accounting officer Stanford; Karl Hartmann, staff counsel, Capital Preservation Fund; Dick Olden, chief financial officer, Capital Preservation Fund; and Frank (Bud) Ratts, director of management and financial planning at Stanford; and Linnea Marenco, executive assistant to the director of CIT at Stanford. Marenco recently was elected board chairman.

Other board members, whose terms are continuing, are Terry Denley, manager of information services in the Office of Development, Stanford, and Floyd Grolle, biotechnolgoy research associate in the Office of Technology Licensing, also at Stanford.

The Stanford Federal Credit Union serves 35,000 members and has assets in excess of $40 million. Membership is open to most employees (and their relatives) of companies located on land owned and administered by the Board of Trustees of Stanford.

Four receive Newcombe fellowships

Four Stanford graduate students in the humanities have received Charlotte W. Newcombe doctoral dissertation fellowships for 1983, the Woodrow Wilson National Fellowship Foundation has announced.

Recipients, their field and dissertation topic are:

Jenny Franchot, American literature, "Roads to Rome: Catholicism in Ante-Bellum America;"

Patricia Klindienst Joplin, modern thought and literature, "Art and Resistance: Authority and Violence in the Work of Virginia Woolf;"

William Beattie Smith, political science, "British Government in Northern Ireland: A Study in Conflict Management;" and

John Louis Tofanelli, English, "The Opened Heart: The Act of Confession in the Novels of Dickens and Eliot."

Each will receive a $7,500 stipend plus dependency allowances. They are among 46 winners for the only dissertation awards in the humanities or social sciences offered in a national competition.

The dissertations concern the ethical and religious values by which individuals and societies determine the right course of action.

Franchot is a 1975 UC-Berkeley graduate who received a CBS bicentennial award for research in Colonial American literature.

Joplin is a 1973 graduate of Hampshire College and received her M.A. in English at Boston University in 1977. She was a University fellow there and received a Whiting dissertation fellowship at Stanford.

Smith graduated in 1971 from the University of Sussex. Former private secretary to Lord Melchett, minister of state, Northern Ireland Office, he received a Fulbright award in 1979 and 1980 and an American Political Science Association British politics group dissertation fellowship in 1982.

Tofanelli graduated from Saint Mary's College in 1978, where he received both the De La Salle award and the Brother Leo Meehan award for outstanding achievement in the liberal arts and English, respectively.

Government research contract and grants, 1972-82

Total direct and reimbursed indirect expenditures

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Department of Energy (excluding SLAC)	$ 848,268	$ 982,556	$ 1,178,108	$ 1,673,457	$ 3,040,578	$ 4,456,303	$ 5,666,946	$ 6,453,264	$ 7,576,894	$ 7,107,183
Department of Defense	8,941,745	8,800,068	7,466,925	7,617,661	8,234,111	9,683,585	11,629,057	15,637,596	21,916,739	23,928,326
National Aeronautics and Space Administration	3,927,616	3,937,671	4,709,964	5,046,300	5,000,279	5,429,935	6,157,694	6,351,433	7,634,918	8,343,127
National Science Foundation	13,116,406	14,287,612	14,146,645	15,433,880	16,145,829	18,686,880	22,106,388	24,498,258	24,584,153	24,816,348
Health and Human Services, Department of Education	26,424,525	25,236,280	29,781,807	33,982,849	35,098,909	38,574,490	44,901,281	49,616,662	53,735,952	54,079,001
Other	1,063,644	1,692,907	2,356,929	3,235,616	3,594,788	4,119,218	3,918,344	3,208,917	4,473,749	4,312,524
Total (excluding SLAC)	54,322,204	54,937,094	59,640,378	66,989,763	71,114,494	80,950,411	94,379,710	105,766,130	119,922,405	122,586,509
SLAC–Energy Research and Development Administration	26,582,186	26,564,938	27,314,117	29,861,409	32,511,653	36,146,737	47,227,660	58,829,605	63,840,267	66,696,785
Total	$80,904,390	$81,502,032	$86,954,495	$96,851,172	$103,626,147	$117,097,148	$141,607,370	$164,595,735	$183,762,672	$189,283,294
PERCENTAGE OF TOTAL										
+ Department of Energy (excluding SLAC)	1.0%	1.6%	1.2%	1.8%	1.4%	2.0%	1.7%	2.5%	2.9%	4.3%
+ Department of Defense	11.0	16.5	10.8	16.0	8.6	12.5	7.9	11.4	7.9	11.6
+ National Aeronautics and Space Administration	4.9	7.2	4.8	7.2	5.4	7.9	5.2	7.5	4.8	7.0
National Science Foundation	16.2	24.1	17.5	26.0	16.3	23.7	15.9	23.0	15.6	22.7
Health and Human Services Department of Education	32.7	48.7	31.0	45.9	34.2	49.9	35.1	50.7	33.9	49.4
Other	1.3	2.0	2.1	3.1	2.7	4.0	3.4	4.8	3.5	5.1
SLAC–Energy Research and Development Administration	32.9		32.6		31.4		30.8		31.4	
	100.0%		100.0%		100.0%		100.0%		100.0%	

	1980		1981		1982	
Department of Energy (excluding SLAC)	3.9%	6.1%	4.1	6.3%	3.7%	5.8
Department of Defense	9.5	14.8	11.9	18.3	12.6	19.5
National Aeronautics and Space Administration	3.9	6.0	4.2	6.4	4.4	6.8
National Science Foundation	14.9	23.2	13.4	20.5	13.1	20.2
Health and Human Services Department of Education	30.1	46.9	29.3	44.8	28.6	44.1
Other	2.0	3.0	2.4	3.7	2.3	3.5
SLAC–Energy Research and Development Administration	35.7		34.7		35.3	
	100.0%		100.0%		100.0%	

* Note: Handwritten numbers below indicate percent of total excluding SLAC

+ = "mission-oriented" Agencies

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the months of February and March:

FEDERAL

New Contracts

Daniel B. DeBra, Thomas O. Binford, and Lambertus Hesselink, aeronautics and astronautics, "Ultra Precision Machining," $350,000 from the Department of the Navy for 1 year.

Contracts—Amendments

C-W Francis Everitt, Daniel B. DeBra, and William M. Fairbank, W. W. Hansen Laboratories, "General Relativity Experiment," $279,999 from NASA for 3 months.

Robert A. Huggins, materials science and engineering, "New Battery Materials," $300,439 from the Department of Energy for 11 months.

Thomas Kailath, Stanford Electronics Laboratories, "Signal Estimation, Scattering Theory and Interpolation in One and Two Dimensions," $210,001 from the Department of the Army for 2 years.

Stephen J. Kline, Joel H. Ferziger, Robert J. Moffat, James P. Johnston, and Brian J. Cantwell, mechanical engineering, "Theoretical and Empirical Studies of the Basic Structure and Properties of Turbulent Shear Flows Including Separated Flows and Effects of Wall Curvature," $245,100 from the Department of the Air Force for 2 years.

Robert J. Madix, chemical engineering, "Molecular Beam Studies of the Dynamics and Kinetics of Heterogeneous Reactions on Single Crystal Surfaces," $310,000 from the Department of Energy for 3 years.

Joseph Oliger, computer science, "Computing Methods for the Approximate Solution of Time Dependent Problems," $335,187 from the Department of the Navy for 32 months.

William C. Fowkes, family, community, and preventive medicine, "Stanford-Area Health Education," $315,561 from the University of California (Health Resources Administration) for 1 year.

William A. Tiller, materials science and engineering, "Fabrication and Properties of Multilayer Structures," $423,951 from the Department of Defense for 2 years.

New Grants

Peter M. Banks, Stanford Electronic Laboratories, "Stanford Center for Aeronautics and Space Information Sciences," $415,000 from NASA for 1 year.

D. Craig Miller and Edwin L. Alderman, cardiovascular surgery, "Ventricular Dynamics from Surgically Inserted Markers," $219,310 from NIH for 1 year.

Grants—Amendments

David A. Clayton, pathology, "Mitochondrial Gene Expression in Malignant Cells," $208,732 from NIH for 1 year.

Carl Djerassi, chemistry, "Mass Spectrometry in Organic and Biochemistry," $214,412 from NIH for 1 year.

Robert A. Helliwell, Donald L. Carpenter, and John P. Katsufrakis, Stanford Electronics Laboratories, "Active and Passive Very Low Frequency Wave-Particle Experiments on the Magnetosphere from Siple Station, Antarctica," $313,496 from NSF for 1 year.

K. Karamcheti, aeronautics and astronautics, "The Research and Training Activities for the Joint Institute for Aeronautics and Acoustics," $206,459 from NASA-Ames Research Center for 1 year.

Hugh O. McDevitt, School of Medicine, "Genetic Control of the Immune Response," $330,223 from NIH for 1 year.

Irving Schulman, pediatrics, "General Clinical Research Center for Premature Infants," $431,372 from NIH for 1 year.

F. Blair Simmons, surgery, "Development of a Cochlear Prosthesis," $302,514 from NIH for 1 year.

Robert L. Baldwin, biochemistry, "Physical Studies of Nucleic Acids and Proteins," $205,835 from NIH for 1 year.

Arthur Bienenstock, Steven G. Boxer, and Keith O. Hodgson, Stanford Synchrotron Radiation Laboratories, "A Synchrotron Radiation Biotechnology Resource," $478,805 from NIH for 1 year.

Luigi Cavalli-Sforza, genetics, "Genetics Research Project," $215,309 from NIH for 6 months.

Robert A. Helliwell, Donald L. Carpenter, and John P. Katsufrakis, Stanford Electronics Laboratories, "Active and Passive Very Low Frequency Wave-Particle Interaction Experiments on the Magnetosphere from Roberval Station, Canada," $242,713 from NSF for 1 year.

Halsted R. Holman, Department of Medicine, "Stanford Multipurpose Arthritis Center," $374,646 from NIH for 1 year.

Henry M. Levin, education, "Research on Educational Finance and Governance Plans for Fiscal Year 1983," $1,170,000 from the National Institute of Education for 1 year.

Uel J. McMahan, neurobiology, "Structure and Function of Regenerating Synapses," $212,636 from NIH for 1 year.

Thomas C. Merigan, Department of Medicine, "Interferon, Immunity, and Latent Viruses," 271,488 from NIH for 1 year.

Dominick P. Purpura and Gerald M. Reaven, Medical School, "General Clinical Research Center," $671,723 from NIH for 1 year.

Henry S. Kaplan, radiology, "Radiology/Oncology Research Program," $338,000 from NIH for 6 months.

NON-FEDERAL

New Contracts

Edward E. Shaw and Norman K. Wessells, Center for Information Technology, "Joint Administrative Development Program on Scholarly Communications," $495,000 from International Business Machines for 30 months.

Harold A. Mooney, biological sciences, "Plant Response to S02, a Predictive Approach," $903,823 from the Electric Power Research Institute for 42 months.

William Watson and Paul H. Jacobs, dermatology, "Topical Minoxidil in Early Male Pattern Baldness," $248,900 from Upjohn Company for 7 months.

Ian Watt, Special Programs in Humanities, "Junior Faculty Fellowship Program," $250,000 from the Mellon Foundation for 5 years.

Rental housing

HOUSING AVAILABLE

□ **July & Aug.:** European vacation rent. Priv. hse nr. Alpine Lake, midwy Lucerne/Zurich. 3+BR, walk to pub. beach. Refs. recq. Mercedes 450 avail. $1500/mo + dep. Call New York, (212) 599-3100, Mr. Gordon, day; or Evelyn, (415) 839-5060, eve.

□ **July 1 to end June '84:** Unfurn master BR in 3BR/2BA hse. Walk/bike to campus. W/D, DW, gar. $350/mo + util. Nonsmokers. Call Mark, 497-1794, day; 854-2424.

□ **July thru Sept. '83:** Furn. Palo Alto condo. Time per. flex. 2BR/2BA, LR w/DR area, W/D, DW, patio, carport, pool. Walk to Stanf., train, bus, no pets, nonsmokers. $1200/mo (nego) + $800 sec. dep. Call 321-9280, eve.

□ **Beg. Oct. 24 (or sooner) thru June '84:** 1BR w/BA in Palo Alto condo; new furn., linens, W/D, prkng, pool, walk to Stanf., train, bus. Nonsmoker. $325 + 1 mo. sec. dep. Call 321-9280, eve.

□ **June, July, Aug.:** SRI scientist has rent. to SHARE. Fully furn. 3BR/2BA apt., central Menlo Pk. TV, BBQ, pools, gym. $400/mo + ½ util. Call Malcolm 859-4066, 325-3732.

□ **Aug. 22, '83 to July, '84 (flex):** Old Palo Alto, fully furn hse. 3BR/2½BA, DR, den/guest rm, gourmet ktchn. Quiet st., nr schls. Garden. No pets. $1600/mo, incl. grdnr. Call 855-2068, day; 326-0850.

□ **June 10 to Sept. 20:** Summer sublet: 1BR furn apt, full ktchn, BA w/shower. Kingscote Grdns, ctr. Stanf. campus. $645/mo. Call 324-8985, 493-1376.

□ **June 15 to Sept. 15:** 2BR apt. sublet to SHARE w/student. Ctr. campus in Kingscote Grdns. Full ktchn. $375/mo. Call 325-8095, 328-2239.

□ **July 4 to Aug. 8:** Campus hse, fully furn., contemp., view solar-ht. pool. Cpl pref. $1500/mo. Call 857-9654.

□ **June 26 (flex) thru July '84:** Fully furn. 2BR/2BA hse, AEK, microwave, W/D, gar., pool, tennis, hot tub; grdnr & maintenance incl. $1100/mo. Call Dr. Kulick, 497-7001, day.

□ **Beg. Aug. 15, 1 yr. or longer:** Fully furn, Danish style, 3BR/2BA condo w/pool, children's playgrnd. $1050 + util. Call 497-2844, day; 493-2717.

□ **July 28 to Aug. 29:** Lovely London hse, Chiswick area, 3BR/1BA, LR, DR, new ktchn, W/D, TV, garden. Nr transp. $1000/mo. Call Abramsky, 011-441-995-2747, or write: 13 Van Brugh Rd., London, W41, JB, England; local call: 856-6049.

□ **Mid-June to Sept. 1:** Secluded hse in Los Altos Hills, 3BR/2BA, view, fully furn, incl crib, kid's toys. $1000/mo. Call 941-6194.

□ **June 18 to Aug. 27 (flex):** Fully furn campus hse, 4BR/2½BA, DR, FR, piano, lrg. fenced y d. Nonsmokers, no pets. $1200/mo. incl. wkly clean., grdnr, water. Call 493-8874.

□ **June to Sept. '83:** Summer rent, TAHOE. Modified A-frame chalet. 2BR + loft/1½BA, lrg. AEK/DR, LR w/frpl, W/D, cable TV. Deck. No pets or sublet. Close to casinos. Nr. lake & tennis. $600/wk, $1100/2 wks, $1750/mo. Call Marsha, (415) 563-3156.

□ **NOW:** New 2BR/2BA cottage in San Miguel de Allende, Guanajuato, Mex. Peaceful, reasonable. Local Inst. Allende & Bellas Artes nr. for varied crses. in writ. lang., arts. Call 851-7086.

□ **June 18 to July 31:** Los Altos hse, fully furn, 3BR/1BA, deck, fenced yd.; nonsmokers. 15 min. to Stanf. $700/mo. Call 948-5659, after 4 p.m.

□ **Sept. to Dec. 15, '83:** Furn. 1 or 2BR apts. Olympic pool, sauna, jacuzzi, tennis, racq. ball. Adult complex. Dep. req., 1 apt. air-cond. Refs. $600/mo. Rte. #280 to Stanf. Call Prof. Arnold, 968-0951, (408) 255-8909.

□ **NOW:** Summer rent. Alpine Meadows, Tahoe, 3BR/1½BA cabin, W/D, phone, sleeps 10. $180/wk. Call 493-4139, eve.

□ **June 11 for 1 yr:** 1BR furn apt., walk to Stanf/Med Ctr, shops, theaters, restaurants. Pool, jacuzzi, sauna, lndry. $550/mo. (415) 538-9444, early a.m., late p.m., (408) 335-3597.

□ **Regularly avail:** 1 & 2BR furn & unfurn apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049.

□ **Beg. Aug. '83:** Crescent Pk, Palo Alto, 3BR/3BA, new ktchn, DR, fenced yd, piano, W/D, Mediterranean style hse. $1590/mo, incl. grdnr, water. Call COLLECT (602) 299-4499.

□ **July 26 to Aug. 31, '83:** Spac. Victorian hse, 4BR/3BA, gourmet ktchn, DR, FR, lrg. yd. Nr. dwntwn Palo Alto, Com. Ctr. pool, tennis, libr. Call 328-6794, eve.

□ **NOW:** SHARE: Young single woman seeking M/F nonsmoker for 2BR/2BA lux. condo in Old Mill complex. AEK, secure bldg. Elevator, pool. Call Leslie, 948-6185, eve.

□ **Beg. Aug. 10:** Fully furn 1BR apt. in triplex. On Alma St. in Palo Alto. Priv. patio. $675/mo. Call 856-6049.

□ **Beg. June 16 (flex):** Unfurn. Palo Alto hse, 2BR/2BA, LR/DR w/brick frpl; FR can be 3rd BR. Yd, terrace, carport, wrkshed. Remodelled AEK ktchn, w/dw. $1150/mo incl grdnr. Call 856-6049.

□ **Beg. Sept. 1:** Palo Alto unfurn hse, 3BR/2BA, lrg. yd, patios, 2-car gar., frpl. 2 mi. to Stanf. $1200/mo. Call 856-6049.

□ **June 16:** Fully furn 2BR apt in 4-plex. 100 El Carmelo Ave., 2 mi. to Stanf. Coin lndry, yd., carport w/bike stor. $750/mo. Call 856-6049.

□ **NOW:** Excep. lovely campus hse, unfurn, 3BR/2½BA, study, all appl. Avail. for fac. or staff. $1200/mo. incl. garb, water, grnds care; dbl carport. Call Helen Meyer, 497-3453, day.

□ **Beg. June 1:** Male or female to share furn. 2BR/2BA Oak Creek lux. apt. Patio, piano, tennis, pools. Foreign visitors welcome. Walk to Stanf, Palo Alto, Menlo Pk. $465/mo. Call 326-7266.

□ **Beg. July 1:** Fully furn hse, 3BR/1BA & sep. shower, DR, bkfst nook. Quiet creekside st., bike to Stanf. $1200/mo. Call Larry, 324-2469, Eveleen 322-6985, eves or wknds.

□ **June to Sept:** House to sublet. 2BR, lrg yd, quiet, cool. $700/mo. + util. No pets. Call J. Murphy, 857-0438, eve.

□ **NOW:** For rent in France, in Orsay, 15 mi. so. from Paris, nr. univ., CEA, CNRS. Lrg hse, furn, 4BR, 2LR, frpl, cellar. Call (408) 248-7303.

□ **July 1 or sooner, for 1 yr:** Exec. twnhse for writer/-scholar: 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min. to Stanf. Cpl or single adult only. No pets. $1300/mo. Owner going to Harvard. Call 494-0452.

□ **July 1 (flex) to Sept. 1 (flex) '83:** Furn. 2BR/2BA hse on campus. Study, FR, deck, garden, frpl, piano. No pets. Nonsmoker. $800/mo nego. for light grdng. Call Ed Brown, 497-4439, day; 493-3748.

□ **NOW:** To rent for 1 yr or more: beautiful hse, 5BR/2½BA, furn. or unfurn. in ISRAEL, in Beer-Sheva, 5 min. drive to Univ/Hosp. Call Prof. Rosenblatt, 497-9325, day; 856-3552, home.

□ **NOW:** Lease 1 yr. or longer. Lrg. hse on 4 acres in Woodside. 3+BR/3BA, fam. ktchn, horse facil., privacy. Refs. req. $2250/mo. Call 327-3505, day; 851-8393, eve.

□ **June '83 to June '84:** Hse in Mt. View, 3BR/1BA, kitchen w/appl., patio, gar., yd w/ dog run. New carpet & maint. 7 mi. to Stanf. Req. 1st & last mo. rent & 1 yr. lease. Call Mrs. Schatzki 494-6135.

□ **June '83 to June '84 (flex):** Lrg. unfurn hse in Ladera, 3 mi. to Stanf. 5BR/3BA, AEK, 3 frpls., FR, lrg. deck. $2000/mo. Call (415) 854-0281.

□ **Fall Qtr:** Lovely campus hse, fully equipped. Grdnr, pool & clean. serv. Solar pool. Nonsmokers, no pets. $1270/o. Call 857-1497.

□ **NOW:** Tahoe-Donner hse, 4BR/3BA, hot tub, deck overlooking Nat'l Forest. Hiking, tennis, golf, Donner Lake access. $450/wk, $200/wknd. Call 324-8559.

□ **June 11 to July 19:** Fully furn hse in old Palo Alto. 5BR/2½BA, mdrn ktchn, fenced yd, game rm (sep. from hse), housekeeper. $1000 (nego). 1 mi. to campus. Call Vickie, 327-5339.

□ **Beg. July 15 (flex):** Furn hse mid-twn Palo Alto, 3BR/2BA, quiet off-st. loc., nr elem. sch. Nonsmokers, pets nego. Lease 1 or 2 yrs. $1000/mo. Call eves (408) 735-1441.

□ **Aug. '83 to July '84 (nego):** Paris apt., quiet loc., nr Forum-Pompidou. 2-level on top flrs; 1BR/1BA, LR, study, DR, AEK, W/D. Fully furn. in rstored 18th c. bldg. $700/mo. Call (415) 864-5011.

□ **Beg. July '83 to beg. Apr. '84 (flex):** Fully furn hse, 3BR/2BA, AEK, W/D, Steinway, 2 studies, frpl, pool, fenced yd. Nr. Med. Ctr, bike to campus. $1500/mo. (nego) incl. pool serv, grdnr. Call 497-1348, day; 325-4533 (lv. message), 322-9866, eve.

□ **Beg. June 10:** Palo Alto, old town; furn. 2BR/2BA apt suite to SHARE w/grad student or other Stanf male. Quiet, conv. to Stanf. & dwntwn. Pool, lndry, stor. for bike, encl. prkng. $385/mo. incl. util. Call Dan Stephan, 324-1552, 859-2185, wkdays.

□ **Beg. June 1, '83:** One unfurn. BR avail. in 3BR Menlo Pk hse. Rest of hse furn, W/D. Seek female nonsmoker. Close to Stanf, dwntwn Menlo Pk. $216.67/mo. Call Denise or Aria, 324-0174, eve.

□ **June to Sept. '83:** Summer rent; TAHOE; modified A-frame chalet, 2BR + loft/1½BA, AEK, DR, LR w/frpl., W/D, cable TV, deck. Nr lake, tennis, casinos. No pets or sublet. $600/wk, $1100/2 wks, $1750/mo. Call Marsha (415) 563-3156.

□ **Beg. July to beg. Sept:** OXFORD, Eng. Centrally sit. hse, 4BR/3BA, lovely garden, gar. Call 857-9384.

□ **Mid-June to end Aug. '83:** Portola Valley, 3BR rustic hse in woods, fully furn, piano, W/D. $525/mo. + util. + care of pets. Call 497-3486, day; 851-1986.

□ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

□ **Aug. 19:** Luxury 1BR furn. campus apt. Lrg. closets & windows. Priv. patio. $875/mo. incl all util. Call Shirley, 856-6049.

HOUSING NEEDED

□ **Beg. June 15 for 1½ mos:** Recently retired Prof. from Oregon seeks moderate price 1BR (or shared 2BR) apt. Reasonably close to Stanf. Write: Dr. Allan Kittell, History Dept., Lewis & Clark Coll., Portland, OR 97219, or call (503) 244-1616, x507.

□ **July 1 or early Aug., thru June 30, '84:** Adult physician cpl., nonsmokers, no pets, desire hse or twnhse, furn or unfurn, min. 2BR, Palo Alto, Menlo Pk, Los Altos, Mt. View. Pay $800 to $1100/mo. Call eves, (415) 333-0168.

□ **Beg. Fall Qtr (flex):** Visit. prof. from Northwestern U. is seeking hse/apt, at least 2BR, on or nr campus. Call Prof. Rosenblatt, 497-9325, day; 856-3552.

□ **June, July, Aug.:** 4BR hse in Stanf-Woodside-Palo Alto area needed for computer programmers living & working in hse. Call (415) 369-4671.

□ **July 15 to Sept. 15:** Visit. prof. from Paris seeks hse to rent in Palo Alto, Menlo Pk, Los Altos area. Poss. EXCHANGE 4BR apt. & car, 16th Arrondisment dist. Write Jean Vuillenin, 76 Rue de la Tour, 75116, Paris, France. Call 504-33-79.

□ **July 16 to Aug. 28, '83:** Visit. fac. cpl, former Stanf. visitors, desire HOUSESIT or rent arrang. for above per. seek 1BR or more. Call C. Holahan, (512) 471-3033, day; (512) 346-2220, eve.

□ **June thru Sept.:** HOUSESITTERS avail. Florida parents spending summer in Los Altos. No fee. Call Janice Carr, 941-4486.

□ **Sept. '83 to Aug. 31, '84:** Visit prof, wife, 3 children seek to rent 3-4BR furn hse on or nr campus. Up to $1500/mo. No pets, nonsmokers. Call 497-3480, day; 856-0534, eve & wknd.

□ **Aug. 1 (flex) for 1-2 yrs:** European visit. prof, wife, 2 dghtrs (14 & 8) seek 3BR hse, furn or unfurn, on or nr campus. Nonsmokers, no pets. Local refs. Call 497-9258, day; 321-9539, eve.

□ **Sept. '83 to May (or Aug.) '84:** Fac. husband seeks furn 1BR apt. Careful, nonsmoker, no children or pets. Local refs. Call 969-4442, x4117, day; (415) 834-9143, eve.

□ **Beg. end Sept. for 6 mos:** Norwegian visit. scholar, husb, 1 child seek fully furn. 1-2BR hse or apt. nr campus. Nonsmokers. Call Marilyn Yalom, 497-1994, day.

□ **Sept. 1, '83 to mid-Apr. '84 (flex):** Sabbatical physician, wife, children 15 & 12, seek 3BR hse. Stanf. area, furn. to rent. Or EXCHANGE N.W. contemp hse, 4BR, study, FR, view, Portland, OR. Call COLLECT (503) 222-2464.

□ **June 18 to Aug. 1 or Sept. 1:** Dutch prof, NRC assoc. at Ames, Moffett Field, wife & dghtrs 16 & 19 seek furn. hse. Call Dr. Voogd, 961-4054, eve; 965-6174, day.

□ **Beg. July 1 for min. 1 yr:** M.D. assoc. w/Stanf. Med Ctr seeks to lease hse or condo w/min. 3BR in or so. of Palo Alto area. No children or pets, not cost limited. Call (619) 450-1133, or write: John Connolly, 8652-1 Villa La Jolla Dr., La Jolla, CA 92037.

□ **Sept. 1 for 9 mos.:** Visiting scholar, wife, 1 child seek 2-3BR furnished house or apt. near campus. Nonsmokers, clean living, home-owners. Will care for plants, pets. Local refs. Call (314) 875-2858 COLLECT, eves.

□ **Sept. 25, '83 to Mar. 25, '84 (flex):** Visit. Canadian physician & wife (no children) seek 1-2BR furn apt, small hse or HOUSESIT. Prefer within 10 min. to Stanf. Med. Ctr. Refs. avail. Call (403) 432-3912, day; day; (403) 439-5135, eve.

□ **July '83 to Dec. 31, '83:** Visit. prof, wife, 2 children seek furn. 2-3BR hse or apt in Stanf.-Palo Alto area. Call Susie or Michelle, 497-2218, day.

□ **Beg. Aug. 1 (flex):** Responsible family of 4 willing to hsesit any time after beg. Aug. Local refs avail. Call COLLECT (202) 363-6558, Wash. DC.

□ **Sept. '83 to May '84:** Visit. prof. on sabbat. at Stanf. & spouse w/dog, seek furn. 2BR hse in P.A., Menlo Pk, Stanf. Nonsmokers. Call COLLECT (413) 367-2286 (home), (413) 545-0685 (work), Amherst, MA.

□ **Summer '83; 3 to 4 wks:** Seek hse w/pool on or nr campus. Local refs. Call J.M. Gallagher 981-6911 or (415) 751-3600, eve.

□ **Beg. Sept. '83 for 8-10 mos:** Visit prof from Israel with wife, children, 5 & 2, seeks hsng nr Stanf, Esc. Vill. Call 497-4786.

□ **Academic yr. '83-'84:** Visit fac. mbr & fam. seek furn 2-3BR apt. or hse. Call Ron Oaxaca, (602) 621-6224 or (602) 745-1796.

□ **Beg. Sept. 1, '83:** Prof. & wife seek 2BR apt or hse nr campus. Call Linda Heider, 497-4440, day.

□ **June 15 to Sept. 15 (flex):** Reliable missionary cpl on lv from Philippines seeks 1BR furn apt or will HOUSESIT. Call Lori, 324-5729, day; 321-0237, eve.

□ **Summer live-in:** French youth, 19, son of Visit. Prof. Berkeley, seeks summer live-in w/family in exchange for supervision of children over 6. Call Loftis, 325-7293 or Martinet, 549-2312.

□ **Aug. 15 (flex) for 1 yr:** Univ. of Ill. prof, wife, 2 well-behaved children, 14 & 16, seek 3BR, furn hse. Pref. nr Stanf. in Palo Alto sch. dist. Careful, considerate, nonsmokers, no pets. Local refs. Can pay $900 to $1100/mo. Call COLLECT (217) 351-9881.

□ **NOW:** Long term, hsesit or or work/rent exchange. Dr's wife w/local refs. Meticulous caretaker. Call 326-8880, Marjorie Pryor, or lv. message.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Position available in rental listings

The service is seeking a second person to help with listings which appear weekly in *Campus Report*. Simple bookkeeping, typing and telephoning skills are required.

The job pays $6 an hour, and when shared, needs a time commitment of five to seven hours weekly. Most of this is Wednesday through Friday, plus being available at a phone certain days of the week.

If you are a campus resident interested in such a partnership, please write SCHOA Rental Housing, Box 7772, Stanford, Calif. 94305.

CIT solicits ideas for two forums on SUNet's schedule for next fall

SUNet, Stanford's computer and video communications network, will be the subject of two open forums early in autumn quarter.

The first session (5:30-6:30 p.m., Oct. 12) will explain in nontechnical terms the basic capabilities of SUNet and its relationship to Stanford's new telephone system and Palo Alto's planned cable TV system.

The second session (5:30-7 p.m., Oct. 13) will begin with a short status report on SUNet development and prototype operations.

The rest of the time will be devoted to open discussion of planned and potential uses of SUNet.

In addition to linking computers, SUNet is being designed to accommodate experimentation with new video services such as teleconferencing, transmission of prerecorded classroom materials, and reception of public service broadcasts such as congressional sessions, etc.

SUNet will support both delivery to and origination of video programming from any central campus building. Together with the other University resources such as the Instructional Television Network and the newly-built video studio in the Communications Department, it will create opportunities for innovation in instruction and research.

We solicit your ideas and will use them to help shape SUNet development. If there are specific issues you would like covered in the forums, please contact Jean Siegman, ext. 7-1683.

Both forums will be held in Skilling Auditorium.

Gates to Frost will close at 10 a.m.

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march in the colorful procession.

Individual tickets will be checked and taken at the Amphitheater gates, which will remain open only from 8:30 to 10 a.m., when the main ceremony starts.

Frost will be secured, starting Tuesday. Signs carried by demonstrators will be permitted so long as they do not obstruct the view of others and are not on sticks.

An estimated 4,500 degrees will be conferred by President Donald Kennedy, who also will address the class. Following the Frost ceremonies, diplomas will be handed out in 37 separate locations across campus. Total attendance is estimated at 19,000, an all-time high.

The Rev. David H. C. Read of the Madison Avenue Presbyterian Church, will deliver the baccalaureate sermon at 9:30 a.m. Saturday, June 11, on the Inner Quadrangle.

Dedication of the Senior Class plaque will follow at 10:45 a.m. Speakers at Class Day luncheon in the Bowman Alumni House Grove will include President Kennedy, Alumni Association Director William Stone, Admissions Dean Fred Hargadon, and Profs. Eleanor Prosser, drama and English, Gil Masters, civil engineering, and William Durham, anthropology.

This year's class presidents are Joe Del Hierro, Mary Ruckelshaus, Katy Dore, and Kevin O'Beirne.

The president's reception for graduates, faculty, and alumni will start at 3:30 p.m. Saturday at the President's House, 623 Mirada.

History senior wins Sudler Prize

James Riley, a senior in history and a member of the graduate class in creative writing, has been chosen as the first Stanford recipient of the Louis Sudler Prize in the Arts.

He will receive $1,000 and will be flown to New York for a symposium in the arts to be held at the Yale Club in early June.

The Sudler Prize will be given each year to the most accomplished and promising undergraduate in one of the fine or performing arts: music, art, drama, or creative writing. Prizes will be awarded at 14 colleges and universities, among them, besides Stanford, are Yale, Harvard, Princeton, Dartmouth, MIT, Chicago, Duke, and Purdue.

Louis Sudler, who has endowed the prize, is chairman emeritus of the Chicago Symphony Orchestra, and is founder and honorary chairman of Sudler Company, a Chicago real estate firm. A musician of note, Sudler had appeared as a soloist with leading symphony orchestras, and from 1960 to 1974 was host and founder of the Peabody Award winning television program, "Artist's Showcase."

Riley, a native of Pasadena, is a history major with a long held interest in writing. Upon completion of his sophomore year at Stanford he dropped out for a year to sell real estate and to write; upon his return, he enrolled in a number of undergraduate writing courses and in his senior year was admitted to the graduate workshop in creative writing. After graduation, Riley will attend the Writer's Workshop at the University of Iowa.

Winner of film prizes

Winners of screenwriting and film production fellowships for 1983-84 in the Department of Communication have been announced by Prof. Julian Blaustein.

The Nicholl Fellows in screenwriting will be Jay Stapleton, Jeff Swab, and Kris Tomooka. The fellowships are funded by a gift from the late Don Nicholl and Mrs. Nicholl.

The Louis B. Mayer Fellows in film production, funded by the Louis B. Mayer Foundation, will be Marshall Eisen, Devon Miller, and Dan Woodard.

Radiological peril

All interested members of the Stanford community are invited to attend the meeting of the Administrative Panel on Radiological Hazards Control (APRH) at 2:30 p.m. Tuesday, June 14, in Tresidder Room 132.

Questions or comments should be directed to Health Physics, 497-3201.

Humanities Center move

The Humanities Center has moved into Mariposa House, behind Kresge Auditorium.

The remainder of its offices in nearby Rogers House will not be ready until later this summer.



Return those library books

Green Library material charged out to faculty and staff due Spring 1983 must be returned or renewed by June 30, 1983. Prompt response will reduce library costs of mailing overdue notices.

Questions or concerns should be directed to Mary Sevilla, Loan Division, Green Library, 497-1493.

Eliot Cohen is third Simon Schuster scholar

Eliot Cohen, a second-year student in the Stanford Writing Program, has been chosen as the third Gulf and Western-Simon and Schuster Scholar.

He will receive $6,000 support money during the 1983-84 school year and, upon receiving his degree, will be offered an entry-level editorial position with the publishing firm of Simon and Schuster in New York.

The Gulf and Western-Simon and Schuster Scholarship is awarded to three students a year at universities located on the East and West Coasts. The participating universities are: Columbia University, School of Arts; Stanford University, School of Humanities and Sciences Graduate Program in Creative Writing; and Tufts University, College of Arts and Science.

Prof. John L'Heureux, director of the Stanford Writing Program, said, "The Simon and Schuster scholarships foster the very healthiest kind of relationship between academia and the world of business. Publishing money assists young writers in completing their graduate educations; those writers, armed with their new degrees, then work within the publishing industry. This is an exciting, innovative, and handsome example of corporate charity."

Cohen is a native of New York City. He received his B.A. in ancient history in 1977 from Yale University and wrote for three years for the *Yale Daily News*. After graduation he worked for the U.S. International Communication Agency in Washington, D.C., and was assigned to Dar es Salaam, Tanzania, for one year as a foreign service information officer.

Children's Dance offers variety of summer courses

Children's Dance at Stanford enters its fourth year of operation with a summer session scheduled for June 20 to July 28 in Roble Dance Studios.

The six-week program features classes for boys and girls ages 3 to 13. Classes meet Monday through Thursday afternoons between 4 and 6 p.m.

Class offerings include a "Workshop in Dance and Micro-Computers," "Dancing Out-of-Doors," "Rhythms and Movement" for three to five-year-olds, and "Movement and Music" for six to eight-year-olds.

The "Workshop in Dance and Micro-Computers" for children ages six to 13 involves one hour of choreography in the dance studio, followed by an hour in Stanford's Micro-Computer Lab.

The "Dancing Out-of-Doors" class will improvise and choreograph in a variety of environments on Roble grounds.

For further information and registration call instructors Elizabeth Larkam and Diana Lindsay at 497-4254. Children's Dance at Stanford is sponsored by Stanford Dance Division under the auspices of the Department of Athletics, Physical Education, and Recreation.

STARTS sponsors summer classes for all dance levels

Student Arts at Stanford sponsors a six-week Summer Dance Workshop with instructors Lisa Burnett and Elizabeth Larkam.

The Workshop features classes in ballet, modern dance, floor-barre—alignment, and early morning dance-exercise.

Classes are scheduled for early mornings, late afternoons, and evenings, Monday through Thursday, June 20 through July 28, in Roble Dance Studios.

Dancers of all levels of experience from Stanford and neighboring communities are invited to participate. Workshop fees range from $3 to $4 per class based upon the number of classes taken per week.

For further information and registration call Lisa Burnett at 854-4163, or Elizabeth Larkam at 497-4254.

Trips, adventures offered by SOAR at Tresidder

Stanford Outdoor Adventures and Recreation (SOAR) at Tresidder Union has in store all kinds of trips and programs to keep campus people busy through the summer months. Like the U.S. Marines, participants will be able to play on land, on water, or in the air.

Summer programs, beginning this month, include backpacking, whitewater rafting, and flying, as well as trips to Yosemite, New Brighton Beach, and Big Basin State Park.

Classes will be available in horseback riding, kayaking, bike maintenance, and rock climbing.

Call 497-4316 for information on these and other exciting events sponsored by SOAR.



Tom Coster



David Baker

Tom Coster, David Baker to give first two STARTS 'Speaking Jazz' lectures

Tom Coster, pianist for Santana, will speak on "Ivory Expedition, Multi-Keyboard Applications and Approaches to Improvisation and Modern Chord Voicings" at 7:30 p.m. Wednesday, June 22, in the Tresidder Lounge. Admission is $3.

Coster has recently released an album entitled "Ivory Expedition," a richly textured, cohesive work, on Fantasy records. He is also a columnist for *Keyboard* Magazine.

David Baker, internationally renowned educator, composer, performer, and author of more than 60 books on jazz will speak at 7:30 p.m. Thursday, June 23, in the Tresidder Lounge. Admission is $3.

Baker, currently chairman of the Jazz Department of the Indiana University School of Music, will talk about "New Directions in Jazz Since 1959."

These lectures are the first in a series of 10 Speaking Jazz lectures sponsored by STARTS and the Stanford Jazz Workshop. Other speakers include composer Bobby Hutcherson, guitarist Bruce Forman, and sax player Stan Getz. Full series tickets are $25, available at the STARTS office.

UNICEF concerts next weekend

Stanford's Department of Music will host the 21st annual UNICEF Youth Concerts at 2 p.m. Saturday and Sunday, June 18 and 19, in Dinkelspiel Auditorium.

The two concerts will feature solos and ensembles by talented young musicians aged six-18 chosen from over 300 auditioners. The panel of judges includes professors from San Jose State University, Stanford, the San Francisco Conservatory of Music, and Bay Area music teachers.

Admission is $3 for adults and $2 for children and seniors at the door. All proceeds benefit UNICEF, the United Nations Children's Emergency Fund.

For more information, please phone 365-1681.



'60 Minutes' show on Mosher Sunday

Producers of the CBS-TV program "60 Minutes" have advised Stanford that they plan to broadcast a major segment on Steven Mosher Sunday, June 12. The program may be seen locally on Channel 5, starting at 7 p.m.

A graduate student in anthropology, Mosher was dismissed by an 11-0 vote of the department faculty Feb. 24 for "illegal and seriously unethical conduct" in China that "endangered his research subjects."

Mosher has blamed his expulsion on a popular press article he wrote on forced abortions late in pregnancy in China and on "slanderous" allegations by his former wife.

Mosher has filed a grievance with Dean Norman Wessells of the School of Humanities and Sciences, who has named three persons to review the case.

The panel includes Profs. Gordon Wright, history; Ernest Hilgard, psychology; and Ward H. Goodenough, University of Pennsylvania anthropologist. Wessells has requested a report from them by June 30.

Ph.D.orals

MONDAY, JUNE 13

Rafael Mantilla-Montalvo, electrical engineering, 9 a.m., Durand 450.

Summer jazz workshop to feature Stan Gertz, Richie Cole, master classes

Stan Getz, Richie Cole, and an all-star faculty will lead masterclasses and jazz clinics this summer at the 11th annual Stanford Jazz Workshop, sponsored by the Department of Music and Tresidder Memorial Union.

Week-long, full-time instrumental and vocal jazz programs offer a unique and outstanding educational opportunity to adult and student jazz players, while concerts and the "Speaking Jazz" lecture series are open to anyone with interest in jazz.

June 20-July 21: Jazz Summer XI (Mon-Tues-Thurs evenings). Theory, improvisation and small combo playing with Jim Nadel. Also "Speaking Jazz" lecture series.

July 24-30: Bay Area Jazz Week featuring Richie Cole. Between appearances at festivals in Europe and Japan, the talented and versatile alto saxophonist will highlight this week at Stanford with a faculty including Mark Levine, Eddie Moore, Mel Martin, Cal Lewiston, Dick Hindman, Bruce Forman, and others.

July 31-August 6: Stan Getz Jazz Week. Stan will bring Jim McNeely (piano), Victor Lewis (drums), and Marc Johnson (bass). Getz's career spans four decades and his distinctive sound can be heard on over 150 albums.

The Jazz Workshop includes improvisation, small combo playing, masterclasses, individual instruction, big band sight reading, clinicians for each instrumental family, public performances and jam sessions, and evening faculty concerts.

The Workshop accepts all instruments, junior and senior high school, adult, and advanced students. Room and board are available; commuters are welcome.

For information call (415) 752-1370 or write: Stanford Jazz Workshop, Box 6508, Stanford, Calif. 94305. Jim Nadel is director.

Coping with divorce workshop slated

The Help Center workshop on coping with divorce, "Why Can't I Get Over It," slated for noon to 1:30 p.m. Wednesday, June 15, still has room for a few more participants.

Items for discussion are the normal phases in the separation-divorce process, children's emotional responses, social pressures, and how to recover.

Guest speakers are Sue Thompson and Kay Martin, licensed clinical social workers.

Call 497-4577 to reserve a-place by Monday, June 13. The Help Center is in the rear of Galvez House; parking is at Angell Field.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., June 8, to cover the week of Mon., June 20, through Sun., June 26. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, JUNE 14

Tower Talks Presents: "Solidarity between East & West," by Christine Sadowski, National Fellow. 3:30 p.m. Lou Henry Hoover Bldg., Hoover Tower.

EXHIBITS

Early Lithography: 1803-1830. Museum, Miedel Room. April 12 - June 19.

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. Louis Lurie Rotunda, Green Library. April 25 - June 30.

Stanford Senior Class Art Show. 7 a.m. to 11 p.m. Tresidder Coffee House and Upper Lobby. May 1 - June 15.

Master of Fine Arts Exhibition. Tues.-Fri.: 10 to 5 p.m.; Sat. & Sun. 1 to 5 p.m. Stanford Art Gallery (next to Cummings Art Bldg.). May 17 - June 14.

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23July 28.

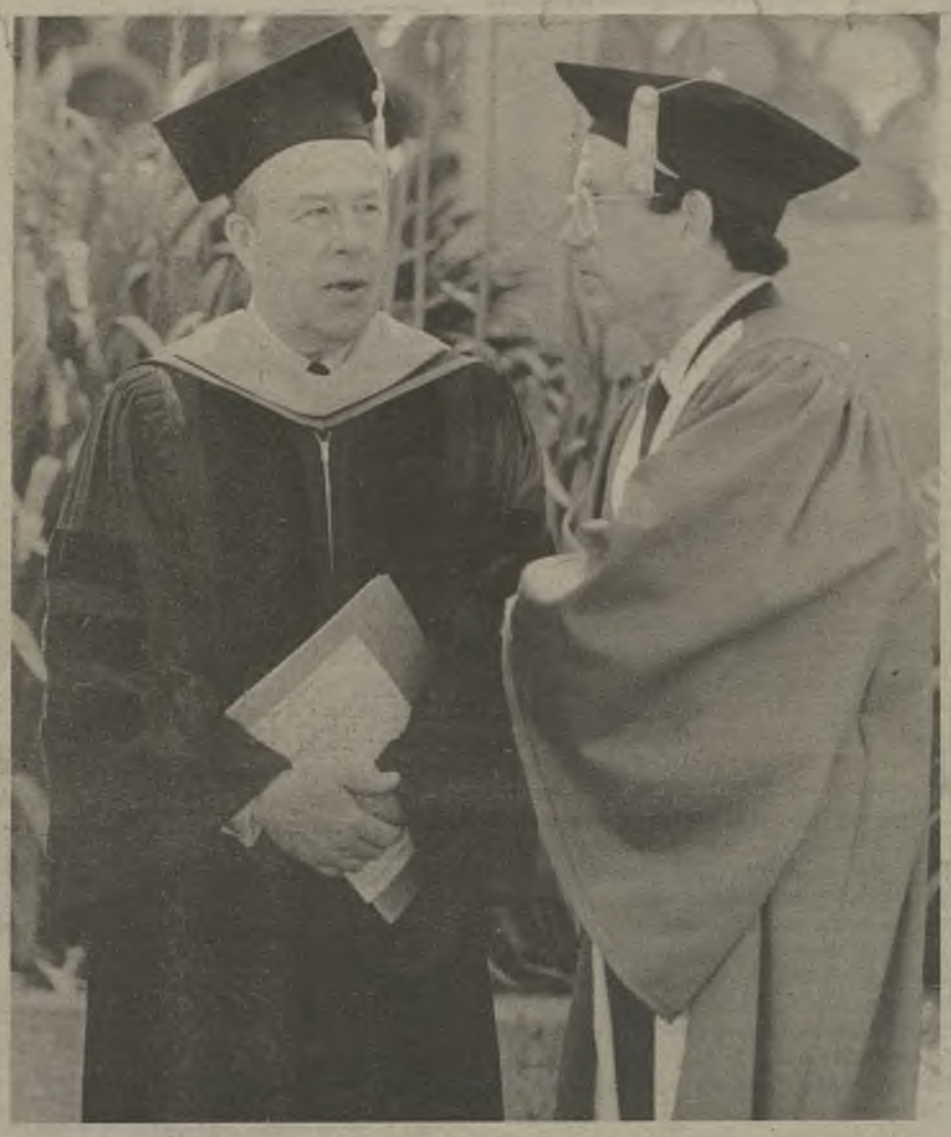
Arthur Schnitzler 1862-1931, Documentary Photo Exhibition. Cecil H. Green Library, West Wing Corridor. May 23June 30.

Boris Ilyin, exhibition of recent oil, acrylic, & watercolor paintings. Reception, Friday, June 10, 5-7 p.m. Bechtel International Center. June 3 - June 30.

Graphic Artists Work. The work of Tresidder's Marketing Dept. staff - see the process involved in creative advertising as well as cartoons and graphic design work. Upper Lobby and Coffee House Galleries of Tresidder Union. June 16 - July 3.

CAMPUS REPORT

Volume XV, Number 37 | A publication for Stanford University faculty & staff | June 15, 1983



George Shultz and Donald Kennedy wait outside Frost Amphitheater — Ed Souza photo

Record crowd in Frost

Standing ovation for Shultz — but the quote wasn't his

Returning to his home campus, Prof. George Shultz, on leave from Stanford as Secretary of State, drew a standing ovation from 2,800 graduates Sunday, June 12, when he said "a nuclear war cannot be won, and must never be fought."

Only when the graduates returned to their seats did Shultz add the kicker: "That's a quote from Ronald Reagan."

Scattered laughter, applause and a few boos ensued.

Bathed in sunshine, sage advice, and champagne, the 92nd annual commencement drew a record crowd of more than 15,000—the most since former President Herbert Hoover spoke at the 1935 commencement in Stanford Stadium.

A large, balloon-buoyed banner, "Congrats '83—Stop U.S. Intervention in Central America" floated high above Shultz. Scores of students, several faculty, and the Rev. Robert Hamerton-Kelly, dean of the chapel, wore orange sashes with the words "Respect Human Rights."

Smoothly adapting his text, Shultz was applauded when he said: "Considering how few democracies there are in this world, what we have in common with our allies is therefore something precious: systems of constitutional, representative government; systems of law that guarantee basic political and civil rights and freedom; respect for human rights; open economic systems that give free rein to individual talent and initiative."

Nine television crews were among an estimated 50 press covering his foreign policy address. About 150 persons joined in a peaceful protest outside Frost prior to the ceremony. Speakers included former Stanford religion Prof. Robert McAfee Brown.

While Shultz was donning his academic robes in the Little Theater, petitions signed by more than 2,000 persons opposing U.S. policy were presented to Doug Bryson of the State Department by Andrew Bennett, a graduating senior who helped organize the protest.

In his prepared remarks, Shultz warned that protectionist policies could hinder global economic recovery.

"New efforts of trade liberalization would be especially beneficial to the developing countries," he said. "In 1980, their export earnings of $580 billion amounted to 17 times their net receipts from foreign aid.

"The unprecedented expansion of Soviet power over the past two decades cannot be ignored or rationalized away. Any President, any Administration, would be forced to respond.

"Surely the burden of proof is on those who would undo the present military balance, or alter it, or conduct risky experiments with unilateral concessions without genuinely reducing the levels of arma-

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Smokeless information can't solve all problems—Kennedy

President Donald Kennedy of Stanford Sunday, June 12, urged graduating seniors to devote a portion of their lives to public service.

In remarks prepared for the University's 92nd commencement, Kennedy said "our passion for the entrepreneurial chase should not blind us to some fundamentals.

"We must take care of the agricultural and industrial basics. We must govern ourselves. We must teach the children.

"Despite what we are told by the best-selling corporate futurists, we cannot live in some Mandevillian beehive run entirely on smokeless information, in which half the inhabitants are venture capitalists and the other half software designers."

While economic constraint "makes everyone more cautious about occupational risk-taking," Kennedy said, "a decade's worth of unwise political rhetoric about Big Government and the Bureaucracy has congealed into a generalized mistrust of the public sector."

Former commissioner of the Food and Drug Administration, Kennedy noted that morale in federal agencies has been "sapped by constant criticism, especially from those campaigning for national office in hope that they might run those very agencies.

"Both the vulnerability and the resilience of morale in the civil service were poignantly illustrated by the way in which the disenchantment at the Environmental Protection Agency turned to hope when

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A burgher of Calais, in Memorial Court, one of four Rodin sculptures that were placed near the Quad for Commencement — Chuck Painter photo



At Baccalaureate, left to right, are the Rev. Robert Hamerton-Kelly, President Donald Kennedy, Baccalaureate speaker Rev. David H.C. Read, Rev. Wendy Smith, Rabbi Ari Cartun, and Father Eugene Boyle. Chuck Painter photo

Read attacks atheist fundamentalism

"People are tired of living within the narrow frontiers of a secularist philosophy and a technological society," the Rev. David H.C. Read of the Madison Avenue Presbyterian Church of New York said Saturday, June 11, at Stanford.

Delivering the baccalaureate sermon to about 3,500 graduates, their families and friends, Read said whatever career is beckoning you at this moment—science, law, literature, public service, diplomacy, business, teaching, art—you will find people who are searching for. . .that dimension which gives meaning, purpose, and some measure of hope and joy" in life.

Read criticized the "new atheist fundamentalism" which would rule out all forms of religion. A year ago, one professor condemned the awarding of a Nobel Prize in literature to Isaac Singer on the sole ground that he believed in the supernatural.

Read said others "keep their religion on a back burner. . .for future use in time of emergency," a kind of "fox-hole religion."

"But it is not only the unbelievers and the half-believers who have pushed religion into a corner as a specialized interest," he added.

"Thousands of devout church members today speak and act as though their God was a private possession confined to the area of their prayers and worship, and isolated from their business, their profession, their recreations, their political opinions....

"Others let their religion intrude into public affairs, but their God hardly seems to be the God who requires us 'to do justly, and love mercy, and walk humbly' with Him. He's the kind of God who can be let into, or kept out of our public schools by vote of Congress, a God who apparently doesn't exist in countries called 'Godless':

"I sometimes have wondered if God
Doesn't find it exceedingly odd
That the Moral Majority
Should have the authority
To control Him at home and abroad.

"Your predecessors who boasted about being the 'Now' generation were apt to reject anything that smacked of tradition, to despise their religious roots, and to welcome any cult that was born yesterday.

"I believe that you realize that religion is not one of those subjects where the new is always better than the old.

"In astrophysics, the latest authority makes the older obsolete, but that doesn't hold for ethics or religion. Plato and Kant are not made obsolete by the latest ethical school in Oxford or Heidelberg. Augustine and Luther are not made obsolete by the latest messianic cult or televangelist.

"The best place to begin a new search for religious truth is the tradition in which you were born."



Bob Beyers receives the Cuthbertson award from President Donald Kennedy

Chuck Painter photo

Cuthbertson award given Bob Beyers

Robert W. Beyers, director of News and Publications Service, was named recipient of the Kenneth M. Cuthbertson award for exceptional service to the University at Stanford's 92nd annual commencement exercises Sunday, June 12.

Interrupted in his work as the University's chief journalist covering commencement, Beyers was summoned to the podium by President Donald Kennedy, who cited him for "the reliability and stubbornly independent candor with which he represents Stanford to the external media."

Kennedy also praised him for the "humanity, energy, and scrupulous sense of fairness he applies to the proprietorship of this University's publications, to the leadership of his own staff, and to the coverage of various news events at which his presence has become campus legend."

Word of his selection for the honor had been kept from Beyers.

In addition to his role as liaison with the press, Beyers serves as "publisher" of *Campus Report*, Stanford's weekly faculty-staff newspaper, and the *Stanford Observer*, a newspaper mailed seven times a year to 140,000 alumni, parents of students, and friends of the University. He also oversees the University's in-house graphic design service.

He once wrote that his "main satisfaction comes from writing several hundred news releases yearly, trying to attract attention to new ideas of all kinds nationally." His goal is to write an average of two substantive stories a day, while managing a department of 25 employees.

"You can't treat Bob as an ordinary person—he's a force of nature," said his former boss Robert M. Rosenzweig, who resigned in February as vice-president for public affairs to become president of the American Association of Universities.

"We talk glibly sometimes about irreplaceable people. Bob is as close to being an irreplaceable person as I have ever seen in any organization," Rosenzweig added.

Robert Freelen, appointed in May to replace Rosenzweig, said Beyers' "reputation as the nation's leading practitioner of university press relations is justly deserved. His dedication to reporting the facts, even when embarrassing to the institution, has enabled Stanford to develop and maintain a high level of credibility."

Beyers has served as a consultant to colleges and foundations about public relations, always advocating "telling the truth, even when it hurts."

Since 1975 he has served as a trustee of Editorial Projects in Education, publisher in Washington, D.C., of the newspaper *Education Week*. He was a staff member of the 1965 White House Conference on Education and during summer of 1964 served as volunteer coordinator of all media and police relations on the Mississippi Summer Project, a civil rights program.

Beyers' son Robby, a Ph.D. candidate in materials science at Stanford, who was active in the conspiracy to keep news of the award from his father, arranged for an "early Father's Day" visit by the other two Beyers children, Bill and Amy, who both live in the East.

"Trying to keep the guy who has all the information from finding out is pretty tough," he observed.

Vincenti, Supton, Zuckerman, Haynes given highest honor for undergraduate education



Dinkelspiel award winners
Walter Vincenti
Alice Supton
Mary Haynes
Seth Zuckerman

A pioneer in supersonic aerodynamics, a staff member of the Dean of Student Affairs office, a former editor of the *Stanford Daily*, and a student active in black service organizations received the 1983 Lloyd W. Dinkelspiel awards for outstanding service to undergraduate education at Stanford's 92nd commencement exercises Sunday, June 12.

The recipients are engineering Prof. Walter G. Vincenti; assistant dean of residential education, Alice L. Supton, and seniors Seth A. Zuckerman and Mary L. Haynes.

Each received a personalized citation by President Donald Kennedy, himself a Dinkelspiel winner in 1976.

Vincenti was honored for "a devotion to students and a skill as a teacher so extraordinary that he is called saint by some, moving spirit by others, and teacher's teacher by his colleagues."

A professor of aeronautics and astronautics since 1957, Vincenti has also taught in the Values, Technology, and Society program since 1971 and served as program chairman for several years. In addition, Vincenti served as associate dean of undergraduate studies, from 1980 to 1982.

Prior to joining the faculty, he was chief of a group of scientists who built a wind-tunnel at Ames Research Center in Mountain View to study how airplanes could travel at the speed of sound.

Supton, in addition to her residential education duties, is active in the Center for Research on Women. She was honored for "her role in bringing different elements of the Stanford community together, in unexpected but welcome ways, so as to enrich them all—using a level of energy and creativity that no reasonable person could expect."

Kennedy also acknowledged her "for the determination, discipline, and devotion she brings to each task—whether designing a dormitory or fashioning a seminar program.

Zuckerman, who designed his own major in energy studies, was honored for "his distinguished contributions to the voice of this campus, through his editorship of the *Stanford Daily* and his bold initiative in establishing an alternative student newspaper, the *Independent*."

Kennedy also noted that Zuckerman "has contrived to blend serious academic purposes and accomplishments of his own with the education and enlightenment of others, through service as an engineering advising associate and a sought-after teaching assistant in chemical engineering and human biology.

In addition to his other projects, Zuckerman also was responsible for creating an undergraduate special course, "The Energy Controversy."
He served as editor of the student newspaper in spring 1981.

Haynes, who received a degree in communication Sunday, was cited "for a commendable four-year record of leadership." Kennedy noted she exercises "that special kind of leadership that inspires the participation of others, drawing new talents into key roles and ensuring the continuity of voluntary service."

She has worked with organizations serving black undergraduates on projects ranging from orientation to media and the arts, and mental health and residences.

As resident assistant at Mirrielees, a student dormitory, she employed "creativity, productivity, and good cheer in equal portions to create a sense of community under challenging circumstances," Kennedy said.

Walter Gores awards for excellent teaching conferred on Guerard, Durham, and Steyer



Gores award winners Albert Guerard, William Durham, and James Steyer.

Stanford presented its highest teaching recognition on Sunday, June 12, to an English professor and author, a MacArthur Foundation fellowship winner, and a teaching assistant in political science. The 1983 Walter J. Gores awards for excellence in teaching were given at Stanford's 92nd commencement exercises to Albert J. Guerard, professor of English; William Durham, assistant professor of anthropology; and James P. Steyer, teaching assistant in political science.

The three were presented personalized certificates by Provost Albert Hastorf.

Guerard, holder of an endowed chair named in honor of his late father, Albert Leon Guerard, was cited "for decades of inspired and inspiring teaching at all levels: from freshman seminars through undergraduate courses and graduate seminars to the direction of dissertations in literature as well as fiction writing."

A nationally recognized literary critic, Guerard is author of *The Touch of Time: Myth, Memory and the Self*. He also wrote *The Triumph of the Novel* and several other books and edited *Mirror and Mirage: Fiction by Nineteen*.

Guerard taught at Harvard for 23 years, during which time he wrote five novels and four critical books. In 1961 he returned to Stanford, where he was reared and where he earned his bachelor's degree. His father taught literature at Stanford from 1907 to 1913 and 1925 to 1946.

Himself a student of the late Yvor Winters, Guerard has taught such distinguished writers as John Hawkes, Jonathan Kozol, and John Updike.

In the mid '60s, with support from other faculty members, Guerard introduced a new interdisciplinary Ph.D. program in Modern Thought and Literature.

Hastorf paid tribute to Guerard for "the passion for letters which kindles the sacred fire of a great teacher; and for the word and example which make him a creative presence at Stanford."

Durham, a leading researcher in biological anthropology and recipient last January of a $176,000 MacArthur Foundation fellowship, was cited by Hastorf for "his skill in revealing the nature of scholarship by the introduction of his own research and experience in the classroom, and for his successful efforts in training the teaching assistants and developing their teaching effectiveness." Hastorf called him a "superb teacher: clear, sparkling, and innovative."

Durham, who believes "genetics and culture have coevolved in a very interdependent fashion," currently is writing a book about his theory of "coevolution." His theory is that there is a dynamic relationship between human culture and human genetics: one alters the other and is, in turn, altered itself.

Durham attended Stanford as an undergraduate, then earned his Ph.D. at Michigan. He joined the faculty of Stanford's Anthropology Department in 1977.

In the mid-'70s Durham researched his Ph.D. dissertation in the then-little known country of El Salvador. The work was published by Stanford Press in 1979 under the title *Scarcity and Survival in Central America*.

This is the second time Durham has received a prestigious honor at commencement: in 1971, as an undergraduate, he was named recipient of a Dinkelspiel award for outstanding service to undergraduate education.

Steyer, a law student from New York City, was honored "for his extraordinary effectiveness as a teaching assistant in a number of political science courses, for demonstrating a friendly and caring attitude while demanding that his students think critically, and for his ability to relate his own outside activities as well as other students' activities to the class material."

Active in the area of rape education and rape prevention, Steyer was named a co-recipient of a Dean's Student Service Award last month. This spring Steyer was also involved in organizing student petitions calling for a study of ties between Hoover Institution and the University. He also has been busy setting up a legal clinic in East Palo Alto.

Gurley: Lenin's forecast coming true

Marxist scholar John G. Gurley, professor of economics at Stanford, told an audience of newly initiated members of Phi Beta Kappa June 10 that Lenin's forecast of doomed capitalism was coming true.

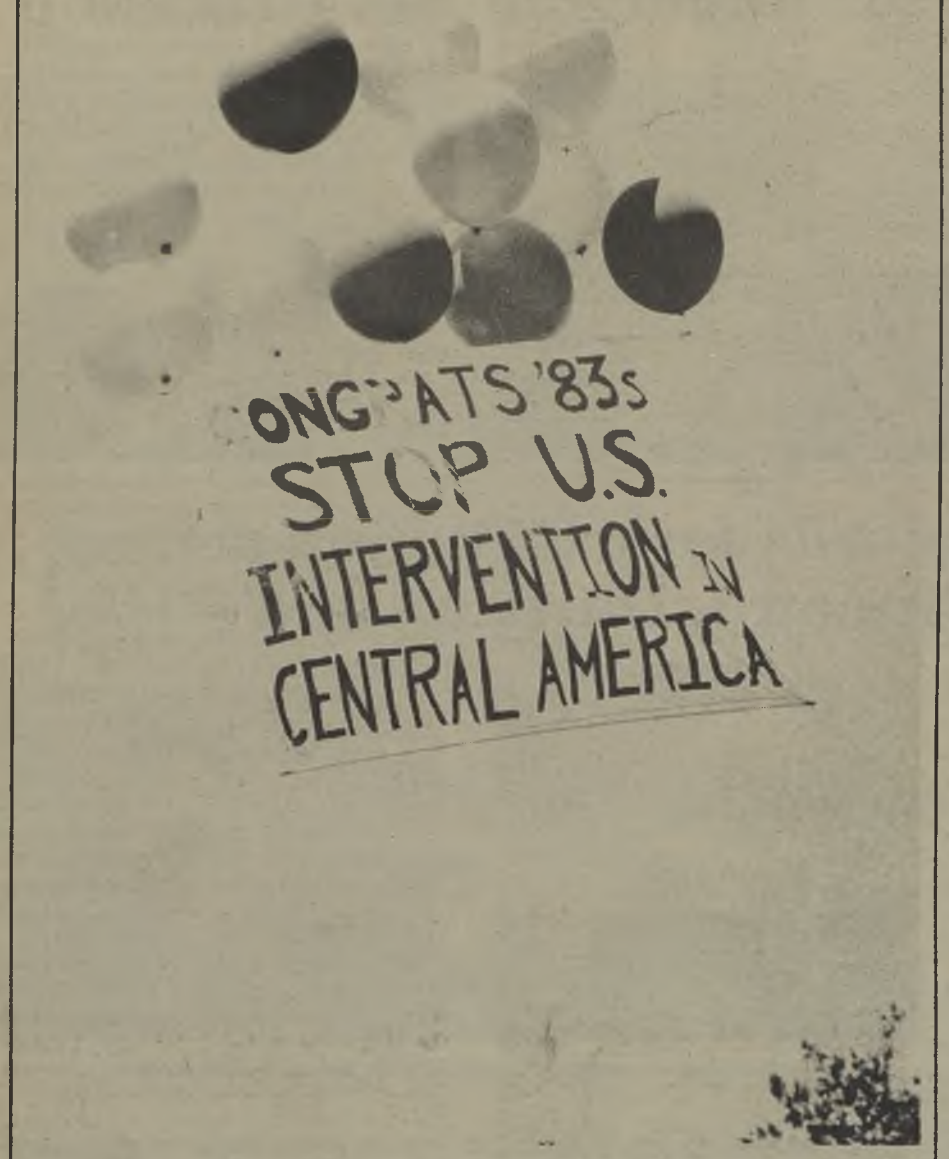
"Lenin's prophecy was of a turbulent, violent, and unplanned world," said Gurley, "a world of violence and revolution. Many people think that describes the 20th century very well, considering the depressions, the inflation, the unemployment, the wars among capitalist powers—which Marxists claim generated World Wars I and II.

"Socialism now comprises about one-third of the world's land and population. Lenin's opinion was that the fires of revolution would work in from the underdeveloped countries till they consumed the advanced capitalist countries.

"This has been a century of capitalist wars, the reduction of capitalism and the expansion of socialism."

Gurley said that his own personal role model in life was the actor-singer-lawyer Paul Robeson, who linked the two worlds of Marxism and intellectualism. Robeson had gained great intellectual honors, including election to Phi Beta Kappa and had also collected 12 varsity letters."

The ceremony was the 80th consecutive initiation into Phi Beta Kappa at Stanford. Most of the 183 new members initiated by the president of the Stanford chapter, Assoc. Prof. Susan A. Stephens, were seniors, and 49 were women.



Inventive students find a newer and better way to make their message known PAINTER PHOTO



J.E. Wallace Sterling presents the Sterling Award to Megan Ann Chesnut

Megan Ann Chesnut gets Sterling award for leadership—from Wally

Megan Ann Chesnut, a psychology major from Chappaqua, N.Y., has been named the fifth recipient of the J.E. Wallace Sterling Award, given annually to a Stanford senior who has displayed outstanding leadership potential.

The award, presented at the Class Day luncheon Saturday, June 11, by Chancellor Sterling, is the Stanford Alumni Association's highest honor for a student.

The honoree has been staff coordinator at Roble Hall this year, was a resident assistant as a junior, and is president of Pi Beta Phi sorority.

Currently a social worker at the Palo Alto Nursing Center, she has a wide background of experience with the developmentally impaired, much of it as a volunteer. She has also directed and choreographed, danced, and acted in campus dramatic and musical productions.

The citation mentions the "wholeheartedness of her commitment to others and the energy and infectious enthusiasm that are the trademarks of her life and work" as well as "the unwavering quality and substance of her contributions to the residence program, to music and drama at Stanford, to departmental research, to counseling and tutoring, to physical therapy and human services."

Recipients of the Sterling Award receive a plaque and a life membership in the Alumni Association.

Burk, Klarman lead Law School class; Coif elects 16

Stanford Law School presented diplomas to 158 members of the Class of 1983 in an awards ceremony held June 12 in Kresge Auditorium, following university commencement exercises.

John Hart Ely, dean of the Law School, welcomed the School's 90th graduating class and more than 750 relatives and friends.

Bernard A. Burk of Encino, Calif., was named the Nathan Abbott scholar, for the highest cumulative grade point average in the class.

Michael J. Klarman of Baltimore, Md., received the Urban A. Sontheimer prize for the second highest cumulative grade point average.

Sixteen members of the class were elected to the Order of the Coif, the national law honor society for the encouragement of scholarship and advancement of ethical standards in the legal profession.

Membership in the Order is extended to third-year students ranking at the top of the class academically and considered worthy of the distinction. The Stanford chapter was established in 1912.

New members are Bernard Alan Burk, Encino, Calif.; David Lambert Furth, Los Angeles, Calif.; Samuel Michael Hurwitz, Hamden, Conn.; William Gerald Roche, Atlanta, Ga.; Michael Joseph Klarman, Baltimore, Md.; Kirk Murray Veis, Scobey, Mont.; Cynthia McGaw Moore, Cheektowaga, N.Y.; Mark B. Seidenfeld, Queens Village, N.Y.; Dana Leigh Gross, Woodbury, N.Y.; David James Shaffer, Enon, Ohio; Vincent Michael Waldman, Tulsa, Okla.; John David Guinasso, Portland, Ore.; Robert B. Hawk, Dallas, Texas; John Steven Gordon, Houston, Texas; Thomas Martin Hagler, Arlington, Va.; and Robert Axel Olson, McLean, Va.

Class President Stephane Atencio of San Antonio, Texas, presented the 1983 John Bingham Hurlbut award for excellence in teaching to Prof. Paul L. Goldstein. Goldstein, a member of the Stanford faculty since 1975, is an expert in property law. In a brief address, he urged members of the graduating class to hold on to their individuality despite the inevitable career pressures they will encounter.

Several members of the class have been recognized for outstanding achievements during their three years at the Law School.

David I. Schiller of Brocton, N.Y., received the Frank Baker Belcher award for the best academic work in evidence.

Margaret A. Niles of Portland, Ore., received the Carl Mason Franklin prize, awarded annually for the most outstanding paper in international law. She also was author of the outstanding student note published in the *Stanford Law Review* during 1982-83.

Eva Marie Carney of San Francisco and Michael J. Gennaco of Glendale, Ariz., received the Faerie Mallory Engle prize, awarded to the finalists of the School's client counseling competition.

Palma J. Strand of Ashland, Wash., received the 1983 Olaus and Adolph Murie award for the most thoughtful written work in environmental law; the 1982 award went to J. Christopher Grace of McLean, Va.

Sharon L. Reich of West Lafayette, Ind., was presented with the award for outstanding editorial contributions to the *Stanford Law Review*.

Cynthia M. Moore of Cheektowaga, N.Y., received the award for outstanding service to the *Stanford Law Review*.

The R. Hunter Summers trial practice award, presented by officers of Serjeants at Law for outstanding student performances in trials conducted during the year, went to Robert M. Bohl of Topeka, Kan.; Joseph E. Bringman of Elmhurst, N.Y.; John S. Gordon of Houston, Texas; James E. Henderson of Winowa, Minn.; Samuel M. Hurwitz of Hamden, Conn.; Dennis P. McLaughlin of Tucson, Ariz.; and Gail MacQuesten of Alamo, Calif.

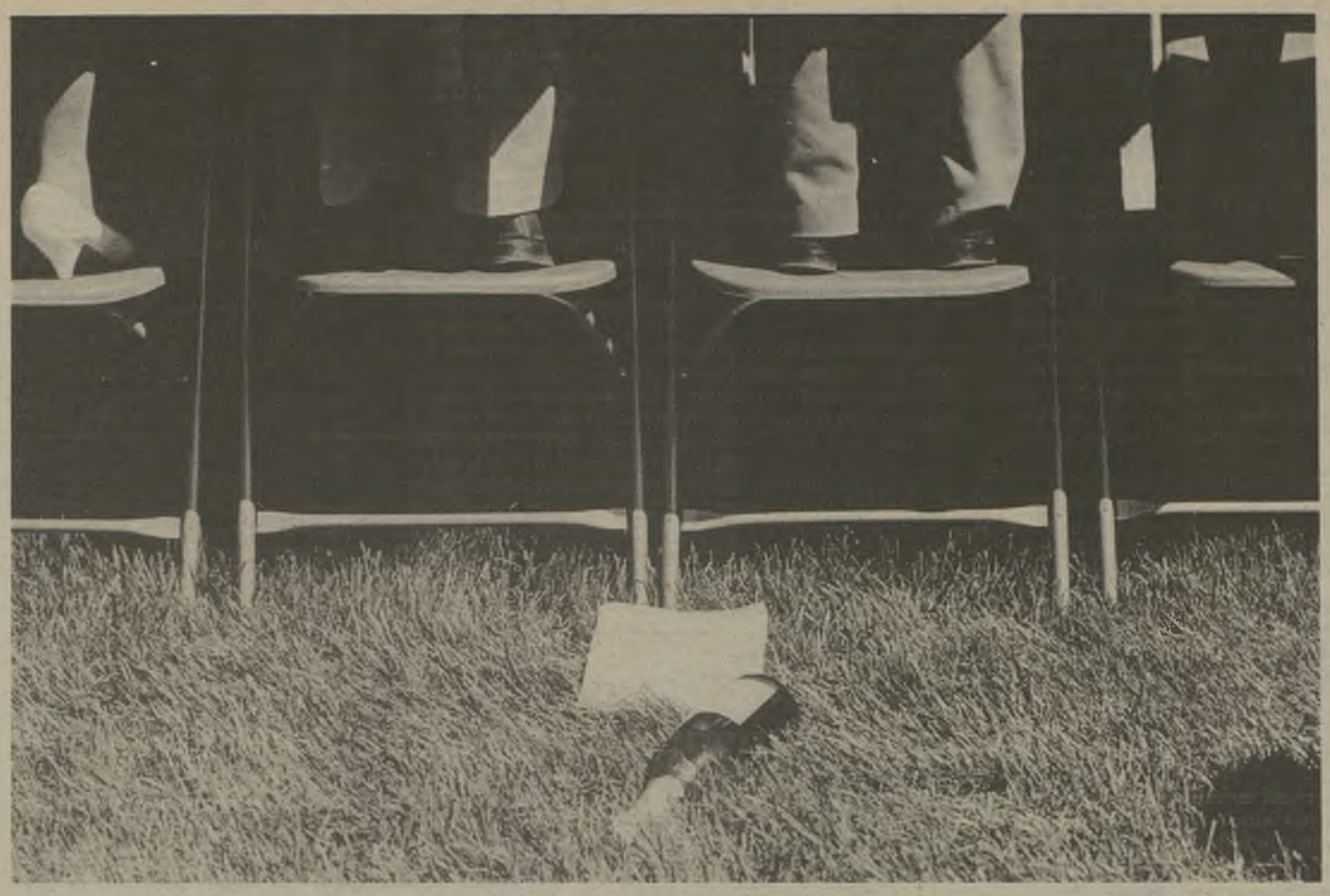
A string quartet played while graduates and their families celebrated at a champagne reception held in Crocker garden following the ceremony.

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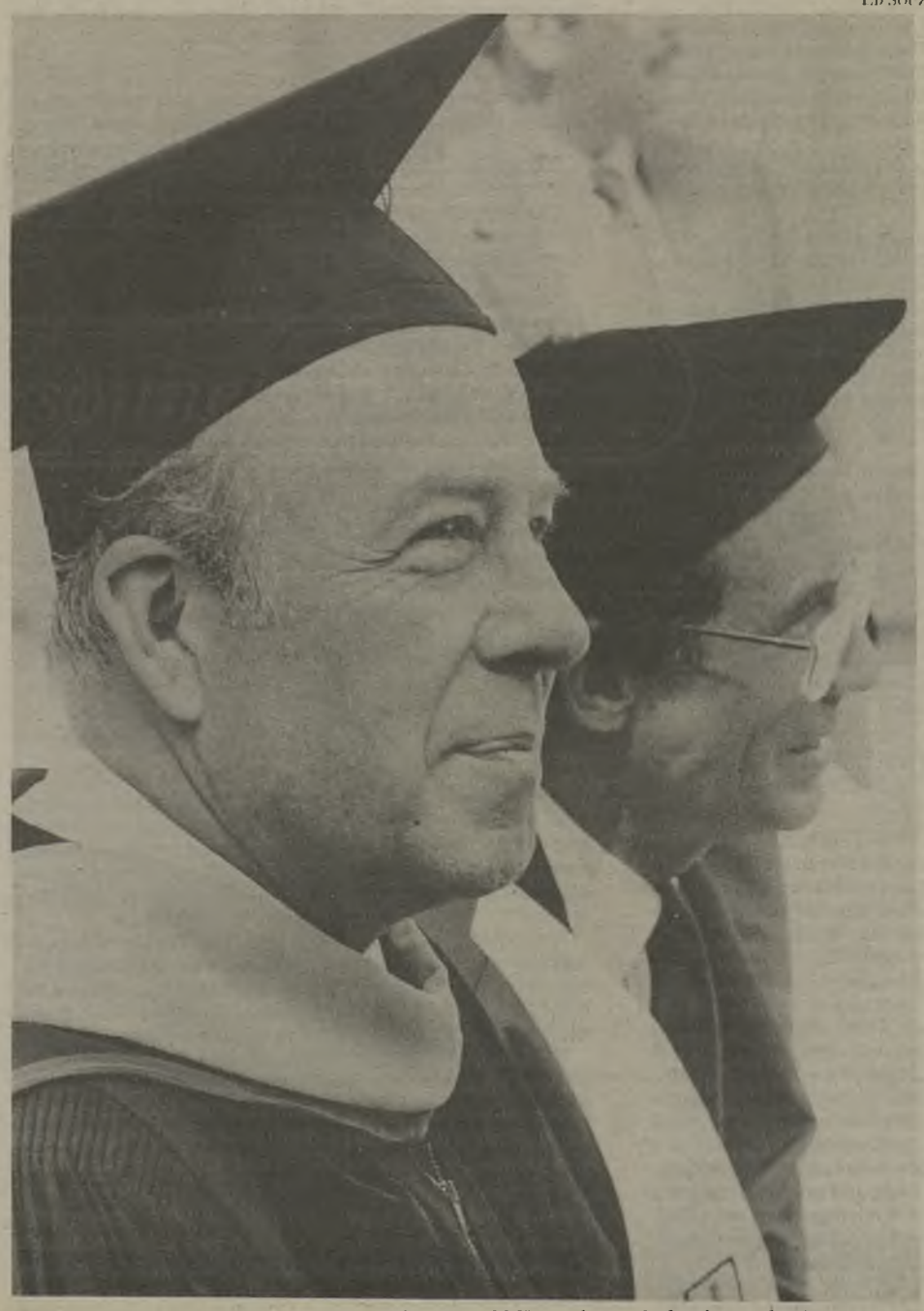
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Champagne bottle and Commencement program are forgotten as students watch the approaching academic procession

Chuck Painter photo

Ed Souza photo



Secretary of State George Shultz and President Donald Kennedy, ready for the academic procession



A different message from a senior

Shultz. . .

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ments on both sides.

"On the basis of strength, the cohesion of our alliances, and a clear view of our own obejctives, we must never be afraid to negotiate.

"This is our attitude to arms control. As NATO decided in December 1979, for example, we intend to modernize our intermediate-range nuclear forces in Europe to counter the Soviet deployment of over 1,000 nuclear warheads on their new intermediate-range missiles (SS-20s). But we are also willing to eliminate this entire category of nuclear weapons from the face of the earth; and we are prepared, as an interim step, to reduce these forces to any equal, verifiable level.

"If negotiations do not succeed, however, we must be prepared to deploy at the end of this year as decided in 1979. The Soviet Union has no higher priority goal at the moment than to intimidate NATO into cancelling its deployments unilaterally, thereby leaving the Soviet Union with its massive monopoly of new missiles and warheads already in place.

"Democracies are sometimes slow to awaken to their challenges. But once they are aroused, no force on earth is more powerful than free peoples working together with clear purpose and determination."

EE Department honors Angell, Bacon, Cloutier

Three Stanford electrical engineering faculty and staff members received outstanding service awards from their department during its special commencement ceremony Sunday, June 13.

In the fourth annual presentation of the awards, those honored each received a certificate of appreciation and a check for $1,000. They are:

Prof. James B. Angell: For outstanding service as director of graduate admissions and financial aids for the Department of Electrical Engineering, carrying out this responsibility with highest standards, excellent judgment, absolute integrity, and infinite patience and dedication. By systematically applying highest criteria to the selection of outstanding students for admission to our department, he has played a major role in creating the excellence of which we are so proud.

Dr. David C. Bacon: For extraordinary contributions and outstanding service as associate director for the Stanford Electronics Laboratory and as research coordinator for the School of Engineering. In these capacities he has handled complex and frustrating problems in research management, in personnel, and in research funding with sensitivity, competence, responsibility, and good humor. With his guidance, an academic research establishment of almost unrivaled power has been built and continues to run smoothly.

Mary Cloutier: For extended service of the highest professional quality, as both secretary and administrative assistant to the Department, the Solid State Laboratory during a period of extraordinary growth, and the executive committee of the Center for Integrated Systems during especially critical stages of policy development and fundraising.

Kennedy. . .

continued from page 1

the eleventh-hour restoration of trusted leadership offered those career employees the return of their self-respect."

In an obvious reference to the featured speaker, Secretary of State George Shultz, Kennedy said "there are abundant illustrations of the cost of public service—some of them are visible even at this commencement.

"For experienced men and women who have something valuable to contribute to their government, it is not easy to give up the comfort, the financial advantage, and the personal freedom that private life provides.

"No one, in short, needs to go into one of the visible, high-pressure government jobs; the reward has traditionally been a sense of fulfilled obligation and a measure of respect for one's fellow citizens—not immunity from criticism, mind you, but decent, humane respect.

"If that is allowed to disappear, we may some day wake up to discover that public life at the top has become such a psychic hazard that only the insensitive will undertake it."

Former president of the Bechtel Corporation, Shultz is now on leave as a professor in the Stanford Graduate School of Business and has a home on campus. In his absence, demonstrators opposed to U.S. policy in Central America have staged peaceful protests on the street in front of his residence.

'We cannot find security in arms alone,' Shultz declares

Following is George Shultz Commencement text:

"Commencement" says that something new is about to begin, just as something else ends. Don't worry about it too much—you can still have fun in the real world. And if someone tells you it means a sharp transition from the world of learning to the world of work, don't believe it. The transition is more apparent than real.

The week before last, for example, I happened to meet with an extraordinary American, our Ambassador to the Federal Republic of Germany, Arthur Burns. He's full of information and ideas about Germany, the Atlantic Alliance, the American economy, and dozens of other subjects. He's lively and well and full of the future. He's 79 years old. He has been taking German lessons over the past 18 months. He's never stopped learning.

The message is that this habit of learning is a habit that will sustain you throughout your life.

An old saw has it that experience itself is the best teacher. I can mention this now that you have already paid your Stanford tuition. But the old saw is only a half-truth. Just as scientists say that luck is something that comes to the prepared, experience teaches only those capable of grasping its meaning.

So, make use of the gifts Stanford has given you: the habits of careful observation, of an analytical ordering of what you see, of living with ambiguity and waiting for the evidence before reaching conclusions—the quality of mind that enables you truly to learn from experience.

The Challenge to the Democracies

Societies, too, must learn and remember, if they are to maintain their vitality and confront the future.

In recent weeks, much of my time has been devoted to this country's relations with our closest friends and allies, the great democratic nations of the Atlantic Community and Japan. A month ago, I attended a meeting in Paris of the Organization for Economic Cooperation and Development (OECD), the descendant of the international agency that, 35 years ago, administered the Marshall Plan. Two weeks ago, I joined President Reagan in Williamsburg at the Economic Summit with leaders of our major industrial partners. And this past Thursday and Friday, in Paris, I took part in the semi-annual meeting of Foreign Ministers of the North Atlantic Alliance.

As Dean Acheson said about the Alliance, this unity "is not an improvisation. It is a statement of the facts and lessons of history."

When the Atlantic Alliance was founded in 1949, the allies showed they had learned a lesson from the period before World War II—when the democracies had lacked the will to come together in the face of danger, when they had tried to evade their responsibility of maintaining their strength and permitted a dangerous imbalance of power to develop. Eventually, they were forced to respond, but it was at a cost of millions of lives that might have been spared had they taken bold but prudent action beforehand. When the Altantic Alliance was formed, the purpose was to prevent war by ensuring that the cohesion, strength, and collective will of the democracies would never again be doubted by any adversary.

The Alliance has succeeded in preventing war. Indeed, since its formation, the only use of military force on the Continent of Europe has been by the Soviet Union against its own "allies." But experience has also taught that the unity of the free nations is central to the achievement of any of our goals: peace, freedom, security, prosperity.

I want to say a few words now about how the democracies, learning from the "facts and lessons of history," are responding today to a new set of challenges—in the realms of political affairs, economics, and security.

Political and Moral Unity

The first lesson is that what the democracies have in common is of overriding importance to us and to others throughout the world. Our common heritage gives us a common responsibility.

American students graduating today have many worries, I am sure. You must be anxious about your careers and your future. Yet, there is one category of worries that I daresay you do not have. You are not concerned that the threat of imprisonment or torture hangs over you if you say or write or do the "wrong" thing. You have no fear of the policeman's midnight knock on the door. Considering how few democracies there are in this world, what we have in common with our allies is therefore something precious: systems of constitutional, representative government; systems of law that guarantee basic political and civil rights and freedoms; respect for human rights; open economic systems that give free rein to individual talent and initiative.

Most alliances in history have not lasted. The fact that the democracies have been held together by ties of political, economic, and security cooperation form more than three decades, through many profound changes in international conditions, is proof, I believe, that our unity of shared values and common purpose is something special. At the same time, the grim lesson of history should warn us that even this



George Shultz

great coalition will not survive without conscious effort and political commitment. Those statesmen who were "present at the creation" in the immediate postwar period showed enormous vision and courage. In a new era in history, it is up to all of us to summon the same vision and courage to assure that it survives and flourishes.

Therefore, it is of enormous importance that our moral unity is today being so effectively translated into political unity.

It is important that old divisions within the Alliance are narrowing, as shown by the fact that the Ministerial meeting I just attended was held in Paris for the first time in 17 years. It is important that the Alliance is attractive enough for new countries to want to join—the original 12 now number 16. It is important that the 24 industrial democracies grouped in the OECD have worked out a framework for a consensus on the difficult issues of East-West trade, based on a thoughtful analysis of the balance of interests in economic relations with Communist systems.

Outside of the formal Alliance framework, British, French, and Italian soldiers now stand alongside our Marines protecting Beirut. Our Atlantic allies, Japan, and other countries around the world are supporting our efforts to promote the withdrawal of all external forces from Lebanon. Britain, France, West Germany, Canada, and the United States are working together as a "contact group" to help reach a negotiated arrangement for the independence of Namibia. And all the diverse Williamsburg Summit partners—including Japan—joined in an impressive joint statement on security and arms control.

Thus, for all our occasional squabbles, the democratic nations have not forgotten the paramount importance of the values and interests we have in common.

Our Common Prosperity

In the economic dimension as well, experience teaches that cooperation is essential. We now live in an interdependent world in which each country's well-being, primarily its own responsibility, is nevertheless affected powerfully by the health of the global economy, for which the industrial democracies bear a special responsibility.

In the 1970s, the plagues of recession, oil shocks, and inflation spread across national boundaries. The impact was not only economic but political. There was great concern that these ills would weaken not only Western economies but the cohesion of Western societies. If democratic governments proved unable to deal effectively with their economic problems, societies would be under continuing strain, social divisions would be aggravated, and we might have faced a demoralizing crisis of democracy. Increasing resort to protectionism, choking off world trade and compounding the recession, could have undermined relations between allies. These political divisions, as well as budgetary pressures, threatened to weaken the common defense.

The free nations had learned however, from the experience of the 1930s, when the failure of cooperation gave birth to widespread protectionism, which deepened the Great Depression.

This time, the free nations began the practice of holding yearly Economic Summits and intensified their cooperation in many other forums, multilateral and bilateral.

As the Williamsburg Declaration testifies: "The recession has put our societies through a severe test, but they have proved resilient." Rather than economic stagnation, we are seeing the impressive capacity of open economies to regain their vitality. Growth with low inflation has resumed in the United States, Japan, West Germany, Britain and other countries which together account for about three-quarters of the production of the industrialized world. If we have truly wrung inflation out of our system, and if we all maintain discipline in our national policies, the world could be headed for a long period of sustained noninflationary growth. Those are big "ifs," I know, but our experience should tell us that the job can be done and that we will be much better off as we do it.

It is essential that we resist protectionism, which could hinder this recovery. The Williamsburg Summit partners candidly acknowledged to each other that every country's record is spotty on this score. But they committed themselves "to halt protectionism, and as recovery proceeds to reverse it by dismantling trade barriers." New efforts of trade liberalization would be especially beneficial to the developing countries: In 1980, their export earnings of $580 billion amounted to 17 times their net receipts from foreign aid.

For all our temporary setbacks, the free economies have brought about since 1945 an era of growth and prosperity unprecedented in history. On the Eastern side of the divided continent of Europe, economic problems are systemic. Inefficiencies are built-in; innovation is inhibited; effective economic reforms are excluded because they would weaken the grip of centralized Soviet political control. In contrast, our economic difficulties are largely problems of self-discipline, of better management of fiscal and monetary policy to permit the inherent vitality of the free economic system to show its power. The weakness of Soviet-style economies is structural. We have reason for confidence, for our economic future is in our own hands

Collective Security

Unfortunately, the Soviet system is very proficient in another sphere: the accumulation of military power. Therefore, security must remain a priority area of cooperation.

If the values and interests we have in common are truly precious to us, then we have a duty to defend them.

The Summit partners at Williamsburg made very clear that they have learned this lesson. Let me read to you from their joint declaration:

"As leaders of our seven countries, it is our first duty to defend the freedom and justice on which our democracies are based. To this end, we shall maintain sufficient military strength to deter any attack, to counter any threat and to ensure the peace. . . . The security of our countries is indivisible and must be approached on a global basis. . . . We have a vision of a world in which the shadow of war has been lifted from all mankind, and we are determined to pursue that vision."

Importantly so, but in an age of nuclear weapons, maintaining collective security is no easy task. "A nuclear war cannot be won, and must never be fought." That's a quote from Ronald Reagan. Our challenge is really two-fold: We must both defend freedom and preserve the peace. We must seek to advance those moral values to which this nation and its allies are deeply committed. And we must do so in a nuclear age in which a global war would thoroughly destroy those values. As the President pointed out in Los Angeles on March 31, our task is "one of the most complex moral challenges ever faced by any generation."

We and our allies have agreed for decades on a two-fold strategy for meeting this challenge. First, we are committed to ensuring the military balance, modernizing our forces, and maintaining vigilance. Second, we are prepared for and committed to constructive dialogue with our adversaries, to address the sources of tension, resolve political conflicts, and reduce the burden and danger of armaments.

We cannot find security in arms alone. We are willing to negotiate differences—but we cannot do so effectively if we are weak, or if the Soviet Union believes it can achieve its objectives without any compromise. Therefore, both these tracks—strength, and diplomacy—are essential.

Unfortunately, the democratic nations have tended to neglect their defense responsibilities. Some serious problems have resulted and are now coming home to roost. They underlie many of the current controversies. In the 1970s, the trauma of Vietnam caused the United States to reduce its armed forces and reduce real defense spending, at the same time that the Soviet Union, in the wake of the Cuban missile crisis, was embarked on a relentless buildup in all categories of military power, strategic, conventional, and naval.

Once the United States lost its unquestioned strategic

continued on next page

Kennedy to grads: Consider public service part of career

Following are President Donald Kennedy's Commencement address:

My opening text for this last lesson is supplied by the line from this year's Gaieties: "I think perhaps it's time I explained what's going on here."

What's going on is that you are in the very act of graduating from Stanford, and it is now my privilege to address you for the last time in your present status. So we have reached that point in these proceedings at which, by ancient custom, we examine together the timeless question "Is There Life After Stanford?"

Since there are obviously alumni, there must be life after Stanford. I will say a few words about that in a moment. But first, there is something else; it is called the Awful Awakening. I refer to the realization that life *off* the farm, although ripe for discovery, contains some problems.

During the Awful Awakening, you will be envied and misunderstood. These are your crosses to bear. Perhaps they will be easier for you if I briefly acquaint you with each.

Envy you must remember, is notable especially for its occasional irony. A typical example will help you identify it. Susie, a member of your high school class, was rejected by Dean Fred in the Spring of 1979, when you were accepted. Subsequently, you have learned (through the assiduous efforts of others who know you both, but know her better) that she was elected to Phi Beta Kappa at Princeton in her junior year, made all-Ivy in soccer, and has just been accepted to Stanford Law School. That's not the worst. Her mother—who is a good friend of your mother's, turns out to be your seatmate on a long transcontinental flight. As she settles in beside you, she begins the conversation. "Isn't it too bad that Susie is coming to Stanford just as you're leaving, dear. Do tell me about your plans."

Misunderstanding can be even more immediately depressing than envy. Your Stanford penchant for abbreviation, so easily understood and accepted here, will only draw blank stares elsewhere; Wide Libe is not used in Cambridge. And only the Stanford interns in our nation's capital will understand that by Mem George you mean the Washington Monument.

You will, furthermore, have to accustom yourselves to a belief that this university resides in a middle-sized suburb of Fairfield County, Connecticut—or, perhaps worse, to a view that *correctly* places it in California but believes that it is in Southern California. You may recall that when you were freshmen my predecessor learned about the effect of distance on perspective the hard way, in the headlines: "New York Foundation Post to Head of Coast School."

And finally, I would warn you sternly that you cannot expect anyone to understand what it means when, in a difficult moment of frustration at some injustice, you give the Stanford gesture for confusion, personal ineptitude, and total loss of control. . .

These experiences of the Awful Awakening are unpleasant to different degrees, but you will survive them; and once you have, you are fully prepared to engage with Life After Stanford. In trying to help you with this, I shall sound a bit avuncular, not to say preachy. Too bad; that's an inevitable part of this ritual. It just wouldn't be complete without farewell advice, so relax and try to enjoy it.

Last year, I approached my task by venturing some hopes about what the graduates had obtained from their time at Stanford. Here is a brief version of the list of qualities I gave them:

- Confidence in their own capacities of analysis;
- The desire to appreciate and seek a wide range of diverse traditions and values;
- A tolerance for ambiguity;
- A healthy suspicion of those convictions that emerge from commitments to a single value;
- A strong, but not incapacitating, skepticism about Certified Truth;
- Appreciation for the value of a sense of humor and last, but not least;
- A willingness not to be cool—to engage in headlong, risky commitments when they seem warranted.

This year, I chose instead to make some predictions and suggestions about what you may do with those capacities, beliefs, and qualities that you will take away from Stanford.

The first is that you are likely soon be occupied with a number of matters you didn't study at all. This may produce, at first, a sense of dismay; but I think you will then become acquainted with with an old piece of wisdom: that education is what takes over when training gives out. You will find much scope, even in unfamiliar circumstances, for the application of the capacity to communicate, the analytical style, and the foundations of liberal learning that you have gotten here. I hope you will come to trust those capacities and believe in them. More than that, I hope you will tell others about your successes, especially those who have yet to begin college. They need relief from the awful burden of believing they have to Prepare for Life even before Declaring a Major.

Second, I urge you not to regard this day as the end of one phase of your life and the beginning of another, entirely different phase. Your years in the university should open doors but not close any; it is an episode of learning but it will not encompass all, or even most, of the learning you will do. If it has worked it will have expanded both your appetite and your capacity for more. Indeed, the only thing I don't like about the symbolism of commencement is the metaphor it offers for the discontinuity between learning and life. I hope your life will be a symphony in some respects, but you won't, I assure you, live it in movements. Take from here the belief that the best that has happened to the life of your minds will happen over and over again—if only you will insist upon it.

There is a third hope, and I want to dwell on it at somewhat greater length. It is a wish that you will put some of the talent, energy, and training you possess into public service at some time in your lives. I offer that wish with the realization that these are not times in which that prospect has a great deal of natural appeal, even to an audience of thoughtful and compassionate people in the university that not so long ago led the nation in rate of volunteering for the Peace Corps. We might begin, in fact, by wondering briefly how we could ever have reached a point at which public service requires such special pleading.

There is, of course, the state of the economy. Constriction of opportunity makes everyone more cautious about occupational risk-taking. While I take that seriously, I do not think it begins to provide the whole explanation. Other things have happened. For example, a decade's worth of unwise political rhetoric about Big Government and the Bureaucracy has congealed into a generalized mistrust of the public sector. Morale in Federal agencies, about which I know a bit, has been sapped by constant criticism—especially from those campaigning for national office in the hope that they might run those very agencies. Both the vulnerability and the resilience of morale in the civil service were poignantly illustrated by the way in which disheartenment at the Environmental Protection Agency turned to hope when the eleventh-hour restoration of trusted leadership offered those career employees the return of their self-respect.

Second, there are abundant illustrations of the human cost of public service. For experienced men and women who have something valuable to contribute to their government, it is not easy to give up the comfort, the financial advantage, and the personal freedom that private life provides. No one, in short, needs to go into one of the visible, high-pressure government jobs; the reward has traditionally been a sense of fulfilled obligation and a measure of respect from one's fellow citizens—not immunity from criticism, mind you, but decent, humane respect. If that is allowed to disappear, we may some day wake up to discover that public life at the top has become such a psychic hazard that only the insensitive will undertake it.

A third source of difficulty, I am afraid, comes out of something that is actually rather good: our national rediscovery of entrepreneurship. It is distillate of some traditional pieces of our national character; individualism, independence of action, innovation. Our economic situation, and our visible need for productivity improvement, have heightened the emphasis on private initiative and on new ventures. But passion for the entreprenurial chase should not blind us to some fundamentals. We must take care of the agricultural and industrial basics. We must govern ourselves. We must teach the children. Despite what we are told by the best-selling Corporate Futurists, we cannot live in some Mandevillian beehive run entirely on smokeless information, in which half the inhabitants are venture capitalists and the other half software designers.

Entrepreneurship, we should remember, is but one side of the coin of American tradition. Obligation—public responsibility—is the other. The public sector has been through some difficult times, but its need for your support and your talents is only the greater because of that. Think of your own life, and consider how much poorer it would have been without the dedication of the best teacher you ever had, the most devoted leader in your community, the county agent, the city director of recreation—whatever public servants you have encountered in personally important ways. I find it quite inconceivable that you will decide, as a society, to allow those roles to be filled by whoever happens to fall into them. Yet unless we can manage to get some of you turned around, that is exactly what is going to happen. I am not naive enough to expect that any of you will change your life plan now; but I do hope that in the happiness of remembering this day, sometime in your future, what I have just said may contrive to touch your conscience gently.

Finally, I hope you will all find yourselves becoming advocates for what you have experienced here—becoming, that is, promoters and supporters of education at all levels. It is none too early for you to accept a remarkable fact: already our society's future depends upon those younger than yourselves. It is too late to do much about you, all I can do is stick a last word or two in your ear, and you're gone. But you can decide to use some of your own unusual educational background in the interest of improving the opportunities for those who will follow you. The quality of American education has never been more urgently in need of help from those in the best position to know how to help it—and they turn out, my friends, to be you.

Most especially, I hope that there will be joy and vigor and commitment in your lives, and happy memories of this place. Because I am a firm believer in the sentimental marking of significant moments I close this farewell with the best testimonial to such remembrance I know of. It was said thirty years ago to another senior class by Adlai Stevenson, but it is independent of time or locale:

> "Your days are short here; this is the last of your springs. And now in the serenity and quiet of this lovely place, touch the depths of truth, feel the hem of Heaven. You will go away with old, good friends. And don't forget when you leave why you came."

Adlai Stevenson, What I Think, Harper Brothers, 1954.

Shultz. . .

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superiority over the Soviet Union, NATO's defense—which relies on the commitment of American strategic power—became much more complicated. Yet NATO conventional forces continue to be inadequate. Ironically, NATO's success in keeping the peace in Europe for more than three decades leads some to take peace for granted and to forget the crucial role NATO has played in guaranteeing it.

The unprecedented expansion of Soviet power over the past two decades cannot be ignored or rationalized away. Any President, any Administrator, would be forced to respond. We have seen too often that an imbalance of power is an invitation to conflict. Therefore, this Administration, and our allies, are committed to maintenance of the military balance, in Europe and globally. Surely the burden of proof is on those who would undo the present military balance, or alter it, or conduct risky experiments with unilateral concessions without genuinely reducing the levels of armaments on both sides.

At the same time, experience teaches that a balance of power, though necessary, is not sufficient. Our strength is a means to an end; it is the secure foundation for our effort to build a safer, more peaceful, and more hopeful world. On the basis of strength, the cohesion of our alliances, and a clear view of our own objectives, we must never be afraid to negotiate.

This is our attitude to arms control. As NATO decided in December 1979, for example, we intend to modernize our intermediate-range nuclear forces in Europe to counter the Soviet deployment of over 1,000 nuclear warheads on their new intermediate-range missiles (SS-20s). But we are also willing to eliminate this entire category of nuclear weapons from the face of the earth; and we are prepared, as an interim step, to reduce these forces to any equal, verifiable level.

If negotiations do not succeed, however, we must be prepared to deploy at the end of this year as decided in 1979. The Soviet Union has no higher priority goal at the moment than to intimidate NATO into canceling its deployments unilaterally, thereby leaving the Soviet Union with its massive monopoly of new missiles and warheads already in place. As the Summit partners made unanimously clear at Williamsburg, the Alliance cannot, and will not, permit this to happen.

At Williamsburg and at NATO, we saw an impressive consensus on security and arms control. This is a firm ground for confidence that war will be deterred, that stability will be maintained, and tht we will have a chance at least to reach reliable agreements making the world that you inherit a safer place.

Facing the Future

The final lesson I want to leave you with is this: Experience teaches us that nothing is foreordained. Nations, like individuals, have choices to make. History is filled with many examples of nations and individuals that made the wrong choices; there are also many examples of foresight, wisdom, and courage.

Democracies are sometimes slow to awaken to their challenges. But once they are aroused, no force on earth is more powerful than free peoples working together with clear purpose and determination.

Therefore, I have confidence in the future. You new graduates, with your energy, talent, and creativity, represent the promise of that future. Few others are so fortunate. Few others have such a responsibility.

And now, my congratulations to you, to your parents, and to Stanford, and my very best wishes to all of you.

Read criticizes narrow frontiers of secularist philosophy

Following is the text of baccalaureate sermon by Rev. David H.C. Read:

He brought me forth also into a large place: he delivered me, because he delighted in me."—II Samuel 22:20; II Samuel 22:1-7; 17-20; Matthew 7:13-20.

Here comes the sermon. A dictionary I consulted offers as one definition of preaching: "To give earnest advice as on religious or moral subjects and the like, and to do this in an obtrusive or tedious way." I shall try to keep in mind that the author of that definition may have sat through, as a captive graduate, a sermon like that. Years ago when a colleague of mine, graduating from seminary, had the temerity to ask his homiletics professor what he should preach about, he got the answer: "About God and about 20 minutes"—and that's the rule I am following today. Anyone who dares to speak in the name of God needs the authority of the Bible and has no right to be tedious, for the biblical view of religion and the challenge to the mind and heart of the Word of the living God is the most exciting and enriching theme in the world.

What *is* the biblical view of religion? I offer you these words from a psalm: "He brought me forth into a large place." The religion of the Old and New Testaments is so large that it embraces the whole human experience from birth through death. It speaks of a God who is not a concept to be discussed by those who have a taste for this kind of thing, but a living God who lights up the universe with his presence, a God who is inconceivably great, great enough to rule the utmost limits of space and time, and great enough to be concerned personally with creatures like you and me. According to Isaiah: "Thus saith the high and lofty One who inhabiteth eternity, whose name is holy: I dwell in the high and holy place, with him also that is of a contrite and humble spirit. . . ." And, in the inspired imagination of Jesus not a sparrow falls to the ground unnoticed by the Lord of heaven and earth, and the very hairs of your head are numbered. This God of the Bible is not locked up in a church or temple. He is not chiefly concerned about our religious rituals but with every aspect of living—our careers, our business, our intellectual, mystical, artistic, and sexual activities, our laws, our political judgments, our search for justice, and our expression of love and compassion. To reckon with this God is to be brought out from the narrow world of an atheistic philosophy into a large place—so large, in fact, that the Bible has no special word for what we call "religion" at all.

It must occur to you that all this is far from the way in which we have come to think about religion today. In our world religion has become an option, an elective that you may choose if it happens to be one of your interests. It is an avocation—you might even say a hobby. As some are drawn to photography, to ballet, to stamp-collecting, or to computers, so others get into religion. We think we know the type: we can smell them a far off. The nice ones are affectionately tolerated; the obnoxious ones we avoid like the plague. A few weeks ago I read an obituary of a well-known newspaper editor. "Under his guidance," I read, "the paper stepped up its reporting on religion and other specialized subjects." Yes, that's how we think: religion is a specialized subject.

Some today go even farther. They don't think it is even a legitimate option, especially in an academic community. A letter to the press from a university professor about a year ago complained that a Nobel prize for literature should not have been awarded to Isaac Singer on the sole ground that he believed in the supernatural. So Dante, Shakespeare, Milton, Wordsworth, T.S. Eliot, Auden, Updike, and a thousand others would have been ineligible because of their peculiar religious aberration. This new atheist fundamentalism would rule them all out.

Then there are others who keep their religion on a back-burner. They know it's there, but it's for future use in a time of emergency. Once in the summer of 1940 (if you can imagine such an era), I was in an uncomfortable position as chaplain to a division of the British Army that had been surrounded by the panzers of General Rommel. It was two weeks after Dunkirk, and we were hoping for a minor evacuation of our own. The day before we were due to embark there was one of these peculiar lulls in the fighting and I decided to conduct a short service. As I finished a young officer came over and said to me: Thanks, padre, I always say there's nothing like a spot of religion in a tight corner." I'm not scoffing at what we call fox-hole religion, and the remark was genuine, but it did sum up the attitude of those for whom religion is for tight corners only. The religion of the Bible is not a religion of last but of first resort. "In the beginning God. . . ." "Whither shall I go from thy spirit? or whither shall I flee from thy presence? If I ascend up into heaven, thou art there: If I make my bed in hell, behold, thou art there. If I take the wings of the morning, and dwell in the uttermost part of the sea, even there shall thy hand lead me, and thy right hand shall hold me." I am Alpha and Omega, the beginning and the end, the first and the last."



Rev. David H.C. Read

But it is not only the unbelievers and the half-believers who have pushed religion into a corner as a specialized interest. Thousands of devout church members today speak and act as though their God was a private possession confined to the area of their prayers and worship and isolated from their business, their profession, their recreations, their political opinions. How often do you hear the phrase: "Let's keep religion out of this."

Others again let their religion intrude into public affairs, but their God hardly seems to be the God who requires us "to do justly, and love mercy, and walk humbly" with him. He's the kind of God who can be let into, or kept out of our public schools by vote of Congress, a God who apparently doesn't exist in countries called "godless."

"I sometimes have wondered if God
Doesn't find it exceedingly odd
That the Moral Majority
Should have the authority
To control him at home and abroad."

Let's forget about religion as a specialized subject. Whenever I heard the words: "Attend the church of your choice" I have a picture of religions spread out on a shelf like a selection of tobaccos. There's a brand sold in Scotland that's called "Presbyterian Mixture." I'm not here to commend Presbyterian mixture to you as a religion you might enjoy. If religion really matters it's not something you choose. If god really is then we don't choose him. He chooses us. That's what we mean by his revelation. He reveals himself to us all, and it is for us to respond. There is no special category of people to be called religious. What makes human beings unique is our capacity to wonder about the meaning of our lives. If you have ever wondered why you were born, if you have ever wondered what happens when you die, you are religious. If there ever was a time when the meaning of life and the nearness of death are real and compelling questions, whatever age we are, it is now.

So I am commending to you the thought of religion as a "large place." St. Paul, in a prayer, speaks of the "breadth and length and depth, and height, of the love of Christ." These are the dimensions of any true religion.

There is *breadth* in that large place. If Dr. Gallup is right by the end of this century there may well be an almost unprecendented wave of spirituality rolling across this nation. If this happens it will, I believe, be not only because we are living under the nuclear sword of Damocles, but because people are tired of living within the narrow frontiers of a secularist philosophy and a technological society and are groping for the dimension of the spiritual. The signs are there on every hand. Whatever career is beckoning you at this moment—science, law, literature, public service, diplomacy, business, teaching, art—you will find people who are searching for that larger place, that dimension which gives meaning, purpose, and some measure of hope and joy. Whatever your religious convictions may be now, I hope you will join them in that quest seeking a faith that is at home in that large place in the spirit of the apostle Paul who said; "I do not reckon myself to have got hold of it yet. All I can say is this: forgetting what is behind me, and reaching out for that which lies ahead, I press toward the goal to win the prize which is God's call to the life above." The broad religion is not the shallow one but one that includes "all this and heaven too."

Then it has *length*. Keep that in mind in your religious quest. For it suggests that in our search we are more likely to find the truth in a religion that has deep roots in the long history of the human race. Your predecessors who boasted about being the "Now" generation were apt to reject anything that smacked of tradition to despise their religious roots, and to welcome any cult that was born yesterday. I believe that you realize that religion is not one of these subjects where the new is always better than the old. In astrophysics the latest authority makes the older obsolete, but that doesn't hold for ethics or religion. Plato and Kant are not made obsolete by the latest ethical school in Oxford or Heidelberg. Augustine and Luther are not made obsolete by the latest messianic cult or televangelist. The best place to begin a new search for religious truth is the tradition in which you were born.

Then surely a satisfying religion has the dimension of *depth*. We are living in a society where everything tends to come in neat little packages, and where we are encouraged to believe that there is a "How-to" answer to every problem. So we are being offered religion packaged to suit our immediate needs. When, for instance, I hear the Christian Gospel presented as if it could magically provide us with all the answers to the conundrums of this mysterious universe, I feel like saying like Hamlet to his friend: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." But it is not only popular religion that lives in the shallows. Don't we miss the sound from the depths in philosophies that reject the dimension of the spiritual, and in novels, plays, movies that glorify the trivial and snigger at the holy?

That word brings me to the last dimension of the "large place:" *height*. "Praise to the holiest in the heights" wrote John Newman, "and in the depths be praise." It's time we rescued the word "holy" from its pietistic associations. The holy is that which is the quality of God and cannot be defined. The holy is the element of transcendence, what Rudolf Otto called the "mysterium tremendum et fascinans (the tremendous and fascinating mystery.") We meet it in the world of nature, in music, architecture, and all the arts. Let me give you this from literature—a meditation of Thomas Traherne:

> "You never enjoy the world aright, till the sea itself floweth in your veins, till you are clothed with the heavens, and crowned with the stars: and perceive yourself to be the sole heir of the whole world, and more than so, because men are in it who are every one sole heirs as well as you. Till you can sing and rejoice and delight in God, as misers do in gold, and kings in sceptres you never enjoy the world."

It is that enjoyment to which I invite you as you face the adventure that lies before you now. May God lead you through the narrow gate of dedication and decision into the breadth and depth and length and height of the large place to which he calls us all.

Robert McAfee Brown views the struggle for human rights

Following is a homily by Robert McAfee Brown, former Stanford professor, at Memorial Service for the Victims of Human Rights Violations Resulting from U.S. Foreign Policy—June 12, 1983.

Let us use El Salvador as an example. Since 1979, the government forces in El Salvador have murdered over 42,000 of their own citizens. The victims are almost randomly slaughtered. They are any persons who are suspected—no proof required—of being in opposition to the government, and that includes students, workers, farmers, women, children, the elderly. If you live in a certain area where "rebels" are thought to be present, you are likely to be rounded up, tortured, raped, shot, strangled, mutilated.

We are talking about ordinary people, most of them desperately poor. We are talking about priests, nuns, lay workers, who have been trying to help the poor with such subversive devices as food kitchens, schools, and hospitals. We are talking about an archbishop, Oscar Ernulfo Romero, who was gunned down in the very act of saying mass, because he had become a champion of the poor and oppressed. Not a single murderer has been brought to trial during the entire period. As a result of this random terror, one-fifth of the nation have become refugees—in the United States that would mean 40 million refugees either hiding within our boundaries or seeking political asylum abroad.

You would think that our government would be in the forefront of protesting such policies. You would think that our government would long since have stopped giving any support to such a government. You would think that our government would be welcoming refugees from such indiscriminate slaughter.

But you would be wrong. Every six months our government endorses the human rights policies of the government of El Salvador, continuing to send U.S. *military* aid so that it can maintain itself in power. We now have 55 military advisers helping the government keep control, and have declared that keeping the so-called "rebels" out of power is crucial, since the reason for the unrest in El Salvador is communist-inspired.

I think there is a fairly simple answer to that. It was given by one of the peasants who is opposing his government, who said, "The Russians didn't have to come over here to persuade me that I had been oppressed all my life. I know it every morning my children and I wake up hungry, or one of my friends is tortured and killed."

The truth is that not only in El Salvador, but in many other countries—Guatemala, Chile, the Philippines, Korea, South Africa—we are financing dictators and maintaining them in power. And the victims are ordinary people—the powerless, the hungry, the despairing. They are not just victims, they are victims *of our policies*.

It is a reason for deep anger. And it is a reason for deep sorrow. We have chosen today to acknowledge the sorrow.

It is sorrow first of all *for the victims*, victims of repressive regimes that are kept in power by American dollars, American military expertise, American guns and tanks, American complicity.

So in addition to sorrow for the victims, we feel sorrow also for *the role our government has played* in their oppression and death:

- Sorrow that rather than humanizing their policies, our leaders are now in the process of creating even tougher policies, in which a traditional hardliner like Thomas Enders is now perceived as too "soft," and as plans for a widespread American-inspired military offensive are refined;
- Sorrow that Vice-President Bush can go to the Philippines and hail General Marcos as a "champion of human rights," and President Reagan can go to Guatemala and claim Rios Montt as an ally in the human rights struggle;
- Sorrow that Ambassador Kirkpatrick can tell the world that the Catholic nuns and lay missionary murdered in El Salvador more or less got what they deserved;
- Sorrow that Secretary of State Shultz can admit to a Congressional committee that human rights in El Salvador need a lot of improvement and *still* agree to a six-month endorsement for more military aid;
- Sorrow that our State Department does not trust students on this very campus to hear both sides of the Chilean story, but denies a visa to the widow of Salvador Allende;
- Sorrow that rather than welcoming political refugees from El Salvador who seek asylum here, our Immigration Service, with the approval of the State Department, almost routinely ships them back to face danger and death if apprehended.

But in addition to sorrow for the victims and sorrow for our government's role in making them victims, we must also express *sorrow for ourselves*, since we too must shoulder blame. It would be too easy to say that the blood of the human rights violations stains only the hands of the President or the Secretary of State—no, it stains our hands as well, as long as we allow the present policies of our government to continue. So we must express sorrow for ourselves:

- Sorrow that we as a people have so far been unable to force major changes of policy upon our leaders;
- Sorrow that we do not give more support to those courageous members of Congress who are trying to force those changes;
- Sorrow that we have forgotten our own heritage, born of revolution, and deny its applicability to those today who seek deliverance from the shackles of tyranny;
- Sorrow that among peoples fighting today for their own freedom, the name of our nation symbolizes opposition to their deepest desires and most cherished dreams.

Where do we go with sorrow? We can be engulfed by it. We can be immobilized by it. We can be embittered by it. We can even be destroyed by it. But there is a different choice we must make. We must be *transformed* by it. Let me suggest, to conclude, some of the directions of that transformation:

1. Let us learn first from the victims themselves and those closest to them. If you live today among the victims in El Salvador, or South Africa, or the Philippines, or wherever, you find that they have an amazing and quite unexpected *hope*. They believe in the righteousness of their cause; they believe, nay, they know, that it will prevail, and that not even the power of the United States on the side of the tyrants will suffice to keep the tyrants in power forever.

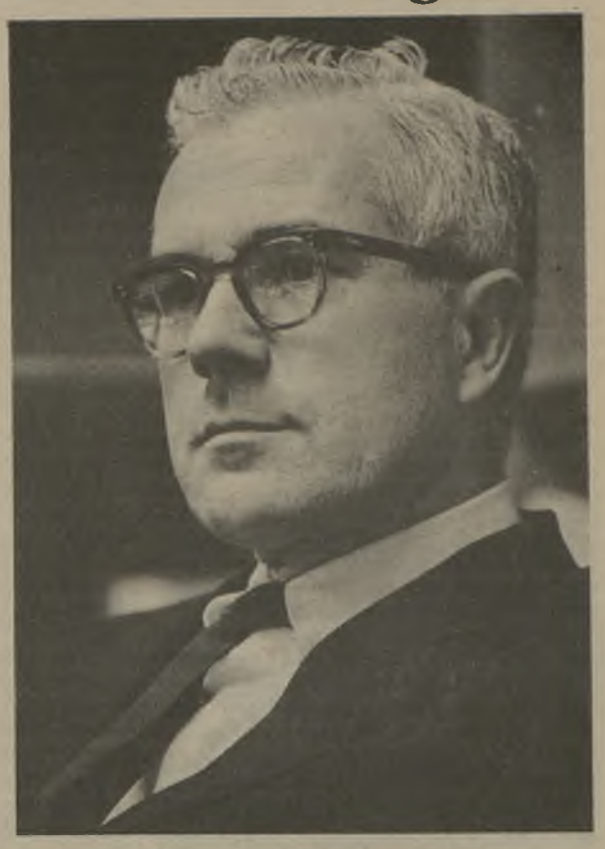
They see a vision of a better world for their own children that was unavailable to their own parents, and they are willing to struggle and suffer and even die for it. So while there is sorrow—who can fail to mourn any human death?—there is also hope. Let us allow that hope to rub off on us, and inspire us to keep the present policies of our government under constant challenge, so that the hope of others need not be so long deferred.

2. Let us embrace *the wider vision of human rights* to which the present victims are dedicated. For them the struggle is not just for the human right to protest, or to engage in public assembly without being gunned down—important as such rights are. No, for them human rights include the right to a job, the right to an education, the right to medical care, the right to shelter.

In our nation those are still privileges—you can have them if you can pay for them. But let us realize that those must be rights available to all, particularly to those who cannot afford to pay for them, whether they live in San Salvador or Managua or Manila—or East Palo Alto, for our foreign policy creates domestic victims as well.

3. And finally, let us find *a deeper rootage for our own hope*, so that we can struggle more effectively. In the Jewish story, there was a time of being oppressed by a ruthless tyrant called Pharaoh, a time of no hope. And in the Christian story, there was a time of being oppressed by a ruthless tyrant call Caesar (with local flunkies named Herod and Pilate) a time of no hope. In both stories, therefore, it seemed that sorrow had had the last word. But in both stories sorrow was not the last word.

In the Jewish story, the subversive word of the Lord came to Pharaoh, "Let my people go," and full of a faith that God was a liberator rather than an oppressor, the Israelites escaped from the bondage of fear and began their ongoing struggle for liberation.

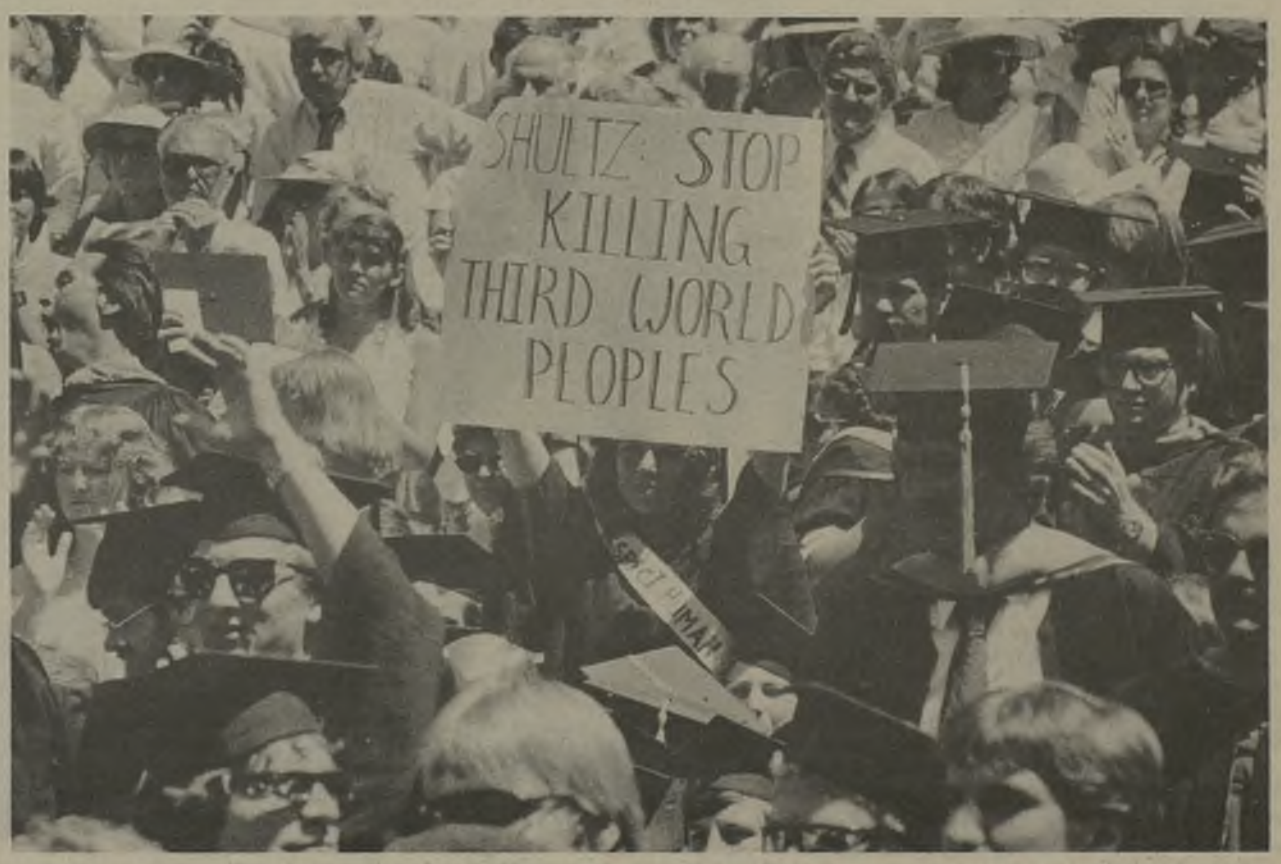


Robert McAfee Brown

In the Christian story, the subversive word of the Lord came to Caesar through Jesus, that not even a political execution could destroy Jesus or his mission, and full of a faith that God was a liberator rather than an oppressor, the Christians escaped from the bondage of fear and began their ongoing struggle for liberation.

That ongoing struggle for liberation is being carried on today by the poor, the marginated, the "wretched of the earth." Along with Archbishop Romero, they and we can believe that God is an energizing power to bring freedom to the captives, liberation to the oppressed, and a day of great jubilation.

So we mourn, yes, for all those who have died. But we pledge, also, that their deaths will become for us a constant reminder that the killing must stop, and that we, who have given such aid to the killer, must exert our influence to change those policies that lead to death, and direct them toward those that enhance life. Amen.



As Shultz speaks to the students, the students speak to him Ed Souza photo

Medical Center MEMO

Barbour addresses crowd at Medical School convocation



Allen Barbour

Physicians must understand and treat the complete person, and not be concerned only with a specific disease, in order to be effective in their role as healers, cautioned the keynote speaker at Stanford University School of Medicine's convocation ceremony Sunday, June 12.

"In medicine, we are students of the natural system known as human illness in which human elements play a major role. Unlike other scientists, however, we often ignore the most important causes in the very system we are supposed to be studying," said Dr. Allen Barbour, emeritus professor of clinical medicine and associate university ombudsman.

Physicians, he urged, must strive to understand the "human condition"—the underlying factors contributing to the patient's state of health—in addition to diagnosing the specific symptoms in order to determine the most effective treatment.

"The technology in medicine is the disease or medical model: every illness is reduced to a disordered part, labeled, and fixed," Barbour elaborated. "The result is that we rely almost exclusively on diagnoses and treatments to solve problems.

"Unfortunately, only about one-third of all our patients have illnesses that begin and remain mainly at the physical level and can be cured by technology. The other two-thirds have illnesses strongly charged with human problems, problems of living, problems of the human condition—what I call human illnesses."

Physicians must collaborate with the patient, and serve as healer, educator, and therapist, Barbour said. By relying only on technology to seek a cure, he said, physicians "inadvertently block the healing process, because when human elements are important in an illness, healing inevitably involves what the patient can and must do for him or herself."

It takes "some change in attitude, behavior, or a more positive solution to the problem than holding it all in just as it is and being sick."

Barbour pointed out that he does not discount the necessity of treating disease. "The treatment of disease is obviously the most important thing we do," he said. "But in many situations, what is most needed is our sensitivity to the human condition, and our confidence in the capacity of this person who is now our patient, to surmount the illness in any way possible. These provide the spark which fire the healing process."

Barbour spoke to the 91 graduates receiving their medical degrees, in addition to those receiving bachelor's degrees in basic medical sciences and medical microbiology; master's degrees in genetics, medical microbiology, medical sciences, physical therapy, and physiology; and doctorate degrees in biochemistry, cancer biology, hearing and speech sciences, medical microbiology, neurosciences, pharmacology, physiology, and structural biology.

Nineteen of the medical graduates plan to stay at Stanford for their internships. More than half plan to intern at university hospitals. About half the graduates were appointed to their first hospital choice through the internship matching process, while more than three-quarters of the graduating class received one of their top three hospital choices.



Malcolm Bagshaw

Bagshaw named Avery Professor

Dr. Malcolm Bagshaw, chairman of the department of radiology and leading authority on the use of radiation therapy for prostatic cancer, has been named the first holder of the Catharine and Howard Avery Professorship.

The Stanford University Board of Trustees approved the new endowed professorship and named Bagshaw the first recipient at its regular meeting Friday, June 10.

Bagshaw, who has served on the Stanford faculty since 1956, has played a key role in developing clinical uses of the medical linear accelerator, which has had

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Faculty and students honored with special awards

Faculty and students alike were honored at the Medical School convocation ceremony Sunday, June 12.

The Henry J. Kaiser Family Foundation Award for Outstanding and Innovative Contributions to Medical Education was awarded to Drs. Ron Merrell, assistant professor of surgery, and David Stevenson, assistant professor of pediatrics.

Merrell had received the Henry J. Kaiser Award for Excellence in Teaching in 1982.

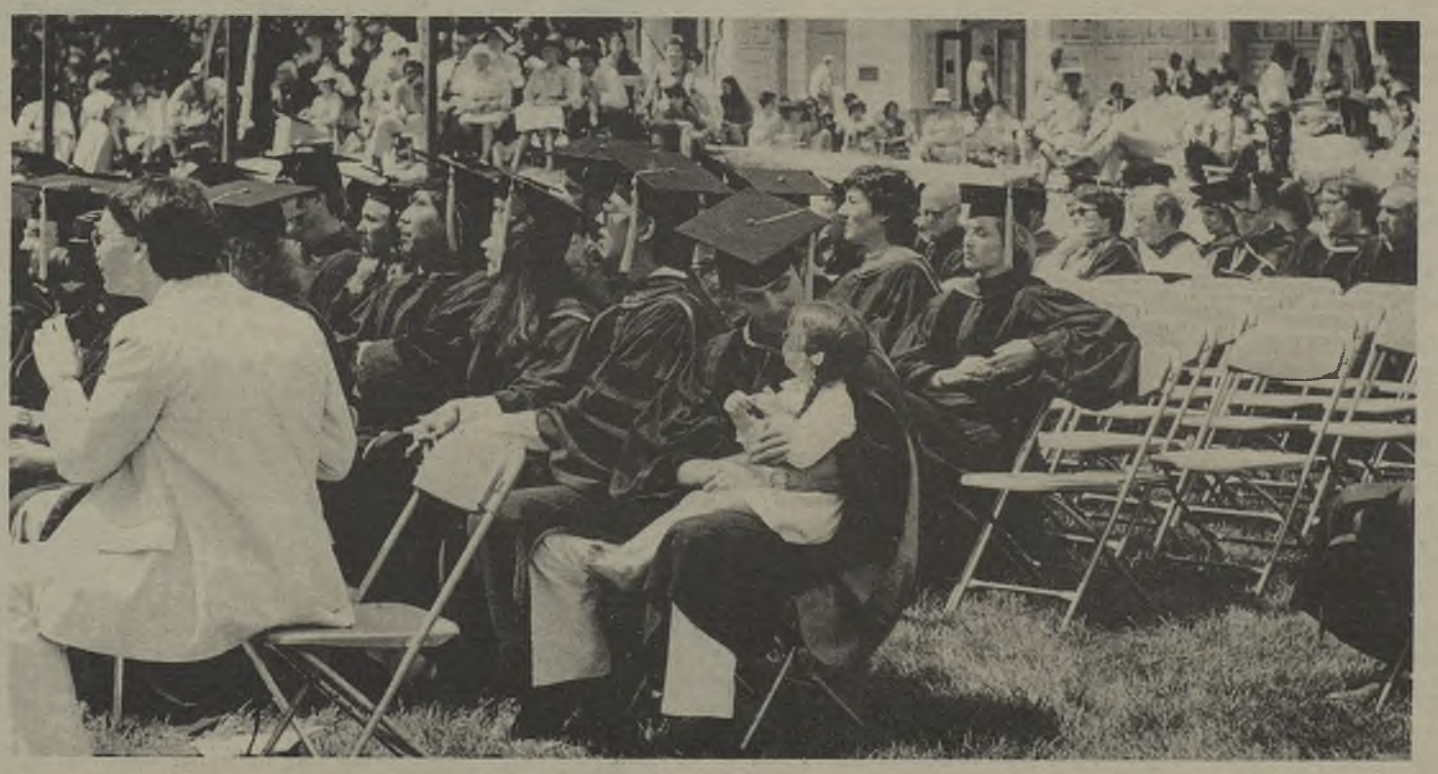
Four faculty members received the Henry J. Kaiser Foundation Award for Excellence in Teaching on Sunday. Drs. Peter Sargent, assistant professor of structural biology, and John Dolph, lecturer in structural biology, received the award for preclinical teaching. Drs. Charlotte Jacobs and Kelley Skeff, both assistant professors of medicine, received the award for clinical teaching.

Dr. Mark Perlroth, professor of clinical medicine, received the Arthur L. Bloomfield Award in Recognition of Excellence in the Teaching of Clinical Medicine. Perlroth heads up the housestaff program for the department of medicine also.

The Lucille Daniels Recognition Award for Outstanding Contribution to Physical Therapy at Stanford was presented to Dr. John Medeiros, acting director of the physical therapy program.

For the first time, seven graduating students were presented with Medical Student Research Honors Awards. They were Drs. Edward Robert Baer, Alan Michael Garber, Susan Jacobson, Amelia Genevieve Laws, Gary Steven Richardson, Audrey Christine Shafer, and Don Shigeo Yokoyama.

Dean Dominick Purpura presented a special award to graduating student Dr. Laura Jean Esserman for her contributions to the medical school play, *The Hypocritic Oaf*.



A FAMILY AFFAIR—As in the case of graduate Stephen Leibovic, who took time out to talk to his little niece (and favorite fan), the convocation ceremony was touched with many personal moments. *Convocation stories and photos by Shirley Kraus.*

NIH grant to help steer young M.D.s towards academia

A training grant renewal from the National Institutes of Health for approximately $900,000 over five years has been awarded to Dr. Eugene Robin, professor of medicine and physiology at Stanford University School of Medicine.

The grant, by encompassing some new features, will allow an expansion of the



Eugene Robin

pulmonary training program. Designed by Robin, who has overseen the program for several years, the new approach is hoped to attract more aspiring and fledgling M.D.s to the research labs.

"Many fewer young physicians are entering academia and biomedical research today than as recently as five years ago," Robin said, adding that this is observed particularly in clinical areas, and even more specifically in certain high-technology areas where there is now a substantial oversupply of clinicians.

The reasons for this phenomenon and how to overcome it have become the focus of much of Robin's attention.

"The progressive decline of M.D. academicians is a widely recognized, national problem," he said. "But it is particularly pertinent at a place like Stanford, which—with remarkable academic resources—is equipped to be in the forefront of research and teaching."

Moreover, he added, there is little need for Stanford to train pulmonary clinical specialists, of whom there is an abundance, and who are now needed "probably only on a replacement basis."

Until about five years ago, Robin said, 80 to 90 percent of young physicians trained in the pulmonary division under the now 21-year-old NIH grant went on to pursue careers in research. But of the latest group of trainees, only 30 percent went that route.

"The reasons are varied," he remarked. "There are changing values which view the independence of a clinician's life as happier than the stresses of an academic life. A career in research is very demanding. Economic factors probably play a role too."

The program revisions involve a two-pronged approach which recognizes that medical education must be flexible enough to meet new challenges as they arise.

First, the program will offer a new form of training to medical students—a marriage of their clinical and basic science preparation. "Under the conventional method, bench research is divorced from the student's clinical training," explained Robin. "We want to connect the two, to show the connections more clearly.

"Our students will be trained under the same circumstances in which they'll work in clinical departments," he added. The hope here, he said, is to make an impact on students while they're still at an early, formative stage in their training, before they become M.D.s.

"I'm not saying Stanford shouldn't emphasize the teaching of clinical medicine," said Robin. "However, we should be turning out students who are trained to think critically and know how to apply the best in medical science to patient care."

Two medical students, Mark Morin and Jesse Dodd, have already taken part in a trial of this approach, he said. The time spent in the training program is not a part of the regular studies leading to an M.D. degree, and is not eligible for credit towards the degree. However, these students have the opportunity to take a graduate degree, either M.S. or Ph.D., in physiology.

The second feature of Robin's plan involves young physicians who have finished their clinical training as pulmonary specialists, and who will be offered two years of further academic pursuit. "We've seen some people become interested at this stage, when they see that a purely clinical life is not enough to satisfy them," he said.

"The goal is to have 100 percent of the trainees under this program wind up in academic life. Of course with the medical students, this may not and need not be in the pulmonary field."

Robin said for the upcoming year there is still room for two medical students and three M.D.s under the new program.

The grant renewal, which takes effect July 1, also includes conventional training of pre- and postdoctoral Ph.D. candidates, and postdoctoral M.D.s without prior pulmonary training. The latter group will now also be offered research experience following clinical training in the pulmonary field.

"Hopefully, the more trainees we expose to the rewards of academia, the more will choose it as the base for their careers," Robin said.

Robin is acting chairman of the physiology department. The research basis of the training program involves the cellular pathophysiology of respiratory failure, and lung structure and function. Training is offered in molecular genetics and in heart-lung transplantation physiology, as well.

The intent is to meet the needs of trainees from many different backgrounds, by including contributions from Stanford faculty cellular physiologists, biochemists, pathologists, cardiovascular surgeons, clinical pharmacologists, infectious disease specialists, psychiatrists, and pulmonary disease specialists.

The training faculty, besides Robin, includes Drs. Lawrence Simon, James Theodore, Kay Ptashne, and Antonius Van Kessel.

"The idea is to use our new training program as a model for responding to a national problem," Robin concluded. "It may represent the type of innovative role that academic medical centers can assume in training the scientists of the future."

—Lisa Ames

AIDS victims susceptible to lethal form of toxoplasmosis

A common parasite that lingers harmlessly in humans has joined a list of maladies which turn deadly in persons suffering from Acquired Immune Deficiency Syndrome (AIDS), scientists say.

About 60 cases of acute toxoplasmic encephalitis, a potentially fatal brain disease, have been found to be caused by the parasite Toxoplasma gondii since July 1981, "and our research shows that this occurred in patients suffering from AIDS," said Dr. Benjamin Luft, a medical instructor at Stanford and a research scientist at the Research Institute at the Palo Alto Medical Foundation (PAMF).

Luft and two colleagues—Dr. Jack Remington, professor of infectious diseases at Stanford and director of the department of immunology and infectious diseases at PAMF; and Dr. Frances Conley, professor of neurosurgery at Stanford—published findings linking toxoplasmosis and AIDS in the April 9, 1983 *Lancet*, a British medical publication.

The article details 10 of the 60 cases of central nervous system toxoplasmosis (encephalitis) that have occurred throughout the United States and Western Europe. It focuses mainly on the linkage of toxoplasmosis to encephalitis and an "epidemic" increase in toxplasmic encephalitis in the past two years. Acquired immunodeficiency contributed to to the difficulty in making the toxoplasmosis diagnoses, the authors said.

Luft said in an interview this month that "there is extremely strong evidence that all of these patients suffered from AIDS."



Remington (left) and Luft discuss their findings on toxoplasmic encephalitis and AIDS.

photo courtesy PAMF.

About 1,500 cases of AIDS, which destroys the body's immune system, have been reported since the condition was identified in 1979. There is no known cure and about 75 percent of its victims have died within two years. Nine of the 10 patients cited in the *Lancet* article have died, Luft said.

Common AIDS killers include a form of pneumonia and rare cancers such as Kaposi's Sarcoma, in addition to other conditions such as the toxoplasmic encephalitis documented in the *Lancet* article.

AIDS has become widely known as an affliction of homosexuals and drug abusers, but it also is found among heterosexual, non-drug-user Haitians, hemophiliacs, and it has occurred among heterosexual Americans. Many authorities on infectious disease fear that AIDS could spread to the general population. Epidemiologists report that the number of cases is doubling about every six months.

Remington said the study of AIDS could help "lead us to an understanding of infectious agents that can cause cancer. The immune system is the key."

Most researchers now believe that AIDS is caused by some type of infection that causes the body's immune system to fail by drastically reducing the number of protective T-cells or lymphocytes in the blood. Then a second infection can move in with devastating results, Remington and Luft explained.

They believe that toxoplasmosis is one of those secondary infections. Laboratory studies and analysis of human blood tests have demonstrated that certain infections can disrupt the body's immune system, but no single infection has yet been identified as the trigger of AIDS.

Toxoplasmosis is present in about 50 percent of the U.S. population, Remington said, but the immune system keeps it dormant and under control in most healthy persons. It is spread through undercooked meats, unwashed vegetables, soil and cat feces. Symptoms are usually totally absent or are similar to a mild case of flu, he said.

The ailment usually becomes dangerous only when a woman becomes infected during pregnancy, risking transmission of the disease—and the likelihood of birth defects—on to the

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Easing kids' fears about hospitals

Orthopedically handicapped children at Loma Vista Elementary School in Palo Alto listen raptly as play therapist Betty Lovelace describes what it's like to enter Stanford Hospital. Lovelace and her colleagues in pediatrics visit local schools, on request, with their unique hospital orientation slide show and demonstration. They also serve as special friends to children while they're hospitalized.

For a closer view of the recreation therapy program at SUH, look for a special feature by writer Shirley Kraus in an upcoming issue of **Campus Report.**

Five young Medical School scientists receive biomedical research grants

The genetics of immune diseases, oxygen boosters for the blood, and the ways certain chemicals are linked to cancer of the larynx are among the newly funded research topics to be explored by five young scientists at the Stanford University School of Medicine.

Each researcher was awarded a $5,000 allocation in May from the Biomedical Research Support Grant, provided twice each year by the National Institutes of Health, and administered by a Stanford faculty committee.

The grant is designed to help young scientists establish research programs in areas of basic and clinical research.

The five assistant professors awarded one-year grants are: Drs. Mark Davis (medical microbiology), Martin Hopp (otolaryngology/surgery), Susan Perrine (pediatrics), J.H. Pate Skene (neurobiology), and Michael Weinrich (neurology).

Davis will use his grant to explore the ways certain severe immune diseases present from birth may arise from a specific deletion in the genetic code of a developing embryo.

Scientists know that human illnesses such as severe combined immunodeficiency disease or Wiskott-Aldrich syndrome have a genetic component, but until now, no one has been able to determine exactly which genes are responsible for the illnesses, Davis said.

Hemoglobin F, a special variety of the oxygen carrying component of blood, is the research focus of **Perrine**. Normally, Hemoglobin F is produced primarily before birth, to be replaced by Hemoglobin A in the growing child and adult. Many diseases of the red blood cell, such as sickle cell anemia, might be ameliorated if Hemoglobin F production could be "switched on" again after birth, Perrine said.

She is investigating the way 5-Azacytidine, a drug used to fight cancer, coincidentally activates some genes that are normally suppressed, and leads to a boost in Hemoglobin F.

Hopp is using chemical tools to probe cells of the larynx in his efforts to better understand how a cancer-causing agent is activated inside the cell. Though larynx cancer is strongly correlated with heavy smoking and drinking habits and occupational exposure to certain hazards, the chemicals themselves are not carcinogenic, said Hopp, but must be broken down by enzymes in the cell to trigger cancer.

Susceptibility to larynx cancer in some individuals may be linked to elevated levels of such enzymes, said Hopp.

Weinrich is studying vestibulospinal reflexes in primates—the network of neurons that enable animals (and humans) to use information from the outside world to maintain posture and balance in a moving world.

Skene is investigating the genes that seem to regulate the growth and regeneration of some nerve cells.

—**Deborah Frankin**

Toxoplasmosis deadly in AIDS sufferers. . .

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unborn child. Toxoplasmosis also becomes dangerous when immunosuppressive drugs are given to persons, such as organ transplant or selected cancer patients.

Luft said the experience at Stanford and Palo Alto Medical Research Foundation has led to the following indications regarding the AIDS-toxoplasmosis link:

• Central nervous system toxoplasmosis can frequently be cured if it is pinpointed and proper drug treatment (with antibiotics) is conducted early. "This is tricky," said Remington, "because cortisone, often used for encephalitis treatment, is not effective and is even harmful when the condition is caused by toxoplasmosis. With the nationwide outbreak of AIDS, it is imperative that physicians be alert to this potential link and the appropriate treatment."

In addition, the symptoms can be quite varied, including such problems as chronic headaches, confusion or seizures. This variability underscores the need for physician alertness and the use of laboratory tests in diagnosis, Remington said.

• Luft said that before the most recent outbreaks, only about 10 cases of toxoplasmic encephalitis in adults had been reported in the past 40 years. (Those cases did not include medically immunosuppressed patients, he said.)

• The 60 patients represent a wide variety of lifestyles, indicating that the AIDS epidemic is not confined to select groups or caused by specific behavior patterns. Among the 10 persons reported in the *Lancet* article, only two had homosexual histories.

"This does *not* mean that the disease has already spread to the general population," said Remington. "What it does mean is that AIDS has the potential to affect a wide variety of persons."

Nevertheless, the link to the homosexual, Haitian, and drug-abuse communities appears valid. One patient described in the article, for example, was not identified with any of the three risk groups but had received a blood transfusion in Haiti following a motor vehicle accident.

• Evidence repeatedly points to the Haitian population as a center of the disease. "It appears," said Luft, "that the disease is endemic in that Caribbean nation. I'm not sure what the significance is except that it is an appropriate area to study the disease and look perhaps for causes—and this is being done."

—**Mike Goodkind**

Appreciation day

The fourth annual Appreciation Day for Referring Physicians is scheduled for June 18 at the Medical School.

Sponsored by the department of medicine, the program offers continuing education sessions focusing on new aspects of clinical practice and areas of tertiary care. About 150 physicians are expected to attend.

"This event affords us a special opportunity to thank our referring physicians and to become increasingly familiar with their needs," said Dr. Kenneth Melmon, chairman of the department.

Participation is by invitation only. The day will conclude with a wine and cheese reception for faculty and referring physicians.

Gonda awardee reflects on his long service to SUH

Today may be just Wednesday for most of us, but for Bill Ferguson, associate project manager in Operations and Maintenance, it is June 15, the day that marks his 24th year at Stanford University Hospital.

And Ferguson, or "Fergie" as his coworkers call him, has only the best things to say about his many years here. "I've enjoyed working at Stanford. As long as you do your work, you can stay as long as you want."

Ferguson "does his work" and then some.

As a project manager, he works with contractors hired to perform maintenance or building tasks in the hospital. And while he said the actual negotiations with contractors aren't difficult, when he begins a project he sometimes finds more than he'd bargained for.

"There are decisions to be made sometimes with the unknown—you could open a wall and find out you've got plumbing in there you didn't know about." Then he must quickly arrange for more preparations before the contractor's work can begin. Luckily, "I work closely enough with them so that if they *do* have to put in 'stand-by' time, they understand."

Ferguson has developed a reputation for this ability to work well with contractors, as well as the many electricians, plumbers and other maintenance and building professionals in the department. Earlier this month he received the Thomas A. Gonda award as Outstanding Hospital Employee of the Year at the 25th annual service awards banquet, in recognition of his quality work and professional rapport.

"It was a complete surprise," he said, pointing with bashful pride at the honorary plaque he was given.

Ron Just, director of operations and maintenance, was one of several people who nominated Ferguson for the award. He spoke of Ferguson's "thoroughness and resourcefulness. When something comes up, he doesn't complain, he *acts*." Just also noted his sense of commitment, exemplified by readiness to work extra hours.

He once came from his home in Burlingame on Thanksgiving to check the progress of a renovation project because, as Ferguson pointed out, modifications cannot always be done during regular business hours, particularly in a hospital environment.



Ferguson at the scene of the Hoover Pavilion Lobby, where he has just begun supervising renovation. photo by Ed Souza

"A hospital is not a place for an engineer to just sit in a boiler room waiting for a call to come in. You've got to really get out and hustle." ***—Bill Ferguson***

"When I'm on a project, no matter if it's the middle of the night, I'll come down. That's just part of my job. If something goes wrong, I'm here to correct it, and if there's a decision to be made, I make it," he explained.

Ferguson, who came to Stanford as an electrician from the Southern Pacific Company, has witnessed events in his 24 years here that have called for more than usual dedication.

In 1968 when the first heart transplant took place, he was instrumental in getting the necessary electrical power for the 150 reporters who attended the hospital's three weeks of press briefings after the landmark operation.

Then in 1971, an outside group staged a sit-in and took over the hospital administration office for four days after the firing of a black employee. The protesters caused extensive damage to the area when they fought back the riot squad who fired tear gas into the offices. "They turned hoses on and shot all the tear gas back at the riot squad. They absolutely demolished that place," Ferguson said.

His department, of course, was directly involved in the cleanup and renovation of the ruined offices. In that case, Ferguson said he didn't go home for three days.

When he does go home, though, he doesn't slow the pace. He works in his yard and does all his own home main-

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Construction Corner

Research Animal Facility I:

According to a report from the University Facilities Project Office, construction of the Research Animal Facility I is scheduled to begin the last week of July or first week of August. Construction is expected to take approximately a year.

To minimize the impact of vibrations on the sensitive research operations within the Sherman Fairchild Research Building, a special consultant has been retained and particular directions have been given to the architect and the construction manager. Generally, all vibration-causing activities are to be scheduled before 1 p.m. Also, a bi-weekly schedule pertaining to vibration-causing construction will be developed by the contractor and furnished to those affected.

Between now and July another access road will be built from Campus Drive into the east side of the medical center parking lot; that is, Via Ortega is to be extended across Campus Drive into the parking lot. The reason for this is that the Jordan Way entrance will be blocked by the construction fence and eventually by RAF-I.

Some utility lines presently under the parking lot must be relocated before July. There will be scheduled utility shut-offs, and as much advance notice as possible will be given to those affected.

At the Hemodialysis Center there is no planned disruption of utilities, but the access ramp from the parking lot will have to be replaced before the present one is fenced in. This is being coordinated.

All construction traffic will go from Campus Drive, south. Except for this portion of Campus Drive, streets around the medical center should not be noticeably affected.

At Fairchild there will be no direct access from the parking lot to the auditorium or main entrance to the research building, but the ramp to the service entrance below grade will be maintained. Emergency exits from the auditorium will also be maintained. Deliveries of chairs, etc., for the auditorium can be accommodated along the south face of the medical school, and appropriate personnel are being informed.

Electrical Upgrade in Operating Room Suite:

Work is under way to provide additional electrical power to each of the main center's 14 operating rooms. In order to provide for the normal scheduling of cases, the contractor is performing the work during the night hours and on weekends.

Dave Dominguez, construction coordinator, and Wells Hoeltje, project manager, are overseeing the project.

Wood's lab—730 Welch Road:

Renovation of a laboratory area at 730 Welch Road has begun. The area will provide an office and lab for Dr. Peter Wood, deputy director of the Stanford Heart Disease Prevention Program. In addition, the renovation will make the building accessible to the handicapped.

The project was designed by Jennifer Wagstaff, Facilities architectural planner, and Erik Lund, project manager.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JUNE 15

Div. of Orthopedic Surgery C. Howard Hatcher Memorial Visiting Professorship lecture: "Sublaminar Wiring as an Adjunct to Scoliosis Surgery"—Dr. John Hall (professor of orthopedic surgery at Harvard, and president of Boston Children's Medical Center medical staff). 8 a.m., M114.

Div. of Hematology Wednesday noon conference: "The Hickman catheter: Problems and Perspectives"—Dr. Robert Carlson, oncology fellow. 12 noon, **S102**.

Dept. of Clinical Social Work and the American Cancer Society: "I Can Cope"—a program for cancer patients and their families. 5:30 to 7:30 p.m., TF-122c. To register, call 497-5091.

Hematology Support Group: A meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

Medical Center Auxiliary Volunteer Orientation: 9:45 a.m., W001. For further information, call the Auxiliary office at 497-6636.

JUNE 15 through JUNE 17

Departments of Pediatrics, Obstetrics, and Dietetics: "Nutritional Care of High Risk Obstetrical Patient and High Risk Infant." 7:30 a.m. to 8 p.m., Fairchild Auditorium. For further information, call 497-5711. *Find details in this issue.*

THURSDAY, JUNE 16

Dept. of Medicine grand rounds: "Case Presentations in Hepatitis B—Prevention, Prophylaxis, and Treatment"—Dr. Gabriel Garcia. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JUNE 17

Dept. of Gynecology and Obstetrics grand rounds: "Women's Health and Maternity Care in China"—Susan Leibel, R.N., C.N.M. (UCSF). 8 a.m., A336.

Dept. of Pediatrics grand rounds: "Hormones in Milk"—Dr. Otakar Koldovsky (professor of pediatrics and head of physiology, Perinatal and Nutritional Sciences, University of Arizona). 8 a.m., Fairchild Auditorium.

SATURDAY, JUNE 18

Dept. of Medicine Appreciation Day for Referring Physicians. 7 a.m. to 5 p.m., M classrooms, medical school. For further information, call 497-5453. *Find details in this issue.*

JUNE 20 through JUNE 22

"Small Beginnings"—an overview of nursing care in the Intensive Care Nursery. Sponsored by nursing staffs of ICN, extended care nursery and intermediate intensive care nursery. 9 a.m. to 5 p.m. each day, located outside the hospital cafeteria. *Find details in this issue.*

JUNE 20 through JUNE 23

Dept. of Pharmacology Second International Symposium on the Biochemical Basis of Drug Action. To be held at Fairchild Auditorium. A fee will be charged. For further information or to register, call 497-6834.

TUESDAY, JUNE 21

Depts. of Gynecology/Obstetrics and Psychiatry special conference: "Neuroendocrine and Psychological Perspective of Pregnancy." Speakers will include Drs. Paul Mascovich and Arthur Coleman. 11:30 a.m. to 1 p.m., M106.

WEDNESDAY, JUNE 22

Div. of Hematology Wednesday noon conference: topic to be announced. Speaker: Dr. Joseph Miletich (Washington University School of Medicine, St. Louis). 12 noon, **S102**.

SATURDAY, JUNE 25

Eating Disorders conference: sponsored by the Dept. of Psychiatry and Behavioral Sciences. A one-day conference to inform parents and the community about modern treatments for obesity, bulimia, and anorexia nervosa. The public is invited, and a fee is charged. 9:30 a.m. to 4 p.m., M104. For further information or to register, call 497-7871.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.



Eugene Farber

Reminiscing at School reception

"I remember seeing patients in the dermatology clinic where we had four or five patients in an entire afternoon for six to 10 medical students," Dr. Eugene Farber said at the first annual Medical School reception for long-service employees, held June 2.

Farber, chairman of the department of dermatology, described the steady increase of patients over the years since the school's move from San Francisco. "They come from all over the world, including some from Salinas," he joked, remarking as well on many of the changes resulting from that growth.

The reception, which about 100 employees and their guests attended, commended those who have served the medical center for at least five years. Dr. Dominick Purpura, dean of the medical school, presented specially-designed certificates to those with 20 or more years of service.

Others honoring employees at the reception included Dr. Lawrence Crowley, vice president for medical affairs; David Mendelow, associate dean, administration; Donald Tower, executive director for the Faculty Practice Program; and Rosemary Hornby, manager of the Human Resources Group.



Feeding high-risk moms and babies

A conference on the nutritional care of high-risk obstetrical patients and high-risk infants is being held in Fairchild Auditorium and some M classrooms of Stanford Medical Center today through Friday, June 17.

The conference is oriented to nutritionists, nurses, obstetricians, pharmacists, neonatologists and other physicians who are involved in the care of these patients.

Both theoretical and practical points will be raised through the use of lectures, round tables, and workshops.

Sponsored by the departments of pediatrics, obstetrics and gynecology, and dietetics, the program will include such topics as "New and Future Issues in Perinatal Nutrition," "Severe Preeclampsia: The Highest Risk Pregnancy," "Specific Nutritional Deficiencies and Excesses; Impact on Pregnancy Course and Outcome," "Exercise During Pregnancy," "Ethical Dilemmas in Perinatology," "The Continuing Conundrum of Kernicterus," and many more.

The faculty includes many Stanford physicians and other professionals involved with these issues, as well as several knowledgeable guest speakers from around the country. The program directors are Dr. Philip Sunshine, professor of pediatrics and director of newborn nurseries at SUH; and Dr. John Kerner, Jr., director of pediatric gastroenterology.

A fee is charged, and continuing education credit is available. For further details on the conference and enrollment information, call 497-5711.

"Preemie" fair

"Small Beginnings" is the title of an information fair on the care of premature infants, to be held June 20-22, said Penny Rau, B.S.N., staff nurse in the neonatal intensive care nursery (ICN).

Nurses from the ICN, extended care nursery (previously called Romper Room), and the intermediate intensive care nursery will staff the event.

Also described will be adaptation of the nursery environment to meet the needs of the very tiny baby, new advances in eye care and surgical treatment of "preemies," and the process of helping parents assume an active role in their child's care.

The fair will run from 9 a.m. to 5 p.m. each day, and will be located outside the hospital cafeteria.

Building for the Future

HOSPITAL MODERNIZATION

A contract has been signed with the firm of Morse/Diesel Inc. for construction management services with the Hospital modernization.

Dr. Lawrence Crowley, vice president for medical affairs and SUH president, and Donald Piser, president of Morse/Diesel, signed the contract at a ceremony at SUH last week.

Construction costs for the modernization work are estimated at $66.5 million, which includes construction management services.

The design development phase of modernization planning began last week. During this stage of design, the 20 departments and services affected by remodeling and construction are working with architects to develop detailed large scale drawings of their new areas.

Department representatives and architects from The NBBJ Group are compiling detailed information about equipment needs also.

The design development phase is expected to be completed by fall. Then technical construction drawings will be prepared by the architects.

News Notes...News Notes...

Spotlight on. . .

Four medical center physicians were commended for special service by the Santa Clara County Medical Society recently.

Dr. Frederick Armstrong, *clinical professor of medicine, was honored for his "outstanding contribution to the medical society."*

Dr. James McCort, *clinical professor emeritus of radiology, was awarded for his "outstanding contribution in medical education," as was* **Dr. Donald Alcott,** *clinical professor emeritus of pathology.*

Dr. Rodney Beard, *professor emeritus of family, community and preventive medicine, received recognition for his "outstanding contribution to the community."*

* * * *



Dr. William Haskell, *clinical associate professor of medicine, was appointed president of the American College of Sports Medicine at that organization's annual meeting in Montreal last month.*

The College is a group of 10,500 scientists, physicians, educators and health professionals whose common interests involve treating sports injuries and defining exercise's role in improving human health.

* * * *

Karen Sortino, M.A., *director of the SUMC Friends of Psychiatry and Behavioral Sciences, led two special workshops on "Keys to Creative Volunteer Management" earlier this month.*

In the first workshop, sponsored by the Retired Senior Volunteer Program (RSVP) and the Volunteer Center of Palo Alto, Sortino instructed participants in motivating volunteers and developing creative leadership. Later she taught interviewing skills and offered suggestions on how to recognize and reward volunteers.

* * * *

The SUMC Signage Committee has hired **Leonard Kitts** *of Design Systems Group of Palo Alto to serve as consultant for its signage project. The project is intended to update and better coordinate directory signs within the medical center.*

The signage committee is chaired by Jeanne Kennedy, director of SUH community relations. Project manager for the renovation is Wells Hoeltje of Facilities.



Dr. Paul Basch, *associate professor of family, community and preventive medicine, has been chosen by the Committee on Scholarly Communication with the People's Republic of China to participate in the Distinguished Scholars Program.*

The Committee is supported by the National Academy of Sciences, the American Council of Learned Societies, and the Social Science Research Council.

Late this year, Basch will travel to Amoy University in Xiamen, Fujian Province. There he will work for two months at the Parasitology Research Laboratory with Professor C.C. Tang, an eminent Chinese parasitologist. Basch intends to investigate parasitic diseases of animals and humans, particularly schistosomiasis.

Basch was chosen as one of 16 senior American scholars of science, engineering, social sciences and humanities, from a field of 200 applicants. A total of 30 from the two countries will participate during 1983-84.

* * * *

Richard Rydell, *director of SUH management systems, has been elected to his third term as chairman of the Los Altos Hills Planning Commission.*

* * * *



Mike Goodkind *has been appointed news director in the Medical Center's office of communications effective June 1, announced director Spyros Andreopoulos.*

In his new capacity, Goodkind is responsible for the day-to-day news activities of the medical center. He coordinates news assignments, and acts as the spokesperson for SUMC.

The delegation of this responsibility was necessitated, Andreopoulos said, by his own recently expanded role as director of the Office of Communications.

With Stanford since May 1981, Goodkind will continue to edit the Medical Staff Update, *and assist Andreopoulos in development of the SUMC publications program.*

His professional experiences include work for newspapers in Vermont, Arizona, and California, and as a reporter for the Associated Press in Los Angeles from 1971 to 1979.

A graduate of Dartmouth, Goodkind has served in Africa with the Peace Corps, and with the Army in Vietnam.

You should know...

Annual Individual Benefits Statements *will be mailed to all hospital employees during the week of June 20. The statement explains each employee's benefit plan in detail and notes the cost of the various benefit programs to SUH and to employees.*

If you are an SUH employee and have not received your statement by July 18, or if you have any questions about your statement, call the benefits office at 497-5734.

* * * *

The Fleischmann Learning Resource Center *in the medical school has changed its hours for the summer months. As of June 14, the center is open Monday, Wednesday and Friday from 8 a.m. to 5 p.m., Tuesday and Thursday from 8 a.m. to 10 p.m., and Saturday noon to 6 p.m. (See next news note for another new feature of the LRC.)*

* * * *

The Learning Resource Center **(LRC)** *now has the* **computer system** *ASKME, an adaptation of Ohio State University's CASE. The programs are designed to teach medical history and physical examination information, as well as allow the user to "play" doctor to a "patient," for practice in diagnosing illness.*

The computer center in the LRC, room M200, also provides terminal access to the StanMed, Ohio State and Massachusetts General Hospital computer systems.

For more information see Anne Davis, LRC librarian.

* * * *

The Human Resources Group in the medical school has a file of applications from interested **summer clerical workers.** *If your department has such a need, call Catherine at 497-6295, or stop by the HRG office in M118 between 8 a.m. and 5 p.m.*

* * * *

Dr. Mary Southam of the behavioral medicine program reminds the community that a **weight-loss day camp for teenagers** *opens again this summer for two sessions, the first beginning June 20 and the second July 18.*

Young people aged 12-17 are eligible for the camp, which offers a chance to have fun while following a weight-loss program of dieting, exercise, and behavioral change techniques. Faculty will include members of the behavioral medicine program of the School of Medicine.

A fee is charged and space is limited. For further information, call Southam at 497-5065.

* * * *

The **Medical Board** *in May approved formation of a therapeutic pheresis committee recommended by the bylaws committee.*

The board in May also approved the policy for general nursing and heard annual reports from the care review/risk management department and the division of nuclear medicine.

Bagshaw. . .

continued from page 10

worldwide impact on the treatment of cancer. More recently, he has directed clinical studies of hyperthermia, the use of heat to destroy cancerous tumors.

He was also a pioneer in the treatment of localized human cancers with combinations of drugs and radiation, a now common procedure which was experimental only two decades ago.

He has authored or co-authored nearly 150 publications covering broad areas of cancer research and therapy.

Bagshaw has served as director of radiation therapy at Stanford since 1960 and was appointed chairman of the academic department in 1972. A 1950 graduate of Yale University School of Medicine, Bagshaw completed his radiology residency at the University of Michigan School of Medicine.

The Catharine and Howard Avery Professorship has been earmarked for a faculty member researching the causes, treatment and cure of cancer, an ailment Mrs. Avery had battled. In 1975 she established a fund for cancer research, which was augmented after her 1981 death to make the establishment of the professorship possible.

Mrs. Avery attended Mills College in Oakland and was a graduate of the University of Washington, Seattle.

Her husband, a resident of Mill Valley, is a 1932 graduate of Stanford.

As a Navy captain during World War II, Avery received several honors, including the Navy Cross, the Legion of Merit, and the Distingusihed Flying Cross. Later he held various command positions, including four years in the NATO headquarters in Paris as representative of the Supreme Allied Cammander-Atlantic.

In 1977, Avery established at Stanford the Douglas P. Avery Band Scholarship in memory of his son, who was killed in an aircraft accident in Munich while attending the University of Maryland, Munich Branch.

Ferguson. . .

continued from page 13

tenance, and being "the kind of person who likes to help people out," he also makes time to do the same for friends.

In addition to these pastimes, when he retires in 1985 he hopes to visit relatives back east with his wife and their pet dog, who is "the best traveler you've ever seen." They plan to continue their frequent trips to Reno, and he also wants to do more "abalone-ing" and salmon fishing.

For now, though, Ferguson works away, supervising his various remodeling and construction projects, and troubleshooting with characteristic calm.

He explains his philosophy about doing his job well very simply:

"A hospital is not a place for an engineer to just sit in a boiler room waiting for a call to come in," he said. "You've got to really get out and hustle."

—Stacie Newman

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Morley Safer of '60 Minutes' interviews Steven Mosher, Clifford Barnett

Following is an off-the-air transcript of the CBS 60 Minutes broadcast June 12, concerning the dismissal of Steven W. Mosher as a graduate student in anthropology. Produced by Joe Werschba, it features reporter Morley Safer and interviews with Mosher and Prof. Clifford Barnett, chairman of the Anthropology Department. Titled "The China Syndrome," it was introduced by Safer.

SAFER: "The China Syndrome" is about what the Chinese government will do when it is displeased—in this case with an American anthropologist from Stanford University, Steven Westley Mosher, to whom the Chinese took a dislike while he was doing field work in their country.

China threatened to cut off academic exchanges with Stanford unless the University fired Mosher. Stanford, which has extensive contacts with China, did what the Chinese wanted—expelled Mosher—but not, says the University, because of pressure from the Chinese government but because of what it called illegal and unethical activities by Steven Mosher.

But did Stanford, in fact, kow-tow to China? And, if it did, what does this do to the academic freedom of a great American university? You decide.

Steven Mosher, everyone agrees, was an excellent scholar with an unlimited future in Chinese studies, due to receive his Ph.D. from Stanford University.

In 1979 he was the first anthropology student to get into China in a new exchange program. He got around perhaps more than the Chinese liked.

Mosher speaks the language well. He was married to a Chinese woman from Hong Kong and worked in the village where her father was born.

Mosher found the people in his village to be warm and gregarious and truthful when they spoke to him in private. Communist Party officials knew of his activities and were highly suspicious.

What struck Mosher about his village was the devotion people had to children—a love that went beyond normal family ties because of China's birth control program.

Mosher was sympathetic to the need for China to control its population but found that the harsh rules of that program were being violated by even harsher rules.

MOSHER: Now in Chinese villages, parents are allowed only one child. And they are under government restrictions, they are under a quota system that only allows them to have that child when they have a quota.

If they happen to get pregnant, if they happen to conceive a child before they've been issued a quota, then abortion follows.

For example, the very large village that I was in had a population of 8,000 in 1981. The 1981 quota was seven. . . .

SAFER: Seven births?

MOSHER: Seven births in a year.

SAFER: Passes, in effect, to have a child.

MOSHER: Right. Those who were found to be pregnant and without a birth control quota were sent to the commune seat and they were held in dormitories there until they agreed to an abortion.

SAFER: How pregnant were these women?

MOSHER: Some of the women were as far along as nine months.

SAFER: Nine months?

MOSHER: I would say that perhaps two-thirds of the women were six months or more pregnant. The fetus was first injected with an agent that causes abortion. With that injection, the fetus took from 24 to 48 hours to die. Normally, that injection also caused the uterus to begin its contractions and that fetus would then be ejected. In some cases, that didn't happen, and so they had to go in and perform a cesarian.

I left at that point. I did not have the stomach to stay and watch that performed.

SAFER: Give us an idea of what these women said after what must have been a horrendous experience.

MOSHER: It was a horrendous experience. I think a lot of people in the West have the impression that Chinese don't bleed. That's totally false. These Chinese women reacted to forced abortions in the third trimester of pregnancy the same way that American women would.

SAFER: Is abortion in the seventh, eighth or ninth month legal in China?

MOSHER: No. According to China's own birth control regulation, abortions cannot be performed under duress. In other words, you cannot use coercion to obtain consent. And abortions are forbidden after the sixth month. So what I was seeing in rural China were widespread violations of China's own birth control regulations.

SAFER: Mosher wrote to Chinese officials about these violations but got no response. The Chinese government did suggest to her visiting American scholars that Mosher was a troublemaker, but gave them no details, just unsubstantiated allegations.

Almost a year after Mosher left China he made his findings public in an article written in a popular magazine in Taiwan, complete with evidence—color photographs of women about to be aborted in the last three months of pregnancy.

The Chinese government was outraged, both by the article and the fact that it had been published by its enemy, Taiwan.

American academics also were outraged that women's faces had not been blacked out as they are here. They were also upset that Mosher, going so public, might ruin things for other scholars wanting to work in China.

MOSHER: Chinese officials in Peking were demanding of visiting American academic delegations that I be punished. They made the explicit threat that if I were not in some way punished that the cultural exchange program would suffer, that American social scientists would no longer be welcome in China.

SAFER: You also wrote of infanticide. . . .

MOSHER: Recently, because of the tremendous pressure that the Chinese government is putting on the people, peasants very reluctantly have done away with female children in order, you see, to keep their quota open, in order to have another chance to have a son. And since in the countryside you must have sons if you are going to have a means of support in old age, female infanticide is reoccuring.

SAFER: So if the child is "lost" for whatever reason you can maintain your pass until you give birth to a healthy baby.

MOSHER: Right. And so many girl babies are, as you put it "lost."

SAFER: Mosher claims that all his subsequent troubles started with that article and led to his dismissal from the Stanford Ph. D. program.

MOSHER: If Peking had said nothing, I would have come back to the University, would have received the Ph. D., would have been accepted back into the academic fold, and would have been no problem.

SAFER: Not so, says Stanford. Mosher's troubles began almost the minute he hit China, and the article had nothing to do with it, says department chairman Clifford Barnett.

BARNETT: I don't believe there is any issue of academic freedom involved in this situation, unless you again subscribe to Mr. Mosher's statements, despite what is said in the report that his publication of the material on the Chinese birth control program was at issue.

There's no way in which that is an issue.

SAFER: If it wasn't the article that led to his dismissal, and it wasn't the displeasure of the Chinese government, why was Mosher expelled?

BARNETT: He was expelled for professional misconduct in the field and for illegal activity, illegal conduct, illegal and professional misconduct in the field.

SAFER: . . .They said unethical conduct.

BARNETT: That's right. And most of that conduct occurred before his publication of the birth control article. . . .

SAFER: You're saying you don't want to release the report because it's going to hurt innocent people. Mosher says the only innocent person to be hurt is Mosher. . . .

BARNETT: The other argument that he's built up is that we have acted to please the Chinese, that the only grounds that we have had to dismiss him are grounds that he published that article with regard to the excesses of the birth control program—and I might add, as a footnote that he was not the first person, in fact there are umpteen journalists who have reported on this going back to 1979 when the Baltimore Sun published material on this.

SAFER: Hold on a minute. Why were the Sinologists so up in arms for the poor fellow if it was all just old hat?

BARNETT: That's a very good question.

SAFER: Professor Barnett says he won't release the Mosher report because it would violate University regulations, but says it would be all right for Mosher to release it.

BARNETT: I feel that it would be injurious to other people. If I was subpoenaed to release that report, I would go to jail before I would release it.

SAFER: Mosher won't release it because he says it's slander, and he has no interest in spreading slander against himself.

MOSHER: They have now libelled me by saying I engaged in illegal and seriously unethical activities in China. But they still have not come forward and said precisely what those illegal and unethical activities are.

BARNETT: I would much prefer to see that report out and, if that was out, I don't think you and I would be talking today.

SAFER: You mean we would all be so convinced that Mosher was guilty as charged?

BARNETT: Yes, I think so.

SAFER: Well, give us a hint of what's in that report. . . .

(He won't) But there are hints. In November, 1981, six months after the Taiwan magazine article appeared, a Stanford investigating committee was asking the Chinese government for information on what Mosher was supposed to have done wrong the year before:

(Quotes from Stanford letter) "Much of the information we have received on these charges has been indirect and second-hand, consisting of reports made by American scholars of complaints made to them by Chinese officials."

Would you have acted at all had the Chinese government (not) written a very, very strong letter to this university saying "look, either punish this guy—not only punish him, we want to know precisely how he is punished because this is going to affect all future relationships that we have"

BARNETT: Here again, I don't know where you're taking information that you just relayed. We did not get a letter on this matter from the Chinese government until February, 1982. And we received that letter because the investigating committee had heard all kinds of rumors in this regard.

SAFER: That letter from the Chinese Academy of Social Sciences warned Stanford that exchange scholarships between China and the U.S. had been endangered by Mosher and that "we hope that Stanford University will deal with this matter severely and that our academy be informed as to its disposition."

The Chinese also laid out a bill of particulars against Mosher: that he travelled in an illegal van, that he had travelled to unauthorized places, that he had an unauthorized research assistant, that he tried to take old coins out of the country, and that he had published that abortion article in the Taiwan magazine—the same charges which Professor Barnett now says played no significant part in the dismissal of Mosher from Stanford's Ph.D. program.

Was that one of the things you considered, the so-called illegal van?

BARNETT: We considered that and, as a matter of fact, that was not considered a problem at all.

SAFER: Was the presence of a researcher?

BARNETT: That was a problem but that was not the reason for his termination.

SAFER: Was travelling in areas not precisely authorized to travel in?

BARNETT: That was a problem, but not the major one for his termination.

SAFER: Was the buying of 140 old coins?

ZBARNETT: No, that was completely discarded. 'Cause, among other things, of the Chinese statement themselves they also paid him back for it, which is hardly the kind of thing you would do. That was completely not at issue.

SAFER: Was there information, corroborated or otherwise, that he was an agent of the U.S. government?

BARNETT: No. I feel perfectly free to at least lay that aside, because I have heard that question come up now a number of times. I think in fairness to Mr. Mosher, as well as to ourselves, but particularly to him, particularly in this kind of situation, we feel very comfortable in saying that there isn't a word of that even discussed in the report.

SAFER: To complicate things, Mosher divorced his Chinese wife, and she later gave testimony against him.

One of the criticisms was that as you went into the village that was your former wife's family's village—your former wife being Hong Kong Chinese with roots back in this village—and that by reporting and the way you reported, you endangered that family. You endangered not just sources but sources very close to you.

MOSHER: Stanford has used that reason as an excuse to keep this whole investigation under wraps, to keep the final report confidential. That was a red herring. These rumors and allegations that Stanford gathered into the final report have been around now for two and a half years. Nothing untoward has happened in the village in that time. There have been no arrests, no persecutions, no people sent to labor camps.

SAFER: Do you know this?

MOSHER: I know that to be a fact. I go frequently to Hong Kong. There are many people in Hong Kong who visit rural China.

BARNETT: Well, I think there are two tragedies in this whole situation. One tragedy is of a brilliant student who's gone wrong, a student who's brilliant in the classroom, and has a real defect with regard to his behavior in doing research.

And the second tragedy is that the real suffering of, on humanitarian grounds, of women who indeed are undergoing forced abortions have gotten mixed up with what I consider to be the self-serving needs of an individual.

SAFER: Is the evidence against him evidence that, if this were a criminal trial, the evidence would stand up in court?

BARNETT: It's hard to say what a jury would do. All I can tell you is that, interestingly enough, there were 12 or 13 people—and, as you know, anthropologists are a very contentious, individualist bunch—and I think for the first time in a long time in my experience in this department, they voted unanimously. I don't know what that says. . . .

MOSHER: It says that academic freedom is a myth that is sustained by large universities who preach academic freedom, but when the crunch comes, when political pressure is on, sometimes behave in quite different ways.

SAFER: Whether or not it is an issue of academic freedom is an open question. Mosher has appealed to higher university officials to reconsider his expulsion. They've not yet come to a decision.

For the moment, Mosher is done for as an academic, but not as an authority on China. He has a book coming out in the fall on life in China, a book that will likely get more attention than it would have had the university not expelled him.

Rebholz: Hoover critics also favored rigorous education

Editor, *Campus Report*:

I was gratified by Prof. Thomas Gray's response (*Campus Report*, June 8) to Hoover Fellow Edwin Harwood's attack on the "sincerity" of my motives in criticizing the relationship of the Hoover Institution to the rest of Stanford University (*Campus Report*, June 1).

As a legal scholar with an accurate memory of the Franklin case, Prof. Grey puts to rest, I hope, Mr. Harwood's charge that arguments, by me and others, for Franklin's speeches being protected by the First Amendment were "patently ludicrous" and that my support of Franklin proves my partisan bias in questioning Hoover's role at Stanford.

On this aspect of Mr. Harwood's attack, I want only to add that I did not agree with Franklin's politics but that I do believe in free speech, and it was that belief which led me to sign the *Amicus Curiae* brief in defense of Franklin.

Contrary to Mr. Harwood's expectations, I believe in the free speech even of "A Ku Klux Klan adherent" or a "Nazi," users of "the most rabid and vicious demagoguerie" with whom Mr. Harwood compares Franklin. I remain a member of the A.C.L.U., which does defend the First Amendment rights of such groups as it has defended the rights of Franklin.

In the same spirit I would defend Mr. Harwood's right to attack me, even though the attack comes very close, I think, to the "nonmalicious slander" which Mr. Harwood identifies as one expression of "rabid and vicious demagoguerie."

Likewise I would defend the freedom of speech of every member of the Hoover Instution and of the Institution itself, which, as I argued in the Senate debate of May 26, does speak *as an institution* because the director and his immediate assistants use their power over appointments, the allocation of funds, and the publications program to create the Institution's image as a politically conservative think-tank and thereby encourage politicians and the media to seek out the *Institution's voice* on ideologically controversial issues.

The issue is not Hoover's freedom of speech; it is Hoover's "speech" as *an institutional component of Stanford University* to which I object because, in my view, no *institutional component* of the University should take partisan political stands. If Hoover's defenders would keep that distinction between individuals and institutions in mind, they would not invoke the analogue with Franklin to discredit their critics.

And, quite clearly, discrediting me as a critic is the purpose of Mr. Harwood's letter. It is just the most recent in a series of what Prof. Grey describes as "hysterical diatribes" uttered for the purpose of discrediting those who have asked for an inquiry into Hoover's relationship with the rest of Stanford:

Peter Duignan's "This is the same gang that was against the Vietnam War, supported the partisans in Nicaragua and now the rebels in El Salvador" (*San Francisco Sunday Examiner and Chronicle*, May 8;

The same Senior Fellow's "It is interesting that Hoover's most outspoken critics (Drekmeier, Carnoy, Levin, Rebholz, Roth, etc.) also supported the Maoist group led by Franklin when he rampaged around the campus intimidating and threatening conservatives and carrying on partisan political warfare" (*Campus Report*, May 11); and

Senior Fellows Peter Duignan's, Lewis Gann's, and Milorad Drachkovitch's "The reasons for the current attacks on Hoover appear to be the same ones that motivated earlier attacks, that is, greed, envy, and political partisanship. Liberal-Left faculty and students are intolerant of views that run counter to theirs and are unwilling to allow conservative view (sic) to be espoused in any significant or dynamic way" (*Campus Report*, May 18).

Such are the "restraint and forbearance" for which Glenn Campbell praises his "internationally renowned scholarly staff" during a "lengthy and difficult period of unwarranted attacks" (*Palo Alto Weekly*, June 1).

It is ironic that such defenders of Hoover should charge that they are the object of a witch-hunt. For me, personally, the most ironic of these attempts to discredit the critics of Hoover through the rhetorical strategy of "guilt by association" was that of my colleague, Alphonse Juilland: "These are the people who 15 years ago tried to rewrite academic programs and requirements along political lines in the name of relevance, of reconstituting the University" (*Campus Report*, May 25).

Prof. Juilland must know that I fought hard to retain the language requirement, which he rightly held dear, and to restore it recently, and that I fought equally hard to retain the old Western Civilization program and to institute the current requirement in the study of Western Culture.

People who are not a gang of Maoists and who believe in rigorous education can also, with sound motives, question the propriety of the Hoover Institution's role in Stanford University.

Ronald A. Rebholz
Department of English

Harwood comments on liberal guilt, left-wing extremism

Reply to Professor Grey
By Edwin Harwood
National Fellow
Hoover Institution

In my June 1 *Campus Report* article, which argued that some faculty very probably signed the Hoover petition because of political bias, I claimed that it was patently ludicrous for faculty defenders of Bruce Franklin, a former professor discharged for incitement to violence, to claim that his conduct on campus in 1971 was the innocent expression of free speech. I argued that it was reasonable to assume that their support for him was motivated by political partisanship based on various statements they affirmed in their 1971 *Amicus Curiae* brief on his behalf.

There is other supporting evidence in that brief which I omitted to mention. On page five the signers express their sympathetic understanding for Franklin's "alleged" participation in the disruption of Henry Cabot Lodge's speech. Had Franklin been found to have behaved disruptively, his defenders assert, "the principles of Nuremberg apply as context and constitute profound mitigating legal and political precedents."

That the signers could see no distinction between a democratic society such as ours and Nazi Germany and, moreover, that they could imply that Ambassador Lodge belonged with other American leaders in the same class as Nazi war criminals *is* both patently ludicrous and a clear indication of their partisan sympathies for Franklin.

Let me explain. It was left-wing extremists who first promoted the idea that American involvement in Vietnam was comparable to the atrocities of the Nazi regime. Sadly, many liberals on campus came to accept this preposterous comparison. And they accepted other equally preposterous claims made by the exteme Left.

The intriguing question remains: why was balanced judgment thrown to the wind at Stanford and other universities during this period? How was it, for example, that well educated men and women, indeed, even professors of theology, could justify the terroristic violence of left-wing "liberators" operating both at home and abroad yet at the same time, and without noting the contradiction, fulminate against agents of law at home who would defend us from such violence as well as against foreign governments trying to protect themselves against left-wing terrorists? Why was *left-wing* murder and mayhem excused?

I offer this theory. It happened not because campus liberals necessarily shared the radicals' *ideology* root and branch. Rather, the radicals succeeded in inducing in them profound feelings of guilt about their own society.

The liberals' guilt over social injustice at home became the deep psychological pocket that the extremists of the Left were able to draw from. And if they didn't fall quickly into line, the radicals were adept at using psychological terror, achieved primarily by the imagery of violence (raised, clenched fists) but sometimes also by the real thing to enforce compliance. Thanks to the university community's psychological vulnerability, the new Unreason spread without opposition.

As reason fell victim to this onslaught, thanks to the failure of moral courage on campus, partisanship on behalf of Left extremists became legitimate.

Had the campus radicals of the late '60s to early '70s been antidemocrats of the Right rather than the Left, that psychological terrorizing would not have worked. To the contrary, right-wing terror would have galvanzied the campus community to expel and punish those coercively disrupting the university's functions. True, Franklin was eventually discharged but not without considerable agonizing and delay, and only after a climate of terror had not only taken hold on campus but threatened life as well as property.

And it's why, I contend, that such an *Amicus Curiae* brief as was written for a Left extremist like Franklin would never have been written for a (thankfully) hypothetical Nazi or Ku Klux Klan advocate on the faculty.

Nor is it plausible that a Nazi would have been referred to as an "effective teacher and able scholar." And do not forget: Franklin admired and advocated revolutionary *violence*. He described the bombing of the Senate Building in Washington as a "wonderful act." He called for a "people's war." I find nothing ambiguous about such language. And I believe that an English professor can be legitimately held accountable as one who should know the meaning of the words he is using.

Law Prof. Thomas Grey responded vigorously to my article. In his letter (*Campus Report*, June 8), he argues that there was nothing ludicrous at all in the position taken by Franklin's supporters.

Let me clarify my position. I argued that the position taken by his *faculty* supporters was patently ludicrous. I would never argue that it would be ludicrous for Franklin's own *attorney* or other supporters in the legal community to try to get the charges against him dismissed by claiming that he was merely exercising his right of free speech.

Attorneys are *obligated* to marshal any and all case precedents that will turn the tide of litigation in their favor, and to deftly hammer out a theory which, when fitted to the factual circumstances of the case, will vindicate their client. They can do this by astute reasoning from the accumulated case law, by emotional appeals to boards and juries, by conferences with the press in which they paint their client white and his accusers black and so forth. That's their job.

But this necessary partisanship of the advocate, who is a hired gun for his client, need not be adopted by the layman, and it certainly cannot be adopted by any judge or jury sitting on a case, whose duty it is to assess the legal reasoning of the *two* sides to a dispute, weigh the facts in dispute and finally arrive at a judgment in conformance with legal principle.

Most of Franklin's faculty defenders were barely conversant with the case law in the First Amendment area. Though the "freedom of speech" issue is raised in their *Amicus Curiae* brief, it is very spottily addressed from the standpoint of legal scholarship. Their "brief" is much more akin to a political polemic and it is one, moreover, that abounds in legal confusions. To cite just one, they state (p.7) that the Advisory Board "is asked to rule on charges concerning inchoate crimes—a category in which the lack of agreement on standards is notorious and in which such a Board is singularly unqualified to judge." What they say would be quite true if the Advisory Board had been sitting as a criminal court.

However, the Board never presumed to have the authority to pass judgment on whether Franklin's behavior was or was not in violation of the state's criminal code. And finding Franklin in violation of criminal statutes was never a legal prerequisite for passing judgment on his conduct as a university scholar and teacher in an administrative hearing. (This point was, indeed, conceded by the ACLU attorneys who drafted a genuine *Amicus Curiae* brief for Franklin, one whose legal reasoning on the First Amendment issue was both coherent and tied to case precedent even if debatable.)

If a university were not free to punish violations of unprofessional conduct on a faculty member's part through administrative proceedings without the individual first having been found in violation of some criminal statute, its ability to function effectively would be severely jeopardized. (This is one point on which Prof. Grey appears to agree with me. And it was a point on which he stated he (did) *not* see eye to eye with other signers of the faculty brief.)

But whether or not Franklin's faculty defenders clearly understood the First Amendment issue is beside the point. The important point is that they were under no moral obligation to come to Franklin's defense. To the contrary, as scholars concerned with academic freedom, they should have felt a strong moral obligation to defend their university and its reputation against the kind of attack a man like Franklin posed.

For Franklin's conduct—and one should examine the entire battery of testimony in this case—posed a clear threat to the most central values of a university, among them the values of tolerance for dissenting views and the expectation of civil behavior toward others holding differing views. It *was ludicrous*—and I won't mince my words here—that they should have viewed as "chilling" the university's efforts to punish and expel him when, to the contrary, it was his own behavior that was contributing to a chilling climate of terror on campus.

Prof. Grey argues that when Franklin told a crowd of students that the University Computation Center should be "shut down," a persuasive case could be made that his words were ambiguous between a call for "imminent unlawful trespass and a call for a lawful boycott or strike." In the context of other statements Franklin made, both on that and earlier occasions, any student would have been quite within his right senses to assume that Franklin meant the Center should be shut down with coercive violence. Reliable witnesses testified that Franklin called for a "people's war" against the "occupation army" on campus on that occasion.

On another occasion he advocated an "armed struggle" against the Board of Trustees and members of its class. On the night on which the Computer Center was damaged—and several students were injured—he had urged the students to do things that would bring more of the "occupation army" (police) to campus. What would bring more police on campus at night if not violence? He told the crowd that they should do whatever they wanted to do, and as late at night as

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Senate report

Faculty Senate discusses weapons-related research, calls for more study

**TO THE MEMBERS OF THE
ACADEMIC COUNCIL
FIFTEENTH SENATE REPORT NO. 14
Summary of actions taken
by the Senate
June 9, 1983**

At its meeting of June 9, 1983, the Senate took the following actions:

1. On the recommendation of the Committee on Academic Appraisal and Achievement, the Senate, by unanimous voice vote, conferred bachelor's degrees on candidates who had met the various requirements for those degrees.

2. On the recommendation of the Committee on Graduate Studies, the Senate, by unanimous voice vote, conferred advanced degrees on candidates who had met the various requirements for those degrees.

3. On the recommendation of the Committee on Committees, the Senate, by unanimous voice vote, approved a charge to the new *Ad Hoc* Committee on Senate Representation.

4. On the recommendation of the Committee on Undergraduate Studies, the Senate, by unanimous voice vote, approved the list of changes to courses certified for distribution requirements.

5. On the recommendation of the Committee on Academic Appraisal and Achievement, the Senate, by unanimous voice vote, approved the official transcript notation certifying foreign language proficiency.

6. The Senate approved, by unanimous voice vote, the following motion:

The Senate receives with thanks the report of the Committee on Research, including the minority report, and instructs the Steering Committee of the next Senate to consider the results of this debate and to expedite the work of the next Senate in discussion and action on the issues brought forth at this meeting, including the framing of a new charge on this matter to the Committee on Research for discussion in the next Senate.

**MINUTES OF THE FIFTEENTH SENATE
OF THE ACADEMIC COUNCIL
June 9, 1983**

(Draft subject to approval by the Senate)

A meeting of the Fifteenth Senate of the Academic Council was held on Thursday, June 9, 1983, beginning at 3:18 p.m. in Room 190 of the School of Law with A. L. Fetter, Chair, presiding. Present were 37 representatives, 7 *ex officio* members, and a number of invited guests.

Approval of Minutes

The minutes of the meeting held on May 26, 1983 (SenD#2537) were approved as submitted.

Conferral of Degrees

Under the Action Calendar, the Senate, by unanimous voice vote,

1. Conferred bachelor's degrees on candidates recommended by the Committee on Academic Appraisal and Achievement in the Preliminary List (SenD#2527) and a Supplementary List (SenD#2528). In the same action, the Senate authorized C-AAA to make last minute changes up to the time of Commencement.

2. Conferred advanced degrees on candidates recommended by the Committee on Graduate Studies in the Preliminary List (SenD#2529) and a Supplementary List (SenD#2530). In the same action, the Senate authorized C-GS to make last minute changes up to the time of Commencement.

Report of the Steering Committee

In the report of the Steering Committee, A.L. Fetter, Chair, called attention to the President's reception following the Senate meeting for the members of both the Fifteenth and Sixteenth Senates. He then thanked the new Academic Secretary for her work and for learning fast during an eventful year. At the conclusion of his remarks, W. H. Northway, Jr. sought recognition to present to Chairman Fetter the traditional inscribed gavel to mark his year as Senate chair.

The text of Professor Northway's remarks was as follows:

Mr. Chairman:

On behalf of the Steering Committee and the Fifteenth Senate of the Academic Council, I would like to take this opportunity to thank you, Sandy Fetter, for your leadership during this year. Your calm, good-humored approach to the discussion of divisive issues, your sensitivity to the feelings of others and your knowledge of the interactions of the university community have created an atmosphere in the Senate which promoted reasoned dialogue.

This gavel, the traditional symbol of your office, is a token of our appreciation and thanks for your guidance this year.

Report of the Committee on Committees

A. Mellor, Chair, began the final report of the Committee on Committees by announcing that J. Gere, a member of CoC XV, had agreed to chair the new CoC for the Sixteeenth Senate.

She then introduced the last item of business to be reported from CoC XV, the draft charge for the Senate—mandated *Ad Hoc* Committee on Senate Representation (SenD#2534). There was no discussion of the charge. Chairman Fetter pointed out that the new CoC is expected to nominate the members to this committee, who will work over the summer and report to the Sixteenth Senate by November on recommendations regarding reapportionment and by late January on any other recommendations.

The Senate vote to approve the charge was unanimous.

Report of the President

President Kennedy, after thanking the Senate chair and his Senate colleagues for the encouraging year, spoke briefly in clarification of his comments made two weeks ago at SLAC when he met there with faculty and staff about their concerns over the SSRL project proposal. Some question has arisen concerning his reported statement there that a department or other University unit has the capacity to make its own research policies more stringent than those followed by the rest of the University. In clarification, the President commented that a department or other unit might do so, provided that such policies do not present any conflict with the University's overall policy on research. He reported that his qualifications about the practicality of such a position and the overall sense of the subsequent discussion were, unfortunately, not relayed in the newspaper report of that meeting.

In the question period for President Kennedy, R. Mozely reported that he had checked on the decision—making structure at SLAC after that meeting with the President and discovered that the faculty does not have the right to control the research decisions made there. The faculty are consulted by the director but the control at SLAC comes from the director.

Report of the Provost

Provost Hastorf announced that Robert Street, professor of Civil Engineering, had been appointed Vice-Provost for Academic Computing and Information Systems. He will be responsible for overseeing all instructional and research computing related to academic needs, including the networking needed for such functions.

The Provost next commented on a letter recently sent out by a national AAUP official announcing insurance protection for faculty sued by colleagues over issues related to tenure, salary, dismissal, etc. He pointed out that Stanford indemnifies its faculty engaging in good faith activities on such professional matters. Most other major universities do the same.

Interim Report on Alternatives to TIAA-CREF

In the final portion of his report, Provost Hastorf commented that of a series of ten proposals made by a recent *ad hoc* committee dealing with faculty benefits, the first two were to be implemented before the fall of 1983. Retirement funding alternatives in the future will include not only the TIAA-CREF option, but also a choice of three or four other company options. These alternatives are expected to become available to faculty by September 1.

J. Thomas, Manager of Benefits and Records, reported that negotiations are now in the final stages with three mutual fund firms and one other insurance company. Final details in written form are expected to be completed by next week and the names of the firms involved will be announced at that time. By Labor Day, faculty can expect to receive information on the options available. All four companies are experienced in this type of investment. The alternatives promise to provide improved investment performance and greater flexibility in the options available. Furthermore, communication from these firms will be more frequent and more specific than it has been from TIAA-CREF, enabling the individual to track the investment more effectively.

The Provost added that during the coming summer other recommendations from the *ad hoc* benefits committee will also be addressed, broadening the options even further. That report can be expected by October. He reminded the Senate that these matters are complex and expensive to explore and this impedes the pace at which such recommendations can be implemented. He also pointed out that work is going forward simultaneously on health benefit plans, which are extremely volatile now, in the hope that affordable health benefit plans can be provided in the future. This is the next important priority for all of us.

Finally, he commented on participation rates in TIAA-CREF. For young faculty, they are not high; they go up markedly as ages and salaries rise. For age 35 and up, rates are nearly 90 percent; for 45 and up, they approach the high 90s to 100 percent.

R. Rebholz inquired about the *ad hoc* committee's recommendation that the University make its contribution to retirement funds whether the individual faculty member contributes to the fund or does not. The Provost expressed some concern about the financial impact of such a policy, but deferred his considered response until the October report. President Kennedy pointed out that since those dollars would come from the same poor from which the University would increase its contributions generally, this would mean in effect that those willing to make their own contributions would be subsidizing those who are not.

In a question harking back to the May 26th report by Dean Wessells on the mean age of tenured faculty in Humanities and Sciences, B. Roth questioned again the generalization that brain function declines steadily with age. He cited research on psychometric test scores reported last year in *Nature* showing little or no decline for individual subjects through the 70s and into the 80s.

There followed several comments on the known effects of age on scores for various sub-tests measuring intelligence, on the significance of individual scores as oppposed to mean scores, and on the existence of an authentic debate in the neuroanatomical literature about cell loss.

C-US Report on Distribution Requirement Courses

P. Seaver, Chair of C-US, presented the year-end report on additions and deletions to the list of courses which will satisfy the distribution requirements in 1983-84.

K. Arrow commented on the large net increase in the number of courses approved and the very few deletions. The lists should be monitored so that the numbers don't go up, or do so only with good justification.

C. Lougee pointed out that a large number of the additions represent those courses approved for the Overseas Studies Program for 1983-84. These replace a similar number of courses for 1982-83 and thus are not truly additive. She also noted as a friendly amendment that under *Deletions* on the Addendum to SenD#2533, page 1, second line from the bottom, the words "or 106" should not be there. Computer Science 105 will no longer be taught, it is true, but the combination of Computer Science 101 and 106 will remain approved for the Area VIII distribution requirement in 1983-84.

There was further discussion about the status of the few deleted courses, all of which were withdrawn by departments because they were not to be taught in the immediate future. President Kennedy reiterated his concern that the list of courses had been too large and indiscriminate to begin with, and it continues to get larger. In his view, departments need to do some critical pruning so that the list can provide the students with intelligent guidance for fulfilling distribution requirements.

Registrar Mahoney commented that the longer the list, the

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harder it becomes to monitor students' completion of the requirement. She also pointed out that these particular additions appear to have been made in areas where additions were needed: small population courses and non-Western Culture courses.

Vice-Provost Katchadourian pointed out that great pressure is exerted on C-US by departments and faculty to get courses approved. He expressed his belief that an arbitrary quota system is the only way to control the growth of the list. This would force departments to make critical choices internally. Perhaps the Senate should instruct C-US to explore the possibility of setting a ceiling on the number of courses proposed by a given department.

Chairman Fetter suggested that this would be an appropriate matter to consider when the C-US Annual Report comes before the Sixteenth Senate next fall. The Steering Committee might want to consider that possibility.

L. Ryan pointed out that cutting back would eliminate larger numbers of small enrollment courses and leave more students without that option. He also reminded the Senate that the demand for distribution requirement courses can put tremendous pressures on small departments with few graduate students.

When put to a vote, the C-US report on additions and deletions to courses certified for distribution requirements next year passed unanimously.

C-AAA Report on Transcript Notation Certifying Foreign Language Proficiency

S. Matisoff, Chair of C-AAA, presented the report on the transcript notation which the C-AAA recommended to certify foreign language proficiency. She called attention to the history of the proposal's development and indicated that C-AAA had unanimously found the level of competency, methods of testing, and notation for certifying proficiency all appropriate for the purpose earlier endorsed by the Senate.

K. Arrow commented on the lack of parallelism in the procedures specified for determining proficiency in the different languages. M. McCall reported that they had been devised independently for each language and were not intended to be parallel, but that they had been generally accepted as being roughly parallel in the level of competence tested. T. Pearkes pointed out by analogy that honors programs are similarly independenly determined by departments.

There being no further discussion, the vote was taken and the report was unanimously approved.

Preliminary Report on Weapons-related Research at Stanford

Vice-Provost G. Lieberman opened the presentation of the report from the Committee on Research in the absence of the committee's Chair, J. Meindl, who had been detained by a flight delay. He first pointed out that the report addressed two basic issues: 1) the Senate's request that C-Res study weapons-related research at Stanford, and 2) the SLAC community's concern about the impact of the proposed SSRL project on their freedom of choice. He proposed to present the two issues separately.

He reported that the committee had a lot of trouble with the Senate resolution because it found itself unable to define "weapons-related research" in any reasonable manner. The committee concluded that all research done at Stanford could conveivably have some military application.

Trying to respond to the Senate's request, however, the committee did review trends in the volume of research over the past 10 years, indicating dollar amounts by sponsors and also the calculated percentages of the total. A second study of the character of research was performed by a sub-group of the committee, which chose to examine 12 sponsored studies by title and sponsor. The sponsors for the 12 were DOD(8), NASA(2), and DOE(2). All the projects were found to be of high scientific quality; each could have potential defense applications but all offered a wide variety of non-military uses.

At this point, the presentation of the report was interrupted so that discussion could be opened on the part of the C-Res report responsive to the first issue, the Senate resolution asking C-Res to study the character and volume of weapons-related research at Stanford. (The minority report, it was pointed out, was not relevant to this issue.)

This first portion of the report was challenged as begging the question by not considering degrees of relatedness to weapons applications, as being labeled "preliminary" but indicating that no further action is planned, and as not addressing issues or reporting procedures to be followed as the resolution specifically instructed should be done.

B. Roth listed a number of issues which should be of institutional concern, among them departmental pockets of dependence on a single sponsor, problems of local expansion based on temporary funding which leaves a permanent residue, and the influence on student career patterns. There are many such questions which should be looked at.

He urged that the committee do what he had originally hoped they would do: give a preliminary report laying out the questions they would address, solicit advice from the Senate about the appropriateness of that range of issues, then indicate their proposed tactics for studying the problem—all of this before coming back with a final report of the findings.

G. Lieberman commented that many of the issues mentioned were interesting and might be worthy of study, but tying them to the question of weapons-related research in some unspecified sense seems inappropriate.

There was some further discussion about various degrees of research relatedness to weapons applications, with Vice-Provost Lieberman concluding that non-sponsored research was presumably not so related but that the sponsored research done at Stanford (all open research) would fall from 0-9 on a scale of 10 indicating relationship to weapons applications.

R. Mozley pointed out that SLAC physicists distinguish weapons research by the declared purpose of the proponent. If the purpose documented in the proposal is weapons research, the project is weapons research. The description of the project by the funding agency can also help to make the purpose of the project clear. For example, the SSRL proposal comes from a group at Livermore Laboratory titled *39GB Weapons Activities Research and Development.* Half of its $5 million will come from Livermore weapons research funds. Its original proponent describes it as " . . . the development and application of new diagnostics in nuclear testing. . . . " SLAC faculty have no difficulty accepting that this is weapons work. He concluded by supporting Roth's view that this portion of the C-Res report is not acceptable.

L. Rosenberg expressed the belief that the committee had misinterpreted the Senate's intent. It was not expected that weapons-related research would have no other application at all. The point was to use obvious and reasonable criteria (like sponsor, declared intent, etc.) to judge relatedness to weapons applications. There's no reason why the committee could not have responded to this request.

L. Moses pointed out that the language of the Senate resolution and the language of the C-Res report appear to be in conflict. That is, the Senate resolution seems to suggest that there may be grounds to study the matter, even the possibility that policy may need to be changed. The C-Res report seems to imply that if research projects meet the current requirements of the University's research policy, there are no grounds to study the matter. Moses also was inclined to agree that the committee had refused to take the problem.

R. Redfield expressed the view that the committee had trouble understanding what the Senate wanted; that it had tried to provide a helpful response and that it was willing to accept a clarification and try again.

President Kennedy agreed that the question was not put well in the resolution and the committee was asked to respond on short notice to a rather vague charge. He expressed the hope that the proponents of the resolution might refine the question further as had been done to some extent in this meeting (e.g., adding declared intent as a part of the defining mechanism). We ought to make it a first order of business in the next Senate to put the question better and to get the committee to look at it in the way that we instruct.

R. Rebholz disagreed with the claim that the question needs to be refined. For example, declaration of intent of proponent and sponsor seem too obvious criteria to need specification as defining mechanisms. The Senate was simply seeking information as a basis for further action or no further action.

G. Lieberman pointed out that if you take declared intent of sponsor as an automatic defining criterion, you find yourself in the dilemma of judging SLAC itself to be engaged in weapons-related research when the faculty there won't accept that view. Yet unless there is some simple criterion, classifying the 1,400 sponsored projects here is a very difficult, if not impossible, task.

W. Northway argued against sending the resolution back to the committee. It would make more sense, he felt, if the proponents of judging end-use as a criterion for accepting research projects would address that subject directly, i.e., would draft and defend such a proposal for the Senate's consideration. This would meet the issue squarely.

R. Mozley responded that unofficial groups have difficulty getting the information needed. Much of the data is not available. He objected strongly to the attempt to close the issue prematurely.

Northway insisted that the real issue is a desire to change the University's end-use research policy, and that more information won't help in writing a proposal that the policy be changed.

V. Fuchs asked how far one should be prepared to go in protesting the right of colleagues to do the research they wish to do, sponsored or not. An open, scholarly community has to be honored and protected as the most valuable aspect of the University.

J. Adams commented that there were several issues involved, all knotty ones, e.g., economic exposure, involuntary compliance, end-use. If the committee is asked to look at those issues, the Senate must send very specific directions, and legislative histories if available, to the committee.

S. Dornbusch expressed the view that end-use is a very weak criterion. Much basic research is sponsored by mission-oriented funding agencies, so judging end-use by sponsor is often misleading. Even so, there are varying degrees of closeness to military end-use. We do have the problem that research now is often carried out by interdependent research teams. He expressed the belief that the committee responded as best they could to the Senate's vagueness. The Senate should postpone discussion until the next Steering Committee can deal with the problem of sharpening the question and assisting the Senate to deal with it more effectively.

At this point, J. Meindl, Chair of C-Res, arrived from the airport and was briefed by G. Lieberman on the progress made in presenting and discussing the C-Res report so far. Meindl then focused on presenting the second portion of the report, dealing with SLAC faculty and staff concerns about involuntary contributions to weapons-related research. The majority of the committee members felt that these concerns arose because the individuals focused on one possible end-use of the project rather than on the basic research to be done. The SLAC researchers were responding to a proposal 85 percent of which dealt with basic applications of radiation to other fields of science (biology, astrophysics, chemistry, etc.) and 15 percent dealt with calibrating radiation detectors. These detectors can be used for a variety of purposes, e.g., to measure X-rays from an atomic weapons experiment, or to measure the rearrangement of atoms on the surface of a solid in understanding a basic chemical reaction in a bomb. The detector, like any calibration tool, can be used to further many very different purposes.

The committee rcognized the concern of the SLAC researchers and the issue they raised. The majority of the committee attributed the sense of conflict to a focus on possible detector end-use. This, however, wasn't a completely satisfying resolution of this consideration, even for the committee majority. Certainly it was not for the committee as a whole; obviously, it occasioned the minority report.

At the close of Meindl's presentation, Chairman Fetter deferred questions so that the Senate might first hear the minority report from C-Res, presented by Prof. E. Garwin of SLAC.

The minority report expressed the view that the committee focused almost exclusively on the undesirability of imposing end-use selection criteria on research, and did not adequately consider the issues of individual freedom and involuntary servitude raised by some of the SLAC faculty. It pointed out that 12 years ago when the Statement of Principles Concerning Research was adopted by the Senate, the trend toward collective research was not so evident as it is now.

Garwin reminded the Senate that the 1971 statement affirms the individual scholar's freedom to select the subject matter of his research. The stipulation against depending on end-use criteria applies to decisions made by the University as a body, as a collective. Indeed, that stipulation is followed explicitly in the 1971 statement by the following paragraph:

The above principles circumscribe the University's role with respect to University-connected research. They in no way diminish, and indeed **they reinforce, the individual researchers' personal responsibility to assure *that the* sources of funding *for his research,* and its perceived applications, are consistent with his own judgement and conscience *(emphasis Garwin's).***

The SLAC faculty feel that their freedom to follow those guidelines is being abrogated, not reinforced. Noncompliance implies failure to perform academic duties.

The dilemma has arisen from the particular situations associated with plural or collective research. It raises questions not adequately covered by the current research policy statement, questions which will become more common in the future given current trends toward collaborative research. He closed with a statement urging the Committee on Research to make a searching evaluation of these issues and trends in the coming academic year.

Asked why researchers at SLAC can't except themselves from a given project easily, Garwin cited the dilemma of one key researcher with a twenty-year involvement in one aspect of the research. His contribution is unique and there is no in-depth staffing for that work. His refusal to contribute to the PRT project would mean a failure to improve the effectiveness of the laboratory facility for all other projects as well. He would have to be replaced.

M. Bratman said that he found the minority report persuasive in pointing out that present policy clearly indicates two levels of treatment with respect to the end-use criterion: the University enjoined from using it for the allocation of scarce resources and the individual allowed, even encouraged, to consider it in making individual decisions. This creates a

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real problem that deserves attention.

R. Mozley pointed out that SLAC was just beginning its work when the 1971 policy was formulated, and that the problems caused by intermingling the work of two large laboratories are not adequately treated under that 12-year-old policy. The question needs more study. He reiterated that the present policy makes no provisions for protecting the rights of faculty, staff, and graduate students in a unit doing collective research. He made it clear that the several SLAC representatives at the meeting were not the only ones concerned; the majority of the SLAC faculty consider this a serious problem not adequately addressed by the present policy.

There was some discussion about the difference between directly contributing to weapons-research as opposed to contributing to basic research in a field used by others for weapons applications. It is the direct involvement which is being protested by those at SLAC.

J. Roughgarden summarized his conclusions from the debate: that the degree to which a project is related to weapons research is an operational concept, and that there do not appear to be too many projects at SLAC narrowly focused on weapons research. He is very persuaded that there is a new development since the 1971 guidelines—a new question of the rights of the individual *vs.* the rights of small groups and of the institution as a whole. He spoke in support of further study, focused on the nature of collaborative research, which creates in effect a third level between the individual and the institution. That problem is not addressed by the current policy.

S. Dornbusch then proposed a motion that the Senate receive with thanks the report of the Committee on Research, and instruct the Steering Committee of the next Senate to go over the results of this debate and assist the next Senate in possible discussion and action on the issues brought forth at this meeting. There were several seconds to the motion.

K. Melmon remarked that the only persuasive evidence of involuntary servitude is that of the developing scientist who naively gets caught up in a protect and committed to it without fully understanding the implications of his or her early choice. It should be the Senate's aim to project the rights of such individuals. Full professors have a choice; the person in the process of developing a scientific background, once having made a commitment to an institution, does not have the same freedom.

President Kennedy suggested that faculty freedom of choice in a federally-funded contract laboratory might be somewhat more limited than in other environments. He also suggested a friendly modification to the eagerly-seconded Dornbusch motion—that the Steering Committee be asked to draft a resolution to bring to the Senate for discussion at an early meeting in the fall.

S. Dornbusch accepted the modification as in the spirit of the motion's intent.

L. Rosenberg asked if the motion included the minority report. Dornbusch responded that it did include the entire report, including the minority statement.

The question was called by unanimous vote.

The motion in final form read as follows:

The Senate receives with thanks the report of the Committee on Reseach, including the minority report, and instructs the Steering Committee of the next Senate to consider the results of this debate and to expedite the work of the next Senate in discussion and action on the issues brought forth at this meeting, including the framing of a new charge to the Committee on Research for discussion in the next Senate.

Put to a vote, the motion passed unanimously.

There being no unfinished business and no new business, Chairman Fetter pronounced the Fifteenth Senate adjourned *sine die*.

Clara N. Bush
Academic Secretary

Weapons-related research; a student letter, minority report

The following letter was sent to President Donald Kennedy June 8 by Loren Rusk, graduate student in English.

I am writing to express my concern about the possibility of weapons research at SSRL. A Ph.D. candidate in the English Department, I care about the ideals and acts of this institution, as I am certain you do. I hope to do the University credit in the future, but that prospect is endangered by the proposed research, which would make me ashamed of the institution I come from.

You have said that end-use restrictions which may seem benign now could prove oppressive in the future. You must see that this is a special case. First, because the humanistic ethics you speak from signify nothing if they do not serve humanity, that being their *raison d'etre*. Second, because ethics assume that we have a future.

Nuclear war would put an end to consequences. Never in history have weapons been stockpiled on a large scale without being used. To allow weapons research at Stanford is clearly to participate in building the bombs.

Please re-examine your conscience and truly represent the community that you head. Fundraising, as I see it, comprises only part of your job, which is representation. In this case the money comes at too high a risk. I don't know how to stop nuclear war from happening, but I am sure than no neutral move is available to you. You can either add to the danger of annihilation, or you can join those of us who believe that the least we must do is not allow it to begin in our own back yard.

Minority Report of the Committee on Research presented to the Senate of the Academic Council on June 9, 1983, by Edward L. Garwin and supported by Sumner M. Kalman

Prof. Meindl has reported that the Committee on Research adopted by a vote of 7 to 2 a resolution stating that the Stanford Statement of Principles Concerning Research adopted by the Senate in December 1971, is adequate to handle the current SSRL-SLAC controversy concerning the "PRT proposal."

The minority view is that the committee focused almost exclusively on the undesirability of imposing end-use selection criteria on research, and did not strike an adequate balance in considering the issues of individual academic freedom and involuntary servitude raised by some of the SLAC faculty.

When the Statement of Principles Concerning Research (reproduced below with emphasis mine) was adopted 12 years ago, the trend toward collective faculty research was not so evident as it now is.

A. Statement of Principles Concerning Research

The following "Statement of Principles Concerning Research" was adopted by the Senate of the Academic Council on December 16, 1971:

The transmission of knowledge and conduct of scholarly inquiry are central and complementary functions of the University. They can be carried out effectively *only if scholars are guaranteed certain freedoms and accept corresponding responsibilities.* The Senate of the Academic Council of Stanford University hereby affirms the following principles concerning research:

The individual scholar should be free to select the subject matter of his research, to seek support from any source for his work, and to form his own findings and conclusions. These findings and conclusions should be available for scrutiny and criticism as required by the University's "Policy Guidelines on Secrecy in Research."

Research techniques should not violate established professional ethics pertaining to the health, safety, privacy, and other personal rights of human beings or to the infliction of injury or pain on animals.

The University should foster an environment conducive to research. Where, because of limited resources, *the University* cannot support all research demands, it *should allocate space, facilities, funds, and other resources for research programs based on the scholarly and educational merits of the proposed research, and not on speculations concerning the political or moral impropriety of the uses which might be made of its results.*

The above principles circumscribe the University's role with respect to University-connected research. They in no way diminish, and indeed *they reinforce, the individual researcher's personal responsibility to assure* that the *sources of funding* for his research, *and its perceived applications, are consistent with his own judgment and conscience.*

It is the view of a number of the SLAC faculty that their responsibility to assure that the sources of funding for their research and that its perceived applications be consistent with their individual judgments and consciences far from being reinforced (as in the last paragraph of the "Statement of Principles. . . ") has instead been abrogated.

The apparent remedy to what these faculty regard as "involuntary servitude" to a program expressly related to weapons research is to refuse to provide their services to aspects of SLAC which serve SSRL. Not only does this modify their freedom to select the subject matter of their research (in one case a 20-year-long interest), but might be construed as non-performance of academic duty, with possible disciplinary consequences.

This dilemma stems from the particular situations associated with plural research. For example, to what extent does a direct decision made not by a vote of the concerned faculty, but by the laboratory director (or principal investigator), bind individual faculty members?

If a researcher finds certain research personally repugnant, does he or she have an explicit right to refuse involvement, or does such action depend on the pressing requirements of the project, the good will of the director, or the interpretation of a policy written without deep consideration or understanding of the circumstances of plural research? How is "academic duty" defined for a faculty member engaged in cooperative research with other faculty in a laboratory or a large project under a Principal Investigator?

The discussion above indicates why Prof. Kalman and I believe that the current Statement of Principles Concerning Research is not adequate to handle the SLAC-SSRL controversy, and that the inadequacies of the Statement will become increasingly apparent with present research trends. We hope that the Committee on Research will make a searching evaluation of these issues and trends in the coming academic year.

Personnel update

Staff training on choices, changes

Staff Development will present two all-day pilot training sessions on "Choices and Changes: How to Improve Your Life" on Thursday and Friday, July 7 and 8.

Every day each person makes choices that affect their lives—some are positive, others negative.

The purpose of the new program is to help participants identify ways they may be limiting their effectiveness and make positive changes in their lives, both personally and professionally.

The course is especially useful for those who live and work in an environment where change is a constant consideration and who need the ability to make effective daily choices.

The pilot course will require a lot of participation. Not only will staff members leave with an action plan concerning a change they want to make, they will also be asked for feedback.

The two sessions, which will meet from 8:30 a.m. to 4:30 p.m., are limited to 20 participants each day. For enrollment call Bea Tracy at Staff Development, 497-0657.

Follow-up session on supervision set

A follow-up session for graduates of Staff Development courses in Fundamentals of Supervision and Supervisory Problem-Solving has been scheduled for 9 a.m. to noon Wednesday, July 6, in Room 204 CERAS Building.

Discussion will focus on what skills are working for participants and how to communicate with confidence. The leader will be David Wick, the new facilitator of the Fundamentals of Supervision course.

The follow-up sessions will be held about every two months on different subjects. Participants can expect to share their assessments of what was learned in the courses, to discuss what has worked and what has not, to exchange ideas about current supervisory concerns, and to learn new supervisory skills.

For information, call Staff Development, ext. 7-0659.

Foreign language proficiency to be shown on transcript

Future student transcripts at Stanford will note proficiency in foreign languages, the Faculty Senate decided unanimously June 9.

With minimum discussion, the Senate approved recommendations detailing how students could earn this notation.

To demonstrate proficiency in a foreign language, undergraduates should show achievement "roughly equivalent to knowledge an excellent student can be expected to demonstrate late in the third quarter of the third year of study."

The transcript notation was suggested as an incentive to encourage student study of language beyond the level of the requirement adopted by the Senate two years ago.

The procedures were developed by Prof. Carolyn Lougee, associate dean for undergraduate programs in the School of Humanities and Sciences, and representatives of several language departments. They were recommended to the Senate by the Committee on Academic Appraisal and Achievement.

The languages in which students may earn an official notation of proficiency include Chinese, Japanese, French, German, Greek, Latin, Hebrew, Italian, Russian, and Spanish.

Ph.D.orals

TUESDAY, JUNE 21

Fred E. Stanke, electrical engineering, "The Theory of Propagation of Elastic Waves in Polycrystalline Materials for Use in Nondestructive Evaluation," 3 p.m., Appled Physics 200.

THURSDAY JUNE 23

Carlos H. Muravchik, electrical engineering, "Identification of Moving Average Systems Using Feedback Ladder Algorithms," 10 a.m., Durand Bldg., Room 450.



Seven Days in the Life of the World were examined by (l to r) first row: Xioli Qin and Ying-huang Zhu, master's degree students in communication from the People's Republic of China; second row: junior Julie Jacobs, independent major; sophomore Ann Locke, economics and communication; master's degree student Barb Barbara Kelley; third row: master's degree student Jay Framson; Prof. Marian Lewenstein; Karen Dachey, master's degree student from England; professional journalism fellow Mola Olaniyan from Nigeria; back row: Daryn Kagan, sophomore in communication; Bryce McIntyre, doctoral student in communication; and John Hochheimer, doctoral student in communication.

Students, professionals view a week in the world's news

Mixing backgrounds on research projects is nothing new at Stanford University, but a recent media project in the Department of Communication went all the way: it mixed undergraduate with master candidates and doctoral students; it mixed American citizens with foreigners; and it mixed students with media professionals.

The project, "Seven Days in the Life of the World," was sponsored by the Associated Press Managing Editors Association. Prof. Marion Lewenstein, from the Department of Communication, and Robert Cochnar, deputy executive editor of the *San Jose Mercury News*, led the six-month long project which analyzed what "news" happened in the world during the week of Feb. 27 through March 5, and how American newspapers reported that news.

Among this week's news highlights: The Queen of England visited the U.S.; there were elections in Australia and West Germany; the Pope visited in South America; there were disturbances in Zimbabwe and India; and a ferry boat overturned in China, killing some 300 people.

Thirteen people pored over 25 wire and syndicate services that provided news from 225 foreign sources and compared how many of those stories were used in 32 newspapers from across the U.S. In addition, about 25 foreign newspapers were analyzed to see what news they carried that was not sent to the U.S. Over 6,000 stories were analyzed.

Some early findings: government and other media are the most frequently quoted sources in foreign news; American newspapers like to run human interest stories or accounts of terrorism and dissidence in other countries.

Swimming lessons to start Monday

Swimming lessons will be offered in two-week sessions at de Guerre Pools this summer, beginning Monday, June 20.

The program includes eight half-hour lessons Monday through Thursday during each session for anyone over the age of five years, beginners through advanced swimmers.

The cost is $35 per person for each of the four sessions. Full information is available at the guard office at de Guerre Pools or may be obtained from Skip Kenney, men's varsity swimming coach, at ext. 7-4416.

Summer recreation facility schedule

Encina Lockers and Showers: M-F, 7:30 a.m.-9 p.m.; Sat-Sun, 9 a.m.-6 p.m.

Roble Lockers and Showers, Weight Training Facilities: M-Th, 8 a.m.-10 p.m.; F 8 a.m.-7 p.m.; Sat-Sun, noon-5:30 p.m.

Angell Field: Open daily during daylight hours (inner field reserved, call 497-0505).

Taylor Field and IM Fields: Reserved only, call 497-0505.

Olympic Gamefield (starts at Angell Field) and **Perrier Parcourse** (starts near Roble Dorm): Open daily during daylight hours (complete body exercise).

Maples Pavilion: Closed.

Roble Pool (show ID and summer swim cards): M-F, noon-1 p.m. faculty-staff only; M and W, 2-6 p.m.; T and Th 3-6 p.m.; F, 1-6 p.m.; Sat-Sun: noon-5 p.m. Caps required. No children allowed (497-3277).

DeGuerre Pools (show ID and summer swim cards): M-F, noon-2 p.m. faculty, staff, student lap swim; 2-4:30 p.m. swim card holders; 4:30-6 p.m. lap swim only; Sat-Sun, noon-6 p.m. swim card holders (497-2210).

DeGuerre Courts (show ID): (Handball, racquetball, squash) Phone Reservations only 497-1588. Courts: M-Sat: 11 a.m.-7:15 p.m. Closed Sundays. May be closed periodically for maintenance.

Tennis Courts (show ID): Sign-up sheets for the next day's play are posted on each court bulletin board at the following times: Encina Courts, 8:30 a.m.; Roble Courts, 8:30 a.m.; Varsity Courts, 5:10 p.m. (Roble Courts are reserved M-F noon-1 p.m. for faculty-staff only.)

Encina Weight Room (show ID): M-F, 10 a.m.-2 p.m. and 4-8 p.m.; Sat-Sun, noon 5 p.m. (497-9993).

Encina Volleyball Courts: Daylight hours.

Roble Field: Check schedule at Roble Office (497-4895).

Roble Gym Floor (show ID): Recreational basketball only: MWF, 1-3 p.m.; TTh, 12-3 p.m.; recreational badminton only: F, 4:30-7 p.m. Open recreation: MW, 3-7 and 9-10 p.m.; TTh, 3-6 p.m. and 8-10 p.m.; F, 8 a.m.-noon and 3-4:30 p.m.; Sat, 2-5:30 p.m.; Sun, noon-5:30 p.m.

Roble activities rooms, #33 and #42 (show ID): Check schedule at Roble Office (497-4895).

Golf Course (show ID): Golfers must obtain starting times in person at the Pro Shop. For information, call 497-4334. T-F, First available starting times; Sat-Sun-Holidays, first available starting times after 11 a.m. Closed Mondays.

Golf Course Driving Range: M-F, 8:30 a.m. to one hour before dark; Sat-Sun-Holidays, 7 a.m. to one hour before dark.

Harwood responds to Grey's letter. . .

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possible. That's hardly the time for a peaceful boycott.

A man who maliciously yells "fire" in a crowded theater is not protected by the First Amendment just because he omitted to specifically instruct the audience on how they should trample one another to death. Most revolutionaries have enough low cunning to avoid giving the kinds of specific instructions to commit violence and mayhem that would ease the prosecutor's proof burden in a criminal court.

No legal machinery, even in a democracy like our own, can achieve perfect justice or guarantee a correct verdict every time. Verdicts that simple moral decency and common sense would dictate don't always get the nod from the bench. The fact is that the legal technicians, the client's partisan advocates, do on occasion win cases they ought not to just as, I'm sure, they must on occasion lose some that they should have won. In a democratic society we are obligated to live with the result. But we are under no obligation to conclude that a victory won for a client vindicates the claims of legal principle made by himself or his advocates.

In Franklin's administrative hearing, Franklin might conceivably have won on some technicality or other. That he didn't win is Stanford's good luck. But even if he had won, it would not necessarily have been a victory for "academic freedom" or "free speech" on campus. To the contrary, from all that we know about the climate of terror that Franklin helped to instigate, it could very well have been a grave tragedy. And, instead of just injuries and property damage, homicide might have followed in their train.

A final note. I wasn't in the least annoyed by the intemperate way in which Prof. Grey responded to my article. I was, however, much piqued by what he said in his closing paragraph.

He suggests that Stanford might be just as well off without Hoover as it probably is without Franklin. If Prof. Grey meant to imply that the conduct of myself and other Hoover Fellows is in any way comparable to Bruce Franklin's, then I want to register my profound disgust and dismay at a comparison that is not only patently ludicrous but highly offensive as well.

Edwin Harwood
National Fellow
Hoover Institution

Staff employment opportunities

Exempt

29569-DS (JCC:2028) ADMIN SERVICES MGR I: Fixed term, 1yr appmt to assist the Telecommunications Mgr in all phases of $7 million/yr budget; preparation of yearly budget & budget revisions; monitoring review & revision of charge-out rate for service ctr; conducts analysis of telecommunications rates; provides support to dept data processing apps; in-house EDP projects in areas of billing & svc order processing; financial analysis using Apple II w/Visicalc; hardware, software, system operation, database mgmt & documentation support for Dept's dataprocecessing systems. QUALIFICATIONS: Know & skills consistent w/BS or BA in business; 3+ yrs exp in financial analysis & budget preparation; know in dataprocessing area including programming exp w/Visicalc or other spreadsheet application; prefer knowledge of Datapoint systems; C06; $1854-2312.

39359-VW (JCC:2048) ADMIN SERVICES MGR IV: Respon in clincal dept; budget prep, forecasting & expenditure control for all budgetary matters; establish of dept guidelines for all personnel policies & procedures; coord of dept clinical activities relating to patient care; establish & appl of approp policies & procedures relating to grants & contracts; forecasting of dept's activities relating to faculty, staff, space allocation thereof; recommedation &/or establishment of an approp computer system; complete respon & authority in dealing w/ div chiefs; QUALIFICATIONS: strong background in acct & financial mgmt; wrkg knowl of computer systems; MBA or equivl; educ or exp of delivery of health care & principles of operating clinical prof services bus; demon bus intelligence & maturity; capability of relating well w/people of all level; good communication skills.; C09; $2972-3642.

31928-VW (JCC:3150) DEVELOPMENT OFFICER III: The Assoc Area Dir reports to & is respon for working w/the Dir for the assigned region; Geographic configuation & staff area assignments are subject to modification; the position covers a full range of activities related to donor relation & direct contact w/ volunteers, donors, & prospective donors; QUALIFICATIONS: inititative to pursure a task on the basis of genl instruction; knowl of the technical aspects of gift procurement, volunteers & Major Gifts prospects & the ability to communicate effectively w/them; possess good judgment in matters pertaining to individuals & the ability to work w/highly sensitive info; familiarity w/Stanford & the Devel Office is preferred; ability & willingness to travel & work weekends & evenings is required; knowl of the purposes of undergrad and grad educ & resrh are essential; arithmatical & statistical skills useful; background in devel work preferred;; C08; $2464-3139.

41670-AW (JCC:4076/4084) Programmer/Analyst II/III: Sun-Thur, 1-10pm; develop, code, test, integrate, & maintain RLIN production networks; perform program development projs to enhance, expand, or improve the tech performance of production services; act as a first level consultant for procedures & sys of RLIN production to other RLG staff; monitor & report regularly & on an exception basis to mgmt on the status of the production functions, etc; P/A II should have approx 2 yrs of exp w/ production serv of complex sys while P/A III, 3-5 yrs of exp; QUALIFICATIONS: working knowl of IBM (or IBM-compatible) hardware & software; knowl of IBM/OS/VS JCL & utility programs & exp in automation of production control functions; familiarity w/ high-speed impact & xerographic printing technologies; good written & oral commu skills; exp w/ WYLBUR or equiv as an EXEC file/job entry sys; knowl of high-level structured programming lang; demonstrated ability to learn new sys.; C06/C07; $1854-2733/2113-3344.

42630-LL (JCC:5588) LIFE SCI RES ASST I: Participate in electrophysiological/anato mical studies of central nervous system; construction & use of micro and ion-selective electrodes, in vitro tissue chamber, recording & stimulating instrumentation, histological procedures data analysis & photography; will be expected to help develop or modify experiments based on literature review & an understanding of the nature of the res; will be performing statistical & data analysis and will participate in the write-up of the results for publication; QUALIFICATIONS: BS degree or equiv; relevant lab exp; ability to function independently in the lab; some know of electronic instrumentation & histological methods desirable; C05; $1670-2086.

22831-DS (JCC:7384) FOOD SERVICE SUPVR I: Supv & schedule full time & student employees in various work duties in food prep, serving & sanitation; keep records of food & eqpt inventories, wkly & monthly food cost reports, etc; assume full respon in absence of Unit Mgr; assists Mgr in scheduling & training of employees; assists in purchasing of designated food items & supplies; prep monthly food costs & other acctg reports as requested; QUALIFICATIONS: bachelor of Sci Degree in Institutional Mgmt or Dietetics; knowl in basic food production, employee training & sanitation principles.; C05; $1670-2086.

30790-JB (JCC:7526) FACIL ENGR I: Fixed term for 1 yr; prov professional staff support for planning, design & construction of various utility sys; required to perform extensive field surveys & to engineer & design new utility lines; prov analytical support for utility design & planning & develops feasibility & site analyses; prep master plans for utility sys & recommends future upgrades; creates campus wide monument & bench mark sys; respon for the maintenance of the computerized, cross-referenced, document index sys; QUALIFICATIONS: requires degree in civil engrg or min 5 yrs exp in engrg & serveying of various Utility Sys; working knowl & exp in underground utilities installation required; written & oral commu skills essential; knowl of computer sys & engrg economy nec.; C06; $1854-2312.

31942-VW (JCC:3154) DIR OF ANNUAL FUND PRO-: The Dir of the Annual Fund Program is responsible for the mgmt, development, coord & review of all annual giving programs which comprise an $11,000,000 operation w/a budget in excess of $1,000,000; works w/volunteers, Univ officers, trustees & staff; mgmt resp include design, implementation & monitoring of the annual fund program marketing plans; suprv/performance evaluations of program directors; budget forecasting; provide advice to Dir of Individual Gifts; QUALIFICATIONS: Superior analytical & planning skills, as well as admin & leadership strengths; excellent understanding of mail, phone, & personal solicitation techs; effective verbal & writing skills; minimum 5 yrs direct fundraising exp in development, preferably on behalf of an educational institution; C10; $ 3494-4255.

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Nonexempt

32631-PM (JCC:2454) OFFICE ASST II: Data Control Clerk performs the data control function required for posting of charges, adjmts, cash & patient master record info; obtains daily, monthly & special rprts fr Data Processing Operation Dept; logs rprts, receipts & verifies distribution requirements; coord pickup & delivery schedules w/ initiating depts; reconciles daily output control procedures; prep required rprts for Data Control Supvr; QUALIFICATIONS: high school diploma or equiv work exp; physically able to transport computer rprts to various depts in a timely manner; daily access to a personal vehicle required; familiarity w/ bookkeeping & patient billing operations beneficial; typing ability helpful; contact: Marianne Simkins, 525 Univ Ave., Suite 400.; B09; $1130-1189.

21623-BP (JCC:2462) OFFICE ASST III: 75%; sec & clerical support for lang schools in Tokyo & Taipei; duties include processing student applications, awards, visas, health insurance, invoicing, record keeping, arrange annual mtgs; typ proposals, reports & corresp; file maintenance & genl offc bkup; QUALIFICATIONS: typ 60; able to work independently; IBM/PC/WORDSTAR exp or willingness to learn; contact: Louise Bolitho, 497-4581.; B11; $935-983.

27294-PM (JCC:2470) OFFICE ASST IV: Position in Academic Secretary's Off; develop & establish a computerized system for retrieval & update of large volume of documents & records for the Academic Council, Academic Senate & committees for various distributions, periodic updating & for legislative history demands; includes implementing a revision of filing system & document retrieval using computer tech; use word processing for general correspondence; QUALIFICATIONS: Ability to work independently in designing & implementing new systems & procedures; type 55+; strong editorial skills & background in computer text-editing; good organizational ability in coping w/a large workload; Send app to Elaine Gloystein, Bldg 10, President's Office.; B14; $1440-1514.

29534-PM (JCC:2554) SECRETARY II: Provides sec support & assistance to the director & offices of public events & alumni affairs in the Med Ctr; receives & screens calls; types memos, letters, & reports; opens/sorts and routes mail and composes routine replies when appropriate; maint off supplies; schedules maternity tours for Stanford Hospital; records & deposits dues & contributions for alumni assoc & prepares biannual financial reports; QUALIFICATIONS: Type 55; strong verbal communication skills; ability to work under pressure; demonstrated exp in a sec position & in record-keeping; six months previous exp in office setting; prefer familiarity w/Stanford Med Ctr.; Contact: Michael Cowan, 750 Welch Rd. #300, 497-6389.; B11; $1246-1310.

29877-PM (JCC:2596) SECY II-SPEC: Typ mathematical & scientific manuscripts, grant applications, corresp, & course work for a small group of professors in Biological Sciences; use of word processor involved; answer phones; photocopying & filing; travel arrangements; QUALIFICATIONS: typ 65+; exp w/ word processor desirable; accuracy & neatness stressed; good English usage & accurate spelling; send appl/resume to S. Wray Wolfe, Biological Sciences, Herrin Labs, Room 223A.; B12; $1310-1373.

29876-PM (JCC:2630) SPECIALIST TYPIST: Typ tech manuscripts, grant applications, corresp, & course work for various professors in Biological Sci; heavy use of word processor; answering phones; photocopying & filing; travel arrangements; QUALIFICATIONS: typ 65+; accuracy & neatness are stressed; prev exp using word processor; typing tech manuscripts required; good English usage & accurate spelling; send appl/resume to S. Wray Wolfe, Herrin Labs, Room 223A, Dept of Biological Sciences.; B12; $1310-1373.

27056-PM (JCC:1763) LIBRARY SPEC III: Fixed term 7/1/83-12/31/83; Archival assistant in Hoover Institution Archives; process & describe assigned collections fr the archival & manuscript holdings of Hoover Institution; recognize & describe historical significance of unique archival & manuscript mat'ls relating to subj fields of 20th-century social, political, diplomatic, & economic history; read & describe foreign-lang mat'ls; classify & index audio-visual mat'ls; identify documents for repair, etc; QUALIFICATIONS: require intimate knowl of modern European or US history equiv to bachelor's degree w/ a major in that field; reading knowl of or more foreign lang (French, German, Russian, or Polish); 1 yr or more of lib or archives-related exp, or equiv combination of edu & exp desirable; send appl/resume to Charles G. Palm, Hoover Institution, Stanford, CA 94305 or call 497-3563.; B14; $1440-1514.

41674-BP (JCC:2078) ADMIN ASST I (N): The Admin Asst provides admin support to the RLG Governors & the RLG Executive Office; the position reports to the RLG President & Executive Vice-President & is repson for coordinating all admin functions in the Exec Offc; QUALIFICATIONS: excellent oral & written communication skills; ability to work independently w/high level of discretion, judgement, diplomancy & tact; knowl of computing tools (e.g. WYLBUR & SPIRES) & word processings equip preferred; ability to establish priorities in a fast-paced environment w/frequently changing arrangements; demonstrated ability to work effectively & independently w/various levels of staff in order to work with the central staff, the Board of Governors & the staff of the member libraries; proofreading skills that result in accuracy in syntax, grammar, spelling, etc; ability to devel & apply info technology enivironment preferred; etc;; B16; $1593-1671.

31637-PM (JCC:2562) SECRETARY III: Type & edit manuscripts on word processor; coord deadlines & keep track of status of several manuscripts; arrange for prep of illustrations & figures for final publication; organize mail; take dictation & transcribe; phones; organize/maintain filing system for correspondence, manuscripts and publication status; organize extramural speaking engagements; make travel arrangements; monitor budgets; QUALIFICATIONS: Previous sec exp necessary; type 60-80; ability to take dictation; good grammar; know med terminology is helpful; ability to work w/little supervision; capable of coord the variety of work entailed in managing all facets of the lab; familiarity w/Stanford procedures & guidelines; Contact: Dr. Karl H. Pribram or Dr. Diane McGuiness 497-3774.; B14; $1440-1514.

22010-BP (JCC:2562) SECRETARY III: Sec In High Temperature Gasdynamics Lab, which incl 6 faculty members, 2 res assoc, 32 Ph.D. candidate res assistants, & a tech staff of 8 persons; respon for offc mgmt, personnel admin, record maintenance, prep of reports & contract proposals; plans, organizes, directs, & audits offc functions; typing; report prep; filing, etc; QUALIFICATIONS: typ 60; skill & knowl of word processing operation nec; devise & implement filing & record keeping sys; lib organization & operation; send appl/resume to R. K. Hanson, Bldg. 520, Room 520F.; B14; $1440-1514.

30560-PM (JCC:2470) OFFICE ASST IV: Academic sec of the Math Dept; interpret dept & Univ policies, procedures, & requirements; maint undergraduate & graduate student records, evaluate progress toward degrees; advise on resolution of academic problems; provide staff support to grad admissions committee; independently correspond w/applicants; prepare course abstracts; maintain grade sheets; coord & prepare Univ & dept bulletins & publications including Courses and Degrees, time schedules, etc; QUALIFICATIONS: Type 60; excellent communication & interpersonal skills; excellent English usage & spelling; accurate typing; attention to detail; substantial exp in an academic environment and/or some know of Stanford policies & procedures desired; Send app/resume to Glenna Smith/Barbara Fairlie, Math Dept, Bldg 380; B14; $1440-1514.

Bargaining unit

24951-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; Sun-Thur, 10am-7pm; the Cook mantains highest quality of food prep & serv thru the use of standardized recipes, portion & temperature control & attractively served food, on time, for scheduled Lunch & Dinner for approx 300; under the direction of Head Cook (except on Sun) assts in prep & serv of entrees condiments, gravies, soups & vegetables; assumes Head Cook's respon, in the event, of his absence; assts in prep of Storeroom Reqs; performs special cleaning duties; maintains approp standards of safety & sanitation; QUALIFICATIONS: exp in quantity cooking, prep & serv; ability to translate recipes & culinary vocabulary into standardized goods; read & write English; basic knowl & practice of good principles of food prep.; A20; $ 7.91.

40480-JB (JCC:8150) CARPENTER MAINT/MUS: TMS Unit; 8-4:30pm; builds, repairs & installs counters, cabinets, benches, partitions, floors, doors, stairs, ladders, bldg framework, etc; selects specified type of lumber or other mat'ls; selects & installs various sound insulation mat'ls; operates wood working machinery; lays out work as required; working fr blueprint sketches, or verbal instruction; installs or replaces various kinds or bldg hardware; constructs concrete forms & pouring chutes, etc; answers emergency calls; QUALIFICATIONS: ability to determine work methods & procedures; require full Journeyman level skills; must be skilled in the use of the tools, mat'ls, & eqpt of the carpentry trade; completed documented Carpenter Apprentice program.; A33; $10.71.

40476-DS (JCC:8210) PAINTER MAINT: TMS Unit; 8-4:30pm; prep & finishes all types of interior & exterior surfaces w/ all types of mat'ls, tools, & eqpt; usage of stains, shellac, lacquer, varnish, etc to all types of hardwood, metal surfaces & fine cabinet work; tapes sheetrock, minor plastering, cement repairs & texturing; mixes & matches paint by hand; all types of paperhanging; assisting glass & sign shop; QUALIFICATIONS: 4 yrs exp in some commercial & trade or industrial painting; knowl of OSHA rules desirable; familiar w/ all types of ladders, planks scaffolds; completion of painter's apprenticeship program desirable exp in taping, texturing, mixing colors, special coatings glazing, refinishing furniture, sign painting streetstripping or some other special skill desirable; will paint at high levels standing on plank scaffold or ladder; paint fumes always present.; A33; $10.71.

27150-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; respon for the measurment of drug concentrations in biological fluids; involve the use of radioimmunoassay tech & high performance liquid chromatograph ; use of equilibrium dialysis for the measurement of the degree of drug binding also be expected; work under the direct supvn of a sr. analytical chemist; routine stocking of lab supplies & routine instrument maintenance; QUALIFICATIONS: familiar w/ basic lab tech of pipetting, weighing, solution & buffer prep; familiarity w/ biological processes; prev exp in radioimmunoassay & liquid chromatography desirable but not nec.; A18; $ 7.50.

42305-LL (JCC:5644) LIFE SCI TECH II: TMS Unit; involves work both w/ lab mice & w/ mammalian cells in tissue culture; involves a study of modifying Influence of selected compounds on the response of cells, tumors & normal tissues to radiation & to some chemotherapeutic drugs; the investigations will involve quantitative assays for tumor cell killing (both in mice & in tissue culture) & DNA damage & its repair; QUALIFICATIONS: exp w/ tissue culture, biochemical assays for DNA damage & small animal experimentation; exp w/ biochemical assays, mouse surgery, record keeping & data analysis also an advantage.; A24; $ 8.65.

148-LL (JCC:6612) PR S&E TECH - ELECTRO MEC: 50%; flexible; provide electromechanical services related to teaching & research within the School of Earth Sciences; instruct faculty, students & staff in the use of lab equip & machine shop facilities; design, fabricate & maintain experimental equip; participate in the design of complex experiments; QUALIFICATIONS: detailed knowl of & exp in all aspects of machine shop practice & fabrication; exp w/high-pressure systems, pneumatic equip & high pressure furnaces desirable; knowl of material characteristics under severe temperature/pressure conditions desirable; exp w/ high pressure valves & seals; ability to work independently.; A39; $12.39.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, June 21 in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Carpools

Ride share between SF and Stanford M-F, mornings and eves (times flexible), call Jennifer at 346-6411 after 8 p.m.

Ride needed from Sharon Heights Shopping Center to Stanford, in exchange for gasoline. My hours are 8 a.m. to 5 p.m. Please call Dixie Dodson at 497-9150.

Rental housing

HOUSING AVAILABLE

□ **Beg. Aug. 1, prefer 1 yr. or longer:** New twnhse, 2BR/2½BA, partly furn, W/D, fenced yd, carport, El Camino & Page Mill, 5 min. bike to campus. $1150/mo. incl. grdnr. Call COLLECT (213) 990-5302.

□ **June 17 to end Aug:** Furn. 2BR apt to SHARE. Lndry facil. Bike to campus, nr shops, transp. $275/mo. incl. water (nego). Beg. Sept. 1 entire apt. avail. Call 328-3128.

□ **NOW:** Relax on 5 wooded acres Grass Valley. New, spac. 3BR/2BA hse, lrg. deck. Call Anne Kinder, 497-7876, day.

□ **Aug. 7 to Sept. 3, '83:** 4 wks: fully furn hse, mid-twn Palo Alto. 3BR/1½BA, den, playrm, play-yd, lovely patio. $975 incl. phone, util, lwn. serv. Ideal for yng. fam. No pets. Call Lee or Judy, 321-0250.

□ **July 1 or sooner, for 1 yr:** Exec. furn. twnhse for writer/scholar; 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min. to Stanf. Cpl. or single adult only. No pets. $1300/mo. Owner going to Harvard. Call 494-0452.

□ **NOW to Sept. 1, '83:** Oak Creek apt, 2BR/2BA, fully furn. incl. hsekeep. equip. Quiet, sunny, spac; patio. Nr pools, tennis, spa & rec. build. $1400/mo. Call 497-3649, day; 327-9245, eve.

□ **June 19 to Aug. 31:** Sublet 2BR/1BA, furn apt; 1st flr. College Terrace, minutes to campus. $635/mo. + util. Call 493-0543.

□ **Aug. 12 to Sept. 5, '83:** Campus hse, 4BR, study, FR, piano, fenced yd, W/D, 3 cars. $375/wk incl. util, lawn serv, bi-wkly clean. Call 493-2042, eve.

□ **July 2 to Aug. 15, '83:** 2BR hse, W. Menlo nr shps & bike bridge. Garden. Care of cat. $900. Call Ian, 321-9255.

□ **Sept. 1 to summer '84 (flex):** Fully furn & equipped hse, 3BR/2BA, grdnr, Japanese garden, conv. to expressways. Sunnyvale, 20 min. to Stanf. Fine schools. $1200/mo. Call 497-1316, day; 929-7134.

□ **June 25 to July 25 and Aug. 5 to Sept. 15 (flex):** Choice, lux. old campus hse w/pool. Pref. cpl. Garden, pool & hse maintenance incl. Call 324-3119, eve.

□ **Mo. of Aug. (flex):** Attrac. furn. campus hse, 4BR/3BA, study. Prefer fam. without young children. No pets. $1200 + util. Call 493-5492.

□ **Beg. July 15 (flex):** Furn. 2BR/2BA + den nr Woodside Rd. Cathedral ceil., pool, jacuzzi. No pets. Quiet. Refs. $1000/mo. Call 365-0210, eve.

□ **June 22 tq Aug. 20, '83:** Furn. hse, 3BR/2BA, w/yd. Family rent; Sunnyvale. Nr. #280. Nonsmokers, no pets. $800/mo. incl water & grdnr. Call (408) 739-9182.

□ **Aug. 20 (flex) for 5 wks:** Lux. 2BR condo, Los Altos. Fully furn. pool, $800/mo. Maid optional. Call Dr. Haeger, 328-0920 or 948-2312.

□ **June 25 to Aug. '84:** Fully or partly furn 4BR/2BA hse w/office area, fenced pool, elec. pool cover, kids' playhse, acre lot. Los Altos, view of hills. Nr. #280, dwntwn, bike to Stanf. $1800/mo. incl. pool & grdnr. serv. Call 941-4021 or (408) 988-6367, lv. message.

□ **NOW w/1 yr. lease:** Elegant hse off Skyline Blvd. 3BR/2BA, 3 frpl. Bay view, 185 acres open land. Pool, spa, sauna, pond for fishing. Will rent fully furn incl, dishes, linens. $3000/mo. $1000 dep. No pets, nonsmokers. Refs. req. Call Lynda Rose, 851-8076.

□ **Sept. to June '84 (flex):** Manhattan, 3BR/1½BA furn apt. Walk to NYU. Wish to EXCHANGE for similar Bay area apt. or hse; or for smaller apt or hse + rent. Call (212) 674-0412.

□ **July 29 to Aug. 26 (flex):** Lrg. 3BR/2BA hse, fully furn, cul-de-sac nr. Woodside Plaza, Rdwd Cty. Great for fam. w/children. $900/mo. or $225/wk. Call John, 497-0837, day, 364-1244, eve.

□ **End July & Aug. (flex):** 1BR/condo, furn, pool, sauna, tennis, 15 min. to Stanf. $600 (nego) + dep. Call 969-1193 after 4 p.m.

□ **Beg. end of Aug.:** Deluxe lrg. 1BR condo. Lease 1 to 2½ yrs. Furn. or unfurn. Xclnt Mt. View location, lndry facil. 2 pools. $600 to $700. Call Gene Weber, (408) 295-1300, X311, (415) 965-4289.

□ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

□ **NOW:** 4BR/3BA hse at Tahoe-Donner. Hot tub, deck over-look Nat'l Forest. Hiking, tennis, golf, Donner Lake access. $450/wk or $200/wknd. Call 324-8559.

□ **NOW:** Rm. in priv. hse, fully furn. incl. util, linens, lndry facil. For nonsmoker, male grad. stud. or scholar. Priv. entr., priv. phone. $225/mo. Call 493-3589.

□ **Beg. Aug. 10 (flex):** Furn. hse, 3BR/2BA, AEK, frpl, xlg 2-car gar., W/D. Fenced garden, huge patio, trees. Quiet st., xcint nghbrhd, nr shops, park w/pool. 2½ mi. to Stanf. Min. 1 yr. lease. $1125/mo. Call 326-4866.

□ **July & Aug.:** European vacation rent. Priv. hse nr. Alpine Lake, midwy Lucerne/Zurich. 3+BR, walk to pub. beach. Refs. recq. Mercedes 450 avail. $1500/mo + dep. Call New York, (212) 599-3100, Mr. Gordon, day; or Evelyn, (415) 839-5060, eve.

□ **July 1 to end June '84:** Unfurn master BR in 3BR/2BA hse. Walk/bike to campus. W/D, DW, gar. $350/mo + util. Nonsmokers. Call Mark, 497-1794, day; 854-2424.

□ **July thru Sept. '83:** Furn. Palo Alto condo. Time per. flex. 2BR/2BA, LR w/DR area, W/D, DW, patio, carport, pool. Walk to Stanf., train, bus, no pets, nonsmokers. $1200/mo (nego) + $800 sec. dep. Call 321-9280, eve.

□ **Beg. Oct. 24 (or sooner) thru June '84:** 1BR w/BA in Palo Alto condo; new furn., linens, W/D, prkng, pool, walk to Stanf., train, bus. Nonsmoker. $325 + 1 mo. sec. dep. Call 321-9280, eve.

□ **June, July, Aug.:** SRI scientist has rent. to SHARE. Fully furn. 3BR/2BA apt., central Menlo Pk. TV, BBQ, pools, gym. $400/mo + ½ util. Call Malcolm 859-4066, 325-3732.

□ **Aug. 22, '83 to July, '84 (flex):** Old Palo Alto, fully furn hse. 3BR/2½BA, DR, den/guest rm, gourmet ktchn. Quiet st., nr schls. Garden. No pets. $1600/mo, incl. grdnr. Call 855-2068, day; 326-0850.

□ **June 10 to Sept. 20:** Summer sublet: 1BR furn apt, full ktchn, BA w/shower. Kingscote Grdns, ctr. Stanf. campus. $645/mo. Call 324-8985, 493-1376.

□ **June 15 to Sept. 15:** 2BR apt. sublet to SHARE w/student. Ctr. campus in Kingscote Grdns. Full ktchn. $375/mo. Call 325-8095, 328-2239.

□ **July 4 to Aug. 8:** Campus hse, fully furn., contemp., view solar-ht. pool. Cpl pref. $1500/mo. Call 8579654.

□ **June 26 (flex) thru July '84:** Fully furn. 2BR/2BA hse, AEK, microwave, W/D, gar., pool, tennis, hot tub; grdnr & maintenance incl. $1100/mo. Call Dr. Kulick, 497-7001, day.

□ **Beg. Aug. 15, 1 yr. or longer:** Fully furn, Danish style, 3BR/2BA condo w/pool, children's playgrnd. $1050 + util. Call 497-2844, day; 493-2717.

□ **July 28 to Aug. 29:** Lovely London hse, Chiswick area, 3BR/1BA, LR, DR, new ktchn, W/D, TV, garden. Nr transp. $1000/mo. Call Abramsky, 011-441-995-2747, or write: 13 Van Brugh Rd., London, W41, JB, England; local call: 856-6049.

□ **Mid-June to Sept. 1:** Secluded hse in Los Altos Hills, 3BR/2BA, view, fully furn, incl crib, kid's toys. $1000/mo. Call 941-6194.

□ **June to Sept. '83:** Summer rent, TAHOE. Modified A-frame chalet. 2BR + loft/1½BA, lrg. AEK/DR, LR w/frpl, W/D, cable TV. Deck. No pets or sublet. Close to casinos. Nr. lake & tennis. $600/wk, $1100/2 wks, $1750/mo. Call Marsha, (415) 563-3156.

□ **NOW:** New 2BR/2BA cottage in San Miguel de Allende, Guanajuato, Mex. Peaceful, reasonable. Local Inst. Allende & Bellas Artes nr. for varied crses. in writ. lang., arts. Call 851-7086.

□ **June 18 to July 31:** Los Altos hse, fully furn, 3BR/1BA, deck, fenced yd.; nonsmokers. 15 min. to Stanf. $700/mo. Call 948-5659, after 4 p.m.

□ **Sept. to Dec. 15, '83:** Furn. 1 or 2BR apts. Olympic pool, sauna, jacuzzi, tennis, racq. ball. Adult complex. Dep. req., 1 apt. air-cond. Refs. $600/mo. Rte. #280 to Stanf. Call Prof. Arnold, 968-0951, (408) 255-8909.

□ **NOW:** Summer rent. Alpine Meadows, Tahoe, 3BR/1½BA cabin, W/D, phone, sleeps 10. $180/wk. Call 493-4139, eve.

□ **June 11 for 1 yr:** 1BR furn apt., walk to Stanf/Med Ctr, shops, theaters, restaurants. Pool, jacuzzi, sauna, lndry. $550/mo. (415) 538-9444, early a.m., late p.m., (408) 335-3597.

□ **Regularly avail:** 1 & 2BR furn & unfurn apts. & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk. in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049.

□ **Beg. Aug. '83:** Crescent Pk, Palo Alto, 3BR/3BA, new ktchn, DR, fenced yd, piano, W/D, Mediterranean style hse. $1590/mo, incl. grdnr, water. Call COLLECT (602) 299-4499.

□ **NOW:** SHARE: Young single woman seeking M/F nonsmoker for 2BR/2BA lux. condo in Old Mill complex. AEK, secure bldg. Elevator, pool. Call Leslie, 948-6185, eve.

□ **Beg. Aug. 10:** Fully furn 1BR apt. in triplex. On Alma St. in Palo Alto. Priv. patio. $675/mo. Call 856-6049.

□ **Beg. June 16 (flex):** Unfurn. Palo Alto hse, 2BR/2BA, LR/DR w/brick frpl; FR can be 3rd BR. Yd, terrace, carport, wrkshed. Remodelled AEK ktchn, w/dw. $1150/mo incl grdnr. Call 856-6049.

□ **Beg. Sept. 1:** Palo Alto unfurn hse, 3BR/2BA, lrg. yd, patios, 2-car gar., frpl. 2 mi. to Stanf. $1200/mo. Call 856-6049.

□ **June 16:** Fully furn 2BR apt in 4-plex. 100 El Carmelo Ave., 2 mi. to Stanf. Coin lndry, yd., carport w/bike stor. $750/mo. Call 856-6049.

HOUSING NEEDED

□ **Beg. Aug. 1 (flex):** Responsible family of 4 willing to hsesit any time after beg. Aug. Local refs avail. Call COLLECT (202) 363-0558, Wash. DC.

□ **Sept. '83 to May '84:** Visit. prof. on sabbat. at Stanf. & spouse w/dog, seek furn. 2BR hse in P.A., Menlo Pk, Stanf. Nonsmokers. Call COLLECT (413) 367-2286 (home), (413) 545-0685 (work), Amherst, MA.

□ **Summer '83; 3 to 4 wks:** Seek hse w/pool on or nr campus. Local refs. Call J.M. Gallagher 981-6911 or (415) 751-3600, eve.

□ **Beg. Sept. '83 for 8-10 mos:** Visit prof from Israel with wife, children, 5 & 2, seeks hsng nr Stanf, Esc. Vill. Call 497-4786.

□ **Academic yr. '83-'84:** Visit fac. mbr & fam. seek furn 2-3BR apt. or hse. Call Ron Oaxaca, (602) 621-6224 or (602) 745-1796.

□ **Beg. Sept. 1, '83:** Prof. & wife seek 2BR apt or hse nr campus. Call Linda Heider, 497-4440, day.

□ **June 15 to Sept. 15 (flex):** Reliable missionary cpl on lv from Philippines seeks 1BR furn apt or will HOUSESIT. Call Lori, 324-5729, day; 321-0237, eve.

□ **Summer live-in:** French youth, 19, son of Visit. Prof. Berkeley, seeks summer live-in w/family in exchange for supervision of children over 6. Call Loftis, 325-7293 or Martinet, 549-2312.

□ **Aug. 15 (flex) for 1 yr:** Univ. of Ill. prof, wife, 2 well-behaved children, 14 & 16, seek 3BR, furn hse. Pref. nr Stanf. in Palo Alto sch. dist. Careful, considerate, nonsmokers, no pets. Local refs. Can pay $900 to $1100/mo. Call COLLECT (217) 351-9881.

□ **NOW:** Long term, hsesit or or work/rent exchange. Dr's wife w/local refs. Meticulous caretaker. Call 326-8880, Marjorie Pryor, or lv. message.

□ **July 16 to 31:** Reliable nonsmoking prof. & wife seek apt. or hse. Call (415) 922-4640, eve.

□ **Sept. '83 to Sept. '84:** Visit. prof. & wife wish to rent small furn. hse or 2BR apt. Pref. nr. Stanf. Call (415) 859-5105 or 326-0537.

□ **Beg. early July:** Stanf. staff mbr. wants studio for 2, Palo Alto area, w/College Terr. or dwntwn pref. Local refs. Call Donna, 497-3967, day.

□ **Mo. of Aug. '83:** French scientist seeks EXCHANGE for apt. in Paris. Furn, quiet st. 15th Arrondissment, Nr Institut Pasteur, Volontaires metro. Top flr, 6-flr. bldg (no elev). Dbl. LR, 1BR + xtra rm. Or will rent for $600/mo + $200 refundable dep. Call Dr. Brutlag, 497-6593 or write Dr. Maurice Hofnung, Institut Pasteur, UPMTG, 28 rue Dr. Roux, Paris, 75015, France. Call 1 306 19 19, X2156.

□ **Sept. 25 to Mar. 25, '84 (flex):** Visit. Canadian physician & wife seek 1BR or 2BR furn apt, small hse or HOUSESIT position. Prefer within 10 min to Stanf. Med Ctr. Refs. avail. Call (403) 432-3912, day; (403) 439-5135, eve.

□ **Aug. or Sept:** Female post-doc & dghtr, 12, seek quiet, inexpensive apt. or shared hse nr. campus. Write J. Carey, 805 W. Stoughton Ave., Urbana, IL 61801.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.



Another of Rodin's burghers invites attention from passersby

CHUCK PAINTER PHOTO

Help wanted in rental listings

The service is seeking a second person to help with listings which appear weekly in *Campus Report*.

Simple bookkeeping, typing and telephoning skills are required.

The job pays $6 an hour, and when shared, needs a time commitment of five to seven hours weekly. Most of this is Wednesday through Friday, plus being available at a phone certain days of the week.

If you are a campus resident interested in such a partnership, please write SCHOA Rental Housing, Box 7772, Stanford, Calif. 94305. Or call Dorothy, 857-0414.

Summer bowling leagues to form at Tresidder soon

The Recreation Center in Tresidder Union will offer five summer bowling leagues beginning the week of June 20:

Mondays—Friendly Fours: Bowl on a four-person mixed team for 10 weeks. League starts June 20 and bowls at 6 p.m.

Tuesdays—Bowl for Lunch Bunch: Bowl with a partner at 12 noon. League starts June 21 and bowls for eight weeks.

Tuesdays—Mixed Trios: Bowl on a three-person mixed team at 7:30 p.m. starting June 21.

Wednesdays—Wednesday Fours: Bowl on a four-person mixed team, starting June 22. League starts at 7 p.m. and bowls for 10 weeks.

Thursdays—Stanford Hospital League: A four-person mixed team league from the hospital. Bowl at 5:30 p.m. for 12 weeks.

All of the leagues are handicap and include three games per week, except for the lunch league which bowls just two games each week. The cost is $3.30 per week plus an additional trophy fund.

Interested people should come to the organizational meeting for the league of your choice. You may sign up at the Recreation Center as a team or individually. For more information call 497-4316.

Join the joggers at Tresidder—free

The Tresidder Union Recreation Center invites students, faculty, staff, and visitors—beginners as well as runners of all abilities—to join the regular summer jogging program.

Morning runs begin at 7 a.m. Tuesdays and Thursdays, with afternoon runs scheduled for 4:30 p.m. Mondays and Wednesdays.

The runs, led by Stanford junior Chris Rodriguez, will last approximately one hour and will cover a variety of courses around the Stanford campus. Runners should meet at the entrance to Tresidder Recreation Center for each session.

There is no charge for any of the runs. For more information call the Recreation Center at 497-4311.



Vintage Brass Ensemble, l. to r.: Philip Zahorsky, Skip Wagner, Larry Osborne, David Burkhart, Steve Kohlbacher.

Vintage Bass Ensemble plays June 24

Stanford's Department of Music will present the Vintage Brass Ensemble in concert at 8 p.m. Friday, June 24, in Dinkelspiel Auditorium on the Stanford campus.

Founded in 1974, the brass quintet consists of David Burkhart and Skip Wagner, trumpets; Steve Kohlbacher and Philip Zahorsky, trombone; and Larry Osborne, horn.

They will perform *Rondeau from Premiere Suite* by Mouret, *Two Fantasias a 5* by Coperario, *Concerto* by Vivaldi-Bach, *Suite from the Music for the Royal Fireworks* by Handel and, after intermission, some contemporary works: *Scherzo for Brass Quintet* by Pilss, *Music for Brass Instruments* by Dahl, *A Tribute to Duke Ellington*, the Beatles' song *Penny Lane*, and *Star Wars* by John Williams.

Burkhart teaches trumpet at Stanford. Formerly principal trumpet with the Jerusalem Symphony and San Jose Symphony, he currently plays principal trumpet with the Oakland Symphony.

Wagner is a member of the San Francisco Ballet Orchestra and principal trumpet with the Midsummer Mozart and Cabrillo Festival Orchestras.

Osborne, formerly a member of the San Francisco Opera Orchestra, is currently a tenured member of the San Jose Symphony.

Kohlbacher toured world-wide and recorded with the Woody Herman Orchestra, and now freelances with the San Francisco Opera, Ballet, San Jose, and Oakland Symphony Orchestras. He also has a tenured position with the Santa Fe Opera Orchestra.

Zahorsky is bass trombonist with the San Jose Symphony Orchestra and has performed frequently with the San Francisco Symphony Orchestra. He is director of bands at Ohlone College.

Tickets for the June 24 concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Group tennis lessons

Small group tennis lessons will again be offered to staff and-or their families on weekdays or evenings. Players are grouped by ability in these lessons taught by Dick Gould's staff.

Call 497-1160 on weekday mornings to receive detailed printed information and registration form.

Hutchings opens summer concerts

Pianist Virginia Hutchings will open the Stanford Music Department's Summer Session concert series at 8 p.m. Tuesday, June 21, in Dinkelspiel Auditorium. She will be a visiting assistant professor here from Stetson University for the Workshop on Baroque Music and Dance, June 20 to July 1.

Hutchings' June 21 concert will include Rondos in A minor and D Major by Mozart, Bach's *Partita No. 4 in D Major*, and *Sonata in E Major, op. 109* by Beethoven.

Hutchings holds a master's degree from Juilliard, where she studied with Rosina Lhevinne. She has received grants from the Martha Baird Rockefeller Fund and the Institute for International Education, and is winner of the Friday Morning Music Club National Piano Competition in Washington, D.C. and the Busoni International Piano Competition in Bolzano, Italy.

She has performed throughout the U.S. and Europe, including the Bar Harbor Festival in Maine, International Bach Society concerts at Lincoln Center, a *lieder* recital with Tatiana Troyanos in Paris, and radio and TV appearances in Italy and the U.S.

Hutchings made her New York debut at Alice Tully Hall in 1977, and soloed with the Atlanta Symphony under Robert Shaw in 1977.

Tickets for her June 21 concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.



Jeanne Lee

Jeanne Lee to give free recital

Pianist Jeanne Lee, a graduate student in the Department of Music, will present a free evening of romantic music at 8 p.m. Saturday, June 25, in Tresidder Lounge.

Lee will perform Chopin's *Sonata No. 3*, selections from Schumann's *Waldscenen* (Forest Scenes), and *Sonata in B minor* by Liszt. She studies at Stanford with Naomi Sparrow.

Lee studied piano at Juilliard with Beveridge Webster for seven years and also received a degree in chemistry from Columbia University. She has soloed with Boston, Portland, and New England Symphony Orchestras and given solo recitals in Boston's Gardener Museum.

Lee is married to Stanford Ph.D. candidate in electrical engineering, Youm Huh.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., June 15, to cover the week of Mon., June 27, through Sun., July 3. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

WEDNESDAY, JUNE 22

Physicians for Social Responsibility: "In the Nuclear Shadow, What Can the Children Tell Us?" presented by Ian Thiermann, open to the public. 7:30 p.m. M-116, Medical School.

STARTS Speaking Jazz Lecture Series: "Ivory Expedition, Multi-Keyboard Applications and Approaches to Improvisation and Modern Chord Voicing," by Tom Coster, columnist for "Keyboard Magazine and currently touring with Santana. 7:30 p.m. Tresidder Union. $3 admission, $25 for 10 week series.

EXHIBITS

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. . Louis Lurie Rotunda, Green Library. April 25 - June 30.

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning, development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23-July 28.

Arthur Schnitzler 1862-1931, Documentary Photo Exhibition. Cecil H. Green Library, West Wing Corridor. May 23-June 30.

Boris Ilyin, exhibition of recent oil, acrylic, & watercolor paintings. Reception, Friday, June 10, 5-7 p.m. Bechtel International Center. June 3 - June 30.

"Propaganda Posters of Two Revolutions". Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8 - Aug. 31.

Graphic Artists Work. The work of Tresidder's Marketing Dept. staff - see the process involved in creative advertising as well as cartoons and graphic design work. Upper Lobby and Coffee House Galleries of Tresidder Union. June 16 - July 3.

CAMPUS REPORT

Volume XV, Number 38 | A publication for Stanford University faculty & staff | June 22, 1983

Senate discusses academic freedom in large-scale research

Stanford faculty will take a new look at how to reconcile the academic freedom of individual researchers with the requirements of large-scale research next fall.

The issue of "involuntary servitude" surfaced early this year when 15 faculty and 180 staff members at the Stanford Linear Accelerator Center made public their opposition to a weapons-related research proposal at the Stanford Synchrotron Radiation Laboratory.

No decision has yet been made on the proposal, which is unclassified.

SLAC provides the beams used by SSRL.

Attempts to block the research on the basis of its proposed end-use in nuclear weapons testing have been strongly opposed by Stanford President Donald Kennedy. His position was upheld in a 7-2 vote of the Committee on Research, which reaffirmed that research projects should be judged on scientific merit, not potential applications.

On Thursday, June 9, the Faculty Senate voted to receive the committee report. Simultaneously, the Senate instructed its Steering Committee to draft a new charge to the committee next fall, trying to focus issues raised by the SLAC protest more clearly.

"It's a truly thorny issue," SLAC Prof. Edward Garwin said after the Senate action. "I don't necessarily believe that a certain group of faculty should be able to 'veto' a certain research line." On the other hand, individual faculty should not be required to work on large projects which they find morally repugnant.

Graduate students also should have an opportunity to fully understand the nature of projects in which they are involved, he added. Where they can obtain statements to the funding agency from their principal investigator, they have been denied access by the agencies to work unit statements.

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Alternatives to TIAA—CREF will be available this fall

Stanford faculty should have three or four alternatives available to TIAA-CREF for retirement planning by September, Provost Albert Hastorf told the Faculty Senate June 9.

Jeannie Thomas, manager of benefits, said the University is now in "final negotiations" with three mutual funds and one insurance company.

Those eligible should receive detailed information by Labor Day, she added.

While disclosing no names, she said all four firms were accustomed to working with retirement plans and offered some "pleasant improvement" in investment performance and flexibility for individual planning.

They also are characterized by more frequent communication, in very clear language, with their customers, Thomas noted. The Teachers Insurance and Annuity Association and College Retirement Equities Fund have long dominated the college market.

The University currently requires a five percent contribution toward TIAA-CREF through voluntary salary reductions for employees to qualify for an additional 10 percent contribution to those plans by Stanford.

In a report issued a year ago, a task force headed by Prof. Kenneth Scott, law, recommended that the University offer three or four alternatives to TIAA-CREF and drop the matching contribution requirement.

Responding to Senate questions, Hastorf said participation in the present program is "not high" among those under age 35, but approaches 90 percent among those over 35 and is even higher among those over 45.

The task force report said nonparticipants included at least 50 percent of the assistant professors and 20 percent of associate professors.

While setting aside about 15 percent of

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Down in the trenches, a new communications project starts

Stanford plans a $22 to $26 million modernization of its telephone and electronic communications systems on campus.

Replacement of the present telephone system will account for more than half the total, an estimated $12.5 to $14.5 million, including a new Telecommunications Building near the present Central Energy Facility.

Other elements in the Electronic Communications Media Project include the Stanford University Network (SUNet), currently projected at $3.5 to $5.5 million; a distribution system for the telephone, SUNet, and other communication system needs, estimated at $4.3 million; and an energy management and control system, projected at $1.6 million.

At their June 10 meeting, the Board of Trustees approved the $4.3 million distribution system, which will include nearly seven miles of trenching to accommodate nearly 57 miles of four-inch diameter conduit.

"The existing underground conduit system is extremely congested," a report to the trustees noted. "Many places on campus cannot support even current requirements for new underground cabling."

The expansion of underground conduit and manhole facilities will support voice, data, and video communications. By starting construction before the rainy season, parts of the system considered critical to SUNet can be built before winter.

The new telephone system is expected to result in significant savings in annual operating costs. "The current Centrex features and services are the poorest available on the market and among the most expensive," the report notes.

"Modern switching equipment will

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Quad's arcades provide refreshing shade

People



Stephen Harris

Prof. Stephen E. Harris, electrical engineering and applied physics, has been named director of Ginzton Laboratories at Stanford for a three-year period, effective Sept. 1, Vice Provost Gerald Lieberman, dean of graduate studies and research, has announced.

He will succeed Prof. Anthony E. Siegman, electrical engineering and applied physics, who has served as director since 1978.

"Steve will have a hard act to follow, as Tony has proven himself to be a true academic statesman, representing the interests of not only Ginzton Labs, but of University-wide research policies and practices as well," Lieberman said.

Harris has an outstanding track record of research achievements including:

The first demodulation of frequency-modulated light;

The invention of FM laser;

The development of the first synthesis technique for birefringent optical filters;

The first observation of optical parametric spontaneous emission;

The operation of the first visible CW optical parametric oscillator;

The invention of the tunable acoustoptic filter;

The operation of the first electronically-tunable laser;

The invention and demonstration of generation of ultra-violet light by phase matched third harmonic generation in metallic vapors, and the use of this radiation to take the first hologram in the vacuum ultra violet.

His recent interests have been in the areas of selective laser-induced inelastic collisions, and in the development of new techniques for generating vacuum ultra violet and soft x-ray radiation.

Harris earned his Bachelor's degree from Rensselaer Polytechnic Institute, and his Master's and Ph.D. from Stanford, all in electrical engineering. He has been on the Stanford faculty since 1963 in electrical engineering and, since 1979, in applied physics.

He has received the Alfred Noble prize from the American Society of Civil Engineers, the Curtis McGraw Research Award of the American Society for Engineering Education, and the David Sarnoff Award of the Institute of Electronic Engineers.

Harris received a Guggenheim Fellowship in 1976, was elected to the National Academy of Engineering in 1977, and the National Academy of Sciences in 1981.

I appreciate Tony Siegman's many contributions as Ginzton's Director and welcome Steve Harris as Tony's successor.



Steven Chaffee

Prof. Steven Chaffee of the Stanford Department of Communication has been elected one of 16 fellows of the International Communication Association.

Emeritus Prof. Nathan Maccoby and Prof. Everett Rogers also are ICA fellows.

Besides Chaffee, those elected fellows this year were Dr. Randall Harrison of UC-San Francisco, an occasional lecturer in the Stanford Department of Communication, and Bradley Greenberg of Michigan State University, a postdoctoral fellow at the Stanford Institute for Communication Research in 1962-64. Chaffee is director of the Institute.

ICA is an academic association of some 2,200 members, most of them professors and scholars in fields such as mass communication, interpersonal communication, and organizational communication.

Fellows are elected primarily on the basis of scholarly contributions to the study of communication, and also on the basis of service to the Association. Maccoby was president of ICA in 1974-75, Rogers in 1980-81, and Chaffee in 1981-82. Election is by the Association's board of directors, upon recommendation of a committee composed of those who have already been elected Fellows.

ICA's convention next year will be held at the San Francisco Hilton May 24-28.

David Wick

David Wick, who was a management development specialist at Levi Strauss and Co. before coming to Stanford in January, is now facilitating the Fundamentals of Supervision course for Staff Development.

Wick has a B.A. in psychology from the University of Arizona, a master's degree in communication from San Jose State University, and did further graduate work in public service administration at the University of San Francisco.

He currently is vice-president of the Golden Gate chapter of the American Society for Training and Development and cofounder of its newest special interest group—Organization and Societal Transformation. The group is involved in understanding the functions of the brain in reaching an individual's highest potential, and how this affects organizations and groups.

Wick also has been for three years a cofacilitator with Dr. Jerry Jampolsky at the Center for Attitudinal Healing in Tiburon.



Valana Wells

Valana Wells, a Ph.D. student in Aeronautics and Astronautics at Stanford University, will receive one of the 1983-84 Zonta Amelia Earhart Fellowship Awards.

The $5,000 grant, offered annually to women qualified for graduate study in aerospace related science or engineering, memorializes Zonta International's famous member and air pioneer, Amelia Earhart, who disappeared over the Pacific Ocean in 1937.

Ms. Wells, of Mountain View, Calif. will use her third Amelia Earhart Fellowship to complete her Ph.D. thesis research on "Unsteady Effects of Propellers in Non-Uniform Flows." Her work is designed to provide a tool for the aerodynamic analysis of propellers behind wings and behind airplane bodies and-or tails (as in the Lear fan jet).

She has designed and begun to build an ultra light, personal recreational airplane with several Stanford colleagues which she sees as "a way to directly influence the efficiency and safety of general aviation aircraft." She expects to have a career which combines her enthusiasm for design with academic teaching.

Zonta International is the worldwide classified service organization of executive women in business and the professions. Since the establishment of the Awards in 1938, a total of 217 women from 32 countries have been named as Amelia Earhart Fellows.

Eleanor Worden

Eleanor Worden, assistant dean of admissions and financial aid for the School of Education, was honored by students on June 1, when they presented her with a plaque and a bouquet "in appreciation of her outstanding contribution to the students of the School of Education."

Joel Samoff

Prof. Joel Samoff received this year's School of Education excellence in teaching award.

Samoff is described by his students as "an extraordinarily dedicated teacher who is able to initiate a real dialogue between students and teacher; he respects students' opinions and views but pushes them to be critical and analytical; a tireless teacher, always available and helpful."

Samoff is a political scientist with special interests in the political economy of underdevelopment, primarily Africa. He has been with the School since 1980.



Mili Mosher

Mili Mosher is the Controller's Office's new assistant controller for expenditure operations, responsible for University expenditure departments, including Payroll and Accounts Payable.

For the past 12 years Mosher has been director of finance and administration at the Institute for Medical Research, Santa Clara Valley Medical Center, San Jose. She had previously worked as an accountant at the University of Oregon and at Des Moines General Hospital in Iowa.

Mosher has an MBA from the University of Santa Clara, and is a member of Beta Gamma Sigma, an honor society for outstanding students of finance. Her BA degree is from the University of Redlands.

Mosher set a milestone for women in 1980-82 by holding office as vice-president of the Association of Indpendent Research Institutions—the first woman officer in the history of the 25-year old national organization. She has also served on the board of directors of the University of Santa Clara MBA Alumni Association, and of the Children's Health Council.

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Adolph Baller, a pianist for nearly 70 years, plays in his studio

Adolph Baller's hands survived crushing by Nazi jackboots

BY DONALD STOKES

Adolph Baller was an infant prodigy at the piano and today, nearly three-quarters of a century later, his hands still possess their magic.

He is teaching a dozen advanced students at Stanford, where he has been on the faculty for 20 years. He guides other pupils in his private studio at his Palo Alto home. His students include a number of noted musicians who are themselves concert pianists or music teachers. Some travel long distances to study under him.

For more than 30 years Baller has been a leading influence in the Peninsula world of music. He was a cofounder of the well-known Alma Trio, and was one of its mainstays for 40 years.

Baller is a cheerful, white-haired man of decided opinions, which he expresses with happy vehemence. Nearly 74 years old, he talks objectively of how musical genius can sometimes last into old age.

"Some musicians play better as they grow older. I heard Arthur Rubinstein play when he was 90, and he was incredible, far better than he had been when younger."

Baller's powerful hands, which have played as many as 300 concerts a year, were almost lost to the world in a ghastly scene during the eruption of Nazism. The precious fingers were deliberately stomped on by jackbooted Nazi thugs. Only a miracle of skillful and loving care saved the hands for the music-lovers of the world.

Baller was attacked by the thugs because he was a Jew. He was born in Brody, Galicia, at a period when that part of Poland was in the former Austro-Hungarian Empire.

When he was still a small child an uncle, who was a composer and singer, showed him how to read music. Within a short while he had gained a reputation as a prodigy on the piano.

At the age of eight he was taken to Vienna, where he studied music with a former student of Liszt. Within five years his powers had developed so remarkably that he performed as a soloist with the Vienna Philharmonic. His name became known throughout the world of European music. He gave recitals on tours all over the Continent.

When he was still in his 20s his name was included in those of the first rank in playing. Then came the foul tide of Nazism which spilled into Austria from Hitler's Reich.

In April 1938, soon after the Nazis had bullied their way into Austria, Baller was attacked by Nazi stormtroopers. They asked him if he was Jewish, and he said he was. They thrust him in an auto and proceeded to beat him up sadistically, pounding his face till his eyes swelled shut.

He was taken to a country estate, hauled into a room that was stained by blood on the floor and furniture. He was stripped, mercilessly clubbed and kicked. His kidneys were ruptured.

Worst of all, in Baller's frantic mind, he suffered the agony of his fingers, on which his artistry depended, being stomped by hobnailed boots, until the bones were broken. While they systematically beat him into unconsciousness, the thugs smoked cigarettes and stubbed them out on his skin.

They would probably have killed him, but they saw from his passport that he was a Polish citizen, and they may have feared international repercussions, or the anger of their own superiors. When they were sated the attackers dumped him in the basement and left him there for the night.

In the morning they stood over him again and forced him, with his broken hands, to clean their boots.

Only two hours later some other men he had not seen before came in and treated him with comparative respect. They used clumsy words to try to make him feel better: "This is war, and you have suffered some wounds of war."

He was released shortly after that, and taken back into the city. Later, he learned that his fiancee, Edith Strauss, had secured the help of the Polish Embassy, which made vigorous representations to the Nazi leaders. The resulting rapid inquiries soon revealed what had happened to the young man.

Baller was treated in a hospital, but even there the fear of the conquerers of Austria was so great that he was asked to report that his injuries had come from falling downstairs.

Baller is fervently grateful to the doctor who decided that the fingers should not be put into casts, as that would have made them permanently stiff. Instead, the doctor introduced a painstaking treatment by massage. Very slowly, as the broken bones healed, there was patient kneading of the damaged tendons and muscles.

His fiancee played an important role in the healing of the injured hands. She was at his side all the time, helping in the delicate work of recovery.

In retrospect, Baller does not think he was deeply worried whether his hands were ruined for playing; he had the confidence of youth. Both he and Edith were aghast, however, at the growing ugliness of the Nazi menace.

It was obvious that they had to try to escape from the looming danger. Jews were being hounded and abused, and many were rounded up for dispatch to destinations nobody could guess, but which the world was shocked to learn later. The ovens were being constructed with German efficiency in places like Auschwitz.

The chance fact that he had been born in a

Baller/ continued from page 3

foreign country may have saved Baller's life. As he had a Polish passport he was able, unlike most Austrian Jews, to leave the country. He and Edith escaped into Hungary where they were married. They managed to slip over another border, into Yugoslavia, then a pro-Western monarchy.

From here they secured passage by ship to the U.S., where they landed with hardly a penny between them. They found a refuge with relatives. Baller soon found a job with WQXR radio station New York City as a pianist—those were the days when major radio stations maintained orchestras.

He came to California in 1941 as guest of the famous young violinist Yehudi Menuhin, on the latter's Alma estate near Los Gatos. The two men formed a concert duo and toured together. They played far and near for the armed forces, including the Aleutians and the South Pacific.

Baller was named an Army colonel, as a precaution in case of his capture by the enemy.

In 1943 Baller joined with other musicians in trio playing, and this was the nucleus of what became the Alma Trio. The cellist was Gabor Rejto, Baller the pianist, and Roman Tothenberg the violinist. Later Andor Toth, today on the Stanford faculty, became a member of the Trio.

At the end of the war Baller received the devastating news that his entire family had been murdered by the Nazis. His mother, his two sisters, and his brother, together with an uncle, had been shot and shut into their house which was then burned to the ground over them.

Baller's voice dropped as he said, "They were burned alive." The pain was clear on his face.

"Like so many others I hoped that when the world war ended we would never again see human bestiality. But it is happening all over again."

For several years after the end of World War II Baller toured the world extensively playing to enthusiastic audiences. However, he found himself drawn increasingly to playing with the Alma Trio and he devoted himself to the group more and more. Eventually he played with the trio fulltime, and shared the growing praise for its smooth balanced playing and exquisite sound.

Baller has now been teaching music at Stanford for 20 years. He is impressed by the high quality of many of the pianists who have passed through his tutelage. "There are so many fine ones."

The last great composer was Gustav Mahler. The best composer of the 20th century was Bela Bartok. Except for the early compositions of Stravinsky, there has been very little since.

—Adolph Baller

At this time he has 12 advanced students in his Stanford class. Many of them perform in master's recitals. All of them speak warmly of their tutor.

"A wonderful man and a wonderful teacher," says doctoral student Nicholas Isaacs, who comes from England. "He is acutely sensitive to the qualities and needs of his students. When he plays you know immediately that you are in the presence of a master."

"He creates an atmosphere that makes you want to play for him," says doctoral student Kay Bedenbaugh, "there is a sense of sharing music."

The Ballers bought their Lowell Avenue home in 1950 when he decided to cut down on his touring schedule and concentrate more on teaching. He has two pianos in his studio, a Yamaha for practice and a Bosendorfer for performance.

He is so busy that very often the only time he can find to practice is after 10 p.m. when the last student has left. Then the magic hands play again.

He is strongly critical of modern music. "A Chinese philosopher once said, 'Show me the music of a country and I will show you its political situation.' When you try to listen to contemporary music. . . . He made a shrug of disgust.

"Think of the Brandenburg Concerto, which had been 'entertaining' music, think how much is conjured up by the waltzes of Strauss—then think of rock and roll." He grimaced as if in actual pain.

"Thousands of young people go to these gatherings, I can't call them concerts. They fight, they take drugs, they are like animals, sometimes people are injured, even killed. Nobody listens. There is just a great noise. The entertainers—I won't call them musicians—look like cannibals. So you have it. This is our 20th century."

He turned to avant-garde music. "Noise, chaos!! It has no future whatsoever."

He recalled how his teacher, the great European musician Hugo Kauder, once wrote scornfully of "modern" music, not modern in the sense of being typical, but as applied to music of a particular nature.

"Kauder wrote 'Nietzche was the first to recognize 50 years ago the sign of this time and to call it by its name: it is *nihilism*, that is, the highest values lose value. Where however there are no highest values which are generally believed in and honored, there are, in life as in art, no generally valid bonds, no generally acknowledged forms and formal principles.' "

Baller recalled another sad verdict by Kauder: " 'All this so-called "music life" for a long time now has been a mere dance of death. Yet I mean that in no way pessimistically; only that which vanishes anyway is dying, like the life of nature in winter, and it is now winter in spiritual life; but this too has in the darkness under the frozen surface its guardians and preservers of warmth and light.' "

Baller was asked whether he liked any music written in this century.

"The last great composer was Gustav Mahler. The best composer of the 20th century was Bela Bartok. Except for the early compositions of Stravinsky, there has been very little since."

What about electronic music?

"Absolute chaos. You cannot class it as music at all. As for other modern music Schoenberg was a worthy man, but his new system started off wrong and never went right. Today's self-styled composers actually look down on the masters of the past, because to justify what they are doing, they have to. This is a reflection of a sick society."

A look of surprise spread on his flexible features: "Sometimes I meet perfectly nice people who are engaged in this modern stuff. Why? It is utter lawlessness!

"Everything has to follow natural laws—in science, in people, and also in music. Must follow its own laws."

An interviewer suggested that there is not a large listening public for modern music, that even on campus it was difficult to draw audiences for those sorts of programs.

Baller shook his head: "That may be, but some of these modern composers are very well off, far more than many of us. They cater to the trendy."

His whole frame took part in remembered laughter: "There was a modern group that played a composition called 'Noise.' Can you imagine? It was so horrible that half the audience got up and left."

Supreme Court, other clerkships claimed by law grads

Two 1982 Stanford Law School graduates have been named to U.S. Supreme Court clerkships for 1983-84 and 33 members of the Law School Class of 1983 have been accepted at other judicial clerkships for the coming year.

Glen Nager of Houston, Texas, has been selected as a clerk for Justice Sandra Day O'Connor of the U.S. Supreme Court, while Anne Durand, of Albuquerque, N.M., will be a clerk for Justice Harry Blackmun.

U.S. Court of Appeals clerkships will be filled by 20 graduates in the Class of 1983:

Hugo Black III of Miami, Fla., for Hon. Patrick Higginbotham, 5th Circuit, Dallas, Texas; Nelson Cunningham of Panama, Republic of Panama, for Hon. James Hunter III, 3rd Circuit, Philadelphia, Pa; Stephen Easton of Thief River Falls, Minn., for Hon. Joseph Sneed, 9th Circuit, San Francisco, Calif.; Michael Gennaco of Glendale, Ariz., for the Hon. Thomas Tang, 9th Circuit, Phoenix, Ariz.; Robert Gordon of Chicago, Ill., for Hon. Walter Cummings, 7th Circuit, Chicago, Ill.; Robert Hawk of Dallas, Texas, for Hon. Irving Goldberg, 5th Circuit, Dallas, Texas; Mark Hersh of Skokie, Ill., for Hon. Joel Flaum, 7th Circuit, Chicago, Ill.

Walter Johnson of San Mateo, Calif., for Hon. Proctor Hug, Jr., 9th Circuit, Reno, Nev.; Walter Kamiat of New York, N. Y., for Hon. J. Skelly Wright, D.C. Circuit, Washington, D.C.; Michael Klarman of Baltimore, Md., for Hon. Ruth Ginsburg, D.C. Circuit, Washington, D.C.; Selene Mize of Portland, Ore., for the Hon. William Timbers, 2nd Circuit, New York; Robert Moore of Alameda, Calif., for Staff Attorney, 9th Circuit, San Francisco, Calif.; Margaret Niles of Portland, Ore., for Hon. Eugene Wright, 9th Circuit, Seattle, Wash.; Robert Olson of McLean, Va., for Hon. Anthony Kennedy, 9th Circuit, Sacramento, Calif.; Tony Phillips of San Francisco, Calif., for Hon. Ben C. Duniway, 9th Circuit, San Francisco, Calif.;

John Porter of Cincinnati, Ohio, for Hon. Proctor Hug, Jr., 9th Circuit, Reno, Nev.; Sharon Reich of West Lafayette, Ind., for Hon. Harlington Wood, Jr., 7th Circuit, Chicago, Ill.

Mark Seidenfeld of Queens Village, N.Y., for Hon. Patricia Wald, D.C. Circuit, Washington, D.C.; David Shaffer of Enon, Ohio, for Hon. Betty Fletcher, 9th Circuit, Seattle, Wash.; Vince Waldman of Tulsa, Okla., for Hon. John Minor Wisdom, 5th Circuit, New Orleans, La;

Those serving as clerks in U.S. District Courts include:

Bernard Burk of Encino, Calif., for the Hon. William Schwarzer, Northern District of California, San Francisco, Calif.; Barbara Gaal of Minneapolis, Minn., for the Hon. Robert Peckham, Northern District of California, San Francisco, Calif; John Gordon of Houston, Texas, for Hon. Richard Gadbois, Central District of California, Los Angeles, Calif.; Jonathan Hart of Merion, Pa., for Hon. Almeric Christian, Virgin Islands District, Virgin Islands; Robert Kent of Middletown, Ohio, for Hon. William Ingram, Northern District of California, San Francisco, Calif.; Seth. D. Linfield of Brooklyn, N.Y., for the Hon. Laurence D. Lydick, Central District of California, Los Angeles, Calif.; Cynthia More of Cheektowaga, New York, for the Hon. Louis Pollak, Eastern District of Pennyslvania, Pa.; Daniel Reicher of Syracuse, N.Y., for Hon. David Nelson, District Court of Massachusetts, Boston, Mass.; Valda Staton of Gary, Ind., for Hon. Frank Battisti, Northern District of Illinois, Chicago, Ill.

The following students have *State Court* clerkships for the 1983-84 term:

Eva Carney of San Francisco, Calif., for Hon. Robert Staniforth, 4th District, Court of Appeals, San Diego, Calif.; David Little of Boulder, Colo., for Hon. Joseph Quinn, Colorado Supreme Court, Denver, Colo.; James Steyer of New York, N.Y., for Hon. Allan Broussard, California Supreme Court, Sacramento, Calif.; Karen Wentzel of Eastchester, N.Y., has a Superior Court clerkship with the Superior Court of Santa Clara County, San Jose, Calif.

One member of the 1982 class accepted a *U.S. District* clerkship: Robert Riggs of Odenton, Md., for Hon. Stanley Weiger, Northern District of California, San Francisco, Calif.

Class of 1981 U.S. District Court Clerkship: Donald Donovan of East Meadow, N.Y., for Hon. Abraham Sofaer, Southern District of New York, N.Y.

Ratner seeks to enhance public appreciation of *The Musical Experience*

People with only an arm-chair or concert hall appreciation of music can tap more than 30 years' experience of Stanford Prof. Leonard Ratner in his new book, *The Musical Experience: Sound, Movement, and Arrival,* published in the Alumni Association's Portable Stanford series (155 p., paper).

Designed to let people "be friends with music," in the author's words, the book moves from general ideas of musical expression, to elements of its language, to great works of music art.

"I like to speak to laypeople about music and help illuminate their listening experience" says Ratner, who has given a number of seminars on Mozart and Beethoven to bankers and engineers visiting campus for Alumni Association summer workshops.

The book includes two inserted soundsheets: 33 rpm recordings of many musical examples from the book played by Stanford piano lecturer Josephine Gandolfi.

Ratner also received help from music lecturer Jonathan Berger, who produced many of the examples using Prof. Leland Smith's music typesetting computer program. Both Gandolfi and Berger were doctoral students of Ratner's.

Art works that accompany each chapter were chosen by Ratner's artist-wife, Ingeborg, to illustrate the various music topics.

Special approach

"I have developed a special approach to music listening," says Ratner. "The criteria of sound, movement, and arrival which encourage listeners to make their own evaluations, rather than be told what to think of the music. Music is like a wheel with spokes—no matter how elaborate it gets, it always proceeds from the basics—the center.

"One mark of the great composer is the ability to deal with the conventional in a unique way, to make the music come alive by giving it perspective. The conventional is the point of departure, the thing you push against in order to be unique. Beethoven is marvelous in the way he puts kinks into the conventional.

"Like a magnet attracts or orients iron filings, my book sets up points of reference for the listener. I focus on salient features of a piece: high or low sound, slow or quick movement, effects of arrival. Thus the listener can exercise personal discrimination and judgement from the very beginning."

Music 'arrives'

Ratner's term "arrival" is not a conventional one in music. He describes it in this way in the book: "Music moves toward goals. To be intelligible, music movement must arrive. . .

"In a composition, points of arrival form a chain that gives the piece structure. Each arrival (except, of course, the last) is also a point of departure, so the music moves forward with what might be called a pogo stick effect. How the points of arrival affect the music's movement depends on how final, how clear, and how emphatic they are."

To illustrate his points, Ratner refers to many of the great works by Bach, Bartok, Beethoven, Berlioz, Brahms, Tchaikovsky, Chopin, Liszt, Mendelssohn, Mozart, Schubert, Stravinsky and Wagner. Most of the examples are arranged so the reader can play them with ease at the piano.

W.H. Freeman and Co. has published *The Musical Experience* for the commercial market. (The Portable Stanford series is published for subscribers only, who number about 10,000.)

John Boykin, associate editor at the Alumni Association, edited *The Musical Experience.*

"I couldn't have asked for a better author to work my first book," he says. "Prof. Ratner was cooperative, punctual, and he really cared. He was very interested in being sure we had the best possible book. If that meant rewriting, that's what we did, and the book is stronger as a result."

Boykin was chosen as editor because he majored in music at Fresno State. He describes *The Musical Experience* as "starting where the layperson starts—with the emotional reaction to music. Then it climbs inside the composer's workshop and studies the techniques the composer used to produce the effects you hear. It teaches someone who already enjoys music how to become a more perceptive listener."

Boykin background

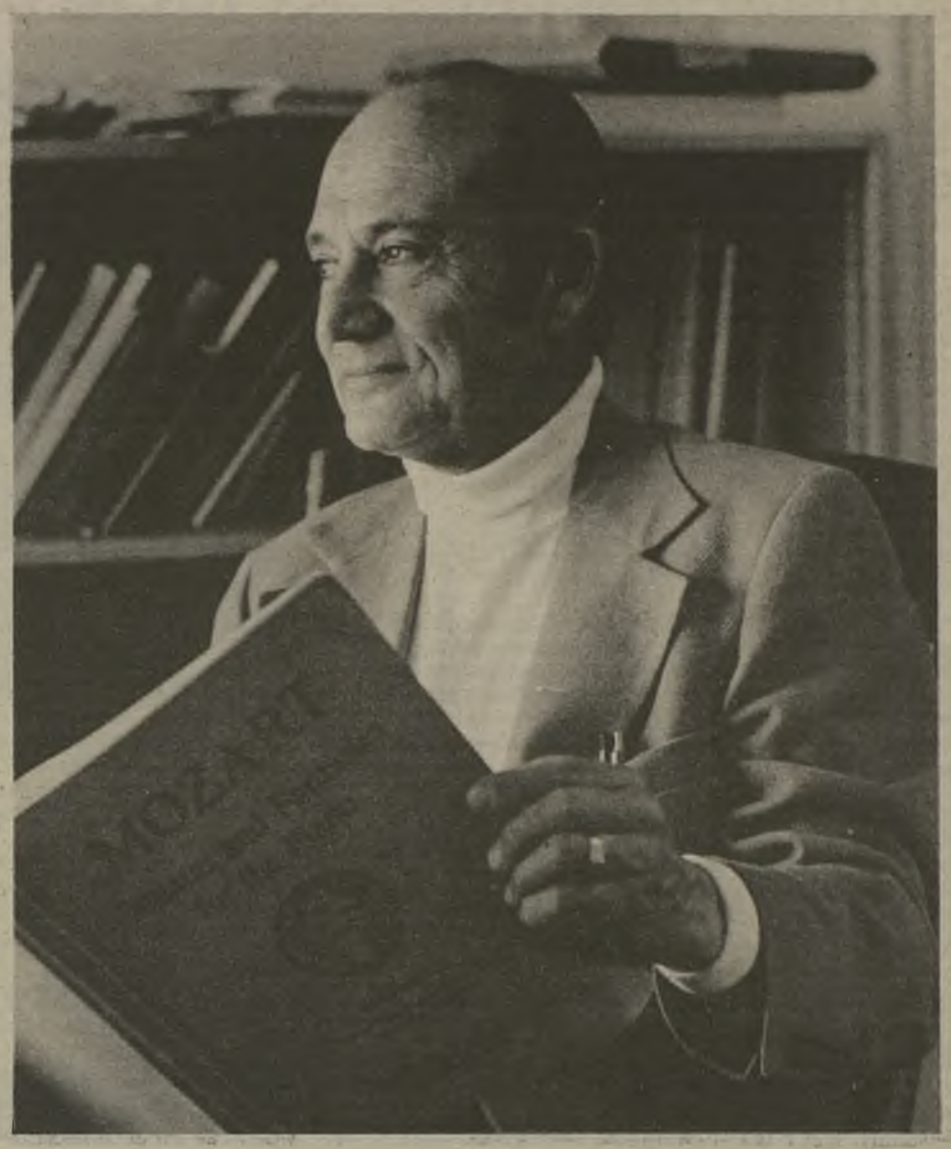
The Portable Stanford series was started in 1972 to keep alumni up on happenings at Stanford. The books, usually three a year, are written by Stanford professors on their current areas of interest. "They are a form of continuing education," says new managing editor Miriam Miller. "They are not written like textbooks, but are quite personal and often witty. Stanford's is the only Alumni Association in the country that publishes books."

Ratner came to Stanford in 1974 after receiving the first doctorate in music awarded by UC-Berkeley. He was named professor of music in 1957 and a Guggenheim Fellow in 1962. He has twice been visiting lecturer at Bar-Ilan University and the Hebrew University in Israel, and has taught at Stanford overseas campuses in Beutelsbach, Semmering, and Florence. This summer he co-hosts an Alumni Association trip along the Rhine River with German Prof. Walter Lohnes.

Ratner's first major book, *The Listener's Art,* was published in 1957 and is still widely used as a textbook in introductory courses. *Classic Music,* which Ratner refers to as "the book of my life," was published in 1980 to great acclaim. An historical and encyclopedic study of the classic principles of composition, it has already become a basic reference book for the Classic period (the era of Haydn, Mozart, and Beethoven) and a model for the study of musical style.

Ratner is not resting on his laurels, however. He has completed the first draft of a book on Beethoven's string quartets.

—Julia Sommer



Leonard Ratner

Alumni Assoc. sponsors Australia and New Zealand travel

The Stanford University Alumni Association will sponsor a 25-day travel study seminar to Australia and New Zealand August 28 to September 21 in association with Betchart Expeditions Inc. of Cupertino, Calif.

The expedition is open to friends of the University as well as alumni and provides an outstanding introduction to the best of Australia and New Zealand—cities, art galleries, botanical gardens, zoos, museums, and national parks.

Participants will be able to tour the cosmopolitan cities of Sydney, Melbourne, Auckland, and Christchurch, as well as the unforgettable Outback.

From Green Island on the Great Barrier Reef to the rich rain forests of Cairns and the pristine alps of Mt. Cook and Milford Sound, the travelers will encounter the unique flora, marsupials, and birdlife of Australia and the stunning fiords, glaciers, and alpine countryside of New Zealand.

Other special highlights of the trip include a gala evening at the Opera House in Sydney and an entire day and evening spent with a farm family on a sheep station in New Zealand. In addition, there will be time for walks through historic districts and national parks; gardens in spring bloom; swimming and snorkeling.

The expedition will be lead by Stanford alumnus Dr. Ian Smith, a native of Sydney, Australia, and professional field naturalist Robert Nansen.

Well-versed in the socio-political scene in Australia and New Zealand, Smith will introduce seminar members to the cultural heritage, arts, and traditions of these two nations while Nansen, expert naturalist and worldwide expedition leader, will interpret the unique natural history of both countries.

The trip fee of $2,625 per person includes land transportation, accommodations in deluxe or "best available" hotels, meals as indicated in the itinerary, park-museum entrance fees, instruction, leadership, and educational materials. Air fare is separate.

For more information contact Alice Coogan at 497-2021.

Escondido offers daycare homes

Even though local daycare centers often have waiting lists, responsible childcare is available now on campus in daycare homes located in Escondido Village, according to Phyllis Craig, Stanford consultant on childcare.

Frustrated parents, searching for care for toddlers or school age children, find a warm, individual solution to their problem in a family daycare home, where a student spouse often looks after one or two children in addition to her own. All the children have access to the sand pools and play equipment in the court, as well as other children to play with.

The fees charged by daycare mothers vary from $1.25 to $3.50 depending in part on how many children are involved in the home.

The Childcare Resource Center, located in the Escondido Village Office, maintains a list of daycare homes, and tries to match families seeking daycare with those homes that seem most appropriate.

Interested parents may come to the Resource Center Monday through Thursday from 10 a.m. to 12 noon to review the listings or to ask for other advice and assistance. Their phone number is 497-1660.

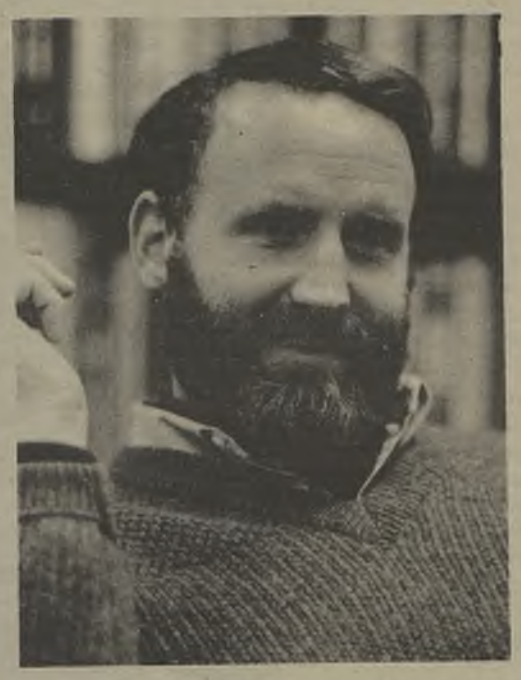
Durham to seniors: See life as fieldwork in 'foreign' land

Following is the Class Day Address by Prof. William H. Durham, anthropology.

It's a special pleasure to be with you today when, for probably the first time in four years, class attendance is nearly perfect, there are smiles on every face, and no one is taking notes in four colors with one of those frightful "pre-med pens."

In anthropology, the one other time that we are called upon as faculty to address a group of departing students comes when our Ph.D. students leave Stanford destined for fieldwork in another culture. Typically, these are bright, enthusiastic young folks off to undertake research among peoples in diverse and interesting places—among colorful native villagers of Mayan ancestry in Mexico or Central America, for example, or among Tibetan agropastoralists in remote Himalayan villages at 14,000 to 16,000 feet, or among fabled warriors (even headhunters) in the humid tropical forests of the Amazon, the Congo, or island Southeast Asia. Off they go, our Ph.D. students, to remote places, exotic peoples, and to what have sometimes been called "primitive" cultures. . . .

Well, if there is one thing we have learned in anthropology over the years, it's that what's remote depends primarily upon where you are, it's that what's exotic lies purely in the eyes of the beholder, and it's that what's primitive is at least a matter of some debate. So, if you'll forgive me this afternoon, I'd like to suggest an explicit parallel—a parallel between the situation advanced anthropology students face when they leave Stanford, and the situation you graduates face starting with commencement tomorrow. In many ways, you, too, can be seen as bright, young Stanford anthropologists setting off for a kind of fieldwork experience in a very foreign culture. And you, too, must now begin participant-observation among peoples, places, and cultures that will at



William H. Durham

times seem remote, exotic, and—yes—primitive in the course of your field stay. Tomorrow, when you head out Palm Drive for your own exotic, primitive tribe, whether it be in Cambridge, Cincinnati, or Cupertino, remember that these are valuable years of life's built-in apprenticeship in anthropology.

To speed you on your way (and for goodness sake, do stay out of trouble if you ever visit the People's Republic of China!), let me propose to you three simple guidelines that I hope will make your fieldwork happy, rewarding, and productive.

First, even before you arrive at your primitive tribe and remote field site, work to challenge your own preconceptions. Keep yourself open to human diversity however awesome and bewildering it may sometimes seem, and work to drive from your thinking all pre-conceived bias, intolerance, and prejudice even if (or especially if) we as your teachers are its source. Remember that an important goal of all fieldwork is to test, relentlessly, your conceptions and models of what people are all about against data that you collect for yourself.

This won't be easy, especially at the outset, for it may have been some time since the host population has been exposed to someone from your culture as well. Expect some "culture shock" on *both* sides, and a kind of mutual "warming-up" period. An excellent if slightly exaggerated example of this can be seen in one of anthropology's favorite descriptions—the arrival of a young, new researcher like you for the first time in a Yanomamo Indian village in the rainforest of Venezuela. He wrote:

"My heart began to pound as we approached the village and heard the buzz of activity within the circular compound. . . . The entrance to the village was covered over with brush and dry palm leaves. We pushed them aside to expose the low opening to the village. The excitement of meeting my first Indians was almost unbearable as I duck-waddled through the low passage into the village clearing.

I looked up and gasped when I saw a dozen burly, naked, filthy, hideous men staring at us down the shafts of their drawn arrows! Immense wads of green tobacco were stuck between their lower teeth and lips making them look even

continued on next page

Communism is now authoritarian, not revolutionary, according to Wesson

World commmunism is becoming "more ambiguous and amorphous," according to Robert Wesson, editor of the 1983 Yearbook on International Communist Affairs, just published by the Hoover Institution Press at Stanford.

A professor of political science at the University of California at Santa Barbara, Wesson has been a senior research fellow at Hoover since 1978.



Joan Oppenheim will teach Japanese flower arranging this summer for STARTS. See Page 19 for more information. (Photo by M.L. Cunningham)

"The essential unity of the Marxist-Leninist movement is not pro-Sovietism but anti-Westernism, especially anti-Americanism," he declares.

"Since 1960, it has been impossible to assemble a world communist conclave, and the Soviet party seems long since to have given up trying. Even international front organizations prosper only by pretending, in the manner of the World Peace Council, to have nothing to do with world revolution.

"Doctrinal unity has vanished," but communist parties remain "attached by the image of power and the assistance that a great power can give its friends.

"Under former police chief Andropov, perhaps even more than under party boss Brezhnev, the Soviet Union has become a model not of revolutionary change but of modernized authoritarianism, a strongly governed and disciplined society.

"Lenin is still an icon for all the (communist) parties, even those of China and Albania, not because he stood for the masses but because he taught how to organize a communist party to grasp and wield power. . .

"World communism is the spearhead of the resentment of those who feel more or less deprived or pushed around by the advanced industrial world, a drive sharpened and mounted but not made or controlled by the Soviet Union. As such, it prospers to a considerable extent with the failures and misfortunes of the Western world, especially the U.S.

Poor year for all

"The past year has not been a good one for the Western sphere, with the severest recession since the 1930s bringing grievous debt, financial and trade problems. Although the Soviet sphere also had a poor economic year, the balance was against the West.

"Accordingly, one might expect that the Marxist-Leninist cause prospered in 1982. Rather remarkably, it has not done so."

Andropov's "accession to the throne of Lenin" marked "another step away from the original meaning of the Russian Revolution," Wesson says.

While U.S.-China relations cooled, rapprochement between China and the Soviets was "hindered by the ongoing conflicts in Afghanistan and Kampuchea, both of which seriously damaged the communist position in Asia," he adds.

"In the Middle East, communist prestige suffered from the defeat of the Palestine Liberation Organization in Lebanon, the apparent inferiority of Soviet arms used by Syria, and the inability of the Soviet Union to play a significant role in the entire crisis. . . .

"In sub-Saharan Africa, Soviet influence appeared weakened chiefly by inability to fill material needs, and various Marxist-Leninist-oriented states turned to the West in compensation.

"In the Americas, political and economic problems made opportunities for radicals of all brands, but the communists in most countries continued to be a minor political force, awaiting worse times.

"In Bolivia, however, they emerged to play an important part in the redemocratized state. In El Salvador, communist-led guerrillas strengthened their hold on large parts of the countryside. The dictator of Surinam turned to Castro for help in holding power and apparently added one to the trio of Marxist or quasi-Marxist states in the Caribbean area.

"An offsetting reversal for the Marxist-Leninsts was the apparent success of the Rios Montt government of Guatemala in reducing the long-standing insurgency."

Now in its 17th edition, the Yearbook on International Communist Affairs includes a register of Communist Parties and profiles of their activity in each country by 74 different scholars. Copies (534 pp, cloth $44.95) may be ordered direct from the Hoover Institution Press, Stanford Calif. 94305 Phone (415) 497-3373.

Durham/ continued from page 6

more hideous, and strands of dark-green slime dripped or hung from their noses. We arrived at the village while the men were blowing a hallucinogenic drug up their noses . . . and the Indians usually let it run freely from their nostrils. My next discovery was that there were a dozen or so vicious, underfed dogs snapping at my legs, circling me as if I were going to be their next meal. I just stood there holding my notebook, helpless and pathetic. Then the stench of the decaying vegetation and filth struck me and I almost got sick. I was horrified. What sort of a welcome was this for the person who came here to live with you and learn your way of life, to become friends with you? . . .

I pondered the wisdom of having decided to spend a year-and-a-half with this tribe before I had even seen what they were like. I am not ashamed to admit, either, *that had there been* a diplomatic way out, I would have ended my fieldwork then and there. I did not look forward to the next day when I would be left alone with the Indians; I did not speak a word of their language, and they were decidedly different from what I had imagined them to be. The whole situation was depressing, and I wondered why I ever decided to switch from civil engineering to anthropology in the first place. (From N. A. Chagnon, *Yanomamo: The Fierce People*, 1977.)

Now I wouldn't expect your arrival to go exactly like that, although it has been some time since I visited the natives in Cambridge, Cincinnati, and Cupertino, but you get the point. In the face of novelty and diversity, fight off your preconceptions and work to keep yourself open. You'll be happy to know that the frightened researcher in the passage went on to become a prominent professor of anthropology.

Second, in your fieldwork, strive not only to observe, describe, and chronicle human diversity, but more importantly, strive to understand it. It's not enough simply to see differences as a tourist would and react to them. It's your job, in fieldwork, as an apprentice anthropologist, to interpret and explain those differences. Look for the reasons why the natives organize their lives the way they do. Search for an explanation and don't let up until you have one that fits all the data you have collected.

Let me give you a second example from the annals of anthropology—another exaggerated case to make the point with emphasis. Even within the written record of anthropology, Tibet and Nepal stand out as remote and exotic places, and for years outsiders have been amazed, intrigued, and bewildered by their system of marital diversity. Well, a young colleague of mine named Nancy Levine walked into a Nyinba village in Nepal in 1975 and began a survey of 89 marriages in this one village. To make a long story short, she found approximately 40 percent of the 89 marriages to be monogamy (one husband, one wife), 10 percent of the 89 to be polygyny (one husband, several wives), and 50 percent of the 89, still in the same village, to be polyandry (one wife, several husbands). Moreover, five of the polyandrous marriages were actually polygynandry (that is to say group marriages where plural males are simultaneously married to plural females)—and she found as many as nine and ten full-grown adults all married together at the same time in one legal matrimony.

To give you some concrete idea of what this entails as a case of human diversity, let me attempt a translation for you. One of the things all of us enjoy about Class Day at Stanford is that you graduating seniors can be with your families during this part of the graduation proceedings. Well, imagine how Class Day would be different if you were sitting with all seven of your fathers, all three of your mothers, together with seven or eight brothers and sisters, some of whom were, in fact, actually your genealogical cousins (i.e., children of your father's brother). I can see it now—sometime next May I'll get a letter from the caterer, "Prof. Durham how can we implement your wonderful plan for a bigger and better Class Day?"

But again you see my point. Human behavior is marvelously diverse on this planet and it's your job in fieldwork to help make sense of it all. The first outside visitors to Tibet and Nepal described this marital system as immoral, deplorable, savage, and disgraceful, and sadly enough, over the years we've carried forward some of that prejudice. Recently, Levine and others who have gone there for fieldwork have found that the entire pattern of marriage diversity follows from a few simple and rational rules that Tibetans explicitly discuss and adhere to. One is the rule of family property conservation: to prevent partition of precious family land resources at each generation, parents simply arrange marriages so that all their sons as heirs are married together in one family with one inheritance in each generation. If parents have two sons, they arrange bi-fraternal polyandry, if three sons, tri-fraternal polyandry, and so on—all to conserve family property. Marital diversity thus follows from the observance of a simple rule or set of rules.

In computer simulations here at Stanford I and a number of your classmates working with me have been able to show that any other rule of marriage—any other rule about land division among heirs in Tibet and Nepal—would cause whole families to go extinct in three to five generations. In short, the reasons for marital diversity in Tibet are good ones, I submit, and if you are diligent and persistent in your own fieldwork, you too will find good reasons for why the natives do what they do.

My third and final point is simply to remind you that as apprentice anthropologists, about to begin your own exotic fieldwork, you have a responsibility not only to pursue the understanding of human diversity, but also to spread the understanding of that diversity. We live in a world of rapidly decreasing differences, of cultural homogenization—a world where social, economic, and political pressures serve to reverse the general trend of prior millennia toward increasing human diversity. It is a world in which we must see remaining cultural differences as a resource, not a threat, and a world in which we must strive for greater mutual tolerances, respect, and understanding. My point is not that you must agree with all of the natives you encounter in your fieldwork. But I am asking-you to study their positions, to understand their differences, and to help spread such understandings. I hope that all of you will join us, as anthropologists, in the task of understanding, preserving, and appreciating human diversity. Come back to see us, bring along your field notes for consultation, thanks, and good luck.

Masters to grads: Become conscious as consumers

Following are the Class Day remarks of Adjunct Prof. Gil Masters, civil engineering, associate dean of the School of Engineering:

Thank you for asking me to share this celebration with you, it is a great honor for me to be here. You have worked hard, you have done well and you are to be congratulated for your accomplishments. You and your parents have every right to be proud. We were asked to deliver *short, light* talks. . .I'm not going to be very light, so I will try to make up for it by being short.

In trying to decide what to say today I was influenced by the play that my eight-year-old son was in the day before yesterday, called "Anyone could, But. . . ." It was a simple play in which a king was looking for a suitable prince for his daughter, so early one day he dug a small hole in the dirt road leading into town, then filled it with gold and covered it with a large stone. Then he hid by the side of the road and watched and listened as people began to pass by.

This provides a fine opportunity, by the way, for all the second graders to get into the act and recite a few lines to the effect "look at this stone right in the middle of the road, how terrible, the king ought to do something about that, let's go tell the king to move it and so on. . . .

One after the other the actors complain about this stone in the way and the king's negligence, and so on, until finally, the hero comes along and says. . ."Hey there's a stone in the road, it is in the way and so he rolls it off to the side. And of course he gets the gold and princess. "Anyone could, but."

The moral is simple and seems applicable to my main area of professional interest, which is energy. If you despair over the deterioration of our air quality, the creation of national sacrifice zones for energy development, the inevitable oil spills, the radioactive wastes, the sterilization of our lakes by acid rain, the possible alteration of global climate through the release of carbon dioxide during combustion, and finally, and most threatening, the need to build tremendous armaments in part, to protect our access to Middle East oil.

And if you look toward government, or to big national laboratories filled with scientists and engineers working on development of breeder reactors, synthetic fuels, controlled nuclear fusion, or orbiting solar power stations in space, then I would say you are not unlike the second graders in the play waiting for the King to take care of things.

Seniors, you are about to become consumers in a big way You are going to earn handsome salaries, and as soon as you pay your parents back, you are going to be buying cars and furnishing apartments and houses. Maybe even someday building your own house. The decisions you make about the products you buy are going to have enormous consequences to the energy future of the U.S.

You and I and people like us—individuals, plain people—



Gil Masters

directly control about 40 percent of the energy used in this country, energy that we use in our own vehicles and in our own residences. We can waste it or we can use it frugally.

What we choose to do will make a difference—it is making a difference already. The big story in energy since the oil embargo has been energy conservation—not big power plants, not big government programs. Energy demand is dropping in the U.S.—in part due to the recession, in part due to conservation. In the last decade, however, energy consumption per dollar of GNP has dropped 20 percent.

Consider some examples of the power we hold in our own hands. Consider an almost trivial example. The next time you stop at the gas station, put some air into your tires, enough to bring them up to the recommended maximum pressure. On the average, fuel efficiency will go up by about four percent. If we all did that we could save about $2.5 billion in imported oil at essentially zero cost. Compare that to the proposed '84 Department of Energy budget for all energy conservation programs, $100 million. That, by the way represents one percent of the total DOE budget, 60 percent of the DOE budget is for defense—that's DOE not DOD.

Consider a less trivial example: You know we have mandatory fuel efficiency standards in new vehicles that are gradually leading us toward cars that average 27.5 mpg. As older less efficient cars are being replaced by newer ones, our dependence on imported oil is dropping. In fact, if every car on the road today would have the fuel efficiency required of the 1983 models, we would not have had to import any oil from OPEC last year. (OPEC supplied only half of our imports last year.)

Another: If all of us were driving around in cars that were equal in fuel efficiency to the most fuel efficient car in that size range—that is, if you would drive the best station wagon available instead of the one you are driving, and if all 4-passenger cars were as good as the best, and so on, the U.S. would have been a net energy exporter last year. That is, without downsizing, and with automobiles that you can buy in the showroom, we would be exporting more energy in coal than we import in oil. We would still be importing oil however.

If you want to eliminate all imported oil, one way we could do it is all drive 50 mpg vehicles, which by the way are available today. If we were doing that last year we would not have needed to import a single barrel of oil and we would have saved about $50 billion dollars in one year.

How about energy use in our homes. that's about one-quarter of the U.S. total. Let's start with the cracks around our windows and doors. Cold air leaks in those cracks in the winter and hot air leaks in the summer. About five percent of all U.S. energy leaks in or out of those cracks in our homes. At the price of imported oil, that is about $15 billion worth a year, at least $5 billion of which could be saved if we all spent a Saturday with a caulk gun and a roll of weatherstripping.

What about our appliances? How many of you would rank the energy consumption of a new refrigerator as one of the most important concerns in making your choice? Probably not many. A PGE survey indicated that purchase price was the primary concern of refrigerator buyers but energy was sixth on the list. Yet you will probably spend three times as much money operating that refrigerator as you will on buying it in the first place.

We need to pay more attention to energy labels on appliances and we need to learn to care more about lifecycle costs than initial costs. We could save as much energy in lighting as is currently being produced by all of the nuclear power plants in the country—and do so at about one-third the current cost of electricity.

Conserved energy does not mean "freezing in the dark" as some imply. It is our best source of future energy. It is the cheapest, cleanest, safest, surest, and quickest, source available. By and large the products are on the shelves—and it is up to us not to act like second graders in a play, but like adults responsible for our own futures and for the futures of our children and grandchildren.

Trustees discuss permanent Environmental Safety Facility

A centralized program to manage the procurement, use, and disposal of hazardous materials at Stanford University was discussed by the Board of Trustees at their meeting on the campus Friday, June 10.

According to a report made to the Board, such a program is necessary to protect public health, to respond to increasingly complex governmental regulations, and to contain rising costs.

Included in the program is a proposal to build a permanent Environmental Safety Facility (ESF) on the west side of the campus to handle infectious, chemical, or radioactive items used at, or produced by, the Medical Center, chemistry, and physical science buildings, and other scientific laboratories.

Made up of small buildings totaling 23,000 gross square feet, the facility would replace and augment a temporary structure near the Hospital and augment a temporary structure near the Hospital now used to receive, monitor, and process materials for on-campus use and off-campus disposal.



Alain DeCleve

"By commercial standards, the volume and level of hazardous wastes produced at Stanford are quite low," according to Dr. Alain DeCleve, director of health and safety. "They are the inevitable by-products of a large research hospital, extensive scientific laboratories, and patient clinics."

"County, state, and federal regulations require that such materials be safely handled. Those regulations are becoming so strict and complex that all of Stanford's responsibilities can only be addressed by a central management program."

DeCleve said that the new facility, proposed for construction next year, would be located in a "support services area" to be developed south of the Medical Center. It would be convenient to the generating sources, yet would not occupy "close-in" land that could be needed for future academic use.

The EFS would include the program's administrative offices, areas for handling potentially hazardous wastes, small labs for waste treatment and handling, and space for training programs for safety committees being formed.

Two small incinerators would also be located there, replacing aging equipment at the Stanford Hospital.

DeCleve emphasized that there would be very little danger from the facility, with many safeguards to separate, store, and neutralize the materials. It would be built and operated in accordance with strict government regulations, he said.

By detoxifying and neutralizing much of the material at the ESF, the University would be able to reduce the volume to be sent to off-campus land-fill sites, DeCleve noted. Such sites are decreasing in number every year, he said.

Private contractors would pick up weekly for off-campus disposal those materials which could not be burned or detoxified.

The support services area in which the ESF will be located is in an area already used for storage anad other ancillary activities. It is listed in the University's long-range land-use plan as an area roughly corresponding to the corporation yard facilities on the opposite side of the campus, off Serra Street and Campus Drive.

The Trustees will be asked for concept approval in the fall, the report states, and for project approval early in 1984. Under that schedule, the ESF could be operational by early 1985.

Distribution of salaries 1982-83

The table below has been developed to show the distribution of higher level administrative salaries. The people whose salaries are counted include those professionals who work in areas generally considered as administrative; they include University officers and other individuals who are involved in the creation, application, or interpretation of University policy. Professionals involved with research, library, computer, and other support areas are counted in the Comparison Salaries section.

The data source is the Personnel Office's Salary Management Analysis System (SMAS Personnel) file. Similar tables have been published annually in Campus Reports since 1975-76. This year's data differs from those reported in previous years and reflects more accurate counts of administrative personnel. Thus, while the format of the table is similar to those tables published in years past, it is not possible to track trends. The lower bound salary figure of $27,500 was chosen to show an appropriate increase over the previously published lower bound of $25,000.

To facilitate comparisons of administrative salaries with faculty and other exempt professional salaries, the table includes the relevant tabulations below. To establish an equivalency for comparative purposes, academic year faculty salaries were multipilied by 4/3, a figure intended roughly to account for the three months that lie outside the nine month school year. The 4/3 figure also reflects the basic supplementary compensation limit established in University policy. Individuals who wish to view faculty salaries from another point of view can, of course, interpolate.

	$27,500-32,499	$32,500-37,499	$37,500-42,499	$42,500-47,499	$47,500-52,499	$52,500-57,499	$57,500-62,499	$62,500 & Above	Totals
Administrative Salaries									
Academic									
Schools and Departments	48	16	12	11	7	15	10	21	110
Research Labs & Institutes and SLAC	24	22	11	6	11				104
Student and Academic Support Services									
University Libraries and C.I.T.	5	5	7	11	3	7	Above $57,500: 49		40
Student Services	20	4	5	6					42
Administration and Auxiliaries									
President's and Provost's Office, Public Affairs, and University Counsel	9	11	6	3	7	20	20	33	57
Business and Finance	74	79	36	20	19				249
Development	9	15	11	10	3				57
Medical Center (including Hospital)	8	14	42	27	16				129
Administrative Totals[1]	197	166	130	94	66	42	Above $57,500: 93		788
Comparison Salaries									
Faculty Salary Equivalents (12 months)[2]									
Medical School Faculty	6	13	4	8	27	27	18	221	324
All Other Faculty	34	81	52	84	63	74	62	355	805
Research Associates	57	51	41	13	13	Above $52,500: 16			180
Other Non-Administrative Exempt	173	135	59	25	6				409

1. These figures do not include the heads of academic departments. They do include 25 faculty members who hold full-time administrative posts; these 25 are not included in faculty counts below.

2. To establish an equivalency for comparative purposes as noted above, nine-month salaries are multiplied by 4-3. Professorial ranks of full professor, associate professor, assistant professor, and assistant professor subject to Ph.D. comprise the faculty reported herein.

NOTE: Total regular faculty count for 1982-83 is 1,152.

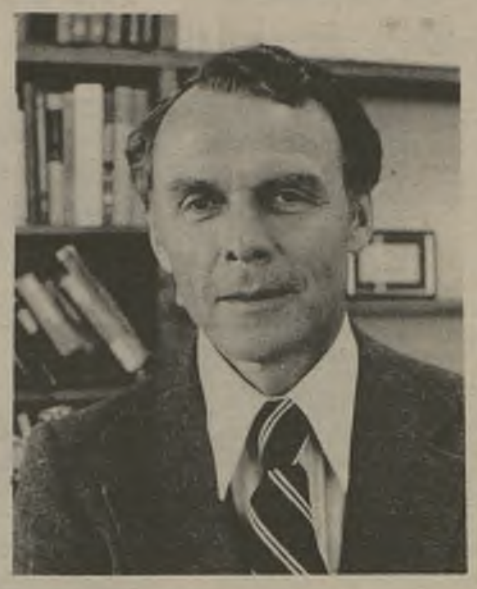
Cox helps write geologic timeclock, basic reference tool

A Stanford geologist and five colleagues have published a new version of an essential geologic reference tool, the time scale that traces the history of the earth.

"We're trying to synch our global watches," said Allan Cox, dean of Stanford's School of Earth Sciences. "We have to sit down and make sure we're all running on the same clock."

Geologists throughout the world will use the time scale to correlate and compare their own findings to past work and to each other.

"It provides a framework by which to ask a question like: Did dinosaurs become extinct at the same time in Europe and North America, or perhaps at the same time as a marine extinction?" said Cox.



Allan Cox

Multicolored chart

Cox collaborated with Cambridge University and British Petroleum Co. Ltd. scholars to assemble and document the new timetable, presented as a multicolored wall chart which capsulizes decades of geologic research. They also wrote a 100-page text with over 350 references to accompany the chart.

A useful tool

Cox and his British colleagues wrote the time scale "as a service to the profession," said Cox. "It doesn't break any new intellectual ground but it's an extremely useful thing that will be used a lot by students and researchers."

Geologists use such a time scale as they work to establish the order of events all over the world long before human history began. They gather clues from rocks about what the world was like when the rocks were forming. As natural historians they also need to know precisely when the rocks formed.

Petroleum geologists hunting for oil have a special interest in the timetable. They need to know the timing of two geologic events: first, the burying of myriad marine organisms whose bodies will turn to oil, and second, the bending of rock layers to form pockets that will trap oil as it rises toward the surface. This sequence is so important that many major oil companies, like BP, write their own time scales.

The new time scale has four time-lines climbing in parallel up a three-foot poster. Geologists use a different method of dating rocks to define the geologic ages on each scale. Several "tie points" are marked where two or three time-lines have well-documented events that occurred simultaneously.

The leftmost scale represents the oldest and most common type of dating: fossils. The time periods, most of which were originally dated by the fossils they contain, are named and ordered in a column. Human history fits into the top few millimeters.

Familiar names like Mesozoic and Pleistocene appear among the hundred or so eras, epochs, periods, and ages.

Radioactive decay

While marine fossils are nearly ubiquitous, it is radioactivity that gives the most consistent age estimates. Geologists calculate a rock's age using the steady rate of radioactive decay that commences as soon as a newly formed rock cools.

Fluctuations of sea level while rocks were forming provide more information to geologists. The new timetable includes two time lines estimating the sea levels, called "sea stands."

The magnetic time scale arose from Cox's own research and that of other geophysicists who measured the magnetism of land rocks--lava flows or limestone, for example. They used this rock magnetism to show that the earth's own magnetic field has flipped direction hundreds of times since the earth's formation. The earth's magnetic field gently magnetizes rocks as they form, by forcing some of their electrons to align with the field.

A continuous record

The ocean floor provides the most continuous record of the earth's magnetic field. Cox explained that as the North American and African continents creep away from each other (as they have been doing for 150 million years), the sea floor must grow. New, volcanic rock becomes magnetized as it forms at the fissure near the middle.

The result of the changing field is a magnetic pattern of stripes from which geophysicists like Cox can read the history of the earth's magnetic field, much like reading the history of a tree from its rings. Ships crossing the Atlantic can read this magnetic record on the ocean floor simply by towing a sensitive magnetometer behind them.

All this sleuthing would be unnecessary, Cox said, "if we had a clock that was running and printing a digital signal on every rock that was forming. But we don't. So we pick a physical body of rock and define the time that elapsed during the formation of that body of rock as our basic unit of geologic time.

"We then use all of the tricks of our trade to tie these units to other events in earth history that have left their marks on the rocks. That is exactly what we have tried to do in our new time scale."

—Julie Kiser

Trustees approve more planning funds for $42 million cogeneration plant

Stanford trustees have approved additional planning funds for a proposed $42 million cogeneration facility on campus.

Project approval will be requested from the board in October.

The proposed facility, to be located near the existing central energy plant at Jordan Way and Campus Drive, would produce both electricity and steam from a single fuel.

At their June 10 meeting, the trustees authorized $270,000 to continue preliminary design and cost estimating work, securing necessary permits for construction and operation, negotiating contracts for the purchase of natural gas fuel and sale of surplus capacity and energy, and developing a financial plan.

Since the concept of the cogeneration facility was approved in October 1981, the trustees have authorized nearly $1.4 million for planning purposes.

Early projections indicated energy cost savings of $8 million or more annually could be realized from a cogeneration plant.

$2 million more for COIN program

The Board of Trustees has authorized an additional $2 million for the Stanford second mortgage coinvestment program (COIN).

The June 10 action brings total authorized funds for this purpose to $32.3 million. The additional authorization will enable deans to meet commitments for housing assistance made to recent faculty recruits.

The trustees authorized a $9.3 million expansion of COIN in December, when it expected a successor program would be in place by June. The new program is expected to be ready for consideration by the trustees in September.

Dating the "Sunnyvale Girl" —The Garden of Eden *wasn't* in California

A group of scientists, including a Stanford anthropologist, reported Friday, June 10, that "Sunnyvale Girl," a skeleton believed by some to prove that humanity originated in California, is probably only an old Indian.

Instead of being 70,000 years old, as some suggest, the skeleton, found in 1971 in Sunnyvale, Calif., north of San Jose, is only between 3,500 and 5,000 years old, about the same age as other Indian skeletons found in California, the scientists reported in the current issue of *Science* Magazine.

"Sunnyvale Girl" has been the object of considerable controversy after Jeffrey L. Bada, a geochemist at the University of California's Scripps Institution of Oceanography in La Jolla, determined that she was 70,000 years old. That would have made the skeleton by far the oldest human skeleton ever found in North America, and would have upset the widely-held belief that humans first came to this continent 12,000-14,000 years ago from Asia.

Bada, using a method of determining age by analyzing amino acids, also dated a skeleton found in Del Mar, near La Jolla, as being 40,000 years old, also too old for the theory.

A book on the subject even suggested that the skeleton was proof that the Garden of Eden was in California, not the Middle East. The book attained some quasi-religious status.

But the group of scientists from UC Riverside, the National Science Foundation Regional Facility for Radioisotope Dating at the University of Arizona, and Prof. Bert Gerow, professor emeritus of anthropology at Stanford, have determined "Sunnyvale Girl" can't be more than 5,000 years old.

Evidence that the skeleton was not unusual goes back almost to its discovery. Several scientists, including Gerow, have claimed since 1972 that the surrounding soil and bone artifacts discovered with the skeleton made it impossible for it to be 70,000 years old.

"The human skeleton had a maximum age of 10,000 because it was included into a soil horizon that was dated at 10,000," Gerow said. "In other words, it had to be less than 10,000.

"Bada proceded to ignore all of this information, which is published, and just goes on merrily on his own way."

The new paper says that scientists at Arizona, using a new technique involving a cyclotron (atom smasher) have found support for his position, Gerow said.

The paper in *Science* lists four possible dates, three obtained with the cyclotron, one with a conventional Geiger Counter.

"They show that the dates range between 3,500 and 5,000, and they would average somewhere around 4,500."

That puts "Sunnyvale Girl" as something of a contemporary to other Indian skeletons found in the area, including Stanford Man 1, discovered by a graduate student on the Stanford campus in 1922, and Stanford Man 2, discovered here by Gerow in 1963.

Gerow said that the amino acid dating system developed by Bada, has been used to date ocean fossils, "but it hasn't been accepted by archeologists for bones."

He said people who want to believe Bada's theory do not want to study specific cases.

"Sunnyvale is a specific case for which we have all of the evidence but he won't look at all of the evidence. We're not just talking about just radiocarbon dates; we're talking about a knowledge of the geology. . . the formation of (San Francisco) Bay. . . settlement patterns. We know where most of the sites were located in relation to ground water.

"We're talking about a whole series of lines of evidence that point clearly to it being a recent, totally Holocene phenomenon and probably not more than 4,400 years old."

The *Science* paper was co-authored by R.E. Taylor and Louis A. Payen at UC Riverside, D.J. Donahue, T.H.Zabel, A.J.T. Jull, and P.E. Damon at Tucson.

Study underway

Ulcers may be treated with hypnosis instead of medicine

A gastroenterologist and a psychiatrist at Stanford University Medical Center are looking for volunteers to learn whether ulcers eventually may be hypnotized away.

"We're a long way from having any definite answers, but we have at least an indication that hypnosis might lower stomach acidity for some people," said Kenneth Klein, clinical instructor of medicine and a specialist in diseases of the stomach and intestines.

"Since lowering stomach acidity has been shown to aid in ulcer healing, there is a possibility that hypnosis exercises might someday be a useful substitute in some cases for medication in the treatment of ulcers," he added.

> ***We're a long way from having any definite answers, but we have an indication that hypnosis might lower stomach acidity for some people."*** **–Dr. Kenneth Klein**

Klein is working with David Spiegel, associate professor of psychiatry, who has studied the medical uses of hypnosis.

Klein cautioned that his study is intended only to give an indication—not proof—of whether hypnosis might be useful as an ulcer treatment. If the technique is eventually found to heal ulcers, it would only be helpful for the 25 to 50 percent of the population who are good hypnotic subjects, Klein said.

Volunteers for the current study should be healthy adults who will be tested to determine whether they are hypnotizable. (Former ulcer patients are acceptable if they are showing no current symptoms, Klein said). Their stomach acidity will be analyzed using a tube inserted into the stomach through their nose after a local anesthetic is applied. Then a hormone, pentagastrin, will be administered to stimulate acid production, and stomach acidity will be compared with the first test.

A week later, the volunteers will return to the Medical Center and their stomach acidity will be reanalyzed. But this time, half the volunteers—about five persons—will be hypnotized and given coaching and suggestions intended to lower their stomach acidity. About five other volunteers will repeat, again without hypnosis, the test taken earlier to serve as controls.

So far, one volunteer has completed the procedure, his stomach acidity declined markedly under hypnosis, Klein said.

"Hypnotism has been viewed with some skepticism by the medical community, but after 10 years of experience with it, I am quite convinced of its ability to dramatically effect many physiological processes. I'm most anxious to study its potential effects in my own specialty, gastroenterology.

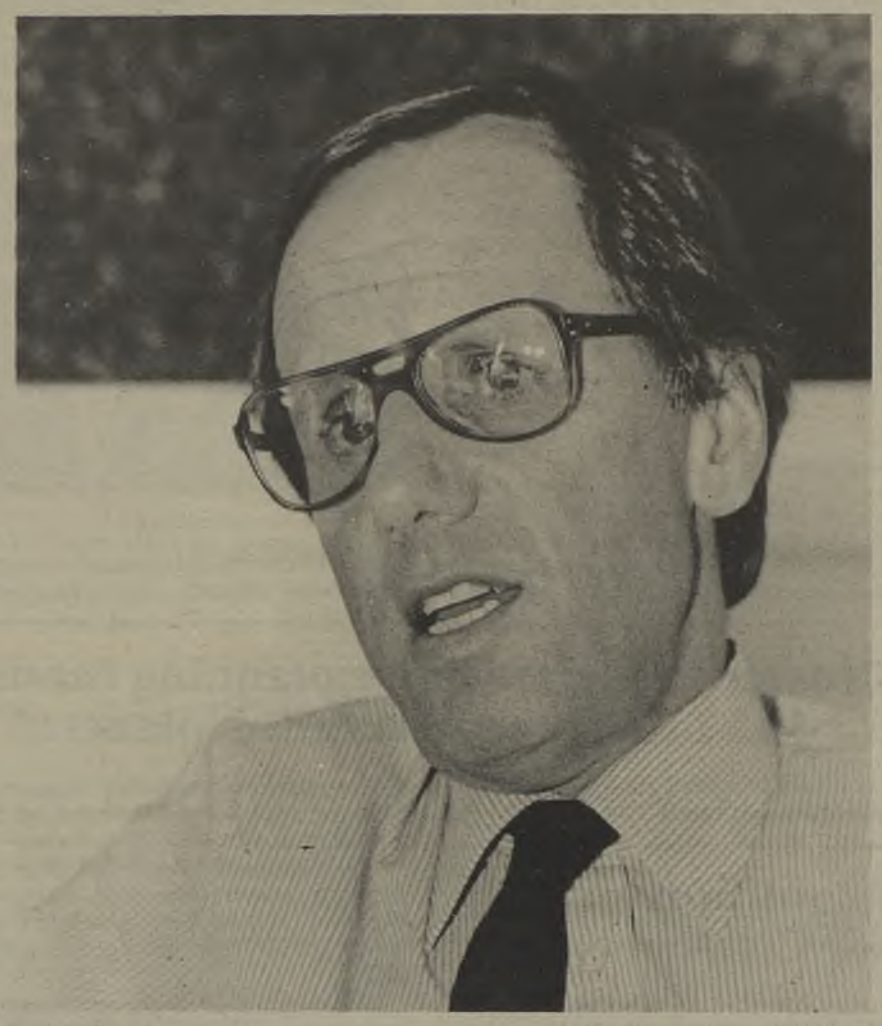
The physician added that the current study could begin to offer some scientific answers about what mechanisms trigger gastric acid production.

Klein explained:

"If a person can control acid production through the mental concentration or trancelike state which hypnosis brings, we might be able to learn more about how acid production is triggered. We don't know, for example, the relative importance of the central nervous system, the vagus nerve and various hormones in causing gastric acid secretion. If we can prove that hypnosis—which presumably acts primarily through the central nervous system—can moderate acid production, we can begin to explore the intervening pathways."

Klein said the medication most often

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Trevor Clay

Education leads to better image, nursing leader says

Education is the key to advancing the British nursing profession in its efforts to catch up with its American counterpart, said one of the country's nursing leaders.

Addressing a group of Stanford University Medical Center nurses at the third distinguished lecture series dinner Thursday (June 16), Trevor Clay, general secretary of the Royal College of Nursing of the United Kingdom (RCN), said the "slowness with which the nursing process has caught on in Britain is a measure of the deep-seated conservatism among many nurses: a reluctance to think for oneself bred by an over-hierarchical nursing structure and a less than enthusiastic medical profession."

As general secretary, Clay is responsible for the staff and services, and is chief negotiator of about 60 percent of the country's nurses who belong to the RCN, which functions as both a professional and labor organization.

Advancing the nursing process, Clay continued, will improve clinical expertise and standards of care. As such, the RCN has proposed a new structure based on four key principles: individual nurse's accountability, the role of the ward sister (head nurse), professional development through continuing education, and promotion dependent on fulfillment of specific criteria at each step in the nurse's career.

Many of the issues British nurses are now facing are the same that American nurses have encountered in recent times. It's essential, Clay stressed, that British nurses pursue academic education in addition to the clinical skills they acquire in the "apprentice training" that now constitutes the major portion of education for about 95 percent of the country's nurses. Many nurses, he added, are reluctant to get a university-based education.

"Nurses as a group will only be taken seriously as total health professionals when they are seen as such by their patients and clients, and—more importantly—when they see themselves in this way," Clay said. "There is only one way of effecting this change of attitude among nurses and that is through education."

The profession's attempt to upgrade its image must also deal with resistance from physicians, and from the public, Clay continued. Physicians "see us as a young profession seeking to encroach upon the territory of an old, established one," he said. Rather, he explained, he wants nurses, physicians, and other health care providers to enter a collaborative relationship. "I want nurses to be more accountable not just to the next person on the hierarchy, but because she feels like a qualified practitioner, responsible for the patients she cares for."

The nurse-physician relationship will be effected by the change in public image as well, he continued. A campaign has been launched to rid the profession of its image as "dedicated spinster," doctors' handmaiden," and "battleaxe," Clay said.

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Heart-lung patient "critical but stable"

The fourteenth heart-lung transplant patient is in critical but stable condition following the operation that began early Friday morning (June 17) at Stanford University Medical Center.

The patient, 29-year-old Susan Teixeira, from Ludlow, Mass., had been waiting for the operation for 10 months.

She was taken off the respirator Monday (June 20) at 7 a.m.

Teixeira went into the operating room at 7:30 a.m. Friday, where the transplant team, headed by Dr. Stuart Jamieson, assistant professor of cardiovascular surgery and head of the heart-lung program, replaced her diseased heart and lungs with those of an unidentified donor.

Her husband, Dave, and two children, ages 3 and 4, have been riding out the wait with her in their temporary home in Mt. View.

Teixeira was diagnosed as having primary pulmonary hypertension nearly two years ago. Her physicians in Massachusetts first blamed nerves for her shortness of breath, chest pains, insomnia, and edginess. She then began retaining water—40 pounds in less than a month—and her blood began seeping through her veins.

Primary pulmonary hypertension is a fatal lung ailment with no known cause and no known cure. The lungs become irreparably damaged due to the high blood pressure resulting from a poorly-pumping heart, necessitating replacement of both organs.

Ten of the 13 patients who underwent heart-lung transplants at Stanford are living today. The operation was first performed here in March, 1981, following the discovery of the immunosuppressant drug Cyclosporine, which helps prevent organ rejection and promotes healing.

AIDS: hospital authorities answer some common questions

Acquired immunodeficiency syndrome (AIDS) has gained widespread, and often alarming publicity recently. Dr. Thomas Merigan, chairman of the department of infectious disease, and Carol Oakes, R.N., assistant director of care review/risk management for the Stanford University Hospital, helped to prepare the following column to help Stanford community members separate fact from fiction on current understanding of the syndrome and how it is spread.

What is AIDS?

Acquired immunodeficiency syndrome strikes the immune system, zeroing in on two types of T-lymphocytes (T-cells), a class of white blood cells crucial to the human body's ability to battle infection. Helper T-cells, the generals of the immune system that regulate the army of cells that mobilize each time a foreign substance or organism enters the body, usually are found twice as frequently as suppressor T-cells in a healthy person. But in a patient with AIDS, suppressor cells, which normally keep the immune system from running amok, outnumber helper cells. In addition, the overall number of T-cells is reduced. As a result, the AIDS patient's immune system is stripped, leaving him vulnerable to infections that a healthy person can easily thwart. Incubation time between the exposure to AIDS and the onset of symptoms has been between six and 18 months in some cases.

What are some of the diseases affecting AIDS patients?

About 90 percent of the cases studied have had one or both of two rare diseases: a usually rare type of cancer known as Kaposi's sarcoma, and *Pneumocytosis carinii*, a parasitic infection of the lungs. Other infections that have afflicted AIDS patients include yeast infections, cytomegalovirus (CMV), herpes, and toxoplasmosis.

How serious is AIDS?

AIDS has a high mortality rate, ranging from 20 to 70 percent, depending on the specific infection. Patients don't die from AIDS; they die from the serious infections that develop because AIDS has stripped away most of their natural immunity to disease. The Centers for Disease Control report that, as yet, they know of no AIDS patients who have regained immunity, so that even if a specific bout of illness can be curbed, repeat infections are likely.

Is AIDS a new disease?

Yes, apparently so. Careful studies show no clear evidence of AIDS before 1979. The origins of the disease are still unclear, although many scientists now believe that AIDS is caused by an unidentified virus that specifically attacks lymphocytes. Such a virus might be a mutated form of a more common human or animal virus, and probably interacts with a number of other factors to cause disease.

Are there any symptoms characteristic of AIDS?

There are no clear cut symptoms to indicate a loss of immunity, but many patients with AIDS complain of fever, a loss of appetite, sudden weight loss, extreme fatigue and enlargement of the lymph glands. These symptoms often develop over a period of several months before becoming severe enough to be markers for specific diseases. Early symptoms of Kaposi's sarcoma include brown or blue-violet spots that can appear anywhere on the skin or in the mouth. As the disease progresses, the spots grow larger and may become open sores. Pneumocystis pneumonia triggers symptoms similar to any other form of severe pneumonia, highlighted by fever and difficulty in breathing.

Is there a laboratory test for AIDS?

There is no specific laboratory test that can diagnose AIDS patients. However, 95 percent of AIDS patients show an identifiable change in the numbers of different types of cells in their immune system. This difference is currently being used at the Stanford Medical School Blood Bank as an indicator of donated blood that might inadvertantly have come from a person with AIDS. The blood screening method is not perfect. Sometimes a harmless viral infection can initiate the same change in the blood cells, and some healthy people contain the unusual characteristic naturally in their blood. But physicians at Stanford's blood bank feel that the very small amount of blood lost because it was mistakenly thought to have come from a person with AIDS is worth the extra protection it affords blood recipients. Researchers around the world are currently seeking a less expensive, more effective method of screening blood for AIDS.

Who is at risk of contracting AIDS?

Currently, the people known to be at highest risk for infection are homosexual men with many partners (75 percent of the cases), intravenous drug abusers, hemophiliacs and Haitians. The link between the first three groups appears to be exposure to blood or blood products. Whatever spreads the disease seems to be present in blood and semen, and perhaps mucus and saliva. Airborn spread, through a cough or a sneeze, and spread through casual contact with a person with AIDS do not seem likely means of disease transmission.

Needles shared by drug users provide an obvious route of transmission. Hemophiliacs who lack a vital clotting factor in their blood often receive a transfused concentrate of the factor to stop their bleeding. Such a factor, which occurs naturally in minute quantities in blood plasma, may be pooled from hundreds of donors for one transfusion. The mode of transfer of disease among homosexuals is unknown, although the small amount of bleeding from the lining of the anus that can occur during anal intercourse has been suggested as a likely possibility. The Haitian victims, as yet, do not fit the blood-transmission pattern.

A few people who don't fall into the identified high risk groups have contracted the disease, but nearly all seem to have had some close connection to one of these groups. The detection of AIDS in a few women and babies, for example, does not mean that all mothers and babies are at risk. The women who developed the syndrome had sexual partners who had AIDS. Except for the few children who have acquired the illness through blood transfusion, babies who contracted the disease were born to women who probably had AIDS themselves and may have transmitted the illness during pregnancy or while giving birth.

Are hospital employees at risk for contracting AIDS?

To date, no cases of AIDS have been reported among those caring for the slightly more than 1500 AIDS patients around the world. Researchers studying the disease recommend that hospital personnel take the same precautions when caring for AIDS patients as those used for patients infected with hepatitis B virus, which seems to follow the same pattern of transmission as AIDS.

Guidelines from the Centers for Disease Control in Atlanta, Georgia, suggest that "patient-care and laboratory personnel should take precautions to avoid direct contact of skin and mucous membranes with blood, blood products, excretions, secretions, and tissues of persons judged likely to have AIDS."

A private room, disposable dishes, careful bagging of linen and trash as well as the use of gowns, gloves and sometimes masks (depending upon the specific infection) are standard procedure in caring for these patients at Stanford. Members of the health care team are advised to use special care while drawing blood and disposing of needles to avoid pricking themselves. Any specimens of blood or body secretions sent from AIDS patients to the hospital laboratories are labeled as having come from patients in isolation. Laboratory workers should avoid getting such specimens on skin, mucus membranes or mouth pipettes.



Giving of oneself to help others

The Stanford University Blood Bank goes on location to collect pints of the vital resource. Here, Hewlett Packard (Palo Alto) employees volunteered to donate blood. The Blood Bank plans to hold drives at Wilbur Hall, June 27 from 3:30-7:30 p.m., and at SUH, July 6 from 11 a.m.-4 p.m.

News Notes

Spotlight on...

Dr. James Loomis, *assistant professor of anesthesia and pediatrics, was given a teaching award by the pediatrics housestaff.*

Each year the housestaff in that department chooses one faculty member to receive this honor at the time of graduation. Loomis' award is especially noteworthy in that his primary appointment is in anesthesia.

* * * *



Dr. Norman Lewiston, *associate professor of pediatrics (clinical), was named Secretary of the Cystic Fibrosis Club at the recent meeting of this group in Kansas City, Missouri.*

Among other activities, the Cystic Fibrosis Club sponsors an annual meeting which spotlights research in cycstic fibrosis and related genetic disease.

The Cystic Fibrosis Foundation is located in Rockville, Maryland.

* * * *



Dr. J. Kent Garman, *associate professor of anesthesia (clinical), completed the 26th session of the Stanford Sloan program of the Graduate School of Business at Stanford University.*

Garman was awarded a Master of Science degree in Management at graduation ceremonies Sunday, June 12.

The Sloan program is geared towards executives in middle management, from both the U.S. and abroad, who are expected by their organizations to rise quickly to the senior management level. They come from both the public and private sectors, to engage in very intensive study during the nine-month program which teaches general management skills. Acceptance into the program is highly competitive.

Garman was on sabbatical leave since last September from his Medical Center duties. His participation in the Sloan program was funded by a Henry J. Kaiser Family Foundation fellowship.

(Dr. James Silverman, chief of staff at SUH, is also a graduate of the Sloan program.)

Dr. Frederick Behling, *clinical associate professor of surgery, received the Tenth Annual President's Cup Challenge Award from the 8,000-member National Athletic Trainers' Association (NATA).*

The silver cup was presented to Behling at NATA's annual awards banquet in Denver, Colorado, last Tuesday evening, June 14.



Behling is an orthopedic surgeon with the Palo Alto Medical Clinic, the Health Care Division of the Medical Foundation. He has been team physician to Stanford University's sports teams (since 1961), the San Francisco Giants baseball team, the annual East-West Shrine Games, and until recently the San Francisco Forty-Niners football team. He is active with several other professional and athletic organizations.

NATA cited Behling's "efforts over the past 25 years toward encouraging increased professionalism and public acceptance of the athletic training profession, and for initiating legislation which has markedly reduced the injury risks in contact football."

He has strongly advocated eliminating the use of the head and neck in blocking and tackling in football, and has been instrumental in greatly reducing other hazards of the game, NATA officials said. He is an advocate of youth health care and physical fitness.

The award is presented each year to a doctor of medicine or osteopathy for an outstanding contribution to sports medicine.

* * * *

Dr. Edward H. Shortliffe, *assistant professor of medicine and computer science, has been appointed chairman of the Biomedical Library Review Committee for 1983/84 by the National Library of Medicine.*

The committee reviews grants and applications dealing with a variety of topics in medical library and medical computer science.

You should know...

The Stanford University **Blood Bank** *presented a certificate of appreciation last week to the Hospital* **Print Shop** *staff, in recognition of that service's valuable contributions to the blood bank's activities.*

SHDPP seeks volunteers for study

Volunteers are needed to participate in a study aiming to clarify the relationship between blood pressure and moderate alcohol intake.

Researchers based in the Stanford Heart Disease Prevention Program (SHDPP) are seeking 40 to 60 healthy, non-smoking men, over 30 years old, who drink one to four alcoholic beverages per day. The study will run from July 7 through the end of August.

Participants will be asked to abstain from drinking for a three-week period, and to record their alcohol intake throughout the rest of the study period. They will make short weekly visits to the SHDPP's clinical facility on Welch Road, to have their blood pressure, weight and height measured. Volunteers are expected to gain a better awareness of their own health status.

Principal investigator for this new study is Dr. Stephen Fortmann, director of communication studies for the SHDPP. For further information or to volunteer, call 497-5046, from 1 to 5 p.m. weekdays.

Hypnosis...

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prescribed to relieve ulcers works by lowering stomach acidity, even though acidity might not be the only cause of ulcers.

If hypnosis is effective, some patients might be able to avoid taking any medication for their ulcers, Klein said.

Patients, he said, could be taught to self-induce a hypnotic trance several times daily at key times when controlling acid production is crucial. This would eventually be less expensive than drugs and would bypass the potential side effects which are always present when drugs are given.

Klein explained that hypnosis was a state of intense concentration, not relaxation, so that techniques of relaxation cannot be used as substitutes for hypnosis. He added that the ability to be hypnotized appears to be innate and cannot be acquired.

"Easily hypnotizable people don't appear to show any consistently common qualities, except perhaps that they have the ability to concentrate intensely and have long attention spans.

"We will be giving our volunteers a test which will indicate their ability to be hypnotized. The test involves answering some questions, and measuring how they respond to a brief hypnotic session," the researcher said.

Persons interested in participating in the study may telephone Klein at (415) 497-5488.

Persons who complete the study will be paid $40. Each of two sessions will take about 2 1/2 hours, he said.

Klein said there were no risks from hypnosis. The gastric tube may be uncomfortable for some participants and cause a minor sore throat, or gagging as the tube is inserted.

The hormone to stimulate acid production may cause brief nausea or flushing and rapid heart rate, while a very rare subject might suffer an allergic reaction, Klein said.

Nursing...

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And, as in the U.S., nurses are working to get higher wages. "Any material advantages gained will no doubt be offset by some tarnishing of our public halo," he observed. But, he conceded, a little tarnishing would be fine "if the resulting image were to be a closer approximation to reality."

The make-up of the nursing profession has changed in recent years, Clay went on. "Nurses are not a workforce made up of an army of unmarried women anymore." Many are married with children, and about 10 percent are men. About 50 percent of the men, however, are top managers and educators.

Clay also made a plea for internationalism among nurses, especially to help third world countries set up nursing systems. "Newspapers in Britain regularly raise a hue and cry over the issue of British-trained nurses going abroad, but they ignore the fact than nine out of ten return enriched by the experience," he said. We have an enormous amount to gain from sharing our differing experiences with each other."

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JUNE 22

"Small Beginnings"—Today is the final day of this display, an overview of nursing care in the Intensive Care Nursery. Sponsored by nursing staffs of ICN, extended care nursery and intermediate intensive care nursery. 9 a.m. to 5 p.m., outside the hospital cafeteria.

Div. of Hematology Wednesday noon conference: topic to be announced. Speaker: Dr. Joseph Miletich (Washington University School of Medicine, St. Louis). 12 noon, S102.

Dept. of Clinical Social Work and the American Cancer Society: "I Can Cope"—a program for cancer patients and their families. 5:30 to 7:30 p.m., room TF-122c. To register, call 497-5091.

Hematology Support Group: A meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to 12 noon, room TF-122c. For further information, call 497-6961.

JUNE 22 and 23

Dept. of Pharmacology Second International Symposium on the Biochemical Basis of Drug Action. Final two days of the symposium, to be held at Fairchild Auditorium. A fee is charged. For further information, call 497-6834.

THURSDAY, JUNE 23

Div. of Surgical Pathology Conference: "Spindled Neoplasms of Breast"—Dr. Gertrude Crabtree. 8 a.m., L201.

Dept. of Medicine grand rounds: "Comprehensive and Cost Effective Management of Patients after Myocardial Infarction"—Dr. Robert DeBusk. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JUNE 24

Dept. of Pediatrics grand rounds: "Snakebites"—Dr. Frederick Lloyd. 8 a.m., M106.

SATURDAY, JUNE 25

Eating Disorders conference: sponsored by the Dept. of Psychiatry and Behavioral Sciences. A one-day conference to inform parents and the community about modern treatments for obesity, bulimia, and anorexia nervosa. The public is invited, and a fee is charged. 8:45 a.m. to 4 p.m., M104. For further information or to register, call 497-7871.

MONDAY, JUNE 27

Dept. of Gynecology and Obstetrics REI (Reproductive Endocrinology/Infertility) conference: "Hirsutism"—Dr. Alan Shapiro. 8 a.m., A336.

WEDNESDAY, JUNE 29

Div. of Hematology Wednesday noon conference: "Pediatric presentation"—Dr. Bertil Glader. 12 noon, S102.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Research principles emphasize individual responsibility

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In a minority report to the Senate from the committee, Garwin noted that the statement of principles concerning research, adopted by the faculty 12 years ago, did not envision the trend toward large scale, collective research.

This policy affirms that "the individual scholar should be free to select the subject matter of his research, to seek support from any source for his work, and to form his own findings and conclusions."

It also states that "the University. . . .should allocate space, facilities, funds, and other resources for research programs based on the scholarly and educational merits of the proposed research and not on speculations concerning the political or moral impropriety of the uses which might be made of its results."

While these principles circumscribe the University's role in research, the statement adds, "they in no way diminish, and indeed they reinforce, the individual's personal responsibility to assure that the source of funding for his research, and its perceived applications, are consistent with his own judgment and conscience."

SLAC faculty concern

A majority of the SLAC faculty believe their personal responsibility would be "abrogated" if the weapons-related work were conducted at SSRL, Garwin said.

If they refused to provide services to those aspects of SLAC which serve SSRL, this action "might be construed as nonperformance of academic duty, with possible disciplinary consequences," he noted.

The "inadequacies" of the present policy "will become increasingly apparent with present research trends," he argued.

Prof. James Meindl, electrical engineering, chairman of the Committee on Research, noted that 85 percent of the controversial proposal dealt with the applications of high energy physics to other sciences. Roughly 15 percent, as measured in dollar costs, concerned calibration of radiation detectors. While intended to measure x-rays from weapons-testing, other applications "abound," he said.

Prof. Robert Mozley of SLAC said present policy "isn't adequate—it isn't working" where "two bigs labs are intermingled."

The controversial project seeks $5 million from the Department of Energy's Office of Military Applications and an additional $1 million from the University of California for research by UC faculty.

Meindl noted that the committee members objected more to an "outside" proposal than they would to one from Stanford faculty.

Mozley said "it's not the research itself, it's the perception of what we're contributing to" that leads many SLAC faculty to object. "It's working for Project R"—work at Lawrence Livermore—"very direct involvement."

Asked to examine "the volume and character of weapons-related research at Stanford," the Committee on Research concluded that "virtually all research at Stanford could conceivably have some military application."

Prof. Ronald Rebholz, English, asked what military applications might stem from his studies of Shakespeare.

Vice Provost Gerald Lieberman, dean of graduate studies and research, said the committee felt that if war-related research was put on a scale of zero to 10, most research at Stanford would fall in the range between one and nine.

Prof. Bernard Roth, mechanical engineering, urged the committee to examine the impact of "very large differences" in research funding growth between the Department of Defense and the National Science Foundation, particularly where one agency provides a majority of the funding for a Stanford department.

Computer science now gets 63 percent of its research funds from Defense, he said, and electrical engineering about 58 percent.

Exposed to pressure

This can leave the institution more exposed to pressure—if the Defense Department attempts to classify more information, for example, he added. While universities may welcome the "floodgates of expansion" now they could find themselves in trouble later, when federal dollars diminished.

Prof. Gerald Gillespie, German studies, argued that openness remains a "very important criterion" for research, since this means any results can be drawn upon by every other conceivable researcher, if desired.

Mozley noted that it was sometimes difficult to obtain information on the declared intent of research, especially when work unit summaries aren't public.

Prof. Kenneth Melmon, medicine, said "naive individuals in the process of being educated" should be encouraged to think about the implications of their research. But it was hard to understand the "servitude" of full professors.

President Donald Kennedy noted that faculty in government contract laboratories may have centrally assigned duties, unlike principal investigators in a smaller scale research group.

At a recent meeting with SLAC faculty, Kennedy said he understood that department or school faculties might make themselves subject to "research policies that are somewhat more stringent than the university as a whole, provided that these policies do not conflict with university policy."

But such actions are likely to have effects on other units of the university or funding agencies that would make them "not particularly practical," he added.

Mozley noted that what the SLAC faculty may be consulted by the director, control remains with the director. Prof. Wolfgang Panofsky, SLAC director, has made it clear that SLAC would "cooperate fully" if the controversial proposal is accepted by SSRL and the University.

—Bob Beyers

TIAA-CREF. . .

continued from page 1

total compensation for retirement is "desirable and worthy of encouragement," the task force said, it clearly is "less than optimal" for those with relatively low salaries and high expenses, including housing.

President Donald Kennedy noted that if the matching requirement were dropped, "those who are willing to make the contribution would subsidize those who were not," since all the funds would come from those available for faculty compensation.

Prof. Bernard Roth, mechanical engineering, called on the Senate to "get rid of the popular wisdom" and "deal with science" in showing more concern for older persons.

Challenging past statements by Humanities and Sciences Dean Norman Wessells that brain cells diminish with age, he cited a *Nature* magazine article which claimed "no significant decline" in psychometric test data on individuals as their average age rose from 64 to 73.

Hastorf, a psychologist, responded there was pretty clear evidence that short term memory diminishes with age.

A veteran observer with diminished capacity could recall no similar semi-scientific argument in the Senate since 1968.

—Bob Beyers

$3.2 million for 14 condominiums

The Stanford Board of Trustees has authorized $3.2 million for construction of 14 condominiums for faculty housing on Rural Lane.

The 3.4 acre site is adjacent to the 13th hole of the Stanford Golf Course.

The project will include seven pairs of duplexes. Two basic floor plans will be offered: 1) a one-story unit of 1,900 square feet with two bedrooms plus den, and 2) a two-story plan of 2,100 square feet with three bedrooms plus den.

A low block wall may be built along Alpine Rd to serve as an acoustical buffer.

In February, the trustees approved the concept of 15 clustered housing units and an application for annexation of the unincorporated portion of the site to the city of Menlo Park.

The reduction to 14 total units came in response to comments from the Menlo Park Planning Commission and the University Committee on Land and Building Development.

Construction is expected to start sometime between September 1983 and April 1984 with completion eight to 12 months later.

SSRL Vacancy announcement

A Research Associate position is available at the Stanford Synchrotron Radiation Laboratory starting after September 1, 1983 to work with Consulting Prof. R. Z. Bachrach. The renewable term appointment will be from 1 to 3 years.

Candidates should have experimental research experience in Semiconductor Surface Physics or Soft X-ray Radiation Physics and should have demonstrated experience with synchrotron radiation related instrumentation and computer control.

The Research Associate will participate in experiments utilizing absorption or photoemission spectroscopy to probe the atomic and electronic structure of condensed matter. The Research Associate will also participate in the implementation of SSRL Beam Line WUNDER, a high performance soft X-ray spectroscopic capability using a periodic magnet insertion device in SPEAR.

Write to: Prof. R. Z. Bachrach, Stanford Synchrotron Radiation Laboratory, SLAC Bin 69, P.O. Box 4349, Stanford University, Stanford, CA 94305.

Stanford University is committed to equal opportunity through affirmative action in employment and we are especially eager to identify minority persons and women with appropriate qualifications.

Telecommunication and SUNet update

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allow most moves and changes to be made (using) software rather than hardware changes. . .

"A modern system will allow for much more efficient use of outside and long-distance trunk lines."

The new Telecommunications Building is estimated to cost $1.5 to $2 million. The present facility is not large enough to accommodate the new equipment and is located far from the main concentration of telephones on campus. Nearly two-thirds of Stanford's phones are in the triangule bounded by the Main Quad, Forsythe Hall and the Medical Center. The new building would be located atop the underground thermal storage reservoir, or "cool pool."

Bids on the new telephone project will be received this summer. Project approval will be sought from the board in October.

At their June meeting, the trustees approved $1.6 million for the first phase of the energy management and control system. Modern, proven, digital controls will permit more effective management of utilities. This is expected to reduce electrical consumption 1.9 percent, steam by 0.9 percent, and chilled water by 5 percent, providing an internal rate of return of 21 percent on the investment.

Design of the campus-wide, broadband SUNet is nearing completion. Interbuilding prototype network links have been installed, with completioon of the first phase of the prototype network planned for this summer.

Engineering design and cost estimates are expected to be complete this summer. Project approval will be sought from the trustees in October.

Tennis lessons

Small group tennis lessons will again be offered to staff and-or their families on weekdays or evenings. Players are grouped by ability in these lessons taught by Dick Gould's staff.

Call 497-1160 on weekday mornings to receive detailed printed information and registration form.

Board of trustees act on variety of investment decisions

The Board of Trustees took the following actions at its meeting on June 10, 1983:

1) Approved actions already taken by the Office of the Vice-Provost and Dean of Graduate Studies and Research to enter into contracts and grants for research for the month of April, 1983, totaling $12,745,298. The monthly average of such awards for the twelve-month period ending April 30, 1983, was $14,608,086 compared with $13,312,356 for the corresponding period the year before.

2) Accepted gifts received during the month of May, 1983, totaling $3,971,217.

3) Accepted statements concerning:

a) Offsets and revisions in the Operation Budget for 1982-83.

b) The Conditional Budget for 1982-83.

c) The fact that the balance of the Operating Budget Reserve was $2,695,000 on August 31, 1982, and is projected to remain that at the end of the fiscal year on August 31, 1983.

4) Elected its officers for 1983-84 as follows:

President: William R. Kimball

Vice-Presidents: Nancy Barry Munger, Barbara Denning Finberg, John A. Young, John T. Packard.

5) Approved expenditure for 1983-84 from Merged Endowment Pool-A of the amount of 97 cents per share, first from ordinary income earned, and next from prior year's income that had been reinvested; and of the amount of 96 cents per share from Merged Endowment Pool-B, first from ordinary current income, next from prior year's income that had been reinvested, and, if ordinary income is not sufficient, from realized net appreciation in the value of assets. Expenditure of net appreciation, however, shall not exceed one percent of the average share value of Merged Pool-B, currently 21 cents per share.

6) Raised the limit of the advance to the Alpine Chalet, Inc., to $500,000 for a term not to exceed five years.

7) Approved the project and design for construction of fourteen condominiums on Rural Lane for eligible faculty and staff; authorized a total budget of $3,210,000; and approved provision of interim financing for construction from the Expendable Funds Pool with repayment by proceeds from sales of the condominiums.

8) Authorized the Vice-President for Business and Finance to invest up to an additional $2,000,000 from the Merged Investment Pools under the Second Mortgage Coinvestment ("COIN") Program to provide "COIN" funds for eligible recruits for faculty and senior staff.

9) Received a report summarizing performance of investments in the past calendar and fiscal years, changes in the mix of assets, and other matters concerning the University's endowment.

10) Heard a report on the University's activities in the lending of securities.

11) Heard a report on the status of further possible diversification, internationally, of the University's investment funds.

12) Heard a report from the Subcommittee on Real Estate Investment of the Committee on Investments.

13) Approved budgets for 1983-84 for the Auxiliary Activities and Service Centers: Student Housing, Food Service, and Conferences; Stanford University Press; Tresidder Memorial Union, and the Department of Athletics, Physical Education, and Recreation.

14) Authorized the Vice-President for Business and Finance to execute external financing from a bank or banks or via taxable bonds for an amount not to exceed $9,000,000, the proceeds to be used to provide working capital for the Faculty Practice Plan in the Medical Center.

15) Concerning the proposed facility for cogeneration of energy:

a) Authorized additional funding of $270,000 to continue activity on design, receipt of permits, financing, and negotiating of contracts, carrying the project forward to December 31, 1983, for a total authorization to date of $1,390,000.

b) Authorized funding of this maximal addition by an interim internal advance or an interim advance from external borrowings for General and Research Equipment to be replaced upon final approval of the project by permanent external financing.

16) Concerning the Electronic Communications Media Project, authorized various approvals for site, projects, expenditures, and funding of expenditures for the Telephone Replacement Project, the Distribution System Project, the Energy Management and Control System, and the Stanford University Network (SUNet).

17) Concerning renovation of the south wing of the building at 800 Welch Road, approved the project, design, total budget of $1,756,000, and funding by an interim internal advance to be replaced, when appropriate, by permanent long-term debt financing through the California Educational Facilities Act or other external sources.

18) Approved the design for the renovation of the Angell Field Track House.

19) Approved the concept and site for the expansion of the Bowman Alumni House.

20) Approved the concept of this project to improve facilities in the Stadium.

21) Authorized the Vice-President for Business and Finance to execute a Fourth Amendment to the University's lease with the United States government (Stanford Linear Accelerator Center—SLAC) adding 5.1 acres to its leasehold.

22) Authorized transfer to term endowment of half of the gifts made by Leslie Anne Weeks for endowment and of half of the matching funds earned by such gifts, to be expended over a 10-year period for fellowships at the Stanford Humanities Center, provided that the total to be transferred from gifts of Marta Sutton Weeks and Leslie Anne Weeks shall not exceed $500,000.

23) Established the Catharine and Howard Avery Professorship in the School of Medicine.

24) Heard a report on the impact on the University's debt of three projects currently being considered for debt funding.

25) Heard a report on the proposed Environmental Safety Facility.

26) Heard a report on progress toward reconstruction of the Red Barn and Stable.

27) Heard a report on the Samuel J. and Ileen B. Campbell Wing of the Braun Music Center.

28) Heard a report comparing projected financial results for auxiliaries and non-academic service centers for 1982-83 with those for 1981-82.

29) Heard a report on the budgets of Operations and Maintenance and the Stanford University Investment Management Organization (SUIMO).

30) Received the Annual Insurance Report.

31) Received a report on the status of construction on campus.

32) Heard an informal report from Fred A. Hargadon, Dean of Admissions, and Robert P. Huff, Director of Financial Aids.

33) Authorized an increase of up to an additional 10 percent of the amount originally subscribed, or $500,000, in Endowment and Foundation Realty Partnership—JMB I.

34) Authorized an investment of $5,000,000 in Endowment and Foundation Realty, Limited—JMB II.

35) Authorized an investment of $25,000,000 in the Common Fund-International Fund.

Governing board approves faculty appointments, promotions, titles

On June 10, 1983, the Board of Trustees approved the following actions, effective September 1, 1983, unless indicated otherwise.

PROMOTIONS:

Thomas E. MaCurdy, associate professor of economics.

REAPPOINTMENTS:

Carson E. Agnew, assistant professor of engineering-economic systems; Jan Ehrenwerth, assistant professor of anesthesia; Michael Eliastam, assistant professor of surgery and medicine; James W. French, associate professor of pediatrics (clinical); Anthony E. Howes, assistant professor of radiology; J. William Langston, assistant professor of neurology; Raymond E. Levitt, associate professor of civil engineering; Abdul Matin, assistant professor of medical microbiology; Thomas A. Raffin, assistant professor of medicine; Ron. G. Rosenfeld, assistant professor of pediatrics; Peter Rudd, assistant professor of medicine; James Silverman, associate professor of radiology (clinical); Kelley M. Skeff, assistant professor of medicine; Richard M. Swanson, assistant professor of electrical engineering; Frank M. Torti, assistant professor of medicine; Bruce G. Wallace, assistant professor of neurobiology; Stuart Young, assistant professor of radiology.

APPOINTMENTS:

Joel S. Beinin, assistant professor of history; Thomas J. Campbell, associate professor of law, 7-1-83; William T. Clusin, assistant professor of medicine, 7-1-83; John W. Etchemendy, assistant professor of philosophy, 7-1-83; John W. Frost, assistant professor of chemistry; Robert W. Gordon, professor of law, 7-1-83; Lawrence D. Hammer, assistant professor of pediatrics, 7-1-83; Frederick O. Holley, assistant professor of anesthesia, 7-1-83; Holly Hosford-Dunn, assistant professor of surgery; Donald C. Johanson, professor of anthropology (teaching); Daniel S. Kapp, associate professor of radiology, 7-1-83; Antonio C. Lasaga, professor of geology; Stephen F. Lundstrom, associate professor of electrical engineering (research); Alan K. Miller, professor of materials science and engineering (research); Mark. H. Munn, assistant professor of classics (subject to Ph.D.); Michael Pavel, assistant professor of psychology; Peter M. Pinsky, assistant professor of civil engineering, 1-1-84; David D. Pollard, associate professor of applied earth sciences; William J. Poser, assistant professor of linguistics (subject to Ph.D.); Leonard Roberts, professor of aeronautics and astronautics (research) 6-1-83; Kristine M. Samuelson, associate professor of communication (teaching); Krishna Saraswat, professor of electrical engineering (research); Peter Sarnak, associate professor of mathematics; Stephen J. Shochat, associate professor of surgery (clinical) and pediatrics (clinical), 7-1-83; Mark Shulman, assistant professor of anesthesia; Dennis C. Stowe, assistant professor of mathematics; Daniel A. Weinberger, assistant professor of psychology (subject to Ph.D.); Barry R. Weingast, associate professor of business and the environment, GSB; Brian White, assistant professor of mathematics.

REPORT MATTERS:

Fernando Alegria, professor of Spanish and Portuguese, appointed chairman of the Department of Spanish and Portuguese, 9-1-83 to 8-31-85.

Malcolm A. Bagshaw, professor of radiology, appointed the Catharine and Howard Avery Professor in the School of Medicine, effective immediately.

James B. McClenahan, director of Cowell Student Health Center, emeritus, 9-1-83.

Edward Teller, reappointed senior research fellow at the Hoover Institution, 7-1-83 to 6-30-85.

Ewart Thomas, professor of psychology, appointed chairman of the Department of Psychology, 9-1-83 to 8-31-86.

FACULTY EMERITUS TITLES:

The following members of the faculty have elected early retirement and will be granted the following titles effective September 1, 1983, unless another date is indicated:

George Leland Bach, Frank E. Buck Professor of Economics and Public Policy, GSB, and professor of economics, Department of Economics, emeritus.

William A. Bonner, professor of chemistry, emeritus.

John V. Breakwell, professor of aeronautics and astronautics, emeritus.

Chi-Chang Chao, professor of aeronautics and astronautics, emeritus.

Wendell Cole, professor of speech and drama, emeritus.

Herbert Hultgren, professor of medicine, emeritus.

Eric Hutchinson, professor of chemistry and academic secretary, emeritus.

Dudley Kirk, Dean and Virginia Morrison Professor of Population Studies, Food Research Institute, and professor of sociology, emeritus, 1-1-83.

David Thompson, professor of industrial engineering, emeritus.

Walter Vincenti, professor of aeronautics and astronautics, emeritus.

Alan T. Waterman, professor of electrical engineering, emeritus.

Mitchel Weissbluth, professor of applied physics, emeritus.

STAFF EMERITUS TITLES:

Robert M. Butler, Medical School controller, emeritus, effective 3-1-83.

Gertrude Rulofson, assistant dean of the School of Earth Sciences, emerita, effective 9-1-83.

Letters to the editor

Edwin Harwood responds to Rebholz, then rests his case

Editor, *Campus Report*:

In his letter to the *Campus Report* (June 15), Prof. Rebholz suggests that I might possibly have engaged in "nonmalicious slander" in questioning the sincerity of his motives in criticizing the relationship between Hoover and Stanford. He also claims that I identify "nonmalicious slander" as one type of "rabid and vicious demagoguerie."

If you pursue the chain of Prof. Rebholz's reasoning to its logical terminus, then you arrive at the absurd conclusion that I myself may have engaged in rabid and vicious demagoguerie.

First, I am not alone in raising questions about Prof. Rebholz's motivations. Prof. Thomas Grey, whose letter (*Campus Report*, June 8) was a source of gratification to Dr. Rebholz, has also raised qustion about Dr. Rebholz's motives.

Although he confesses that he does not know what Rebholz's motives were, he is willing to go out on a limb and assert that both Rebholz and Prof. Juilland "probably have mixed motives" in organizing their respective petition drives. (However, Prof. Grey offered no compelling evidence in Prof. Juilland's case whereas I went to considerable trouble to document the bona fides of my argument in the case of Prof. Rebholz and the other signers of both the Franklin brief and Hoover petition.)

Second, I do not identify slander with rabid demagoguerie. I raised the quite legitimate question of whether the Franklin *Amicus Curiae* brief signers' agreement that political opinions could assume "rude forms, even the nonmalicious slander of public personalities" was to be taken as a *defense* for Franklin's behavior which went far beyond the heckling observed among backbenchers in the British Parliament. (The example the Franklin brief signers used.) If anything, the only valid inference to be drawn from what I wrote is that there is a world of difference between the two kinds of behavior.

Thirdly, I do not like slander, whether malicious or nonmalicious, and would write no brief in its defense irrespective of whether or not it is protected by the First Amendment. It may be considered acceptable conduct by politicians or by editors of magazines like *National Enquirer* but in my opinion is very unseemly for the scholar whose principal mission is to seek truth and wisdom.

I am a very cautious man. By no means do I enjoy attacking anyone in print. And I do not call into question the sincerity of a man's motivations unless I believe that the issue at hand is of overriding importance, that doing so is essential for articulating a convincing rebuttal to the opposing side's position, and that the evidence is such that I have the strongest possible case for raising the question.

Since we cannot know one another's minds or hearts directly, we must build our case from what an individual writes and says. My case rested on the contradictions I perceived between the stand Dr. Rebholz and others took in the Franklin affair and the stand taken in the Hoover controversy and which I developed at length in my two *Campus Report* (letters).

Interestingly, the point I considered most important is the one that neither Prof. Grey or Dr. Rebholz have responded to: namely, the fact that Dr. Rebholz, as a signer of the Franklin brief, allowed in 1971 that Stanford could take a partisan stance as an institution on certain issues whereas in the Hoover controversy he asserted that neither Stanford or any of its affiliated centers could behave otherwise than to remain "nonpartisan."

I would add, finally, that had Rebholz and the others been genuinely concerned about academic freedom in 1971, then isn't it plausible to assume that they would have been at least as much, if not more, concerned over the threat that left-wing extremists posed not just to the academic freedom of conservatives on campus but to the scholarly community as a whole?

I rest my case.

Edwin Harwood
National Fellow
Hoover Institution

Commencement celebration

Editor, *Campus Report*:

Back in the '70s, when I last took part in the commencement exercises, those exercises were rather sober affairs. This year's commencement was refreshingly lighthearted: bands playing, champagne corks popping, lots of banter—even from the Secretary of State—and high spirits coupled with generally respectful attention to the program.

Even the human rights message, in which I joined, seemed upbeat, constructive, and symbolic of the free expression and tolerance of diversity that one hopes to find at the best universities. What a contrast to the self-serious, intolerant, and shameful disruptions of speeches by Jeanne Kirkpatrick and others that have taken place elsewhere.

Obviously, Don Kennedy sees commencement as a celebration. He has also managed successfully to communicate that spirit to the entire commencement body.

Armin Rosencranz
Former university trustee

Contracts and grants

Following is a selected list of government and nongovernment contracts and grants of $200,000 and over, received for the month of April:

FEDERAL

New Contracts

Karl H. Pribram, Herbert Solomon, and Richard F. Thompson, psychiatry, "Theoretical and Experimental Analysis of the Neural Bases for Learning and Memory," $938,990 from the Department of the Navy for 3 years.

Contracts—Amendments

James D. Meindl, Stanford Electronics Laboratories, "Joint Services Electronics Program," $520,000 from the Department of the Army for 1 year.

New Grants

Albert E. Dien, Stanford Center for Research in International Studies "East Asia National Resource Center and Fellowship," $285,480 from the Department of Education for 1 year.

Charles H. Kruger, Morton Mitchner, Sidney A. Self, and Robert Eustis, mechanical engineering, "Fundamental Processes in Partially Ionized Plasmas," $200,000 from the Department of the Air Force for 1 year.

Hugh O. McDevitt, medical microbiology, "Lymphocyte and Macrophage Genes, Proteins, and Receptors," $780,518 from NIH for 1 year.

Grants—Amendments

David A. Clayton, School of Medicine, "Medical Scientist Training Program," $669,137 from NIH for 1 year.

Stanley N. Cohen, genetics, "Genetic Mechanisms in Bacterial Antibiotic Resistance," $245,721 from NIH for 1 year.

A. Dale Kaiser, biochemistry, "Training in Biochemistry," $229,790 from NIH for 1 year.

Henry S. Kaplan, radiology, "Biological Aspects of Carcinogenesis by Radiation," $381,230 from NIH for 1 year.

Henry S. Kaplan, radiology, "Human Hybridoma Antibodies in Neoplastic Disease," $257,946 from NIH for 1 year.

Saul A. Rosenberg, Department of Medicine, "Clinical and Laboratory Studies of the Malignant Lymphomas," $1,370,580 from NIH for 1 year.

George R. Stark, Biochemistry, "Mechanism and Role of Gene Amplification in Mammals," $294,196 from NIH for 1 year.

NON-FEDERAL

New Contracts

Lorrin M. Koran, Keith I. Marton, and Harold C. Sox, psychiatry, "A Medical Evaluation Study of Mental Health Service Clients—Four County-Stanford Medical Evaluation Study," $445,000 from the State of California for 15 months.

Gary K. Schoolnik, Department of Medicine, "A Pilus Vaccine for the Prevention of *E. coli* Urinary Tract Infections," $461,760 from Cetus Corporation for 3 years.

Richard N. Zare, chemistry, "Reaction Dynamics in Condensed Media," $409,954 from Standard Oil Company AMOCO Research Center," for 3 years.

New Grants

John W. Lewis, political science, "Arms Control and Disarmament Program," $600,000 from the Hewlett Foundation for 4 years.

John R. Perry, Institute for Mathematical Studies in the Social Sciences, "Situation Semantics for Natural and Programming Languages," $725,824 from the System Development Foundation for 29 months.

Grants—Amendments

Ruth T. Gross, pediatrics, "General Pediatrics Academic Development Program," $357,396 from the Robert Wood Johnson Foundation for 2 years.

Accidents and injuries

Accidents and Injuries Occurring During Week of June 6-17

Cause of Accident or Injury	Number of Incidents	Number of Days Off
Animal contact	1	0 (0)
Chemical inhalation	1	0 (0)
Contact with object:		
Cut by object	3	0 (0, 0, 0)
Impact with object	1	0 (0)
Fall from height	1	1 (1)
Fall from same level	2	10 (10, 0)
Foreign body in eye	1	0 (0)
Job stress	1	16 (16)
Lifting improperly	2	4 (1, 3)
Overexertion	3	8 (0, 3, 5)

Campbell steps down as chairman of Regents, takes up U.S.—Japan posts

W. Glenn Campbell, director of the Hoover Institution at Stanford University, will finish his term as chairman of the University of California Board of Regents June 30.

The senior appointee of former Governor Reagan, he will complete his 16-year term as a member of the board in March, 1984.

Effective July 1, Campbell assumes the chairmanship of two separate organizations concerned with Japanese-U.S. relations: the American panel of the Joint Committee on Japan-U.S. Cultural and Educational Cooperation and the Japan-U.S. Friendship Commission. The latter group, established by Congress in 1975, administers a $30 million fund to promote educational and cultural activities between the two countries.

Campbell has a distinguished record of public service having held six appointments under four U.S. presidents. He currently serves as chairman of the President's Intelligence Oversight Board and as a member of the President's Foreign Intelligence Advisory Board.

From 1972-1978, he was a member of the Board of the National Science Foundation (the largest foundation in the United States), a member of the President's Committee on Science and Technology (1976), and a member of the President's Commission on White House Fellows (1969-1974).

Campbell, who has been director of the Hoover Institution since 1960, is well known as a successful organizer and builder of public policy research organizations, having directed research at the American Enterprise Institute from 1954 to 1960 and having been one of the founders of the Center for Strategic and International Studies at Georgetown University, both located in Washington, D.C.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

42001-LL (JCC:3152) DEVELOPMENT OFFICER IV: Develop & implement fundraising programs which will secure a significant fraction of the gift funds required to modernize SU Hospital ($15 million) & construct the New Children's Hospital at Stanford ($40 million); respon will res w/ Assoc Dir to identify prospective major donors, involve them in Med Ctr & see that they are asked to contribute in a timely fashion; draw on existing resources as well as develop new programs; able to organize & motivate volunteers,faculty admin & sr. staff; QUALIFICATIONS: must have a proven record of accomplish't which demonstrates initiative, creativity & endurance; exp in a teaching hospital working w/ Med Staff & community volunteers & organizations highly desirable; broad knowl of local community (San Mateo & Santa Clara counties)—its corporate base, its non-profit organizations & its leading citizens helpful; understanding of major gift fundraising & marketing.; C09; $2972-3642.

30525-DS (JCC:4068/4076) Programmer Analyst, Genl I/II: SYSTEMS ANALYSIS: respon for identifying user needs & problems, evaluating approaches, & translating into sys designs; develop solutions for improvements to Payroll/Personnel & other computer sys; develop test plans for new sys enhancements; PROJ COORD: monitor status of sys projs for users, liaison w/ user & tech support teams; report on progress & performance according to schedule & budget; PROGRAMMING/CONSULTATION: moderate programming in Stanford software—e.g., WYLBUR, SPIRES, Mark IV, SPSS; consult w/ end-users; liaison w/ CIT; DOCUMENTATION: develop, write, & maintain sys documentation in user area of existing sys; explore methods & promote uniform standards of documentation; QUALIFICATIONS: knowl of & exp w/ sys concepts required; ability to write clear, concise descriptive prose required (writing sample requested); ability to describe, address, & solve problems; ability to plan, schedule, & coord tech projs preferable; prior exp w/ Stanford software preferable.; C05/C06; $1670-2086/1854-2312.

39485-TC (JCC:5588) LIFE SCI RES ASST I: Maintenance of cell line for cultivation of viruses; cultivation of viruses fr clinical specimens as well as reference stocks; propogation & preservation of virus stock; cloning of virus DNA & extraction fr bacterial cultures; DNA hybridization using nick translated xxxx labelled 32P probes, incl DNA hybridization on clinical specimens; analyses of virus antigens using polyacrylamide gel electrophoresis & immunodetection procedures; problem solving & planning of new experiments, etc; QUALIFICATIONS: BS degree w/ several yrs lab exp; familiar w/ advanced biochemical lab skills; thorough understanding of theory behind procedures used & ability to interpret resuits & change procedures based on this theory.; C05; $1670-2086. 1

36185-TC (JCC:5588) LIFE SCI RES ASST I: Involves the characterization of the role of small ribonucleoprotein particles in the processing of eukaryotic primary transcript in vitro; requires the use of independent judgment & application of theory relating to RNA-DNA interaction & RNA processing; exp in cell culture, protein & RNA purification & analysis by electrophoresis & electrofocusing, filter hybridization, nick translation & restriction enzyme analysis, preparative DNA gel electrophoresis & RNA sequencing; QUALIFICATIONS: exp/training in protein, DNA & RNA biochemistry, RNA hybridization & cell culture & be capable of independently designing, performing, & analyzing procedures & experiments; Bachelor's degree or its equiv & relevant work exp required.; C05; $1670-2086.

22525-LL (JCC:5596) LIFE SCI RES ASST II: Asst faculty investigator in carrying out res projs; primary respon for purifying enzymes & nucleic acids; conducts experiments & procedures under the supvn of faculty investigator, thus familiarity w/ tech for purification & characterization of enzymes, e.g. gel electrophoresis, chromatography, radioactive isotope assays growth & maintenance of bacteria, phages, phage-infected bacteria are preferred; supv routine maintenance & operations of lab; prov 1 assistance to postdoc fellows & grad students; order supplies, etc; QUALIFICATIONS: BA or BS in Biochemistry, Chemistry or Biology; 2 yrs lab exp nec.; C06; $1854-2312.

40384-JB (JCC:6306) R & D ENGR II: Work closely w/ scientists & engineers to design precision optical mech res instrumentation & related components for use in synchrotron radiation beam lines; requires a synthesis of mech engrg calculations (e.g. heat transfer & thermal effects in objs struck by intense x-ray beams; mech stresses, deformations vibrations in various structures & mechanisms) & practical mech design of precision instruments, guided by the analytical calculations as well as by prior design exp & familiarity w/ commercial mat'ls & components, fabrication techiques, & budget & schedule realities; QUALIFICATIONS: advanced degree(MS Minimum) in mech engrg, w/ ability to perform complicated heat transfer & mat'ls stress calculations essential; working familiarity w/ computer solutions of such problems highly desirable; familiarity mech drafting practices, & machine shop & fabrication tech, essential; min 5 yrs working exp in mech design-related areas; knowl of ultra-high tech helpful.; C99; $2113-OPEN.

40551-LL (JCC:2136) ACCOUNTANT III: Respon for all Faculty Practice Program financial reporting functions; incl consolidation of income, expense, activity , accts receivable & other info on FPP depts into a comprehensive financial report on a monthly basis; reporting on FPP admin cost ctrs & indiv physician performance; respon for calculation & payment of physician incentive payments; respon for a financial report which currently exceeds 300 pages each month; familiar w/ a large number of reports & several distinct computer sys; highly visible w/in Med Ctr involving physicians & administrators; QUALIFICATIONS: Bachelor's degree in acctg w/ 6 yrs work exp or equiv; excel verbal & written commu skills; knowl of complex physician billing & acctg sys; knowl of data processing concepts w/ some exp w/ spread-sheet software; some knowl of statistical analysis.; C07; $2113-2724.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

32946-LL (JCC:5940) CLINICS STAFF NURSE IV: Research nurse will monitor several clinical res protocols for treatment of Hodgkin's disease & non-Hodgkin's lymphomas, studying primary chemotherapy & radiotherapy treatments & toxicity of treatments; involve patient care, patient interviews, review of chemotherapy records, assessment of treatment toxicity & mgmt of data, incl some computer entry & retrieval; clinical studies w/ interferon will incl Phase I-II testing of new products & a Phase III adjuvant study in nodular lymphoma; help to coord lymphoma teaching conferences & interface w/-several add'l res projs, incl monoclonal antibody studies for diagnostic & therapeutic use; QUALIFICATIONS: valid Calif Registered Nurse's License; prev exp w/ Oncology patients.; K04; $2061-2229.

Nonexempt

25645-PM (JCC:2058) ADMIN ASST I: (N) 8-5, occasional wkends; Admin Asst to VP for Public Affairs; plan & organize VP's schedule; draft original corresp; requires summarizing, excerpting, & drafting on specific issues, such as tax policy, other public policy issues, position memo to offices of univ, trustees & govt officials at all levels; typing; maintain files; screen phone calls; receive visitors; organize mail, expense reports; represent VP at selected mtgs in his absence; assemble bkground mat'l for VP's daily mtgs & for continuing issues & projs; arrange travel plans; QUALIFICATIONS: typ 50; good organizational skills; atten to detail; good judgment & discretion dealing w/ sensitive & confidential matters; good written verbal skills; knowl of univ policies & procedures & prior univ exp desirable; send appl/resume to Rene 1 Cortinaz, Public Affairs, Bldg. 170.; B16; $1593-1671.

28291-BP (JCC:2058) ADMIN ASST I: (N) Asst ASM in Admin Offc of Stanford Electronics Lab in complex & sensitive matter requiring high degree of judgment & independence in performing the varied tasks assigned; review all res proposal budgets for correctness & compliance w/ Univ acctg practices & Agency requirements; develop budgets for faculty in EE fr scratch to be submitted to Govt & Private Agencies complying w/ all governing requirements; respon for maintaining records on all pending proposals & awards; respon for prep of monthly, as well as annual reports for awards & monthly expenditures & maintain effort report sys; serv as liaison between SEL & approp Univ Offc; QUALIFICATIONS: good organizational, commu skill nec; diplomacy & tact essential; knowl of Univ's personnel forms helpful; some math ability nec; knowl of word processing helpful; able to deal w/ people & their related questions & problems in a professional manner; send appl/resume to Beverly Yates, AEL Room 107.; B16; $1593-1671.

38883-PM (JCC:2596) SECY II-SPEC: 50%; typing of tech manuscripts & some corresp; maintaining ledger & running balances for several grants; preparing monthly summary of total funds remaining in grants, checking monthly budget statements on grants, & as grants near close of funding period, being able to forecast amounts available for expenditure; keeping payroll records of large research group; preparing purchase orders, etc; answering phones; ordering of supplies; QUALIFICATIONS: typ 60-65+; excel typing a necessity; willingness to work w/ figures essential; exp w/ Stanford expenditure statements very useful; willing to 1 deal w/ large res group (20-25 people); send appl/resume to Janet Shaw, Dept. of Chemistry, Seeley Mudd Bldg. Rm. 121A.; B12; $655-687.

21983-BP (JCC:2596) SECY II-SPEC: Typ tech papers, proposals, corresp; prepare purchase reqs, expense rprts; checks reqs & interdept'l requests; willing to learn word processing (NBI); perform genl offc duties for 2-4 faculty members; run errands; distribute mail; answer phones, etc; summer employment optional; QUALIFICATIONS: typ 75-80; 2-3 yrs of genl offc exp; knowl of tech typing (med terms & math equations); send appl/resume to Judith Haccou, Terman Eng. Ctr, Rm 551.; B12; $1310-1373.

40333-PM (JCC:5484) DATA AIDE II: Maintaining control over epidemiological survey & surveillance records fr off-site centers; respon for records going thru manual validation procedure; respon for use of computer report to make corrections to data; prep of simple statistical tables; 25% of duties involve clerical support to data group; QUALIFICATIONS: typ 50; knowl of large data bases essential; must have exp w/ data collection & mgmt; familiarity w/ computer processing procedures; exp on Stanford computer helpful (WYLBUR, SPIRES, SAS); med terminology helpful; send appl/resume to Kay Wilson, SHDPP, 730 Welch Road, Suite 234, or call 497-7822.; B10; $1189-1246.

24688-BP (JCC:2462) OFFICE ASST III: Answer telephone & counter inquiries; direct students to proper staff member; disburse student loans after checking ID, obtain signatures on documents as required; explain credit disclosures & terms of various funds; process all incoming mail & date/time stamp & sort by category; prep all coding for address changes to Student Loan Sys; opens & checks student loan payments & prepares for loan payment processor; alphabetizes & numerically sorts large volume of documents; balances petty cash fund; QUALIFICATIONS: typ 40; 1 yr genl offc exp plus receptionist exp; requires good interpersonal skills, neatness & accuracy; good numerical skills required; able to tolerate continuous interruptions; send appl/resume to J. Jedd/J. Kitaji, 104 Old Union.; B11; $1246-1310.

43702-PM (JCC:2462) OFFICE ASST III: Greet visitors; answer phones; make appts for Dept of Med offc; operate Xerox 860 word processor for reports, corresp, grant proposals, mailing lists, etc; act as resource person by training & assisting users 1 of word processing in dept; handle typing, filing, & ordering of supplies; key Operator for dept copy machines, etc; QUALIFICATIONS: typ 55; good typing & offc skills; ability to learn all aspects of word processor; aptitude for figures; contact: Linda Barozzi, SU Med Ctr, Rm S-102.; B11; $1246-1310.

40332-PM (JCC:2470) OFFICE ASST IV: Prov offc & sec'l support for key personnel in an international collaborative research proj, the Lipid Res Clinic of Stanford Heart Disease Prevention Program; typ draft mat'ls & format final copies of corresp, reports & forms; some data entry on computer; proofread & update vital data records; transcribe infor; record & transcribe minutes of mtgs; bkup to Subj Coord, Data Coord, & Clinic Receptionist; maintain records & files; perform lib reference searhes; screen applicants for various staff openings; schedule appts for participants, etc; monitor clinic budget for Trial Coord & Dir; QUALIFICATIONS: typ 60-70; s/h, preferred; superior sec'l & commu skills; excel spelling; transcription & word-processing exp helpful; good interpersonal skills essential; prior exp w/ univ res helpful; send appl/resume to Patti Mathis, 730 Welch Road, Suite B, 497-6254.; B14; $1440-1514.

39284-BP (JCC:2470) OFFICE ASST IV: Respon for payroll & personnel records for dept'l staff, 25 regular employees, 300 student employees, 33 resident fellows; monitor, reconcile, & analyze budgets on a monthly basis; interface w/ other Univ depts; asst in prep of yrly budget proposal; coord info w/ financial aids, grad awards; act as bkup receptionist-sec to Sec III, etc; QUALIFICATIONS: able to work w/ diverse group of people; work w/ numerical detail accurately & quickly; able to handle several tasks at one time; maintain confidentiality; accuracy in typing & proof reading ability; typ 45; send appl/resume to E. Hiyama, 311 Old Union.; B14; $1440-1514.

27473-BP (JCC:2520) OFFICE ASST IV-PREM:

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SLAC

94117-JM (JCC:2058) ADMIN ASST I: (N) 75%; coord all voice telephone moves & changes; receive, analyze & assist telephone serv requests; plan, organize, implement & coord telephone changes; authorize telephone co. rep on implementing & modifying sys; QUALIFICATIONS: must be familiar w/ telecommu industry; excel 1 interactive skills incl effective oral & written commu; ability to demonstrate helpful & patient attitude; understand telephone configurations & have a working knowl of features available & of sys limitations; able to plan, organize & implement telephone moves & changes; ability to coord multiple telephone activities.; B16; $1195-1253. APPLY AT SLAC

93745-JM (JCC:2596) SECY II-SPEC: Prov full sec'l serv to large group of physicists; typ corresp, incl tech terminology; typ final tech papers using physics terminology; use dictaphone to transcribe work; answer inquiries; interact w/ short & long term foreign visitors; QUALIFICATIONS: typ 50-65; ability to use Greek & math symbols; ability to carry out a wide variety of tasks w/ minimal supvn; exercise good judgment in screening activities; ability to compose ltrs fr oral or written instructions; knowl of punctuation & syntax; dictaphone exp desirable.; B12; $1310-1373. APPLY AT SLAC

95511-JM (JCC:2262) FIN/MGMT ANALYST II: Assist in preparing annual budget documents for submittal to DOE; review & analyze cost performance against budget; participate in spec analyses as required; assist in long range planning process; establish group/proj budgets; development & maintenance of computer models; QUALIFICATIONS: BS or equiv exp in Business Admin, Economics or tech discipline w/ some acctg bkground; MBA desirable; ability to commu both orally & in writing.; C07; $2113-2773. APPLY AT SLAC

Bargaining unit

26603-TC (JCC:5638) LIFE SCI TECH I: 50%; TMS Unit; order lab supplies, animals & eqpt; maintains inventory; keeps records; in charge of animal surgery & histology rooms & maintain them in good & clean condition & has the authority to require all users to do so; makes media, reagents, etc; will be trained to perform routine histology, incl perfusions, tissue sectioning, mounting & staining & to assist w/ routine animal surgery; may train lower level part-time employees; QUALIFICATIONS: any exp in working in a lab or edu'l bkground in Biology or Psychobiology would be helpful but not nec; must have interest in working in a lab w/ a large staff of Grad Students, Post Doctoral Fellows, Res Assoc, etc.; A18; $ 7.50.

32874-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; participate in devising tissue culture conditions, preparation of media; respon for RNA & DNA large scale prep, protein electrophoresis & DNA sequencing gels; incl plasmid prep, screening plasmid & phage lib, enzyme assays, working w/ radio-labelled compounds; make decisions as to mat'l required & proceed w/ ordering all supplies; perform analysis & maintain documentation of all data; QUALIFICATIONS: fully trained in both molecular biology & basic biochemistry tissue culture tech, & skilled in working w/ radio-labelled compounds; 3-5 yrs of closely related research desirable.; 1 A24; $ 8.65.

44336-TC (JCC:5736) TISSUE TECH II: TMS Unit; 7:30-4pm M-F or Tues-Sat; cutting 3-5 micron sections of paraffin embedded tisuue incl lymph node, spleen, liver, & kidney biopsies w/ a high degree of skill & speed; performing routine H&E & spec stains; embedding, coverslipping, & iabeling surgical specimens; lab bookkeeping, other misc histology lab duties such as knife sharpening, solution prep, etc; QUALIFICATIONS: ASCP in Histology preferred; exp as active Histotech; skills in high quality sectioning.; A30; $ 9.97.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, June 28 in Room 270, Tresidder Union.

The sessions are open to all new employees without preregistration.

Carpools

Ride share between SF and Stanford M-F, mornings and eves (times flexible), call Jennifer at 346-6411 after 8 p.m.

Ride needed from Sharon Heights Shopping Center to Stanford, in exchange for gasoline. My hours are 8 a.m. to 5 p.m. Please call Dixie Dodson at 497-9150.

Four Rodin masterpieces displayed in courtyards of Quad

Four major bronze sculptures by Auguste Rodin, representing four Burghers of Calais, have been installed in courtyards of the Stanford Quadrangle.

On loan from the B. Gerald Cantor collections, they will remain on view in the courtyards for the next two years. They eventually will become part of the B. Gerald Cantor sculpture garden, being built immediately south of the Stanford Art Museum. It is scheduled for completion by June 1985.

According to Stanford art Prof. Albert E. Elsen, one of the world's foremost authorities on Rodin, Cantor felt these great sculptures should be placed out on campus where they could be seen and enjoyed rather than placed in long-term storage.

The statue of Eustache de St. Pierre, elderly leader of the Burghers, has been installed in History Corner Courtyard; Jean de Fiennes and Pierre de Wissant in Memorial Courtyard; and Jean d'Aire who carries the key to Calais, on the terrace on the western Lomita Mall side of the Quad between Mathematics and Values, Technology, and Society.

Burghers of Calais

Rodin conceived the Burghers of Calais in response to a commission for a monument to their memory by the city of Calais in 1884. The final monument, completed in 1889, but not installed until 1895, was to all six Burghers who in the 14th century, at the beginning of the Hundred Years War between France and England, offered their lives as hostages to the King of England if he would lift the seige of their city.

Each of the Burghers was conceived separately and ultimately joined into a single final monument. During Rodin's lifetime, statues of the individual Burghers, notably those of Eustache de St. Pierre and Jean d'Aire, were exhibited, purchased and publicly installed in various European cities. Thus the installation of these single statues in the Quad and historical precedent in the artist's lifetime. They also date from the time that Stanford University was being built.

According to Elsen, "Rodin's conception of the Burghers surprised and dismayed many in Calais because he did not show them stoically and happily accepting their fate. Rodin's view of heroism credited his public with greater sophistication than it had at the time.

"He saw true courage as the overcoming of fear, and each of his Burghers is revealed in terms of how he came to terms with his own death. Such displays of feeling were considered at the time unbecoming secular martyrs, but ultimately Rodin imposed his vision on the public.

Symbols of surrender

"Rodin has shown the Burghers stripped of their armor or normal attire, wearing shifts and ropes around their necks as symbols of surrender. Each figure is a powerful recreation of an individual Burgher, a marvelous confluence of artistic imagination and realism.

"In the absence of any contemporary recording or description of the physical appearance of the hostages, Rodin had to rely upon his imagination and custom of working from live models. He sought to show men who before the siege had been hardy of physique, but who had suffered from starvation before their surrender.

"He made these figures with what from close up seem very large hands and feet, but which he knew was necessary for their gestures to visually carry from the great distance when seen out-of-doors. Their movements are almost dance-like as Rodin choreographed the way their spirits resisted but their bodies complied with the demands of duty. All the Burghers were made of the same height to signify the equality of their sacrifice.

"The Burghers remind us of the great tradition of western art in which public monuments were made to celebrate the dead and dying, heroes for causes in which they believed, and men who despite the injustice of their fate met it bravely.

Nationalist spirit

"Such sculpture was frankly intended to arouse the spirit of nationalism in all who saw it. Rodin's monument was to heroes in defeat, and a reminder to his countrymen who had suffered a humiliating defeat at the hands of the Prussians in 1870, that Frenchmen could act nobly under the worst of circumstances.

"Each Burgher as interpreted by Rodin is a drama within an overall play. Just as each sculpture is expressive when seen from every prospect, so too do successive views help to reveal unfolding aspects of the individual dramas. Each figure is a summation of successive physical movements.

"Rodin believed that the artist should learn from nature, but not be inhibited from exaggerating what he found—to lie in order, to tell the truth, as he put it, in order to create credible and important art."

With this latest addition to outdoor campus sculpture, Stanford has one of the finest public installations of the history of modern public sculpture in the nation.



Stanford student stops to examine Auguste Rodin's statute of Eustache de St. Pierre, elderly leader of the Burghers of Calais, now on display in the courtyard of History Corner. The famed bronze is the loan from the B. Gerald Cantor collection.

Teachers are the key to improved science teaching

Any efforts to improve science teaching in the schools must recognize teachers as the key resource, says Dean Myron Atkin of the Stanford School of Education.

A former high school science teacher, Atkin's views on "The Improvement of Science Teaching" are featured in the current issue of *Daedalus* magazine.

Educational policies "should be constructed at least as much to enhance teachers' strengths as to guard against their weaknesses," he comments.

"If external initiatives are directed exclusively toward assuring some prespecified minimum level of effort or achievement, and not toward enhancing the work of those who do the job best, the profession will gradually become less attractive to its most able practitioners, because the minimum tends to become the standard."

Able science teachers are in critically short supply. Perhaps only 10 percent of those students now planning teaching careers rank academically with the top half of those in other preprofessional, four-year programs, he estimates.

Given the great shortage, Atkin suggests that only able science teachers should be assigned to work with youngsters of the highest achievement in high school.

"This is not to suggest that these teachers should not work with students of lesser ability, too," he adds.

"Perhaps more controversial, school districts should give serious attention to offering science courses only to the degree that qualified teachers are available.

"Even if 'qualified' were defined broadly to include all those teachers certified in the subject, there would be a significant winnowing out of teachers who have been redirected to science from English or social studies or physical education because of declining enrollments.

"If such a policy were pursued, a certain amount of science now taught would disappear from the schools—temporarily, one would hope—but the loss probably would not be great.

"Nothing kills interest and misrepresents the field as surely as the unprepared teacher."

Another possibility would be to extend the influence of the most effective science teachers by enabling them to reach larger numbers of students. At the university level, Atkin notes, it is common for professors to lecture to large sections, while assistants supervise laboratory and discussion groups.

Another means of tapping the interests of the most talented teachers might be to permit part of the high school science program to be tailored to the qualifications and interests of the available teachers.

Concentrating science teaching resources even more than is now done at the elementary level also should be tried. "Able youngsters seem to be able to progress to college, even with uninspired teaching, provided their motivation is sustained when they are young," Atkin observes.

"None of these possibilities has been studied sufficiently to be advanced without reservation. Each has some superficial appeal; each some serious flaws and costs."

While a pluralistic approach among the nation's 20,000 school districts may seem uncoordinated, "it may well be that the sopundest policies are formulated when people with immediate responsibility for improving the educational system are accorded some scope," provided their objectives are shared in the community and they consider a suitably broad range of options.

"Government agencies can provide incentives and attempt to fill important resource gaps, but...solutions are almost always local and special," Atkin says.

"In some districts it may make sense to emphasize elementary school science at the expense of high school, but in other districts not.

"To become too prescriptive is to risk transforming teaching into an occupation that will attract few people of high ability. To become too anarchic is to risk the development of educational programs that do not elicit sufficient support—and therefore resources—for high quality education to occur.

"But whatever policies are adopted for the improvement of science teaching, the closest attention should be given to their probable effect on recruitment and retention of the nation's most capable people as teachers. At the moment, nothing in the school or in the education policy arena is more important."

Rental housing

HOUSING AVAILABLE

☐ **NOW:** SHARE: Young single woman seeks M/F nonsmoker for 2BR/2BA lux. condo in Old Mill complex. AEK, secure bldg, elev. pool. Call Leslie 948-6185, eve.

☐ **July 15 to Aug. 16:** Furn campus hse, 3BR/3BA, LR/DR, playrm, study, studio, 3 patios. Car poss. $1100/mo. Call 857-9431.

☐ **NOW:** Tahoe-Donner condo. 3BR/2BA, loft, spa, pool, tennis, golf, stable. $350/wk, $140/wknd. Bienenstock, 493-8649.

☐ **July 16 to Nov. 16:** New furn. 2BR condo on campus, Peter Coutts Circle, No pets, prefer cpl. $1000/mo. Call Phillips, 493-1326.

☐ **July 27 to Aug. 23:** Furn. hse, 4BR, 15 min. to Stanf. in Cupertino, access to #280. Nr Deep Cliff golf crse. Nonsmokers, no pets. $1000. Call (408) 257-0158, eve.

☐ **NOW to Sept. 15:** 2 women & 1 man (ages 25-35) seek someone to SHARE hse in Palo Alto, nr Stanf. $262.50/mo. + util. Call 324-3815.

☐ **Beg. June 24:** Unfurn. or part. furn 2BR/1BA hse in Los Altos. Secluded, cul-de-sac, 15 min. to Stanf. Nonsmokers, no inside pets. Nr schls. $850/mo. Cali 948-9385.

☐ **July 1 to Sept. 15:** FREE - Delux rm w/BA in fac. hse on campus. Nonsmoking female. EXCHANGE for 7 hrs. wk (eves & wknds). No hsewrk or childcare. Call Mrs. Berger 497-3900, a.m.; 493-6770, eve.

☐ **NOW:** Tahoe vacation retreat, Tahoe-Donner condo, fully furn. sleeps 8. Pools, spa, stables, golf, fish, tennis; boats, rafts nrby. $80/wknd; $195/wk. Call Al, 326-3821, eve.

☐ **Beg. July 1:** Fully furn. hse, 3BR/1BA & sep. shower. DR, bkfst nook, lrg. yds. Quiet, creekside st., bike to Stanf. $1200/mo. Call Larry, (415) 573-4998, day 324-2469 eve, Eveleen, 322-6985, eves. or wknds.

☐ **Academic yr 83/84:** Furn. apt nr Tel-Aviv U; 2BR/1BA, LR, view, phone & car. EXCHANGE for hsng nr Stanf. Call (217) 333-9358 or in Israel, (03) 426-191

☐ **Beg. Aug.:** Westchester cnty on Conn. border; fully furn contemp. hse on 4 wooded acres, 50 min. to N.Y. City. Rent or EXCHANGE for your Calif. hse. or apt. Call Eva 326-3684 or 854-6760.

☐ **July 11 to 25:** Sublet; Scenic Woodside hse. 2½BR, rustic setting w/creek. Off Canada Rd. $400 Stephan or Laurie, 851-4297.

☐ **NOW:** Tahoe Donner hse, 4BR/3BA, hot tub, deck, view of Nat'l For. Hike, tennis, golf, swim, Donner Lake access. $450/wk; $200/wknd. Call 324-8559, eve; 843-4557.

☐ **July to Sept. '83:** Summer rent, Tahoe. A-frame chalet, 2BR/1½BA, loft, DR, AEK, frpl, W/D, cable TV, deck. Nr lake, tennis, casinos. No pets or sublet. $600/wk, $1100/2 wks, $1750/mo. Call Marsha (415) 563-3156.

☐ **June 16:** Fully furn 2BR apt. in 4-plex, yd, coin lndry, carport w/bike stor. El Carmelo in Palo Alto. $750/mo. Call 856-6049.

☐ **June 16 (flex):** Unfurn. Palo Alto hse, 2BR/2BA, LR/DR w/frpl, FR can be 3rd BR. Yd, terr, wrkshd, carport, remodeled ktchn. $1150/mo incl. grdnr. Call 856-6049.

☐ **Sept. 1, '83:** Unfurn 3BR/2BA hse, Palo Alto, 2 mi. to Stanf. Big yd, patios, 2-car gar, frpl, DW. $1200/mo. Call 856-6049.

☐ **Beg. Aug. 1:** Fully furn. 1BR apt in 3-plex, on Alma in Palo Alto. Priv. patio. $675/mo. Call 856-6049.

☐ **Regularly Avail:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses. in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley 856-6049.

☐ **July 28 to Aug. 29:** Lovely London hse, Chiswick area, nr transp. Open flr. plan, LR, DR, remodeled ktchn, W/D, TV, gardn. Upstairs 3BR/1BA. $1000/mo. Call Abramsky, 011-441-995-2747 or write: 13 Van Brugh Rd, London W41 JB. Local call 856-6049.

☐ **Beg. end June (flex):** Unfurn upstairs condo in 7-unit complex, dwntwn Palo Alto. 3BR/2BA, no adj. walls, lots of decking. Prefer grad. cpl or faculty. No pets. $1000/mo. Cali agent; Arlene. 321-6078, eve.

☐ **End June thru July '84:** Fully furn hse, 2BR/2BA, AEK, microwv., W/D. Att. gar., hot tub, pool, tennis, $1100/mo incl grdnr & maintn. Call Dr. Kulick 497-7001, day.

☐ **July 17 to Aug. 31:** Furn. studio sublet, dwntwn Palo Alto. Prkng, pool, walk to Stanf, train, bus. No pets. $540/mo. incl util. + $400 sec. dep. Call Tania 497-2425, day; 321-6530, eve.

☐ **Beg. Aug. 1, prefer 1 yr. or longer:** New twnhse, 2BR/2½BA, partly furn, W/D, fenced yd, carport, El Camino & Page Mill, 5 min. bike to campus. $1150/mo. incl. grdnr. Call COLLECT (213) 990-5302.

☐ **June 17 to end Aug:** Furn. 2BR apt to SHARE. Lndry facil. Bike to campus, nr shops, transp. $275/mo. incl. water (nego). Beg. Sept. 1 entire apt. avail. Call 328-3128.

☐ **NOW:** Relax on 5 wooded acres Grass Valley. New, spac. 3BR/2BA hse, lrg. deck. Call Anne Kinder, 497-7876, day.

☐ **Aug. 7 to Sept. 3, '83:** 4 wks: fully furn hse, mid-twn Palo Alto. 3BR/1½BA, den, playrm, play-yd, lovely patio. $975 incl. phone, util, lwn. serv. Ideal for yng. fam. No pets. Call Lee or Judy, 321-0250.

☐ **July 1 or sooner, for 1 yr:** Exec. furn. twnhse for writer/scholar; 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min. to Stanf. Cpl. or single adult only. No pets. $1300/mo. Owner going to Harvard. Call **J. Donnelly, 497-1065.**

☐ **NOW to Sept. 1, '83:** Oak Creek apt, 2BR/2BA, fully furn. incl. hsekeep. equip. Quiet, sunny, spac; patio. Nr pools, tennis, spa & rec. build. $1400/mo. Call 497-3649, day; 327-9245, eve.

☐ **June 19 to Aug. 31:** Sublet 2BR/1BA, furn apt; 1st flr. College Terrace, minutes to campus. $635/mo. + util. Call 493-0543.

☐ **Aug. 12 to Sept. 5, '83:** Campus hse, 4BR, study, FR, piano, fenced yd, W/D, 3 cars. $375/wk incl. util, lawn serv, bi-wkly clean. Call 493-2042, eve.

☐ **July 2 to Aug. 15, '83:** 2BR hse, W. Menlo nr shps & bike bridge. Garden. Care of cat. $900. Call Ian, 321-9255.

☐ **Sept. 1 to summer '84 (flex):** Fully furn & equipped hse, 3BR/2BA, grdnr, Japanese garden, conv. to expressways. Sunnyvale, 20 min. to Stanf. Fine schools. $1200/mo. Call 497-1316, day; 929-7134.

☐ **June 25 to July 25 and Aug. 5 to Sept. 15 (flex):** Choice, lux. old campus hse w/pool. Pref. cpl. Garden, pool & hse maintenance incl. Call 324-3119, eve.

☐ **Mo. of Aug. (flex):** Attrac. furn. campus hse, 4BR/3BA, study. Prefer fam. without young children. No pets. $1200 + util. Call 493-5492.

☐ **Beg. July 15 (flex):** Furn. 2BR/2BA + den nr Woodside Rd. Cathedral ceil., pool, jacuzzi. No pets. Quiet. Refs. $1000/mo. Call 365-0210, eve.

☐ **June 22 to Aug. 20, '83:** Furn. hse, 3BR/2BA, w/yd. Family rent; Sunnyvale. Nr. #280. Nonsmokers, no pets. $800/mo. incl water & grdnr. Call (408) 739-9182.

☐ **Aug. 20 (flex) for 5 wks:** Lux. 2BR condo, Los Altos. Fully furn. pool, $800/mo. Maid optional. Call Dr. Haeger, 328-0920 or 948-2312.

☐ **June 25 to Aug. '84:** Fully or partly furn 4BR/2BA hse w/office area, fenced pool, elec. pool cover, kids' playhse, acre lot. Los Altos, view of hills. Nr. #280, dwntwn, bike to Stanf. $1800/mo. incl. pool & grdnr. serv. Call 941-4021 or (408) 988-6367, lv. message.

☐ **NOW w/1 yr. lease:** Elegant hse off Skyline Blvd. 3BR/2BA, 3 frpl. Bay view, 185 acres open land. Pool, spa, sauna, pond for fishing. Will rent fully furn incl, dishes, linens. $3000/mo. $1000 dep. No pets, nonsmokers. Refs. req. Call Lynda Rose, 851-8076.

☐ **Sept. to June '84 (flex):** Manhattan, 3BR/1½BA furn apt. Walk to NYU. Wish to EXCHANGE for similar Bay area apt. or hse; or for smaller apt or hse + rent. Call (212) 674-0412.

☐ **July 29 to Aug. 26 (flex):** Lrg. 3BR/2BA hse, fully furn, cul-de-sac nr. Woodside Plaza, Rdwd Cty. Great for fam. w/children. $900/mo. or $225/wk. Call John, 497-0837, day, 364-1244, eve.

☐ **End July & Aug. (flex):** 1BR/condo, furn, pool, sauna, tennis, 15 min. to Stanf. $600 (nego) + dep. Call 969-1193 after 4 p.m.

☐ **Beg. end of Aug.:** Deluxe lrg. 1BR condo. Lease 1 to 2½ yrs. Furn. or unfurn. Xclnt Mt. View location, lndry facil. 2 pools. $600 to $700. Call Gene Weber, (408) 295-1300, X311, (415) 965-4289.

☐ **Sept. '83 thru Aug. '84:** Fully furnished & equipped Palo Alto 3BR/2BA hse on cul-de-sac. AEK, patio, 10 min. to Stanf. $975/mo. incl. gardnr. Lease. Call 497-4861, eve.

☐ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

☐ **NOW:** 4BR/3BA hse at Tahoe-Donner. Hot tub, deck over-look Nat'l Forest. Hiking, tennis, golf, Donner Lake access. $450/wk or $200/wknd. Call 324-8559.

☐ **NOW:** Rm. in priv. hse, fully furn. incl. util, linens, lndry facil. For nonsmoker, male grad. stud. or scholar. Priv. entr., priv. phone. $225/mo. Call 493-3589.

☐ **Beg. Aug. 10 (flex):** Furn. hse, 3BR/2BA, AEK, frpl, xlg 2-car gar., W/D. Fenced garden, huge patio, trees. Quiet st., xclnt nghbrhd, nr shops, park w/pool. 2½ mi. to Stanf. Min. 1 yr. lease. $1125/mo. Call 326-4866.

HOUSING NEEDED

☐ **July 16 to 31:** Reliable nonsmoking prof. & wife seek apt. or hse. Call (415) 922-4640, eve.

☐ **Sept. '83 to Sept. '84:** Visit. prof. & wife wish to rent small furn. hse or 2BR apt. Pref. nr. Stanf. Call (415) 859-5105 or 326-0537.

☐ **Aug. or Sept:** Female post-doc & dghtr, 12, seek quiet, inexpensive apt. or shared hse nr. campus. Write J. Carey, 805 W. Stoughton Ave., Urbana, IL 61801.

☐ **Mo. of Aug. '83:** French scientist seeks EXCHANGE for apt. in Paris. Furn, quiet st. 15th Arrondissment, Nr Institut Pasteur, Volontaires metro. Top flr, 6-flr. bldg (no elev). Dbl. LR, 1BR + xtra rm. Or will rent for $600/mo + $200 refundable dep. Call Dr. Brutlag, 497-6593 or write Dr. Maurice Hofnung, Institut Pasteur, UPMTG, 28 rue Dr. Roux, Paris, 75015, France. Call 1 306 19 19, X2156.

☐ **Sept. 25 to Mar. 25, '84 (flex):** Visit. Canadian physician & wife seek 1BR or 2BR furn apt, small hse or HOUSESIT position. Prefer within 10 min to Stanf. Med Ctr. Refs. avail. Call (403) 432-3912, day; (403) 439-5135, eve.

☐ **Beg. early July:** Stanf. staff mbr. wants studio for 2, Palo Alto area, w/College Terr. or dwntwn pref. Local refs. Call Donna, 497-3967, day.

☐ **Aug. 22, '83 to Feb. 5, '84:** Furn hse, 4BR + study, car; in Brisbane, Queensland, Australia. EXCHANGE for 3BR furn. hse. ne Stanf. Write M. Sanders, Dept. of Psychiatry. U. of Queensland, Herston, Brisbane, 4029, Australia.

☐ **Aug. 25 to Sept. 5:** Faculty cpl seeks 1-2BR apt/small hse nr Stanf. No pets or children. Call Dr. Burn, (415) 666-4362, (415) 731-8551, eve.

☐ **NOW:** HOUSESITTER. Neat resp., great w/pets & plants. Refs. avail. Call Karen 324-1780, day; (415) 484-1116, eve.

☐ **NOW:** Stanf. staff wants to rent or sublet studio or 1BR apt in Palo Alto area only. Will also consider long-term HOUSESIT. Excl. local refs. Call Donna 497-3967, day; 493-6859, eve.

☐ **NOW::** $100 reward for info. leading to rent of garden cottage nr Stanf for resp. prof. woman. Call 326-4695.

☐ **Fall Qtr:** Visit Prof, wife, from Finland need small furn. apt.; walk. dist. to Med Ctr. $550 or less. Call Sydney, 497-6051, day.

☐ **July 16 to Aug. 28, '83:** Visit. fac. cpl, former Stanf. visitors, desire HOUSESIT or rent arrang. for above per. 1BR or more. Call Holahan, (512) 471-3033, day; (512) 346-2220, eve.

☐ **Aug. & Sept. (flex):** Visit Prof & fam. need 2BR furn. hse/apt to sit, share, rent. To $600/mo. Call 493-1546.

☐ **Last of July (flex) & Aug.:** Faculty cpl seek furn hse or apt. Nonsmokers, no children. Call 497-3134, day; 323-0105.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Jobs. . .

continued from page 16

Nonexempt

Reviews & processes proposals submitted to govt & nongovt agencies for contracts & grants funding Univ programs in research & training; drafts transmittal ltrs & memoranda; ensures that proposals conform w/ Univ policy & agency guidelines & that proposed budgets are arithmetically correct; enters statistical data into computer sys concerning proposal award process; involved in programming info into Datapoint sys; QUALIFICATIONS: good commu skills, arithmetical & analytical skills; able to work effectively w/ faculty & dept administrators & sponsor reps; articulate in both written & spoken word; requires light typing & operate simple calculator; able to use (or willingness to learn) Datapoint; strong serv 1 orientatioin & ability to exercise tact & discrimination; self-starter & able to solve complex problems; send appl/resume to Valerie Mallace, Rm 40 Encina Hall.; B15; $1514-1593.

26845-PM (JCC:2554) SECRETARY II: 75%; acts as Dept'l sec; prep syllabus mat'l, corresp, schedules, etc; using IBM Sel III & IBM Personal Computer w/ word processing program; keeps undergrad student files, grades & other dept'l records; works on different projs w/ other staff members as needed; answers dept phones & deals w/ visitors'/students questions; QUALIFICATIONS: typ 60; knowl/exp of academic sys desirable; ability to do detailed work; typ accurately; exp w/ IBM word processing desirable or willingness to learn the skill; send appl/resume to Joan Coppock, Dept of Art, Stanford Univ.; B11; $935-983.

29964-PM (JCC:2562) SECRETARY III: Prov sec'l serv to 2 Chemistry professors; prep of manuscripts, proposals, corresp; maintain schedules; arrange travel; monitor budgets; prep reqs, forms, etc; extensive use of word processor for manuscripts; prep grant proposals, develop proposal budgets, administer res expenditures w/in guidelines established by Univ & funding agencies; QUALIFICATIONS: typ 75; solid admin sec'l exp usually associated w/ 3-5 yrs exp; good English skills; prev word processing exp highly desirable, or willingness to learn; knowl of basic acctg principles; exp w/ tech typing desired; knowl of univ procedures & policies helpful; no smoking in the offc; send appl/resume to Janet Shaw, Chemistry Dept.; B14; $1440-1514.

31602-PM (JCC:2562) SECRETARY III: Sec to dir of large med res lab; prov sec'l & organizational support & coord a wide range of activities involving both Med Sch'l & many outside respon; make informed decisions involving understanding of policies, bkground, & prior; answer phone; maintain calendar; handle travel arrangements; screening visitors; compose corresp & reports; edit & assist in layout & format of reports & res proposals; tape transcription using IBM Sel & Wang word processing eqpt; prov liaison between lab personnel, vendors & Procurement; QUALIFICATIONS: excel sec'l & writing skills; use of machine dictation and/or stenography, word processing eqpt & computer; able to edit & assist in prep of documents using scientific vocabulary; familiarity w/ Stanford procedures; some bkground in biology or chemistry desirable; prev sec exp essential; contact: Edna Dorles, Med Ctr R-321, 497-7522.; B14; $1440-1514.

42631-PM (JCC:2562) SECRETARY III: Prov sec'l support for 3 faculty members & their res staff; receive & screen all calls; make appts & maintain calendars; typ & edit all manuscripts, corresp, grant proposals & clinic visit notes in finished form; monitor & maintain all grant budgets in res lab; approve grant expenditures within given limits; order supplies; do lib & bibliographic searches; maintain reprint & slide files; QUALIFICATIONS: typ 65; med & scientific terminology required; able to transcribe fr dictaphone in finished form; good command of vocabulary & punctuation; exp in Univ grant policies & procedures helpful; exp or ability to learn NBI word processor; send appl/resume to Phyllis Friedman, Dept. of Neurology, Med Ctr C338 or call 497-5072.; B14; $1440-1514.

39356-PM (JCC:2562) SECRETARY III: Respon for handling applications to Orthopaedic Residency Program, fr first inquiries thru selection process; genl sec'l duties in connection w/ orthopaedic Residency Program; genl sec'l duties & patient-related transcription in connection w/ one faculty member's clinical practice; QUALIFICATIONS: familiarity w/ resident selection procedures; knowl of med terminology (Orthopaedics preferred); knowl of word-processing; high degree of accuracy & quality; ability to schedule work to meet deadlines & coord phases of work w/ others; pleasant telephone manner; able to interact effectively w/ Faculty & Residents; working in offc w/ many people in close proximity; contact: Jane Pelton, 497-7609.; B14; $1440-1514.

Help wanted in rental listings

The service is seeking a second person to help with listings which appear weekly in *Campus Report.*

Simple bookkeeping, typing and telephoning skills are required.

The job pays $6 an hour, and when shared, needs a time commitment of five to seven hours weekly. Most of this is Wednesday through Friday, plus being available at a phone certain days of the week.

If you are a campus resident interested in such a partnership, please write SCHOA Rental Housing, Box 7772, Stanford, Calif. 94305. Or call Dorothy, 857-0414.

Batik works by Jamaican artist shown at I-Center

The Batik art of Sharon Chacko of Kingston, Jamaica, will be on view at Stanford's International Center from July 4 until August 14. A reception honoring the artist will be held at the Center from 5 to 7 p.m. Wednesday, July 6.

Chacko uses the traditional technique of resist-dying of cloth to create images of personalities and situations. Although batik is more conventionally employed for design and patterning of fabric rather than as a medium for artistic expression, she finds that its unique effects illuminate and emphasize her ideas.

She notes that batik was an intrinsic part of ancient Far Eastern and African cultures and yet survives as an individual textile art in spite of modernization and mass production. Chacko's batik method is a personally developed combination of traditional patterning and more diffuse application of the wax-resist with oil painting brushes, sticks, and Indonesian *tjanting*.

Chacko was born and educated in the West Indies. She graduated with honors in history and Spanish from the University of the West Indies in Kingston.

She has developed her batik art over the last six years without formal art instruction through the difficult but rewarding process of trial and error. Her batik portrait entitled "Rasta Queen" (1978) was used as the symbol for the Exhibition of Third World Art at the First International Festival of Women Artists sponsored by the United Nations in Copenhagen in 1980.

Chacko had a solo exhibition of her batik in New York in 1982 and has been included in several group exhibitions.

The International Center, located on the Stanford campus at the intersection of Mayfield Ave. and Lomita Dr. is open for viewing exhibitions from 8 a.m. until 11 p.m. on weekdays all summer and from noon until 11 p.m. on Saturdays during July.



'Malika,' a batik by Sharon Chacko

Tresidder's holiday hours

Some of Tresidder Union's facilities will have slightly reduced hours for the July 4 weekend, as follows:

The Tresidder Store—Saturday and Sunday, July 2-3, 7:45 a.m. to 11 p.m.; Monday, July 4, 8 a.m. to 4 p.m.

The Coffee House—9 a.m.-7 p.m. Saturday and Sunday; 11 a.m.-6:30 p.m. Monday.

The Recreation Center—11 a.m. to midnight Saturday, 11 a.m.-11 p.m. Sunday; 11 a.m.-7 p.m. Monday.

The Information Center—10 a.m.-10 p.m. Saturday and Sunday; closed Monday.

The Wells Fargo Express Stop is open 24 hours a day.

HEALTH IMPROVEMENT PROGRAM

HIP classes will pep you up in no time!!

Summer quarter will be an active one with a full schedule of exercise classes offered by the Health Improvement Program.

HIP is Stanford's health promotion program for faculty, staff, and their families, funded by the Benefits Office and Administered by the Stanford Heart Disease Prevention Program.

This quarter's session began officially on Monday, June 20, with the exception of Aerobic-Movement Workout Section II which beings Tuesday, June 28, but there is still space in all classes. And, because of summer vacation schedules, HIP is offering special six-, seven-, and eight-week rates for all aerobic movement-workout classes. Participants may join classes at any time during the summer.

Here's a schedule of this summer's classes:

Aerobic Movement-Workout: Classes consist of stretching, aerobic and toning exercises to music.

Section I meets Mondays, Wednesdays, and Fridays from 12 noon to 12:50 p.m. in Roble Gym. The instructor is Sue Jackson. The special summer rates are $25 for seven weeks and $20 for six weeks.

Section II begins Tuesday, June 28, and meets Tuesdays and Thursdays from 1-1:50 p.m. in the Encina Gym Wrestling Room. This class is taught by Barbara Frey Hewitt. The special summer rates are $15 for seven weeks and $10 for six weeks.

Section III meets Mondays and Wednesdays from 5:30-6:20 p.m. in the International Center Assembly Room. The instructor is Sue Jackson. The special rates are $15 for seven weeks and $10 for six weeks.

(The special summer rates quoted are $5 off the usual price.)

Walk-Jog-Run classes consist of walking, jogging, and running at all ability levels. Special focus is placed on those who have never jogged before or have not done so recently.

Section I meets MWF from 12:10-12:50 p.m. on Roble Field. Cost is $5 for the eight-week summer session.

Section II meets TTh from 12:10-12:50 p.m. on Roble Field. Cost is $5 for the eight-week summer session. Participants are encouraged to attend five days per week, but it has been broken down into sections because less frequent workouts are often preferred. Instructors for this class are Flay Adams and Julie Sahakian.

The Joy of Swimming class offers individualized swimming instruction at all ability levels. It is taught by Corinne Powell and David Schrom.

Section I is a new section at 11 a.m. at DeGuerre Pool. There will also be 12 noon and 1 p.m. sessions. People who have little or no experience swimming are especially encouraged to take the class. Cost is $10 for the eight-week summer session.

To register for any HIP class, send your name, campus address and phone, the class you would like to take and a check payable to Stanford University to: HIP, School of Medicine. For more information, call the HIP office at 497-9649.

STARTS offers summer classes for all tastes from chocolate to aerobics

STARTS (Student Arts at Stanford) summer classes, including unusual things like a chocolate workshop and Japanese flower arranging, begin this week.

Dance and exercise classes include modern dance (TTh 6:30 p.m.), ballroom dance (M 7:30 or 8:30 p.m.), Your Body: Use It or Lose It (M 6 p.m.), morning dance (TTh 7:30 a.m.), ballet (MW 5:30, 6 p.m.), floor barre alignment (MW 4 p.m.), and aerobic exercise (MTh noon).

Arts and crafts lovers can take knitting (M 8-10 p.m.), crochet (Th 7:30 p.m.), calligraphy (M 7 p.m.), Japanese flower arranging (W 7:30 p.m.), and photography (T 7 p.m.).

For musicians there is folk guitar (W 3-4 p.m., 4-5 p.m., 5-6 p.m.), and recorder (Th noon).

Other choices are Assessing Your Thinking Style (W 7-9 p.m.), Creating Your Own Image (two evenings in August), Auto Mechanics (W 7 p.m.), the chocolate workshop for hard core chocoholics (W 7-9 p.m.), and its recommended partner, Natural Weight Control (Th 5:15 p.m.).

Call the STARTS office at ext. 7-9671 or inquire at the Tresidder Information desk for starting dates, places, and prices for the above courses.

Patio Faire

Flowers, plants, and fine arts prints from the Fox Galleries of San Francisco, balloons, music, and food (including a "Chocoholics Delight"—goodies to fulfill every chocolate lover's dream) will be on sale Monday through Friday, June 27-July 1, on Tresidder's front patio.

The Summer Patio Faire will be sponsored by STARTS (Student Arts at Stanford). For more information call the STARTS office afternoons at 497-9671.

Publishing 'greats' come to Stanford

More than 50 leaders in the publishing profession from throughout the United States will converge upon the campus this week to serve on the faculty of the Stanford Publishing Course.

They will discuss the current status and the future of the book and magazine industries with the 200 Course participants, themselves professionals.

The program is sponsored by the Stanford Alumni Association under the direction of Della van Heyst, director of publications.

Harold Hayes, for 10 years editor of *Esquire* magazine and currently vice-president of editorial planning and development for CBS Publications, was the keynote speaker at Monday evening's opening dinner.

On Thursday, June 23, Pulitzer Prize-winning journalist Harrison Salisbury will be on hand for an evening Fireside. Long with the *New York Times*, he has been that paper's op-ed page editor since 1972. Salisbury has recently published his memoirs, *A Journey for Our Times*.

Among the other speakers will be Jerome Rubin, group vice-president of the Times Mirror Company in Los Angeles, where he overseas book publishing subsidiaries. A former president of Mead Data Central, he will consider the future of data base publishing.

Preservation Hall's back again for July 4 celebration

The Lively Arts at Stanford will present the annual Independence Day Picnic and Concert on Monday, July 4, in Frost Amphitheater.

Gates will open at 12:30 p.m. for a fun-filled family afternoon of picnicking and games, plus concerts by Queen Ida and the Bon Temps Zydeco Band at 1:30 p.m. and the Preservation Hall Jazz Band at 5 p.m.

As a sepecial treat, in honor of the Louisiana roots of both bands, Cajun food will be available in addition to traditional Fourth of July fare.

The celebration also will include the non-traditional playing of the Los Trancos Marching Band.

Each of the old-fashioned games—egg and spoon race, watermelon eating contest, three-legged and sack races—will be held twice, once for children under 10 years old and once for everyone else. Face-painting will be available.

The Preservation Hall Jazz Band will make their 91st appearance at Stanford, since first playing here in 1967.

Appearing with the Band this year will be Percy Humphrey, trumpet and band leader; Willie Humphrey, clarinet; Josiah "Cie" Frazier, drums; James Edward "Sing" Miller, piano; Narvin Kimball, banjo and bass; Frank Demond, trombone; and Allan Jaffe, tuba.

Most band members are in their 60s, 70s, and 80s, and have created and performed traditional New Orleans jazz for more than 50 years.

Though their jazz is simple in style, it can be quite complex in execution, as each musician improvises and adds his own personality to the performance.

Queen Ida and the Bon Temps Zydeco Band will present their own unique brand of Cajun music, an appealing blend of blues, dixieland jazz, and Latin music, influenced by reggae, calypso, country, and western swing.

The picnic and concert are presented in cooperation with *The Peninsula Times Tribune*.

Tickets are available at Tresidder Ticket Office, (415) 497-4317, and all other BASS outlets.



This striking image of the Annunciation as interpreted by Federigo Barocci is one of the etchings in the permanent collection of the Stanford University Museum. It will be viewed in the context of its influence on the prints of such master painter-etchers of the 17th and 18th centuries as Rembrandt and Giovanni Batista Tiepolo, whose prints are on exhibit. Docent tours will be presented on Thursdays at 12:15 beginning June 23 at the Museum.

Gallery exhibit shows Stock Farm items

In conjunction with the renovation of the Red Barn at Stanford, an exhibition of paintings, drawings, prints, photographs, and memorabilia related to Leland Stanford's interest in breeding and training fine trotting horses and thoroughbreds will open in the Art Gallery on June 28.

Stanford's Palo Alto Stock Farm was once the finest stable in the country and was known throughout the world. In operation for 27 years, it was at its peak between 1880 and 1891.

Jockey's silks, boots, bits, bridles, and other paraphernalia removed from the stables and stored in the Museum basement will be on view together with 19th-century tools from the blacksmith's shop.

A feature of the exhibition will be the historic photographs taken of Stanford's horses during the 1870s by Eadweard Muybridge.

Among these photographic experiments was the development of the zoopraxiscope, a machine that projects images from rotating glass disks in rapid succession. The first showing of these "motion pictures" took place in the Stanfords' Palo Alto home in 1879. A copy of the original machine will be included in The Stanford Horse Show.

The exhibition closes August 14.

The Art Gallery, on the Stanford campus next to the Cummings Art Building, is open Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday, from 1 to 5 p.m. It is closed on Mondays. Admission is free.

Tour fancy hotel suites tomorrow

Do you want to see the exclusive hotel suite where Flo Ziegfeld's wife, Anna, bathed nightly in 30 gallons of milk? Or the historic rooms where world leaders met in 1945 to charter the United Nations?

There are a few tickets left for the Committee for Art's Suite Story tour of San Francisco's most beautiful hotel suites tomorrow (Thursday, June 23).

The tour, which starts at 10 a.m., includes door prizes, refreshments, and transportation between the four hotels on the itinerary—the Westin S. Francis, the Mark Hopkins, the Fairmont, and the Hyatt Regency.

If you get the ticket today, it'll be $15; tomorrow the price is $20. Call the Committee for Art at the Museum for quick service, 497-2997, and pick up the ticket yourself. Tomorrow you could be in the suite that Beverly Sills favors because of its grand piano and model English butler.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., June 22, to cover the weeks of Mon., July 4, through Sun., July 17. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

MONDAY, JUNE 27

n: STARTS Exhibit and Sale of Fine Art Prints and Plants. Outdoor Faire featuring Fox Gallery prints, plants, flowers, music, food. 11 am - 5 pm. Tresidder Front Patio.

TUESDAY, JUNE 28

n: STARTS Exhibit and Sale of Fine Art Prints and Plants. See details on Monday above. 11 am - 5 pm. Tresidder Front Patio.

Stanford Museum Lunch Hour Tour: "The Artist Chooses Paper". 12:15 p.m. Stanford Art Museum. Free.

WEDNESDAY, JUNE 29

n: STARTS Exhibit and Sale of Fine Art Prints and Plants. See details on Monday above. 11 am - 5 pm. Tresidder Front Patio.

Stanford Museum Lunch Hour Tour: "The Artist Chooses Paper". 12:15 p.m. Stanford Art Museum. Free.

Aero-Astro/NASA/ASEE Seminar: "From Icarus to the Boeing 767 and Beyond": Prof. Richard S. Shevell, Stanford Dept. of Aero/Astro. Open to the public. 8 pm. Terman Auditorium. Free.

THURSDAY, JUNE 30

n: STARTS Exhibit and Sale of Fine Art Prints and Plants. See details on Monday above. 11 am - 5 pm. Tresidder Front Patio.

STARTS Speaking Jazz Lecture Series: "Guitar in Jazz, Old and New Directions and Approaches," by Bruce Forman. Muse recording artist has worked as bandleader and sideman with Grover Washington, Bobby Hutcherson, Richie Cole, Freddie Hubbard, Eddie Jefferson and others. 7:30 p.m. Tresidder Union. $3 admission, $25 for full series.

FRIDAY, JULY 1

n: STARTS Exhibit and Sale of Fine Art Prints and Plants. See details on Monday above. 11 am - 5 pm. Tresidder Front Patio.

EXHIBITS

Chicanos in California: Organization, Politics & People. An exhibition selected from the Chicano Manuscipt Collection, Dept. of Special Collections. 8 a.m.- 5 p.m. . Louis Lurie Rotunda, Green Library. April 25 - June 30.

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning, development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23 - July 28.

Arthur Schnitzler 1862-1931, Documentary Photo Exhibition. Cecil H. Green Library, West Wing Corridor. May 23 June 30.

Boris Ilyin, exhibition of recent oil, acrylic, & watercolor paintings. Reception, Friday, June 10, 5-7 p.m. Bechtel International Center. June 3 - June 30.

"Propaganda Posters of Two Revolutions". Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8 - Jan. 31, 1984.

Graphic Artists Work. The work of Tresidder's Marketing Dept. staff - see the process involved in creative advertising as well as cartoons and graphic design work. Upper Lobby and Coffee House Galleries of Tresidder Union. June 16 - July 3.

Photographs by Aurangreb Khan. Coffee House Gallery, Tresidder Union First Floor. July 3 - Aug. 1.

Paintings by Liz Cheney. Atmospheric style and designs by a student of the Stanford Fine Arts Dept. Upper Lobby of Tresidder Union. July 3 - Aug. 1.

CAMPUS REPORT

Volume XV, Number 39 | A publication for Stanford University faculty & staff | June 29, 1983

Stanford West proposal cut by 175 units

Stanford will reduce the size of its proposed Stanford West housing project by 175 units and will contribute up to $2.1 million to traffic and transportation improvements under the terms of a proposal developed by the University and Palo Alto staffs.

Announced Thursday in a staff report to the City Council, the terms have yet to be approved by that body, or by the Stanford Board of Trustees. The Council will consider project details and its Environmental Impact Report (EIR) on July 7.

The proposal also calls for Stanford to provide 180 below-market-rate (BMR) housing units in the project, and to make the 4.2-acre Mayfield School site on El Camino Real available to the city for housing for $100,000.

As now proposed, Stanford West would consist of not more than 1,100 condominium units on a 46-acre Willow Road site, and 194 Medical Center-related units on a five-acre parcel at the corner of Willow Road and Pasteur Drive.

The 46-acre site is zoned for 1,666 units. Stanford initially proposed 1,275 units, but has cut that figure to reduce the size of the buildings in the development.

"We think that we have met the city and our neighbors more than halfway in these various agreements," said Frank Morrow, Stanford director of real estate. "We will be providing badly-needed housing, including three times as many BMR units than have been built in all of Palo Alto so far, and we will be making a substantial contribution toward road improvements in that area of the city."

Under the BMR agreement, 15 percent of the units in the project will be priced to be affordable to families with an income between 80 percent and 120 percent of the Santa Clara County median. Palo Alto will be able to buy 50 of the units, and Stanford has agreed to make 130 units available at affordable prices for 51 years.

All together, the project's EIR and the various mitigations, including the BMR program, are valued at nearly $10 million, Morrow said. The EIR alone has cost $700,000, he reported.

In addition to that, Stanford has recently extended Campus Drive to Junipero Serra Blvd. at a cost of $850,000, plans to extend Welch Road to Campus Drive at a cost of more than $250,000, and has proposed to extend Willow Road to El Camino Real for an additional $1.5 million, Morrow said.

According to the staff report, Palo Alto will pay $235,000 for a right turn lane on Quarry Road at Arboretum, and to computerize traffic light timing on Willow Road.

Taxes from the housing would more

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Prince Talal urges more help for starving children

Photo by Chuck Painter

Saudi prince criticizes U.S. press coverage

Multimillionaire Prince Talal of Saudi Arabia came to Stanford Monday, June 27, to beg for the starving children of the world. He hardly got a word in.

Talal, who is one of the 48 brothers of King Fahd, has for 18 months been president of the Arab Gulf program for the U.N. Development and Humanitarian Organizations (AGFUND) which raises money for UNICEF and other UN developmental and aid programs. All its members are Arab states.

In a 30-minutes news conference at Hoover Institution, only the last five minutes was given to the starving children of the world. All the rest of the time was taken up by political questions hurled at Prince Talal by reporters.

Draped in a gold-trimmed brown robe, with his dark hair covered in the traditional Arab headdress, Talal listened earnestly to the barrage of questions.

"Is the United States the friend or the enemy of Saudi Arabia?" asked Talal. "All we seem to receive in the American press is attack, attack." He referred to inaccuracies and slanted reports in leading newspapers, specifically to a report in the *New York Times* of an impending *coup d'etat* by one of Talal's brothers, a report which was going to be corrected.

No other country received so much hostile reporting as Saudi Arabia, said the prince, in spite of the fact that the Saudis had given $7 billion in aid to the underdeveloped world, had imported $35 billion worth of products from the U.S., other large sums from other leading countries, had given money generously to such countries as France and Germany, and had tried to act as an honest broker in the troubled Middle East.

Talal was asked whether Saudi Arabia could help to persuade the Syrians to withdraw from Lebanon. He urged the U.S.

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Police postpone auction of remaining stolen goods

An auction originally scheduled for July 9 to dispose of unclaimed property found in the home of convicted burglar Robert Lee O'Connor has been postponed, according to Police Capt. Raoul Niemeyer.

Superior Court Judge Robert M. Foley ruled Tuesday, June 28, that O'Connor and his codefendants should have an opportunity July 25 to demonstrate why the property should be returned to them.

On May 24 Foley had ordered the Santa Clara County Public Administrator's Office to dispose of the unclaimed property, and the preview and auction had been set for July 8 and 9 in the Stanford Police Department parking lot.

O'Connor, suspected of involvement in 181 Midpeninsula burglaries during the past two years, pled guilty March 22 to 21 counts of burglary. Police recovered more than $2 million in stolen property from his home following his November arrest by San Mateo County sheriff's deputies. O'Connor was sentenced to 19 years in prison.

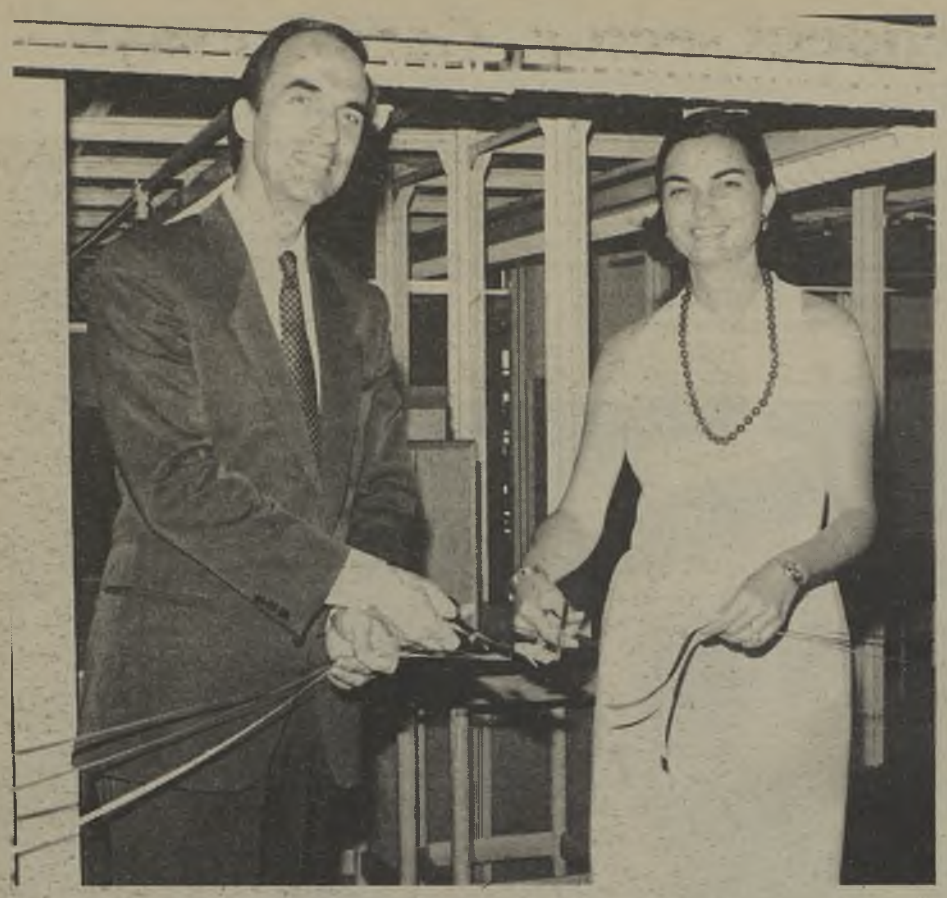
Stanford police, who headed the investigation that led to his arrest, have stored the recovered merchandise in two trailers. Niemeyer said persons from more than 2,000 households have sifted through the items looking for their belongings since Nov. 15.

"We've exhausted our ability to locate victims whose property is still here," Niemeyer said. He speculated that some of the stolen property might be from Southern California, other western states, and

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Philip R. Jonsson and Margaret Jonsson Charlton

Jonsson Library dedicated

The day after Commencement new Stanford alumna Laura Charlton, '83, was joined by members of her family for the dedication of the Jonsson Library of Government Documents in Green Library.

The expansion and renovation of the department of Government Documents as a library-within-a-library were made possible by a gift of the Jonsson foundation of Dallas in honor of Laura Charlton's grandparents, Erik and Margaret Jonsson of Dallas.

Mr. Jonsson is a long-time friend and business associate of Cecil H. Green and the late Eugene McDermott, in whose memory the McDermott Foundation made a gift for the McDermott Suite and Eugene McDermott Room in the Curatorial and Reference area of Green Library. Thus the names of all three of the principal founders of Texas Instruments are joined in Green Library.

President Donald Kennedy, Director of Libraries David C. Weber, and Jonsson Foundation Trustee Margaret Jonsson Charlton spoke at the brief dedication ceremony in the Jonsson Library of Government Documents.

Mrs. Charlton's brother and fellow foundation trustee, Philip R. Jonsson, joined in the traditional gesture of cutting the ribbon, pictured above, at the entrance to the stacks in the Jonsson Library of Government Documents.

Students serve as faculty liaison at LOTS

In order to improve communication, two students have been appointed to newly created faculty liaison positions at LOTS computer facility, Director Ralph Gorin reports. The student coordinator will focus on the students' needs and the consulting staff, while the faculty liaisons can accommodate the faculty's needs.

Steve Miner, a junior majoring in electrical engineering, and Pierre King, an undeclared junior, will serve as faculty liaisons during the next year. Greg Ching will serve as student coordinator.

"Over the past several years, LOTS has been in the position of providing limited computing resources to an ever-increasing user community. Unfortunately, our staff size has not increased proportionately. Because of this increased user-staff ratio, most of the staff's time has been spent on maintaining the system, rather than on communication. It has become quite obvious to us at LOTS that this is unsatisfactory; that close interaction with the faculty and students is of paramount importance," Gorin said.

Research associate in psychology

The successful candidate for this position will act as study director for a large-scale longitudinal field study of divorce and custody including survey field research as follows: designing questionnaires and interviews; training interviewers; conducting and supervising data gathering by telephone and face-to-face interviews; computerized data processing, analysis, and write-up of results.

Persons interested in applying for this position must have a Ph.D. in psychology, sociology, or in a related social science; academic experience in all phases of survey field research as described above related to family functioning, family law, family roles, or child development; prior research should preferably concern both adults and children; statistical expertise required.

Qualified candidates should send a resume to: Prof. Eleanor Maccoby, Psychology Department, Building 420, Stanford University, Stanford, Calif. 94305.

Stanford is committed to equal opportunity through affirmative action in employment and we are especially eager to identify qualified minority and women candidates.

Sutro and Co. donates $100,000 endowed fellowship to aid MBAs

A $100,000 endowed fellowship that will provide financial assistance for MBA students at the Stanford Business School has been announced by Robert K. Jaedicke, dean of the School, and Warren H. Berl, president of the Alice and Sidney L. Schwartz Foundation and chairman of the Sutro and Co. Inc. executive committee.

The Sutro and Co. Incorporated Fellowship was established with a $71,000 contribution from the Schwartz Foundation and augmented by contributions from Sutro and Co.

Founded in 1858, Sutro and Co. is the oldest investment banking firm on the West Coast.

Sidney L. Schwartz, who died in 1975 at the age of 89, joined the company in 1906. As its senior partner from 1930 to 1959, he developed Sutro from a small family enterprise to one of the largest regional full service investment banking institutions in the western United States, and continued to serve as chairman emeritus after his retirement.

Among his many other civic and charitable activities, Schwartz was a founder of the San Francisco Boys Club and the San Francisco Rotary Foundation. A writer, artist, collector, and philanthropist, he was also a generous donor for many years at UC-Berkeley's Business School, library, and athletic program.

People

Marsh McCall

Prof. Marsh McCall, chairman of the Classics Department, was the main invited speaker at the annual meeting of the Classical Association of Canada, held June 2-4 in Vancouver B.C. He gave a lecture entitled "Actors' Roles and some problems of interpretation in Greek tragedy."

Earlier this year McCall was visiting scholar at the Institute for Classical Studies in London. He spent two weeks at the Institute, which is a leading international center for classical studies, and gave a seminar on the subject of Greek tragedy.

Michael Oman
Tony Macias

Associate Provost Michael Oman of Stanford will assume the newly created position of director of foundation and corporate relations in the Office of Development, effective July 1, acting Vice-President Bruce Hinchliffe has announced.

Tony Macías, who has served both as assistant dean of the School of Engineering and acting director of corporations in the Development Office, will become full-time associate dean in the School of Engineering.

Both changes were made with the concurrence of Prof. Henry Riggs, who will assume office as vice-president for development July 15.

Robotics Society to form here

The newly formed Robotics Society of America held its first general membership meeting at the Terman Residence at Stanford July 11.

The residence is located at 445 Escarpado on the campus.

The agenda calls for "artificial entertainment by robots and real refreshments by humans."

The society is open to anyone interested in the problems of robotics. Membership dues are $25 for adults, $15 for children. Anyone interested can contact the society at 200 California Ave., Palo Alto, Calif., 94306, or call executive director Walter Tunick at (415) 326-6095.

Alan Fahrenbruch

A major treatment of a growing branch of solar technology, *Fundamentals of Solar Cells: Photovoltaic Solar Energy Conversion*, by Alan L. Fahrenbruch and Richard H. Bube, has just been published by Academic Press.

Fahrenbruch, senior research associate in the Department of Materials Science and Engineering, carries on an active research program in thin film photovoltaic materials for large area terrestrial solar energy conversion in collaboration with Professor Bube, department chairman.

Fahrenbruch also teaches an annual course, "Photovoltaic Solar Energy Conversion," MSE 215, upon which the book was based. The book treats the fundamental physical principles of solar cells, introduces specific devices, and illustrates the possibilities for innovative design.

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Small gifts backbone of independent sector, Gardner says

BY DONALD STOKES

Mr. and Mrs. America give nine times more to nonprofit organizations than is given by the foundations and corporations.

Last year over $54 billion flowed out from private pockets, mostly in gifts of modest size. Foundations and corporations gave a total of about $6 billion.

This is one of the reasons why John W. Gardner, former Health, Education, and Welfare secretary, founder of Common Cause, and until his retirement last winter a longtime trustee of Stanford, is a robust optimist about the spirit and future of the United States.

Gardner is still active in Stanford affairs, but these days most of his time is spent helping the growth of another national organization which he founded and chairs. It is Independent Sector, a coalition of voluntary organizations, foundations, and corporate giving programs devoted to the public interest.

Independent Sector now has 465 affiliated organizations which cover almost every important area of effort in the public good.

The idea that inspired it came when Gardner was attending a meeting of the Stanford Board of Trustees in 1977.

"I heard some gloomy fears expressed about the future of private nonprofit organizations," he said.

"I began to look around after that and found that a lot of people shared those fears. They felt that voluntary effort for the common good, which had always been an enormous part of American life, had seen its best days, and that the walls were closing in.

"I decided to do something about it, and brought together some organizations which were interested. Apprehensions were extremely grave in the late 1970s, long before the present administration cut the budget and reduced the funds going to many worthwhile institutions. There were fears about inflation, an erosion of private giving, worries about relationships with government.

"Today our members include corporate giving programs, foundations, activist groups, women's rights organizations, charities, religious bodies. We have people from every segment of American public purpose.

"We do not believe that the private sector can make up for the administration's cuts in social programs. That is not the point. The government's social programs are important. But the private sector has a unique role to play."

Gardner, interviewed in San Francisco, was there to attend the premiere of a film "To Care: America's Voluntary Spirit," made for Independent Sector.

"We believe that if Americans are made more aware of the depth of this tradition of private help for the community they would put more into it," he said.

"Private effort for the community is a really tremendous feat, which few of us realize. In 1982 $60 million was pumped out to nonprofit organizations. Out of that huge sum, roughly five percent came from the foundations, five percent from corporations. The remaining 90 percent came from individual givers.

"This surprises people when they learn it. They think that the giving is mostly from foundations and corporations.

"But in fact, the vast majority of private help for the common good is a Mississippi River of five- and ten-dollar checks."

Gardner includes himself among the people who were surprised when they learned the full extent of the generosity of Americans.

Another impressive fact, he said, is that a significant amount of money given to churches goes to such nonsacramental purposes as overseas relief. The churches do more effective work in the inner cities than any other category of nonprofit organization.

The first priority of Independent Sector is to educate the public in the power of and the need for private giving. The second is to deal with the problems caused by government.

"We do not take an adversarial position toward government. Far from it. Many nonprofits receive government grants or contracts," he said.

"The trouble is that first comes the government dollar and then comes the government rule-book, which gets fatter all the time. Also, the rules keep changing all the time.

"We serve as a mobilizing point for dealing with such matters."



The purpose of a university is not to train people for jobs, but to train them for life. In any case, we do not know what the future jobs are going to be. We may guess for five years out, but not for 15. We are educating for an unknown future.

—John W. Gardner

As an example, Gardner mentioned that in January the Office of Management and Budget (O.M.B.) issued a new circular which would have drastically reduced the right of advocacy of members of nonprofit organizations which received any government funds. This included universities and colleges.

"This circular," he said, "did not simply limit you against carrying on advocacy with government funds—that would be understandable—but even limited the extent to which you could engage in advocacy using private funds.

"We took up the matter vigorously with O.M.B. and with Congress, and the circular was withdrawn.

"How do we go about such a battle? Our 465 organizations have roots in every Congressional district. When a Congressman hears from the local arms of these institutions in his area, whether it is the local Boy Scouts or the corporate executive who heads the local United Way, he tends to listen.

"Not that lobbying is our main business. It is not our primary objective, except when government deliberately does something that is offensive to nonprofit institutions. Then we have to take up the fight."

Independent Sector is run by a comparatively small staff of nineteen people, with a budget of about $1.3 million a year.

"The private pursuit of public purpose is an honored tradition in America," said Gardner. "Independent Sector is a meeting-ground for organizations serving that tradition."

When he retired from the Stanford Board of Trustees last winter his colleagues passed a resolution that described Gardner as having been 'the conscience of the Board in consistently advocating that Stanford strive for excellence.'

When reminded of this, Gardner waved it away. "I refuse to accept that label. The other Board members care about excellence too. But I do think that it is very important to keep in mind certain basics about the purpose of education. Sometimes things get so complicated that we forget what that central purpose is.

"The purpose of a university is not to train people for jobs, but to train them for life. In any case, we do not know what future jobs are going to be. We may guess for five years out, but not for 15. We are educating for an unknown future.

"We must develop young people's senses of what they are about, what their community and their culture is about, their capacity to solve problems, basic strengths that will stand them in good stead wherever technology takes them."

Gardner served on President Kennedy's Task Force on Education and was chairman in the same period of the President's Commission on International Education and Cultural Affairs. He was chairman of President Johnson's Task Force on Education and of the 1965 White House Conference on Education. He served as Secretary of Health, Education, and Welfare from July 1965 to March 1968.

His work in education, from the time of Sputnik on, helped the explosion of activity on education matters during the 1950s and early 1960s.

Asked what has caused the sorry decline of American education since that time, Gardner replied: "I believe that about 1967, after virtually 10 years of lively national interest in education, there came a period of disinterest on the part of the American people.

"We have had 15 or 16 years of comparative neglect. In this country there are ups and downs of interest in major issues, and when the interest falls to its lowest, the public doesn't even think about the

continued on next page

Gardner/ continued from page 3

particular issue.

"It would seem that Americans just got tired of thinking about education. They haven't given it the time of day since 1967—until this year. We went through all those years of apathy you just couldn't penetrate.

"There were a number of social problems which may have helped to turn off interest. There were the disputes about busing, about racial discrimination, and so on. Nobody really knows why Americans lost interest in the education of their children. Some say that when the federal government began to support education, the American people lost interest. But the federal contribution to education never rose above seven percent of the total.

"Today that is changing. Interest is returning. We are having a resurgence, thanks in part to the efforts of people like Donald Kennedy, president of Stanford, and Myron Atkin, dean of Stanford's School of Education.

"Part of the reason interest in education is coming back is worry over our competition with the Japanese. It is regrettable that we cannot be enthusiastic about education for its own sake. It seems that a prod from outside is necessary to wake up the American people.

"There are fears that we are losing our position in the forefront of economic growth and development, particularly in high technology. The Japanese have penetrated our position over a wide front.

"I like the high motivation today, but it tends to be centered on vocations. I worry about the competitive scramble to get into the big corporations, when there is so much else that students should be preparing themselves for.

"Young people really should be preparing themselves for an unknown future. They don't know what is coming, and nor does the older generation.

"There are several things which favor basic work in the humanities and sciences as an important part of the educational system. First, the rate of change is such that any really smart youngster is bound to give a little thought as to whether he should spend all his time on specialization. To specialize implies that you know what is coming.

"In view of the way the world is changing it might be better to know some basic things about yourself and your species, and of the world in general."

Gardner rose and walked around the room, earnestly seeking for the words to express his deepest feelings. "Let me tell you what I would like for my grandchildren—I have four. I would like them to feel that they are part of a long story that started way back, and I would like them to understand something about that story.

"I think a sense of continuity is terribly important, not only in terms of the past but also of the future. We should feel a powerful link with those who preceded us and a strong sense of responsibility for the generations to come.

Santayana said 'Life is not a feast nor a spectacle—it is a predicament.' I would like my grandchildren to know something about that predicament.

"You have to have the sciences because the physical environment and your own physical nature are part of the story; but I put a lot of emphasis on the social sciences and humanities. History, philosophy, and literature, for example, introduce you to the predicament through quite different doors.

"I am thinking in very practical terms. My convictions about the humanities don't rest on the fact that I want my grandchildren to be cultivated in some old-fashioned sense. I want them to be introduced to an extraordinary story, which they are not going to understand unless they come to it through many doors."

In his book *Self-Renewal* Gardner wrote that many people fear George Orwell and Aldous Huxley were right in forecasting that the individual will become obsolete, that individuality in the old sense will not be able to survive the impersonal demands of modern mass society. Asked whether he still thought this was true, Gardner replied:

"The danger of monolithic societies, made up of brainwashed citizens, is real. We must combat it with all the resources at our command. Fortunately those resources are substantial.

"There is something unpredictable about the human spirit, not always comfortable, but something that will never be wholly tamed. Not necessarily a noble rebellion, maybe a cranky or even unpleasant tendency not to believe what you are told to believe.

"I do not believe that any amount of indoctrination can stamp out that spirit from our species. Perhaps it can be stamped out in 99 persons, but the 100th will nurse some thought that is not permitted.

"The human mind is mischievous, unpredictable, its spirit is volatile and troublesome. I have faith that the rebellion of the human spirit against authoritarianism will continue. It is built into our species.

"If a society hopes to achieve renewal, it will have to become a hospitable environment for creative men and women with the capacity for self-renewal. Thanks to recent research, we now know a good deal about the creative person and about the environment which fosters creativity.

"Orwell and Huxley were so worried by the question of liberty and what would happen to it, that they tended not to take into account the inefficiency of the monolithic societies they envisaged.

"On at least two occasions in the last quarter of a century the Soviet Union has tried to decentralize some responsibility, because the people at the top were conscious that something very undesirable had happened in those insulated layers below them. Factory managers, for example, didn't appear to have the spirit and initiative they would probably have had in a more decentralized organization.

"Both those two efforts failed. The vast middle layers of Soviet bureaucracy had no intention of carrying out the instructions to decentralize.

"In some ways it is rather similar to a difficulty faced by many large corporations in the U.S. Alfred Sloan, chairman of General Motors during its great years, was very strong for decentralization. He did not think of it in terms of democracy or political liberalism, or philosophy. I used to talk to him about it when I was writing *Self-Renewal*.

"He would say to me 'All I am interested in is in keeping that regional manager awake, and making him feel that he is part of the future of General Motors. The only way I can do that is to push more responsibility in his direction.'

"Sloan approached the issue quite outside the realm of philosophy, but he said what many philosophers of our system today are saying: 'Unless you give people a piece of the action they are not going to stay awake.'

Modern philosophers are fashionably pessimistic. Life has always been harsh, and a sensible view of life has always been based on a clear-eyed view of the ironies and absurdity of the human condition.

"It is hardly surprising that men and women today take a less cheerful view of the world than their grandparents did. But for some of our contemporaries the pendulum has swung so far toward a bleak and despairing view of life that one may ask whether it has reached the end of its arc.

"One is inclined to hope so as one contemplates the excessive, self-dramatizing and essentially romantic pessimism that characterizes some modern writers, artists, and thinkers."

Gardner founded Common Cause in 1970. It met a national need to enable citizens to hold government accountable. It is growing steadily and now has 240,000 members. During 1982 a record 66,000 new members were enrolled.

Gardner is a consultant to Common Cause, but is no longer chairman.

Gardner was asked about rumors that he had in the past turned down offers of the presidency of Columbia and of Stanford.

"I have never allowed any suggestion of this sort to come to the point of my refusal. There have been many occasions when universities have approached me to explore the extent of my interest, and I have always thought that the only fair way was to say either 'Yes, I'm ready' or 'Please don't make me an offer.' So it is accurate to say that I have not refused any presidencies."

Gardner, a Stanford alumnus, agreed that he declined to be considered for the presidency of Stanford. "I was deeply honored by the thought," he added.

Gardner was the editor of President Kennedy's book *To Turn the Tide* and is the author of the books *Excellence*, *Self-Renewal*, *No Easy Victories*, *The Recovery of Confidence*, *In Common Cause*, and *Morale*. He is co-editor with his daughter Francesca Gardner Reese of *Quotations of Wit and Wisdom Know or Listen to Those Who Know*.

He has received a large number of awards, decorations, and honorary degrees. In 1964 he was awarded the Presidential Medal of Freedom, the highest civilian honor in the United States.



Excerpt. . .

Free men must set their own goals. There is no one to tell them what to do; they must do it for themselves. They must be quick to apprehend the kinds of effort and performance their society needs, and they must demand that kind of effort and performance of themselves and of their fellows. They must cherish what Whitehead called "the habitual vision of greatness." If they have the wisdom and courage to demand much of themselves—as individuals and as a society—they may look forward to long-continued vitality. But a free society that is passive, inert and preoccupied with its own diversions and comforts will not last long. And freedom won't save it.

Today any reference to the weaknesses of our society is seen in the context of our international rivalries of the moment. But long, long before such rivalries were formed we were committed, as free men, to the arduous task of building a great society—not just a strong one, not just a rich one, but a great society. This is a pact we made with ourselves.

DeTocqueville was not speaking rhetorically when he said, ". . . there is nothing more arduous than the apprenticeship of liberty." And he might have added that the apprenticeship is unending—the unchanging requirement of a free society's survival is that each generation rediscover this truth. As Chesterton put it, "The world will never be safe for democracy—it is a dangerous trade."

But who ever supposed that it would be easy?

John W. Gardner
Excellence

Leaders need to balance innovation, analysis —Leavitt

Some current best seller books on management may delude rather than enlighten us if we come to believe that a return to individual leadership is all we need to solve complex managerial problems.

So said Stanford Business School Professor Harold J. Leavitt, of the nation's most eminent managerial psychologists, in a campus interview. Leavitt, who holds the Walter Kenneth Kilpatrick Professorship in Organizational Behavior and Psychology, is best known for his textbook, *Managerial Psychology*, a work which has been published in 15 languages.

Books such as *In Search of Excellence: Lessons from America's Best Run Companies,* by Peters and Waterman, reflect a pendulum swing away from the rational and analytic and toward the emotional and entrepreneurial, a movement he personally welcomes. But Leavitt worries that in the process we may be seduced by simple answers to problems that are not simple.

"A lot of the recent books are being widely read because managers have recognized that in the last few years there is something wrong, and they've gotten itchy and unsure of themselves," he said. "The biggest single reason is the success of the Japanese. Americans, who have been sure they knew what to do and exactly how to do it, have found that the Japanese have been doing it differently and doing it better.

"All these books point to something that may be a little too seductive. They say to managers, in effect, 'You'll succeed if only you go out and walk the plant, lead your troops emotionally, have a few simple messages about what you believe in, and send those through the organization.'

"This is a kind of return to individual leadership. It is important, but one of the things that scares me about it is that it is too easy. One of the reasons managers like it is it gives them things to do that they already know how to do. It doesn't require serious change. It doesn't say you have to learn Fortran. It says you walk around the shop and smile. Those things are true and managers should be doing them. But they should also be using their staff analysts and doing their projections and the other hard stuff."

What's happened is that analysis has stuck its head up above the clouds, when everything else is down below. We ought not to be pulling the analytic tower down but instead, we ought to be raising the towers of implementation and pathfinding.

—Harold J. Leavitt



Pendulum swings

Leavitt said the pendulum swing away from the analytic is an appropriate correction for American management. But rather than tear down the analytic, American management needs to bring innovation and implementation up to the level achieved in the analytic portion of the managing process. "What's happened," he said, "is that analysis has stuck its head up above the clouds, when everything else was down below. We ought not to be pulling the analytic tower down but instead, we ought to be raising the towers of implementation and pathfinding."

The post World War II push toward analysis and quantitative methods in business schools was, said Leavitt, "a visionary movement away from the then-existing view of business education as a simulation of current business practice," a movement which he said was as important for the development of the management field as was the turn-of-the-century shift away from the apprentice system in medicine.

"This heavy push toward numbers in business schools was extremely sensible at the time," he said. "Some very wise people perceived correctly that rapid growth in technology and the emerging computer offered a rich and promising vein to be mined to improve management practice. We did that way ahead of anybody else and we are still doing that far better than anybody else. But while we did that well, we ignored some other things around us because we didn't see that those things were being neglected."

The human aspect of getting things done is much more important now, he said, because the nation has become a knowledge-based society "with people carrying more of their skills in their heads. Work no longer means using your arms and legs; now it means using your head. And we don't know better ways to do that than going back to some rules about how you involve people so that they use their heads. Before, you may have told people what to do. Now, you provide a fertile work environment and hope they will do things that are in the interest of the organization."

In his balanced model of the managing process, Leavitt challenges the axiom that decision-making should come before implementation. He calls, instead, for an interactive process between problem solvers and implementers, acknowledging that the success of Japanese management has lent major support for that interactive process.

"There is where the Japanese have really helped us organizational behavior types," said Leavitt. "The whole thrust of organizational behavior has often been seen as softheaded, and kind of crazy. We're known as people who make decisions by committee, and everyone knows that committees make lousy decisions, and that authority has to rest at the top. Now the Japanese come along, and the song we've been singing suddenly becomes popular. Groups and quality circles and bottom-up management suddenly look reasonable."

Primacy of the problem-solving view has led organizations to put planning and decision-making people into one camp and implementing people into another, and that specialization and separation of the two camps is a major cause of trouble.

"The point of hand off, where the problem solvers have to pass the ball to the implementers, is where the trouble usually starts," he said. "The reason is simple: people don't like other people's babies nearly as much as they like their own. Implementers will find all sorts of reasons for disapproving of the problem solvers' plans that have been passed on to them. On the other hand, implementers love their own decisions and will fight hard to make them work."

Leavitt suggests that an interactive process between decision-makers and implementers will capitalize on the strengths and offset the weaknesses of both. "An army designed by extremal problem solvers would be made up of well-trained, well-organized, obedient, but reluctant troops," he said. "An army designed by extremal implementers would be peopled by a committed, enthusiastic, but undisciplined mob.

"Decision-makers and implementers can rally around the same ideas, although their agreement may be for different reasons," said Leavitt, and he suggested decentralization as a case in point.

"Both believe almost fervently in decentralization—astonishing, until one looks inside. Problem solvers love decentralization because it provides mechanisms of control. It pinpoints responsibility in a few key profit centers, and by controlling at those points one can control the whole organization. Implementers love decentralization because small is beautiful, and the more you can break larger into smaller units, the more possible it is for members to deal directly with one another.

"For implementers, then, decentralization messes up the organization, making it less orderly, and more human. And that is what's good. For problem solvers, the same decentralization provides order in an otherwise dangerously chaotic world."

What can business education do to encourage interaction between problem solving and implementation?"

"What we do now is divide the world into sectors—problem solving and implementation—and we teach each of those sectors," he said. "We need a lot more interaction so that students can see that the two processes are tied closely together.

"One way to do it is for faculty to put into their courses more problems which require students to extend their thinking through both problem solving and implementing. In most business school courses, the solution itself is victory—success. In organizational behavior, which has traditionally had responsibility for implementation, success is making the solution happen—people changing their behavior. Now, we have to get both in the same courses."

Leavitt acknowledges that both the implementers and the problem solvers need to modify their courses.

"We need to ask students not only to solve a problem but to come up with feasible solutions; feasible in the sense that they are implementable; and to evaluate students not only by whether their solution is elegant in terms of the discipline, but whether it is a usable solution in terms of the realities of the organization in which the solution is to be implemented. If a course confines its view of the world to one that starts with a problem and ends with a solution, and doesn't carry the issues any further, students are going to learn to value just the solution."

On the other hand, said Leavitt, professors teaching implementation would be admonished to "get your students to worry about whether or not the solution they are recommending—the changes they are bringing about—are any good from an analytical point of view."

Going overboard

Leavitt is quick to point out that he does not support across-the-board integration of problem solving and implementation in all aspects of the academic program. "You can go overboard on this too, and say, 'Let's not do any research that does not concern itself with implementation.' But we ought to be doing a lot more to promote marriage between the hardnosed analytic courses, such as accounting, finance, and quantitative methods, and the softer organizational behavior courses."

Leavitt also contends that a better marriage between problem-solving and implementation is not enough. The "emergence of large bureaucratic organizations and the development of orderly, specialized, systematic, top-down organizational designs" in the last 25 years has discouraged the nurturance of innovators or what he calls pathfinders, but that current American business problems, in combination with recent national interest in new technology growth open the way for the reappearance of such innovators.

There are steps business schools can take to increase the enrollment of, and improve the educational environment for, such pathfinders. "As an educator, I think you start using different selection methods, so you pay less attention to quantitative scores on the admission test, and look for other clues about people who are movers and shakers, doers, and creators.

"We can also build into the curriculum a lot more emphasis on those kinds of things. This is not to say that we know how to teach them. I think we probably don't know much about how to teach creativity, for example, but we can explore ways of trying to teach them. We can put energy and resources into experimenting.

"We can also teach by modeling—by doing more innovative, creative things ourselves, and sending messages to students which, in effect, say, 'It's ok to listen to your guts, and to have dreams about things that you might do or start.' Actually, I don't think we have much trouble there because I think students are already going in that direction, probably faster than we are.

"Currently, business schools are apt to train pathfinding out of students. But if we are wiser, we'll change business schools to encourage pathfinding in people who already have propensities in that direction and try to develop it in others."

—Herb Blanchett

Knowledge will be the new 'wealth of nations' Feigenbaum says

Knowledge will be the new "wealth of nations" in the 21st century, and unless the United States does something dramatic, the Japanese will corner the market, with supercomputers and intelligence software, Stanford computer scientist Edward Feigenbaum says.

Feigenbaum calls for a mobilization of the national will, perhaps embodied in a national research center, similar to those set up for physics and space exploration. It will certainly require American corporations to alter the way they go about their business, Feigenbaum says.

The issue is the new computers, dubbed the Fifth Generation by the Japanese, and those computers' ability to make use of the relatively new science of artificial intelligence. He calls AI the "Manifest Destiny of computing."

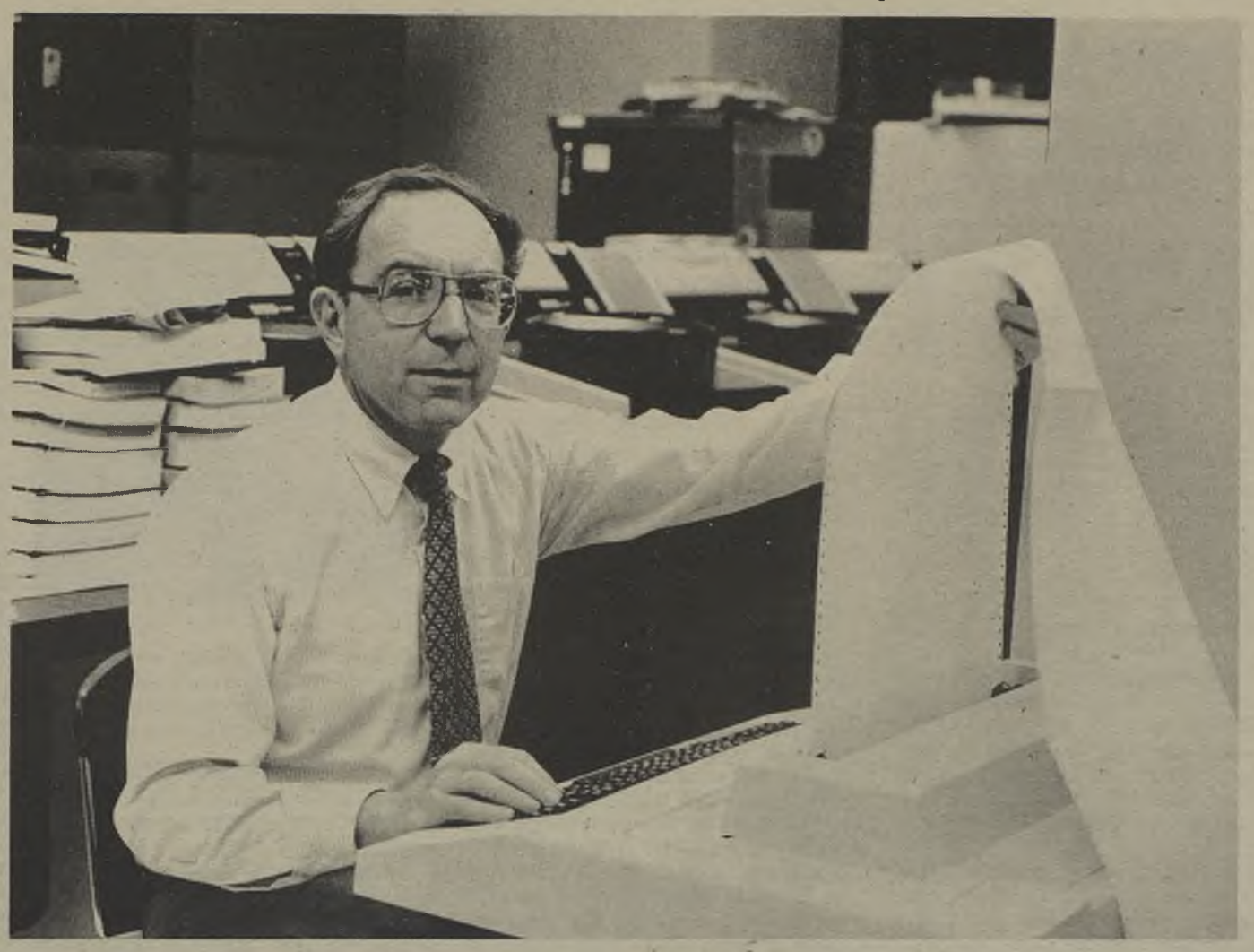
Feigenbaum and science writer Pamela McCorduck, have written a new book, *The Fifth Generation* (Addison-Wesley Publishing Co., $15.55), warning of the dangers of the loss of American pre-eminence in the computing industry, and why it is important.

The Japanese have begun a "remarkable and audacious new ten-year project for developing computers that they will use and sell in the 1990s and beyond," Feigenbaum said.

"The Japanese have set for themselves a national industrial goal of becoming number one in the world's computer market in the mid-1990s, and create great new industries which will use the fifth generation machines. They call this the knowledge industry.

"The concept is based on the idea that knowledge is the new wealth of nations."

The Japanese government is contributing $450 million over the next ten years to the project, and Japanese industry is kicking in $400 million. The United States has been slow to respond, and that, Feigenbaum and McCorduck contend, could be disastrous.



Edward Feigenbaum

Information processing

"The information processing industry is about to be, if it is not already, our most important industry," Feigenbaum said. "Computing is spreading into every industry, every business, and everybody's life. It is the great modern industry. As our old industries pass away, computing is taking its place—computing qua information processing.

"It is the cutting edge industry of all the other industries," he added.

"Knowledge is power, knowledge always has been power. The pen really is mightier than the sword, in the long run. Those with knowledge, those societies with knowledge technology, win. . . .

"Consider two of the greatest knowledge technology inventions of all time. Number one: the Greek alphabet. Number two: the printing press. . . . Those two inventions alone might be seen as accounting for the hegemony of western culture, the spreading of it all over the world. "Now we're talking about the ultimate in knowledge technology. . . .

"The appearance on earth of a non-human intellect of great power would have enormous consequences, economic, social, military, political.

"The Japanese are talking about not only producing the machines that will supply this tremendous revolution. . .capturing the base structure underneath the computers, the software, but they're also talking about packaging knowledge. They're going to be selling knowledge. . .in its active form.

"That can have tremendous economic ramifications and power."

Feigenbaum and McCorduck point out that the technology involved was invented here. "We pioneered in the computer areas, and we did most of the underlying research work in artificial intelligence.

"Unless we are diligent and energetic, that lead, that position, will pass to the Japanese. Some have said that the 20th century was the American Century; that the 21st Century will be the Japanese Century."

Feigenbaum admitted that he and McCorduck were not optimistic in their book.

"There were no grounds for optimism when we were writing that book, there wasn't a stirring of anything except the beginnings of a research consortium. A few companies, very few, were committing themselves to MCC (Microelectronics and Computer Technology Corporation—a cooperative effort in the industry). Now it has thirteen companies. They haven't gotten started yet, they just picked a site (Austin, Texas), they haven't hired any scientists or engineers yet.

Pre-competitive phase for MCC

"MCC is a piece of the answer. One has to be very sympathetic and friendly and wish them well. It's the first great American cooperative enterprise of the type the Japanese routinely put together. The Japanese call such cooperation the pre-competitive phase. . . ."

But MCC is up against the Japanese computer industry and the Ministry of International Trade and Industry (MITI), which plays by different rules.

For instance, MCC will keep its developments proprietary so that benefits "do not accrue to non-members." The Japanese find inter-company competition less important. MCC runs into American anti-trust laws, which are not significant in Japan. MCC may not have the financial resources of the Japanese effort.

Some have said that the 20th century was the American Century; that the 21st century will be the Japanese Century.

—Edward Feigenbaum

There is the way American companies work.

"We see our corporate executives paying very close attention to the bottom line, if not on a quarterly basis, then on an annual basis. Their bonuses are awarded on the basis of the bottom line. What company do you know has a vice president for planning that gets his or her reward based on a beautiful ten-year plan?" Feigenbaum asked.

American companies usually "go the equity route" to raise money, putting the emphasis on the short term. The Japanese companies do not have this problem. MITI can pressure the banks to make loans and to accept a low interest rate. Japanese savers are accustomed to low returns so the banks can make the loans without harming themselves.

Corporate America lacks vision

There is a lack of vision in American corporate headquarters, Feigenbaum maintains.

"Ask yourself this—we have a company that is the world's largest company in computers. It owns most of the world's market share. It is in all respects a fabulous company. It keeps its employees happy, makes a lot of profit. When is the last time you heard a speech or saw an article by the president of that company expounding a national vision on computing, where it's all going, and why it's going there? Never."

The new, high-flying electronics companies do not have the luxury of this kind of forward thinking, he says. "A start-up company rarely thinks of doing research, rarely thinks of a ten-year plan. They don't know if they'll be alive next December."

Strategic Computing Initiative

The federal government may be beginning to understand the problem, Feigenbaum says. The Department of Defense has requested funding for a supercomputer project called the Strategic Computing Initiative, although it is not officially aimed at the Japanese. There is also money in one version of the National Science Foundation authorization bill for new super computer research.

"I don't have fix-it answers," he admits. "We barely came up with one fix-it answer in the book, a brief mention of a National Center for Knowledge Technology. The U.S. has traditionally handled major national goals with national centers like the Manned Spacecraft Center, the Kennedy Space Center, the Fermi Lab in physics, but we haven't done it very often.

"We should, for once, imitate the Japanese as they have done so often with us in the past. Pick a page out of their book, set up a national center. . .get our industries to cooperate with the center.

"The center could also serve, not only as a technology focus, but as a focus for the national will."

—Joel Shurkin

Voyager I data disclose internal gravity waves in Titan's atmosphere. . .

The Voyager 1 spacecraft has detected surging waves of gas called internal gravity waves in the atmosphere of Titan.

Stanford researchers believe these waves are similar to ocean waves on Earth.

The waves originate near the surface of the Saturnian moon, possibly the result of "Titanic" thunderstorms, but the researchers are not sure of the mechanism.

The study, published in the current issue of "Icarus," was derived from a doctoral dissertation by graduate student David Hinson and work by his adviser, G. Leonard Tyler, research professor in electrical engineering at the Center for Radar Astronomy.

All the data came from Voyager 1, which swept by Saturn and Titan on November 12, 1980.

The technique used to gain the data is called radio occultation, in which the spacecraft flies behind the moon so the radio waves from the spacecraft to the Earth are forced to pass through the atmosphere. The radio waves appear to "twinkle" before they are blocked out entirely, and the twinkling provides the information.

Bland atmosphere

"The Titan atmosphere appears very bland from the images; there's almost nothing there to see," Tyler says. "Other analyses have shown generally a very uniform, slowly varying, and well-behaved type of atmosphere."

But the temperature of the moon does vary slightly from the equator to the pole, about 4 degrees Kelvin. This means that there has to be some winds aloft. Other scientists have calculated the wind speed to be about 80 meters per second (about 180 mph). The waves in the atmosphere probably carry energy to maintain the winds.

The twinkles seen in the radio occultation showed that there was internal structure in the atmosphere above 25 kilometers (82,000 feet), which surprised scientists.

"Could it be layers? One possibility was that it might represent stratification similar to cloud layers," Tyler says, like "stratus clouds or inversions in the earth's atmosphere.

"A second possibility is that it could be caused by convection, like the turbulence you encounter in thunderstorms."

The Voyager data showed that it was neither of those phenomenon, but the wave action within the atmosphere. The waves are probably generated below the 25-kilometer level, he said.

"We don't know what the source of these gravity waves is," he added. But the waves are "a very important phenomenon" in the atmosphere.



G. Leonard Tyler

On Earth gravity plays a part in maintaining lenticular clouds on the leeward side of mountains.

"The wind over the mountain is like water going over a rock, and it produces a wave pattern downstream of the rock in the water.

At Titan the waves are not tied to any particular feature. Being in the upper atmosphere of Titan in a ballon would be like being in a small boat where waves from distant storms were tossing you about, Tyler said.

The gravity waves on Titan are a "discovery," he said. "It's very surprising."

Study is continuing on the data, a process Tyler describes as "cleaning, scrubbing, filtering, sharpening, focusing—the real process is focusing."

The technique used to study the gravity waves is also being used to study the magnetic fields of Saturn and Jupiter, Tyler says.

"That hasn't proceeded to the point where we have any new results but has proceeded to the point where we know that in future missions we can use radio measurements to make a substantial contribution in studying magnetic fields.

"In the case of Jupiter we know there is a problem in the present field model because our data are not consistant with those models. In the case of Saturn it looks like the. . .field is much simpler than Jupiter's and the present field model derived from the fly-bys look very good.

Hinson's and Tyler's work is supported by NASA.

—Joel Shurkin

. . .Saturn's giant moon does not have methane oceans, Stanford team says

Data from the Voyager spacecraft indicates that Titan, Saturn's giant moon, is not the world of broad methane oceans and frigid methane rains that many scientists had theorized, Stanford researchers report.

Radio occultation experiments indicate there is not enough methane to form rain, according to Von Eshleman of Stanford's Space, Telecommunications, and Radioscience Laboratory. The results of the experiment are published in the current issue of *Science* magazine.

Titan is bigger than the planet Mercury and the only moon in the solar system with an atmosphere. Titan's atmosphere, like Earth's, is mostly nitrogen, but it is four and a half times as dense.

The experiment was performed while the Voyager 1 spacecraft flew behind Titan in November 1980. The moon gradually blocked out radio transmissions from the spacecraft to Earth. The recently completed analysis of the changes in the radio signal as Voyager passed behind Titan shows the atmosphere with remarkable accuracy.

No methane rain

Scientists had long speculated that the clouds that completely cover Titan were made of particles of condensed methane. These particles were believed to combine and fall to the surface as rain, forming methane rivers and eventually methane seas.

Many found the idea of methane clouds, rains, and oceans very appealing because of the possible parallel between the roles of methane on Titan and of water on Earth. Some have discussed what it would be like to sail the Titanic oceans, and an analysis has been made of the possibilities.

Scientists were also intrigued because methane is the simplest hydrocarbon, one of a family of compounds that are believed to have been required for the origin of life on Earth. Voyager detected small amounts of more complex hydrocarbons and other organic molecules in Titan's atmosphere, where they were formed from methane as the result of solar radiation.

Chemical evolution

Thus Titan might provide an example of the chemical evolution that led to the possibility of life on Earth. The process on Titan has been arrested by the deep-freeze conditions of the outer solar system.

"It's been known for many years that there's methane there," Eshleman, professor of electrical engineering, said in an interview, "and that it's very cold. It turns out that the temperature structure of the atmosphere is approximately at a condition where nitrogen might condense, and where methane would condense if there was enough of it. We don't know exactly how much there is, but it now appears that the amount is less than previously thought."

"If you read most of the things you'd think maybe it's been fairly well established that there'd be oceans. Everyone picks up on that and it is of interest."

But in the *Science* paper, Eshleman, G. Leonard Tyler, research professor at the laboratory, and Gunnar F. Lindal of the Jet Propulsion Laboratory in Pasadena, reported that there is no evidence of such oceans or of methane rain clouds.

"If there were oceans a cumulus cloud would form above the surface," Eshleman said.

The condensation of the clouds would produce characteristic changes in temperatures in the atmosphere, but the temperatures did not vary in this way, according to the Voyager data. They indicate instead that the methane "humidity" is low.

Polar regions

This does not necessarily mean there is no methane on the surface (Eshleman says there could possibly be some at the polar regions) but there is not enough to form widespread oceans.

There may not even be enough to condense into a thin, high altitude haze of methane ice crystals, which would mean concentrations in the atmosphere of less than 1.3 percent. Eshleman expects that the observed haze may be due to the other hydrocarbons and organic molecules.

"I wouldn't expect what we really call rain; I think it would be a slow settling of the haze material. And over geologic time it might build up to quite a bit.

"The surface is probably fundamentally different than any other surface in the solar system, but we don't know exactly in what way."

Most of Titan is water ice and that is probably the main constituent of the surface, Eshleman says.

The occultation experiments measured two places on Titan separated by a hemisphere so the sampling is believed to be very representative, Eshleman says. The results indicate that the atmosphere is remarkably uniform.



Von Eshleman

—Joel Shurkin

Accident insurance coverage improved

Improvements to the Voluntary Accidental Death and Dismemberment (AD and D) Plan will be effective August 1, 1983, says Jeannie Thomas, manager of Benefits and Records.

The maximum amount of coverage under the AD and D Plan will increase from $100,000 to $250,000 for faculty and staff; and from $100,000 to $150,000 for spouses. If a faculty or staff member wishes to purchase coverage in excess of $150,000, the maximum that may be purchased is the lesser of $250,000 or ten times annual base salary. Additional benefits have been added to the Plan covering loss of speech and hearing.

The premium rate has been reduced to $.04 per $1,000 of coverage per month. Previously, the rate per $1,000 of coverage was $.06 for faculty and staff, and $.05 for spouses.

Over the next week, an information packet is being sent to the home of each faculty and staff member.

Current participants are asked to re-enroll at this time to insure that the University has the most up-do-date coverage and beneficiary information. For current participants who fail to re-enroll current coverage will continue at the new lower rates. The new rates will be effective on July 22 paychecks.

Faculty and staff not participating currently may enroll in the AD and D Plan at this time. There is no deadline for enrollment. Faculty and staff may begin participation in the plan at any time.

Individuals having any questions, or needing additional information, should contact the Office of Benefits and Records at 7-1776 or 7-1777. Employees located at SLAC should call 2357.

1983-84 N.E.H. professional journalism fellows announced

Twelve professional American journalists have been awarded National Endowment for the Humanities fellowships to study at Stanford for the 1983-84 academic year.

Joining them as a part of the Professional Journalism Fellowship Program will be six journalists from other countries.

All 18 will pursue independent courses of study and participate in special seminars in the humanities.

The American group includes six women and six men, while the international fellows will have two women and four men. Their average age is 38.

The 1983-84 year will be the 17th at Stanford (11 of them under N.E.H. Funding) for the program, designed to give journalists the opportunity to stand back from their work and acquire new perspectives on its humanistic content through study of its historical, cultural, social, and philosophical dimensions.

The Stanford program is under the direction of Prof. Lyle M. Nelson. Harry N. Press is managing director.

The American Fellows and their courses of study:

Jennifer Boeth, 40, staff writer, *Dallas Times-Herald*. Issues of power, freedom, and ethics; the history of ideas; philosophical and intellectual history.

Peter Carey, 43, investigative reporter, *San Jose Mercury News*. Social change and the impact of technology.

Donald Colburn, 35, reporter, *The Herald*, Everett, Wash. An interdisciplinary study of America's health care delivery system.

Rasa Gustaitis, 49, associate editor, Pacific News Service, San Francisco. The ethical, medical, legal, and emotional facets of decisions involving life and death.

Arthur M. Jester, Jr., 31, higher education reporter, *Lexington Herald-Leader*, Lexington, Ky. International relations.

Margery Lipton, 36, field producer, "ABC News," London. The history and practice of propaganda, and the dynamics and influences of public opinion.

Walker Lundy, 40, executive editor, *Tallahassee Democrat*, Tallahassee, Fla. The impact of the information society, and the role of information media into the 21st century.

Janice Schaffer, 33, business writer, *Philadelphia Inquirer*. The relationships among cultural patterns, economic institutions, and urban affairs.

Mary Tuttle, 34, community affairs producer, KANU radio (public radio), Lawrence, Kan. Social change in the United States since 1920, through history and literature.

Gerald Volgenau, 42, science editor, *Detroit Free Press* Historical roots of today's national migration caused by the shift from the industrial revolution to the information revolution.

Amei Wallach, 41, arts critic, *Newsday*, Long Island, N.Y. The social, political, and economic forces that shape art, and how art shapes those forces.

Richard Zahler, 35, special projects editor, *Seattle Times*. English literature, and the narrative and creative arts; regional North American cultures.

The International Fellows:

Herman De Prins, 42, journalist and newscaster, Belgian Radio and Television, Brussels, Belgium.

Franzalbert Joku, 30, editor, *The Times of Papua*, New Guinea.

Myong-sik Kim, 42, city desk editor, *The Korea Times*, Seoul, Korea.

Mary Lee, 34, specialist writer, *Far Eastern Economic Review*, Hong Kong.

Teresa Otondo, 39, editor, *Cultural Supplement*, O Estado de Sao Paulo, Brazil.

Erich Vogt, 33, producer-editor, German Television, Hamburg, Germany.

Degler on Pioneer 10: knowledge of our universe exceeds that of ourselves

Following are remarks at Ames Research Center, June 10, by Prof. Carl N. Degler, history, on the departure of Pioneer 10 from the solar system.

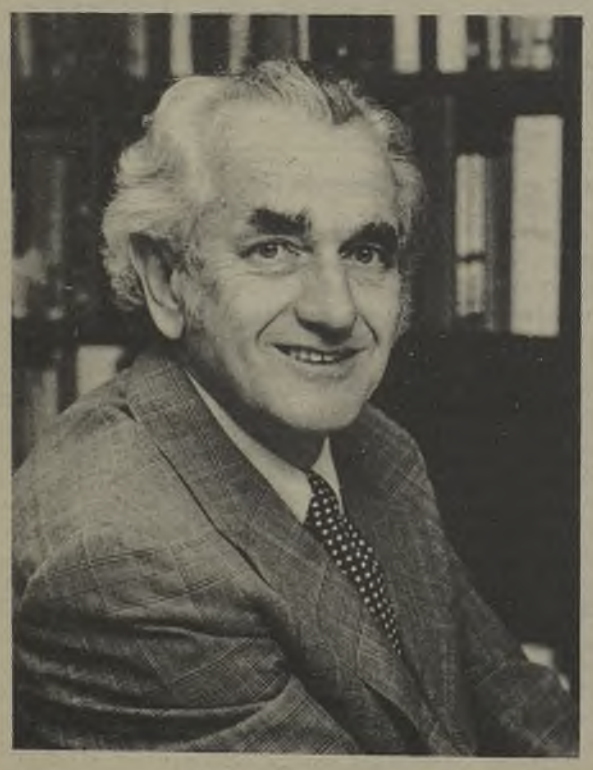
Let me make clear at the outset that I come here today, not as a historian of technology or of science, but as a social historian who believes that science and technology, because they are human products, enlighten us about what human beings are.

To me, the exciting aspect of Pioneer is that for the first time an object made and directed by human beings will escape from the confines of our solar system.

Technology in league with science has freed men and women from the power of nature before. Recall how steam power multiplied many times the ability of human beings to perform work, or how the airplane lifted men above the ground in sustained flight, or how rockets made it possible for men and women to free themselves from our planet's confining pull.

We cannot help be moved by the intellectual power implied by all of these efforts to overleap the limits imposed by nature. In this regard, however, Pioneer 10 is in a class by itself, not only because it has escaped the largest cage yet—the solar system itself—but because it is still pressing against an ever larger confine—the heliosphere and perhaps even beyond that.

Surely there is justified pride in this latest scientific accomplishment by men and women, but there is also danger from what our ancestors used to call "overweening pride." Such hubris encourages us to forget how much we are still a part of, and controlled by nature.



Carl Degler

There was a time, to be sure, during which human beings, and especially those in America, with its vast expanse, rugged terrain, and seemingly endless forests, saw nature as something to be conquered, mastered, and overcome. The movement of Americans from the Atlantic seaboard to the Pacific in less than a century is but one measure of that urge to make nature do man's bidding.

Pioneer 10, unlike the settling of the American frontier, is not an example of the mastering of nature, but of understanding it. The very success of its mission is a dramatic monument to human understanding of how nature works. Consider the transmission of signals from Pioneer 10, now almost three billion miles away from earth. Only because the antennae here are extremely sensitive can that signal, which begins as a mere 8 watts of energy be detected when it arrives four hours later on earth.

Mastery over nature has been essential in order for us to achieve our present social and economic state. Yet we are also becoming increasingly aware that such mastery has a negative side. It can and does result in destroyed farmland, denuded forests, devastating floods, encroaching deserts, and the disfiguring of nature's beauty. Understanding the workings of nature, however, has no such evil consequences and that is surely one of the admirable achievements of Pioneer 10.

There is another insight into human values to be gained from Pioneer's flight. So far as I know, nothing of immediate practical use will be learned from this journey that literally has no end.

Much, to be sure, has been learned already, and more may well be learned about that invisible body that seems to be affecting the orbits of Pluto and Neptune. But even if that mystery is cleared up by Pioneer 10 no obvious practical consequences will follow.

Indeed, the lack of immediate practicalities is an impressive tribute to the curiosity about nature that has been the foundation of all intellectual inquiry, whether it be in science or in the humanities.

As a historian, whose work also often has little practical consequences, I can only admire the dedication of the many people here at Ames and elsewhere in seeking simply to find out more about the universe in which they reside. That sense of wonder about the natural world which we often see as a most endearing quality in a child is actually more than engaging, it is an attribute that helps to define what it means to be human.

Because of my own professional interest in the past, I could not help reflecting on possible precedents for this latest triumph of human beings to reach beyond the cages in which they must spend their lives, however broad these confinements may be.

There is only one that comes close to the novelty of Pioneer's achievement. It was the discovery of the New World. Long before Columbus, of course, people had migrated into new regions, but when they did they were not taken by surprise in the same way that they were in the early sixteenth century, when it finally dawned upon Europeans that what Columbus had chanced upon was not China or Japan, but a land mass no one had thought was there.

Indeed, their surprise was so great that Europeans were not at all sure that the inhabitants were fully human. One of the truly amazing events of the era grew out of the questions raised about the nature of the beings found in the New World. So perplexed was the Spanish Crown that it ordered in 1555 a conclave of theologians to debate the ability of the Indians to live in liberty and to become Christians. Until the issue was resolved, the King ordered that no further conquests be undertaken in the New World.

The Europeans of the sixteenth century may have encountered other human beings in their New World, but so far Pioneer 10 has not met any in its. Yet there is an expectation that it might, for on the side of the spacecraft is a plaque depicting a male and a female human being.

When will we learn to deal with each other as productively as we have with the cosmos?

—Carl Degler

The belief that there must be other inhabited worlds than earth is not new, though to hold that view in the past was often dangerous since it flew in the face of the Christian belief in a single creation. Today we seem to have progressed beyond the hostility the Europeans displayed toward the Indians.

In the depiction of human beings on the plaque on Pioneer 10 the male has his arm raised in what I suspect was intended to be perceived as a gesture of friendship. (That the beings Pioneer 10 would run into may have quite a different gesture for friendship, if they have limbs at all, is a question I will not enter upon now.) In short, there seems no doubt that today we have progressed beyond the sixteenth century in our attitudes toward outsiders—at least if they live outside the solar system.

It is that last ironic remark that brings me to my final observation on the historic meaning of Pioneer 10. It is that this little artifact in its near perfection as a functioning machine puts to shame our ability to master ourselves as social beings.

As a species we still find it impossible to live in peace or to control the appetites that our all too human values have caused us to cultivate. And if the aliens that Pioneer 10 encounters are anything like us, it is not at all clear that they will be any friendlier than the Europeans were when they encountered the people they called then and forever after: "Indians."

For human beings are dominating as well as curious and intelligent; it is that drive to dominate, to control, and to exploit that still shapes our lives here on earth, even as we reach literally to the stars for more knowledge of our universe and the way it works.

Twenty-five centuries ago, Socrates urged his students to know themselves. Our knowledge of the outer universe, as epitomized by Pioneer 10, has indeed grown enormously since then, but our knowledge of the universe within has made only modest advances.

For that reason, the great success of Pioneer 10 leaves me, as a historian and student of social behavior, not a little jealous. As a human being, who hopes for a peaceful as well as a just world, it leaves me wistfully wondering when we will learn to deal with each other as productively as we have learned to deal with the cosmos.

University won't commit more land to open space to get Stanford West OK

continued from page 1

than meet the added costs of city services, according to the project EIR. That area of Palo Alto, including the Shopping and Professional Centers, provided the city with $2.3 million in sales and property taxes and net utility revenues in 1980.

Stanford would pay $1,000 per unit to finance traffic improvements at 13 streets intersections and a third lane for foothills-bound traffic on Willow Road between Pasteur Drive and the San Francisquito Creek bridge. An additional $200 per unit payment would fund "alternative means of travel" for those living at Stanford West, with a $10 a month homeowner's fee earmarked for the same purpose.

The two staffs could not reach agreement on Palo Alto Planning Commission recommendations that the University commit off-site vacant lands to open space, or guarantee the affordability of more units, as conditions of approval.

"We cannot forego the use of our academic land endowment in that way, even though there are areas of our lands that may never be used, and even though we anticipate little major growth in the foreseeable future," Morrow said.

"As to the question of affordability, we already have gone well beyond the city's below-market-rate requirements, and expect that half the project will be affordable to families in the County's 120 percent-150 percent range. We are unwilling to commit ourselves beyond that."

Stanford also declined to guarantee that future academic development outside the city would not cause traffic to exceed certain prescribed levels, without regard to the merits of the proposed program or other conditions that might exist at the time.

The University also agreed to continue notifying neighboring jurisdictions of major development on its lands, but could not commit itself to an added level of review by a joint committee of area governments and agencies.

The University will continue comprehensive studies of the traffic and transportation needs of the entire campus, including the Stanford West area, with the intention of devising an efficient, integrated circulation system, the report notes.

Morrow said that the proposed lot coverage at Stanford West is half of what the zoning allows, that the open space will be three times that required, that the density will be 34 percent less than permitted, and that the set-backs will be far greater than the zoning calls for.

The housing will be available to Stanford faculty and staff; to graduate students; to those who work on University lands; and to those who work elsewhere in Palo Alto, in order of priority.

"About half of the condominiums are expected to be rentals and half for sale. The university is also exploring other forms of ownership such as cooperative housing," Morrow said.

Stanford West responds to both a University need for housing and to long-standing Palo Alto policies to reduce commute traffic and the imbalance between jobs and residential units in the community, Morrow pointed out.

Specific details of the project will be reviewed by the Palo Alto Planning Commission and the Architectural Review Board this fall and winter, Morrow said.

Police offer tips for reducing theft of property from home and offices

With the summer season here, many people will be vacationing, leaving their homes vulnerable to burglars. Here are some tips to help prevent burglaries over the summer vacation:



Residences:

★Have good locks on all doors and windows, **and use them**. Be sure all screens are fastened from the inside.

★Engrave all your valuables with your California driver's license number (preceded by "CA"), and post Operation I.D. stickers in all entry doors and windows. (Available at Stanford Dept. of Public Safety.)

★Never leave your house keys hidden under a doormat, in a flower pot, or on the ledge of a door.

★Make your house appear "lived in." Use timers for lights and radios. Have a neighbor or friend pick up all mail, packages, and newspapers, and keep the lawns mowed and watered. If possible, cancel all deliveries.

★Light up your porch and yard with outdoor lights to increase the likelihood that a burglar will be seen.

★Leave your shades and blinds as you normally do. Closed blinds keep the sun out, but they also hide burglars.

★Leave your trip plans and an emergency phone number with trusted neighbors or friends. Notify your police department when you'll be leaving and when you expect to return.

Offices:

★Record the serial numbers, brand names, and descriptions of property or valuables which are kept in your office. Keep a duplicate copy of this information somewhere else. This information is often invaluable in reporting a theft and recovering the stolen property.

★When you are not using your desk, lock it up and take the key with you.

★If you leave your office, always lock the door, and tell your neighbors so they can keep an eye on your office.

★Never leave keys in an unlocked drawer or cabinet. Do not tape keys under desk drawers or file cabinets.

★Never prop open a door for someone joining you later.

★If you see a suspicious person, call the police immediately at 9-911.

Dept. of Public Safety hours are 8 to 5, Monday through Friday at 497-9633. For specific questions about Property Crime please ask for Kat Berry or Dan Smith.

Saudi prince seeks UNICEF support. . .

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not to underrate the importance of Syria, which had a crucial role to play in Lebanon. Syria had been invited in to Lebanon, unlike the Israelis, who had invaded the country, caused 150,000 deaths and 250,000 wounded, mostly women and children.

"There is a limit to what we can do," said Talal, "we are not a super-power. One of the most hopeful factors is that Israel will still listen to the U.S. Also, the peace movement is growing inside Israel.

"One of the most important things to keep in mind is that the legitimate government of Lebanon should play a key role in the negotiations."

He referred to the popular image of the Saudis as being the sole beneficiaries of the huge oil production there. "Your major oil corporations are getting much of the benefit, and the commercial relations between our two countries are growing more extensive.

"We are willing to take American advice," he said several times, "but our influence in the world is limited. All we ask is to be treated on a fair basis."

He refused to comment on the new situation created in the Middle East by the ouster from Syria of Yasser Arafat, leader of the Palestine Liberation Organization.

When the questions finally turned to the starving children of the world, Talal explained that as part of his current role as special envoy for UNICEF he had visited nearly 40 countries in Asia, Africa, Latin America, and the Caribbean and had participated in study missions to see for himself UNICEF's lifesaving work.

He had seen the human devastation in Bangladesh, where UNICEF doctors and nurses are saving lives and providing health care where before there had been none. He had seen wells being dug in remote parts of West Africa to bring clean water to the people for the first time, he had seen food distributed to starving families in ravaged Cambodia.

Since he had become president of AGFUND the organization had handed over some $53 million to UNICEF.

Figures handed out by aides showed that by far the largest amount of aid commitments by UNICEF this year are to India ($107 million) followed by Pakistan ($57 million). Also high on the list are Bangladesh ($50 million) and Vietnam ($27 million).

How much of the millions raised had actually reached the children? Talal was asked.

"Over 93 percent," he replied. "The administration costs only seven percent compared to the range of fourteen to twenty-six percent which is usual for most other fund-raising efforts.

Prince Talal has nine children himself—five sons and four daughters.

—Donald Stokes

Auction. . .

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even the East Coast, where O'Connor also traveled.

O'Connor had been dubbed the "connoisseur burglar" due to the high quality of the items found in his possession, including furs, antique guns, violins, jewels, Oriental rugs, and gold dinner plates.

O'Connor, his estranged wife Maureen, and his girlfriend, Nancy Burt, now claim the leftover property is theirs, Niemeyer said.

If after hearing O'Connor's case the judge orders the auction to proceed, it might be held in August, Niemeyer said.

If you fail to pay parking tickets promptly your car may be impounded

Library employee Nancy Bryant, arrested at work Thursday, June 23, on an outstanding traffic warrant, has been charged with failure to pay 56 parking tickets she accumulated on campus, according to Stanford Police Capt. Raoul Niemeyer.

Taken to Palo Alto Municipal Court Judge Edwin Scoyen, Bryant was charged with one count of driving with a suspended license and suspended vehicle registration, along with failure to pay the outstanding parking fines.

According to Niemeyer, Bryant at one time accumulated $8,000 in parking citations. Many were dismissed because of the statute of limitations.

Niemeyer said that more than a year ago Bryant was not allowed to renew her vehicle registration because of her many parking tickets. Bryant's license was suspended when she continued to drive an unregistered vehicle.

Police impounded Bryant's car following her arrest. Recent legislation enables police to impound a vehicle if a person receives five or more parking citations in a five-day period and does not pay the fines. Niemeyer said.

Action was taken against Bryant because the "county wants to collect fees that are due" from parking tickets, he said. In 1981, 52,107 citations were issued on campus and another 4,604 at the hospital. The number decreased in 1982, down to 34,438 on campus and 3,411 at the hospital.

Further arraignment is set for Bryant at 9 a.m. July 13 in Palo Alto.



Saul Rosenberg

Oncologist honored with Professorship

Dr. Saul A. Rosenberg, professor of medicine and radiology at Stanford University School of Medicine, has been awarded a Professorship in Clinical Oncology by the California Division of the American Cancer Society.

Rosenberg is the second scientist in California to receive the professorship. The Society is funding only 17 others in the country.

The professorship was established in 1971 to allow receipients to improve and expand cancer teaching programs and cancer patient care at their institutions.

"It is an honor to be selected from among the candidates throughout the state," Rosenberg said. "It reflects not only on my work, but on the excellence of the institution."

Rosenberg will receive $125,000 over the next five years. The funding, he said, will facilitate the department of medicine's and Medical School's search for another cancer investigator, which will allow Rosenberg more time to become more involved with cancer-related activities at the Medical Center and within the region.

"We hope to be able to collaborate further in our multidisciplinary approach to cancer teaching, research, and patient care," Rosenberg said.

Rosenberg has recieved international acclaim for his research on Hodgkin's disease. He and Dr. Henry S. Kaplan, D'Ambrogio Professor of Radiology, have made dramatic advances in the diagnoses and treatment of the disease.

Rosenberg is chief of the Division of Oncology at Stanford, having been among those who spearheaded the development of oncology as a specialty of internal medicine. He is also director of the Debbie Probst Oncology Day Care Center, a treatment center for cancer patients.

He has received the Henry J. Kaiser Award for excellence in Teaching, and was the first recipient of the Arthur Bloomfield Award for Excellence in Teaching in Clinical Medicine.

Basic research discovery has clinical uses

A potent anti-clotting factor discovered in recent years in the cells that line blood vessel walls is already showing important clinical use in open heart surgery, hemodialysis and in stroke victims, a British Nobel laureate told an international conference at Stanford University Medical Center on Wednesday (June 22).

"Prostacyclin," a hormone-like substance discovered almost by accident in 1976, is an excellent example of how often basic research bears clinical fruit, said John Vane, the pharmacologist from Wellcome Laboratory, Kent, England who shared the 1982 Nobel prize in medicine.

"The medicines of tomorrow will be based on the discoveries made right now," Vane told a meeting of 150 pharmacologists, chemists and biologists gathered at the second annual symposium on the biochemical basis of drug action.

Vane won the 1982 prize for his role in deciphering the mode of action of aspirin and similar drugs as they inhibit a family of chemical messengers called "prostaglandins."

Originally thought, 50 years ago, to be manufactured only by the prostate gland, prostaglandins are now known to be produced by nearly every type of cell in the human body and to play a regulatory role in activities as far flung as protection against ulcers, the contraction of the uterus during labor and the dilation of blood vessels.

Vane's current work focuses on prostacyclin, a highly unstable derivative of the prostaglandins, that is produced primarily by cells that line the walls of blood vessels, and is a potent inhibitor of blood clotting. Vane and colleagues have used the substance to unravel the mystery of how platelets—bandaids of the blood vessel network—"know" when to begin formation of a blood clot and when to sail through the vessels without clinging to vessel walls.

"For years, people said that the reason platelets didn't stick to the walls of healthy arteries was because of the smooth, slippery nature of the blood vessels," said Vane. "But we now believe that it's the production of prostacyclin that helps keep the platelets from sticking."

While cells of the blood vessel produce prostacyclin, platelets themselves produce "thromboxane," a chemical similar in structure to prostacyclin but opposite in function. Together the two chemicals help maintain a delicate balance, in ways still not understood, to make sure blood clots only when necessary.

Now, more and more physicians are taking advantage of this balance to fine tune the control of unwanted bleeding, said Vane.

During procedures such as open heart surgery or hemodialysis, when blood is circulated outside the body through synthetic tubing, the risk of clotting would be great, Vane said, were it not for anti-clotting additives. Most often heparin, another anti-coagulant, is trickled into the blood, but can lead to unstoppable bleeding in some patients. In contrast, prostacyclin only prevents clots temporarily, he said, and is a superior alternative for patients, such as hemodialysis patients with bleeding ulcers, for whom heparin poses a risk.

Still fairly difficult to store because of its instability, prostacyclin will probably not replace heparin, said Vane, but could be used supplementally to reduce the doses of heparin needed.

Physicians in the United States and Europe are currently exploring other uses for prostacyclin, Vane said, including limiting the damage done by strokes, and in helping prevent and dissolve blood clots in patients with peripheral vascular disease.

"We only know about a tenth as much now about the fundamental processes as we shall know in a year's time," said Vane. "There are plenty of ideas and plenty of things left to discover. The trick is in finding the path from one to the other."



John Vane



Gordon Holmes



Donald Prolo

Alumni group picks new officers

Dr. Donald Prolo, a San Jose neurosurgeon, is the new president of the Stanford Medical Alumni Association, and Dr. James Gordon Holmes, a Berkeley surgeon, is the president-elect for the 1983-84 year.

Holmes' election was announced at the recent alumni reunion held at the Medical School, which coincides with the organization's annual meeting.

Prolo, '61, has served on the association's board of governors, and is regional chairman for the south peninsula chapter of the Medical Fund, which provides financial aid for medical students.

He succeeds Roy Cohn, '33, emeritus professor of surgery at Stanford.

Holmes, '47, has been the association representative to the Medical School faculty senate. He has been on the board of governors, as well as other association committees. He also is a professor in health sciences and medical education at University of California, Berkeley.

Task force looks into cable TV use

A five-member task force to explore how Stanford University Medical Center might participate in cable television programming has been appointed by Lawrence G. Crowley, vice president for medical affairs.

"The University is actively exploring the possibility of joining with the City of Palo Alto and other nearby communities in developing a cable TV system," Crowley said. "As a medical center we are primarily concerned (as in other parts of the University) about securing the potential capability to initiate and distribute educational and cultural programs over such a system."

The task force is charged with identifying key center interests and concerns, advise the Vice President, and maintain liaison with the University Cable TV Steering Committee chaired by Mike Oman.

Members of the task force are Spyros Andreopoulos, director of Office of Communications, Stanford Medical Center; Roland Merchant, director, Office of Management and Strategic Planning, Stanford University Hospital; Carole R. Price, associate administrator at Stanford University Hospital; Edward Rubenstein, M.D., professor of clinical medicine and associate dean for postgraduate medical education; James Silverman, M.D., associate professor of radiology and chief of staff, Stanford University Hospital; and Duane Walker, R.N., associate administrator and director, Stanford University Hospital Nursing Service.

...News Notes...

Spotlight on...



Dr. Lawrence G. Crowley, *Stanford vice president for medical affairs, has been elected to the educational advisory committee of the National Fund for Medical Education. The appointment is for a three-year term.*

The Fund, based in Hartford, Connecticut, supports programs designed to promote better health care by improving the quality of medical education. The Fund is giving priority to projects that show promise of containing the cost of health care, improving the continuing education of practicing physicians, and the educational programs in schools of medicine and teaching hospitals.

Crowley is also president of Stanford Univeristy Hospital and board chairman of the New Children's Hospital at Stanford, now planning a consolidated new children's medical center adjacent to Stanford Hospital.

* * * *

Frank Tanaka *has been appointed accounting supervisor in the SUH General Accounting Office effective June 9, announced manager Roger Knobles.*

A graduate of Purdue University with a major in industrial management, Tanaka has extensive experience in general accounting as well as financial analysis and budgeting. He comes to the Hospital from Moore Business Forms, Inc. where he was subcontracting manager. Tanaka may be reached at 7-5862.

You should know...

The **SUH Pension and Benefits Department** *announces a new benefit geared towards Hospital employees who are within 10 years of retirement.*

The "Can You Afford To Retire When You Want To?" theme of the pre-retirement planning program was developed by Kathleen Ghazvini, manager of Pension and Benefits; Carol Peters O'Neill, benefits specialist; and Beverly Hauser, benefits specialist.

The program consisting of three interlinking sessions will be held on three consecutive Wednesday evenings, 6 p.m. to 9:30 p.m., Room M112 on August 3, 10 and 17.

Talks during the sessions are as follows:

Aug. 3: *"Overview of the Program," Kathleen Ghazvini, manager of the SUH Pension and Benefit; "Your SUH Health, Dental and Life Insurance," Beverly Hauser, SUH benefits specialist; "Heart Disease Prevention," Dr. Peter Wood, Deputy Director of the Stanford Heart Disease Prevention Program; "Diet and Exercise," Patricia Kearney, SUH Dietary Department; and " Psychological Planning for Retirement," Steven Johnson, Palo Alto Medical Clinic.*

Aug. 10: *"Your Social Security and Medicare Benefits," Virgil Kocher, Social Security Administration; "Part I—Planning your Financial Future," Dandridge M. Gray, licensed financial planner, Judy and Robinson Securities, Inc.*

Aug. 17: *"Part II—Planning your Financial Future/Estate Planning," Dandridge M. Gray; and "Your SUH pension plans and Tax Deferred Annuity plans," Carol Peter O'Neill, SUH benefits specialist, Dan C. White, William M. Mercer, Inc.*

The program is open to all Hospital employees at no charge, but priority seating and attendance will be given to employees and their spouses who are within 10 years of retirement. Registration deadline is July 20. For further information contact the Pension and Benefits Office, Room E009 or call 7-5734.



Battling against blood disease

Dr. Bertil Glader, director of the hematology/oncology program at CHAS, checks on Jeffrey Helton, 2, who was born with a blood enzyme deficiency that caused him to have jaundiced skin.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard; call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JUNE 29

Hematology Support Group: A meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to 12 noon, room TF-122c. For further information, call 497-6961.

THURSDAY, JUNE 30

Dept. of Medicine Grand Rounds: "Hopsital Information Systems"—Dr. Homer Warner, 8:30 a.m., Fairchild Auditorium.

SATURDAY, JULY 2

Stanford University Medical Center Auxiliary Volunteer Orientation. 9:45 a.m., W001.

WEDNESDAY, JULY 6 thru FRIDAY, JULY 8

Dept. of Genetics Conference: "Genetics and Biotechnology of Bacilli". All day, Fairchild Auditorium. For further information, call 497-5806.

TUESDAY, AUGUST 2

Registration deadline for Nursing Educational Services Course: "Critical Care Course—Level II, Circulatory Assistance" to take place Tuesday, August 16, all day, 900 Welch Rd., rm. 15. Course designed for RNs currently working in critical care areas. All nursing personnel are welcome. For further information, call 497-6366.

Registration deadline for Nursing Educational Services Course: "Critical Care Course: Level I, Selected Topics in Medical and Surgical Critical Care" to take place Tuesday, August 9, all day, 900 Welch Rd., rm. 15. Course designed for RNs currently working in critical care setting. All nursing personnel are welcome. For further information, call 497-6366.

SATURDAY, JUNE 25

Eating Disorders conference: sponsored by the Dept. of Psychiatry and Behavioral Sciences. A one-day conference to inform parents and the community about modern treatments for obesity, bulimia, and anorexia nervosa. The public is invited, and a fee is charged. 8:45 a.m. to 4 p.m., M104. For further information or to register, call 497-7871.

MONDAY, JUNE 27

Dept. of Gynecology and Obstetrics REI (Reproductive Endocrinology/Infertility) conference: "Hirsutism"—Dr. Alan Shapiro. 8 a.m., A336.

WEDNESDAY, JUNE 29

Div. of Hematology Wednesday noon conference: "Pediatric presentation"—Dr. Bertil Glader. 12 noon, S102.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Med faculty openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The pathology department of Stanford University School of Medicine invites applications for a position at the assistant professor level. Candidates must have demonstrated the capacity to conduct first-class research and will be expected to establish an independent and fundable research program in coagulation or cognate areas of laboratory medicine or pathology. Postgraduate training and certification in pathology are desirable. An extensive laboratory background and a record of prior publications are essential.

Applicants should send a curriculum vitae and the names of at least three references to Dr. Howard H. Sussman, Director of Laboratories, Department of Pathology, Stanford University School of Medicine, Stanford, California 94305.

The division of cardiology at Stanford University School of Medicine is seeking applicants at the assistant professor level. The position involves major commitment to both clinical activities and research, and direction of electrophysiology laboratory. Demonstrated research productivity is essential and invasive laboratory skills mandatory.

Send curriculum vitae to: Edwin L. Alderman, M.D., Search Committee Chairman, Cardiology Division, Stanford University School of Medicine, Stanford, CA 94305.

Medical Center MEMO

This issue of Medical Center MEMO marks the start of the biweekly publication schedule for the summer. The next issue is scheduled for July 13. The MEMO is prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. The editor is Lisa Ames, who can be reached at 497-6911.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

39172-TC (JCC:1514) TEACHER: 70%; asst in planning and implementing the program for young children, completing written developmental reports on children, setting objs for teaching-learning activities for children, meeting & conferencing w/ parent, participating in research projs which are ongoing at Bing, & participating in school-wide activities & events; this opening is in the nursery/school-aged Day Camp program for 4-8 yr-olds; QUALIFICATIONS: knowledgeable & exp'd in the field of Early Childhood Edu; BA in child development, early childhood edu, or related field; at least 2 yrs exp teaching young children; a current Calif. teaching credential w/ emphasis in ECE desirable; waiver of undergrad degree is possible if candidate has strong coursework/exp w/ young children.; T01; $875.

19673-PM (JCC:2070) ADMIN ASST II: Prov admin support for Heuristic Programming Proj, a research lab of 70 faculty, staff, & students working on knowl-based artificial intelligence sys w/ over $4M/yr in sponsored res support; designing budgets for & coordinating new res proposals; monitoring expenditure commitments & assuring approp allocation of costs; knowing & applying applicable govt & Univ policies, procedures & acctg principles; supervising proj clerical staff; administering personnel matters; managing proj space & inventory, etc; QUALIFICATIONS: 3 yrs AA-I or equiv exp w/ emphasis on sponsored res mgmt; effective supvry skills; excel skills in oral/written commu; excel knowl of sponsored res admin incl univ & govt policies & procedures; exp w/ computer-based text proc. & admin tools or ability to learn; send appl/resume to Tom Rindfleisch, Bldg. 460, Room 236.; C05; $1670-2086.

42500-LL (JCC:2120) ACCOUNTANT I: The Compliance Auditor is responsible for assuring that the review & documentation verification of medical records relating to professional charges generated by services billable by the FPP are processed in a timely & accurate fashion; respon are complex & demanding in an important & sensitive area; These are tasks in which accuracy & maturity of judgment are extremely important; QUALIFICATIONS: posses a broad working knowl of med terminology CSN, ICD 9 codes & a familiarity w/ med records; min of 3 yrs exp in a health care setting; thorough understanding of Medicare, MediCal, & Commercial Insurance compliance guidelines; strong verbal & interpersonal commu skills; some college helpful; able to exercise mature judgment in all activities carried out.; C05; $1670-2086.

31518-LL (JCC:3148/3150) Development Officer II/III: Assistant Director of Med Development; respon for identification, cultivation & solicitation of major gift prospects for SUMC; serv as liaison for Offc of Med Development w/ several depts in Med Ctr; participate in planning for, & will implement programs to increase funding for student financial aid in Sch'l of Medicine; travel w/ Med Ctr officers, faculty & volunteers to meet & discuss gift opportunities w/ prospects & donors; QUALIFICATIONS: self-starter who functions w/ a min of structure & guidance; ability to work w/ & motivate others, incl faculty, volunteers, & fellow staff members; proven ability to commu effectively, both orally & in writing; ability to exercise sound judgment in matters pertaining to important indiv & to work w/ highly sensitive info; familiarity w/ SU, the Offc of Development & the Med Ctr desirable; exp in succussful development work is essential; DO III requires min 2 yrs exp in planning & implementing major gift solicitations.; C07/C08; $2113-2724/2464-3139.

32546-TC (JCC:6032) SPEECH & HEARING CLIN I: Perform diagnostic assessmt of commu handicapped patients, incl hearing evaluations, site-of-lesion testing, electrophysiological tests (ENG, ABR, ECOG) hearing aid tests, assoc'd reprots for inpatients & outpatients, & audiological testing for ENT staffed clinics & inhouse bedside consultation; initiate & participate in clinical research projs, incl prep of informed consent forms, computer data analysis programs, spec eqpt requiremts & manuscripts for publication; QUALIFICATIONS: knowl of audiological test eqpt & hearing aid consignments stock; able to work w/ patient & staff in a pleasant & helpful manner; CCC-A or able to meet both the requiremts for Required Prof Exp of the Board of Med Quality Assurance of Calif & the requiremts for Clinical Fellowship Year of American Speech, Lang & Hearing Association; sign lang skills, prev exp in dispensing hearing aids, computer programming, cochlear implant programs, and/or speech & lang assessment preferred.; C06; $1854-2312.

19168-JB (JCC:6406) SCI & ENGR ASSOC I: High Energy Physics Lab needs a person w/ a broad spectrum of engrg skills & knowl to work on the development & maintenance of Linear accelerator & assoc free electron laser experiments; designing & overseeing the construction & implementation of part of the accelerator, electronics control & measurement subsys & instruments & cooling sys; becoming familiar w/ the operation of the linac; designing some of the accelerator vacuum & mech sys; QUALIFICATIONS: strong bkground in electronics engrg (analog & digital circuitry) & a familiarity w/ mech design & fabrication, as well as accelerator technologies; familiarity w/ microwave, high voltage & computers highly desirable.; C99; $1854-OPEN.

30046-AW (JCC:7578) PROJECT MANAGER III: Respon for completing assigned facilities projs w/in budget, on schedule & mtg the program requirements, given the financial constraints established by the Univ; program requirements incl not only the needs defined by using dept but sys requirements to meet those needs such as HVAC, mech, elec, energy, maint, aesthetic, etc; reporting progress on all aspects of proj; principal contact of using dept & serv as liaison between the dept & all others involved; coordinating & arranging mtgs; has sufficient authority for making proj mgmt decisions; coord internal & external reviews & for obtaining approvals throughout the life of the proj; QUALIFICATIONS: BA/BS or equiv of edu & exp required; MBA or executive course in business mgmt desirable; skills in planning, scheduling, cost control, contract admin, organizational behavior helpful; architectural remodeling & cost estimating capabilities preferred; strong leadership ability; excel interpersonal skills w/ proven success in proj mgmt.; C08; $2464-3139.

Bargaining unit

32399-TC (JCC:5652) LIFE SCI TECH III: TMS Unit; fixed term 7/15/83-7/14/83; 8:30-5:30pm; process, embed, cut & stain tissue for histochemical, light & electron microscopic evaluation; incl animal perfusion & dissection & processing autopsy & surgical mat'l; conduct light & ultrastructural exam of neural tissue; literature review for pertinent tech info; keep accurate records of procedures used & results of experiments; take light & electron micrographs for study, data interpretation & quantitation, & for publication; order supplies; make solutions/stain; work w/ residents doing EM projs; QUALIFICATIONS: exp in: histochemical procedures for neural tissue, histologic procedures (incl paraffin, plastic & colloidin processes, routine & spec stains, histochemical), photographic/darkroom procedures; strong bkground in electron microscopy essential.; A30; $9.97.

44600-DS (JCC:7090) STOREKEEPER III: TMS Unit; Lead Storekeeper; plan, schedule & assign work of Storekeepers & part time employees; implement procedures as developed by supvr to obtain optimum utilization of personnel, facilities & eqpt; asst in continuous development & training of storeroom personnel; oversee the completion of emergency orders; instruct employees in the safe handling of hazardous mat'ls & operation of mech moving devices; effectively coord w/ supvr regarding space & location of new items coming into warehouse, etc; QUALIFICATIONS: min 2 yrs demonstrated warehouse supervisoral exp; familiar w/ principles of mat'ls handling & physical distribution sys; able to deal w/ numbers & basic math; lift heavy mat'ls, operate forklift & other mech mat'l moving devices; understand basic storekeeping tech.; A26; $9.10.

22840-DS (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; Pantry; prep all cold foods such as salads, salad dressings, cold plates, sandwiches & hors d'oeuvres according to written recipes; selects useable produce & maintains pantry stock by ordering supplies fr the storeroom; selects, stores & records leftovers; able to assume duties of Head Pantry on his/her days off; QUALIFICATIONS: able to read, write & speak English; prior exp in pantry work in institutional food serv; able to prep large quantities of food fr standardized recipes & production sheets.; A12; $6.54.

22843-DS (JCC:7300) FOOD SERVICE WORKER I: TMS Unit; Porter; sweeps, mops & waxes floors; dusts & cleans furniture & walls in assigned areas; sets up & maintains cleaning utensils; empties garbage & wastepaper baskets; washes windows; buses trays; help others in carrying heavy objs; QUALIFICATIONS: requires habits of cleanliness & neatness; ability to stand for prolonged periods of time; ability to withstand physical exertion in lifting, moving & manipulating moderately heavy objs.; A08; $5.95.

22844-DS (JCC:7300) FOOD SERVICE WORKER I: TMS Unit; Porter; sweeps, mops & waxes floors; dusts & cleans furniture & walls in assigned areas; sets up & maintains cleaning utensils; empties garbage & wastepaper baskets; washes windows; buses trays; help others in carrying heavy objs; QUALIFICATIONS: requires habits of cleanliness & neatness; ability to stand for prolonged periods of time; ability to withstand physical exertion in lifting, moving & manipulating moderately heavy objs.; 1 A08; $5.95.

22841-DS (JCC:7308) FOOD SERVICE WORKER II: TMS Unit; Counter Pantry; sets up, serves & breaks down counter lines and/or assigned service area; assists pantry worker in preparing ingredients for Cold Menu Items, such as cutting & slicing vegetables for salads, relish trays; portions, desserts, salads, etc; assembles sack lunches (ingredients); assists pantry worker w/ storage of left overs; cleans dining room tables, chairs & cafeteria counters & machines; QUALIFICATIONS: requires habits of cleanliness & neatness; ability to arrange food on trays & change fr type of task to another given specific instructions; able to read, write & speak English.; A10; $6.23.

22838-DS (JCC:7316) FOOD SERVICE WORKER III: TMS Unit; Cook's helper; works under the direction of cook, head cook, and/or a Food Serv Mgr; grills hamburgers, steaks & grilled sandwiches; prepares scrambled eggs, fried eggs, pancakes; cooks vegetables; assists cooks in prep of menu items; warms pre-cooked foods; QUALIFICATIONS: able to follow verbal and/or written instructions & determines doneness of a large volume of simultaneously cooked food; prior exp in restaurant or institutional food service; able to read, write & speak English.; A12; $6.54.

22834-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; cook; prepares hot foods, incl entrees, vegetables, starches, sauces & gravies according to written recipes under the direction of Food Serv Mgr & Head Cook; directs cook's helpers; orders supplies fr storeroom, stores & records leftovers; able to assume duties of Head Cook on his/her days off; QUALIFICATIONS: able to read, write & speak English; able to organize time & mat'l in pressure situations; able to prep a variety of standard menu items; exp in large quantity cooking (at least 300) & basic knowl of high quality food preparation.; A20; $7.91.

22835-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; cook; prepares hot foods, incl entrees, vegetables, starches, sauces & gravies according to written recipes under the direction of Food Serv Mgr & Head Cook; directs cook's helpers; orders supplies fr storeroom, 1 stores & records leftovers; able to assume duties of Head Cook on his/her days off; QUALIFICATIONS: able to read, write & speak English; able to organize time & mat'l in pressure situations; able to prep a variety of standard menu items; exp in large quantity cooking (at least 300) & basic knowl of high quality food preparation.; A20; $7.91.

22836-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; Head Pantry; prep all cold foods such as salads, salad dressing, cold plates, sandwiches & hors d'oeuvres according to written recipes; selects usable produce & maintains pantry stock by ordering supplies fr storeroom; selects, stores & records left overs; directs & coord work of pantry workers & pantry helper; QUALIFICATIONS: able to read, write & speak English; able to organize time & mat'l in pressure situations; able to prep a variety of standard menu items; exp in pantry work in institutional food service; able to prep large quantities of cold food fr standardized recipes.; A20; $7.91.

22837-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; Storekeeper; receives, marks records & verifies deliveries against orders; reports discrepancies to Mgmt; fills reqs submitted by Food Serv Workers & Mgmt; records items issued & submits records to Mgmt; prep tallies of stock received & issued; conducts inventories; assts in some food prep; gathers, counts, bags laundry for pick up; issues clean linen; works in dishroom & cleans dining room & counters; QUALIFICATIONS: able to read, write & speak English; ability to do simple math & organize stock in an efficient manner; ability to move bulky supplies such as 30-50 lbs boxes of canned goods.; A20; $7.91.

22832-DS (JCC:7332) FOOD SERVICE WORKER V: TMS Unit; Head Cook; prepares hot foods, incl entrees, vegetables, starches, sauces & gravies according to written recipes; coord work of other cooks & cook's helpers; orders supplies fr storeroom, stores & records leftovers & discusses use w/ manager; QUALIFICATIONS: able to read, write & speak English; able to organize time & mat'l in pressure situations; able to prep a variety of standard menu items; exp in large quantity cooking (at least 400) & basic knowl of high quality food preparation.; A26; $9.10.

Hospital

Please submit all applications/resumes to the Hospital Personnel Department to the attention of Celia Corchado, 770 Welch Rd., Suite 100.

SENIOR PLANNER ARCHITECT - Facilities/Projects - #3518 - (C-69): RESPONSIBILITIES: Responsibilities will include planning & designing renovations & expansions of the Medical Center facilities. Prior to contractual assignments, coordinate construction documents and cost estimates for all of the above. Supervision and management of design section as required. QUALIFICATIONS: B.A. in Architecture and license to practice in California required; 5 years increasingly responsible experience, familiarity with code requirements of Hospital/Medical facilities preferred. Full time, permanent, $11.07-$16.61 hourly.

RELIEF BLOOD DONOR TECH - Blood Bank -#8119 - (C-86): RESPONSIBILITIES: Interviews donors and performs necessary tests to determine donor eligibility. Is familiar with State and Federal regulations regarding blood donation. Performs venipunctures for blood donation and accompanying samples. Is able to recognize and treat donor reactions. Is familiar with use of all donor area equipment. Helps set up donor area equipment. Accurately maintains necessary records. QUALIFICATIONS: California licensed R.N. or L.V.N. with I.V. or phlebotomy experience. Donor service experience preferred. Ability to relate well to the public. RELIEF POSITION, Some weekends/evenings, $12.03-$14.62 hourly.

DOSIMETRY TECHNOLOGIST - Radiation Therapy - #6025 - (C-67): RESPONSIBILITIES: Under the direct supervision of a Radiation Therapist and professional direction of a radiological physicist, produces an external beam treatment plan for each patient, with alternatives, if necessary, either by use of isodose charts or by use of a computer. Generally supervises each initial treatment set up. Trains others in dosimetry. Performs related duties as assigned. QUALIFICATIONS: Satisfactory completion of formal training in radiotherapy technology in an AMA approved school of equivalent, and eligibility for registration with AART, REQUIRED. Must have successfully completed formal training in dosimetry technology, or be able to demonstrate equivalent knowledge and skill. Full Time, permanent, M-F, 8-5pm, $12.57-$15.57 hourly.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, July 5, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Nonexempt

30615-AW (JCC:4068) PROGR/ANALYST GEN I: Asst staff in implementing computer-assisted record-keepng & data analysis; maintenance of computer hardware; writing, debugging programs and/or collecting info re user procedures & proposing automated procedures; frequent & detailed guidance & review by Dir; QUALIFICATIONS: familiarity w/ & understanding of sys analysis and/or computer programming procedures & tech; ability to devise progra logic w/in the limits of assignments; ability to write basic program instruction in programming lang involved in work and/or to write reports concerning user procedures; knowl of basic computer and/or sys documentation procedures.; X01; $1670-2451.

32946-LL (JCC:5940) CLINICS STAFF NURSE IV: Research nurse will monitor several clinical res protocols for treatment of Hodgkin's disease & non-Hodgkin's lymphomas, studying primary chemotherapy & radiotherapy treatments & toxicity of treatments; involve patient care, patient interviews, review of chemotherapy records, assessment of treatment toxicity & mgmt of data, incl some computer entry & retrieval; clinical studies w/ interferon will incl Phase I-II testing of new products & a Phase III adjuvant study in nodular lymphoma; help to coord lymphoma teaching conferences & interface w/ several add'l res projs, incl monoclonal antibody studies for diagnostic & therapeutic use; QUALIFICATIONS: valid Calif Registered Nurse's License; prev exp w/ Oncology patients.; K04; $2061-2229.

40701-PM (JCC:2058) ADMIN ASST I (N): 50%; assist the Med Ctr Ombudsman in all aspects of his duties; is the initial contact of an indiv approaching the ombudsman; receives complaints, grievances & inquiries or suggestions fr Med Ctr community; puruses inquiries into the issues involved & obtains nec bkground mat'l & info; serv as a resource person; interaction w/ a wide range of admin staff in

continued on next page



Jobs/ continued from page 12

Nonexempt

following-up cases;maintains close commu w/ offc of Univ Ombudsman & participates in joint staff mtgs; QUALIFICATIONS: typ 45; current knowl of Med Ctr & Univ policies; highly developed commu skills both in writing &-orally; ability to be obj & neutral & t listen creatively; demonstrated exp in interviewing skills; commitment to maintaining confidentiality; able to typ because of confidential mat'l; contact: Linda Northway, 497-6494.; B16; $797-836.

33246-PM (JCC:2058) ADMIN ASST I (N): Admin Asst to Chairman of Dept of Pediatrics; coord of chairman's offc & dept'l functions; faculty affairs, incl clinical faculty; accountable for admin of pediatric internship matching program, of med student pediatric clerkships & of pediatric residency program; supvn of dept'l offc clerical support staff; 35% genl admin assistance to Chairman; 20% Faculty Affiars; 10% supvn; 10% each admin of Pediatric Internship Matching Program, Pediatric Med Student Clerkship Program & Pediatric Residency Program; QUALIFICATIONS: typ 50-60; demonstrated ability to analyze, organize & direct varied admin functions; supvry exp, professionalism & discretion required; knwol of Univ & Med Ctr admin procedures, policies, & guidelines desired; use of dictaphone; demonstrated interpersonal skills & effective verbal/written commu skills; contact: Ali Lampert, Peds S328, 497-5344.; B16; $1593-1671.

36387-BP (JCC:2210) ACCOUNTING ASST III: Review & process forms for Worker's Comp/VDI & SDI/Sick Leave (incl batching & taping for computer processing); prep payments for various health insurance carriers (Blue Cross, Kaiser, Bay Pacific, etc) on a monthly basis; reviewing payroll deduction reprots & making corrections when needed; reconcile all health insurance liability accts on GL & make corrections to entries when nec; answer inquires & help solve problems for employees as they pertain to disability & sick leave; asst in auditing process of Special Salary Processing handchecks, etc; QUALIFICATIONS: a thorough knowl of basic acctg procedures; excel organizaitonal skills & ability to make sound judgments independently; ability to understand & explain Univ policies for resolution of problems related to sick leave use & insurance payments & disability use & policy; min of 2 yrs acctg exp; excel oral skills; use of 10-key adding machine & computer terminal; send appl/resume to M. Willis, 200 Encina Hall.; B14; $1440-1514.

30415-BP (JCC:2462) OFFICE ASST III: Reception-ist; screen incoming calls & visitors for Assoc. Dean; responds to genl questions about Grad Div procedures & interprets registration & financial aid policies to dept. admin, students & genl public; respon for handling In Absentia student checks; maintan record keeping of all; process Honors-Coop tuition grant cards; help process Change of Major/Degree petitions, leave of absence petitions & fellowship orders, etc; process Financial Aid Applications; QUALIFICATIONS: typ 50; accuracy in math & typing for detailed work essential; use of computer terminal, typewriter & xerox machines; ability to work under pressure & w/ many interruptions; no smokIng in offc; no student spouse because of confidential nature of mat'l; send appl/resume to Mary Lou Scott, Bldg 590, room 209.; B11; $1246-1310.

39289-BP (JCC:2470) OFFICE ASST IV: 75%; 9-1/2 month appt, Sept thru mid-June; respon for & directs offc operations, w/ assistance fr part-time Stern residence sec; info & commu; residence operations; liaison w/ custodial staff; liaison w/ food serv staff; maintenance of Stern program budgets; supvry duties; QUALIFICATIONS: through knowl of, & ability to perform, offc procedures, practices, & methods; ability to win coop fr students, staff & faculty of all ethnic bkgrounds; skills in oral & written commu; accuracy w/ numbers & other details; typ 45; ability to evaluate admin procedures & prov useful feedback; send appl/resume to E. Hlyama, 311 Old Union.; B14; $1080-1136.

24768-PM (JCC:2470) OFFICE ASST IV: Dept purchaser/expediter, sec to 2 faculty members & assistant to Dept mgr; prep all purchase documents for Dept; extensive contact w/ Purchasing Dept, Engrg Dept, Acctg Offc, & outside vendors in expediting orders & problem solving; act as resource to faculty, staff, & students regarding all aspects of purchasing & expediting; typing manuscripts, grants, corresp; travel arrangements; scheduling mtgs & appts; asst dept mgr w/ budget prep & budget reconciliation; monitor eqpt records & inventories; keep vacation & sick leave records; QUALIFICATIONS: typ 55-60; required to work independently & make independent judgments & take independent actions; work well w/ a wide variety of people in problem solving situations; familiarity w/ Stanford purchasing/acctg helpful; contact: Pat Gonzales, 497-6834.; B14; $1440-1514.

4715-PM (JCC:2554) SECRETARY II: 50%; 1-5pm; sec & receptionist for academic dept; typ corresp, coursework & short manuscripts; copy mat'ls for coursework; answer phone; key operator for Kodak copier; order & maintain adequate dept'l supplies; vans & room schedules; maintain Stansearch reprints, etc; QUALIFICATIONS: typ 50+; typing nec; send appl/resume to Kim Ciardullo, Applied Earth Sciences, Mitchell 305.; B11; $623-655.

19670-PM (JCC:2596) SECY II-SPEC: Prov sec'l support for Heuristic Programming Proj, a res lab of 70 faculty, staff, & students working on knowl-based artificial intelligence sys; receiving & screening visitors; answering & screening telephone calls; making conference room & mtg arrangements; maintain file sys; typ corresp, memos, manuscripts, etc; involving specialized tech terminology; maintain reprint lib; making travel arrangements & handle expense reports; photocopying; QUALIFICATIONS: typ 65; 2-3 yrs sec'l exp incl good organizational skills; excel oral & written commu skills; exercise fine judgment in dealing w/ telephone & visitor contacts; excel typing skills; exp w/ computer-based text processing & mail tools or ability to learn; send appl/resume to Tom Rindfliesch, Bldg. 460, Room 236.; B12; $1310-1373.

28246-BP (JCC:2454) OFFICE ASST II: Fixed term 9/1/83-8/31/84; monitoring terminal installations & repairs; monitoring production problems; prov phone coverage during lunch hrs; arrange plans for workshops; compiling results of surveys; maintain LC central files & coord files; prov updates to acct status list; setting up search-only lib; asst in answering marketing questionnaires; keeping coordinators documentation updated, etc; QUALIFICATIONS: typ 50; requires an ability to work well w/ people; good clerical skills; good telephone skills; lib exp desirable; exp w/ lib automation sys & WYLBUR or text-editing sys desirable; send appl/resume to Jamie Ingram, Oak 101.; B09; $1130-1189.

30457-PM (JCC:2596) SECY II-SPEC: 50%; 11-4pm; sec'l duties for res group of approx 20 people incl faculty, staff & grad students; typ corresp (tech & non-tech); tech typing of manuscripts for publication; thesis & classroom typing; tech reports; prep of Univ forms; handle budget statements & check for correctness; answer phone; open mail; filing, etc; QUALIFICATIONS: typ 65; sec'l exp required, w/ tech typing exp preferred; knowl of Univ procedures helpful; send appl/resume to Dena Polyhronakis, Varian Bldg., Room 108.; B12; $655-687.

31939-PM (JCC:2618) LEGAL SECY SPEC: Perform full range of sec'l serv for 2 attorneys; use Lexitron word processor; typ error free corresp & legal documents fr handwritten notes or dictation eqpt w/out supvn; neatness & accuracy essential; answer telephones; arrnage mtgs; make travel arrangements; prep expense reports; open & screen mail; deliver w/ bkground mat'ls to attorney; draft responses & file mat'ls not requiring attorney's atten; maintain estate & trust files & worksheets; maintain offc supplies; maintain confidentiality of info; efficiently & accurately manage a large workload; QUALIFICATIONS: exceptionally well developed sec'l skills & ability to apply them w/ unusual speed & organization; proficient Lexitron word processor skills or ability to quickly acquire them; legal sec'l training or exp preferred; exp in high level sec'l position may be substituted; good commu skills; prior probate exp helpful; send appl/resume to Liz Trujillo, 301 Encina Hall.; B16; $1593-1671.

30261-PM (JCC:2672) MED SERV ASST III: 8-5 or 7:30-4:30; Billing Rep for Gyn/Obs Clinic; heavy patient/physlcian contact; respon for explaining Clinic functions & fees; collects payments; assure compliance & completion of med charts & inpatient/outpatient charge documents; calculates, batches & routes physician in/outpatient fees for data entry; reviews surgery schedule w/ physician, determines fees; files operating reports; obtains MediCal/MediCare insurance forms fr patients; completes disability forms; analyzes & corrects problems; may serv as bkup to registration rep; QUALIFICATIONS: min of 2 yrs exp in a med offc environ preferred; some patient billing knowl, Medi-Cal, MediCare, etc; knowl of med terminology helpful; demonstrated interpersonal skills; contact: Dede Jamison, Boswell A334, 497-5505; B11; $1246-1310.

32633-PM (JCC:2680) MED SERV ASST IV: 7:45-4:30; act as Credit & Collection Rep; patient contact & payment arrangements on balances due dept; determines patient's ability to pay & make approp credit arrangements if nec; reveiw & process assignments of amounts for collection; review & maintain files of accts in which notice of bankruptcy or probate has been filed; review & maintain all delinquent amounts; research problem accts, maturity in judgment is extremely important; etc; QUALIFICATIONS: excel abilities in communicating fully w/ patients, family members, peers & mgmt regarding matters of extreme sensitivity; bkground in genl health care business setting, w/ a strong emphasis on retail or consumer credit & collection environ; good offc skills; 1 yr college exp or related exp; able to hold patient info confidential; send appl/resume to Mike Bass, 525 Univ Ave., Suite 400.; B14; $1440-1514.

43085-BP (JCC:7008) PROCUREMENT ASST III: Receive & respon to all telephone & walk-in requests for Procurement personnel; requesting depts & suppliers regarding a contract/purchase order after the initial order has been placed; replace & cancel orders & issue change orders as requested; monitor, evaluate & expedite open orders to ensure the timely receipt of mat'ls & services; asst suppliers of changes in delivery requirements & advise approp Procurement personnel of circumstances which will prevent or delay delivery of orders, etc; QUALIFICATIONS: 3 yrs exp In a lower level Procurement Assistant position or equiv exp elsewhere is nec to handle the respon of this position; thorough knowl of contracting, purchasing, expediting, accts payable & data processing procedures as well as exp involving heavy phone or public contact; send appl/resume to L. Santia, 851 Welch Road.; B14; $1440-1514.

Rental housing

HOUSING AVAILABLE

☐ **July 24 to Sept. 14-20 (flex):** Furn. Palo Alto hse, 3BR/2BA. Xlnt area, 1-1/2 mi to Stanf, nr Cult. Ctr, tennis, pool. Prefer single or cpl. Partial work xchng poss., (grdng) $900/mo. Call 326-5684.

☐ **Beg. July 1:** 1 rm studio, Coll. Terr. 1 mi. to Stanf. Priv. entr., BA, furn. opt. Frig, hot plate. Male grad/scholar pref. $250/mo incl. util. Call 497-3328, day; 857-1464, eve.

☐ **July 26 to Aug. 20:** PARIS. Fully furn. apt, 3BR/2BA, mdrn gas ktchn, frpl, beam ceil. Lrg & sunny. Charm nghbrhd. 15 min via metro to Paris Ctr. $300/wk. Call Mark 497-7850, day.

☐ **July '83 to Aug. '84 (flex):** Fully furn. hse, 2BR/2BA, den. Ranch-style, Crescent Pk. Gr. piano. Nonsmoking adults. Immaculate. $1250/mo incl grdnr. Call 323-1426, after 5 p.m.

☐ **Beg. Aug 10 (flex):** Furn hse, 3BR/2BA, AEK, frpl. Xlrg 2-car gar. W/D, Fenced grdn, huge patio, trees, quiet nghbrhd, nr shops & park w/pool. 2-1/2 mi. to Stanf. Min. yr. lease. $1125/mo. incl grdnr. Call 326-4866.

☐ **Jan. '84 to June or Aug. '84:** Peter Coutts Hill furn. condo, 2BR/2BA, study, frpl, gar. pool, jacuzzi, deck, LR/DR w/cath. ceil. Use of car. Call 497-0833, day, 493—6273, eve & wknd.

☐ **Beg. July 15 for 1 yr. or longer:** 2BR/1BA hse in Coll. Terr. Nice yd w/dog run, fruit trees. Beamed ceil, Indry, small study. Dog ok. $875/mo. Call 497-9791, day; 851-3760.

☐ **July 19 to Sept. '83 (flex):** Furn hse, 5BR. 1/2 acre. Nonsmokers, no pets. $1200/mo incl. grdnr, pool serv. Dep. $1000. Util. xtra. Call 322-7360, 8-9 a.m. or after 3 p.m.

☐ **Sept. '83 to Sept. '84:** Shorter term poss. 2BR/2BA Oak Creek apt. nr Stanf. & hosp. Fully furn. incl. linens, dishes. AEK, Pool, tennis, sauna, jacuzzi. $1100/mo. Call 497-1968 day; 493—0894.

☐ **NOW for 1 yr:** Lux. penthse condo nr dwntwn Palo Alto. Nonsmoking M/F ROOMMATE for summer; take over whole apt. in Sept. New w/pool, cl. to Stanf. Call Dave 327-7194 or 497-2954, day.

☐ **July, Aug. only:** Lrg. furn rm, share BA. $225. Call Ruth 493-8338, eve.

☐ **Sept/Oct:** Fully furn Menlo Pk apt. 2BR, 3 patios, priv. yd., quiet. 10 min. bike to campus, Walk to shops, parks, No pets. $1000/mo. Call 328-0920, X336, day; 321-0741, eve.

☐ **Beg. Sept. 1 '83:** Fully furn. condo, 2BR/2-1/2BA, light, airy, xtra lrg. Nr. Stanf. Avail for yr. $1200/mo. Call 321-4407.

☐ **Mid-July '83 to beg. Apr. '84 (flex):** Fully furn. hse, 3BR?2BA, AEK, W/D, Steinway, 2 studies, frpl, pool, fenced yd. Nr Med. Ctr, bike to Stanf. $1500/mo (nego) incl. pool serv., grdnr. Call 497-1348, day; 325-4533 (lv. message), 322-9866, eve.

☐ **July 1 or sooner, for 1 yr:** Fully furn. twnhse, 2BR/2BA, office/study, AEK, W/D, frpl, pool. 7 min. to Stanf. Xlnt for writer/scholar. Cpl or single adult. No pets. Owner going to Harvard. Call Judy Donnelly 497-1065, day.

☐ **NOW:** Tahoe-Donner hse, 4BR/3BA, deck overlooks Nat'l For. Hiking, tennis, golf, Donner Lake access. Hot tub. $450/wk, $200/wknd. Call 324-8559.

☐ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

☐ **Beg. end of Aug. '83:** Delux, lrg. 1BR condo. Xlnt Mt. View location, Indry, 2 pools, furn. or unfurn. Lease 1 to 2-1/2 yrs. $600 - $700/mo. Call Gene Weber. (408) 295-1300, X311; 965-4289.

☐ **NOW:** Unfurn. hse, 3BR/2BA, frpl, hrdwd flr., newly re-dec, remodelled ktchn, 2-car gar. Menlo Pk, bike to campus. $1200/mo. Call (415) 556-3423, day: 854-6780, eve.

☐ **NOW:** 1 br. apt. (4 rms.) in San Francisco (Bernal Heights), $450 mo. Unf., W-D, large yard, some view. Possible carpool to Stanford with owner. Call Julia, 497-3811 (days), 648-4835 (eves.).

☐ **NOW:** SHARE: Young single woman seeks M/F nonsmoker for 2BR/2BA lux. condo in Old Mill complex. AEK, secure bldg, elev. pool. Call Leslie 948-6185, eve.

☐ **July 15 to Aug. 16:** Furn campus hse, 3BR/3BA, LR/DR, playrm, study, studio, 3 patios. Car poss. $1100/mo. Call 857-9431.

☐ **NOW:** Tahoe-Donner condo. 3BR/2BA, loft, spa, pool, tennis, golf, stable. $350/wk, $140/wknd. Bienenstock, 493-8649.

☐ **July 16 to Nov. 16:** New furn. 2BR condo on campus, Peter Coutts Circle, No pets, prefer cpl. $1000/mo. Call Phillips, 493-1326.

☐ **July 27 to Aug. 23:** Furn. hse, 4BR, 15 min. to Stanf. in Cupertino, access to #280. Nr Deep Cliff golf crse. Nonsmokers, no pets. $1000. Call (408) 257-0158, eve.

☐ **NOW to Sept. 15:** 2 women & 1 man (ages 25-35) seek someone to SHARE hse in Palo Alto, nr Stanf. $262.50/mo. + util. Call 324-3815.

☐ **Beg. June 24:** Unfurn. or part. furn 2BR/1BA hse in Los Altos. Secluded, cul-de-sac, 15 min. to Stanf. Nonsmokers, no inside pets. Nr schls. $850/mo. Call 948-9385.

☐ **July 1 to Sept. 15:** FREE - Delux rm w/BA in fac. hse on campus. Nonsmoking female. EXCHANGE for 7 hrs. wk (eves & wknds). No hsewrk or childcare. Call Mrs. Berger 497-3900, a.m.; 493-6770, eve.

☐ **NOW:** Tahoe vacation retreat, Tahoe-Donner condo, fully furn. sleeps 8. Pools, spa, stables, golf, fish, tennis; boats, rafts nrby. $80/wknd; $195/wk. Call Al, 326-3821, eve.

☐ **Beg. July 1:** Fully furn. hse, 3BR/1BA & sep. shower. DR, bkfst nook, lrg. yds. Quiet, creekside st., bike to Stanf. $1200/mo. Call Larry, (415) 573-4998, day 324-2469 eve, Eveleen, 322-6985, eves. or wknds.

☐ **Academic yr 83/84:** Furn. apt nr Tel-Aviv U; 2BR/1BA, LR, view, phone & car. EXCHANGE for hsng nr Stanf. Call (217) 333-9358 or in Israel, (03) 426-191

☐ **Beg. Aug.:** Westchester cnty on Conn. border; fully furn contemp. hse on 4 wooded acres, 50 min. to N.Y. City. Rent or EXCHANGE for your Calif. hse. or apt. Call Eva 326-3684 or 854-6760.

☐ **July 11 to 25:** Sublet; Scenic Woodside hse. 2½BR, rustic setting w/creek. Off Canada Rd. $400 Stephan or Laurie, 851-4297.

☐ **NOW:** Tahoe Donner hse, 4BR/3BA, hot tub, deck, view of Nat'l For. Hike, tennis, golf, swim, Donner Lake access. $450/wk; $200/wknd. Call 324-8559, eve; 843-4557.

☐ **July to Sept. '83:** Summer rent, Tahoe. A-frame chalet, 2BR/1½BA, loft, DR, AEK, frpl, W/D, cable TV, deck. Nr lake, tennis, casinos. No pets or sublet. $600/wk, $1100/2 wks, $1750/mo. Call Marsha (415) 563-3156.

☐ **June 16:** Fully furn 2BR apt. in 4-plex, yd, coin lndry, carport w/bike stor. El Carmelo in Palo Alto. $750/mo. Call 856-6049.

☐ **June 16 (flex):** Unfurn. Palo Alto hse, 2BR/2BA, LR/DR w/frpl, FR can be 3rd BR. Yd, terr, wrkshd, carport, remodeled ktchn. $1150/mo incl. grdnr. Call 856-6049.

☐ **Sept. 1, '83:** Unfurn 3BR/2BA hse, Palo Alto, 2 mi. to Stanf. Big yd, patios, 2-car gar, frpl, DW. $1200/mo. Call 856-6049.

☐ **Beg. Aug. 1:** Fully furn. 1BR apt in 3-plex, on Alma in Palo Alto. Priv. patio. $675/mo. Call 856-6049.

☐ **Regularly Avail:** 1 & 2BR furn. & unfurn. apts. & twnhses, & 3BR/2BA hses. in Palo Alto & Menlo Pk in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley 856-6049.

☐ **July 28 to Aug. 29:** Lovely London hse, Chiswick area, nr transp. Open flr. plan, LR, DR, remodeled ktchn, W/D, TV, gardn. Upstairs 3BR/1BA. $1000/mo. Call Abramsky, 011-441-995-2747 or write: 13 Van Brugh Rd, London W41 JB. Local call 856-6049.

☐ **Beg. end June (flex):** Unfurn upstairs condo in 7-unit complex, dwntwn Palo Alto. 3BR/2BA, no adj. walls, lots of decking. Prefer grad. cpl or faculty. No pets. $1000/mo. Call agent; Arlene, 321-6078, eve.

☐ **End June thru July '84:** Fully furn hse, 2BR/2BA, AEK, microwv., W/D. Att. gar., hot tub, pool, tennis, $1100/mo incl grdnr & maintn. Call Dr. Kulick 497-7001, day.

☐ **July 17 to Aug. 31:** Furn. studio sublet, dwntwn Palo Alto. Prkng, pool, walk to Stanf, train, bus. No pets. $540/mo. incl util. + $400 sec. dep. Call Tania 497-2425, day; 321-6530, eve.

HOUSING NEEDED

☐ **Aug. 15 to 31 or Sept. 14:** Visit. fam. of Stanf. fac. mbr seeks furn. 2BR hse or apt. nr Stanf. Call Arnice Streit 497-2278, day: 327-6325, eve.

☐ **Early July to Aug. 13:** German Scientist/Lec. seeks furn. hse or apt, 2-3BR, on or nr campus. Reas. rent; will care for gardn. Call 497-2173, day: 968-1861.

☐ **Aug. and/or Sept:** French Prof. U. of Paris, Sorbonne, visit. Stanf. seeks quiet place to hsesit or rent. Nonsmoker. Loc. refs. Call 948-2929, after July 6 or write N. Cot, 4Bd de la Bastille, Paris - 12, France. Tel: (1) 628 02 64.

☐ **Sept. '83 to Apr. '84:** Visit. Canadian physician, wife, seeks 1-2 BR small hse or HOUSESIT. Prefer within 10 min. to Stanf. Med. Ctr. Refs. avail. No children. Call (403) 432-3912, day; (403) 439-5135, eve.

☐ **Mo. of Aug. '83:** French scientist seeks EXCHANGE: furn. apt. in Paris, 15th Arrondissement, nr Inst. Pasteur, metro. Top, 6th flr., no elev. Dbl LR, 1BR, study, balc. $600/mo + $200 dep. or xchng for apt. nr Stanf. Call Dr. Brutlag 497-6593, or write Dr. M. Hofnung, Institut Pasteur, UPMTG, 28 rue Dr. Roux, Paris 75015 France. Tel: 1 306 19 19, X2156.

☐ **Sept. '83 to Sept. '84:** Visit Prof. & wife wish to rent small furn. hse or 2BR apt. Pref. nr Stanf. Call (415) 859-5105 or 326-0537.

☐ **Jan. '84 to July '84:** Two quiet, mature femal Profs on sabbat. at Stanf. seek 2BR furn. apt. or hse on or nr campus. Call COLLECT (913) 541-1501, eve.

☐ **July 27 to Aug. 26:** Med. student seeks HOUSESIT. Local refs avail. Call Gregg, COLLECT (713) 797-1198 or lv. message with Celia (415) 326-0116.

☐ **NOW:** Resp. mature SU staff mbr avail. to HOUSESIT. Good w/plants. Local refs. Call Mollie, 497-2231, day.

☐ **Aug. 22, '83 to Feb. 5, '84:** Furn hse, 4BR + study, car; in Brisbane, Queensland, Australia. EXCHANGE for 3BR furn. hse. ne Stanf. Write M. Sanders, Dept. of Psychiatry. U. of Queensland, Herston, Brisbane, 4029, Australia.

☐ **Aug. 25 to Sept. 5:** Faculty cpl seeks 1-2BR apt/small hse nr Stanf. No pets or children. Call Dr. Burn, (415) 666-4362, (415) 731-8551, eve.

☐ **NOW:** HOUSESITTER. Neat resp., great w/pets & plants. Refs. avail. Call Karen 324-1780, day; (415) 484-1116, eve.

☐ **NOW:** Stanf. staff wants to rent or sublet studio or 1BR apt in Palo Alto area only. Will also consider long-term HOUSESIT. Excl. local refs. Call Donna 497-3967, day; 493-6859, eve.

☐ **NOW::** $100 reward for info. leading to rent of garden cottage nr Stanf for resp. prof. woman. Call 326-4695.

☐ **Fall Qtr:** Visit Prof, wife, from Finland need small furn. apt.; walk. dist. to Med Ctr. $550 or less. Call Sydney, 497-6051, day.

☐ **July 16 to Aug. 28, '83:** Visit. fac. cpl, former Stanf. visitors, desire HOUSESIT or rent arrang. for above per. 1BR or more. Call Holahan, (512) 471-3033, day; (512) 346-2220, eve.

☐ **Aug. & Sept. (flex):** Visit Prof & fam. need 2BR furn. hse/apt to sit, share, rent. To $600/mo. Call 493-1546.

☐ **Last of July (flex) & Aug.:** Faculty cpl seek furn hse or apt. Nonsmokers, no children. Call 497-3134, day; 323-0105.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Service, P.O. Box 7772, Stanford, CA 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414.

Accidents and injuries

Accidents and Injuries Occurring During Week of June 20-24

Cause of Accident or Injury	Number of Incidents	Number of Days Off
Animal contact	1	0 (0)
Chemical contact with skin	1	0 (0)
Fall from height	4	3 (1, 0, 2, 0)
Fall from same level	1	0 (0)
Lifting improperly	1	1 (1)

Carpools

Carpool forming from SF (Bernal Heights) to Stanford, M-F, hours somewhat flexible. Share driving. Call Julia, 497-3811 (days), 648-4835 (eves.).

Ride sharing between Santa Cruz and Stanford Tues. and Wed. 9-5 (flexible), call Andy Carman at 497-6341.

Would like to form (or join existing) carpool from Los Gatos to Stanford, M-F, 9-6. Call Tom Holt, 7-2454 or (408) 354-6040.

Ride share between SF and Stanford M-F, mornings and eves (times flexible), call Jennifer at 346-6411 after 8 p.m.

Ride needed from Sharon Heights Shopping Center to Stanford, in exchange for gasoline. My hours are 8 a.m. to 5 p.m. Please call Dixie Dodson at 497-9150.

Ph.D. oral exams

TUESDAY, JULY 5

Bernadine Chuck Fong, education and psychology, "Community College Instructors' Attitudes and Their Relationship to Student Attrition," 9 a.m., Room e114, Education Bldg.

WEDNESDAY, JULY 6

Robert David Stearns, education and communication, "Linking Classroom and Home: Directed Ethnography in Rural Yucatan," 2:15 p.m., Room e114, Education Bldg.

FRIDAY, JULY 8

Chun-Chiu Daniel Wong, materials science and engineering, "Effects of Heat Treatment on InP Single Crystals and Au-InP Schottky Diodes," 2:15 p.m., Peterson Bldg., Room 550A.

Mattax to give harpsichord concert July 15

Stanford's Department of Music will present harpsichordist Charlotte Mattax in a free concert at 8 p.m. Friday, July 15, in Annenberg Auditorium.

She will perform works by Sweelinck, Tomkins, Rameau, Bach, and Scarlatti.

Mattax expects to receive her D.M.A. in Early Music this year. She recently returned from a year's study with leading harpsichordist Gustav Leonhardt in Amsterdam. In 1980 she won second prize at the International Harpsichord Competition in Bruges, Belgium.

Mattax received her B.A. from Yale and M.M. from Juilliard. A recipient of the 1979-80 Harriet Hale Woolley Scholarship, she studied with Kenneth Gilbert in Paris and Bob van Asperen at The Royal Conservatory in The Hague.

The Peninsula Times-Tribune wrote after her last Stanford recital: "Charlotte Mattax is a name to keep in mind, for in her hands the harpsichord becomes a remarkably eloquent instrument. . . . Her playing was splendid and moving."







The Summer Music Workshops, open to all students of orchestral instruments, is under the direction of music Prof. Arthur Barnes and Stanford MA Sara Salsbury (above with young student).

At far left, practicing the string bass, is Noell Toso, Cindy Giver, and Susan Hintz.

A beginning string player, left, plays a sonata in shorts.

Photos by Stephanie Smith

Barnes to direct summer music workshops starting July 12

The fifth annual Summer Music Workshops sponsored by the El Camino Youth Symphony Association will be held on campus at the music annex on Tuesday, Wednesday, and Thursday evenings during the last three weeks of July (July 12 to July 18).

The Workshops, which are open to all students of orchestral instruments, do not require membership in the El Camino Youth Symphony and are designed to supplement students' private lessons and school musical studies. The faculty of professional musicians and graduate students will be under the direction of Stanford music professor, Dr. Arthur Barnes, who has been the conductor and music director of the El Camino Youth Symphony since 1975, and Sara Salsbury, MA Music Education, who directs the ECYS Chamber Strings and Preparatory Ensemble.

Instruction will be offered in beginning and intermediate ensemble playing, theory, string, and wind technique. Chamber ensembles, master classes, and a repertory orchestra will be offered for experienced instrumentalists and will be open on a space available basis to ECYS alumni, friends, and family.

Tuition fee is $60. For more information and application forms please call (415) 493-8523.

Dramatists give series of free one-acts, starting June 29

The Department of Drama's "Stanford Summer Theater Workshop" is presenting a series of seven one-act plays in the Nitery theater beginning on Wednesday, June 29.

A new play will open each Wednesday and play through Friday at noon with added performances on Friday and Saturday evenings at 8 p.m. Each performance will be approximately 45 minutes in length. Admission is free.

The plays will be directed by Drama Department doctoral students and recent graduates and cast from members of the Summer Theater Workshop. The settings, costumes, and lighting will be designed by faculty, graduate, and undergraduate designers, and by members of staff.

The plays will be presented in the following order:

David Edgar's *Ball Boys*, June 29-July 2 at noon; July 1-2 at 8 p.m.

John Guare's *Something I'll Tell You Tuesday* and *The Loveliest Afternoon of the Year*, July 6-9 at noon; July 8-9 at 8 p.m.

Romulus Linney's *Tennessee*, July 13-16 at noon; July 15-16 at 8 p.m.

Becky Smith's *Man Strapped to Bridge*, July 20-23 at noon; July 28-29 at 8 p.m.

Eugene O'Neill's *The Rope*, July 27-29 at noon; July 28-29 at 8 p.m.

Christopher Durang's *An Actor's Nightmare*, August 3-6 at noon; August 5-6 at 8 p.m.

An original review, *Summer's End*, August 10-13 at noon; August 12-13 at 8 p.m.

Seating in the Nitery is limited but at least one hundred persons will be seated at each performance.

Shape up for summer

Swimming lessons

Swimming lessons are being offered in two-week sessions at de Guerre Pools this summer. The second session begins Tuesday, July 5.

The program includes eight half-hour lessons Monday through Thursday during each session for anyone over the age of five years, beginners through advanced swimmers.

The cost is $35 per person for each of the four sessions. Full information is available at the guard office at de Guerre Pools or may be obtained from Skip Kenney, men's varsity swimming coach, at ext. 7-2210.

Tennis lessons

Small group tennis lessons will again be offered to staff and-or their families on weekdays or evenings. Players are grouped by ability in these lessons taught by Dick Gould's staff.

Call 497-1160 on weekday mornings to receive detailed printed information and registration form.

Aerobic class time

The aerobics exercise class "Your Body: Use It or Lose It" meets MW at 5:30 p.m. for one hour, not at 6 p.m. as previously advertised. This ongoing exercise class costs $2 each class, or $18 for the entire six-week session. For more information, please phone the STARTS office at 497-9671, afternoons.

Children's song concert July 16

Tom Hunter, songwriter and performer who specializes in songs for children, will present an outdoor concert at noon Saturday, July 16, at Bing School, 850 Escondido Road on campus.

Hunter has performed at schools throughout the Bay Area.

Tickets at $3 for adults, $1.50 for children, will be available at the gate. Seating will be on the lawn.

For more information call 497-4865.

Aerospace technology seminars open

The 20th annual Aerospace Technology Seminar began June 22 at the Terman Engineering Center Auditorium.

The seminar consists of presentations made at 8 p.m. every Wednesday through August 3rd. The presentations:

June 29—Richard S. Shevell, professor of aeronautics and astronautics, Stanford, on "From Icarus to the Boeing 767 and Beyond."

July 9—Fredric H. Schmitz, NASA-Ames and Stanford, "Rotary Wing Aircraft—Fooling Mother Nature."

July 13—J. Myron Atkin, dean, School of Education, Stanford, "The Crisis in our Schools."

July 20—R.J.P. Lyon, professor of mineral exploration, Stanford, "Why Look Down When the Stars Are Up; A Geologist Remotely Probes Our Finite Earth for Food, Fiber, Oil, and Copper."

July 27—Robert V. Wagoner, professor of physics, Stanford, "Expanding Horizons of Cosmology".

August 3—Richard J. Jahns, professor of earth sciences and Geology, Stanford, "Coalinga and Akita: New Challenges to Earthquake Prediction."

The seminar is open to registered Stanford students for one credit and is open to the public.

For more information call 497-3079.



Robert Hagopian and Alexandra Hawley

Hawley, Hagopian plan concert July 8 of flute, piano duos in Dinkelspiel

Flutist Alexandra Hawley and pianist Robert Hagopian will perform duos at 8 p.m. Friday, July 8, in Dinkelspiel Auditorium at Stanford. Hawley teaches flute for the Department of Music.

Their program will include Telemann's *Sonata in F minor*, Hummel's *Sonata in D Major*, *Sonataz* by Poulenc, *Fantaisie* by Faure, *Poem* by Griffes, and Bartok's *Suite Paysanne Hongroise*.

Hawley and Hagopian have been performing as a duo for seven years, giving concerts and workshops throughout California, the East Coast, and Midwest. They have performed at the Metropolitan Museum of Art in New York as part of the Myra Hess Memorial Series in Chicago. They have been invited by the Phoenix Chamber Music Society to perform at the Scottsdale Center for the Performing Arts July 15.

A *San Francisco Chronicle* critic once wrote of a Hawley-Hagopian concert: "(It) was as perfect as I have encountered. Programming, technique, musicality—all rated a 10. Hawley has every arrow available. But beyond mere control and mastery, she and Hagopian reached exceptional levels of classy musicianship."

Tickets for their July 8 concert are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and at the door.

Recordings of great jazz pianists will be played by Wodehouse July 9

Artis Wodehouse will present "Great Jazz Pianists of the Past, an Evening of Historical Recordings" at 8 p.m. Saturday, July 9, in Dinkelspiel Auditorium Rehearsal Hall at Stanford. The free public event is sponsored by the Stanford Archive of Recorded Sound.

The lecture will trace the evolution of jazz piano performance from ragtime at the turn of the century through early jazz of the '20s, and swing of the '30s and '40s, using historic recordings taken from the Stanford Archive of Recorded Sound's extensive holdings. Featured artists will include Eubie Blake, James P. Johnson, Jelly Roll Morton, Fats Waller, Earl Hines, and Art Tatum.

Wodehouse is an authority on the history of early recordings. She received a DMA from Stanford and recently gave a series of lectures at Stanford on historic recordings of pianists, violinists, singers, and conductors.

This year she presented two lectures on great singers from the past at the Frank V. de Bellis Collection in San Francisco and also spoke on early recordings at several East Coast colleges. She currently is studying the performance style of George Gershwin.

Wodehouse performs frequently in the Bay Area.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the two weeks in which the events occur. The next deadline is Wed., July 6 to cover the weeks of Mon., July 18 through Sun., July 31. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, JULY 5

Stanford Museum Lunch Hour Tour: "Approaches to Painting". 12:15 pm. Stanford Art Museum. Free.

WEDNESDAY, JULY 6

Drama Department: John Guare's SOMETHING I'LL TELL YOU TUESDAY, and THE LOVELIEST AFTERNOON OF THE YEAR. Two one-act plays, directed by doctoral student Tom Lindblade. Both plays together run approx. 45 min. Noon. The Nitery. FREE..

Book Sale: SU Libraries Gift and Exchange Division. Books and periodicals in many fields : hardbound $1.50 +, paperback 25 cents+, periodicals 10 cents+. 11 am - 1:30 pm. Green Library West Wing, First Floor, Rm 101. n.

Stanford Museum Lunch Hour Tour: "Approaches to Painting". 12:15 pm. Stanford Art Museum. Free.

Aero-Astro/NASA/ASEE Seminar: "Rotary Wing Aircraft Fooling with Mother Nature;" Fredric H. Schmitz, NASA-Ames Res. Center. Open to the public. 8 pm. Terman Auditorium. Free.

THURSDAY, JULY 7

Drama Department: John Guare's SOMETHING I'LL TELL YOU TUESDAY, and THE LOVELIEST AFTERNOON OF THE YEAR. Two one-act plays, directed by doctoral student Tom Lindblade. Both plays together run approx. 45 min. Noon. The Nitery. FREE.

STARTS/Summer Jazz Workshop Speaking Jazz Lecture Series: Don Hass: "The World of Chord Substitution, Observations and Applications". 7:30 pm. Tresidder Lounge. $3; $25 for series of 10 lectures/concerts.

FRIDAY, JULY 8

Drama Department: John Guare's SOMETHING I'LL TELL YOU TUESDAY, and THE LOVELIEST AFTERNOON OF THE YEAR. Two one-act plays, directed by doctoral student Tom Lindblade. Both plays together run approx. 45 min. Noon, 8 pm. The Nitery. FREE.

SATURDAY, JULY 9

Drama Department: John Guare's SOMETHING I'LL TELL YOU TUESDAY, and THE LOVELIEST AFTERNOON OF THE YEAR. Two one-act plays, directed by doctoral student Tom Lindblade. Both plays together run approx. 45 min. noon, 8 pm. The Nitery. FREE.

TUESDAY, JULY 12

Stanford Museum Lunch Hour Tour: "The Chinese Tradition". 12:15 pm. Stanford Art Museum. Free.

WEDNESDAY, JULY 13

Drama Department: "Tennessee", by Romulus Linney. One-act play directed by doctoral student Stephen Weeks. Noon. The Nitery. Free.

Stanford Museum Lunch Hour Tour: "The Chinese Tradition". 12:15 pm. Stanford Art Museum. Free.

Aero-Astro/NASA/ASEE Seminar: "The Crisis in Our Schools"; J. Myron Atkin, Dean of School of Education, SU. Open to the public. 8 pm. Terman Auditorium. Free.

THURSDAY, JULY 14

Drama Department: "Tennessee", by Romulus Linney. One-act play directed by doctoral student Stephen Weeks. noon. The Nitery. Free.

STARTS/Jazz Workshop Speaking Jazz Lecture Series: Frank Sumares: "How to Develop Your Rhythm Section Into a Cooking Machine". Pianist, adjudicator, and director of Jazz Studies at Chabot College will work with a rhythm section for this lecture-demonstration. 7:30 pm. Tresidder Lounge. $3.

FRIDAY, JULY 15

Drama Department: "Tennessee", by Romulus Linney. One-act play directed by doctoral student Stephen Weeks. noon, 8 pm. The Nitery. Free.

SATURDAY, JULY 16

Drama Department: "Tennessee", by Romulus Linney. One-act play directed by doctoral student Stephen Weeks. noon, 8 pm. The Nitery. Free.

EXHIBITS

The Stanford Quadrangles: Design & Construction. An exhibition of materials relating to the early planning development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23July 28.

"Propaganda Posters of Two Revolutions". Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8 - Jan. 31.

The Stanford Horse Show. In conjunction with the renovation of the Red Barn at Stanford, the exhibit contains items related to Leland Stanford's interest in horse breeding and training. T-F 10-5; S-S 1-5; closed Mondays. Stanford Art Gallery. June 28 - Aug. 14.

Paintings by Liz Cheney. Atmospheric style and designs by a student of the Stanford Fine Arts Dept. all building hours. Upper Lobby of Tresidder Union. July 3 - Aug. 1.

Photographs by Aurangreb Khan. Coffee House Gallery, Tresidder Union First Floor. July 3 - Aug. 1.

Sharon Chacko - Batik. Reception Wednesday, July 6, 5-7 pm. International Center. July 4 - Aug. 14.

CAMPUS REPORT

Volume XV, Number 40 | A publication for Stanford University faculty & staff | July 13, 1983



The gender gap in earnings may be changing about as fast as this angel's portrait, a CROW scholar believes. See story, page 5.

Mosher termination justified, scholars say

Steven W. Mosher's termination as a Stanford doctoral candidate in anthropology was "justified," three nationally prominent scholars have advised Dean Norman K. Wessells of the School of Humanities and Sciences.

See texts, pages 10-12

Mosher has blamed his termination on a popular Taiwan press article he wrote documenting forced abortions in China and on "slanderous" allegations by his former wife. In an 11-0 vote Feb. 24, the Stanford anthropology faculty agreed with an investigating committee report that found Mosher's "seriously unethical conduct" in China "endangered his research subjects."

While Mosher was given a copy of the 47-page report, it has never been made public. The three scholars—Stanford Prof. Gordon Wright, past president of the American Historical Association; Stanford Prof. Ernest Hilgard, past president of the American Psychological Association; and Prof. Ward Goodenough of the University of Pennsylvania, former president of the Society of Applied Anthropology—said that "such disclosure is inadvisable for ethical considerations relating to the welfare of other parties."

"The investigating committee's findings, taken all together, do not reveal merely honest mistakes or ill-considered actions," the scholars said.

"Rather, they reveal a pattern of dealings that involved deliberate disregard for the law of the host country and the instructions of its officials, a deliberate disregard of the requests of the funding agency regarding dealings with officials in the host country, a manipulative approach toward the people with whom he was living and working, a serious lack of candor in his dealings with his supervising professors and with the representative of the U.S. Committee on Scholarly Communication with the People's Republic of China, and a continuing lack of candor in his dealings with the investigative committee.

"The pattern as a whole, as it unfolded through the course of the investigation, progressively eroded any possibility for a relation of trust between Mr. Mosher and the faculty of anthropology at Stanford...

continued on page 10

Stanford West conditions cause University to pause

The Palo Alto City Council approved the Environmental Impact Report for the proposed Stanford West housing project Monday night, but added several conditions to those already agreed to by University staff.

See Massy letter, page 8
See coop letter, page 13

The Council voted that there should be a setback averaging 150 feet on the "south" side of Willow Road, between Pasteur Drive and the Stanford golf course. The property is in the University's academic reserve, outside the city. It lies across Willow Road from the Oak Creek Apartments.

There should be no vehicular access from that property to Willow Road, the Council voted.

In addition, the lands bounded by Willow Road, Campus Drive, Pasteur, and the golf course should be held only for academic and support services, the Council said.

Another action had to do with a proposed playing field on the Stanford West site, a 46-acre parcel on the "north" side of Willow Road. The field should not be for

continued on page 6

In 'Debategate'

FBI may join Hoover search of archives

The Federal Bureau of Investigation may join the search of President Reagan's 1980 campaign and transition archives at Stanford's Hoover Institution.

Charles Palm, Hoover acting archivist, said Tuesday "We have received a letter from Edwin Meese, as trustee of the Reagan collection, authorizing us to provide representatives of the Department of Justice access to the materials and to permit copying of any document the Department of Justice deems relevant to its ongoing inquiry."

Agent Keith Berry of the San Jose FBI office met Tuesday afternoon for about an hour with Palm, Hoover research fellow Molly Tuthill, and Richard Burress, associate director of the Hoover Institution.

Four trustees to consider University-Hoover study, page 6

"We had a preliminary discussion concerning access to materials," Palm said. "It was an information gathering trip for him. We surveyed the area where the documents are stored and the search area.

"We discussed space requirements for a possible team of FBI agents to conduct their own search.

"Berry had no decision on whether there would be a team or not. We discussed the status of our own search. He said he would take information back to his superiors for evaluation and decision. We communicated our intention to cooperate fully with the Department of Justice. Meanwhile, our search continues."

Berry gave no indication of when he would return, but "my impression was he'd be back soon," Palm said. If the decision is made to have FBI agents participate, "we asked them to send people familiar with records management or archives."

Palm expressed confidence that any sharing of responsibility could be managed so that both the Department of Justice and the Hoover Institution can meet their requirements.

"It's really up to them to decide," he emphasized.

continued on page 6

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People

RLIN book file expansion set

The book file of RLIN, the online bibliographic support for the Stanford University Libraries, will not be available from July 5-26 so that the Research Libraries Group (RLG), the owner and manager of the database, can complete the final phase of an archival load project. This will add approximately four million records, almost doubling the size of the database.

Included in these records are books cataloged by 15 member libraries before they become members of RLG (Yale, Columbia, Princeton, etc.), 177,000 records from the National Library of Medicine, about 65,000 records of government publications from the Government Printing Office, and 89,000 East Asian records from the University of Toronto.

During this time, the libraries' Acquisitions and Catalog Departments will continue operation but they will not be able to do any inputting into the system to either order or catalog books or produce catalog cards for books.

Books which have received a rush request for cataloging are an exception and will be manually processed, as will a few select emergency rush orders to purchase new books.

For the library users, this means that the staff will not be able to check the database for the status of books to see if they are on order or have been received by Stanford but not yet cataloged. Nor will the staff be able to check to see if other libraries, whose book holdings are included in RLIN, own a particular title.

The main card catalog in Green Library has cards filed for all but the most recently cataloged acquisitions for most libraries. Call the Information Desk between 10 a.m. and 5 p.m. Monday through Friday at 497-9108 to check titles listed in the main card catalog.

At other times Green Library is open, call the General Reference Desk at 497-1811 for catalog information.



Maggie McCarty

Word Graphics expands

Maggie McCarty has assumed a newly created position in customer relations for Word Graphics. McCarty comes to Stanford University from the University of San Francisco where she was the director of publications. Her background includes marketing, sale, graphic design, printing, and public relations. She will use these talents to spread the word about Word Graphics' services. If you have any questions about printing, and how Word Graphics can help you, call McCarty at 7-4811.



Chris Chafe, Jon Berger, David Jaffe

Three composers new NEA fellows

Three of the 35 NEA (National Endowment for the Arts) composer's fellowships for 1983-84 have been awarded to Stanford composers: Jonathan Berger, lecturer in music; Chris Chafe, research associate at CCRMA (Center for Computer Research in Music and Acoustics); and David Jaffe, graduate student in music.

Berger's $6,000 grant is to support composition of an opera for singers, instruments, and computer-generated tape. Berger has also received a $1,000 Young Composer's Award from ASCAP (American Society of Composers, Authors, and Publishers) for his DMA composition, *The Fires of the Night*.

Chafe received his DMA degree in January and works at CCRMA. His $9,000 NEA grant is for a computer piece. In November he leaves for IRCAM (Institut de Recherche et de Coordination Acoustique-Musique) in Paris for one year to compose and provide technical assistance to CCRMA's sister institution.

Jaffe was awarded a $5,000 NEA grant to compose three pieces: 1) a double concerto for mandolin, violin, and small orchestra; 2) a piece for eight channels of computer-generated sound; and 3) a work for six English horns and violin.

His double concerto, entitled *Would You Just as Soon Sing as Make that Noise?* was written for the Mostly Modern orchestra and premiered by them in March at the Vorpal Gallery in San Francisco.

Emmons, Vucinich edit new book about *The Zemstvo in Russia*

Prof. Terence Emmons and Wayne S. Vucinich of the Stanford History Department are editors and contributors to *The Zemstvo in Russia*, published by the Cambridge Century Press.

The book consists of 13 essays written by experts, each of whom has attempted to assess Russian experience with the rural local self-government embodied in the elective institutions called *zemstvos* (1864-1918). The essays were originally read at a Stanford conference in 1978. Subsequently expanded and edited, they represent the first attempt to investigate *zemstvo* systematically since the Revolution of 1917.

Vucinich recently edited another book, *The First Serbian Uprising, 1804-1813*, a collection of essays, published in the Brooklyn College Studies on Society in Change Series, distributed by Columbia University Press.

The First Serbian Uprising is the first book to appear on the subject in the West since the appearance in 1825 of the highly regarded but now antiquated work by Leopold von Ranke, the famous German historian. Each essay in *The First Serbian Uprising* is written by an American or foreign scholar. Vucinich wrote four.

The collective work treats such fundamental questions as the genesis and essence of the Serbian insurrectionary movement, the leadership of Karageorge, the policies of the foreign powers toward the Serbian uprising, the role played by the Serbian Orthodox Church, the military and political organizations of the insurgents, and the impact of the Serbian uprising on other subjects of the Ottoman Empire.

The overthrow of the Ottoman theocratic and feudalistic order, and attempts to organize the Serbian peasant society and to lay the foundations for the modern Serbian state are highlights of this book.

Black students honor three staffers

Linda Bradford, Beverly Scott, and Ruby Mason were each honored by the Black students of the graduating class of 1983. The staff members were saluted by being given a Staff Appreciation Award for Exceptional Service and Guidance to Students at the 9th Annual Black Baccalaureate Dinner that was held on June 11, 1983, at Tresidder Union.

The recipients of the newly instituted award were chosen because each had been "the most helpful to the majority of the Black students of the graduating class of 1983 over the past four years."

Each one of the recipients is a familiar and significant figure in the arena of student services at the University. Bradford, who has a long career in the field of student personal services, is a financial aids advisor in the Financial Aids office. She advises applicants, parents, and students on all aspects of financial aids. She has been in the capacity of advising at the university for five years.

Scott has been at Stanford since 1969 and has been coordinator of extradepartmental programs and is currently assistant dean of minority programs in the School of Engineering. In her roles, she has come into contact with a large number of students; her aim being to facilitate students' successful participation in the University environment.

Mason is an advising consultant in the Academic Information Center. She began working at the University in 1969 and has been advising undergraduate preprofessional students for the past five years. In her work, she focuses on curricular planning, selection of majors, and on minority group students.

Gutenberg Express schedule to change

The following changes in Gutenberg Express service between the Stanford and Berkeley Libraries will go into effect on Monday, July 18. The shuttle service is administered by the University of California Department of Communication and Transportation Services.

1. On Monday, July 18 a 32 passenger bus will begin services from Berkeley with the following schedule:

Leave Berkeley, 7 a.m. and 3:45 p.m.

Leave Stanford, 8:30 a.m. and 5:15 p.m.

2. A fare of $2.25 per passenger will be charged for each one-way trip. Passengers may pay this fare in exact change at the bus, or purchase a booklet of eight coupons at the Central Garage, 1952 Oxford Street, Berkeley (located on the west side of the campus).

3. It is anticipated that with the larger bus, reservations will not be required.

4. The old system, using vans without fees, will continue through July 15.

These changes result from a recent survey of Gutenberg Express riders which indicated strong support for continuing the service even with a fee. Since the survey, various schedules and fee structures have been reviewed with an eye toward meeting the objectives of transporting library materials between the two campuses and of providing users of the respective libraries a source of transportation.

For additional information about this service, please contact Joe Jezukewicz, Stanford University Libraries (ext. 7-2018).

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Vincent D'Andrea has spent lifetime counseling those in distress—and he's found his own secret for contentment

by Donald Stokes

Peer counseling is rapidly growing more important to meet the needs of those in emotional or psychical crisis, in view of the slashing of federal funds for social services.

In the worst cases, those of threatened suicide, peer counseling is invaluable. Among college students, suicide is second only to auto accidents as a cause of death, markedly more so than in the population as a whole.

Fifteen out of every 100,000 students kill themselves each year. There are about 10 times more suicide attempts than those actually carried out, so it is estimated that 1,600 students, out of the 10.7 million in higher education, are alive today in America's 3,221 universities and colleges after failed attempts at suicides.

The number who are probable suicides in suspicious "accidents" (involving guns, cars, or drugs, etc.) is believed by many observers to double the real total of those who destroy themselves.

These terrible totals are quite separate from those of students who are talked out of killing themselves.

This is where Vincent D'Andrea comes in.

Coping with the psychic crises of students is the medical art of Dr. D'Andrea, psychiatrist and a principal instructor of the peer counseling courses at Stanford's Cowell Health Center. There are eight such student groups at Stanford, each dealing with a particular range of student problems.

D'Andrea has been taking care of Stanford students for 12 years as part of a lifetime of counseling those in need. With Peter Salovey (Stanford '81, now at Yale) he has published the only book which deals with the techniques of how students can help other students who are in psychic distress (*Peer Counseling: Skills and Perspectives*, Science and Behavior, Palo Alto, 1983, $9.95).

Over the years D'Andrea, who has spent his career in teaching, psychological counseling, and psychobiology, has not only built up student counseling centers but also suicide hotlines, networks of dormitory advisers, and helped establish peer counselors on other campuses.

"Although suicide calls to peer counselors are relatively uncommon, compared to other types of calls received by our emergency services, suicide attempts are not an infrequent occurrence," said D'Andrea in a campus interview.

Typically, those who attempt suicide are female, aged from 20 to 30. Ninety percent of all suicide attempts are made by women. Those who actually kill themselves are usually males over 40.

"Contrary to the common impression, it is not those who are sunk in a prolonged depression who are most likely to do away with themselves. Those most likely are those who are 'cycling' rapidly into or out of depression. People who are chronically depressed often do not have the energy to take their own lives."

D'Andrea believes that the eight counseling networks at Stanford and the expertise which has been handed down for more than a decade has done much to make suicide, or attempts at it, a rarity among Stanford students.



D'Andrea relaxes by practicing the ancient art of winemaking

Even so, the volunteers who man the 24-hour telephones at The Bridge, the focus of Stanford's peer-counseling groups, are carefully coached in the techniques of helping the desperate people who have self-destruction on their minds.

Two chapters are devoted in D'Andrea's book to depression and suicide. Many of the counselors have the relevant pages pasted up near the phones.

There is great competition to become peer counselors at Stanford. "In The Bridge course there is always tremendous over-subscription," said D'Andrea. "I cannot train more than 22 in any quarter, and usually I get up to 50 applications. For those not interested in earning credits, there is an overspill course which is taught by training assistants."

A group of students approached the Health Service in 1970, with the idea of forming a peer counseling group. "The need was clearly there," said D'Andrea."Students were looking around for ways to get support within their own ranks. We co-founded The Bridge when the ferment on American campuses had only recently reached its peak."

D'Andrea helped to arrange training in counseling and various support systems focused on a "drop-in" center where students in distress or need could go for help with their crises. He developed a course which was first held under the auspices of SWOPSI (Stanford Workshops on Political and Social Issues). From 1976 the courses were held at the Learning Assistance Center. D'Andrea became the principal instructor in counseling courses.

From the original Bridge there are today eight spinoffs, or satellite programs, which deal with particular areas of the student population. These include various ethnic counseling groups and special interest associations which cover such aspects as birth control, drugs, and specific health problems. The next group likely to be formed is one designed for blacks.

The peer academic advisers have major programs in the various residences for students and in other parts of the university.

The basic course that all peer counselors have to take has two main components. The first is in listening and counseling skills. The second component focuses on the content which is relevant to the particular task of the student.

Asked how many students sought the help of the peer counseling groups, D'Andrea said that the only figures available to him were for The Bridge, which has about 60 "drop-in" visits every quarter, plus up to 200 phone calls, often from people anxious to hear a friendly voice.

"This is a 24-hour operation, so that at any time advice can be given on referrals, on crises, and counseling. Four students who live in man the phones. They are all volunteers. They range from freshmen to graduates, but we do not encourage seniors to take on the work, as they will soon be gone, and continuity of experience is valuable here.

"Many of the volunteers are studying psychology or human biology. For others, it seems to be a sort of antidote for their own stresses and problems, or helpful to their own studies.

"We have many counselors from science, engineering, business, and law who relish the work because they feel it adds a more human dimension to their studies."

Is there any particular type of student who is more likely to need counseling? "No, a great many students find it difficult, during a 10-week stay in a campus residence, to develop any real relationship to another person. And there is so much competition. These peer counseling programs provide an opportunity for students to achieve more cooperative kinds of relationships, to draw off the academic sparring and to address themselves to more everyday concerns.

continued on next page

D'Andrea/ continued from page 3

"The most common problem that requires peer counseling is the upset of a relationship. Usually it is a man-woman thing, but quite often it is a family matter, when a student has received a really upsetting call from home, with bad news, or disapproval. People may go into crisis in these sorts of situations.

"Sometimes the trouble has roots in longer-term issues, such as the return of former depression over a deep-rooted problem.

"I don't have any data, but it seems to me that for a while there were more women wanting to be peer counselors, and that now the two sexes are about evenly balanced.

"Women are often more interested in relationships than men, they are more verbal and more free in expressing feelings. That is why they often volunteer in larger proportions than their ratio to men on campus."

D'Andrea's observation over the years has been that women are more slow than men to enter a relationship, but once they have entered it they are more interested in nurturing it than men are. However, they also seem to be more decisive over ending a relationship, whereas men often jump into a relationship much more quickly, and have a difficult time in ending it.

"Both sexes suffer when this occurs. For many it is their first real relationship with the other sex, outside the family. My impression—and I may be wrong—is that it is harder for men to understand why a relationship has soured, what went wrong. Men are also less apt to come in and talk about it. Women, on the other hand, are very interested in finding out why a relationship went wrong. They want to analyze it and understand it more thoroughly.

"It could be that things have changed somewhat over the years I have been here. They may well have, but I have no firm data. Men and women seem to be growing more androgynous; perhaps there is a more cooperative ethic.

The next most common problems are those of negative feelings. Sometimes it is anxiety or depression, for any one of a wide range of reasons. Students frequently feel that they are up against a problem they cannot solve, or they are overwhelmed by the pressures of study. Often they feel they cannot study sufficiently anymore, they feel burned out, they lack motivation, they feel withdrawn and listless about their studies.

"They say they don't feel smart any more, they feel useless, the demands being made on them are beyond their limits. These bright people feel—probably for the first time in their lives—that they are at the limits of their capabilities.

"They have come to the end of the endless optimism and enthusiasm of adolescence, and have been hit by the realities of the later years.

"Our task is to make that realization one that does not destroy them. I spend a lot of time with students and their peer counselors in discussing this issue of how you maintain your self-esteem when it is heavily assaulted.

"I ask the students 'What are the sources of your self-esteem? Are they all based on performance? Do you have good feelings about yourself apart from your role as a student?'

"Even if a student gets lots of A's and does not have an inner core of self-respect, he can develop great insecurity. This often begins to show among graduate students, in spite of the fact that they are invariably extremely bright. Often they lose their sense of bearings, as they realize that their self-esteem and what other people think about them is too narrowly confined in that basket of intellectual attainment.

"The third largest area where the peer counselors are needed is in the specific dilemmas of individual students, often focused on their academic work. Sometimes it concerns anxiety as to whether the area of study they have chosen is the right one for them. Or they may have run out of steam and feel very low intellectually.

"Those who are nearing the end of their studies grow increasingly worried about their chances of finding appropriate jobs. These sorts of problems are often more complex than the others, and they involve much deeper motivations and fears."

D'Andrea explained how Stanford deals with afflictions caused by psychic problems. Of these the most common are anorexia nervosa (dieting to the point of malnutrition) and bulimia (over-eating followed by deliberate regurgitation). These are now so familiar that those afflicted would often appear before peer counselors and identify themselves as victims.

A program called Overeaters Anonymous has been in operation at The Bridge for many years.

"There are certain characteristics of bulimics. For example, a bulimic woman is likely to show a pattern of perfectionism in pleasing others, beginning in adolescence. They tend to be very cheerful, agreeable, bright, lovely young women who are very concerned about other people and worry about what others think and feel. They are very eager to please.

"They are also preoccupied with their personal appearance, and they tend to spend a great deal of their time on their looks and clothing, their body image. They have an obsessive concern with maintaining a specific weight and shape.

"There is a sort of magic belief which bulimics stumble on to the effect of 'I can eat as much as I like to please myself, and can avoid gaining weight simply by vomiting or taking laxatives or diuretics.'

"There is the public picture of this attractive and agreeable woman, whereas in private they confess to us their self-hate.

"Anorexia nervosa is a much more serious condition, and often it is life-threatening."

D'Andrea has had a strong interest in psychological and pharmacological treatments which have effects on thinking and feeling; he published a book on psychoactive drugs in 1973.

D'Andrea is interested in acupuncture, which he began to study, together with other Chinese medicine, during the campus troubles during the early 1970s, when he was, in his own words, "a sort of hippie doctor."

D'Andrea emphasized that he does not practice acupuncture, because of licensing restrictions. He is convinced, however, that the latest research shows acupuncture often to be a valuable physiological function. "It is associated with the release of endorphins, which have an effect on pain.

"What people don't realize is that the good results obtained with it in China are partly the result of the extraordinary rapport that acupuncturists there build with their patients.

"I was myself treated by acupuncture in a California clinic for pericarditis, an inflammation of the sac of the heart. This is an extremely painful condition. I was taking all kinds of medications that were having unpleasant side-effects.

"I had previously been to some lectures on acupuncture, and had met a fine young physician, Harry Oxenhandler, who was then practicing in Palo Alto. I went to him and told him I was having great pain, and detailed all my symptoms.

"I was suffering severely, had a high fever, and felt very badly. Oxenhandler carried out a treatment and in one and a half hours I walked out of his office, entirely free from fever and pain. The doctor checked with my cardiologist, and they worked together when I took subsequent treatment by acupuncture. I was freed from pain and the effects of my affliction.

"I still keep up with the literature on acupuncture, but purely as an avocation. I continue to be interested in the psychobiology of acupuncture and also of meditative states."

D'Andrea's great hobby is winemaking. It began when he was living in south Palo Alto in the early 1960s and became partners with his next-door neighbor in winemaking. Later they joined with a group of engineers working at Stanford Research Institute who had a vineyard on Montebello Ridge.

"We learned a great deal from each other, each year making large quantities of various kinds of varietal wines. I have been making wine since 1962, each year making up to or at the legal limit of 200 gallons (one thousand bottles), usually producing a range of reds and whites, including Cabernet Sauvignon, Zinfandel, and Pinot Noir."

His winery and workshop are next to his home near Middlefield Road in Menlo Park. He says that he learned to make wine in the way the finer wines are made in Europe, which is to use 100 percent varietal grapes and not to add anything to them. He takes great care to protect the mix.

Asked where he obtained his grapes D'Andrea laughed: "There's a whole Byzantine business entailed in that. One calls around in the pre-harvest and asks the big vineyards whether they are selling grapes to home winemakers. That requires some delicate arrangements and contacts.

"I derive great pleasure out of getting to know a great deal about winemaking, in creating good wines on which I put my own label, and in giving some to friends and relatives.

"The reds usually have to mature for up to four years. I still have a few bottles of my 1962 Cabernet Sauvignon."

His label—Villa Cimbrone—is that of his home, which in turn is named after a famous villa in Ravello, Italy, where Wagner is said to have composed parts of *Parsifal*.

He is helped in his winemaking by his wife Shirley, and often by various of his four children. The oldest, Daria, is a musician who studied at the San Francisco Conservatory of Music. His two sons, Christopher and Steven have studied, respectively, literature and comparative literature at UC-Berkeley. Christopher was a finalist in both the Rhodes and Marshall Scholarships selection process last year. The youngest child, Claudia, is a junior at Castilleja School in Palo Alto.

My impression—and I may be wrong—is that it is harder for men to understand why a relationship has soured, what went wrong. Men are also less apt to come in and talk about it. Women, on the other hand, are very interested in finding out why a relationship went wrong.

—Vincent D'Andrea

D'Andrea was born in Philadelphia 53 years ago and received his M.D. at Temple University in 1957. When he was a medical student at Temple he held a clerkship under O. Spurgeon English, the grand old man of psychiatry, and this sparked his interest in human behavior.

"I worked in the out-patient department, which was called the Comprehensive Medical Clinic. We were taught a style of family practice which involved not only serving the patient but also the whole family. Often we had home meals with them and took down the medical histories of each member. We would make an assessment of the family's health needs, and then try to make appropriate recommendations.

"In college, I took a double major, in English and biology. I was dissuaded from a career in literature by my father, but my fascination with the human condition remained. I believe all this made me very interested in psychomatic medicine, in social

continued on page 6

CROW studies subtle ways men maintain work preserve

Despite the highly publicized achievements of Sally Ride and many other individual women, occupational segregation by sex is "no better today than it was in 1950—and probably no better than it was in 1900," according to Associate Prof. Myra Strober of the Stanford School of Education, director of the Center for Research on Women (CROW).

An economist who has found significant differences in the career progress of men and women MBA's, Strober believes occupational differences by sex should be considered in a cultural context.

Several recent Stanford studies indicate that the closer data are examined, the greater the true differences become.

"Women get a ticket to ride after the train has left the station" was the way Stanford students Susan and Michael Carter summarized their comparison of earnings differences by sex in several professions.

In medicine, for example, women MD's are more likely to work for a clinic than for themselves. In law, women work in the less lucrative specialties.

In dentistry, one of the few professions where practitioners are not being "deskilled" and where relative incomes are still rising, women comprise only three percent of the practitioners and four percent of the students.

By allowing dental hygienists to do more routine tasks, dentists have upgraded the work they perform as professionals. Hygienists, of course, are overwhelmingly women.

While women have become proportionately greater among computer programmers and systems analysts, the importance of this field may be diminishing. Surprisingly, the students found, between 1970 and 1977 women's incomes rose from 70 percent to 80 percent those of men while their share of these jobs rose from 20 percent to 26 percent.

Men's earnings increase less rapidly when a profession is "deskilled" and an oversupply of trained personnel develops.

Men are territorial

"Men workers are very interested in protecting their territory," Strober observes. If more women enter a predominantly male field, they increase the labor supply. At some point, men may fear their jobs could become "women's work," with results not unlike those of "white flight" from neighborhoods fearing residential integration.

Subtle differences in communication style proved a powerful barrier to women enrolled in a welding course in a Seattle community college, Cecile Andrews found in Stanford doctoral dissertation study.

The class included 15 men and three women. While there was no overt sexual harrassment, the women were effectively ostracized, Strober said. No one spoke to them in class or in the college cafeteria. The women felt "unwanted."

In class, women asked simple direct questions—"what does this mean?" for example.

Men would take longer to ask questions, usually supplying a potential answer. The teacher would reply simple "yes" or "no," and "usually the men students were right," Strober said.

Where the women were starting with no knowledge of welding, the men used code words to suggest they knew the answers. This enabled the men to view the women as "dumb." By the end of the course, the women said they were not at all sure they wanted to become welders. They missed the chance to talk with friends in a "female" culture.

Other studies have reached similar conclusions, notably Cynthia Epstein's analysis of women lawyers and Judith Steihm's report on women at the U.S. Air Force Academy.

In a third Stanford study, Wanda Brewster O'Reilly interviewed 12 dual career couples on the interaction between family and corporate life.

While all the couples said they were interested in furthering both careers within the marriage, they behaved in ways which advanced the husband, Strober said.

"This makes economic sense, since in all the couples studied, the men earned more than the women."

Where married women in professional careers often say they see no conflict with their family roles, further questioning and analysis shows they have lowered their expectations.

Strober suggests several ways in which companies can work toward a more integrated work force:

1) Bring in more than a few token women, when possible. Some research suggests that men may feel more threatened when the number of women increases.

2) Enable women to create support groups across corporations as well as within their employer's firm. "Women in professional careers need other women to talk with," she notes.

3) Provide more child care availability.

4) Consider adding a "wide" track to the "fast" track, an idea suggested by O'Reilly for those who recognize family commitments as well as those to the company.

The "superwoman" syndrome has become increasingly evident in business, law and several professions, where people are paid well but expected to work 60 to 80 hours a week, Strober observed.

In one bank with a very good policy on maternity leaves, talented women were not returned to their original position but often were promoted into positions of "extreme overload" soon after having a child.

Even when housework is shared, women are often responsible for picking up youngsters from child care or the doctors, she noted.

Between 1950 and 1980, she notes, the proportion of women with children under age six who are in the work force nearly quadrupled, from 12 to 45 percent. The proportion of women with children age 6 to 17 in the work force doubled, from 30 to 60 percent.

While women's experience in the work force increased and their "exit rate" declined sharply, the earnings gap in comparison with men has increased since 1955.

Among full-time employees working year-round, white women's earnings fell from 65 to 59 percent of those of white men by 1980.

During the past 20 years, black women's earnings have moved up to nearly 95 percent of those of white women, as former domestic workers have moved into clerical, nursing and teaching jobs.

Marked improvement for blacks

Between 1955 and 1980, there also has been a "marked improvement" in the earnings of black men compared to white men, with the ratio increasing from 60 percent to 75 percent.

But as recently as 1979, white men with only eight years formal education earned an average of $14,500, compared to only $13,000 for white women with a college degree.

While more than 200 different studies have examined possible reasons for this difference, only 40 percent can be attributed to such factors as differences in years of education, work experience, skills, and absentee rates. And some—including Strober—believe even this figure probably is high.

Whenever women have children, the impact on earnings is negative. But for men, having children tends to be positively correlated with earnings.

While the press highlights individuals moving across traditional occupational lines, statistics tell a different story, Strober notes.

Studies by June O'Neill of the Urban Institute show that the proportion of all employed women who worked in predominantly male occupations—defined as those with 60 percent or more men—rose from 9 percent in 1972 to 10 percent in 1978. The proportion of all employed men working in predominantly female occupations fell from 9 percent to 8 percent in the same period. Those working in "integrated" occupations (with no more than 60 percent of either sex) rose from 16 percent to 22 percent.

Detailed analysis often reveals greater segregation than aggregate data suggest, Strober observes. Where government statistics often lump crossing guards and bridge tenders together, for example, the first group is predominantly women, the second mainly men.

A National Academy of Sciences study by Heidi Hartman found that while 49 percent of all assmebler were women, in the auto industry the ratio was only 17 percent, while in electrical machinery it was 74 percent.

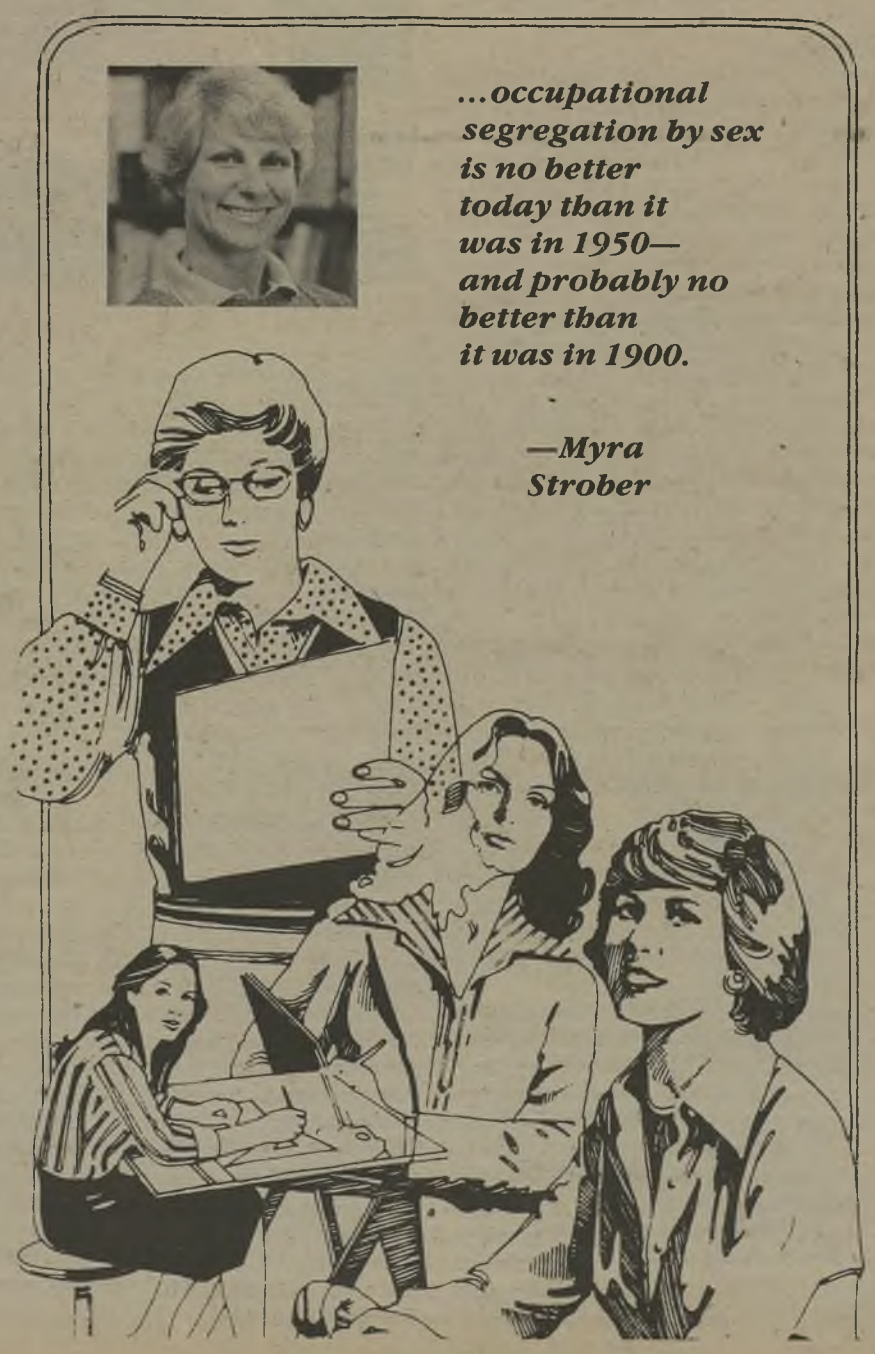
In a 1979 study of 400 business establishments, James Baron of the Stanford Graduate School of Business and William Bielby found that in half the firms examined, no men and women shared the same job title. The mean index of segregation by sex was .84 on a scale where 1.0 meant total segregation.

"The more carefully you look, the more segregation you find," Strober comments.

In a recent study of more than 5,000 students in 23 computer camps, Prof. Robert Hess of the Stanford School of Education found that about 75 percent of the students were boys, 25 percent girls. The proportion of boys was highest at the most expensive camps, suggesting parents were willing to spend more for them to acquire this skill.

Strober's views were discussed at a corporate seminar for management and personnel sponsored by CROW on campus June 29.

—Bob Beyers



...occupational segregation by sex is no better today than it was in 1950—and probably no better than it was in 1900.

—Myra Strober

Ad hoc committee to study University-Hoover relationship

Four Stanford trustees will consider how a proposed study of the relationships between the University and the Hoover Institution should be conducted.

The ad hoc group includes Board President William Kimball, Los Angeles attorney Warren Christopher, San Francisco attorney Frank "Sandy" Tatum, and Nancy Barry Munger, who also serves on the Hoover Board of Overseers.

Starting in mid-July, the group plans several meetings during the summer to recommend the composition and charge for a study committee to be created by the full board this fall.

Kimball favors broad representation on the study committee, including individuals from the University, the Hoover Institution, and outsiders not connected with Stanford.

The board authorized formation of the ad hoc group by Kimball at its June meeting.

On May 26, with a single dissenting voice, the Faculty Senate urged University President Donald Kennedy "to consult with the Board of Trustees with a view to appointing a committee in the near future to explore and reassess the relations between the Hoover Institution and the University, including governance and appointment procedures, with the goal of promoting more effective and cooperative relations."

Earlier, Kennedy and Kimball had agreed it would be "a good idea" for a visiting committee to study governance and appointment processes, indicating such a study would include both trustees and outsiders.

On May 27, Hoover Institution Director Glenn Campbell said the Board of Trustees is "the proper place to conduct any review of the relations between the Hoover Institution and Stanford University."

Earlier, Campbell pointed out that "many binding resolutions and agreements. . .have been entered into by the Stanford Board of Trustees, the Hoover family, and the Hoover Institution Board of Overseers, which have been scrupulously followed during the years I have been director of the Hoover Institution.

"This includes the appointment procedures that have been worked out over the years by the president of the University and the director of the Hoover Institution, based on the above resolutions and agreements."

A 1962 Board of Trustee resolution requires that the director of the Hoover Institution must be "previously approved" by the trustees of the Hoover Foundation, Inc., a New York corporation.

The present charter also specifies that the director "must be a man who reflects the purposes of the institution. He should be of an age which gives him a substantial period of service before the retirement age of 65."

The Hoover Institution operates as "an independent institution within the frame" of the University. Senior fellows, the highest ranking scholars at Hoover, are subject to review by the president of the University. Any appointments made jointly with Stanford's regular academic departments are subject to normal faculty review. Others are not.

The Faculty Senate action followed circulation of a petition signed by 84 faculty, of whom 76 were publicly identified, which called for "an immediate and independent inquiry" into the relationship between the Hoover Institution and the University.

Its preamble stated that "the existence of a partisan organization, whether liberal or conservative, within the University, raises grave questions concerning the academic independence, integrity, and national reputation of the University."

More than 131 faculty signed a counterpetition saying that an investigation of alleged partisanship by Hoover would be a "grave threat. . .to academic freedom."

The Senate adopted a substitute motion with no preamble.

Hoover...

continued from page 1

The Reagan campaign collection includes 550 linear feet of material shelved in manuscript boxes. Collected over six weeks in December 1980 and January 1981, it was left with a letter of deposit at the Hoover Institution. Reagan retains ownership of the documents.

Palm and Tuthill initiated a search of the collection June 27 in response to a White House request. On July I, White House attorney Fred Fielding requested that copies of any documents found be sent directly to the Justice Department.

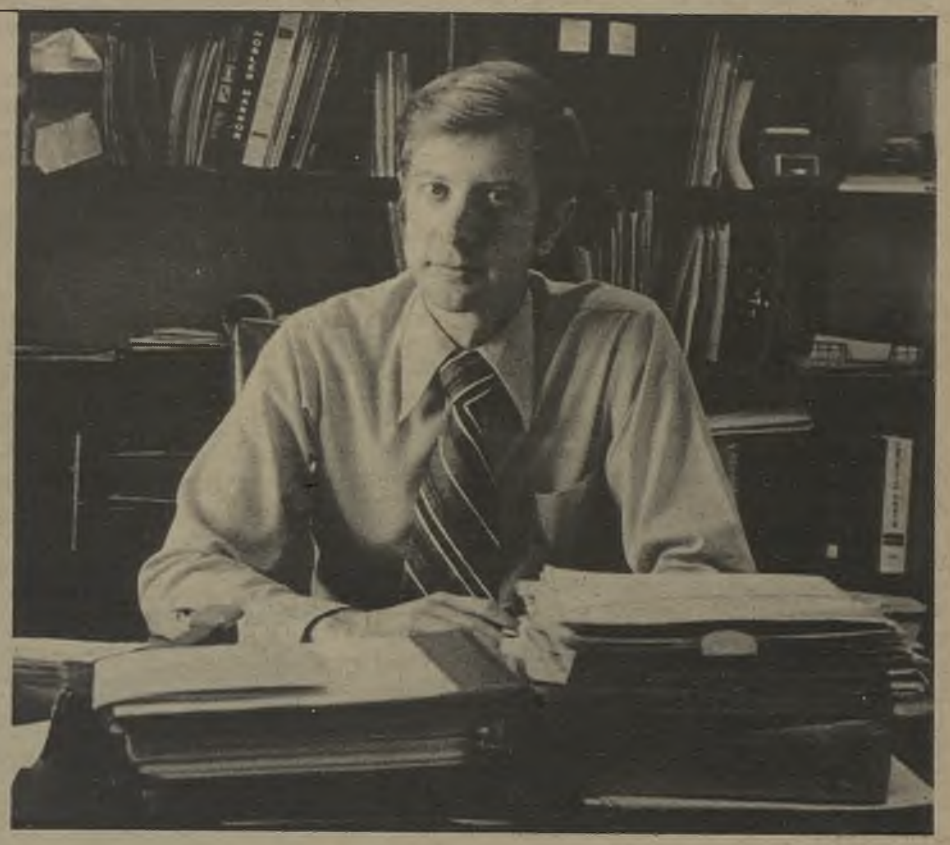
Palm flatly refuses to say whether the search so far has turned up any documents pertinent to what the press has dubbed "Debategate."

Any information about what's found, if anything, would properly come from the Department of Justice, he emphasizes. He noted that it is the Institution's policy not to release the originals of any reports to anyone, including the Justice Department. Copies would be sent.

Palm estimated that the Hoover Institution search now has covered about half the volume of the campaign collection—but not necessarily half the time needed for the full collection.

"Large parts of the records have not been processed," Palm explained. "The uncertainty of what's in the remaining boxes makes it difficult to predict how long the search will continue." Both he and Tuthill have been working long days and weekends since the search began. Palm fielded 38 media calls concerning the collection Monday.

Palm said there was no discussion at Tuesday's meeting with the FBI on a House subcommittee request for documents. Accordig to *The New York Times*, Fielding sent a letter to Rep. Donald Albosta, Michigan Democrat who heads the investigating group saying "The President has directed that representatives of the Department of Justice meet with you to work out procedures to provide you and your subcommittee with access to any such materials located in the Hoover Institution or elsewhere to assist you in your investigation while assuring the integrity of the Department of Justice investigation."



Charles Palm

Palm indicated that some training might be needed if an FBI team participated in the search "to insure the integrity of the files as the materials are searched."

How long would depend on who was sent, but "we'd probably work together smoothly in a day or two," he added.

"As professional archivists, we're well aware of the evidentiary nature of archival materials. We're trained to be aware of documents as potential legal evidence."

Carter plans private session with engineers

Former President Jimmy Carter will meet privately with Stanford President Donald Kennedy and several engineering faculty members Friday afternoon, July 15.

Participants will include Engineering Dean William Kays, Assistant Dean Anthony Macias; and Profs. James Meindl, electrical engineering, codirector of the Center for Integrated Systems; Warren Hausman, chairman of industrial engineering; Charles Kruger, chairman of mechanical engineering; and Robert Freelen, vice-president for public affairs.

According to Macias, the purpose of the meeting is to brief Carter about high technology engineering activity at Stanford, issues facing major research institutions in the U.S., and relations between higher education and business.

Carter plans to stop briefly in California en route to Japan, Macias said.

Stanford West...

continued from page 1

the exclusive use of Stanford West residents, the Council voted, and its use should be coordinated by the residents and the Palo Alto Recreational Department.

Robert Freelen, Stanford vice-president for public affairs, noted that the University staff already had agreed to recommend paying up to $2.1 million in traffic mitigations, to making 15 percent of the project available at below-market-rates, and to mitigating the impacts of the housing in numerous other ways.

"These latest conditions will give us serious pause. Some of them are basically land use control measures on our academic lands beyond the City's jurisdiction, and are unrelated to the housing itself."

"Those conditions, when coupled with the major costs already envisioned, give us serious reservations about the viability of the project as a whole."

Freelen noted that the zoning within the City along Willow Road calls for only a 25-foot setback. Stanford land use policies call for wide buffer areas, and the use of the Willow Road property for academic purposes. "However, there is a considerable difference, between a land use plan and a contract required by a city regarding lands outside its boundaries. A plan gives general direction or guidance, whereas a contract would eliminate future flexibility."

Stanford and Palo Alto signed an agreement in 1974 which set forth procedures to be followed in the development of Stanford's academic lands in the county, Freelen said. Those procedures gave Palo Alto greater opportunity to express its views to Santa Clara County about Stanford proposals through public hearings and City recommendations.

"We have adhered to the letter of that agreement, and have even gone beyond it," Freelen said. "The process already is in place which allows the City to express its preferences regarding our academic growth."

As to the use of the recreational field on the 46-acre site, Freelen said that the University preferred to have the future residents of the project determine how the field should be used.

Freelen said that the University would examine all the conditions for the project and formally reply to the City within the next few week.

Clare Bell helps engineer new robots, writes science fiction, works for IBM— then plays dulcimer and builds 'critters'



Writing a fantasy novel takes a special breed of imagination. But so does engineering a robot or earning a masters degree at Stanford. This year Clare Bell did all three.

Bell, 31, who received her masters in mechanical engineering at commencement this June, recently finished her work on a robot control device for quadriplegics. Bell studied for the degree while working full-time as an engineer at IBM. Her book, *Ratha's Creature,* (Atheneum) has already won a literary award, even though it has just been published.

Bell, who laughs easily and speaks softly, explained about each project. She talked about relating her writing and her engineering to a question facing us all: How will human society adjust to the fast and furious growth of technology?

For example, in *Ratha's Creature* Bell imagines the discovery of fire in a society of intelligent cats who, in her imagination, lived 25 million years ago. Ratha, the female cub who made the discovery, had to flee her clan's angry terror when she brought fire to them.

When she returned from a long banishment, the clan made Ratha its new leader. But the fire had changed the cats, empowering them either to destroy each other or to build a civilization different from what it had been.

"They gained the capability for greater heights and greater depths," said Bell. "They were no longer animals. . .and they could become much more evil or much more enlightened."

Ratha's story is a gentle treatment of the questions raised by technology's growth as society develops. But more than that, it is a fast-moving fantasy tale of battles among the cats, of hidden and revealed identities, and of Ratha's coming of age.

While Ratha's clan grappled with fire, Bell and her coworkers tinkered with machines that could make science fiction. For Bell's mechanical engineering project, they designed a mouthpiece whereby a quadriplegic might control a robot.

The device, called a "palatal splint," sends a dot or dash of Morse code to a computer as the user bites on either side of his mouth. The computer in turn commands the robot to perform simple tasks like helping a person drink from a cup.

The palatal splint suits non-vocal paralytics, for whom available voice recognition systems are useless, and who, said Bell, "need contact the most, because they have an active brain imprisoned in that body."

Bell gestured as she described the ultimate improvement of the device. She envisions a translator and transmitter entirely inside the mouth, so that a person could direct the robot with essentially invisible equipment.

Bell's writer's mind takes her beyond the engineering.

"One nice thing about being in the science fiction area and also being in the secular area is they are constantly cross-pollinating." She is considering a story based on the robot project.

"Suppose you gave a person one of these devices," said Bell, "and they learned how to use it. At first they were very, very depressed, wanting to die. . . . Then when they were given the robot the first thing they did was to pull out the plug on their respirator.

"I'm sure it's going to happen," she added. Bell is not morbid about these possibilities, but realistic.

"Technology demands. . .a lot of scrutiny. In the coming years, we're going to see. . .all sorts of incredible stuff. . .supercomputing machines. . .we can't even guess what it will be."

Bell's imagination produces more than books and inventions. She plays the dulcimer, does pen and ink drawings, and builds "critters," fanciful beasts of pipe cleaners and cloth. Her personal pet is a night-black winged horse with green eyes.

"People like them so much that they are always writing me letters begging me to make them one." She made one critter at the request of science fiction author Andre Norton, and enclosed a sample of her writing with the model. Norton saw promise in the writing and eventually helped get *Ratha's Creature* published.

The book recently won the Award for Writing for Young People given by an association called Poets, Essayists, and Novelists.

Bell's early writing efforts appeared in magazines which publish amateur science fiction based on the Star Trek characters. These "mediazines" have published two of Bell's novels about Captain Kirk and Mr. Spock. Bell hails the magazines as "good training ground for a writer."

She is now working on a sequel to *Ratha's Creature*, in which these gifted cats confront their lack of manipulative ability. Just as humans have trained horses to provide transport and dogs to track game with their sense of smell, the cats try to train lemurs to use their delicate hands for feline purposes. For the books, Bell chose the species of cat called *nimravus,,* an evolutionary ancestor of the sabertooth.

Bell, now an engineer and author, originally graduated with a double degree in biology and chemistry from the University of California at Santa Cruz. For two years she did research for the U.S. Geological Survey on a ship in San Francisco Bay, analyzing water samples and plankton populations.

Soon after, in a program called Women in Engineering, she trained as an electrical engineer and took a job at IBM. She spoke warmly of the "camaraderie" among the women in that program and of her treasured women friends. "They are the rocks when everything else is shifting."

Some of that appreciation came out in Bell's book.

"Ratha definitely had a dash of feminism in her," Bell said. In fact, "I had to go back over the manuscript and take out some polemical remarks."

Her stepfather also helped Bell to push the limits of her imagination and her technical training.

"I was lucky in having a family, especially my stepfather, who did not have any preconceptions of what women were able and not able to do."

What she has done is explore possibilities.

—Julie Kiser

Intelligent cats who discover fire 'gained the capability for greater heights and greater depths. 'They were no longer animals. . . and they could become much more evil or much more enlightened.'

—Clare Bell



Children's Hospital at Stanford has been given the Atari 5200 super system computer won in the Bay-to-Breakers race by the Accelepede, a 62-leg, 31-person burlesque of the Stanford Linear Accelerator. John Winston of SLAC and Rob Witthaus, in accelepede boxes, unwrap the gift with Children's Hospital patients Ellena Chukreeff and Diana Goodman. Accelepede organizer Ken Witthaus is at right rear.

Massy tells city council preservation of land endowment matter of principle

Following is a letter to Palo Alto Mayor Betsy Bechtel and members of the City Council from Vice-President William F. Massy:

As you have read in your staff report, the City and University staffs have reached tentative agreement on a comprehensive proposal regarding the Stanford West housing project. The proposal is the product of long hours of discussion during the past months, and must be reviewed and approved by the Council and the Board of Trustees. The final proposal is one that we think goes far toward meeting the expressed housing needs of both Stanford and Palo Alto.

Basically, the Stanford staff will recommend to our Board that we reduce the project by 175 units on the 46-acre site, provide 180 below-market-rate units, make the Mayfield School site available to the city for $100,000, and pay up to $2.1 million just to mitigate the traffic impacts cited in the EIR. Although we have reservations as to whether or not the impacts reported justify the expenditures requested, we recognize the need both for general traffic improvement in the Willow Road area as well as the overall desirability of reducing the local jobs-housing imbalance.

We estimate that the total extra costs incurred in the project will be in the range of $10 million, or the equivalent of nearly $10,000 per unit. If built as proposed, the BMR agreement would cost several million, (including the $3.5 million value of the Mayfield School site), and the traffic and transportation mitigations would add $2.1 million. The Environmental Impact Report alone has cost $700,000 to date. Various other mitigations will cost hundreds of thousands more. In addition to that, we are prepared to recommend that Stanford forego right-of-way costs in improving several road intersections in that area of the city.

These costs are in addition to the $880,000 expense of the recently extended Campus Drive to Junipero Serra Blvd; the proposed extension of Welch Road to meet Campus Drive (thereby diverting 5,000 cars a day from Willow Road); and the proposed extension of Willow Road to El Camino Real at a cost of $1.5 million.

This compares favorably, we think, with the City's plans to spend $235,000 on road improvements in an area of Palo Alto that returned $2.3 million in sales tax, property tax and net utility income to the City in 1980.

In short, we believe that Stanford has gone to unusual lengths to help create the housing that the City's Comprehensive Plan calls for so loudly; to meet the University's own internal housing and traffic needs; and to ease traffic problems elsewhere on University lands within Palo Alto.

We think, too, that the proposal is responsive to the concerns of our neighbors. Stanford West would cover only half the area that the zoning allows. It would leave three times more open space than required. It would be 34 percent less dense than permitted. And, it will be surrounded by setbacks far greater than those called for by City regulations.

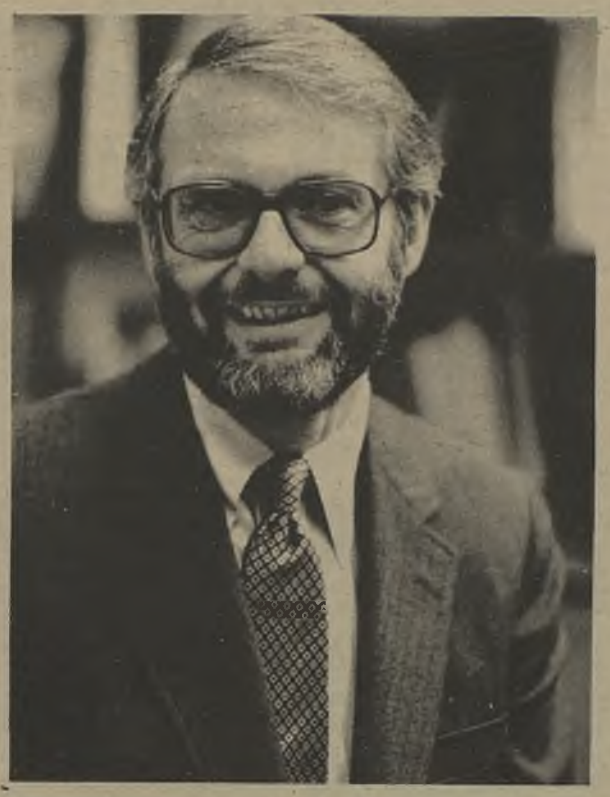
We have agreed to provide a 65-foot by 100-foot recreational field on the site, in addition to the major central open space and "neighborhood" recreational areas throughout the project. The University may build additional recreational facilities to serve the west side of the campus, and they also would be available to Stanford residents of the housing. We also are willing to discuss the interim use of the Mayfield site as a convenient, interim recreational area for Palo Alto.

The two staffs were unable to agree on a number of issues, including suggestions that the University commit vacant lands to open space or guarantee the affordability of additional units, in exchange for approval of up to 1,275 units on the 46-acre site.

As I stated at the May 16 Council meeting, the preservation of our land endowment is a matter of principle to us. Even though there are areas that may never be used, and even though we anticipate little major growth in the foreseeable future on our academic reserve, we simply cannot forego the use of the property. Let there be no misunderstanding on this score: We would abandon the Stanford West housing before we would agree to trade our open lands for city approvals.

It should be noted that the lands that seem to be receiving the most attention—Stanford property south of the City limits between Pasteur Drive and the Golf Course, on the east side of Willow Road—are within our academic reserve. They also fall under "Area B" of the 1972—CS Zone agreement.

What that means is that, under Santa Clara County policy, only academic facilities of less than 5,000 square feet may be built there under the University's general use permit. Academic structures larger than that must receive a special use permit, allowing the City and the public greater opportunity to make their views known at the County level. If commercial growth is proposed—and none is even contemplated under our Land Use Plan—the land must be annexed to Palo Alto and development take place under City regulations.



We would abandon the Stanford West housing project before we would agree to trade our open land for city approvals. **—William F. Massy**

Perhaps it cannot be emphasized enough that the Stanford Land Use Policy views the University's vacant lands as an academic resource to be held for the future, rather than a financial resource. Our Land Use Plan—1980 reflects that in maps showing the lands beyond Pasteur Drive as part of the academic reserve, and not as potential income—producing property. Academic growth on the Stanford campus has been probably the slowest form of development in this entire area.

As adjacent cities have built up to our borders, two-thirds of our total holdings, or some 5,600 acres, remain open or lightly used. Stanford does not have the incentive to develop property as rapidly as other landowners. When we do develop for academic purposes, we almost invariably do so at low or medium density, with minimal traffic impacts. And when we develop commercially, it is under the full control of Palo Alto or Menlo Park.

There appears to be some concern in the community that tighter planning and stronger controls are needed on Stanford lands in the Willow Road area. Stanford has, and does, engage in sound and timely planning for the area, and proper controls already exist.

Our planning goes back to the days of Frederic Law Olmsted and to the creation of the first planning office on a college campus at Stanford in the early 1950s. Our 1980 Land Use Plan was drawn up in cooperation with Palo Alto, and we have worked with the City staff in a review of our General Use Permit with Santa Clara County. We agreed long ago to notify Palo Alto in advance of all major development on our lands community, and to give the City a stronger voice in proposed growth in three sensitive areas by way of special use permit hearings at the County.

Palo Alto understandably has an interest in Stanford's academic land uses, and we respect that through our adopted referral procedures. (Even though it can be strongly argued that our academic growth outside the City has little real impact upon the community as a whole).

In a very real sense, Palo Alto has the best of both worlds: considerable influence over Stanford's land uses in the County without the commensurate political or financial responsibilities. No other city in the County enjoys such a degree of control over adjacent unincorporated lands without agreeing to assume the costs of municipal services or capital improvements upon development of those areas.

Thus Santa Clara County is the controlling agency over our unincorporated lands, with Palo Alto playing an advisory role. We will continue to abide by—and often exceed—the County's requirements.

As to the question of affordability, 15 percent of Stanford West will meet the City's BMR requirements, with the potential for some 85 units beyond that on the Mayfield site. We expect that, overall, about half the project will be affordable to families in the County's 120 percent-150 percent income range. We are giving serious consideration to cooperative housing, which would open home ownership to many now priced out of the housing market.

I repeat another May 16 statement: The units at Stanford West are targeted to be affordable to a broad cross-section of Stanford staff and others, at market prices and rents, under economic conditions that are expected to prevail on average over the life of the project.

Those are significant concessions and goals for any developer. We are not prepared to go beyond them in guaranteeing another level of affordability—not because we are opposed to affordability, but because that would carry with it a requirement to administer the program over time that would be both costly and unwieldy. I spoke to that point at some length on May 16. In the final analysis, the subsidization of units also represents a drain on the University's academic resources in one form or another, much as mitigation costs add to the price of units.

Other points of disagreement had to do with the maintenance of prescribed levels of traffic service on or near Stanford lands, and with the formation of a joint area committee to review Stanford's academic land use proposals. While they may appear to be sound planning measures, we find both to be flawed.

In the first case, such a standard could mean that the merits of an academic project could be outweighed by short traffic delays at a nearby street intersection, or that unreasonable new costs could be incurred, or that the role of other activities in the area could be overlooked. In the second case, we will continue to notify neighboring jurisdictions of major developments on our lands, but we believe that yet another level of review by area governments and agencies would be burdensome and unnecessary.

We found, too, that we could not agree to a proposal to provide sheltered, lockable bicycle storage space on campus. The University has built 1,400 bike racks and 27 miles of bike paths in the past several years, and we will continue to build more. It would be financially and aesthetically costly to provide sheltered storage space on the campus for the many thousands of bicyles used by employees and students. We are presently planning a comprehensive review of our total campus circulation system, including Stanford West, with the intention of further improving and integrating the system. The needs of bicyclists will be carefully considered in that study.

Another, and perhaps the essential point in Stanford's view in reaching an agreement for this proposal, concerns the funding of transportation and traffic mitigations in the Willow Road corridor. This funding under the proposal is to cover the costs of all such work major or minor, not only for the Stanford West project but also for the Hospital Modernization Project, and the Willow Road Extension project. Should other costs be identified, under this proposal Stanford will not be asked to pay for them.

We believe that the payment of up to $2.1 million plus right-of-ways plus the cost of the Willow Road and Welch Road extensions is more than enough in view of the actual impacts of the three projects on many of the intersections scheduled for improvements.

Finally, we should all keep in mind that many of the details of this proposal still must be worked out between Stanford and Palo Alto. For example, since you received the staff report, we have already mentioned several areas requiring clarification to your staff. The BMR proposal in particular requires more specification, for example, in the definition of "affordability" or in the Mayfield School lease terms.

A list of the specific rights-of-way contemplated in the transportation mitigations has not been worked out. For example, Stanford will have objections if included is a right-of-way on Stanford land for the frontage road, or one which eats into parking at the Shopping Center for the left turn at Arboretum and Willow, or a free right-of-way for the judhandles. Nor can Stanford accept the changes for the Shopping Center entrance in Table 14 should the Willow Road extension not be approved. The extension is sought to relieve the flow of traffic through the Center. It would not make sense to aggravate that problem even more by making it easier for non-Center traffic to use the Center's parking lots as a major artery. These details and clarifications, however, can be worked out as we move forward.

Let me conclude on a positive note. Stanford West is a proposal that fits well within Palo Alto's policies and regulations. The housing that both the city and the university wants will be created. Commute traffic will be reduced. The taxes generated will pay for the additional services required. The major impacts of the housing will be alleviated. In general, I think we have the framework of a mutually-beneficial agreement.

We ask that you certify the EIR and recommend reasonable mitigation measures. We all may then move ahead on this important undertaking.

William Massy
Vice-President for Business and Finance

McKinnon says dollar overvalued 15 to 20 percent, urges monetary ease

The U.S. dollar remains overvalued by 15 to 20 percent, compared to the Japanese yen or German mark, says Stanford economist Ronald McKinnon.

"Recent criticism of the Federal Reserve Board for unduly rapid monetary expansion in late 1982 and early 1983 is unwarranted," he declares.

"Because of the worldwide economic depression, short-term monetary expansion in the U.S., with only nominal or below-trend monetary growth in Germany and Japan, is an appropriate strategy for realigning exchange rates," he declares.

"The huge U.S. fiscal deficit magnifies dollar overvaluation and harms American manufacturing, mining, and agriculture. The resulting trade deficit accentuates protectionist pressures in the U.S.

"Indeed, the open U.S. economy may now be 'anti-Keynesian,' with broad cuts in government spending and increases in permanent tax revenue likely to increase output and employment."

Need to avoid depression

The overvalued dollar is "a signal of unusually strong demand for money in the U.S., where extraordinary monetary expansion is necessary to avoid depression," he observes.

McKinnon's ideas have been read and discussed by high officials in the central banks of the U.S., Germany, and Japan. In a campus interview July 6, he warned that currency expansion by other countries has proceeded more rapidly than the U.S.

"This means the exchange rate won't get corrected. If continued, it may lead to excessive expansion in the world system," he said.

While Japan has held expansion of its money supply below six percent in the past year, Germany has expanded about 12 percent and Britain about 14 percent, compared to 10 percent for the U.S.

Pressure is now mounting for the Federal Reserve Board to tighten the money supply, a move McKinnon opposes. The best way for the overvaluation of the dollar to be corrected is for the U.S. to continue to expand its money supply while Germany and Japan show restraint.

In return for short-term monetary expansion and reduced interest rates in the U.S., the Bank of Japan should stop suppressing interest rates in the Tokyo capital market, McKinnon believes.

"Because of its extraordinarily high rate of domestic saving, Japan is a natural creditor country. Rationalizing the role of the Tokyo capital market is necessary for long-run stability of the world financial system.

"Liberalizing exchange controls by 1980 was the first welcome step. Freeing Japanese interest rates is equally important to avoid regression to more lending restrictions."

Massive federal deficits

Massive federal deficits literally force the U.S. economy to rely on the savings of other nations. The U.S. must put its fiscal house in order to correct its trade deficit and prevent a severe outbreak of protectionism.

"Surplus Japanese saving would then be freed to provide yen-denominated finance for the Third World—a more appropriate role for Japan as an international creditor," McKinnon says.

Even with a more expansionist monetary policy, the large U.S. fiscal deficit will continue to depress the American economy. The real dollar exchange rate could not be fully realigned to restore American industrial competitiveness with the rest of the world.

A large trade deficit and protectionist pressures in Congress are the inevitable consequence, a foretaste of which has already been felt in steel, autos, motorcycles, and machine tools.

Worldwide slump lingers

"The current worldwide slump shows little sign of abating," McKinnon notes. "In Japan, the wholesale price index has actually fallen over the past year. In Germany, price inflation has abated, but unemployment is at an all-time high, above eight percent.

"However, American authorities don't seem to realize that continuation of the worldwide slump may provoke the Bundesbank or Bank of Japan into a unilateral monetary expansion." This would accentuate the depression in U.S. tradeable goods industries and provoke even stronger protectionism.



Ronald McKinnon

"The only acceptable way out is for a sharp monetary expansion in the U.S., not matched by equivalent expansions in Germany and Japan. Otherwise, if all three expand simultaneously, there is a long-run inflationary danger—and, of course, dollar overvaluation would not be corrected," he concludes.

McKinnon's views were developed in discussion papers for the Center for Economic Policy Research at Stanford and are slated for publication by the Brookings Institution and in the Keiza seminar papers in Japan. He currently is a visiting professor at the Hoover Institution.

Bunzel backs equal opportunity, opposes racial quotas

John H. Bunzel, one of three nominees to the U.S. Civil Rights Commission, strongly backed equal opportunity but opposed racial quotas in testimony prepared for delivery in Washington, D.C. Wednesday, July 13.

A senior research fellow at Stanford's Hoover Institution, his views were developed in a statement for the U.S. Senate Committee on the Judiciary.

"My long-standing commitment to civil rights is rooted in the firm belief that equality of access and opportunity rather than of condition and result should be the defining principle of our quest for equality and freedom," he said.

I believe in providing special training and advice so that they can perform better on the job.

—John Bunzel

Former president of San Jose State University, Bunzel said: "I do not believe the way to eradicate racism in this country is for the government to encourage, much less compel, individuals to treat some people better than they treat others because of race. . . .

"The way to get beyond racism is to get beyond it today, not tomorrow—and we do that by opposing all practices which give persons any advantage, or impose on them any disadvantage, because of anything extraneous to their own skills, abilities, achievements, and promise—in a word, their own merits."

As an undergraduate at Princeton, Bunzel opposed the "quota mentality" in admissions, criticized "insidious anti-semitism on campus," and sought to recruit qualified blacks as students, he said.

"I continue to support not only equal justice under the law but equal enfranchisement, equal respect for all individuals, equal access to education on a nondiscriminatory basis, equal opportunity for individuals to compete for the rewards of excellence. . . . These values and principles are central to our liberal democracy, very much worth fighting for, very much worth conserving.

"But. . .I do not believe that race should be the predominant basis on which status is determined, individual worth assigned, entitlements settled, or legal rights measured.

"I am opposed to racial quotas, or their functional equivalents, because they are self-contradictory when they are used as a means to end discrimination.

"I have not forgotten the long struggle to resist and overcome quota systems which once kept people from advancement because of their race or religion. Those who assume that quotas can be involved in a good cause—that is, to overcome discrimination—fail to see that bad means cannot assure us of good ends. I have never accepted the notion that we should overcome discrimination against some by discriminating against others."

Bunzel favors affirmative action "when it calls for setting up special programs for women and minorities so they can be given every chance to have equal opportunities in employment and education. So do the people of this country.

"I believe in providing special training and advice so that they can perform better on the job. Along with most Americans, I have consistently favored special-aid programs that enable disadvantaged minorities to increase their skills and opportunities, and thereby catch up to the standards of competition set by the large society."



John Bunzel

On the other hand, he noted, "I do not favor affirmative action when it becomes, in practice, a policy of racially preferential hiring in the name of a newly defined equality that requires the distribution of jobs in some arithmetic proportion among the groups composing society."

Campus crime report

COMMUNITY CRIME INFORMATION
June 29-July 11

Burglary/residence	1	Phone harassment	0
Burglary/nonresidence	3	Controlled substance	1
Burglary/Vehicle	1	Felony arrest	3
Theft/under $400	7	Misdemeanor arrest	15
Theft/over $400	1	Adult booking	13
Bicycle theft	31	Adult cite/release	5
Vehicle accident	6	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	0	Warrants served: follow-up	3
Assault	0	Driving under influence	6

Residential Burglary:

Date	Time	Location	Property Lost
6/24-28	Unkn.	600 blk Mirada	Lawnmower & leaf-blower

The information report is based on campus crime reported to SUDPS during the stated time period, and may not necessarily reflect current crime trends.

Help Stop Crime! Join Neighborhood Watch Program! Contact Dan Smith or Kat Berry in the Special Services Unit, 497-9633.

'You abused student-professor relationship'

Wessells: Mosher's behavior unethical for lengthy period

Following is Dean Norman K. Wessells letter to Steven W. Mosher July 1, 1983 accepting the committee's report and recommendations:

On April 25, 1983 I received a grievance from you concerning your dismissal from the Ph.D. program of the Anthropology Department at Stanford University. After considering the content of your grievance I set up a Grievance Committee composed of Emeritus Professor of Psychology Ernest R. Hilgard, Emeritus Professor of History Gordon Wright, and Professor of Anthropology at the University of Pennsylvania, Ward H. Goodenough.

All three persons enjoy great distinction in their respective disciplines, have widely held reputations of fairness and independence of mind, and have had ample experience at Ph.D. graduate training. Mr. Goodenough brought to the Grievance Committee special expertise in anthropology, especially with respect to the ethics of conducting field research, the ethical standards of the anthropology profession, and the norms of behavior between student and faculty preceptors in the profession of anthropology.

None of the three Grievance Committee officers have had professional interests in the People's Republic of China or its citizens, and none have had special relationships with the Anthropology Department at Stanford or with you.

My charge to the Grievance Committee was intentionally broad:

The charge: I request that you review the case thoroughly and provide me with a report of your review, your recommended findings, and the way you recommend that I rule.

I desired that the Grievance Committee should investigate the full case since your grievance and the public accusations you have made about the Anthropology Department and its faculty raise deep questions of propriety that go well beyond the grievance per se, and ones that I as Dean would be obliged to address, if they proved true.

The Grievance Committee worked on the case during the months of May and June 1983. They requested that you meet with them at Stanford. You declined the invitation to travel at Stanford's expense to the campus in order to do so. The Grievance Committee has now completed its work and has reported to me both verbally and in writing. A copy of their report is enclosed.

With respect to my actions in your case, I have studied the Grievance Committee report, the report of the Investigative Committee of the Anthropology Department, and correspondence between you and the Department, the Grievance Committee, and myself. After considering all aspects of the case that have come to my attention, I make the following decisions.

I regret to inform you that I must deny the grievance that you have filed with me. I accept the unanimous recommendation of the Grievance Committee and find that the action of the faculty of the Anthropology Department of Stanford University was both proper and in conformance with standards of professional behavior expected of groups and members of the learned professions.

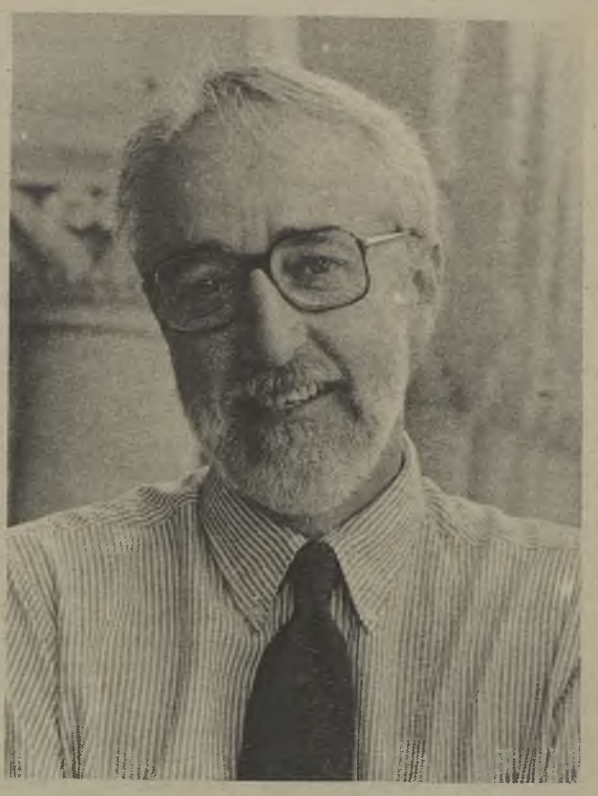
As indicated in the Grievance Committee report, there are several reasons other than purely academic ones why students may be terminated in their studies toward a graduate degree or from a university. Though most often applied in professional schools such as medicine or law, standards of ethical professional conduct apply equally well to all learned disciplines in humanities, social sciences, and natural sciences. The faculties of departments in those disciplines have no lesser obligations than their colleagues in medicine and law with respect to unwritten implications about an individual that accrue when a degree such as the Doctor of Philosophy is awarded.

I agree with the Investigative Committee, the faculty of the Department of Anthropology, and the Grievance Committee that the pattern of your behavior over a lengthy period of time, involving diverse actions and separate incidents, is inconsistent with standards of ethical conduct appropriate for a person entering the profession of anthropology. Furthermore, I find that you abuse the student-professor relationship in such an egregious manner that it was fully reasonable for faculty persons in Stanford's Anthropology Department to decline to serve as your major professor or as members of your thesis committee.

If you desire to pursue the matter of your dismissal from the Department of Anthropology further, then your next recourse is to appeal to the Dean of Graduate Studies, Gerald J. Lieberman.

You will recall that my charge asked the Grievance Committee, if possible, to prepare a report that could be released to the public. They have done so and have certified that their report may be released without doing harm to innocent parties, but they have also asserted that the report of the Investigative Committee of the Anthropology Department should continue to be treated as a confidential document that should not be released.

Since you have placed your case in the public arena, since you have called for public release of documents justifying the Anthropology Department's action, and since you have publicly raised issues that question the intengrity of that Department's faculty, it is appropriate that this letter and the Grievance Committee report should be made public. I will not release it until sufficient time has elapsed that you may be expected to have received both documents.



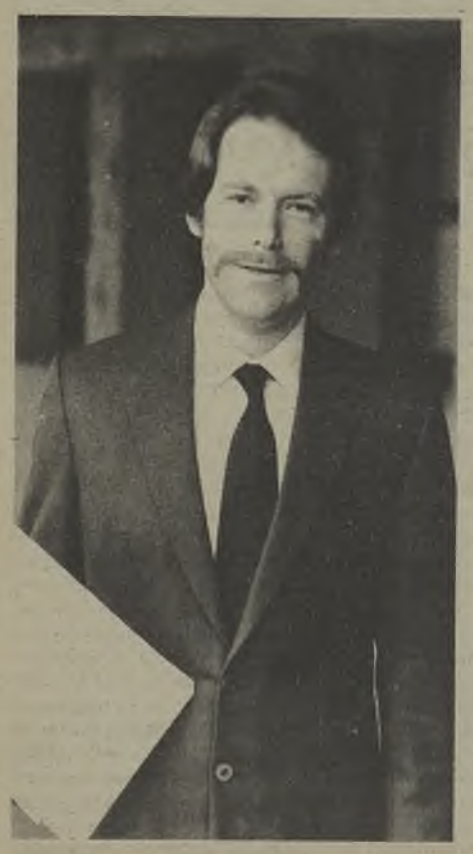
Norman Wessells

In closing, I regret the impact of your actions in the People's Republic of China on your academic career. It is conceivable to me that the suggestions made in the last paragraph of the Grievance Committee report, coupled to changed behavior on your part, might provide a route to continue your academic career.

I urge you to consider carefully the wonderful, private rewards of a life in scholarship and the many years of satisfying work that would lie ahead of you if you can reestablish yourself as worthy of deserving the credential of Doctor of Philosophy in Anthropology.

Norman K. Wessells
Dean

Mosher declined to appear before grievance committee at Stanford expense



Stephen Mosher

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Mosher was invited to appear in person before the grievance committee, travelling from Taiwan to Stanford and return at University expense, but declined to do so.

Agreeing with the investigating committee, the anthropology faculty, and the grievance committee, Wessells wrote Mosher July 1 that "the pattern of your behavior over a lengthy period of time, involving diverse actions and separate incidents, is inconsistent with standards of ethical behavior appropriate for a person entering the profession of anthropology. . . .

"You abused the student-professor relationship in such an egregious manner that it was fully reasonable for faculty. . .to decline to serve as your major professor or as members of your thesis committee."

Mosher currently is in Taiwan. He may appeal to Vice Provost Gerald J. Lieberman, dean of graduate studies, and to University President Donald Kennedy.

The grievance committee's 14-page report to Wessells noted that "termination of Mr. Mosher's candidacy does not mean that he has been 'expelled' from Stanford, as the press has repeatedly put it. He is free to apply to another university or another department at Stanford.

"His graduate credits for course work and residence are valid. There is ample evidence of Mr. Mosher's talent and energy. Completion of the doctorate under other auspices could enable Mr. Mosher to salvage his graduate education and to find a place in the academic community."

Wessells wrote Mosher it was "conceivable" that "changed behavior on your part might provide a route to continue your academic career.

"I urge you to consider carefully the wonderful, private rewards of a life in scholarship and the many years of satisfying work that would lie ahead of you if you can reestablish yourself as worthy of deserving the credential of doctor of philosophy in anthropology."

Responding to procedural issues raised by Mosher in his grievance, Wessells said that "though most often applied in professional schools such as medicine or law, standards of ethical professional conduct apply equally well to all learned disciplines in humanities, social sciences, and natural sciences.

"The faculties of departments in those disciplines have no lesser obligations than their colleagues in medicine and law with respect to unwritten implications about an individual that accrue when a degree such as the Doctor of Philosophy is awarded."

Contrary to Mosher's claims, the grievance committee noted that University officials had informed the Anthropology Department that "questions of professional conduct and ethics belong properly within the province of the department of school concerned.

"(The officials) cited precedents, notably in the professional schools, where degree candidates have been terminated, after due investigation, on the ground that (they) ought not to be certified for the profession in question."

Mosher's charge that the department's procedures lack legitimacy because they were ad hoc and without precedent is "not justifiable," the scholars said. "The procedures adopted were exemplary."

They noted that the investigating committee "decided that Mr. Mosher's article on birth control, published in a popular Taiwan weekly, while evidence of injudicious behavior, was within his rights and therefore was not a basis for action.

"Mr. Mosher was granted several extensions of time, at his request, to enable him to provide satisfactory answers to the allegations against him. In the end, he failed to provide satisfactory answers, and fell back on blanket denials of all charges."

"He eventually accused the Ad Hoc Investigative Committee of undue delay in arriving at a decision, although a major cause of the delay had been his own requests for more time.

Unanimous report from Grievance Committee

Faculty termination of Mosher as Ph.D. was 'justified'

Following is the June 18, 1983 report of the Grievance Committee in the case of Steven W. Mosher.

On May 17, 1983 the undersigned were appointed by Norman K. Wessells, Dean of Humanities and Sciences, Stanford University, as a Grievance Committee in the case of Steven W. Mosher. The charge read as follows: "I request that you review the case thoroughly and provide me with a report of your review, your recommended findings, and the way you recommend that I rule." The letter of appointment referred further to the official Guidelines for Student Academic Grievance Procedures, which contain the following relevant passage:

The review of a grievance and-or appeal undertaken by grievance officer(s) normally shall be limited to the following considerations: a) Were the proper facts and criteria brought to bear on the decision (or, conversely, were improper or extraneous criteria brought to bear on the decision)? b) Were there any procedural irregularities that substantially affected the outcome? c) Given proper facts, criteria, and procedure, was the decision one which a person in the position of the decision-maker might reasonably have made?

It is clear from the charge and the guidelines that it was not our function to "retry" the case or to seek out additional evidence, but to weigh as objectively as possible the facts that were considered by the Department of Anthropology in the Mosher case, the procedures that were used, and the decision that was reached.

The charge to the Grievance Committee was, however, considerably broader in scope than the complaints contained in Mr. Mosher's formal statement of grievance against Stanford University. That statement focused primarily on issues of jurisdiction and procedure, but added as a kind of afterthought the complaint that University officials engaged in "libel and slander" in a press release dated March 7, 1983.

In this latter regard we note that the press release in question was a response to Mr. Mosher's statements during what he called a "press conference" on February 24, and was not made until the Department had acted on the findings of the Investigative Committee.

Since that time the press has carried a number of "revelations" and alleged leaks emanating from Mr. Mosher, from members of the Department of Anthropology, and perhaps from unidentified sources. These accounts, all of them subsequent to the Department's action terminating the Mosher candidacy, do not fall within our province.

Procedures followed by the grievance committee



Ward Goodenough

All of us have read the report of the Ad Hoc Investigative Committee of the Department of Anthropology, with its appendices, upon which the Department's vote to terminate Mr. Mosher's candidacy was based. Two of us (Hilgard and Wright) have read through the voluminous files of that Committee. The same two of us have interviewed a number of Department members and University officials who were, in one capacity or another, involved in the case.

The third member of the Grievance Committee (Goodenough), being an anthropologist, has avoided having any contact with members of the Anthropology Department at Stanford University during the review period.

We asked the Dean of Humanities and Sciences to invite Mr. Mosher to return from Taiwan at University expense to clarify certain aspects of the case and to justify his grievance in person. Mr. Mosher declined this invitation. While Prof. Goodenough was in Hawaii, the two of us on campus consulted with him by telephone or letter and exchanged judgments.

The full Committee met at Stanford University on June 27-28, 1983 for additional face-to-face discussion and to arrive at the conclusions embodied in this report.

It may be proper to add that none of us has been personally or professionally involved in the case before our appointment to the Grievance Committee. We have not met Mr. Mosher, and what little we knew of the case prior to our appointment was only what we had read in the public press, which did not enter our deliberations. None of us has been or is presently engaged in China studies. These disclaimers of course do not guarantee that our judgments will be olympian in their fairness and objectivity. But we believe that we began our task without bias or vested interests, and we have tried to maintain that stance.

Were the procedures followed by Stanford University appropriate?

Since Mr. Mosher's grievance addressed to the Dean of the School of Humanities and Sciences, received April 25, 1983, concentrates heavily on the jurisdictional issue, we are forced to deal with it in some detail.

Mr. Mosher asserts that in September 1981 "the Stanford administration" investigated charges that he had violated the Fundamental Standard and cleared him of such charges, leaving it up to the Department of Anthropology to decide whether or not to conduct its own investigation based on questions about Mr. Mosher's professional conduct. The administration's action, according to Mr. Mosher's grievance, was "erroneous," and led to "an unwarranted investigation, for which there is no provision under Stanford University procedures," and which "violated the University's own regulations."



Ernest Hilgard

Contrary to Mr. Mosher's assertion, it is clear that University officials did not investigate the charges against Mr. Mosher and did not "clear" him of violations of the Fundamental Standard. When the Department of Anthropology reported to the President's office that it had been informed of allegations against Mr. Mosher and wished them investigated in accordance with established procedures, the University's legal officers ruled that the Fundamental Standard did not apply to cases of misconduct committed off campus; they did not "investigate" the charges or "clear" Mr. Mosher.

They informed the Department of Anthropology that questions of professional conduct and ethics belong properly within the province of the department or school concerned. They cited precedents (notably in the professional schools) where degree candidates have been terminated, after due investigation, on the ground that said candidates ought not to be certified for the profession in question.

Since the charges against Mr. Mosher stemmed from his conduct as an anthropologist during field research in China, the legal officers held that the case fell within the jurisdiction of the Department of Anthropology. With considerable reluctance, the Department then proceeded to name an Ad Hoc Committee to investigate and recommend action.

Mr. Mosher's grievance asserts that the administrative decision was in error, since it permitted "a faculty already prejudiced against him to conduct an unwarranted investigation, for which there is no provision under Stanford University procedures." Furthermore, he holds that the action "violated Stanford University's own regulations" and that "the only grounds specified for faculty action leading to dismissal during candidacy are failure to make adequate academic progress."

As to the charge of faculty prejudice, we note that the members of the Ad Hoc investigating committee were persons who were not in a supervisory relationship with Mr. Mosher, had no interests of their own in China, and included a member of the faculty of the School of Law. It is clear that the Department was concerned to create a committee that would confront the allegations without bias.

As to the problem of precedent, we recognize that the University has not spelled out in detail the procedures to be used when degree candidates are charged with violations of professional ethics. This gap stands in contrast to the University's regulations on violations of the Fundamental Standard, and on procedures for initiating and considering academic grievances; in both of those areas, procedures are indeed spelled out fully.

If the University were governed solely by statutory law, the absence of specific rules on matters of professional ethics would not doubt support Mr. Mosher's grievance on this point. But common sense and precedent suggest that in some areas, something like the common law prevails.

As noted, a number of degree candidates have been terminated at Stanford (notably in the School of Medicine) because their conduct in clinical situations indicates that they ought not to be certified for practice, even though their academic records were satisfactory. It seems reasonable to believe that similar considerations apply in a number of fields within the jurisdiction of the professional School and the Departments of Humanities and Sciences: for example, the law student accused of professional misconduct during a summer internship in a law firm; the aspiring clinical psychologist who abuses his relationship with patients; the candidate in the Department of Communications who violates the confidence of informants.

The charge by Mr. Mosher that the Department's procedures lack legitimacy because they were ad hoc and without precedent is not justifiable. The procedures adopted were examplary.

On what grounds does a department have the right to drop a graduate student from its Ph.D. program?

Citing page 49 of the *Stanford University Bulletin: Information 1983*, Mr. Mosher argues that a graduate student may be terminated only for academic reasons. What he cites are the stated procedures for terminating a graduate student at the candidacy level *for such reasons.*

Clearly, Stanford University and its schools and departments may terminate students for other than failure to make satisfactory academic progress. Violations of the Fundamental Standard constitute other than academic progress. Violations of the Fundamental Standard constitute other than academic reasons. They have to do with conduct bearing on membership in the on-campus University community.



Gordon Wright

Violations of the ethical standards of conduct relating to the particular professions or scholarly and scientific disciplines for which students are in training also constitute grounds for termination. Such violations are referred to the professional schools and departmental faculties for appropriate action.

In scholarly disciplines such as anthropology, these ethical standards have to do with several things. First, they have to do with the integrity of scholarly and scientific work and an individual's conduct in his dealings with others that affect his peers' confidence in that integrity. Secondly, where research or practice involves human subjects or working with human communities these standards pertain to the treatment of those subjects and communities in a manner consistent with the respect to which fellow humans are entitled. Thirdly, they concern dealing with funding or other sponsoring agencies and also with governmental authorities in the research locales in a way that does not bring one's profession or discipline into disrepute among those agencies or authorities. And fourthly, they require truthful representation of one's research objectives or professional capabilities to sponsors or clients. For anthropologists, moreover, the American Anthropological Association's Committee on Ethics has made it clear that an anthropologist has an obligation not to publish or disseminate information that can jeopardize the welfare of people he has studied.

In these matters, honest or unwitting mistakes can be made and can be forgiven. In a discipline such as anthropology, the field researcher can easily find himself presented with many problems and dilemmas touching on ethical conduct. A graduate student doing field research must consult with his supervisors about these problems and be entirely candid with them in regard to any questions that arise.

What is importantly at issue, here, is the relationship of trust that must obtain between teachers and students. If trust is destroyed, the relationship cannot continue. Serious mistakes can be made without the relationship of trust being undone. Much depends on the extent to which questionable acts are indicative of a style of conduct that is incompatible with the ethical requirements of research or professional practice, such as duplicity or evasiveness in dealing with others. It may be in relation to data, it may be in relation to sponsors and funding agencies, and it may be in relation to supervising faculty or scholarly and scientific colleagues.

If evidence of such conduct is met by an accusing and antagonistic attitude toward teachers who are seeking for an accounting, the relation of trust between teacher and student is liable to be destroyed. In the latter event, there is no choice

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Mosher text. . .

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but to terminate the student.

A department has considerable discretion in regard both to its admissions standards and its degree qualifications (including "internships" or "field work"), and it retains the same discretion in dismissing a student on grounds that are related to the department's program and purposes, as long as they are not invidiously discriminatory against an individual. Within this area of discretion, there are considerations other than academic achievement as narrowly defined by grades and written reports of research.

Was the investigative committee fair in its dealings with Mr. Mosher? Were its procedures such as to give Mr. Mosher every reasonable opportunity to clear himself of the allegations against him?

We find no evidence of unfairness of impropriety in the Investigative Committee's handling of the case. The Committee exercised unusual care and diligence in pursuing evidence for and against the allegations of misconduct. Some witnesses were unwilling to testify, or refused to allow their testimony to be shared with Mr. Mosher; but the Committee clearly did its best to persuade all parties to speak.

From the outset, the Committee decided to consider no evidence that could not be shown to Mr. Mosher, and toward the end of its work it destroyed all such evidence that had accumulated in its files. (The destroyed evidence consisted of testimony by witnesses who were not willing to share that testimony with Mr. Mosher.) Destruction of the evidence was carried out because Mr. Mosher himself insisted that it be destroyed, and because University legal officers advised the Committee to meet Mr. Mosher's wishes on this point.

The Committee also ruled out as irrelevant the charge that Mr. Mosher's conduct led the Chinese government to restrict access to China by western social science researchers. Furthermore, it decided that Mr. Mosher's article on birth control (published in a Taiwan popular weekly) while evidence of injudicious behavior, was within his rights, and, therefore, was not a basis for action.

Mr. Mosher was granted several extensions of time (at his request) to enable him to provide satisfactory answers to the allegations against him. In the end he failed to provide satisfactory answers, and fell back on blanket denials of all charges.

He eventually accused the Ad Hoc Investigative Committee of undue delay in arriving at a decision, although a major cause of the delay had been his own requests for more time. Mr. Mosher was invited to come to Stanford from Taiwan, at the University's expense, to present his case. He did so twice—once to appear before the Investigating Committee and once to be heard by the faculty of the Department of Anthropology.

We conclude, therefore, that the Investigative Committee's procedures were fair and thorough, and that he was given every reasonable opportunity to clear himself.

Were the investigative committee's findings reasonably arrived at and consistent with the evidence presented?

The findings appear to us to have been reasonably arrived at. The Investigative Committee decided that since it was not engaged in a criminal proceeding but in one to determine a student's status as a degree candidate, the appropriate standard of proof would be "strongly persuasive evidence" rather than "proof beyond a reasonable doubt." We regard this decision as proper.

By that standard, there were adequate grounds for the Investigative Committee's conclusions that certain allegations against Mr. Mosher were supported by sufficient evidence to make a case against him—allegations that Mr. Mosher could easily have refuted if they had been without merit.

Mr. Mosher did not refute them other than to make a blanket denial without supporting evidence, to claim that his former wife was being vindictive and was therefore not to be believed, and that some other witnesses were politically motivated. Indeed, in the course of the investigation Mr. Mosher increasingly impaired his own credibility by the way in which he dealt with the Investigative Committee. We find nothing in the record to justify setting aside the Committee's findings, or to support Mr. Mosher's contention that those findings were politically motivated.

Was the department justified in deciding to keep the report of the ad hoc investigative committee confidential?

By the accepted ethical standards of anthropology, it is improper to publish information that may jeopardize the welfare of people under study or betray their confidences. In the judgment of the Grievance Committee, the report of the Investigative Committee should remain confidential.

In this we note that confidentiality in no way has violated due process or Mr. Mosher's rights, since he had possession of the report and has had access to all of the evidence on which the report and the Department's decisions were based. We recognize the interest of the anthropological community and the wider public in full disclosure of the facts of the case, and regret that such disclosure is inadvisable for ethical considerations relating to the welfare of other parties.

Were the Investigative Committe's recommendation of termination (rather than censure) and the Department's subsequent unanimous vote for termination justifiable within the framework of the Investigative Committee's findings?

This issue commands the attention of the Grievance Committee for the reason that the Investigating Committee's report concludes with a resume of its findings and with a recommendation for termination without discussion of how the specific findings relate to that recommendation. The report, in effect, treats the basis for its recommendation as self evident in light of its findings.

The relation of findings to the recommendation can be considered from several points of view. Are violations of the law of the host country and disregard of its instructions regarding travel grounds for a recommendation of termination? Violation of law by a student need not in itself be regarded as grounds for termination. The nature of the violation, its cicumstances, and what these imply for the student's continuing ability to function as a member of the academic community in which he has been a student—these are relevant considerations. In short, as indicated earlier in this report, what matters is the extent to which the actions and the circumstances in which they occurred represent a violation of the trust accorded the student by his faculty supervisors and by his institutional sponsors.

The Investigative Committee's findings, taken all together, do not reveal merely honest mistakes or ill-considered actions. Rather they reveal a pattern of dealings that involved deliberate disregard for the law of the host country and the instructions of its officials, a deliberate disregard of the requests of the funding agency regarding dealings with officials in the host country, a manipulative approach toward the people with whom we was living and working, a serious lack of candor in his dealings with his supervising professors and with the representative of the U.S. Committee on Scholarly Communication with the People's Republic of China, and a continuing lack of candor in his dealings with the Investigative Committee. The pattern as a whole, as it unfolded through the course of the investigation, progressively eroded any possibility for a relation of trust between Mr. Mosher and the faculty of Anthropology at Stanford University.

For this reason, the Investigative Committee was justified in recommending termination of his status as a degree candidate in Anthropology, and the Department of Anthropology was justified in voting for such termination.

Recommendation

In light of our finding that the Ad Hoc Investigative Committee was justified in recommending termination and the Department of Anthropology was justified in voting for termination, we see no reason for reversing that recommendation and decision. We recommend, therefore, that the Department's actions be upheld.

We would like to add, however, the observation that termination of Mr. Mosher's candidacy does not mean that he has been "expelled" from Stanford, as the press has repeatedly put it. He is free to apply to another university or to another department at Stanford. His graduate credits for course work and residence are valid. There is ample evidence of Mr. Mosher's talent and energy. Completion of the doctorate under other auspices could enable Mr. Mosher to salvage his graduate education and to find a place in the academic community.

Ward H. Goodenough
Ernest R. Hilgard
Gordon Wright

D'Andrea/

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aspects, in systems, in how people interact, in how an illness impacted on all members of a family.

"I found myself more interested in the effects of illness, rather than its treatment—which seemed fairly straightforward. English was such a remarkably fine teacher that I read everything I could about pyschoanalytic theory. Novelists and poets taught me more about being human than my medical text ."

He became an intern at Southern Pacific Hospital in San Francisco, where he was able to continue his close interest in psychomatic medicine. "It was a wonderful place for a young man to have his internship. We served the men working railroad, and we were called on to help with every sort of malady you can think of.

"When the time came for my medical residency there I became exposed to what was then the beginning of technological medicine. I was not very interested in laboratory work nor in much chemistry, which I saw as a sort of scientification of what was really an art."

Just before internship he had married Shirley McFarland of San Francisco, and this influenced him to accept the offer of a residency in psychiatry at Stanford, which he joined in 1959.

The department of psychiatry was at that time being run by Tom Gonda as acting chair; today he is chairman. "We were waiting for the new chair, Dave Hamburg. We had a number of very exciting teachers. Among those who had a big influence on me were Gregory Bateson, Don Jackson, and Eric Berne (who started transactional analysis)."

When Hamburg arrived D'Andrea was asked to become chief resident, a post he held for a year, and then he became an instructor.

In 1963 he became chief psychiatrist at the Peace Corps training center in Hawaii, which trained recruits for service in Southeast Asia. He assisted psychologists there in assessing psychological fitness for overseas service.

"The transition training camp was in a lush valley. There, with the assistance of various specialists, was created a replica of a village in Southeast Asia, complete with 'inhabitants' who spoke the native tongues.

"There were anthropologists, experts in the various countries, psychologists, and psychiatrists. It provided a total cultural immersion. The valley would become, in turns, a particular part of Southeast Asia."

Novelists and poets taught me more about being human than my medical text.

—Vincent D'Andrea

In 1964 he went to the Peace Corps headquarters in Washington, D.C., where after three years service he rose to be chief psychiatrist. While there, he taught at George Washington University School of Medicine.

Washington was both very good and very bad for him, he now believes. "I have a distinctly liberal bent, and I had always wanted to make myself available to young people, and to listen to their points of view.

"I learned a great deal about large social systems which I apply here in my work at Stanford.

"But when I had been in Washington for a while I found myself thinking like a Washington bureaucrat. For example, I was very much a hawk over Vietnam.

"I believed at that time that people in high places knew what they were doing. After a while I began to realize that wasn't necessarily the case."

D'Andrea got back on track. In 1967 he joined the Palo Alto Medical Clinic as a general psychiatrist; in 1970 he became associated with the Department of Student Health at the Clinic. Meanwhile, on joining the Clinic, he had also become an associate clinical professor of psychiatry and behavioral science at Stanford. In 1970 came his co-founding of The Bridge.

D'Andrea had found his niche, as the center of a network that protects some of the brightest young minds in the country. He is a happy man, and his family and winemaking help balance his own psyche.



Letters to the editor

Limited equity housing cooperative approach considered for Stanford West

Editor, *Campus Report*:

It has been brought to our attention by several of our members who work on campus that many Stanford employees must commute long distances because adequate housing they can afford is not available locally.

It has also been suggested that the efforts of Cooperative Housing of Palo Alto, Inc. to ameliorate this situation in our community be publicized among those of you who are in need. This is an invitation to all interested parties to join in our efforts.

Our organization is composed of concerned citizens who wish to promote housing as basic shelter rather than as commercial commodity. A practical vehicle for achieving affordable home ownership is the Limited Equity Housing Cooperative Plan. It is our purpose to foster the development of such cooperatives in the Palo Alto area.

A study done by Palo Alto's Planning Department concisely defines the concept:

"A housing cooperative is a form of home ownership which is owned cooperatively by the people who live in the development. Cooperative members do not own the individual units but own a share in the cooperative, or corporation, and are given a membership or stock certificate. This certificate entitles the member to an occupancy agreement, or proprietary lease, granting the member an exclusive right to occupy a unit.

"A non-profit corporation is formed which has as many shares as units in the building. "Tenants" purchase a share by paying a down payment, and commit themselves to monthly payments which cover their share of the mortgage payments plus taxes, utilities, insurance, maintenance, and other operating costs.

"All the units in the development are financed under a single, or blanket, mortgage. The cooperative is run by a Board of Directors elected by the members. Other members may participate by serving on maintenance, management, or other committees. In this way, members have a direct say in how the cooperative is operated.

"In 1979, AB 1364 (Chapter 1068) was passed by the State legislature defining the limits on the rate of appreciation for a limited equity cooperative member's share. The law states that the "transfer value" of the membership share cannot exceed the original share cost (down payment) by more than 10 percent annual return. An adjustment may be made, however, for improvements made to the unit.

"This cap on equity build-up is intended to insure that individuals' shares will remain affordable to new members over time. Equity is limited through restrictions contained in cooperative by-laws and articles of incorporation. The cooperative generally has the right of first purchase of a share when a member desires to sell.

"A second provision of the law governs the equity growth of the Corporation. This is defined as the difference between the market value of the project minus the members' equity (share value). The corporate equity growth can be used to finance the improvement of the project and benefit of the corporation (e.g. re-finance to allow a new roof, larger meeting room, or reduction in monthly payments), but not distributed to individual members. Upon sale of the project, this corporate equity must be paid out, or the project title transferred, to a public or charitable purpose. This provision encourages continuation of the cooperative and prevents a windfall profit to the last members." ("The Cooperative Housing Concept," Glenn Miller, planner, City of Palo Alto Planning Department. Jan. 5, 1983.)

A limited Equity Housing Cooperative provides the advantages of homeownership for those who otherwise might not enjoy it: security of tenure, homeowner's tax advantage, control over one's own housing. Also statistics show that monthly operating costs of a cooperative are considerably less than a rental development (as much as 50 percent less). In addition, a cooperative share owner has the mobility of a renter. When they wish to leave, their share is simply sold back to the cooperative without the complicated and expensive resale procedures associated with condominiums and single-family dwellings.

It needs to be emphasized that the advantages of a Limited Equity Housing Cooperative are for all future share holders of the project. The amount of equity a member may acquire is limited (usually to the down payment), so the price of shares remains constant—affordability, essentially, in perpetuity.

No one may buy shares for more than one unit which must be occupied by the owner (short-term subleases may be approved by the Board of Directors for reasons of emergency). Thus incentives for speculation are eliminated. Yet, although, the mutual owner may not look forward to an inflated selling price at some future date, they do gain substantial savings every month in reduced housing costs which may then be applied to other types of housing if they so choose.

Limited Equity Housing Cooperatives are becoming popular throughout the nation, including California, and are now being strongly encouraged by both federal and state governments. HUD, the Federal Home Loan Bank, and California State Housing Finance Agency are finding more and more means to make financing easier for the development of Limited Equity Cooperatives.

It is wonderful news that Stanford is considering Limited Equity Housing Cooperatives for part of the Stanford West housing development proposed for Willow Road. This will make it possible for Stanford faculty, staff, and students to enjoy savings in housing costs, commuting time, and travel expenses. It will also encourage walking and bicycling to jobs on campus and to the medical center, cutting down on Willow Road traffic.

For all who wish to discuss the opportunity of Limited Equity Housing Cooperatives further, there will be a meeting affiliated with the Action Research Liaison Office at 7:30 p.m. Thursday, July 28, at 430 Sherman Ave., Palo Alto. For more information, call either 493-2786 or 493-3819.

Rose Ballen
Vice President
Cooperative Housing of Palo Alto, Inc.

Medical Center MEMO

As confirmed by international conference. . .

Biotechnolgy race to build a better bug gains momentum

Forty years ago, harnessing tiny organisms to produce needed chemicals meant grinding up bread mold and extracting a crude rendition of penicillin, the miracle antibiotic of the 1940s. Last week, 300 scientists from 17 countries gathered at Stanford University Medical Center to discuss their increasing ability to reach inside the genetic machinery of live bacteria, where they can manipulate a few chemical "gears" to produce precisely the product they want for use in medicine, industry and agriculture.

Though commercial production of such chemicals has been relatively .slow, the scientists who came to compare their growing list of biochemical tools predicted that a new bacterial friend, *Bacillus subtilis*, may speed the process considerably, perhaps producing its first commercial products within the year.

Long used in the fermentation industry in production of food and detergents, *B. subtilis* and other members of the *Bacillus* family are now giving *Escherichia coli* a run for its money as the favorite slave of genetic engineers.

"These soil bacteria are amazing creatures compared to *E.coli*, especially when one looks at the diversity among the *Bacillus* bugs," said A.T. Ganesan, the Stanford professor of genetics who organized the second international conference on the genetics and biotechnology of *Bacilli* together with James Hoch of Scripps Clinic in La Jolla.

"We have not even touched the surface in terms of exploiting the useful characters of these organisms in the fermentation industry, in breaking down proteins and other compounds in the soil, and in the production of antibiotics," said Ganesan, who has studied the genetics of the bacteria for 25 years. "The bugs will also have an important role to play in the production of safe insecticides and in improving cereal crop production," he said.

"It's important for any company that wants to stay on top in this field to place part of its bet on *B. subtilis*," said Tom Parmeter, president of Syntro Corporation, the La Jolla biotechnology firm that co-sponsored the conference.

Potential advantages of *B. subtilis* over *E. coli* are fourfold:

- *B. subtilis* normally secretes the proteins it makes, whereas *E. coli* keeps most of its product inside the cell. Currently, even if they can force *E. coli* to produce a desired product, scientists must burst (and hence kill) the cells to get it out after a fairly complicated filtering process, whereas the protein products of *B. subtilis* could be harvested without disturbing the bacterial colony.
- Unlike *E. coli*, *B. subtilis* grows best in soil and moldy hay, and can't survive in the human body. Hence, even the remote risk that a runaway bug might trigger human illness is extremely small.
- The membrane coat of *E.coli* is studded with chemicals that can be toxic to humans, and must be carefully removed in productions of any medicines. *B. subtilis* does not carry such toxins.
- Several strains of *B. subtilis* lack cell walls, and therefore might provide a good source of digestible protein for human or animal consumption if they were produced in large quantities.

That's the good news. The bad news is that, up until very recently, researchers have had a tough time coaxing *B. subtilis* to incorporate foreign genes into its DNA. Enticing the organism to "overproduce" proteins that it was born to make has already been accomplished, but prompting it to produce desirable foreign proteins, such as insulin or interferon, has

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Guidelines for chemical abusers established

Chemical abusers should be firmly steered into monitored treatment programs, according to guidelines recently accepted by the Medical Board.

Approved by the board was a 6 1/2-page document for handling chemical dependency among health care professionals.

Major features of the plan include development of a system of intervention counselors who would confront the chemical abuser with his or her problem and recommend treatment.

Persons—including doctors, nurses and other medical employees—who refused treatment would be required to sign a contract with the Hospital or School of Medicine agreeing to randomized chemical screening at the individual's expense.

Intervention counselors would vary, but would include both supervisors and colleagues. Provisions would be established to monitor progress of the individual after initial treatment. Coworkers or colleagues would be notified of a chemical abuser's problem when necessary for safety.

The guidelines provide that no chemical abusers would lose privileges or their jobs before being offered treatment. The guidelines stress that chemical abuse is a disease which should be treated like any other health problem. They also state that personnel should be encouraged to

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Ruth Shanahan of SUH Personnel Health tries out the new "fitness cluster" at the Medical Center. PHOTO BY ED SOUZA

Jogging course, exercise stations open near hospital

A new jogging course and cluster of exercise stations opened near Stanford University Hospital Tuesday, July 5.

The 1.5 mile jogging course and 32-foot square cluster of exercise stations begins at the corner of Quarry Road and Campus Drive on campus. The route follows Campus Drive to Palm Drive, bears left at Palo Road through Hoover Pavilion grounds to Quarry Road, then returns to the starting point on Campus Drive.

The course includes 20 phased warm-up, conditioning, strengthening, and cool-down exercises along the way. Sixteen similar exercise stations are grouped together in the "fitness cluster."

Colorful illustrated signs display instructions and cardiovascular information.

The hospital received a $5,000 grant from Wells Fargo Bank to install the Gamefield, which costs about $9,000 in addition to the grant.

The Gamefield fitness facilities, now installed in parks and schools throughout the country, were designed in consultation with the Stanford Heart Disease Prevention Program, Department of Athletics and School of Education.

A key element of the facility is cardiovascular conditioning. The jogging course includes two "pulse stations" with instructions to count pulse rate.

Sheldon King, executive vice president and director of Stanford Hospital, cut the ribbon opening the course, noting the "value of this program in helping to maintain a healthy and physically fit health care team for Stanford."

The course is designed for use by Medical Center personnel, but is open to the public.

Pediatrics playroom more than just fun: it's therapeutic

BY SHIRLEY KRAUS

Sue Emerson works four days a week as a programmer analyst at NASA-AMES. The fifth day, she volunteers at Stanford University Hospital, spending the morning with the children in the pediatrics playroom.

Seventy-one-year-old Evelyn Parsons has been coming to the playroom one morning each week for the last 10 of her 21 years of volunteer work at SUH. She's often told herself it's time to retire, but, she said, she just can't seem to tear herself away from the children.

Like most Silicon Valley engineers, Gary Elston's workweek is rarely limited to 40 hours. Yet one evening each week, he too volunteers at the playroom.

Self-sacrificing? Perhaps. But these are just three of more than 60 hospital auxilary members, Stanford students, and candy stripers who donate their time to work in the pediatrics playroom, the most popular volunteer service at the hospital.

It's more than the natural appeal of children that accounts for their willingness to work there. Something special happens in the playroom, many volunteers say—something they'd be reluctant to miss out on.

"Most of the kids are pretty unhappy because they're in the hospital," said Jennifer Gray, a recent graduate of Palo Alto High School who's worked at the playroom for about a year. "Your goal is simply to make them laugh. If you can let down your guard, and act like kids, it really helps. If you can just make them smile, you're flying high."

"As many as 44 children, from birth to age 18, are on the unit at any time," said Colette Case, the recreational therapist who supervises the playroom and the play therapy program that includes it, as well as community education, inservice training for other health professionals, training for recreational therapy students, and networking with other health care agencies.

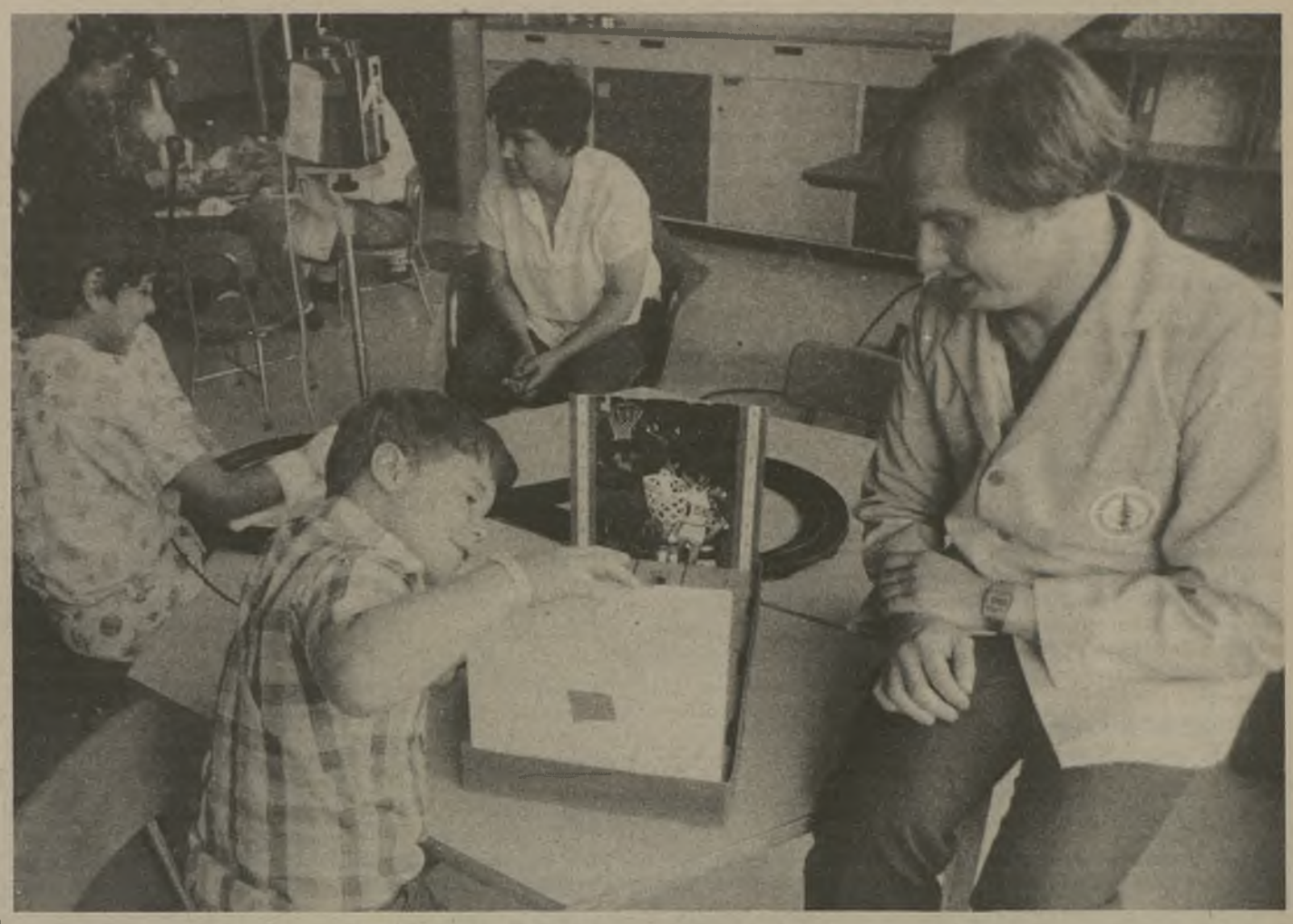
"Their illnesses are usually pretty acute. The goal is to make their stay in the hospital a positive, growing experience."

Case is aided in achieving this goal by, in addition to the volunteers, two other recreational therapists, Ellen VanderWilt, and Betty Lovelace, who developed the program nearly 10 years ago.

"We try to give a feeling for the sights and sounds of the hospital, and introduce the different people children are likely to meet," Lovelace explained.

It starts on Sunday afternoons, when the therapists show children scheduled to enter the hospital a slide show that takes them from admission to discharge. They also take the children on a walking tour of the hospital. And with a miniature hospital, puppets, and medical equipment, the therapists encourage the children to play out their experiences so they can grow more comfortable with them.

During the children's stay in the hospital, the playroom is the one "safe" place for them, Case explained. "The children can relax here. They know no procedures will be done here, so they feel they can talk about their fears and concerns. Often, children will do things in here, such as walk, or use an injured arm, that they won't do elsewhere. The playroom is therapeutic for them."



SUH volunteer Gary Elston watches as patient Scott Pringle gets engrossed in a game in the Pediatrics playroom. Part of a program to make kids feel more at ease, the room is one "safe" place where no procedures are done. PHOTOS BY LARS SPEYER

It's not just therapeutic, the playroom is a child's dream. Toys—most of which are donated by parents and community groups—are piled along the walls. Video games are available for the asking. A pool table occupies a large area, and an outdoor courtyard bears murals of forests filled with animals. The volunteers answer to nearly any whim, and the children are encouraged to play among themselves as well.

"We try to concentrate on the wellness of the children, and make the most of what they can do rather than focus on their limitations," Case said. It's often necessary to point out the wellness to the parents also, she added.

The children derive a lot of support and encouragement from one another. "We once had a boy who was an amputee," Case recalled. "He had a hard time dealing with it. Now he comes back often to visit other children and encourage them."

Much of the interaction with the children is on a one-to-one basis, Case said, in order to maximize their socialization and growth development considering their individual health status. Organized group activities are often held to help out individuals as well. "We have lots of parties in addition to regular holiday and birthday parties," Case explained. "If someone isn't eating well, for example, we'll have a cooking party."

Despite the appearance of just fun, there's a lot of subtle therapy that goes on in the playroom, Case pointed out. And this makes the selection and training of volunteers especially important.



Perhaps not quite understanding exactly what a toy telephone is supposed to do, pediatric patient Laticia Castro looks questioningly at Colette Case, head recreational therapist at SUH.

Many applicants initially request the playroom because of their love for children, Case said. But once they get through the two interviews and orientation sessions, they realize they may not be able to handle dealing with sick children. Even the ones who do end up working with the children, Case continued, are susceptible to "burnout."

"I was a bit hesitant at first because the children are so sick," Parsons recalled. "But you get attached to so many, and when you see them getting better, it makes it worthwhile."

Elston's commitment includes bringing a box of toys with him since the playroom's toys are locked up in the evenings when he comes. Even with his dedication, however, or perhaps because of it, he finds working with the children difficult at times.

"I had to stop coming for about three weeks once, because it just got too intense," he admitted.

But Elston and the other volunteers stay on at the playroom in spite of any problems the work may create.

"When I was young I had to spend some time in the hospital," Emerson recalled. "I know how much it helped to have people to talk with, to play with, and to pay attention to me. I'd like to do the same for these children."

Four SUMC studies seek volunteers for clinical trials

Exercise

Healthy, sedentary men between 40 and 60 years of age are needed to volunteer in a three-month study designed to compare the health benefits of low and high level exercise.

"Especially in sedentary people, low level exercise will produce the same training effects as high level exercise—it just takes a little longer," believes Dr. Robert DeBusk, director of the Stanford Cardiac Rehabilitation Program.

To confirm this, the three-month study will examine how slower paced activity like brisk walking compares to rigorous exertion such as running or swimming in contributing to cardiac health.

The study will involve three randomly-assigned groups of volunteers. One group will carry out their usual activities (control group); another will carry out low level exercise training such as brisk walking; and the third group will perform high level exercise training such as jogging.

Portable heart rate monitors will be used to help volunteers maintain the appropriate intensity of exercise, and individualized instruction will be given concerning the amount and duration of exercise training.

After initial telephone screening, volunteers will undergo a preliminary evaluation including medical history, physical examination, treadmill exercise test and measurement of blood fats. Participants will repeat the treadmill test at six and 12 weeks and will be asked to record their food intake and physical activity. They will also wear a heart-rate recorder at specified times during the study.

One potential benefit of participation in the project is thorough screening for latent (unrecognized) cardiovascular disease. Jeff Martin, a recent participant in a related pilot study for this project, said he was motivated to take part after a close relative died suddenly of heart failure. "My goal was really to find out if my heart was strong. I feel more comfortable now knowing that there's probably nothing to worry about."

On completing the study, which is funded by the Pepsico Foundation, participants will be given an individualized "prescription" for ideal long-term exercise conditioning.

Participants must be free of cardiovascular disease and cannot have participated in any sort of regular exercise program for at least three months prior to the study.

Those interested should call the cardiac rehabilitation program at 497-6461 during regular business hours and ask for the "coordinator of the high/low study."

High blood pressure

Volunteers between the ages of 20 and 70 are needed to participate in studies to confirm the effectiveness of three different anti-hypertensive medications.

The drugs, which have already been through animal trials and clinical testing in Europe, offer potentially promising ways to treat high blood pressure, according to principal investigator Dr. Peter Rudd, assistant professor of medicine.

Each study preparation will be compared to either a placebo or a similar medication already on the market. The three separate studies are based at the Veterans Administration Medical Center in Palo Alto.

Volunteers are needed who have mild to moderate high blood pressure, and are willing to come in as often as weekly for blood pressure monitoring. Two of the studies last three months, and the third lasts a year.

Participants will be offered free comprehensive medical evaluations at the beginning and end of whatever study they join. Screening and follow-up laboratory tests will include urine, blood, electrocardiogram, and chest X-ray. Volunteers will also receive reimbursement for travel and any worktime missed.

Rudd said he and co-investigator Dr. Keith Marton, assistant professor of medicine, expect to demonstrate that the new medications are more effective with fewer side effects than those standardly used to control high blood pressure.

Anyone interested in volunteering or obtaining further information should call Valerie Vierra, R.N., at 493-5000, extension 5918, weekdays from 8 a.m. to 5 p.m.

Acne

About 20 volunteers, ages 16 to 30 with moderate to severe facial acne, are needed to participate in a study to test the effectiveness of a new topical treatment.

The three-month, double-blind study will compare a topical preparation of Acutane with another vitamin A derivative which has been used effectively for years in treating acne.

Dr. David Elbaum, a resident in dermatology and principal investigator for the study, said the topical preparation of Acutane is hoped to prove as effective as its recently approved oral form, while avoiding the side effects encountered.

Volunteers must be off other acne medications for at least two weeks prior to joining the study, and then for the duration of the study. They will come in for observation bi-weekly the first month, and monthly thereafter.

For further information or to volunteer, call Alice, weekdays at 497-6319.

Hormone therapy

Volunteers are being sought for a study at Stanford University Medical Center evaluating the effectiveness of hormone replacement therapy for postmenopausal women.

The researchers, headed up by Dr. Leroy Heinrichs, chairman of the department of obstetrics and gynecology, are recruiting women who are at least 47 years old, and are at least one year postmenopausal. The women should not have received hormone replacement therapy in the past six months. Women who have had hysterectomies, or who have their uterus intact, are eligible.

Specifically, the investigators plan to study the effects of estrogen, estrogen with progesterone, and estrogen with testosterone on psychological factors such as mood changes. They plan to study the effects on physiological variables as well.

Participants will receive laboratory tests and medication free of charge, and those who complete the one-year study will be paid a stipend.

For further information, contact Dr. Jean Dixen at 497-2432.

Construction Corner



Repaving of Blake-Wilbur Drive:

Blake-Wilbur Drive, from the incoming route of Pasteur Drive to the southern exit/entrance of parking lot F (diagonally across from the Administrative Annex Building), will be repaved from Saturday, July 16, through Tuesday, July 19.

Detour routes will be created for the duration of this project, for vehicles headed towards the Clinics parking lot or the front of the Hospital.

Additional security personnel will be on duty to assist in the re-routing of traffic. Signs will be visibly posted, and an additional supply of detour maps will be available at the Admitting Desk, Cashiers Office, Clinic and X-ray desks.

Everyone's cooperation, patience, and help in explaining the situation to patients, will be greatly appreciated.

Parking update:

The resealing and restriping of the parking lot at the south end of the Medical Center is essentially completed, affording more slots for vehicles than before.

The temporary lot in the Governor's Avenue area (adjacent to the Cancer Biology Research Building) is completed and accessible to vehicles needing to park there. However, employees are reminded that this lot has been constructed to accommodate construction workers for the Edward's Deck, Boswell Clinics, and Research Animal Facility (RAF)-I projects. This was done to assure that parking for construction workers would not impact the employee spaces.

With the above two projects completed, the parking situation during RAF-I construction, scheduled to begin around August 1, should be better than it has been over the past several months. The spaces necessarily blocked off during that time will have been more than compensated for by the recent construction.

Editor's note: Look for an up-to-date Medical Center parking map in the next issue of the Medical Center Memo *(July 27). Specifics of A versus C allotted parking spaces, as well as other details, will be available by that time.*

Chilled Water Loop:

The Medical Center chilled water loop around the center is completed and should cause no more traffic or disruption problems.

Boswell Clinics Renovation Update:

Work is progressing on the new balconies and the first floor south in the Boswell Building. This Friday, July 15, the present occupants of the second floor south will relocate to other areas of the Medical Center, primarily to the Edwards Building. Demolition activities on the second floor south are scheduled to begin July 18.

Remodel for the Department of Pathology:

An area on the second floor of the Edwards Building is presently under construction for the Department of Pathology. The remodeling project will provide a tissue culture room, equipment room, and five offices for departmental personnel.

Wells Hoeltje, project manager, and Gordon MacLachlan, construction coordinator, are the SUMC Facilities staff responsible for the coordination of this work.

Medical Center MEMO

Prepared as a section of the *Campus Report* by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

...News Notes...

Spotlight on. . .



Dr. Thomas Merigan, *head of the division of infectious diseases, has been named to the Scientific Committee of a newly formed foundation to search for a solution to Acquired Immune Deficiency Syndrome (AIDS).*

The AIDS Medical Foundation will support selected scientists in their research efforts to determine the causes, and means of treatment and prevention, of AIDS.

Initial funding has been contributed by the Mathilde and Arthur. B. Krim Foundation. Additional support will be sought from government, private individuals, and corporate donors.

Merigan is one of 11 researchers appointed to the foundation's scientific committee.

* * * *



Dr. Frank Stockdale, *professor of medicine (oncology) and biological sciences, has been awarded a Guggenheim fellowship for studies in protein characterization at Cambridge University in England.*

* * * *

Gale Mondry, *University staff counsel, has left Stanford effective July 8 to accept a position as legal counsel at Pacific Medical Center in San Francisco, announced associate director of SUH Carole Runyan Price.*

Mondry served for seven years at Stanford, dealing primarily with legal concerns at the Medical Center.

Michael Fossier *has been appointed to replace Mondry as staff counsel, effective August 1. Fossier is a graduate of Yale University and Harvard Law School.*

He has had three years of experience with Blue Cross-Blue Shield, in the Massachusetts legal office.

* * * *

Dr. Shirley Tom, *professor of gynecology and obstetrics, was given special commendation as "outstanding member of the clinical faculty" by the graduating residents of that department at their annual dinner, held June 27.*

Dr. Anna McHargue, *clinical assistant professor in gyn/ob, was named "most outstanding regular faculty," and resident* **Dr. Kimberly Harney** *was recognized by the students as "outstanding resident teacher."*

The graduating senior residents in gyn/ob are **Drs. Cliff Bochner, Daniel Kredentser, Barbara Peters, Frank Polansky, Paul Schroeder, and Candace Weinstein.**

* * * *



Lois Christopherson *has been appointed manager of patient relations for the Faculty Practice Program, a new position.*

Christopherson had served as chief clinical social worker with SUMC's heart transplant program from its inception in 1968 until 1981, when she left to pursue a master of science in management through Stanford Business School's nine-month Sloan program.

* * * *



Graduating residents in the Department of Anesthesia honored **Dr. C. Philip Larson, Jr.**, *professor of anesthesia, as most outstanding teacher of the year, at their farewell dinner June 29 at the Faculty Club.*

Larson was not present to accept the award, as he was then in the People's Republic of China leading the 1983 People to People International Anesthesiology Project.

The honoree was chairman of the department from 1972 to 1982.

* * * *



Sharon Beckham *has joined Stanford University Hospital as coordinator of Volunteer Services.*

Beckham, who assumed her new position July 5, served as coordinator of Volunteer Services at the University of California at San Francisco (UCSF) since 1977.

Beckham reports to the director of Community Relations and is responsible for working with hospital departments in the development and implementation of volunteer programs.

Her office is located in room P-3018, and her telephone number is 497-7424.

Goings on. . .

The **Palo Alto VA Rehabilitation Research and Development Center** *celebrated its fifth anniversary July 6 with an open house for the media.*

Dr. Larry Leifer, director of the Center and professor of mechanical engineering at Stanford, presented a new robotic arm that responds to 54 voice commands to perform household chores for quadriplegics and elderly persons.

Among other devices presented, with demonstrations by VA patients, were the "smart" wheelchair, omnidirectional wheelchair and ultrasonic head control.

* * * *

There is still room in the July 28 course, **"Clinical and Interpersonal Uses of Laughter in Health Care,"** *sponsored by the Human Resources Development Department. All Medical Center employees are invited to attend; clinical experience is not a prerequisite.*

Recent research and literature by Stanford's Dr. William Fry, Jr., associate clinical professor of psychiatry, and others has demonstrated that laughter has positive physiologic as well as interpersonal effects.

The workshop, to take place from 1 to 5 p.m. in the Eucalyptus Room at Oak Creek Apartments, will use small group exercises, discussion, and other learning techniques.

"A challenge of working at SUH is to provide excellent quality patient care and at the same time maintain our personal well being," said Elad Levinson, director of HRD. "Laughter and play are simple tools for easing the distress of patients' illness as well as aid in revitalizing our own health."

Registration deadline for the course is July 14. A fee is charged, and continuing education credit is available to nurses. For further information call 497-6868.

* * * *

Also this summer, HRD is offering a new two-day course entitled **"Computers Simplified: A Computer Literacy Workshop for Health Care Professionals."** *Today's topic (July 13) is an overview of microcomputer systems, and tomorrow's is microcomputer applications.*

The present session has no more room for participants, but those interested should watch for future announcements of the repeated course. Call 497-5233 for details.

A month for linen amnesty

The Hospital spends half a million dollars a year to replace linen, including $120,000 for scrub suits alone. Since these figures were disclosed by SUH director Sheldon King in April, a variety of linen conservation efforts have been launched.

In keeping with the theme, the hospital will sponsor a unique "Linen Amnesty Month," from July 25 through August 21. The idea is to make some of the lost linen reappear.

Several red and white striped containers will be placed in the main center and at Hoover Pavilion. All employees are asked to bring back any linen or scrubs inadvertently taken home and to drop them in the containers, which will be marked "Linen Return."

Hopefully, Linen Amnesty Month will add to the success so far of the linen conservation program. Already a reduction of 2.3 pounds per patient day has been achieved, according to Nursing Services. The cost savings to the hospital, at the current usage rate of 18.5 pounds per patient day, is $67,526.

Chemical abuse...

continued from page 14

seek treatment voluntarily but that self-recognition of an abuse problem is rare.

The rules were developed by the Medical Board's Committee on the Well Being of Medical Personnel, chaired by Dr. C. Philip Larson, Jr., professor of anesthesia.

In a background statement included in the document, the authors wrote that the guidelines were prepared because "chemical dependency is a relatively common and serious problem among health professionals and that Stanford University Medical Center is not immune to it."

The authors said nationally about 10 percent of physicians and eight percent of nurses become involved in chemical abuse at least once during their careers but that it was not known how those figures compared with Stanford's, since no survey has ever been taken.

The policy was implemented in June, and simultaneously sent to the Hospital Board for ratification.

Faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

Stanford University invites nominations and applications for a newly endowed chair, the Edgar F. Kaiser, Sr. Professorship in Health Policy at the School of Medicine.

Needed is a creative researcher who has demonstrated outstanding scholarship in an area related to health services or health policy. The appointee is expected to be an innovative person who will assume a leadership role in interdisciplinary activity involving both research and teaching.

Substantive knowledge of medicine, public health or health services delivery, as well as strong quantitative and communication skills are essential.

Nominations or applications accompanied by a curriculum vitae should be submitted by October 15, 1983, to Thomas A. Gonda, M.D., Chairman, Health Policy Search Committee, Stanford Medical Center, Stanford, CA 94305.

Medical Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JULY 13

Hematology support group: Support group meeting for patients with leukemia, myeloma, hemophilia, and other hematologic disease. Family members and significant others welcome. 10:30 a.m. to noon, room TF-122c. For further information, call 497-6961.

THURSDAY, JULY 14

Dept. of Medicine grand rounds: "Acetaminophen Toxicity"—Dr. Terry Blaschke. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JULY 15

Dept. of Pediatrics grand rounds: "Tuberculosis in Childhood"—Dr. Moses Grossman (UCSF). Case presentation by Dr. Catherine Albin. 8 a.m., M106.

Dept. of Medical Microbiology seminar: "Genetic and Biochemical Aspects of Bacterial Hemolysins"—Dr. Werner Goebel (Institute for Genetics and Microbiology, University of Wurzburg, Germany). 1 p.m., D300, Fairchild Bldg.

Dept. of Gynecology and Obstetrics grand rounds: "Malpractice Issues in Ob/Gyn"—Dr. David Rubsamen. 8 a.m., A336.

JULY 18 through 22

Blood Bank celebrates fifth anniversary: Cake and punch served to donors at the blood bank, 800 Welch Road, all week.

WEDNESDAY, JULY 20

Dept. of Neurology epilepsy program research seminar: "Neuronal Synchronization in the Hippocampus: From Membrane to Network"—Robert Wong, Ph.D. (Univ. of Texas at Galveston). 5 p.m., C364.

Medical Center Auxiliary volunteer orientation: 9:45 a.m., W001. . For further information, call 497-6636.

THURSDAY, JULY 21

Dept. of Medicine grand rounds: "Newer Antiarrhythmia Drugs"—Dr. Donald Harrison. 8:30 a.m., Fairchild Auditorium.

Dept. of Pediatrics grand rounds: "Hepatitis in Pregnancy and the Newborn"—Dr. Saul Krugman (New York University). 8 a.m., M106.

FRIDAY, JULY 22

Dept. of Gynecology and Obstetrics grand rounds: "Antiviral Agents Used in Treatment of GYN Infections"—Dr. Nelson Teng. 8 a.m., A336.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

New regs on foreign students issued

Following is a June 23 memo to deans, department chairmen, and administrative assistants from A. Lee Zeigler, director of Bechtel International Center on new regulations affecting foreign students:

A final Rule was published in the *Federal Register* of April 5, 1983, which provides new regulations affecting all foreign students in the U.S. These new regulations become effective on Aug. 1, 1983.

I am bringing these regulations to your attention so that academic advisers, principal investigators of grants, and all others having direct contact with foreign students may be aware of some new restrictions.

1. Foreign students *may not accept any employment off the Stanford campus* during the first 12 months of study here. There are no exceptions to this rule. Employment after 12 months may be authorized by the Immigration and Naturalization Service (INS) District Office in San Francisco *only* if the student can show "financial necessity due to unforeseen circumstances arising subsequent to entry or subsequent to change to student classification."

NOTE: on-campus employment during the first and subsequent year may not exceed 20 hours per week, except for vacation or summer recess periods. No INS approval is required for on-campus employment; however, employment must be on student's own campus.

2. Foreign students are admitted to the U.S. for specific degree programs, or particular educational levels. If, after completing a degree or level the student wishes to continue study in pursuit of an additional degree, the student must request permission to do so from INS between 15-60 days before completing the first level. We have no reason to believe that INS will deny a request of a master's degree student continuing on for the Ph.D.; however, INS may question a second master's degree in a different major.

3. All foreign students must enroll for a "full course of study." Stanford's interpretation of this is: undergraduates must register for the full 12 units; graduate students who do not receive Stanford funding must register for 11 units or more; graduate students with Stanford assistantships must register for 9 units.

4. TGR foreign students *must register by the last day of registration* (unlike U.S. students who oftentimes register very late in the quarter). The INS will send computerized lists, based on information they receive from the student's visa certificates, to Stanford. A TGR foreign student whose name appears on this computerized list but who has failed to register by the last day of registration is considered "out of status" and subject to deportation. Therefore, it is important that TGR students register before the last day of registration.

5. Leaves-of-absence are not permitted by INS except for medical reasons. Foreign students who must take leave for other reasons are expected to leave the U.S.

Students and-or advisers who have questions on any of these new regulations are asked to consult an adviser at the I-Center, 7-1831 for more information.

Come help celebrate blood bank's 5th year

The Stanford University Medical School Blood Bank, located at 800 Welch Road, will be celebrating its fifth anniversary July 17.

Everyone is invited to come help celebrate next week by donating blood and enjoying a piece of anniversary cake.

Cake and punch will be served to donors at the blood bank Monday, July 18, through Friday, July 22.

Biotech race. . .

continued from page 14

proved a much greater problem.

In addition, *B. subtilis* produces enzymes that can "chew up" the desired protein before it can be extracted from solution. Several speakers at the conference reported encouraging progress along these lines in the race to build a better bug.

Vasantha Nagarajan, a researcher for Genex, a firm based in Gaithersburg, Maryland, reported her firm's ability to identify, clone and transplant into *B. subtilis* a gene that codes for "subtilisin," an enzyme used in the detergent industry to break apart unwanted proteins.

By stuffing multiple copies of the gene into each bacterium, the Genex researchers were able to increase the organism's production of the enzyme by 200-fold. "I'm sure we can increase the yield even more as we optimize conditions," Nagarajan said. "This was just a preliminary test to see if the procedure worked.

"Our method is very powerful," she said. "We were surprised and delighted that it worked."

Using a different procedure, which was also recently patented, James Wells of Genentech, a South San Francisco biotechnology firm, produced similar results. Industrial researchers are not as excited by the method as a new way to make subtilisin (plenty of the enzyme can already be made cheaply by conventional means) as they are about its potential as a model for producing scarcer proteins, said Wells.

The key to both the Genex and Genentech findings was the identification of a "promoter" and "signal sequence" that regulate production of the gene, he said. A promoter is a segment of DNA that controls the amount of protein each gene produces, while the signal sequence is an adjoining bit of DNA that allows the protein to escape the confines of the cell.

Researchers around the world are racing to identify and clone a good promoter and signal sequence from closely related bacteria that can be spliced to foreign genes and interpreted within *B. subtilis*. Unlike *E. coli*, *B. subtilis* is a very sensitive detector of alien DNA. Like a tourist who can't speak the native language, foreign DNA is left without an interpreter within the host cell. And if the message is not interpreted, no new protein can be made.

Mervi Sibakov, from the University of Helsinki, described similar efforts to construct an all-purpose bit of DNA that could prompt production of a wide variety of proteins. The Finnish group was successful in coaxing *B. subtilis* to produce three compounds valuable in the production of antibiotics, though the yield of each compound was very low. Nonetheless, their data fed the flames of enthusiasm over the potential use of the organism in industry.

Shing Chang, a scientist at Cetus corporation whose interest in *B. subtilis* centers on the production of human growth hormone and other compounds for medical use, is optimistic about the organism's potential value.

None of the hurdles discussed at the meeting are insurmountable, said Chang, who predicts that commercially viable compounds, produced by inserting mammalian DNA into the bacteria, may be possible within one year.

—Deborah Franklin

Ph.D. oral exams

FRIDAY, JULY 15

Richard L. Baker, electrical engineering, "Vector Quantization of Digital Images," 1:30 p.m., 450 Durand. **Anne Gardner,** computer science, "The Design of a Legal Analysis Program," 2:15 p.m, 252 Jacks Hall. **Li-Shing Lee,** physics, "Nonlinear Spectroscopy of $LaF_3:Pr^{3+}$ and Wavemeter for Pulsed Lasers," 2:15 p.m., Varian Conference Room. **Ying-Sheng Lee,** materials science and engineering, "The Preparation and Characterization of Metastable Metallic Alloys," 2:15 p.m., Room 550A. **Mark Sheldon Montgomery,** civil engineering, "Kinetics of Methane Fermentation in Anaerobic Biofilms," 2:15 p.m., Terman Engineering Center, Room M-33.

MONDAY, JULY 18

Leona Kay Sidman, education, "A Gateway to Lessons: The Call-to-Lesson," 12 noon, Room e114, Education Bldg.

WEDNESDAY, JULY 20

Mark A. Horowitz, electrical engineering, "Timing Models for MOS Circuits," 3 p.m., AEL 109. **Jeng-Heng Chen,** aeronautics and astronautics, "Helium Thrustor Propulsion System for Precise Attitude Control and Drag Compensation of the Gravity Probe-B Satellite," 3:15 p.m., Durand 301. **Muriel Y. Ishikawa,** aeronautics and astronautics, "A Fast Accurate Algorithm for Solving the Steady Three-Dimensional Equations for Inviscid Rotational Flow," 2:15 p.m., 450 Durand. **David Campbell Redding,** aeronautics and astronautics, "Optimal Low-Thrust Transfers to Geosynchronous Orbit," 10 a.m., 450 Durand.

THURSDAY, JULY 21

David Kyuyoung Ahn, education, "Loglinear and Markov Chain Models of Change in College Academic Major," 2:15 p.m., Room e114, Education Bldg. **Maurice P. Rehm,** drama and humanities and classics, 2:15 p.m., Memorial Auditorium m125.

FRIDAY, JULY 22

Terri L. Lomax, biological sciences, "Auxin Transport By Membrane Vesicles," 10 a.m., Herrin T-161. **Gerard Patrick Morgan,** physics, "Identification of CW Two-Photon Transitions in Na_2 and NaK," 2:15 p.m., Varian Conference Room. **Jeanine M. Schmidt,** applied earth sciences, "Geology and Geochemistry of the Arctic Prospect, Ambler District, Alaska," 10 a.m., Mitchell Bldg. 350. **Joseph Yao Yao,** education, "The Redistribution of Earnings in the Ivory Coast: The Role of Higher Education Finance," 9 a.m., Room e114, Education Bldg. **Faustin B. Mukyanuzi,** education, "The Political Economy of Educational Reforms in Tanzania: The Secondary Education Curriculum and National Development," 2:15 p.m., Room e114, Education Bldg.

For 20 years, Rulofson's duties grew with Earth Sciences

Nobody is indispensable, but some people are irreplaceable. One of those people is Trudy Rulofson, who retires on Sept. 1, as assistant dean for research in the School of Earth Sciences. During her 20 years of service, the School has more than doubled, and Rulofson's job has grown along with the School. When she retires, her many responsibilities will be divided among several people.

George and Trudy Rulofson came to Palo Alto in 1963, when George, a mechanical engineer with the firm of Aetron-Blume-Atkinson, started working on the Stanford Linear Accelerator. Trudy applied for work at Stanford because she was "bored and didn't know anyone in Palo Alto," she explains in an accent that still bears a trace of Tennessee, her native state.

"I was surprised that Stanford hired me," she recalls, "because I had't worked for 18 years." She had been rearing three daughters. As a new Stanford employee, she felt right at home among the students who peopled Prof. Ron Lyon's remote sensing laboratory. After three years as secretary to Lyon, she was transferred to the dean's office as executive secretary to Prof. Richard Jahns, then dean of the School.

Personnel records state that Rulofson became administrative assistant to the dean in 1970 and an assistant dean in 1980. In truth, she has been accountant, caterer, travel agent, housing consultant, impresario, editor, and the liaison between the School and outside organizations, such as the sponsors of contract research.

Assistant Dean Delores Warrington shared these responsibilities until her fatal illness began in September 1981.

Since 1966 the School of Earth Sciences has mushroomed in size: from 33 undergraduates and 107 graduate students in 1965-66 to 147 undergraduates and 208 graduate students in 1982-83; from 57 degrees awarded in 1965-66 to 162 in 1982-83. But while the student body tripled, the full-time faculty has remained about the same: 28 full-time professors in 1966 compared with 32 today.

The School, now headed by Dean Allan Cox, relies on consulting faculty and a staff of 31 employees to handle the work load. During the last 17 years, nearly every kind of administrative task has fallen on Rulofson's desk. Since 1981, however, the School has added two associate deans, Dudley Kenworthy for development and Ruth Sloan for administration. Little by little, Rulofson's many duties are being absorbed by other staff members.

Running the School's annual Job Fair has been one of Rulofson's "most" satisfying functions." In October of each year, industrial recruiters come to the School for two days to interview students. The recruiters represent petroleum, mining, and energy industries, and government agencies such as the U.S. Geological Survey. The next Job Fair will be held October 25-26.

Rulofson likes the idea of "making a match between employer and student." Before the recession and the oil glut, each graduate could expect several job



Trudy Rulofson

offers. The activity reached a peak in 1981, when 83 recruiters attended the Job Fair. Last year the Job Fair attracted only 53 recruiters, but nearly all the applicants found jobs. Occasionally a student who is disappointed by the job picture remains in school for an additional degree.

A recent survey shows that more than 55 percent of the School's M.S. graduates and 35 percent of its Ph.D. graduates go into industry. About 30 percent of its Ph.D.s become university teachers in the earth sciences. The rest choose careers with the U.S. Geological Survey and other government agencies or continue in postdoctoral research.

Working with the University's Sponsored Projects Office, Rulofson has seen the School's research grants and contracts increase from $210,000 in 1966 to $3.4 million today. Proposals written by faculty members pass through Rulofson's office on their way to such agencies as NASA, the U.S. Department of Energy, or the National Science Foundation.

"Government contracts and grants are declining," Rulofson reports, "but since most research is funded for a term of two or three years, the decline hasn't shown up on our books as yet." Many of the School's research projects are supported by industrial affiliates.

The School maintains active applied research and graduate training programs in enhanced oil recovery, reservoir simulation, geothermal engineering, exploration geophysics, rock physics, structural and stratigraphic field studies in the Western United States, petroleum geology, remote sensing, economic evaluation of minerals, groundwater optimization, and environmental and hazardous wastes geochemistry.

In basic research, faculty and students are investigating volcanology, micropaleontology, seismology, plate boundaries and the tectonics of accretionary terranes, the evolut n of midocean ridges, and the origin and formation of ores and petroleum.

A large percentage of Rulofson's time has been devoted to industrial relations. She maintains communications with the 13 companies who pay $10,000 a year to join the School's Industrial Associates, and with 21 distinguished members of the School's Advisory Board—11 from industry, three from government, and seven from other universities.

Rulofson has been the School's unofficial hostess. When the Advisory Board meets in March, when the Industrial Associates hold their seminar in April, Rulofson plans menus, orders meals, makes hotel and plane reservations, reserves meeting rooms, and then resolves the inevitable last-minute complications.

Although she says that writing is not her forte, Rulofson compiled a 225-page book in 1980 and has updated it each year since then. The "red-book" is an annual report to the Advisory Board on the state of the School and its four departments: Applied Earth Sciences, Geology, Geophysics, and Petroleum Engineering. The next text is now on computer tape so that revising the book will be an easier job for the next editor.

A brochure entitled "Faculty and Facts" also originated on Rulofson's desk. The booklet introduces the faculty and the School to prospective students, faculty members, donors, and other interested readers.

With so much variety, "It has been a very interesting career—for someone who never planned to have a career."

A shadow fell over Rulofson's retirement years on May 19, when her husband died, ending a marriage that had lasted 39 years. Two daughters and three grandchildren form the focus of her family now.

Rulofson will work half days from Sept. 1 through Dec. 31 to train her various successors. After that she will travel, play bridge, enjoy her grandchildren, and become a volunteer for the School of Earth Sciences.

Carol L. King

Gould sharply criticizes Reagan's NLRB appointees

President Reagan's appointees to the National Labor Relations Board have "done a grave disservice to the rule of law" in emasculating their general counsel's ability to represent the agency in court, according to Prof. William Gould of the Stanford School of Law.

Their action suggests "an eager readiness" to reverse much of the case law promoting union and employee rights in the past half century, he adds.

"Framers of the 1947 amendments to the National Labor Relations Act contemplated an independent general counsel appointed by the President. Short-run ideological motivation by the new Reagan Board means subversion of this principle."

The board's dissatisfaction and impatience with a general counsel appointed by President Carter led to this "short cut," Gould says.

The backlog of cases in Washington now is so bad that the Bureau of National Affairs was not able to publish an issue of NLRB decisions for one week in May. Only 16 unfair labor practice cases were issued in April.

For the first seven months of the current fiscal year, the NLRB has produced only half the number of cases as last year. The number of cases pending in Washington has doubled in the past two years.

"The image of a board at war with itself, unmindful of the modus vivendi between



William Gould

the general counsel and the board which has been the rule for 35 years, will not be forgotten by courts who are requested to defer to the board's expertise," Gould notes. "Even before this crisis, the courts were reversing the board without much consideration for the principle of deference."

Recent decisions have been heavily weighted in favor of conflict instead of cooperation between labor and management, he declares.

"Employee involvement in the product can and should be achieved through work group involvement in job design, suggestion boxes, quality circles and the like—and even worker participation before or on the board, as in the Chrysler-United Auto Workers relationship."

But this means that employees would have the interests of the company as well as themselves at heart, and this would divide their loyalties and undermine the adversarial model of labor-management negotiations.

Workers ought to be in a position to know the economic facts of life about their firms—not just in crises or "at the deluge," Gould believes.

"The Japanese have built a form of profit-sharing and concession bargaining into their wage system. . .In a good year, bonuses can consist of six months of normal wages and in a bad year nothing at all. We need to provide ourselves this kind of flexibility.

"Such a model assumes access to information that American unions do not have—a necessary prerequisite to the kind of responsible trade unionism for which so many employers claim to long. In that environment, labor, management, and the public will be the true winner."

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

42848-TC (JCC:8880) MISC PROFESSIONAL: Clinical Instructor teaches primary care associate program students; prov classroom clinical lectures, on-site visits to students in preceptorships; prov small group clinical skills & behavioral sci teaching; assist in the coord of clinical instruction & other program activities & research; QUALIFICATIONS: OR eligible to be certified as a FNP & PA; part-time clinical practice in the community; 2 yrs of clinical exp as a FNP; Masters degree in Health Services.; C07; $1333-1725.

20073-AW (JCC:1464) STU SERV OFFICER I: Act as Financial Aids Advisor; advise students & parents regarding eligibility for all types of financial aid; evaluate financial need using the Uniform Methodology of CSS, increasingly using computer terminal to interact w/ on-line data bases; formulte aid packages by determining amount & approp aid source to be offered to students; interview students on an indiv basis; recommend approp course of action to them; conduct indiv & group pre-loan interviews, etc; QUALIFICATIONS: must have successful financial aid exp at professional level; requires sensitivity & a proven ability to a wide variety of people; comfortable performing math calculations & capable of explaining them both orally & in writing; understand the policies & procedures which govern the aid programs.; C04; $1590-1983.

36401-JB (JCC:2120) ACCOUNTANT I: Respon for a variety of activities that contribute directly to the production of Univ's payroll & associated products (reports,etc); assure that all payroll jobs run in a timely & accurate manner; check outside tapes for accuracy before being put into the sys; data base errors must be corrected before entering the data into the data base master file; monitoring payroll updates & edit runs; working closely w/ CIT production staff to assist in processing the payroll properly; prep batches for processing; attend mtgs, etc; QUALIFICATIONS: Bachelor's degree in acctg or 4 yrs equiv exp; knowl of WYLBUR, SPIRES, EASY-MARK & other computer sys required or must be learned; good numerical, analytical & statistical skills & abilities; understand Univ policy.; C05; $1756-2202.

36396-JB (JCC:2254) FIN/MGMT ANALYST I: Perform analytical work supportive to the functions & respon of the Asst Controller & staff(5 people) involving primarily financial & other numerical data of acctg & reporting sys, operating & capital budget process, overhead allocation process, staff benefit & service ctr rate determination; gather & compile/analyze data fr a variety of sources; requires reading & understanding budget statements; expenditure & fund statements; G/L; invoices, charts & graphs etc; QUALIFICATIONS: ability to commu effectively w/ a wide variety of people; able to work in a support role to 6 people; numerical, analytical & statistical abilities incl calculations, extreme accuracy; close atten to detail; ability to understand Univ policy; some exp or ability to learn computer input/output & simple programming; equiv exp to bachelor's degree in acctg.; C05; $1756-2202.

31517-LL (JCC:3104) DEVEL ASST: Fixed term 9/1/83-6/30/85; Phone Appeal Associate coordinate phone appeals in approx 9 locations around the US; commu w/ volunteer chairmen to assure adequate enlistments & logistical preparations according to established program calendar; distribute prospect lists, rosters & other nec info to chairmen; train volunteers in tech of phone solicitation using Genl Appeal Program guidelines; determine that assignment cards are properly sorted; prep statistical summaries & report results; perform research on individuals fr public info sources, etc; QUALIFICATIONS: ability to travel away fr campus for long periods during fall & spring, incl wkends, & to work evenings of phone appeals; high energy level; exp in public speaking or training of small groups.; C05; $1756-2202.

42853-AW (JCC:4076) PROGR/ANALYST GEN II: 75%; fixed term 7/1/83-4/1/84; participate in the development & maintenance of admin sys; support production computing activities w/ broad programming skills, good user & peer working relationships; prov daily support on the admin of the PACNET sys; plan, design, document, code & test small projs; automatic Answering Feature; respon for documentation for ADMIN & CONTACT/EMS; QUALIFICATIONS: exp in a serv oriented production shop; familiarity w/ documentation & other admin procedures of the computer applications group; knowl of SPIRES & WYLBUR; excel oral & written commu skills; require 1-2 yrs programming w/ emphasis on business functions using SPIRES; exp w/ SPIRES subj & maintenance & record entry; some training in math; ability to write formats.; C06; $1461-1831.

39456-LL (JCC:6102) CLIN SOCIAL WORKER II: 50%; fixed term 9/1/83-8/31/84; provide brief counseling for the faculty, staff, & immediate families of Stanford Univ, Children's & Stanford Hospitals; develop edu'l workshops & facilitates support groups; QUALIFICATIONS: L.C.S.W. or equiv; requires demonstrated skill in above mentioned activities.; J03; $1051-1445.

42827-TC (JCC:6818) SOC SCI RES ASST II: Assist the Regional Dir of Stanford Area Health Edu Ctr & the Med Anthropologist in the Multicultural teaching program; proposal preparation & Regional report; assist the Regional contract w/ the Statewide Offc; collect & compile med edu data, target area info & health manpower data; compile bibliography on computer/compile patient info on computer; compile info on proposal for designation of National Health Serv Corps sites in AHEC target areas; QUALIFICATIONS: knowl of data processing & computer facility; interpersonal skills & exp in compiling & organizing data.; C04; $1590-1983.

30575-TC (JCC:8880) MISC PROFESSIONAL: Program Coord for Program in African & Afro-American Studies (AAAS); asst the Dir in the development & implementation of AAAS programs & activities; serv as liaison w/ participating faculty & other depts, Dean of Students Offc, Registrar etc; prov publicity for course offerings, lectures & other AAAS activities; monitor operating budget expenditures & prepare cost estimates for special programs & activities; also Program Coord for the Committee for Black Performing Arts (CBPA); asst in the planning, execution, fiscal monitoring of all events; serv as liaison w/ Dance Division, etc; QUALIFICATIONS: prev exp in academic environ; excel commu & organizational skills required; knowl of production requirements & performing arts events; familiarity w/ history & 1 trends in Black performing arts.; C04; $1590-1983.

33247-LL (JCC:5986) NURSE EDUC (PATIENT CARE): 80%; Clinical Nurse Specialist receives initial referral fr MD's, PHN's, etc in relation to services to be provided for all potential patients & families by Birth Defect Ctr staff; attends 3 clinics together w/ clinic nurses; evaluation of nursing needs; plans for discharge of BD patients, advises parents; maintains liaison w/ community agencies, refers & receives info fr agencies providing treatment & rehabilitation, etc; serv as consultant to agency staff, under supvn of BD Dir, for screening patients; participates in a consulting capacity for sch'l personnel in definition & implementation of Indiv Edu'l Program for child followed in BD Ctr Clinics, etc; QUALIFICATIONS: Master degree desirable, but not required; bkground & exp w/ children w/ developmental disabilities; knowl of genetics & genl pediatrics is valuable.; K06; $2009.

Bargaining unit

43704-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 50-62%; working w/ mice & rats, surgically removing spleens & other organs, making buffers & drug solutions; familiar w/ sterile tissue culture tech; QUALIFICATIONS: 1yr's exp in a res lab or equiv course work in biology or other lab science; must be willing to learn new res tech; must possess manual dexterity.; A18; $ 7.50.

42431-VW (JCC:5644) LIFE SCI TECH II: TMS Unit; 50%; involves work w/ mammalian cells in tissue culture; treatment of cells followed by measurement of protein & lipid content & composition, enzyme assays, receptor binding; measurement of survival by clonogenic assay; use of radioisotopes, gel electrophoresis, membrane isolation tech, spectrophotometric & fluorimetric assays & other tech related to the biochemistry & biophysics of cellular membranes; analyse data & prepare graphs; QUALIFICATIONS: exp w/ tissue culture & biochemicl assays, esp for proteins & lipids; will train in some tech if nec.; A24; $ 8.65.

22960-TC (JCC:5786) LAB ASST I: Work involved in the purification & assay of monoclonal antibodies for use in experiments carried out by others; ordering & maintenance of chemicals, media & plasticware for tissue culture; keeping records; making simple solutions; QUALIFICATIONS: 1 yr's exp in basic lab tech or equiv course work in a lab science; work will be closely supv'd; requires manual dexterity, habits of cleanliness, neatness, the ability to follow carefully detailed instructions & make clear, well ordered records.; A13; $ 6.68.

26757-JB (JCC:7654) CUSTODIAN: TMS Unit; 7:30-4pm; works under direct supvn; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot clean, shampoos, waxes, dusts & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in light cleaning; knowl of related safety procedures.; A13; $ 6.68.

40487-JB (JCC:8586) HEAT VENT A/C MECH MAINT: TMS Unit; 8-4:30; inspects, troubleshoots, repairs, & maintains refrigeration as it applies to food prep & storage, lab & res eqpt; all types of air conditioning units & their related eqpt; all bldg heating & cooling temperature control sys incl pneumatic, electric & electronic; all ventilations & air distribution sys incl fans, filter, belts, ducts, dampers, etc; all types of heating sys incl hydronic, radiant, warm air, gas, steam & electric; perform air balancing on the above sys, etc; QUALIFICATIONS: practical skills required, soldering, brazing, cutting; ability to read & interpret blueprints & wiring schematics; piping & plumbing tech; knowl of refrigerants & their proper application; knowl of special instruments & tools used extensively in HV&AC trade.; A35; $11.22.

New employee orientation

The next orientation session for new employees will be held at 9 a.m. Tuesday, July 19, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

SLAC

94115-AW (JCC:7600) Contract Administrator: Prep, negotiate & administer SLAC subcontracts for design, construction, alteration, maintenance & installation of conventional & experimental facilities & eqpt; prep, coord & transmit to DOE required reprts for subcontracting activity & assure that required safety & fire prevention reviews are made; QUALIFICATIONS: college edu in Business Law, Economics & Accting or equiv; ability to read construction blueprints & specs exp in construction contract admin involving Govt procurement rules, policies & procedures; ability to commu orally & in writing.; C08; $2464-3000. APPLY AT SLAC

95773-AW (JCC:2058/2070) Admin Asst I/II: Supv clerical staff & operation of offc; procure computer related eqpt; administer computer maintenance contracts; expedite orders & process invoices; interact w/ SLAC personnel & vendors to resolve problems; prep DOE reprts; QUALIFICATIONS: AA degree in Business or equiv exp; 2 yrs admin level exp; good commu skills, both orally & in writing; good interpersonal skills; knowl of business procedures; purchasing & acctg skills desirable; knowl of computer terminology & ability to use terminal desirable; AAII performs above w/ extensive independence.; B16/C05; $1593-1671/1670-2100. APPLY AT SLAC

95616-JM (JCC:8880) Civil Engineer: Will do design work, develop schedules, write specifications, estimate costs & coordinate construction; QUALIFICATIONS: BS degree in Civil Engrg or equiv plus several yrs exp as a Structural Designer or Proj Engr; bkground should incl some or all of the following: drafting, designing, specification writing, cost estimating, field inspection & change-order negotiation; excel commu skills required.; C99; $2400-2800. APPLY AT SLAC

94908-JM (JCC:2596) SECY II-SPEC: Type genl corresp, tech reprts & papers; operate computer terminal for word processing; type purchase reqs, work orders & maintain files for them; perform various genl offc tasks; receive visitors; answer phones; arrange mtgs; make appts; QUALIFICATIONS: typ 60; ability to type physics & engrg papers on IBM Sel; good knowl of spelling, English grammar & punctuation; ability to operate computer terminal for word processing.; B12; $1310-1373. APPLY AT SLAC

95730-JM (JCC:8940) Misc Clerical/Offc Sys Spec: Input & format corresp, reprts, forms, on-line User Notes, VM Notebooks & VM Memos; develop, institute & maintain a training program for staff on use of various computer terminals; add modify & delete accts, etc in SPIRES; prepare computer sys graphs on a monthly 1 basis; asst in testing new sys features; route calls to approp staff; update on-line documentation files (DOCTEXT, INDICES & VTOC using XEDIT); QUALIFICATIONS: typ 55-60; several yrs job-related exp or equiv edu/training; ability to work independently; exp interfacing w/ a variety of persons; knowl of English spelling, punctuation, syntax; comprehensive knowl of data processing terminology; ability to use & understand WYLBUR, XEDIT, SCRIPT & TOPDRAW; ability to use VM & SVS; some programming training desirable.; B14; $1440-1514. APPLY AT SLAC

95729-JM (JCC:5284) COMPUTER OPR TRNEE: TMS Unit; rotating shift; 15 month training program; operate peripheral units such as tape drives, disk drives, card readers, printers, monitor & reprt eqpt malfunctions & output errors; fulfill admin reporting requirements; QUALIFICATIONS: high sch'l or equiv; some exp in computer facility working in dispatch, disk, tape area; must know how to clean eqpt, change printer ribbons/papers; good reading, oral & arithmetic skills.; A00; $1300. APPLY AT SLAC

94640-JM (JCC:6492) LAB MECHANICAN III: TMS Unit; machine tool repair & rebldg; do complete reconditioning of worn machines, incl scraping & aligning of slide ways & spindles; do troubleshooting & repair serv of machine tool clutches, gear boxes, hydraulics, electrical control circuits & similar components; QUALIFICATIONS: completion of machine shop accredited 4 yrs apprenticeshlp or equiv schooling & exp; extensive exp in applied machining; ability to operate lathes, mills & grinders; exp in machine tool rebldg, erection & installation.; A41; $2250. APPLY AT SLAC

95075-JM (JCC:6564) SAW SHOP ATTENDANT: TMS Unit; maintain machine shop tool crib which incl inventory control, writing of reqs for cutting tools or supplies; use of pickup, forklift & 20 & 50 ton shop cranes; clean eqpt; QUALIFICATIONS: knowl of machining & machine shop practices; high school machine shop course or machine shop helper bkground desirable; basic math required; ability to write legibly; bkground in storekeeping, warehousing, etc helpful; forklift & rigging exp needed; ability to qualify for govt driver's license.; A26; $1577. APPLY AT SLAC

94641-JM (JCC:6564) SAW SHOP ATTENDANT: TMS Unit; maintain machine shop toolroom & stockroom; order & cut to size metal stock & material; check out tools & eqpt & maintain inventory; keep tools in good working order; respon for all housekeeping in order to meet OSHA standards; asst tool crib customers; QUALIFICATIONS: have demonstrated mechanical aptitude & good working knowl of basic math incl ability to read blue prints & do simple layouts; good knowl of machine shop tools & practice; ability to lift heavy weights; ability to qualify for govt driver's license.; A26; $1577. APPLY AT SLAC

95514-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; troubleshoot, repair, modify, inspect & do preventive maintenance of installed RF drive sys eqpt; build, install & test new electronic & microwave eqpt; document & keep records; QUALIFICATIONS: AA degree in electronics or equiv; 1 couple yrs exp in microwave/electronics industry; basic knowl of microwave practice, analog & microwave test instruments; good skills in use of hand tools; some drafting skills desirable.; A34; $1901. APPLY AT SLAC

Nonexempt

28843-PM (JCC:8940) MISC CLERICAL:

28847-PM (JCC:8940) MISC CLERICAL: 75%, fixed term 9/15/83-6/30/84; asst in clerical & course-related tasks in Human Biology Program; attend lectures & wkly course assistant mtgs; conduct 3 sections/wk; hold wkly offc hrs; write rough draft exams; grade exams & assignments subj to professor's approval; coord course handouts, room scheduling, & spec events; reserve readings, prep review sheets & sessions, & problem sheets; QUALIFICATIONS: prev teaching exp is desirable but not required; familiarity w/ Human Biology Program; send appl/resume to R. F. Thompson, Bldg. 80, Room 81.; B12; $983-1030.

40339-PM (JCC:2596) SECY II-SPEC: Serv as sec to both the Administrator of the Heart Disease Prevention Program & the Proj Coordinator for the Five-City Proj; typing in final form fr dictation corresp, manuscripts for publication, reports, proposals, forms, etc; edit various proj mat'ls; reconcile budget statements for several Univ accts occasionally; schedule mtgs; maintain a record of proj decisions & activities, & a Heart Health Proj Lib; QUALIFICATIONS: typ 55; sec'l of offc exp w/ med terminology preferred; good vocabulary & knowl of grammar; ability to use or willingness to learn WYLBUR, SU word processing sys, & Apple computer programs; send appl/resume to Lillian O'Toole, HRP Bldg, Room 114, 497-6145.; B12; $1310-1373.

27189-LL (JCC:5940) CLINICS STAFF NURSE IV: A six-year research proj is to be initiated to determine the effects of cardiovascular risk reduction on the progression of coronary atherosclerosis; help conduct the patient edu & treatment program & assist w/ med evaluations; duties incl patient recruitment, development of edu program & mat'ls, patient counseling cardiovascular risk assessment & maintaining patient records; limited supvn of med assistants or technicians required; QUALIFICATIONS: A RN degree required w/ specific training & exp in the care of patients w/ cardiovascular disease; prior res exp required; counseling, patient edu & cardiac rehabilitation skills preferred; high level of respon for proj coord; job sharing may be a possibility.; K04; $2061-2229.

continued on next page

Jobs/ continued from page 20

27478-BP (JCC:2454) OFFICE ASST II: 50%; Human Subjs Assistant prov clerical support for administrator in SPO plus some bkup for offc support staff; process applications for human subjs clearance in research projs, maintain log, card file, & other files; prep of govt forms for human subjs approval; researching files for needed info; asst w/ preps for Administrative Panel mtgs; attend mtgs; take minutes if requested; xeroxing mat'ls as needed, etc; QUALIFICATIONS: typ 45-50; typing accuracy more important than speed; filing exp helpful; knowl of word processing or willingnes to learn; send appl/resume to Phyllis Hall, Encina Hall Rm 40.; B09; $565-595.

32574-PM (JCC:2462) OFFICE ASST III: 8-4:30 or 8:30-5; Faculty Practice Program registration clerk works w/ terminals/FPP CRT, Hospital Patcom sys, Medical Records Spires sys; requesting med record numbers via teloautowriter; updating Patient Master Files for Hospital Admissions & Out-patient Registration; check hospital discharges against Data Sys to determine if patients need to register; answer patient & clerical staff questions, etc; pick up & delivery of patient registration forms fr 12 different registration areas along w/ supplies, patient ID cards, daily batching envelopes; QUALIFICATIONS: typ 35; ability to collect large deposits fr patients; interview patients for both personal & financial info; good telephone manner; knowledgeable or prior exp helpful in clinic setting, lab & & surgical setting, & charges; some med terminology, usage of computers, embossing machines, calculators, typewriters & photocopy eqpt; keep patient info confidential; contact: Judy Bowers/Robert Pulliam, Boswell Bldg A205, 497-5961.; B11; $1246-1310.

30703-PM (JCC:2554) SECRETARY II: Asst Sec III in providing full sec'l serv to football staff & program; type corresp, manuscripts, tech reports fr dictation & rough draft; compose responses to routine corresp; organize & maintain extensive files ; answer phones & refer visitors; heavy public contact; type expense reprts, purchase reqs, other Univ forms, etc; QUALIFICATIONS: typ 65; use of dictaphone; sec'l exp preferably in high public contact offc; able to work in a very fast-paced environ; well organized; able to work for a large staff w/ divergent interests; good verbal & written skills; excel typing required; interest & knowl of sports helpful; able to accommodate overtime during peak season; send appl/resume to D. James/P. Wiggin, Athletic Admin Bldg.; B11; $1246-1310.

27298-PM (JCC:2562) SECRETARY III: Prov sec'l support for VP for Academic Computing; use of personal computer for word processing & other computer software sys; handle admin details & personnel functions for several supporting units; set up new offices; establish & implement new filing & record-keeping sys; collect & summarize tech & non-tech data for reprts or res purposes; write briefing documents; set up mtgs; schedule & manage calendar commitments; screen calls, mail & visitors; make travel arrangements; oversee several budget accts, etc; QUALIFICATIONS: typ 55+; excel sec'l skills; strong bkground in word processing & use of personal computer; good commu skills; good organizational skills; send appl/resume to Elaine Gloystein, President/Provost's Office, Bldg. 10.; B14; $1440-1514.

17044-PM (JCC:2562) SECRETARY III: Exp'd sec to Dir of Sleep Ctr; asst in prioritizing & organizing a multitude of admin, res, clinical & edu'l tasks; independently schedule appts w/out prior consultation; block off working time; numerous screening activities, requiring diplomacy & tact; independently answer mail approx 75%; compose letters for Dir's approval fr genl oral instructions; transcribe, edit final copy; typ corresp, grant proposals; handle all speaking invitations; extensive travel arrangements, etc; QUALIFICATIONS: typ 60; ability to deal w/ unexpected crises & a multitude of high priority tasks; excel organizational skills essential; demonstrated strong interpersonal skills; excel judgment; word processing exp preferred but will train; contact: Lynn Hassler/Karen Sharp,; B14; $1440-1514.

26065-BP (JCC:2596) SECY II-SPEC: Sec/Word Processor for 4 teaching faculty members & a Research Associate for the grad Construction Program in Dept of Civil Engrg; heavy typing incl tech reprts, course mat'ls, res reprts, & genl corresp; ordering of offc supplies & handling cash deposits; reproduce mat'ls by Xerox & duplicating machines; oversee operation of duplication & other work by student helpers; asst in organizing conferences & mtgs; willing to learn/use PDP-Word11 Word Processing Sys on DEC PDP-11 computer, etc; QUALIFICATIONS: typ 65; typing speed & accuracy important; good commu skills; prev exp required; prev word processing exp strongly desired; send appl/resume to Raymond E. Levitt, Terman Engineering, Room 290.; B12; $1310-1373.

39189-BP (JCC:2596) SECY II-SPEC: 50%, 1-5pm; working in Admin Offc of Dept of Civel Engrg w/ Chairman, Associate Chairman & under the direct supvn of Admin Assistant; perform sec'l duties; commu effectively on phone & in person w/ students, faculty & other Univ personnel; typ corresp; input data & prep of reprts(some technical) using word processor; maintain files; asst w/ Grad Admissions process, etc; QUALIFICATIONS: typ 65; accuracy is important in all phases of work; abiltiy to interpret & explain dept's academic policies & procedures to students & other Univ personnel; ability to use or willingness to learn word processing sys; prev sec'l and/or Stanford exp preferred; send appl/resume to Susie Stone, Terman Engr. Ctr. M42.; B12; $655-687.

31183-PM (JCC:1755) LIBRARY SPEC II: 50%; performs duties in Serials Dept; posts daily receipt records for currently received serial titles, concentrating on assigned sections (both Slavic & non-Slavic); annotates & appropriately forwards titles requiring recataloging; typ check-in records & collations; orders serial titles both manually & using RLIN; bkup duties for incoming mail; QUALIFICATIONS: typ 40; prev lib exp; reading knowl of Russian; ability to learn & use RLIN; good clerical & organizational skills; commu well, both orally & in writing in English; ability to interpret to others info contained in Serials Records files; prev exp w/ RLIN & exp working w/ Slavic mat'ls in an academic lib desirable; reading knowl of one other Slavic lang, preferably Polish; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $655-687.

31180-PM (JCC:1755) LIBRARY SPEC II: 50%; may incl some night & wkend or some holiday hrs; performs duties in Reference Services Division of Meyer Lib; asst lib patrons by answering informational & reference questions & gives occasional orientation tours; work manual & on-line bibliographic searching; performs support tasks for Head of Reference, & Coordinators of Bibliographic Instruction & Collection Developm't; such as statistical summaries; sets up mtgs; applies lib policies & procedures; initiates consultation w/ supvr to define objs and/or handles unusual problems; QUALIFICATIONS: typ 40; require prev lib exp; good clerical & organizational skills; ability to learn advanced lib operational skills; prev public serv exp; ability to learn automated sys; prev exp w/ RLIN &/or other automated sys; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B12; $655-687.

29052-PM (JCC:2554) SECRETARY II: Prov sec'l support & assistance to dir & offc of public events & alumni affairs in Med Ctr; receives & screens variety of calls on busy lines; typ memos, ltrs, & reports for offc staff; sort mail; composes routine replies; records & deposits dues & contributions for alumni association & prepares biannual financial reports; schedules maternity tour for Stanford Hospital; respon for maintaining offc supplies; QUALIFICATIONS: typ 55; strong verbal commu skills; demonstrated exp in a sec'l position & in record-keeping; 6 months prev exp in offc setting; prefer familiarity w/ Stanford Med Ctr; contact: Michael Cowan, 750 Welch Road #300, 497-6389.; B11; $1246-1310.

43554-BP (JCC:2562) SECRETARY III: Sec for Dept Chairman; receives & screens all calls & visitors; requiring an intimate knowl of dept's programs & Chairman's prior; make appts, travel arrangements; remind Chairman of appts or other matters; sort mail; answer corresp; routinely composes original letters, memos, etc; writes tech & non-tech reports fr verbal instructions; tech terminology, editing, writing & layout of publications; makes decisions to commit supvr for speaking engagements, conferences, mtgs, etc; QUALIFICATIONS: typ 80; s/h, 120; excel sec'l exp required; college degree or equiv w/ excel English lang bkground & at least 5 yrs exp; ability to interact well w/ students, visitors & other personnel; word processing exp desired; send appl/resume to Gerda de Werk, Durand 452.; B14; $1440-1514.

40526-PM (JCC:2562) SECRETARY III: Sec'l support for one doctor & other members of the offc of Med Computer Sci; using text-processing capabilities of SUMEX computer sys; dictaphone transcription of corresp & manuscripts; make travel arrangements; photocopying; filing; receiving & screening all phone calls & visitors; asst in admin of Med Info Sci program; QUALIFICATIONS: typ 80; ability to perform tech work accurately; develop skills in computer use; prior exp w/ text editor or word processor desirable but not required; deal effectively w/ offc staff, physicians, frequent visitors; effective telephone techniques & interpersonal skills; send appl/resume to Darlene Vian, Med Ctr, TC-117 or call 497-6979.; B14; $1440-1514.

27193-PM (JCC:2596) SECY II-SPEC: 8-4:30pm; admin sec to Tech Dir of Cardiology Div & a small admin staff; screen calls, visitors & incoming mail; maintain Tech Dir's calendar, arrange appts, mtgs, travel; maintain offc files & manuscript files; typ corresp, univ forms, tech reports & other documents; order offc supplies; maintain small petty cash fund, postage meter, xerox machine & faculty & staff directory, etc; QUALIFICATIONS: typ 65; prior sec'l exp; exp w/ or willingness to learn word processing; familiarity w/ conventional offc machines & admin procedures; posses tact, good writing & proofreading skills; tech & med typing desirable; contact: Gary Steinman, 730 Welch Road, Suite D, 497-6283.; B12; $1310-1373.

31185-PM (JCC:1747) LIBRARY SPEC I: Work schedule (Oct-May) Sun-Thur, 1-10pm; during Summer Session, Tue-Sat, 8-5pm; during Intersession, Mon-Fri, 8-5pm; performs duties in Art Lib; public service at circulation desk; answer questions using RLIN & SPIRES as needed; pages & shelves books; checks books & mat'ls at lib exit points; files in the card catalog, shelf list & circulation file; prepares mat'ls for binding; searches book catalogs; respon for operations of lib during evening & wkend hrs; supv student assistant during eveing & Sunday work hrs, etc; QUALIFICATIONS: typ 40; require prev public serv exp; ability to learn & use RLIN & SPIRES; ability to commu well, both orally & in writing, in English; reading knowl of one non-English Western European Lang desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $1189-1246.

31186-PM (JCC:1763) LIBRARY SPEC III: Fixed term 6/23/83-10/30/84; performs duties in Catalog Dept; AACR 2 cataloging of titles for which variant edition copy is available; adjusts description to fit title in hand & to AACR 2 standards; adjusts subj headings to current form; authority work for personal & corporate name headings & uniform titles; inputs records into RLIN database, etc; QUALIFICATIONS: typ 40; prev AACR 2 cataloging exp, incl name authority work, MARC tagging & using automated cataloging sys; high degree of accuracy in typing; atten to detail; demonstrated clerical & organizational skills; prev exp w/ RLIN desirable; contact: Bob Johnson, Green Lib, Room 223 (497-3152).; B14; $1440-1514.

23948-PM (JCC:2078) ADMIN ASST I (N): 75%; counsel students to determine eligibility for financial aid, approp sources of funding; maintain documentation in accordance w/ audit requirements; act as program expert/campus liaison for Med Sch'l applications for National Direct Student Loans, incl preparing budgets & nec forms; acting as liaison w/ campus during award process; counseling students w/ changes in situations; troubleshoot indiv student problems; supv 2 Financial Aid Offc Assts; QUALIFICATIONS: typ 45-50; strong commu & analytical skills; ability to analyze & apply complex guidelines; prev exp in counseling, financial aid and/or student acctg preferred; contact: Anne Gaddy, M105 Med Ctr, 497-6954.; B16; $1195-1253.

40336-PM (JCC:2470) OFFICE ASST IV: 8:30-5:30; prov offc & sec'l support for key personnel in large health edu proj using the mass media; answer phones; screen inquiries; maintain offc records; make appts & travel arrangements; typ draft mat'ls & forms & finalize & format complex reports; respon for coord of part-time employees; execute & follow-up on financial commitments; keep up on internal budget sys; QUALIFICATIONS: typ 70 s/h preferred; highly superior sec'l skills; excel spelling, & ability to use or learn to use abstracting & bibliographic tech, word processing, SCRIPTS, EDS, & audio & audio-visual eqpt for playback; able to manage several projs simultaneously; deal effectively w/ people; able to work w/ graphics,graphic design, or print production; send appl/resume to Dr. June Flora, HRP Bldg.; B14; $1440-1514.

24687-BP (JCC:2512) OFFICE ASST III-SPEC: Commu w/ delinquent student loan borrowers by phone, form letters, indiv'ly composed letters in order to elicit payment; Collector should be thoroughly familiar w/ English lang; all letters are submitted for review by supvr & signature of Bursar; maintain documentation of all collection acitivity & keep statistical records on all contacts; prep accts for submission to commercial collection agencies after Univ's efforts have proven unsatisfactory; read, interpret & correct computer data on borrowers (records maintained on microfiche); learn, interpret & enforce a variety of complex loan fund regulations; QUALIFICATIONS: good telephone manner; ability to compose personal letters & to convey & interpret complex loan fund requirements in writing; basic math & acctg skills essential; require to work evenings & wkends on occasion; send appl/resume to Margaret Willis, 200 Encina Hall.; B12; $1310-1373. 1

27056-PM (JCC:1763) LIBRARY SPEC III: Fixed term 7/1/83-12/31/84; Archival assistant in Hoover Institution Archives; process & describe assigned collections fr the archival & manuscript holdings of Hoover Institution; recognize & describe historical significance of unique archival & manuscript mat'ls relating to subj fields of 20th-century social, political, diplomatic, & economic history; read & describe foreign-lang mat'ls; classify & index audio-visual mat'ls; identify documents for repair, etc; QUALIFICATIONS: require intimate knowl of modern European or US history equiv to bachelor's degree w/ a major in that field; reading knowl of 1 or more foreign lang (French, German, Russian, or Polish); 1 yr or more of lib or archives-related exp, or equiv combination of edu & exp desirable; send appl/resume to Charles G. Palm, Hoover Institution, Stanford, CA 94305 or call 497-3563.; B14; $1440-1514.

Jeannie Thomas reports identities of alternatives to TIAA-CREF

Starting in September, Stanford faculty and exempt staff will have a choice of four alternatives to TIAA-CREF (Teachers Insurance and Annuities Association-College Retirement Equity Fund) for the investment of their basic retirement plan monies.

The alternatives being added are:

Fidelity Distributors Corporation

The Prudential Insurance Company of America

Scudder, Stevens, and Clark Investment Counsel

The Vanguard Group of Investment Companies

Selection followed careful analysis by members of the Personnel Department and Treasurer's Office, in conjunction with Dan White of William M. Mercer, Inc., an expert consultant in the pension field. Faculty members of the Ad Hoc Committee on TIAA-CREF Alternatives, whose report recommended the addition of investment alternatives, followed the selection process carefully.

The Fidelity Group is one of the oldest and largest financial services organization in the country.

Prudential is a mutual life insurance company which first began investing funds for group pension clients in 1928.

Scudder, Stevens, and Clark is an independent, privately-owned investment firm which formed the first no-load mutual fund in 1927.

Vanguard is an investment service organization which started its first mutual fund more than 50 years ago.

Detailed information about these four alternatives and TIAA-CREF will be sent to faculty and exempt staff in early September.

With the addition of these investment alternatives Stanford joins other universities, including Chicago and John Hopkins, in offering its faculty and exempt staff significantly increased flexibility in the investment of their retirement funds, according to Jeannie K. A. Thomas, manager of benefits and records.

Accidents and injuries

Accidents and Injuries Occurring During Week of June 27-July 8

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	2	(0, 0)
Cut by sharp object	4	(0, 0, 0, 0)
Pinched, squeezed, crushed	1	0
Fall from height (incl. stairs)	1	10
Fall from same level	1	0
Foreign body (i.e., in eye)	4	(0, 2, 0, 0)
Other	1	4
Stress	1	10 +

Rental housing

HOUSING AVAILABLE

☐ **NOW:** Summer rental, 3 BR/1½ BA cabin, W/D, phone, sleeps 10, Alpine Meadows, Tahoe. $180/wk. Call 493-4139 eve.

☐ **Aug. 1 to Sep. 11:** Fully furn. 3 BR/1 BA hse. w/wshr., lrg. grdn., small pool, frpl & BBQ in Barron Park, Palo Alto. 1 yr. lease avail. thereafter. $975/mo. (nego.) + secu. depo. Call Nick 493—6354.

☐ **Beg. July '83 (flex.):** ROOM avail. in Palo Alto apt., fully furn. walking dist. to campus. Call 327-2402.

☐ **NOW:** Ski cabin, So. Lake Tahoe, 2BR, frpl, color TV, phone. Adj. Nat'l Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine, 497-2501, day; (408) 739-3141, eve.

☐ **Beg. end of Aug. '83:** Delux, lrg. 1BR condo. Xlnt Mt. View location, Indry, 2 pools, furn. or unfurn. Lease 1 to 2-1/2 yrs. $600 - $700/mo. Call Gene Weber, (408) 295-1300, X311; 965-4289.

☐ **NOW:** Unfurn. hse, 3BR/2BA, frpl, hrdwd flr., newly re-dec, remodelled ktchn, 2-car gar. Menlo Pk, bike to campus. $1200/mo. Call (415) 556-3423, day: 854-6780, eve.

☐ **NOW:** 1 br. apt. (4 rms.) in San Francisco (Bernal Heights), $450 mo. Unf., W-D, large yard, some view. Possible carpool to Stanford with owner. Call Julia, 497-3811 (days), 648-4835 (eves.).

☐ **July 24 to Sept. 14-20 (flex):** Furn. Palo Alto hse, 3BR/2BA. Xlnt area, 1-1/2 mi to Stanf, nr Cult. Ctr, tennis, pool. Prefer single or cpl. Partial work xchng poss., (grdng) $900/mo. Call 326-5684.

☐ **Regularly available:** 1 & 2 BR furn. & unfurn. apts. & twnhses, & 3 BR/2 BA hses in Palo Alto & Menlo Pk., in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049 or Jane 968-4957.

☐ **July 1 or sooner for 1 yr.:** Fully furn. twnhse. 2 BR/2BA, office, study, AEK, W/D, frpl, pool, 7 min. to Stanf., Xclent for writer/scholar. Prefer cpl., single adult, nonsmoker. No pets. $1300/mo. Call Judy Donnelly 497-1065 day.

☐ **July, Aug. and Sep.:** Tahoe-Donner hse., 4 BR/3 BA, deck overlooks Nat'l Forest. Hike, tennis, golf, Donner Lake access, hot tub. $450/wk; $200/wknd. Call 324-8559 eve.

☐ **Oct. 1 to Spring '84 (flex.):** Fully furn hse., 1 hour's drive from LONDON. English countryside. Call (808) 923—6415 or write Gilbert, 2969 Kalakaua Ave., Honolulu 96815, Hawaii.

☐ **Beg. Aug. 10 (flex):** Furn. hse, 3 BR/2 BA, AEK, frpl., xlg 2-car gar., W/D. Fenced garden, huge patio, trees. Quiet st., Xclnt nghbrhd, nr shops, park, w/pool 2½ mi. to Stanf., Min. 1 yr. lease, grdnr included. $1125/mo. Call 326-4866.

☐ **July thru school yr.:** Furn. room w/ktchn, BA, lndry. Nonsmoking male grad. student pref. $275/mo. + util. Call Tola 497-4032 a.m.; 326—2640 p.m.

☐ **From Sep. 1:** 3 BR/2 BA hse. w/lrg. yrd., redwood trees. Walk/bike to STanf., swim, tennis. Leland Rd. in Palo Alto. 1 yr. lease. $1250/mo. Call 493-0599 eve., wknd.

☐ **Sep. 1 to Summer '84 (flex):** Fully furn. & equipped hse., 3 BR/2 BA, grdnr, Japanese garden, conv. to expressways. 20 min. to Stanf. Fine schools. $1200/mo. Call 497-1316 day; (408) 245-3780 eve.

☐ **NOW:** HAWAII (Kauai), Lovely furn. 2 BR/2 BA twnhse., pool, tennis, priv. club atmosphere. $50/day. Call Howarth 591-5190.

☐ **Academic yr. 83/84.or longer (flex.):** FURN. OR UNFURN. 4 BR/2½ BA close-in LA Hills mediterranean villa. Rural setting, 2 acre hilltop, quiet, secluded w/view, trees. 10 min. to Stanf. $2695/mo. Call 941-7190.

☐ **NOW:** 3 BR hse. in Southwest LAKE TAHOE. AEK, Creek side, Alpine setting, 1 mi. fr. lake. Hike and bike track close by. $275/wk. Call 493—9201 eve. and aftn.

☐ **Late Aug. to early Feb. '84:** INVERNESS, beautiful furn. solar hse. v. private, bayvw. hot tub, sleeps 8, all conveniences. Close to Pt. Reyes Nat'l Seashore. $1000/mo. Call (465) 669-1122.

☐ **August thru Dec. '83 or part thereof:** 1 BR apt., AC, Col. TV, dishwshr in QUEENS, NYC, nr. shops, all transport, 3 sbwy stops to Manhattan. $550/mo. util incl. Call Paulson 548—2389 or 540-0899.

☐ **Sep. thru Dec. 15, 83:** Furn. 1 or 2 BR apts, pool, gym, sauna, jacuzzi, racq. ball, adult complex., 1 apt. air cond., Rt#280 10 min. to Stanf. $600/mo. depo. & Ref. req. Call Prof. Arnold 968-0951 or 255-8909.

☐ **Academic yr. 83/84:** Furn apt. nr. Tel Aviv Univ. 2BR/1BA, LR, view, phone & car EXCHANGE for housing nr. Stanf. Call (217) 333-9358 or in Israel (03)426-191.

☐ **NOW:** Tahoe-Donner condo. 3BR/loft/2BA, spa, pool, tennis, golf, stable, $350/wk.; $140 wknd. Call Bienenstock 493-8649.

☐ **Beg. Aug. 1, prefer 1 yr. or longer:** New twnhse, 2BR/2½BA, furn., frpl, AEK, W/D, fenced yd, El Camino & Page Mill, 5 min. bike to campus. $1150/mo. incl. grdnr. Call COLLECT (213) 990-5302, (415) 849-0888.

☐ **July 26 to Aug. 20:** PARIS. Fully furn. apt, 3BR/2BA, mdrn gas ktchn, frpl, beam ceil. Lrg & sunny. Charm nghbrhd. 15 min via metro to Paris Ctr. $300/wk. Call Mark 497-7850, day.

☐ **July '83 to Aug. '84 (flex):** Fully furn. hse, 2BR/2BA, den. Ranch-style, Crescent Pk. Gr. piano. Nonsmoking adults. Immaculate. $1250/mo incl grdnr. Call 323-1426, after 5 p.m.

☐ **Beg. Aug 10 (flex):** Furn hse, 3BR/2BA, AEK, frpl. Xlrg 2-car gar. W/D, Fenced grdn, huge patio, trees, quiet nghbrhd, nr shops & park w/pool. 2-1/2 mi. to Stanf. Min. yr. lease. $1125/mo. incl grdnr. Call 326-4866.

☐ **Jan. '84 to June or Aug. '84:** Peter Coutts Hill furn. condo, 2BR/2BA, study, frpl, gar. pool, jacuzzi, deck, LR/DR w/cath. ceil. Use of car. Call 497-0833, day, 493—6273, eve & wknd.

☐ **Beg. July 15 for 1 yr. or longer:** 2BR/1BA hse in Coll. Terr. Nice yd w/dog run, fruit trees. Beamed ceil, lndry, small study. Dog ok. $875/mo. Call 497-9791, day; 851-3760.

☐ **July 19 to Sept. '83 (flex):** Furn hse, 5BR. 1/2 acre. Nonsmokers, no pets. $1200/mo incl. grdnr, pool serv. Dep. $1000. Util. xtra. Call 322-7360, 8-9 a.m. or after 3 p.m.

☐ **Sept. '83 to Sept. '84:** Shorter term poss. 2BR/2BA Oak Creek apt. nr Stanf. & hosp. Fully furn. incl. linens, dishes. AEK, Pool, tennis, sauna, jacuzzi. $1100/mo. Call 497-1968 day; 493—0894.

☐ **NOW for 1 yr:** Lux. penthse condo nr dwntwn Palo Alto. Nonsmoking M/F ROOMMATE for summer; take over whole apt. in Sept. New w/pool, cl. to Stanf. Call Dave 327-7194 or 497-2954, day.

☐ **July, Aug. only:** Lrg. furn rm, share BA. $225. Call Ruth 493-8338, eve.

☐ **Sept/Oct:** Fully furn Menlo Pk apt. 2BR, 3 patios, priv. yd., quiet. 10 min. bike to campus, Walk to shops, parks, No pets. $1000/mo. Call 328-0920, X336, day; 321-0741, eve.

☐ **Beg. Sept. 1 '83:** Fully furn. condo, 2BR/2-1/2BA, light, airy, xtra lrg. Nr. Stanf. Avail for yr. $1200/mo. Call 321-4407.

☐ **Mid-July '83 to beg. Apr. '84 (flex):** Fully furn. hse, 3BR?2BA, AEK, W/D, Steinway, 2 studies, frpl, pool, fenced yd. Nr Med. Ctr, bike to Stanf. $1500/mo (nego) incl. pool serv., grdnr. Call 497-1348, day; 325-4533 (lv. message), 322-9866, eve.

☐ **NOW:** Tahoe vacation retreat, Tahoe-Donner condo, fully furn. sleeps 8. Pools, spa, stables, golf, fish, tennis, boats, rafts nrby. $85/wknd, $195/wk. Call Al, 326—3821, eve.

☐ **Late Aug. to mid-Jan. '84 (flex):** Furn. apt. 2BR/1BA, in Mt. View, 15 min. to Stanf. No pets. Ideal for family w/small child (crib avail). $500/mo + util. Call David & Jessica 497-2672, day; 965-8981, eve & wknd.

☐ **July & Aug. '83:** Room in Palo Alto hse. Cple/single. $300. Nonsmoker. Call Carie or Dave 493-3768.

☐ **Late July — late Aug:** Furn. 3BR/2BA spac. hse, DR, study. 10 min. to Stanf. Quiet cul-de-sac, great for children. $200/wk, $800/mo. Call John 497-0837, day; 364-1244, eve.

HOUSING NEEDED

☐ **Aug. 15 to 31 or Sept. 14:** Visit. fam. of Stanf. fac. mbr seeks furn. 2BR hse or apt. nr Stanf. Call Arnice Streit 497-2278, day: 327-6325, eve.

☐ **Early July to Aug. 13:** German Scientist/Lec. seeks furn. hse or apt, 2-3BR, on or nr campus. Reas. rent; will care for gardn. Call 497-2173, day: 968-1861.

☐ **Aug. and/or Sept:** French Prof. U. of Paris, Sorbonne, visit. Stanf. seeks quiet place to hsesit or rent. Nonsmoker. Loc. refs. Call 948-2929, after July 6 or write N. Cot, 4Bd de la Bastille, Paris - 12, France. Tel: (1) 628 02 64.

☐ **Sept. '83 to Apr. '84:** Visit. phys. on sabbatical at Stanf, spouse, son 15, daughter 12, nonsmokers, seek furn hse in Palo Alto or campus. Call COLLECT (503) 222—2464, Pat or Steve Chandler, or (503) 652-2880, day.

☐ **Beg. Aug. 1:** Professional cpl. seeks furn. or unfurn. hse or apt. within 15 mi. of Stanf. 1 yr. lease pref. Will pay $600 - $800/mo. Nonsmokers, no pets. Call 323-9730 after 6 p.m.

☐ **Academic yr. 83/84:** Prof. fr. U. of Kentucky on sabbat. seeks 1 or 2 BR furn apt. w/ktchn & gar. for car. Nonsmoker. Call local 325-3612 around 7 p.m. ask for Gorindarajulu or call (606) 257-4950; (606) 223—9661.

☐ **NOW:** $100 REWARD for info. leading to rental of cottage nr. Stanf. for resp. prof woman. Call 326-4695.

☐ **Aug., Sep., Oct.:** Yale & NYU grad stud. on sabbat avail. for HOUSESIT. Nonsmoker, local refs. Call 454-5002.

☐ **Beg. July 16 thru end of Aug.:** Grad. stud. studying for oral exam avail. for HOUSESIT. Refs. avail., good w/plants, animals. Call 328-7947.

☐ **Beg. Aug. 21 for 3 to 6 wks:** professional cpt. & dghtr. wish to HOUSESIT in Stanf. area. Call 857-1641 or 325-6366

☐ **Beg. Aug/Sep.:** New Stanf. prof. seeks cheep, lrg. 1 BR loft or cottage in attrac. surrondings. Good nghbrhd, local refs. avail. Call 848-4978.

☐ **Beg. Sep. 1 for 9 mo.:** Visit. scholar, wife, 1 child seek 2-3 BR furn. hse. or apt. nr. campus. Nonsmokers, clean living, homeowners. Will care for plants, pets. Local refs. Call (314) 875-2858 COLLECT eve.

☐ **Aug. 1 to Oct.-Jan. '84 (flex):** Prof. cpl. (recent Stanf. grad.) seek apt. or hse. in Palo Alto area. Xclent refs avail. Call 494—1310 eve.

☐ **Sep. '83 up to 1 yr.:** English visit. scholar on sabbat. seeks to rent rm. or hse. on or nr. campus. Write Dr. Roger Giblin, Electronics Dept., University College, London WC 1 ENGLAND.

☐ **Beg. Aug. or Sep. to indef.:** Female post doc. & dghtr, 12, seek quiet, inexpensive apt. or shared hse. nr campus. Write J. Carey, 805 W. Stroughton Ave., Urbana, IL 61801.

☐ **Aug. '83 to Aug. '84:** Visit. Prof. fr. Norway, wife, 2 children, seek 3 BR, furn. hse on or near campus. Responsible, nonsmokers. Up to $1000/mo. Call 497-2024.

☐ **Aug. for 2 wks or more:** UCR Prof & wife would like to HOUSESIT for above time period - very flex. Will care for pets, plants, garden. Call parents on campus. 493—5198.

☐ **Mo. of Aug. '83:** French scientist seeks EXCHANGE: furn. apt. in Paris, 15th Arrondissement, nr Inst. Pasteur, metro. Top, 6th flr., no elev. Dbl LR, 1BR, study, balc. $600/mo + $200 dep. or xchng for apt. nr Stanf. Call Dr. Brutlag 497-6593, or write Dr. M. Hofnung, Institut Pasteur, UPMTG, 28 rue Dr. Roux, Paris 75015 France. Tel: 1 306 19 19, X2156.

☐ **Sept. '83 to Sept. '84:** Visit Prof. & wife wish to rent small furn. hse or 2BR apt. Pref. nr Stanf. Call (415) 859-5105 or 326-0537.

☐ **Jan. '84 to July '84:** Two quiet, mature femal Profs on sabbat. at Stanf. seek 2BR furn. apt. or hse on or nr campus. Call COLLECT (913) 541-1501, eve.

☐ **July 27 to Aug. 26:** Med. student seeks HOUSESIT. Local refs avail. Call Gregg, COLLECT (713) 797-1198 or lv. message with Celia (415) 326-0116.

☐ **NOW:** Resp. mature SU staff mbr avail. to HOUSESIT. Good w/plants. Local refs. Call Mollie, 497-2231, day.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Services, P.O. Box 7772, Stanford, Calif. 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414 or Araya, 329-8828.

Carpools

Carpool partner wanted, Oakland-Stanford. Leave Oakland 8:30 a.m., leave Stanford 6 p.m., M-F. Times somewhat flexible. Call Jon Bendor, 497-4480.

Carpool forming from SF (Bernal Heights) to Stanford, M-F, hours somewhat flexible. Share driving. Call Julia, 497-3811 (days), 648-4835 (eves.).

Ride sharing between Santa Cruz and Stanford Tues. and Wed. 9-5 (flexible), call Andy Carman at 497-6341.

Would like to form (or join existing) carpool from Los Gatos to Stanford, M-F, 9-6. Call Tom Holt, 7-2454 or (408) 354-6040.

Ride share between SF and Stanford M-F, mornings and eves (times flexible), call Jennifer at 346-6411 after 8 p.m.

Ride needed from Sharon Heights Shopping Center to Stanford, in exchange for gasoline. My hours are 8 a.m. to 5 p.m. Please call Dixie Dodson at 497-9150.

Campus housing listed

The Office of Housing Programs (105 Encina Hall) publishes a monthly listing of single family homes and condominiums for sale on the campus to members of Eligibility Pool I. Eligibility Pool I comprises members of the Academic Council and those senior staff whose positions are classified in the NA-11 curve range. Those members of Eligibility Pool I who are actively looking to purchase homes may receive this monthly listing by calling Molly Cleland (497-2239).

Program set on stepfamilies

The Stanford HELP Center will offer a lecture discussion on "Stepfamilies—Myths and Realities," from 12-2 p.m. Friday, July 15, at Tresidder Union room 282.

Participating in the discussion are Drs. Emily and John Visher, founders of the Stepfamily Association of America, Inc. They are authors of *Stepfamilies—Myths and Realities*, and *How to Win as a Stepfamily*.

Special emphasis will be given to the special characteristics of stepfamilies, common myths, the integration of two households, and challenges faced with the stepfamily.

All members of the Stanford community are invited to attend.

Saturday noon performances cancelled by Summer Theater Workshop

Saturday noon-time performances of the Stanford Drama Department's Summer Theater Workshop have been cancelled.

Performances will continue each week Wednesday through Friday at noon with evening performances at 8 p.m. on Friday and Saturday. All performances are in The Nitery, located in Building 590 of the Old Union. Each performance is approximately 45 minutes in length. Admission is free.

Steven Weeks directs Romulus Linney's *Tennessee*, a look at the life of a woman in the back country of North Carolina in the 1870s, July 13-15 at noon and July 15-16 at 8 p.m.

Christine Roum directs an original play by Stanford playwright Becky Smith, *Man Strapped to Bridge*, a romantic comedy, July 20-22 at noon; July 22-23 at 8 p.m.

(see story below)

An early one-act by Eugene O'Neill written in 1919, *The Rope*, will be performed July 27-29 at noon and July 29-30 at 8 p.m. Directed by Johanna Dickey, the play is an allegory of the prodigal son with an unusual twist.

Christopher Durang's brilliant comedy, *An Actor's Nightmare*, directed by Leigh Sealy, will be performed August 3-5 at noon; August 5-6 at 8 p.m.

The final show, *Summer's End*, directed by Lorne Buchman, is an original script and combines drama with song and dance. Performance dates are August 10-12 at noon; August 12-13 at 8 p.m.

New Stanford play presented July 20

Beginning at noon on Wednesday, July 20, in the Nitery theater, the Stanford Drama Department's Summer Theater Workshop will present a new play, *Man Strapped to Bridge*, by Stanford playwright Becky Smith.

Smith, a student in the Stanford masters program in film, has been active in the Ram's Head winter one-acts as both playwright and director. In 1982 she wrote and directed *The Lambchop Murders*, and in 1983, *Vinyl Highways Over Paris*.

Man Strapped to Bridge, a light comedy about love, is directed by Christine Roum, who received her B.A. in June with a double major in drama and in film. In September she will begin an M.F.A. program in film production at UCLA. She directed the successful productions of Mark Medoff's *The Wager* in the Drama Department's 1982-83 season. She was most recently seen in the role of the brassy, wisecracking May Daniels in *Once in a Lifetime*.

The cast of *Man Strapped to Bridge* includes Lisa Glass as Faith, Todd Salovey as Jean-Paul, and John Atthowe as Nick. Marta Carillo, Jim Glaser, Cynthia Williams, and Joshua Levy complete the Workshop ensemble. Undergraduate senior Tom Wood is both set and lighting designer; costumes are by Connie Strayer.

Performances are at noon Wednesday through Friday, July 20-22; and at 8 p.m. Friday and Saturday, July 22-23. Each performance is approximately 45 minutes in length. The Nitery theater is located in Building 590 of the Old Union. Admission is free.



Charlotte Mattax, a Juilliard graduate and D.M.A. candidate in Early music, will be giving a free harpsichord recital at 8 p.m. Friday, July 15, in Annenberg Auditorium. She will perform works by Sweelinck, Tomkins, Rameau, Bach, and Scarlatti.



Stan Getz



Richie Cole

Jazz legend Stan Getz to perform at Tresidder in exclusive appearance

Jazz legend, Stan Getz, will perform at 4 and 7:30 p.m. Saturday, Aug. 6, outdoors on the Upper Deck of Tresidder Union in an exclusive Bay Area appearance.

Joining Getz will be the other members of his quartet, Jim McNeely, Marc Johnson, and Victor Lewis.

Tickets are $7 with a student ID and $10 general admission, and are available through all BASS outlets and the Tresidder Ticket Office.

Getz, who has been called "the poet laureate of the tenor sax," has been a jazz artist for over four decades. He and his quartet will be in Palo Alto as faculty-in-residence for Week II (July 31-Aug. 6) of the Stanford Jazz Workshop.

Also in Palo Alto as faculty-in-residence for Week I (July 24-30) of the Stanford Jazz Workshop will be popular jazz saxophonist Richie Cole.

Cole will be appearing in concert at 7:30 p.m. Wednesday, July 27, in the Tresidder Lounge at Stanford.

Tickets are $4 with Student ID and $5 general admission and are available at BASS outlets and at the Tresidder Ticket Office.

Both concerts are presented by Student Arts at Stanford (STARTS) in conjunction with the Stanford Jazz Workshop.

CCRMA concert set for July 14

Computer music under the stars will be presented by the Department of Music's Center for Computer Research in Music and Acoustics (CCRMA) at 8:30 p.m. Thursday, July 14, in Frost Ampitheater.

Works by composers associated with CCRMA will include *The Digital Domain* (1983) by Elliot Mazer, Andy Moorer, and Loren Rush; *Dreamsong* (1978) by Michael McNabb; *Garden for Orpheus* (1979) by Paul Wieneke; *Call to the Spirits* (1981) by Janis Mattox; *Rhapsody for Flute and Computer* (1971) by Leland Smith; and *Colony* (1983) by Bill Schottstaedt.

Two of the pieces will feature live performers. *Call to the Spirits* is the first movement of *Shaman*—a four-part musical theater piece featuring percussionist George Marsh and computer-generated sound.

Music Prof. Leland Smith's work will feature flutist Yvonne Kendall, who is working towards her D.M.A. in music. He hopes to have a computer robotic arm in place by July 14 to give her time cues.

Tickets for the concert are $6 general, $3 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door. The audience is advised to bring blankets.

50-plus, five-mile fun run set July 17

A "50-plus fun run," open to all runners over 50, will start at 8:30 a.m. Sunday, July 17 at Foothill College, according to organizer Donald Carpenter, adjunct professor of electrical engineering at Stanford.

The five-mile run includes slight grades. A $1 donation is requested for refreshments. Further information may be obtained from Carpenter at 327-8043.



Harlan Hokin

Devotional vocal music at Mem Chu

The Department of Music will present a free concert of devotional vocal music of the Middle Ages at 8 p.m. Wednesday, July 27, in Memorial Church under the direction of Harlan Hokin, lecturer in early voice.

Hokin will be joined by early music doctoral students Patricia Halverson, Vera Kochanowsky, and Ruth Van Baak-Griffioen in music primarily from 14th-century France.

Featured work on the program will be *Le Lay de la Fonteinne* by Machaut—a long narrative poem. The four singers will also perform an unstaged version of the 14th-century anonymous miracle play, *Planctus Mariae*.

Art Gallery show memorabilia of the Red Barn, now set for renovation

In conjunction with the renovation of the Red Barn on campus, an exhibition of paintings, drawings, prints, photographs, and memorabilia related to Leland Stanford's interest in breeding and training fine trotting horses will be shown in the Art Gallery through August 14.

Stanford's Palo Alto Stock Farm was once the finest stable in the country and was known throughout the world. In operation for 27 years, it was at its peak between 1880 and 1891.

Jockeys' silks, boots, bits, bridles, and other paraphernalia removed from the stables and stored in the Museum's basement will be on view together with 19th-century tools from the blacksmith's shop.

A feature of the exhibition will be the historic photographs taken of Stanford's horses during the 1870's by Eadweard Muybridge. Among these photographic experiments was the development of the zoopraxiscope, a machine that projects images from rotating glass disks in rapid succession.

The Art Gallery, on the Stanford campus next to the Cummings Art Building, is open Tuesday through Friday from 10 a.m. to 5 p.m.; Saturday and Sunday, from 1 to 5 p.m. It is closed on Mondays. Admission is free.



Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the two weeks in which the events occur. The next deadline is Wed., July 22, to cover the two weeks of Mon., Aug. 1, through Sun., Aug. 14. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, JULY 19

Stanford Museum Lunch Hour Tour: "The Harmony of Japan." 12:15 p.m. Stanford Art Museum. Free.

WEDNESDAY, JULY 20

Drama Dept Summer Theater Workshop: "Man Strapped to Bridge" by Becky Smith. An original play by a Stanford playwright, directed by Christine Roum; a romantic comedy. Noon. The Nitery. Free.

Stanford Museum Lunch Hour Tour: "The Harmony of Japan." 12:15 p.m. Stanford Art Museum. Free.

Aero-Astro-NASA-ASEE Seminar: "Why Look Down When the Stars Are Up: A Geologist Remotely Probes our Finite Earth for Food, Fiber, Oil, and Copper"; Prof. R.J.P. Lyon, Dept of Applied Earth Sciences, Stanford. Open to the public. 8 p.m. Terman Auditorium. Free.

THURSDAY, JULY 21

Drama Dept Summer Theater Workshop: "Man Strapped to Bridge" by Becky Smith. An original play by a Stanford playwright, directed by Christine Roum; a romantic comedy. Noon. The Nitery. Free.

STARTS-Jazz Workshop Speaking Jazz Lecture Series: "The Creation of Music"; composer, vibraphonist, living jazz legend Bobby Hutcherson speaks on creating jazz. 7:30 p.m. Tresidder Lounge. $3.

FRIDAY, JULY 22

Drama Dept Summer Theater Workshop: "Man Strapped to Bridge" by Becky Smith. An original play by a Stanford playwright, directed by Christine Roum; a romantic comedy. Noon, 8 p.m. The Nitery. Free.

SATURDAY, JULY 23

Drama Dept Summer Theater Workshop: "Man Strapped to Bridge" by Becky Smith. An original play by a Stanford playwright, directed by Christine Roum; a romantic comedy. 8 p.m. The Nitery. Free.

SUNDAY, JULY 24

The Lively Arts at Stanford: Midsummer Mozart Festival, directed by George Cleve. Program: Symphony No. 27 in G, K. 199; Piano Concerto No. 22 in E-flat, K. 482, Jean-Philippe Collard, piano; Flute Concerto No. 1 in G, K. 313, Maria Tamburrino, flute; Symphony No. 31 in D, K. 297, "Paris." 2:30 p.m. Memorial Auditorium. $12, $9, $7; students: $10, $7, $5.

Children's Health Council: 24th Annual Summer Symphony. Benefit with Mitch Miller conducting the San Jose Symphony Orchestra with guest artist Rosemary Clooney. 5 p.m. Frost Amphitheater. $13, $11(students, seniors: $10.50, $8).

TUESDAY, JULY 26

Stanford Museum Lunch Hour Tour: "The Stanford Legacy." 12:15 p.m. Stanford Art Museum. Free.

STARTS-Jazz Workshop Speaking Jazz Lecture Series: "Latin Jazz: A Discussion and Concert with Canoneo," Paul Potyen and Michael Spiro. 7:30 p.m. Tresidder Lounge. $3.

WEDNESDAY, JULY 27

Drama Department Summer Theater Workshop: "The Rope" by Eugene O'Neill. Directed by Johanna Dickey, this early one-act play by O'Neill is an allegory of the prodigal son with an unusual twist. Noon. The Nitery. Free.

Stanford Museum Lunch Hour Tour: "The Stanford Legacy." 12:15 p.m. Stanford Art Museum. Free.

Aero-Astro-NASA-ASEE Seminar: "Expanding Horizons of Cosmology"; Robert V. Wagoner, Dept of Physics, Stanford. Open to the public. 8 p.m. Terman Auditorium. Free.

Music Department Concert: Devotional Music of the Middle Ages; Harlan Hokin, singer and director, with singers Patricia Halvorson, Vera Kochanowsky, and Ruth Van Baak-Griffioen. 8 p.m. Memorial Church. Free.

THURSDAY, JULY 28

Drama Department Summer Theater Workshop: "The Rope" by Eugene O'Neill. Directed by Johanna Dickey, this early one-act play by O'Neill is an allegory of the prodigal son with an unusual twist. Noon. The Nitery. Free.

FRIDAY, JULY 29

Drama Department Summer Theater Workshop: "The Rope" by Eugene O'Neill. Directed by Johanna Dickey, this early one-act play by O'Neill is an allegory of the prodigal son with an unusual twist. Noon, 8 p.m. The Nitery. Free.

SATURDAY, JULY 30

Drama Department Summer Theater Workshop: "The Rope" by Eugene O'Neill. Directed by Johanna Dickey, this early one-act play by O'Neill is an allegory of the prodigal son with an unusual twist. 8 p.m. The Nitery. Free.

SUNDAY, JULY 31

The Lively Arts at Stanford: Midsummer Mozart Festival, directed by George Cleve. Program: Overture, Trio and Quartet from "Lo Sposo Deluso," K. 430, with soloists Nile Norton and Baker Peebles, tenors, and Evelyn de la Rosa, soprano; Sinfonia Concertante for Violin and Viola in E-flat, K. 364, Daniel Kobialka, violin; Robert Levine, viola; Two Marches in D, K. 335-320a; Serenade No. 9 in D, K. 320, "Posthorn." 2:30 p.m. Memorial Auditorium. $12, $9, $7; students, $10, $7, $5.

Music Department Concert: Summer Choir; William Ramsey, director. Program: Mozart's Coronation Mass and Schubert's Mass in C. 8 p.m. Memorial Church. Free.

EXHIBITS

The Stanford Quadrangles: Design Construction. An exhibition of materials relating to the early planning development and construction of the university; compiled from the resources of the University Archives. Second floor gallery, Green Library. May 23-July 28.

"Propaganda Posters of Two Revolutions." Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8-Jan. 31.

The Stanford Horse Show. In conjunction with the renovation of the Red Barn at Stanford, the exhibit contains paintings, photographs, and Currier and Ives prints of Leland Stanford's celebrated trotting horses, bred and trained in Palo Alto. T-F 10-5; S-S 1-5; closed Mondays. Stanford Art Gallery. June 28-Aug. 14.

Paintings by Liz Cheney. Atmospheric style and designs by a student of the Stanford Fine Arts Dept. Upper Lobby of Tresidder Union. July 3-Aug. 1.

Photographs by Aurangreb Khan. Coffee House Gallery, Tresidder Union First Floor. July 3-Aug. 1.

Batik by Sharon Chacko of Kingston, Jamaica. International Center. July 4-Aug. 14.

CAMPUS REPORT

Volume XV, Number 41 | A publication for Stanford University faculty & staff | July 27, 1983

Boston, MIT to try TVI with Gibbons

Starting this fall, a Stanford engineering professor will begin work with Boston high school teachers and MIT students to bring courses to high school students via tutored viedeotaped instruction (TVI).

Based on 10 years experience and evaluation, Prof. James Gibbons believes TVI is at least as good as live classroom instruction for subjects ranging from math, physics, and engineering to drug rehabilitation and poetry.

When TVI is properly used, students can—and have—outperformed those taking identical material in a regular classroom setting. TVI can greatly extend the reach of scarce professionals at very low cost, he adds.

TVI uses unrehearsed, unedited videotapes of regular lectures, recorded directly in a live classroom.

The tapes are viewed by groups of four to eight students, who are encouraged to ask questions and interrupt the tape frequently by a tutor.

"The tutor cannot and should not be expected to teach the course in any way," says Gibbons. She should want to review the subject herself, help stimulate discussion, and call the instructor when help is needed in answering questions.

"Straight-A students from MIT and Stanford have proven to be acceptable tutors. But some of our best tutoring has come from students who may not have taken the course or who had difficulty with it. They are interested in learning the material and often can identify more readily with problems their students are having."

For engineers, experience as a TVI tutor appears helpful for becoming project managers.

Instead of providing answers, the tutor helps a group of colleagues think about a problem and develop the broadest range of perspectives they can.

In difficult lectures, the videotapes may be interrupted every five or 10 minutes for about five minutes of class discussion.

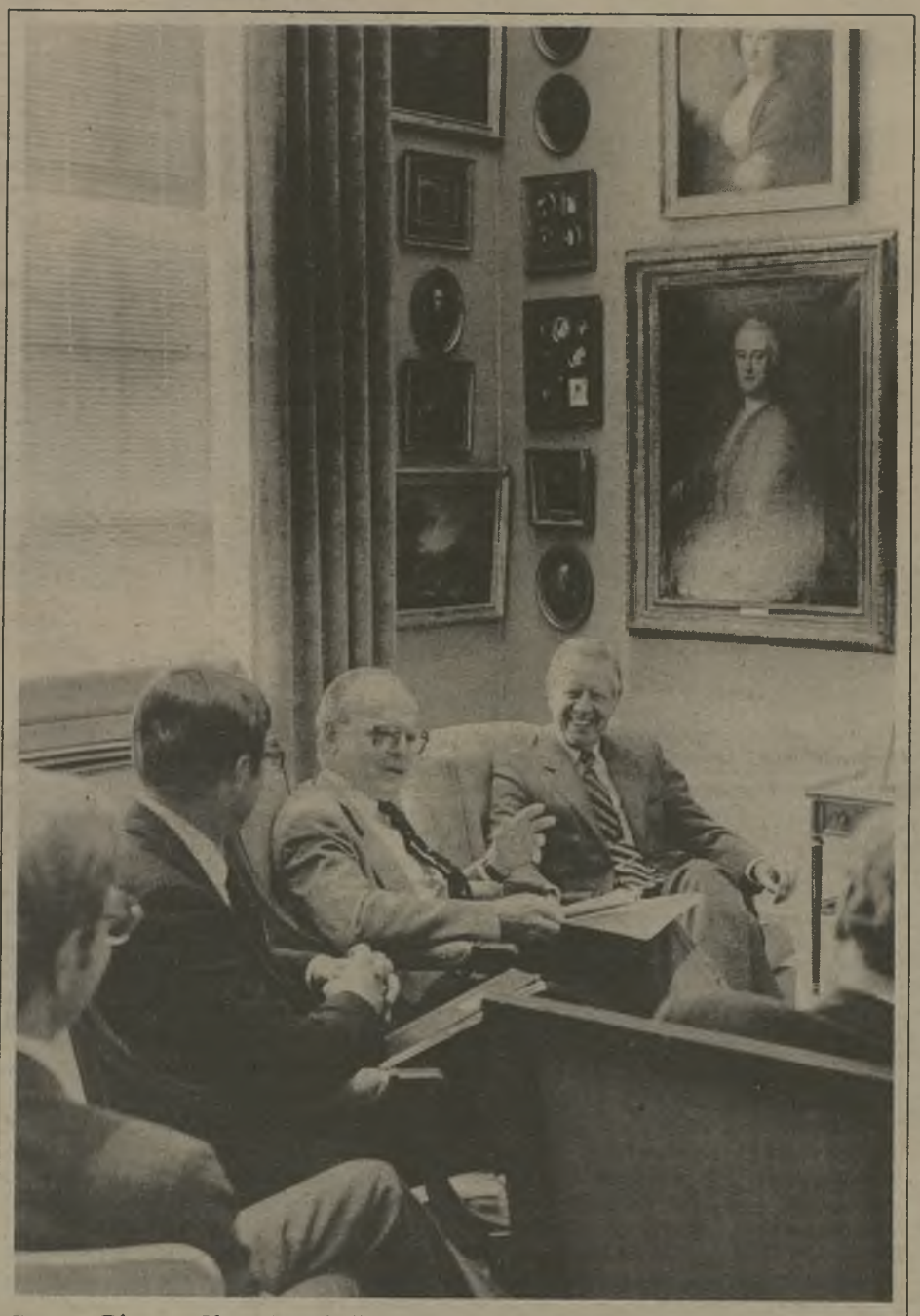
Gibbons has experimented with TVI using math, physics and electrical engineering courses at Hewlett-Packard since 1972, and with several other companies since then.

TVI has been used at Stanford for classes in electrical engineering, engineering and economic systems, and English.

It also has been used to provide Stanford courses to Japanese engineers and to provide family rehabilitation of Eskimos with drug-related problems.

Currently TVI has been applied at Harvard Medical School, the University of Massachusetts at Amherst, Aston University in Birmingham, England, the

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Hoover Director Glenn Campbell, center, with President Carter. See page 7.

PHOTO BY ED SOUZA

Academic freedom abridged by ASSU in McCloskey class

Stanford University has officially apologized to former Congressman Paul N. (Pete) McCloskey for violations of his academic freedom as a guest professor of the Associated Students this spring.

The apology was sent to McCloskey July 25 by Provost Albert Hastorf, following a faculty review of the written record of events surrounding McCloskey's three-unit course on "The Congressional Decision-Making Process, 1964-83."

Finally, "please accept my personal apologies and those of Stanford University for the infringements upon your academic freedom here, as well as the academic freedom of your students," Hastorf wrote McCloskey.

"I also apologize for any public embarrassment that this might have caused you.

"Perhaps it will be of some compensation to you to know that the lessons that have been learned from this case will cause us to revise our policies and procedures so that future (ASSU) guest professors and other instructors at Stanford will without question enjoy the special protections that their positions warrant. You have therefore—albeit inadvertantly—participated in the teaching process at Stanford above and beyond Political Science 7."

Hastorf said the University would not authorize academic credit for any course proposed by the Associated Students'

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Rare reversal

Hastorf backs Freedman for tenure

Stanford Provost Albert H. Hastorf will recommend Assistant Prof. Estelle Freedman of the History Department for tenure.

An award-winning teacher, Freedman played a central role in developing the feminist studies program at Stanford. Her case has attracted wide interest within the academic community nationally.

"We're really delighted," commented Prof. Barbara Babcock of the Stanford Law School, who coordinated her support.

In a telephone interview, Freedman said "I'm relieved that the waiting is over, pleased at the recommendation of the Provost, and grateful for the support of friends and colleagues. Now, I'd like to just work."

Winner of the Dinkelspiel award, the University's highest honor for contributions to undergraduate education, she currently is on leave with a National Endowment for the Humanities fellowship.

Hastorf's action, announced Thursday, July 21, follows the recommendation of Vice Provost Herant Katchadourian, who served as appeal officer in a grievance by Freedman.

Hastorf said his decision was made "with great difficulty" because "a most careful consideration" had been given the case by Dean Norman K. Wessells of the School of Humanities and Sciences.

Following the advice of the School's Appointments and Promotions Committee, the dean had recommended against tenure. Reversals at the provostial level are quite rare.

Hastorf stressed that "no evidence of sex-based discrimination" had been found, but that his provostial responsibility was "to take a view that gave recognition, where appropriate, to University programs such as the Center for Research on Women and the Feminist Studies Program."

He explained that Freedman's case now

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People

Alexander George to share MacArthur prize with wife

Prof. Alexander George, 63, Stanford political scientist specializing in U.S.-Soviet relations, Wednesday, July 20, was named one of 14 MacArthur Prize fellows.

George will receive totally unrestricted awards amounting to $295,200 over the next five years from the John D. and Catherine T. MacArthur Foundation of Chicago.

(Previous recipients of the MacArthur prize at Stanford include Profs. Bradley Efron and Persi Diaconis, statistics; William Durham, anthropology; and Charles Bigelow, computer science and art. Another newly announced recipient, Prof. Richard Schoen of UC-Berkeley Department of Mathematics, will teach at Stanford during 1983-84. A total of 95 prizes have now been awarded.)

George said he was "stunned with the good news" when the foundation notified him of the award Friday. "It's just wonderful. I wish more people could be so honored. Many of my colleagues at Stanford and elsewhere are more deserving."

The award will enable his wife, Julie, to continue their collaborative work on President Woodrow Wilson, first published in "Woodrow Wilson and Colonel House," (1958) widely regarded as a classic study of the role of personality in politics.

"During the past five years, Julie's research has led to an interesting and productive collaboration between us and Dr. Michael Marmor of the Stanford Medical School. Now the Wilson project can go full speed ahead," George notes.

George's continuing effort to bridge the gap between theory and practice in foreign policy will focus on managing Soviet-American rivalry and on using historical cases to develop theories relevant to foreign policy makers.

Winner of the 1975 Bancroft prize for his book on *Deterrence in Foreign Policy*, George warned earlier this year that the steady deterioration in U.S.-Soviet relations has created "dangerous instability and uncertainty."

While both sides may be drifting toward a second Cold War, "they continue to have a common interest in managing their rivalry in order to avoid war threatening crises," he wrote in his latest book, *Managing U.S.-Soviet Rivalry: Problems of Crisis Prevention.*.

In a book on *Force and Statecraft: Diplomatic Problems of Our Time*, coauthored with Stanford history Prof. Gordon Craig earlier this year, George said moral perfectionists in foreign policy "provide a useful safeguard against the tendency of practical men to engage in moral self-deception."



Alexander and Juliette George

Craig and George developed the book from extensive case histories in 19th and 20th century diplomacy for a course they taught jointly.

"Teaching is an integral part of research," George said. He will divide his time this fall between a seminar on managing American-Soviet relations and working with Prof. John Lewis at the Center for International Security and Arms Control under a grant from the Hewlett Foundation.

He is working as an informal consultant with Dr. David Hamburg, president of the Carnegie Corporation and former Stanford professor of psychiatry, on new research initiatives on problems in American-Soviet relations.

George will participate in a study of regional conflict management with scholars from the Soviet Academy of Sciences and others at the Dartmouth conference, sponsored by the John F. Kettering Foundation. He also is working with the John F. Kennedy School of Government at Harvard in a study on avoiding nuclear war with the Soviets.

A Stanford faculty member since 1968, George was designated the first holder of the endowed Graham H. Stuart professorship in international relations in 1978. A native of Chicago and holder of two degrees from the University of Chicago, he worked 20 years at the RAND Corporatiopn before coming to Stanford.

The University has provided "a really supportive environment" for long-range research, he notes. The opportunity to teach in collaboration with Gordon Craig has been "a great pleasure." George plans to continue teaching an advanced seminar to show how case studies from diplomatic history can contribute to modern foreign policy.

"Friday was a good day. It was almost too much," George said. Besides the MacArthur call, he learned that a Stanford-Berkeley joint proposal for a new center to stimulate research and training in the study of Soviet foreign policy would receive $1 million from the Rockefeller Foundation.

On Tuesday, he and his wife spent four hours with a crew moving his mother into a new apartment. "That brings you back to reality in a hurry," he said.

His only regret is that he cannot personally thank his benefactors at MacArthur, since those who made the selection remain anonymous. "It's hard to thank an institution without conveying appreciation to individuals."

But if his long-term interest in U.S.-Soviet relations reduces the risk of conflict between the two superpowers, a lot more people may have reason to be grateful.

—Bob Beyers

Mary Lou Allen heads cable TV group

Mary Lou Allen, director of the Stanford Instructional Television Network, will head the Stanford Cable Television Steering Committee.

Her appointment, effective immediately, was announced by Robert L. Street, vice provost for academic computing and information systems.

The Steering Committee will provide policy guidance in the University's dealings with Palo Alto, Santa Clara County and potential cable vendors, and in the development of internal procedures for cable television on campus, according to Street.

An assistant dean in the School of Engineering, Allen serves as general manager of a four-channel TV network broadcasting 50 courses in engineering and the sciences each academic quarter to 150 Bay Area high technology companies. The network has a full-time staff of 15, reaches about 1,500 students, and has an annual income of about $3 million.

Faculty openings

Electrical engineering professorship

The Department of Electrical Engineering seeks a professor or associate professor (teaching). Primary responsibilities are for undergraduate and first-year graduate teaching and for supervision and development of undergraduate curriculum. Experienced college or university teacher preferred. Record of text writing desirable.

Send resume and names and addresses of references by Dec. 1, 1983, to Prof. Robert L. White, chairman, Search Committee, Department of Electrical Engineering, Stanford University, Stanford, Calif. 94305.

Stanford University is an Affirmative Action, Equal Opportunity Employer and welcomes applications from women and minority groups.

Linvill honored with AEA medal

The American Electronics Association has given its 1983 medal of achievement to Prof. John Linvill of the Stanford Department of Electrical Engineering.

The award recognizes "significant contributions to the advancement of electronics."

A Stanford faculty member since 1955, Linvill was chairman of the Electrical Engineering Department for 17 years. He currently serves as codirector of the Center for Integrated Systems.

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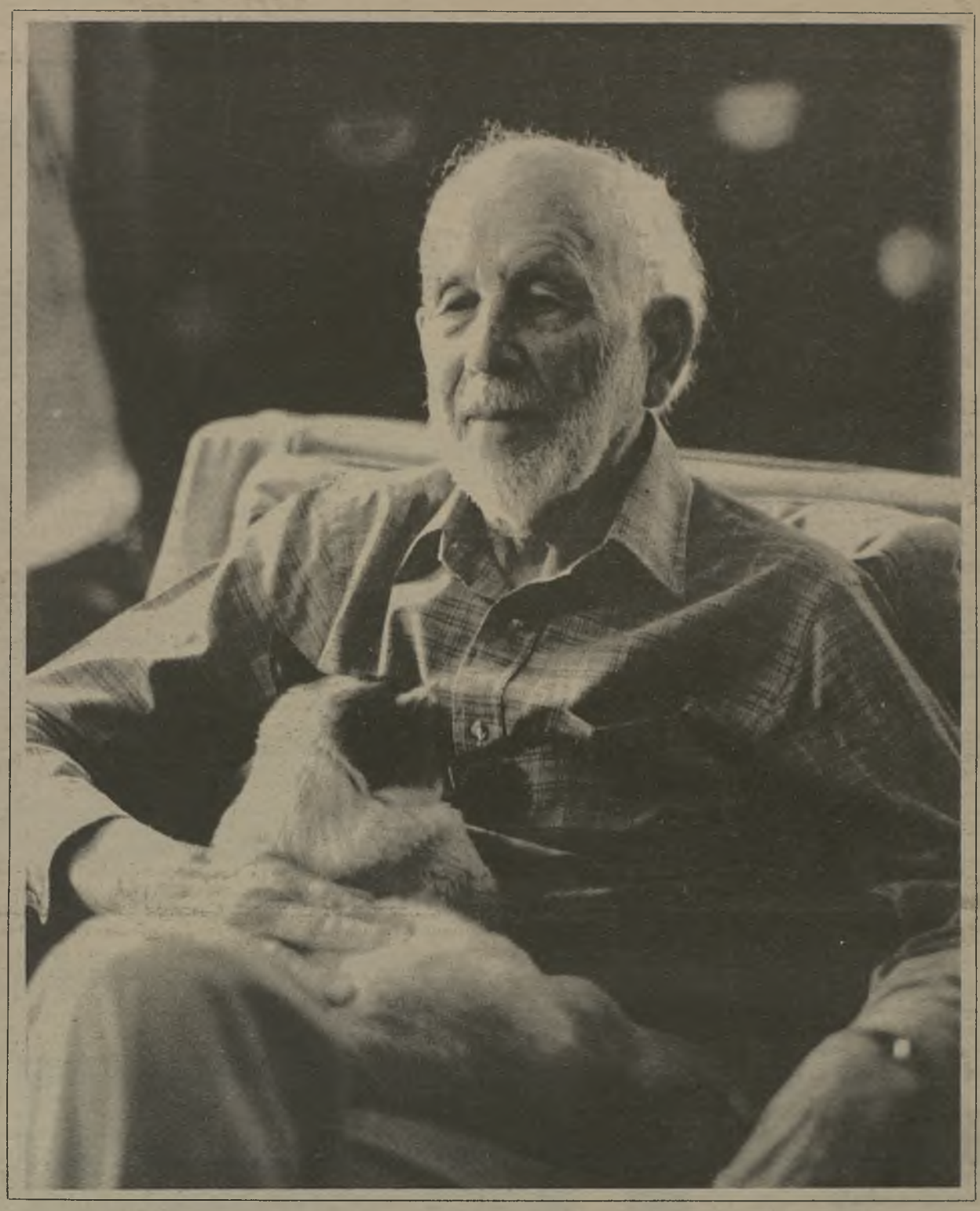
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Paul Kirkpatrick remembers when top scientists had to clean up their own laboratories

After 52 years on campus, one of the grand old men of physics looks back on a career in which he did it very much his own way. (First of two articles.)



Two old friends: Emeritus Prof. Paul Kirkpatrick, 89, with Danny K., the family's 17-year-old male cat.

PHOTOS BY CHUCK PAINTER

BY DONALD STOKES

After four decades of research in x rays Paul Kirkpatrick can remember the time when research was often an orphan in academe. Since then, he feels, research has tended to dominate teaching.

Kirkpatrick, with his student Albert Baez, was the first to call attention to a method of making x-ray images by optical reflection. He was also an innovator of holography in the U.S.

He recalls the time when distinguished scientists had to do their own washing-up chores as there was no budget to pay the necessary 25 cents an hour to cleaning people.

Now entering his 90th year, Kirkpatrick has always regarded teaching as of equal importance to research in universities.

Kirkpatrick is a familiar figure on the Stanford campus, where he cycles every day. Tall, erect and outspoken, he is tart in his views on many aspects of modern education. Having gotten his start in a one-room schoolhouse, he sees little evidence that modern students can spell or express themselves much more adequately than during his schooldays.

In view of his long acquaintance with x rays he was asked to comment on the recent flight on spacecraft Challenger by Stanford alumna Sally Ride, whose doctoral thesis had been on x rays in interstellar space.

"Sally Ride shows what may and probably does happen to whatever x rays there are in interstellar space," he said in a campus interview. "She is a theoretical physicist who draws mathematical conclusions from the known properties of x rays and the great variety of atomic particles thought to be distributed through galactic space."

He agreed that 19 years ago he had been elated to hear that the photon-catching assembly other scientists had built and launched had sent back the first information on x rays from outer space. "I am just an interested spectator, that's all" he said.

Kirkpatrick believes that studies of x rays from outer space have already revealed information of importance. He maintains an interest in the latest developments though he does not read enough about them to feel that he can contribute anything important.

Kirkpatrick and Mary Rose, his wife of almost 60 years, live on Santa Teresa Street, Stanford, in an attractive house which they designed themselves five years after they arrived on campus 52 years ago. Their property includes 14 different fruit trees and a 100-foot redwood, which Kirkpatrick planted himself.

The swing that hangs from an ancient oak in the garden has borne many generations of children, including those of Kirkpatrick's students and their offspring. There is a huge clamshell from the Philippines which measures two feet across. Mrs. Kirkpatrick is the horticultural authority and the planner of the densely-planted half-acre.

Kirkpatrick has been a life-long vegetarian, non-smoker and non-drinker. "I have never felt the need to conform" he says,"whether in the cut of my clothes, the accoutrements of my bicycle, fads of speech, the momentary aversions and enthusiasms for current songs, women, car models, or recreations.

"This independence or obstinacy is traceable from childhood through college and World War II experience, and possibly clear up to date, though I have mellowed somewhat since passing the age of 50.

"When boys began experimenting with tobacco I saw no reason for going along with what even then was suspected of being an unhealthy habit. When alcoholic beverages became fashionable instead of slightly disgraceful in middle-class American life I continued my teetotalism, perhaps because it would have been embarrassing to acknowledge that I was changing a lifelong habit solely because others were doing it.

"It was the same with sexual abstention and language habits when I suddenly descended from a teaching post in a highly proper college to the rear ranks of the U.S. Army.

"It would be very easy to claim that this personal consistency had something to do with virtue, or that it was maintained through heroic struggle. Nothing of the kind. I did as I felt disposed to.

"It would be pleasant to suggest that these oddball characteristics at an early age were premonitions of the great originality later to be manifested in scientific research. But I did not turn out to be a great originator in science. I have never been more than a journeyman scientist.

"In science I made the big leagues but certainly did not come in as a bonus baby, or go out to the Hall of Fame."

The Kirkpatrick story began on July 21, 1894, when he was born to homesteaders in South Dakota, in a rough shack that had no amenities and was only a bare improvement on the prairie

continued on next page

Kirkpatrick/continued from page 3

sod-house which his father had originally erected.

He attended a one-room schoolhouse where 20 or so pupils, ranging in age from six to 12 were all taught by the same teacher. "The education wasn't bad," he smiled. "I can still spell better than my children."

His parents decided to give their three sons a chance of further education, and moved to southern California. Here the boys went to high school, and in due course young Paul entered Occidental, which was then a Presbyterian college.

During his senior year a recruiter came to the college looking for a qualified person to teach physics at an American mission college in China.

"I had lived at home all my life, including when at college, so I accepted at once," said Kirkpatrick. "I spent two years in Hangchow, and had some rewarding experiences there."

He returned to the U.S. during World War I and saw service in the Army. On his return he went to UC-Berkeley to work for a graduate degree in physics. He decided to concentrate his research on x rays; a study he was to continue intermittently all his life. He received his Ph.D. in 1923.

"Early in my Berkeley experience I had decided, as a matter of insurance, to qualify for the California high school teaching credential. There was a chance; I thought, that I might flunk out of the graduate program, or run into difficulty, or even decide to marry.

"The last eventuality never became acute because, influenced by my father's words and my brothers' experiences, I had decided never voluntarily to accept a dependent until I had a good job and $5,000 in the bank. This marital timidity would look ridiculous to today's students, but it looked rational to me."

His experiences with research at Berkeley convinced him that the concentration by most scientists on pre-selected ends often causes them to pass blindly by great opportunities along the road. His favorite example is of Rontgen discovering x rays at a time when at least 100 other laboratories possessed the means to make the same discovery.

In his own experiments with successive reflections of x rays from two crystals he employed the elements of the two-crystal spectrometer, an instrument later to be of great value.

"I observed reflections in the parallel and antiparallel positions, noted and understood the great differences in the widths of these maxima but passed on without realizing the superior spectroscopic resolution that two crystals make possible. Not much later the papers of many others were to appear and make manifest the great possibilities."

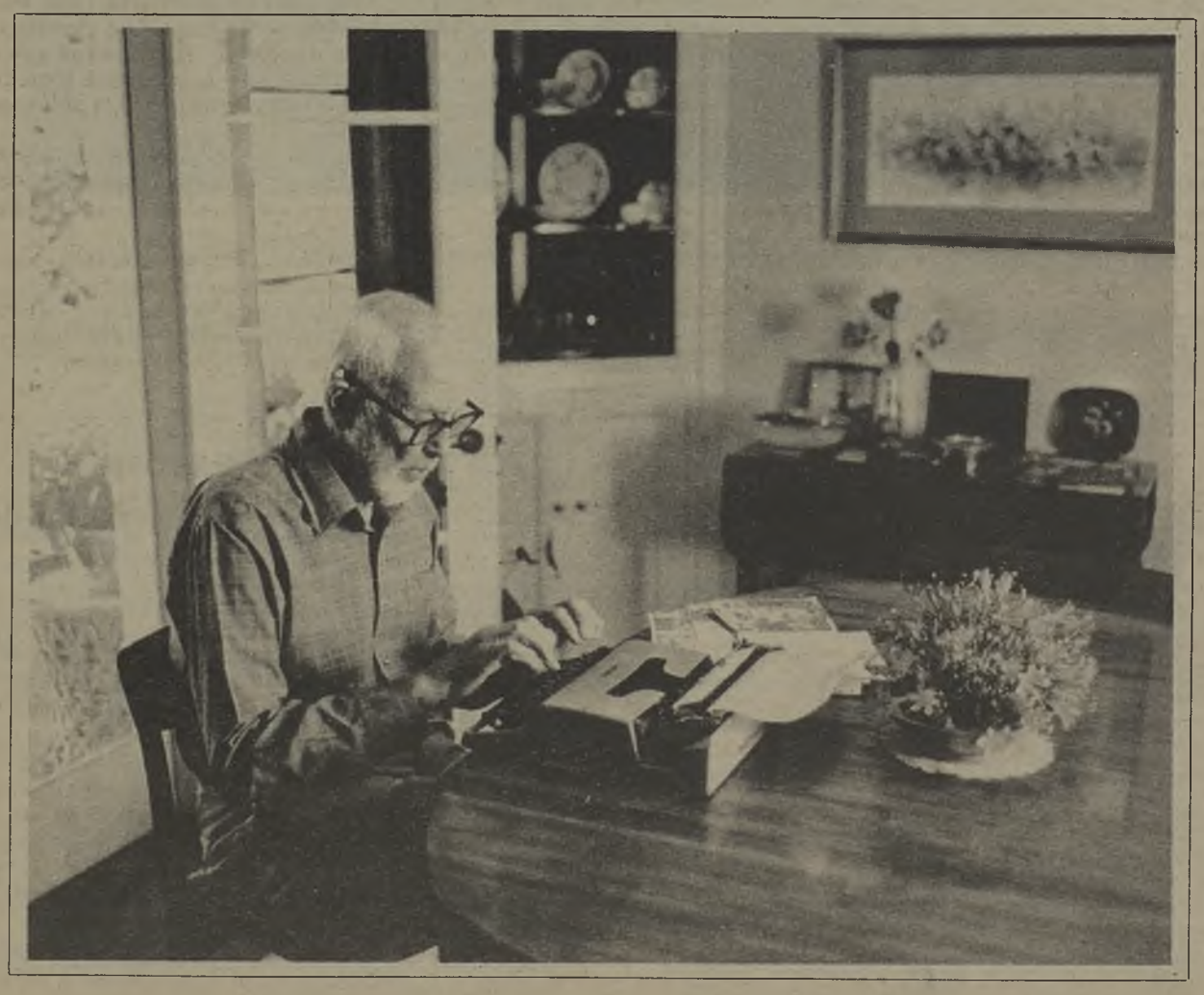
He was offered a post by the University of Hawaii, which was looking for a physicist to operate their one-man Physics Department. He became the youngest professor in the young university.

The professor who is not too self-satisfied feels his own education promoted by association with students such as William H. Hansen and Frederick Seitz.

He found that there were almost no facilities for x ray research in Hawaii. However, he discovered some pieces of disused hospital radiological equipment, and with these continued his investigations into the polarization factor found in expressions of the intensity of reflection of x rays by crystals.

While this crude experiment was in progress he was visited by Prof. David Webster, head of Stanford's Physics Department, who was in the Islands as a tourist. The two men discussed x-ray physics earnestly. This meeting was to affect the major part of Kirkpatrick's subsequent professional life.

"I still did not have the $5,000 I considered necessary as a basis for marriage," said Kirkpatrick. "However, I was getting there. I had three fine prospects under consideration when I left Honolulu in 1924 to fill a summer quarter's appointment at UCLA."



Entering his 90th year, Paul Kirkpatrick is still busy on various projects.

On the return trip he met a Los Angeles girl, Mary Rose Clark, who was on her way to a teaching post in Maui. "The confinement of a small and slow passenger ship led to our marriage," he said.

After six years in Hawaii he spent a year at Cornell doing research. A year after his return to Hawaii he received an offer from Webster at Stanford of a one-year appointment in the Department of Physics. He accepted and moved to Stanford with his family, which now included two daughters.

That one year's temporary appointment was to stretch to 28.

At the request of the American Institute of Physics, Kirkpatrick later made notes on his career. Writing about his time at Stanford he said:

"The Stanford Department of Physics in 1931, though far surpassing that of the University of Hawaii by any criterion, was a petty operation by the standards which came to prevail 30 years later, either at Stanford or at a score of other respected institutions. The instructing force consisted of four professors, two instructors and six part-time assistants.

"The assistants were supposedly pursuing the doctoral degree but the Depression was on and none of them cared to be handed the diploma which might operate as a walking-paper to the jobless outer world. So tenure records were set that would look ludicrous today.

"As with all tuition-charging schools, Stanford suffered from shrinking enrollment and relaxed entrance standards. Most of the professors sought to do research and to direct graduate students, but the total annual budget of the Physics Department, excluding salaries, was $5,000, so the choice of research fields and projects was sharply limited.

"The failure of a vacuum pump or precision meter was an occasion of crisis.

"The chairman, David Webster, who was by any odds the best informed and mentally endowed of the professorial group, spent hours soldering up his own circuits, cleaning out diffusion pumps, and doing other chores which a student might have performed for 25 cents an hour, had such financing been available.

"The undergraduate instruction was half-heartedly supported, and generally criticized by the students subject to its operations. The undergraduate laboratory courses were in awful shape, desperately needing money and a little tender care.

"In addition to their fixed tuition fees, students who took laboratory courses were required to pay certain additional amounts, under the justification that lab instruction was particularly costly and that the extra expense should be borne, at least in part, by those who were to benefit from it.

"These lab fees brought to the department each year several hundred extra dollars, but few of those dollars ever came to the support of the impoverished labs. These funds were regarded as general departmental resources and for the most part were devoted to research.

"I felt that the undergraduates deserved better service than the department was rendering, and that the department was treated in a niggardly fashion by the higher administration."

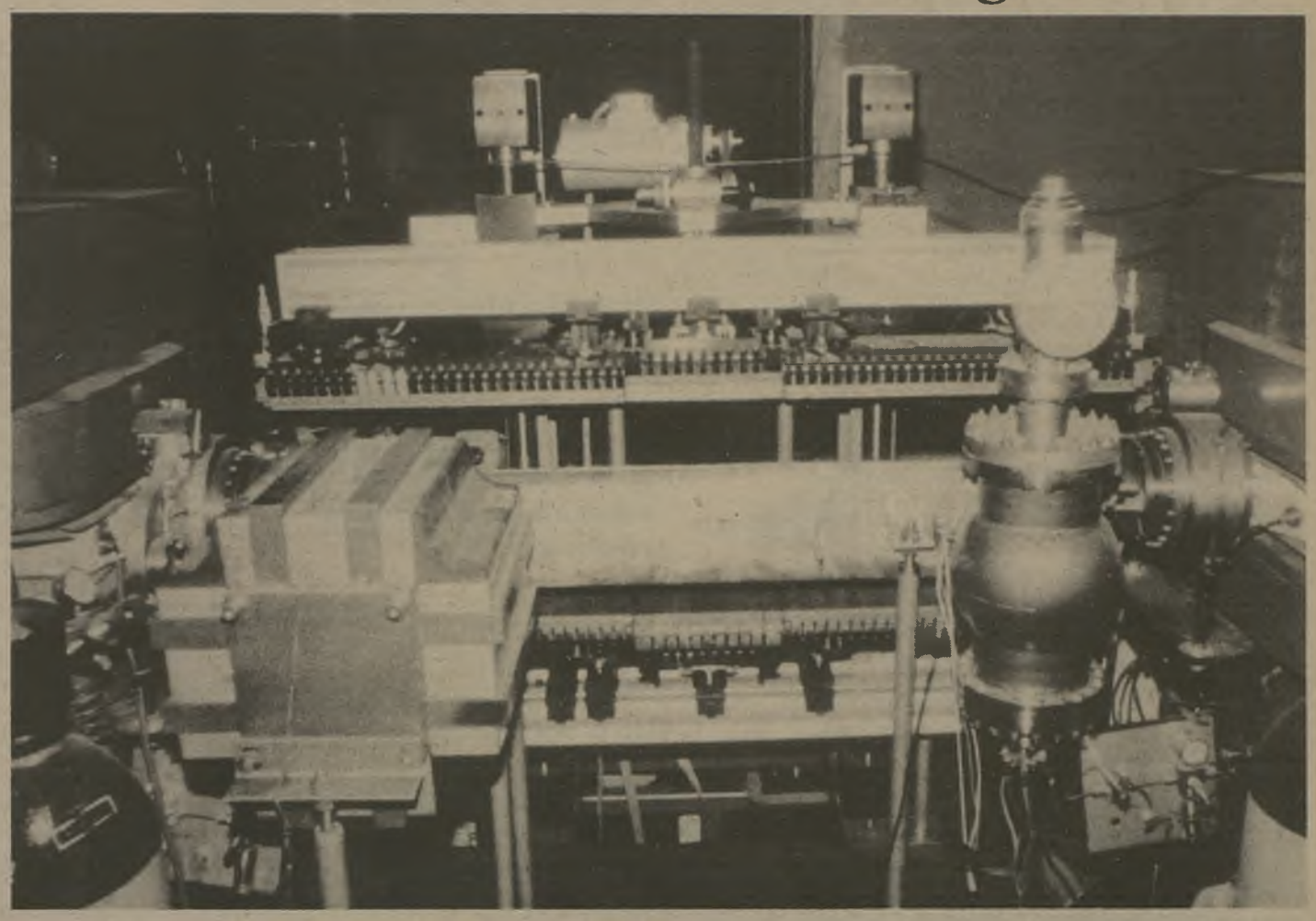
When he was in his thirties Kirkpatrick joined a young organization which had been launched to represent the needs of physics teachers. The need for such a group was plain. "The American Physical Society had long been, and still is, the leading organ of that discipline in this country," he recalls, "but research has always been its central concern. Its journal *Physical Review*, has never offered any help to physics teachers as such.

"But many members of the Society were also teachers, and back in the 1920's a few of them

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World's most powerful lasers in prospect

Scientists link free electron laser, accelerator ring



Stanford free electron laser was attached to French accelerator, as shown above.

Scientists in France and at Stanford have produced a working free electron laser connected to an accelerator storage ring, proving technology that could lead to the world's most powerful lasers.

The lasers could be used for industrial, medical, and military applications.

The device "lased" at 11:31 p.m. French time on June 21, producing a brilliant red beam for a half an hour.

The laser, only the second high energy free electron laser in the world, was developed by a team of Stanford researchers led by Prof. John Madey of the electrical engineering department, a team from LURE in Orsay, France, led by Yves Petroff, and by Stanford consultant David Deacon. The world's first high energy free electron laser fired up at Stanford in 1977.

The laser uses the energy produced by linear accelerators, converting relativistic electrons (electrons moving at almost the speed of light) into photons, the constituent of light. Because of the power that can be produced in accelerators, the potential for the laser is considerable, Deacon said.

"You may even been able to shoot down planes or missiles," he said.

The first free electron laser was run on Stanford's superconducting accelerator at the High Energy Physics Laboratory on campus. A beam of electrons was fired down the acclerator and mirrors extracted a very small portion of their engery which was pumped into the laser.

Because of the nature of the accelerator only .03 percent found its way into the laser.

"The purpose of the experiment was to demonstrate the idea, so .03 percent was an astonishing success," Deacon said. "Once it operated, the clear idea was, we have to increase the efficiency and increase the power."

The logical way to do that, the Stanford scientists decided, was to attach the laser to a storage ring, a round tube that can store the electron beam for a long period of time.

The French volunteered the accelerator and storage ring at Orsay, and Deacon, who had just graduated from Stanford, went over. He was eventually joined by French scientists and colleagues from Stanford.

One limitation to the Orsay experiment was that the laser needed a straight section in the storage ring to extract the electrons and the longest straight section at Orsay was one meter. This reduced the gain, the amount of energy emitted in excess of the energy put in.

The experiment was ready to go last year but problems with the mirror delayed the work. The high quality mirrors were darkened by the spontaneous radiation from the stored electrons. The damaged mirrors absorbed light instead of reflecting it.

The problem was avoided by reducing the electron energy, although the resulting gain of the laser was .07 percent, the smallest gain ever used by a laser.

Because the laser operates in the visible part of the spectrum, the scientists could see the red beam. The first free electron laser which operated in the infra red, was invisible, Deacon said.

"It's really great working in the visible. The eye is a much more versatile tool than helium-cooled solid state detectors," he added.

The beam produced a beautiful, multicolored image on the wall. The various colors were produced by the Doppler effect on the red beam.

Deacon said the next stage of the experiment will be to build a storage ring here especially for the free electron laser with a straight section of 20 meters.

"There are three different ways to make high power in storage ring lasers. None of them has been tested," he said. The new ring "is designed to test these three different techniques."

He said there are many possible future applications for this technology.

"Probably the most important is industrial processing of materials and that means using photons to cause the molecules to jump through the hoops that you want them to jump through.

"For that you need to have a defined wave length, you need to be able to set the wave length to where you want it (which means tunable), you need high power so you have lots of photons to make lots of molecules do what you want, and efficiency to make it cheap.

"Isotope separation is another possibility. That's really an example of the general class of materials processing.

The free electron lasers also could be used for surgery, Deacon said.

"The medical application requires that we change the frequency, the intensity and the pulse length of the laser that you're using. Adjusting the light frequency changes the penetration depth, and allows use of the new cancer-cell-specific drugs such as the hematoporphyrin derivatives.

"You need to change the pulse length according to the size of the element that you're irradiating. If it is a cell you can have a long pulse length; if it is something inside a cell you need a very short pulse length.

"Standard lasers just have a single pulse length, and you can't change that around. Free electron lasers have an adjustable pulse length."

Deacon said free electron lasers will not hit the market for another five years.

Funding from the research came from the U.S. Air Force and the French government, he said.—**Joel Shurkin**

Sohio provides $2 million for oil reservoir forecasting

Stanford University will receive $2 million over five years to improve forecasting oil reservoir performance, the Standard Oil Company (Ohio) announced Monday, July 25.

The Stanford program, headed by Prof. Khalid Aziz, petroleum engineering, is one of five chosen from nearly 1,000 applicants in the company's $10 million Center for Scientific Excellence competition.

Other recipients and their fields include: University of Cincinnati, membrane technology; University of Illinois at Urbana, crop molecular genetics and genetic engineering; MIT, offshore engineering; and Pennsylvania State University, mining technology.

Other faculty involved in the Stanford project will include Profs. Henry Ramey, petroleum engineering; Steve Graham, petroleum geology; Andre Journel, geostatistics; and Amos Nur, rock physics.

Formerly at the University of Calgary, Aziz has developed computer-based methods for simulating and forecasting reservoir performance. A professor of chemical engineering at Calgary for 12 years, he was manager of the computer modeling group there for five years before coming to Stanford in 1982.

Criteria for the national competition included academic excellence, support and training of scientists, collaboration with Sohio, and innovative research.

Frank Press, president of the National Academy of Sciences and judge in the competition, cited the broad response and cooperative effort as "precisely what this country needs at the present time.

The Sohio program has real significance in that it may be a model for many other industrial sectors or companies to follow."

Other outside judges included Glenn T. Seaborg, Nobel laureate in chemistry at the University of California at Berkeley, and physical chemist Bruce Hannay, retired vice-president of research at patents for Bell Laboratories.

Glenn R. Brown, Sohio senior vice-president for technology and planning, said "we asked institutions to be innovative, to ponder the long-term future, and to direct their thinking to goals and objectives which they felt would be critical to the nation's future."

The center's program will represent about one-third of Sohio's funding for educational support during the year.

Kirkpatrick/continued from page 4

organized the American Association of Physics Teachers and started putting out a journal. That few has now grown to between 10,000 and 15,000 thousand members.

"I joined the Association shortly before I came to Stanford, worked on AAPT committees, wrote for its journal, served as a national vice-president and president, and in 1959 was awarded its Oerstad Medal for notable contributions to the teaching of physics."

His acceptance speech on that occasion received considerable acclaim and was reprinted in several publications in the U.S. and abroad.

In his address he said that although instruction and research operated as an established partnership in American universities there were many aspects of competition and interference between them. The impressive growth of research to a dominant activity at universities was in part at the expense of the teaching function.

Kirkpatrick went on to urge that it was no longer necessary to nurture research by depressing the interests of instruction, and it would be well for the universities and their students if the preference which research had been enjoying were to be yielded, at least temporarily, to the teaching activity.

He recalls his words on that occasion: "It does seem that is is high time to swing the protective tariff back from the researchers to the teachers. . . .

"The switch I suggest to the aid of teaching is due at the several levels of physics teaching because no one seems to want to teach physics in the high schools, because the instruction offered in colleges and universities is not attracting enough specializing students to meet the public need, because recruitment of well-qualified physics teachers for colleges and universities has become very difficult against the competition of better-playing employers, because universities are unable or disinclined to train teachers for colleges, and because industries are now able to recruit physicists right out of university faculties."

On the day after the presentation of the medal Kirkpatrick saw the secretary of the American Physical Society who told him: "I wish we could take a whole page of the *New York Times* and put your address on it." Kirkpatrick felt that the historical unfriendliness of the Society to the Association had been resolved and dissolved.

Apart from the reservations he had expressed, Kirkpatrick found much that was novel and enjoyable at Stanford. "I relished the weekly colloquium at which topical subjects were discussed. I liked the small group of graduate students who struggled with their research in relative independence.

"The professor who is not too self-satisfied feels his own education promoted by association with students such as William H. Hansen and Frederick Seitz."

Kirkpatrick came to Stanford intending to continue a particular line of research which he had developed. He soon came to the conclusion that it would be more useful to the department if he helped on some of its current problems. This he did. Later he again took up his independent research.

"The department chairman, David Webster, was investigating the probabilities of K-ionization of atoms by electron impact, working back from the observed data of K spectral line intensities," Kirkpatrick observed in his notes for the American Institute of Physics.

"P. A. Ross, much more the skilled instrumentalist than the physical theorist, had just completed construction of a two-crystal spectrometer of novel design and was on the point of deciding what to do with it. It was not his method to devote himself to a particular field of knowledge or ignorance and solve its problems by whatever means might be indicated, but rather to proceed from the method to the problem.

"The strategies of science are infinitely varied and it behooves no one to prescribe obligatory thought patterns for another. It is not easy for today's physicists to realize that there was a time when the investigator's first question was 'What have I got or what can I get to work *with*?'

"Webster, who had been brought to Stanford right after World War I to build research into the physics program, asserted that an early step was his inspection of the University storehouses and junkyards to find materiel that might be turned into research equipment. Having cased these resources he was ready to choose his problem.

"Ross and I had discussed the unsettled problems associated with the Compton effect, a field of study in which he had done early and important experimental work.

I had decided never voluntarily to accept a dependent until I had a good job and $5,000 in the bank. This marital timidity would look ridiculous to today's students, but it looked rational to me.

"The early spectrometer observations had been crude and we felt that the resolving power of the two-crystal spectrometer was needed to answer the outstanding questions about the shape, breadth, and spectral location of the shifted band, and the dependence of all of these characters upon angle of scattering and material of the scatterer.

"But the sensitive radiation detectors of today were unknown and we were always laboring with the limitations of simple ion chambers and home-made quadrant electrometers, trading off speed for precision or *vice versa*, and cultivating the virtue of patience.

"We were ever in the need of more powerful x-ray sources, and in this necessity I devised a new geometrical arrangement which we called the ring-target tube. It gave us ten times as much target area as we were accustomed to without broadening the range of simultaneously observed scattering angles.

"Ross and I discovered that the magnitude of the Compton shift is measurably less than the value given by Compton's formula.

"We traced the shift defect as function of wavelength and of scatterer composition, and we correctly (as it developed) ascribed the effect to atomic binding of the scattering electrons.

"Felix Bloch, a newcomer to our department, showed interest in the matter and in short order elaborated a theory of the effect of electron binding. Neither Ross nor I could possibly have formulated the kind of sophisticated argument that Bloch constructed, and as a matter of fact neither of us ever really understood the compact paper he published, but we were gratified by his good agreement with our observations.

"Ross and I continued our collaboration until his unexpected death in 1938. He was a mild man, devoid of the prides that sometimes poison scientific partnerships. Although I was much his junior he was content to let me decide the tasks to be pursued and for me to write all the papers. Unlike most physicists I took a certain pleasure in committing research results to paper, and I always finished such a task understanding my own work better than at any earlier stage of its progress.

I felt, and still do feel, that most research reports are badly written, with little enough expository skill and often with indifference toward the mental states and difficulties of the reader. These faults have their counterparts in the utterances of the teacher or lecturer and even in the products of textbook authors.

"Belatedly, being then in my thirties, I began to pay conscious attention to the arts of writing and speaking. I had finally recognized, as I never had when a student, that in science these were first and always techniques of communication and not of entertainment or literary display.

"This does not mean the necessary elimination of graceful form or—shall I say?—salesmanship; it means that in my view that speech or article is well presented which communicates its points with emphasis, economy, and acceptability without drawing attention to itself as the vehicle of transfer."

Kirkpatrick's research was by no means confined to x rays. Another great interest of his has been holography (a scientific word which has nothing to do with the word 'holograph' as found in a dictionary). Scientific holography is a field of optical study and phenomena which was first outlined in the British journal *Nature* in 1942.

"When I first read about it then it seemed improbable enough to merit some experimentation, which I gave it," Kirkpatrick recalls.

"Most people, including scientists, think holography is an offshoot of the laser, but the dates do not permit that idea. The pre-laser doctoral dissertation of my student Hussein El-Sum was the world's first book on holography. It was little noticed and could be found in few libraries until lasers appeared, emitting the ideal form of light for holographic effects.

"Suddenly the loan demand for the Stanford Library copy of the El-Sum book shot up, and exceeded anything in that library's experience, so I was told. The volume became worn out and was replaced."

Kirkpatrick believes that although he contributed nothing to the theory of holography, he was its earliest practitioner and innovator in America.

But Kirkpatrick is a modest man, and is uncomfortable with any praise of his distinguished career. He told one interviewer: "You have a friendly tendency to make your subject look better than he deserves."

Juilland reports more petition names

To the editor:

Please find below an additional list of Stanford faculty who have signed the counter-petition on Hoover, "In defense of academic freedom." Their endorsements reached me after the original list of 131 signers was published in *Campus Report*, May 25.

Alphonse Juilland

"In defense of academic freedom"—additional signers: Ronald Ariagno, associate professor, pediatrics; Franklin Ebaugh, professor and associate dean of medicine; Stephen Harris, professor, electrical engineering and applied physics; Sullivan Marsden, professor, petroleum engineering; Dayton S. Misfeldt, assistant professor, medicine; Kurt Meuller-Vollmer, professor, German; Inder Perkash, associate professor, surgery; Guy Marshall Pound, professor, materials science engineering; David Powell, professor, aero-astro engineering; Gerald Silverberg, associate professor, medicine; Thomas Stamey, professor, surgery; George Thompson, professor, geophysics, earth science; Peter Wood, professor, medicine; Leslie Zatz, professor, radiology.



President Donald Kennedy, who served as commissioner of the Food and Drug Administration during 1977-79, met with his former boss, President Jimmy Carter, in a not-so-oval office July 15.

Carter returns to campus amid 'debategate' controversy

Smiling and relaxed, Jimmy Carter returned to Stanford Friday, July 15.

The former President came to discuss university-industry ties and plans for his new Carter Policy Center at Emory University.

From all accounts, he did just that.

But Carter's visit coincided with national news interest in "debategate" and the possibility, as one wag put it, that the 1980 Reagan campaign and transition archives at the Hoover Institution might prove to be a bipartisan collection.

In his first public comment on what he called the "purloined" papers, Carter told a San Francisco audience early Friday afternoon that "the materials that have been revealed were the most politically sensitive documents we had. They encompassed the essence of our campaign."

Repeatedly questioned by news media at Stanford, Carter replied, "the papers were very valuable. I think I've said enough already."

About 100 reporters, photographers, and well-wishers awaited the arrival of the former President's motorcade on Inner Quad at 3:20 p.m.

After posing briefly for pictures with President Donald Kennedy, Carter paused to help nine-year-old Laura Clark fix her camera, then held her briefly for some campaign-style photos.

"It was neat to be bolded by the used-to-be president," Laura later told reporters. She was accompanied by her mother, geology graduate student Joyce Clark, a Libertarian.

Briefed by engineers

For the next hour and 45 minutes, Carter was briefed in the President's Office conference room by Kennedy, Engineering Dean William Kays, and Engineering Profs. James Meindl, codirector of the Center for Integrated Systems; Warren Hausman and Charles Kruger, codirectors of the new institute for manufacturing automation.

"He's a smart man with a lot of engineering savvy," Kennedy observed. Former commissioner of the Food and Drug Administration, Kennedy said Carter quickly asked "the canonical question" about CIS—what it could achieve in the next decade that a large firm like IBM could not do by itself.

Carter was "very relaxed" in "a pretty fast-paced" discussion "mostly on academic subjects," Kennedy added.

He accompanied Carter on a briskly paced walk to the Hoover Tower, where Director W. Glenn Campbell greeted them at the front door promptly at 5:15 p.m.

Asked if "debategate" had been discussed, Campbell said "not really . . . Mr. Carter is a perfect gentleman."

When Campbell mentioned that Reagan's gubernatorial papers were among the more than 4,000 archives at Hoover, Carter "smiled," the director said. (During the 1980 campaign, Democratic Party researchers checked the Reagan gubernatorial archives extensively.)

Carter was "very interested" in the organizational structure of the Hoover as a possible model for the Carter Policy Center at Emory.

"He obviously had done a lot of study and thinking about it," Campbell said. In April, Campbell counselled an official planning the Carter center on the organizational structure, staffing, and operating policies of the Hoover.

Rita Ricardo-Campbell, a Hoover senior fellow who attended the Carter briefing, said she was "surprised and very pleased with his sense of humor."

Even though the conversation was very serious, Carter appeared "quite relaxed," she added. "I think he's gotten 10 years younger since I last saw him on television."

Eluding the press and well-wishers in front of the Tower, Carter slipped quietly out a basement level back door of the Institution about 6 p.m. and drove away.

After talking with a few reporters on the other side of the building, Campbell prepared to leave the same way by himself.

About 50 yards away, the entrance to the archives remained locked and unlit, as it had been since 5 p.m. The FBI agents had apparently left soon before Carter's arrival.

Carter's first visit to Stanford attracted very little notice. In the very early stages of his campaign for the 1976 Democratic Party nomination, Carter spoke with about 100 students and other supporters on the patio behind Bowman Alumni House.

Footnotes on the visit: t:

Jimmy Carter is believed to be the fifth President to visit the Hoover Institution. The others are Herbert Hoover, Richard Nixon, Gerald Ford and Harry Truman.

Carter's visit to Stanford was arranged by Assistant Dean Anthony Macias of Engineering and Steven Jackson, director of development for the Carter Policy Center, who are personal acquaintances.

Stanford Public Affairs Vice-President Robert Freelen briefed reporters on Carter's discussion with the engineering faculty members. These talks were extended for an hour when Carter cancelled an off campus trip.

Those accompanying Carter to Stanford included James Laney, president of Emory University; James Brasher, campaign director for the Carter presidential library and Carter Policy Center; and Jackson.

Among those attending the discussion at Hoover were John Moore, associate director of the Institution, and acting archivist Charles Palm. —**Bob Beyers**

Full access provided

FBI takes charge of search in Reagan campaign archives

The Federal Bureau of Investigation Wednesday, July 13, took charge of the search of the 1980 Reagan campaign and transition archives at Stanford's Hoover Institution.

"The search is now fully in their hands," said Charles Palm acting archivist.

About 10 agents from the San Francisco FBI office came to the archives late Wednesday morning.

"All of our requirements concerning the integrity of the archive's materials are being met," Palm said.

Hoover staff members have remained on the site to be available to the FBI.

"We are cooperating in every way to make this material available," he added.

He indicated any further comments about the search should come from the FBI.

Speaking briefly with reporters, Palm said he would have no comment on materials found, if any, in the search to date.

He said the FBI agents "may make whatever copies they want of anything they want" in the archives. "They have requested only copies at this point," he added.

He said "it is difficult to estimate how long (a search) will take," especially since large parts of the collection remain unprocessed.

Palm said the Hoover had temporarily closed access to part of its other archives soon after the agents arrived at 10:30 a.m. Normal operations were expected to resume about three hours later.

Asked how he felt personally about fielding a barrage of news inquiries on the campaign and transition archives, Palm replied "it's not the typical experience of an archivist." But he quickly added "it's not the first time archives made national news."

Many journalists were "quite knowledgeable" about archives, he observed.

The Hoover Institution has about 4,000 archives. The majority are open to scholars without restriction. Some collections are accepted with restrictions, since "they contain other people's mail" and "we're mindful of their sensitivity," Palm said.

The Reagan 1980 campaign and transition collection includes 550 linear feet of material shelved in manuscript boxes. Collected over six weeks in December, 1980 and January, 1981, it was left with a letter of deposit at the Hoover Institution. Reagan retains ownership of the documents.

On July 12, Palm said the Hoover Institution had received a letter from Edwin Meese, a trustee of the collection, "authorizing us to provide representatives of the Department of Justice access to the materials and to permit copying of any documents the Department of Justice deems relevant to the inquiry."

Freedman...

continued from page 1

has been returned to regular status and will be considered by the Advisory Board of the Academic Council during their normal course of business this fall. The board is an elected group of seven faculty members who must approve and recommend to the president all faculty appointments, reappointments, and promotions.

Babcock believes it is "unlikely" the board will reverse the provost's recommendation. "We never lost heart. I believed all along the University would do the right thing," she said.

The case brought "an unprecedented amount of mail," including many small financial contributions, some from parents of graduate students taught by Freedman, she noted.

Babcock said it was "very wise" for Freedman to keep a low public profile in the case, since news media comments could be "subject to misinterpretation."

Prof. Carl Degler, nationally prominent scholar in women's history, said "I'm delighted, and glad to see a mistake rectified.

"This is great for the University and for the department. It's a nice vindication of our processes of internal evaluation."

A 1969 graduate of Barnard College, Freedman received her Ph.D. at Columbia in 1976. She received a dean's award for distinguished teaching at Stanford in 1978 and the Dinkelspiel award in 1981.

The University of Michigan Press presented her its Hamilton award for the best scholarly manuscript on women for her first book, "Their Sister's Keepers: Women's Prison Reform in America, 1830-1930." Her NEH fellowship is for a study of "Gender and Deviance: The Treatment of Female Crime and Mental Illness, 1920-1960." She is an associate editor of *Signs: Journal of Women in Culture and Society*, based at the Center for Research on Women.

The Appointments and Promotions Committee of the School of Humanities and Sciences recommended unanimously against tenure in March, 1982 and took a similar position earlier this year, though no vote was disclosed. At that time, the School required that a faculty member be judged "very good" in both teaching and scholarship and "excellent" in at least one. Freedman was rated "excellent" in teaching but only "good" in scholarship, according to independent news reports.

In a letter published in January, Dean Wessells noted that "Being a faculty member of physics, classics, economics, Latin American studies, human biology or other administrative unit is not a criterion for tenure.

"For many years it has been practice in the School of Humanities and Sciences to make the decision about investing a tenure position in a particular field or discipline at the time an initial search is authorized to a department and an appointment is made.

"Thus when a person is hired as a medieval historian, a development psychologist or an organic chemist, the individual is free to work as effectively as he or she can as a scholar or teacher. The young person does not work for six years under a cloud of uncertainty about whether the field itself may be judged inappropriate at the time of tenure review, with the result that tenure could be denied irrespective of the person's qualifications. In other words, we do no include an 'administrative' factor in the tenure equation.

"Those who argue for tenure on the basis of academic field or of service to some unit of the University are asking that such an administrative factor be used. But



Estelle Freedman

if it is, it can be used for or against candidates.

"At present, being a critically important participant in Latin American studies or feminist studies, being Stanford's only teacher of a rare language, or whatever, is not held for or against the person up for consideration.

"Similarly, whether the person is a Marxist, a member of the Moral Majority, or has behavioral quirks is irrelevant. By placing the administrative factor 'up front' at the time of searching and hiring, we allow the tenure process to focus where it should, on the individual as scholar and teacher."

In a report to the Faculty Senate in May, Wessells suggested a future tightening of tenure standards. He said demonstrable excellence in research "should be recognized as our primary criterion. . . .

"No person should be granted tenure here who is not demonstrably excellent as a research scholar. We must continue to emphasize that high quality teaching is critically important, but we should embrace the concept that first-class university type teaching is sustained by, and is directly dependent upon, continuing scholarship of the first rank. The two are inseparable."

Dave Dorosin dies after heart attack; his family establishes memorial fund

Dr. David Dorosin, director of counseling and psychological services at Stanford since 1972, died at Stanford University Hospital Sunday afternoon, July 17, following a heart attack at his Palo Alto home. He was 51.

A faculty member in the Stanford Department of Psychiatry since 1962, Dorosin built a network of 150 student peer counselors and a highly diverse professional staff. Together, they provided counseling for eight to 10 percent of Stanford's 13,000 students annually.

Last year Dorosin told a campus interviewer that in all his years at Stanford "I have not seen any change in people's desire to have somebody they can count on. In the psychological life of young people 'loyalty' and 'fidelity' are still important words. Even in this period, which is often believed to see the heights of sexual freedom, that is still true."

Dorosin was widely known and respected for these qualities himself. Stanford President Donald Kennedy described him as "a wonderful person."

Memorial Services have already been held.

Survivors include Dorosin's wife, Edith, vice-president of the Santa Clara County Manufacturers' Group; their son, Daniel, a Stanford graduate and staffer for Senator Alan Cranston, headed for law school this fall; two daughters, Abigail, a UC-Davis student, and Alicia, who will enter Stanford this fall; and three brothers: Allan, of Santa Cruz; Norman, of Berkeley; and Leon, of Mill Valley.

The family prefers donations to the David Dorosin memorial fund, 525 University Ave. Suite 1320, Palo Alto, Calif. 94301.

Dorosin was born Dec. 31, 1931 in Marshalltown, Iowa. A member of Phi Beta Kappa, he received his B.A. degree from the State University of Iowa in 1953 and his M.D. there in 1956.

After serving as an intern and fellow at



David Dorosin

the UC Medical Center in San Francisco during 1956-58, he was a resident at the New York Hospital-Cornell Medical Center in New York City and at the Psychiatric Institute of New York State and Columbia-Presbyterian Medical Center.

He came to Stanford in 1962 as director of the consultation service in the Department of Psychiatry. He was named director of Psychiatry at Cowell Student Health Service in 1968 and director of the combined counseling and psychological services there in 1972. Rising steadily through the academic ranks, he was named clinical professor of psychiatry and behavioral science here in 1975.

He received a career teacher award from the National Institute of Mental Health in 1964-66 and was elected a fellow of the American College Health Association in 1976.

Ann Bilodeau named director of Annual Fund

Ann Bilodeau, a Stanford staff member since 1970, has been named director of the Stanford Annual Fund.

Her appointment was announced by John Hays, head of individual giving in the University's Development Office.

The Annual Fund currently raises in excess of $10 million per year, mainly in unrestricted gifts from more than 35,000 alumni.

Starting at the Graduate School of Business in 1970 as a coordinator of case development, Bilodeau went on to establish a program to help MBA candidates improve their writing. She became a development officer in the school in 1974, and director of the Engineering Fund in 1977.

In 1979, Bilodeau was named head of the general appeal program, which contacts over 100,000 alumni each year by either mail or telephone to seek gifts for Stanford. She has served as acting director of the Annual Fund since September, 1982.

Bilodeau received her undergraduate



Ann Bilodeau

education at Pitzer College in Claremont, Calif., where she majored in English and psychology. She earned her M.A. in English at Stanford.

Bilodeau has served as a member of the Pitzer College Board of Trustees since 1976, and was a participant in the Stanford Management Development Program in 1980-81.

A Palo Alto resident, she is married to Kenneth R. Bilodeau, Jr. They have one child.

Mosher appeals grievance again

Steven W. Mosher has filed another appeal in his continuing battle to win reinstatement as a Ph.D. candidate in anthropology at Stanford.

The appeal was received Thursday, July 21, in the office of Vice-Provost Gerald J. Lieberman, dean of graduate studies and research, who currently is on vacation.

Mosher was terminated as a Ph.D. candidate in anthropology by an 11-0 vote of the department faculty Feb. 24.

After Mosher filed a grievance, Dean Norman K. Wessells of the School of Humanities and Sciences asked three prominent scholars to review his case.

The scholars—Profs. Gordon Wright and Ernest Hilgard of Stanford and Ward Goodenough of the University of Pennsylvania—unanimously found his termination "justified." Wessells denied Mosher's grievance July 1.

If he is not satisfied by Lieberman, Mosher may request a review by President Donald Kennedy.

At a news conference following the faculty decision Feb. 24, Mosher promised to "use every resource at my disposal" to contest the outcome.

Nurturing young post-graduates

SLAC hosts 11th annual summer institute

The Stanford Linear Accelerator Center (SLAC) is hosting its 11th annual Summer Institute for 330 elementary particle physicists.

Participants from 13 countries are attending a "summer school" from July 18 to July 29 to review advances in high-energy particle physics. Immediately following the summer school will be a two-and-a-half day topical conference where the most recent experimental findings at the major research centers will be presented.

According to David Leith, a SLAC faculty co-coordinator of the Institute, the summer school is geared towards young post-doctorate experimentalists who are often overwhelmed by the elaborate theoretical presentations that dominate most conferences.

"The Institute encourages people who would not normally get exposed to the changing frontiers," he said.

The SLAC Institute is the only annual workshop of its kind in the United States. "There is a heavier tradition of caring for and nurturing the young post-graduate community in Europe," Leith noted.

The need for conferences like the SLAC Institute has grown, Leith stressed, because the increasing cost and complexity of experimental tools has forced research into a few isolated high-energy physics centers.

The Institute enables participants to exchange ideas with colleagues at other research centers. This is especially important because the field changes so quickly and no up-to-date textbooks are available, said Fred Gilman, the other faculty co-director.

The proceedings of the Institute have become a major reference work on the current status of particle physics, Leith added.

Studying 'jets'

A topic for the summer school is chosen each year from the forefront of scientific research. This summer's program, entitled "Dynamics and Spectroscopy at High Energy" focuses on the study of "jets".

Jets are the showers of particles that are detected when two elementary particles such as an electron and its anti-matter particle, a positron, are made to collide at very high energies. Physicists believe that the collision produces a pair of basic building blocks called quarks.

The quarks are then thought to combine with, or "dress themselves" with other quarks from the environment, thereby creating a series of new particles that form the jets observed in experiments.

While scientists have never seen an isolated quark, the study of jets has indirectly confirmed their existence. Steve Ellis, a theorist from the University of Washington and the first lecturer at the summer school, compared jets to the Cheshire cat—by seeing the smile (jets) we know that the cat (quarks) exist.

Through a series of lectures and in-depth discussion sessions, participants review the current theoretical treatment and experimental evidence for jets. Since the concept of jets is fairly new and experiments don't always produce cascades of particles that are clearly identifiable as jets, physicists have difficulty in accurately describing them. "Like true love," Ellis said "a jet is impossible to define precisely. But you know it when you see it".

Since jets are easier to see at higher energy collisions, Gilman and Leith noted that research will be improved by the upcoming generation of accelerators built for higher energies such as CERN's SPS Collider which collides protons with anti-protons at 540 billion electron volts (GeV) and the Stanford Linear Collider which will collide electrons and positrons at 100 GeV when it is completed by 1987. The next step for experimentalists, they said, is to design detectors that measure the jet as a whole rather than detecting the collsion by-products one at a time.

In addition to the seminars, the 187 non-SLAC participants have been invited to tour the SLAC facilities, located in the foothills west of Stanford.

Highlights of the topical conference following the summer school include the recent discovery by researchers at the CERN laboratory near Geneva of three particles that "carry" the nuclear weak force, one of four basic forces in nature. The observation of these particles, named W, W-, and Zo, in part supports what is known as the Unified Field Theory, the belief that the four forces are intrinsically related.

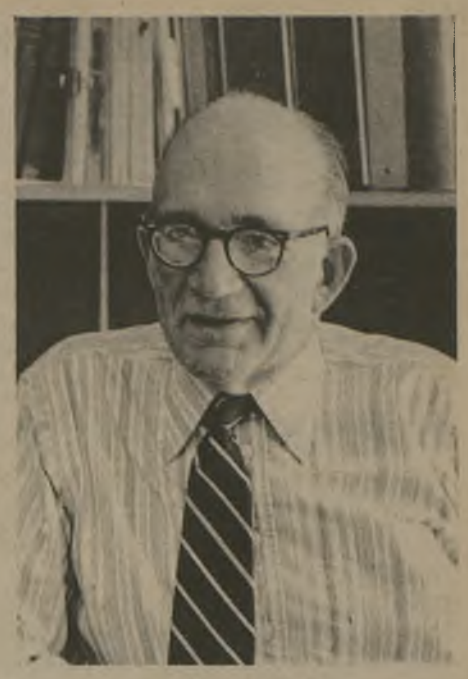
This presentation at SLAC and a concurrent report given at the European Physical Society in England constitute the first announcement of the particles at a scientific meeting.

Researchers from SLAC will also report to the Institute on recent measurements of the decay lifetime of a particle called the B-meson which consists of a "bottom" quark and its anti-particle.

—Stefi Weisburd



Dotted line shows path of new linear collider (see story, next page)



Sidney Drell

Drell to talk about ICBMs

Sidney Drell, deputy director of the Stanford Linear Accelerator Center, (SLAC) will speak on the future of intercontinental ballistic missiles at 7:30 p.m. on Thursday, Aug. 4, in Cubberley 133.

Drell opposes the planned deployment of the MX missile because it's a highly valuable target and if deployed in silos as planned, it would not be survivable—"It looks like a first strike weapon."

He would endorse the proposed Midgetman missile in limited deployments under an overall ceiling that represents a reduction in total destructive power. "They have the advantage that with only one warhead, they are not valuable enough to be vulnerable because they are not worth attacking."

Drell received an open letter this spring from the Russian physicist, Andrei Sakharov, who is in internal exile in Gorki. Sakharov expressed agreement with Drell's assessment of the danger of nuclear war—a calamity of indescribable proportions, and Drell's basic tenent that nuclear weapons only make sense as a means of deterring nuclear aggression.

In this letter, Sakharov suggests that if it is necessary to spend a few billion dollars on MX missiles to achieve Soviet agreement to limitations on silo-based missiles, then perhaps this is what the West must do.

The free public program is sponsored by the Stanford Arms Control and Disarmament Forum.

Stanford receives $2 million IBM grant for engineering

Stanford is one of five universities receiving $2 million grants from International Business Machines Corp. to establish a new program for graduate-level engineering education in manufacturing systems.

The grant will go to the newly-formed Stanford Institute for Manufacturing and Automation.

The other four schools are Lehigh University, Bethlehem, Pa.; Georgia Institute of Technology, Atlanta; Rensselaer Polytechnic Institute, Troy, N.Y.; and the University of Wisconsin at Madison.

"As these selected schools move forward with their new teaching programs, we hope that many other universities will share in their experiences and benefit too," said IBM chairman John R. Opel. "The more opportunities young people have to learn about the new manufacturing technologies, the better prepared industry will be to compete in world markets and to provide, at competitive cost, the products people need and want."

IBM said that the grants are the second phase of a $50 million IBM grant program of cash and equipment to help universities develop and update manufacturing engineering education. Last month IBM awarded computer systems valued at $40 million to 20 universities.

Beginning this fall and over the next four years, the five universities named will develop curricula leading to advanced degrees in manufacturing systems. The courses will integrate the disciplines of engineering, computer science, and business planning.

Emphasis will be on subjects such as designing products for automated assembly, computer-aided design and manufacturing, resource management, and the use of robotics and other automation systems to improve quality and productivity.

Soviet commitment in Afghanistan may not run very deep

The Soviet commitment in Afghanistan does not appear to be as firm as is commonly assumed, Anthony Arnold concludes in a new book, *Afghanistan's Two-Party Communism*, published by the Hoover Institution Press at Stanford (260 pages, paper $10.95).

A former intelligence officer in Afghanistan, Germany, Sweden, Burma, Japan, and England, specializing in Soviet affairs, Arnold wrote "Afghanistan: The Soviet Invasion in Perspective," published by the Hoover Institution Press in 1981.

"No communist party can survive in Afghanistan without a Soviet military occupation," he declares. "The overwhelming majority of the population views communism as an alien ideology imposed by Afghan traitors and their Russian masters."

Arnold emphasizes that the U.S. "should maintain a proper distance from all resistance politics," no matter how much sympathy it might feel for a particular political trend in the resistance.

"American aspirations for Afghanistan's future should be confined to the country's international orientation and conform to the Afghans' own desires—a return to a truly neutral, nonaligned, self-determining status.

"Within these parameters, the country's political system should be the Afghans' choice and theirs alone."

Withdrawal not intolerable

Most Western analysts feel Moscow will judge the costs of retreat from Afghanistan as "intolerable," Arnold notes. But he questions this view.

Where the Soviets may fear a "domino" effect on other socialist states, Arnold notes that "if anything a Soviet pullout in Afghanistan—which has never been an invasion route into Russia—would be accompanied by even tighter control by Moscow over the well-beaten military paths heading east from Europe.

"Unlike the situation in Afghanistan, there is tacit Great Power agreement to Soviet hegemony in Eastern Europe."

Soviet fears of a possible Islamic thrust from Afghanistan into Soviet Central Asia have little basis in history, he adds. "Once the Afghans have expelled an invader, they do not exact vengeance, even when clear opportunities present themselves."

In 1857, 15 years after the first Anglo-Afghan war, the Afghans refused to join rebels in the Indian Mutiny. In 1915, less than a generation after the second Anglo-Afghan war, they declined Turko-German pleas to join the Central Powers in a jihad against Britain. In the early summer of 1940, with Britain apparently on the brink of defeat, the Afghans rejected a Nazi offer to restore Afghanistan's 18th century borders, mostly at the expense of British India, in return for inciting rebellion against the British in the North West Frontier territories.

As a practical matter, no Afghan government could risk provoking a new invasion by fomenting insurrection in Soviet Central Asia. Moreover, the border now is relatively easy to control and police from the Soviet side.

No stonewall position

The Soviets have not taken a "stonewall" position on the occupation of Afghanistan, Arnold notes. Following official and unofficial Soviet proposals for a political solution to the problem in 1980 and 1981, as many as 40 percent of the People's Democratic Party of Afghanistan members may have taken steps to collaborate with the resistance, one 1982 defector estimated.

"The Afghan temperment is molded by Afghan topography, and neither lends itself easily to alien conquest," Arnold notes. "Afghanistan's defiles and gorges defy modern technology."

So long as the Afgans have sanctuaries in the fellow Muslim states of Pakistan and, to a lesser extent, Iran, "the fighting will continue and will remain at a relatively intense level," he predicts.

Only such measures as sealing the Pakistan border, committing four or five times as many troops, forcing the resisting population into urban areas, or politically annexing part or all of Afghanistan would crush the resistance, he notes. "Few if any of these gambits are cheap, most are damaging to Soviet prestige, and none is either swift or sure.

"If the price that Moscow had to pay for its aggression was heavy initially, it has continued to mount steadily in succeeding years. The pressures on the Kremlin to find some different solution have increased in step with the costs."

Reagan approves $32 million to start linear collider

A new kind of machine for studying subatomic physics has been approved for construction at the Stanford Linear Accelerator Center (SLAC).

The new machine, called the SLC for SLAC Linear Collider, was included in an appropriations bill that was recently signed into law by President Reagan. The $112 million faciliity, which will be built within the present site, is scheduled for completion at the end of 1986.

Stanford University operates SLAC under contract with the U.S. Department of Energy through the Department's San Francisco Operations Office in Oakland.

The appropriations bill signed by President Reagan provides $32 million for the first year of construction.

The appropriation follows a complete and favorable series of reviews by the government and the scientific community over the past two years. SLAC Director W.K.H. Panofsky noted, "The SLC is the only new major construction project in science authorized this year. I am extremely happy that the project can now go ahead full speed."

In this new machine two powerful beams from the center's two-mile-long electron accelerator will be bent around and focused into a microscopic spot. One of the beams will contain electrons; the opposing beam will be composed of positrons, the anti-matter twins of the electrons. When these opposite charges collide, the original particles are annihilated in a burst of energy from which new combinations of subatomic particles appear.

Successful technique

Electron-positron colliding beam machines have been one of the most successful techniques of particle physics in the past decade. Although the SLC will produce these collisions with the highest energy in the world, this machine is equally significant for its new way of making the beams collide.

The traditional method for producing these collisions has been with storage rings, in which magnets keep the two beams circulating in a racetrack pattern, passing through one another millions of times each minute. The linear collider fires its beams into one-shot collisions a thousand times less frequently, but makes up for this by squeezing the beams through a collision spot thousands of times smaller than possible in the storage ring.

The storage rings have been the most economical path to colliding beams at the lower energies. At higher energies, however, the storage rings must be made dramatically larger to compensate for the energy lost by the beams when they are bent into a circular path. A practical storage ring of the same energy as the SLC would be more than 15 miles around and would cost more than $500 million. The much less expensive SLC, by contrast, fits comfortably on the present site.

At the higher energies being thought about for the next generation of electron-positron machines, the linear collider technique will almost certainly be required. It is the study of this growth of accelerators with energy that led Nobel laureate Burton Richter, technical director of SLAC, to the ideas of the linear collider and to the SLC project.

The experimental program of the SLC will include the most exciting topics of high-energy physics. In the collisions at this energy, the weak force will overshadow the electromagnetic force that has been dominant at lower energies. The recently discovered carrier of the weak force, the Z, will be directly produced in these collisions. Thousands of these will be recorded each day, allowing a detailed study of this new particle.

Energy boosted

Much of the project involves modifications to SLAC's existing linear accelerator to increase its energy by about 60 percent. New computer controls will steer the beam precisely. Two small damping rings, which shrink the beam size before acceleration, will be placed underground at the beginning of the linac.

The biggest apparent new piece will be the underground arcs of magnets that will guide the positron and electron beams to the final collision point at the far end of the site. A substantial part of the construction work will be done by local industry and by subcontracts without large permanent increases in the laboratory staff.

The impact of the new construction on the neighborhood and environment has been carefully considered. Over the past two years several meetings were held with neighbors from nearby communities and with representatives of environmental organizations. The initial planning on the location of the new experimental hall was modified, to a large part in response to these concerns.

During the wait for final approval, research and planning has gone ahead. The modifications that would improve the normal operation of the linac have begun, and one of the damping rings has been completed. The project is ready to begin in earnest.

According to SLC project director John Rees, "We have a large construction bid package ready to start at the beginning of October. The project staff is enthusiastic and we're ready to go."

Slight drop seen in summer students, ending a six-year enrollment uptrend

Summer session enrollment at Stanford may decline slightly this year, reversing a six year trend.

After four-weeks, total enrollment was 3,354 compared to 3,443 at the same time a year ago, a 2.6 percent drop.

The only significant increase was in nonmatriculated graduate students, whose total rose to 257 from 236, a 9 percent gain, according to Kristen Harrison of the Summer Session Office.

The largest drop came in nonmatriculated undergraduate students, where enrollment fell from 252 to 191, a 24 percent decline.

While there was a 30 percent increase in the number of requests for the summer session bulletin, only 48 percent of the applicants actually registered. In past years, this proportion has remained stable around 65 percent.

Summer session enrollment by matriculated Stanford students declined about two percent at both the graduate and undergraduate level.

Summer session enrollment dropped markedly from 1967 to 1976, but then increased steadily through last year, when the final total was 3,657.

Engineers honored

Profs. Henry E. Riggs and Modesto A. Maidique have been honored for their service and teaching, respectively, by the Departments of Industrial Engineering and Engineering Management.

Both received departmental awards from Prof. Warren E. Hausman, chairman, at commencement. Student awards went to John R. Wilson, for undergraduate academic achievement; Christopher Badger, for graduate academic achievement; and Peter Stamats, for student service.

Remodeled Cubberley needs a piano

Is there someone who has just bought a new piano and hasn't decided what to do with the old one? Is there someone who would like to be immortalized on a brass plate? Is there someone who would like to be instrumental in bringing music to the newly beautified Cubberley Auditorium?

Our remodeled stage will accommodate an upright or grand piano, new or used. We will acknowledge the donation on a brass plate affixed to the instrument.

Please call Shirley Stein, School of Education, 497-0127.

Good discussion leaders key to TVI achievements—Gibbons

continued from page 1

Open University in Britain, MIT, the University of Florida and the University of Lowell.

TVI uses videotape as a recording medium—not for broadcast, Gibbons emphasizes. "A lot of educational value is lost by a presentation that is too slick.

"Similarly, we want to avoid, where possible, having an instructor talk to a TV camera, without a live class to question what is being presented."

When the material covered is difficult, students may take as much as 100 minutes to finish a 50-minute videotaped lecture. When there are frequent interruptions and discussion, TVI students consistently outperform those attending the live classroom presentation.

When the tutor simply answers questions that are asked and does not encourage discussion, the performance of TVI students is not noticeably better than those in the regular class.

"TVI student performance is less dependent on the standard academic measures," Gibbons notes. "In particular, it decreases the importance of high verbal ability, compared to regular classroom performance."

The TVI students can "manage" the lectures optimally for their own benefit, without the normal academic constraints of time and the natural fear of asking "stupid" questions in the presence of the instructor, he adds.

Performance compared

During 1973-74, Gibbons compared the performance of 302 students taking three graduate level courses in electrical engineering in regular classes with an identically qualified group of 55 who viewed the same teachers on closed-circuit TV at Hewlett-Packard, six students who studied the videotapes of the classes with no tutors, and 27 who used TVI.

When given the same exams in the same on-campus setting, the TVI group averaged nearly 3.7 on a 4.0 scale, compared to less than 3.4 for those in the regular classroom (used for both the closed circuit broadcast and the videotapes), less than 3.2 for those taking the course on closed circuit TV, and 3.1 for those studying the tapes without a tutor.

TVI students who would have very low qualifications for admission to graduate programs at Stanford have still done "acceptably well" with TVI, Gibbons reports.

While results over then past 10 years have not been as uniformly good as the initial experiment, students whose tutors encourage class discussion consistently outperform those in the regular lectures.

The ability to stop or repeat the videotape and the more relaxed atmosphere and interaction with other students are the most frequently mentioned advantages of TVI. The principal disadvantage, as seen by students, is that they can't ask the instructor questions directly.

With one exception, undergraduates who took an advanced graduate-level course on 20th century British and American poetry with TVI achieved the same grade distribution as graduate students who took the course live, while it was being videotaped.

The sole exception was an undergraduate who said "her family didn't pay the kind of tuition Stanford requires for her to take a course by videotape," according to Gibbons.



Jim Gibbons

He believes TVI has potential for greatly enhancing faculty productivity, even though resistance to its adoption remains quite strong.

"The only way is to build it bolt by bolt, so you know it works," he says. "Then you may be able to get others to do it, provided they don't have their own agenda."

Currently, Gibbons is working with colleagues at the Universities of Arizona and Florida on the use of TVI for a course in integrated circuit processing. The course was taped with Prof. Douglas Hamilton at Arizona and is being offered with TVI tutors at Florida under Prof. Gene Chenette's sponsorship. His load was so great that TVI was the only way he could offer the course.

Florida is interested in TVI's potential for increasing faculty productivity.

Whether other institutions will qualify the course for academic credit remains uncertain.

Gibbons, widely honored for excellent classroom teaching, hopes that Stanford may become more receptive to such course exchanges. On a long-term basis, this may offer one of the best means of increasing faculty productivity while maintaining high standards of quality.

Gibbons insists on working within the academic framework, giving host scholars a chance to judge the academic quality of TVI for themselves.

In the introductory physiology course at Harvard Medical School, TVI records three lectures by each of 10 instructors. "The faculty blasted the material out, and the course was regarded as a zoo," Gibbons said.

After 250 to 300 students heard the lectures, they divided into 13 sections of about 20 students each, four of which used TVI.

"Students ate it up, and did extremely well," he says. But comparisons were difficult because the TVI students went to both the live and videotaped lectures, "really nailing the material and looking for an edge" over their classmates.

In Alaska, a drug counselor working "live" with two families, was videotaped. The tapes were then distributed with Head Start volunteers who worked with extended families in their homes, calling the counselors for advice when needed.

He's tried to use TVI to teach prisoners skills needed in industry, without success.

"It nets down to a simple set of courses, but after some encouraging startups, we have been barred from further visits—some say because the prisoners were learning more than the guards," he explains.

"The guards could become tutors, helping the prisoners."

Industrial support

With statements of support from Hewlett-Packard, Rolm and Intel, Gibbons has proposed to develop basic courses in science, math and English for use in the videotape format at juvenile hall at San Jose.

Lacking the funding for this project, he'll head to Boston this fall with a similar package for high school students. MIT President Paul Gray has shown great personal interest in TVI and MIT is under court mandate to help improve the Boston schools.

Working at Mario Umana High School, Gibbons plans to have the area's best teachers in basic science and mathematics videotaped in regular classroom presentation, then enlist MIT students and others as tutors for TVI groups in the schools.

"There's always a management problem. Every constituency has to work out a compromise,"Gibbons says. "It may be easier to solve the problems of training juveniles in the subjects needed by Silicon Valley industry in Boston, where they recognize there's a problem.

"Stanford's losing a lot of opportunities. We have everything we need to really make this work—the faculty, the course materials, the facilities, the techniques.

"But the desire to try it out and make it work has to come from within the faculty."

Improved faculty ties

Gibbons believes that TVI can actually improve faculty ties with students, providing many more opportunities for participation in class discussions.

"But no faculty wants to believe you can learn as much or more from watching videotapes in small groups with a tutor as you can from sitting at their feet and listening to an hour-long lecture," he concedes.

"Western culture would be miraculously better if students had lecture material they could reflect on available in the residences," Gibbons believes.

As shown by the reaction to Stanford Prof. Diane Middlebrook's course in poetry, "in any subject where discussion is essential for learning, TVI is loaded for bear," Gibbons says. Students would still go to live lectures, but with videotape players and a few tutors in the dorms, Western culture course materials could be extended through four years, instead of limited to one year-long sequence.

"The discussions should be current," he emphasizes. "The tapes shouldn't be saved." After taking two quarters their freshman year, students might take one quarter sequences of TVI in Western culture over each of the succeeding three years.

Gibbons also sees art as an especially fertile field for TVI.

While many believe engineering and science offer the greatest potential for TVI, Gibbons disagrees. "The people who have the hardest time making dollars inside the universities—the historians, artists, and poets—are the ones most wanted by alumni and others off campus," he says.

—Bob Beyers

EDUCOM conference here Sept. 20-22

Four top university executives will discuss how information technology affects higher education at Stanford Sept. 20.

Stanford President Donald Kennedy, San Jose State President Gail Fullerton, and University of California Vice-President Ronald W. Brady will address the opening session of the 1983 EDUCOM conference at 9 a.m. in Dinkelspiel Auditorium. Harvard Vice-President Robert Scott will moderate.

About 400 persons are expected to attend the three-day conference,which is hosted by Stanford, UC, and the California State University system, and cosponsored by the American Council on Education.

EDUCOM is a non-profit consortium of more than 400 colleges and universities, founded in 1964 to promote the use of computing, communications, and information technology in higher education.

Stanford coordinators for the conference include Sandelin, Jane Marcus and Ruby Lai of the Center for Information Technology, Roberta Calloway of the Business and Finance Office, and Lois Fariello of the Conference Office.

Registration is $245 for individuals from EDUCOM member institutions, $345 from nonmember institutions, and $50 for students. For those registering by Sept. 1, the fees are $195, $295, and $25, respectively.

Further information and registration materials may be obtained from the conference registrar, EDUCOM, P.O. Box 364, Princeton, N.J. 08540. Phone (609) 734-1915.

Patients and doctors explain need for animal research

Patients who have benefited from animal research called on California lawmakers Monday to defeat proposed legislation that would bar scientists from using abandoned animals sold to laboratories by shelters and pounds.

The bill, SB 883, pushed in Sacramento by an increasingly powerful lobby, has been passed by the senate, and is scheduled for a hearing before the Assembly Committee on Government Operations August 17.

The patients were joined by scientists and officials from Stanford and the University of California Medical Center in San Francisco at a press conference held on the UCSF campus.

"Senate Bill 883 must be opposed," said Stanford heart transplant patient Bill Boxberger.

Boxberger, 39, of Madera, California, has suffered from a lifelong heart condition. "My whole life is like a history of research," said Boxberger. He pointed to a young patient seated nearby who received his latest heart surgery last Wednesday.

"When I was that age, these procedures just didn't exist," said Boxberger, referring to Albert Lamb, 12, Modesto, California, who sat in a wheelchair beside his father, Albert Sr.

Dr. Julius Krevans, chancellor of UC—San Francisco, said the purpose of the joint conference was "to share with you some of our understanding of why this (animal research) is important, and why some of the legislative issues which are under way at the present time are, potentially, extraordinarily disruptive."

Krevans sat beside Dr. Norman Shumway, chairman of Stanford's cardiovascular surgery department, who emphasized that SB 883 would seriously impede medical research in California. The proposed law would prohibit the use of pound animals in California, and the importation of pound animals from other states after 1986. The bill is sponsored by Senate President Pro Tem David Roberti, (D—Hollywood).

"For reasons that are difficult to understand, it (SB 883) has gained momentum," Shumway said. He attributed the bill's apparent momentum to the "pleas of Hollywood persons who know nothing about research."

Shumway said that the acquisition of vast amounts of knowledge will continue to require the use of pound animals. He pointed specifically to the search for new and improved heart valves, and better anti-rejection drugs for use by transplant patients.

"There are so many avenues ahead of us, it is ridiculous to say that we have researched to some level of perfection and now we can just stop," Shumway said. In Britain and other European countries, where animal legislation is much tougher than in California, there have been "no significant advances" in research in cardiovascular surgery in these otherwise highly sophisticated nations, he said.

Krevans noted that all public and private health science schools in California spend a total of about $900,000 a year on the dogs and cats used in medical research. He estimated this figure could rise as high as $20 million for the University of California system alone if only specially bred dogs were used.





Among those arguing for animal research at Monday's news conference was Stanford's Norman Shumway (above, second from right), internationally acclaimed heart surgeon and transplant pioneer. Later, SUH heart-lung transplant patient Charles Walker (insert, second from left) and UCSF veterinarian Joseph Spinelli (right) responded to further questioning by members of the press.

PHOTOS BY ED SOUZA

In addition, Dr. Joseph Spinelli, a veterinarian and director of UCSF's animal facility, said that specially bred animals are sometimes inadequate because they do not contain the genetic diversity important in some types of research.

Spinelli also emphasized that research institutions and researchers are anxious to work with the public to help identify pets and their owners and to help insure that only stray dogs become involved in research.

Krevans said that issues of inhumane treatment of animals or the use of animals for capricious research obscured the issues behind the pending legislation. "If the concern is that animals are used capriciously," concern should hone in on those specific cases rather than advancing support that would suppress legitimate biomedical research.

Dr. Saul Robinson, clinical professor emeritus of pediatrics at UC—San Francisco, referred to the continuing treatment required by young Lamb, and said, "There is no doubt in my mind, with all sincerity, that these things would have been hindered and probably would not have been possible without animal research." Robinson has been Lamb's cardiologist for nine years.

Also opposing the legislation, and pointing to their own survival as a testament to the value of animal research, were heart transplant recipient Cynthia Jelkman, 26, of Los Angeles, and Charles Walker, 32, of Mountain View, who was Stanford's second heart—lung transplant patient.

"I see the entire bill as an atrocious mistake," Jelkman said. She referred to what she called the wastefulness of breeding dogs specifically for the laboratory, while nationally, 15 million unwanted dogs and cats are killed annually in pounds.

Emphasizing that research is an ongoing, constantly evolving activity, Walker said, "They could not do anything for me until I was 13 years old." He noted that research has now made treatment possible at a much earlier age for many people born with heart defects.

—Mike Goodkind

Turning off genetic sources of disease

Researchers at Stanford have moved one step closer toward their goal of turning immune diseases off at the source by learning to genetically control the symptoms of a chronic disease of the nervous system.

Although his work has focused on a disease in mice that mimics myasthenia gravis, Dr. Lawrence Steinman, assistant professor of neurology, said that other diseases linked to the immune system—such as multiple sclerosis, juvenile diabetes, and rheumatoid arthritis—might be treatable in the same way.

Graduate student Matthew Waldor, Dr. Subramaniam Sriram, research associate, and Dr. Hugh McDevitt, professor of medicine/immunology, collaborated with Steinman on the study published in the May *Proceedings of the National Academy of Sciences*.

The fatigue and weakness in muscles of the eye, face and throat that are symptoms of myasthenia gravis, are thought to arise from an overactive immune system. In healthy patients, nerve cells relaying messages from the brain to muscles use several chemicals to transmit the message between cells.

The protein on the muscle that recognizes and "receives" one of these chemical messengers, called acetylcholine receptor, or AChR for short, plays a central role in myasthenia gravis.

Because of a defect in their genes, the 8,000 Americans who have myasthenia gravis produce antibodies that destroy the terminals that receive acetylcholine in the muscles, short-circuiting the body's electrical system and triggering disease.

Conventional treatments for the illness act by increasing the number of receptors available, or by slowing their breakdown. But Steinman and his team have found the gene in mice that "tells" cells in the immune system to produce the offending antibodies. Going one step further, they have developed tailor-made proteins, called monoclonal antibodies, that latch onto such genes and turn them off, much like turning off a faucet.

In the mice studied, once the "faucet" was turned off, normal cell communication returned, and the symptoms of myasthenia gravis disappeared.

The next step is to attempt the same

.continued on page 16

SUH proposes Blue Cross contract: response expected within days

Stanford University Hospital submitted a proposal earlier this month to join Blue Cross of California's new Prudent Buyer Plan (PBP), said David Sakai, director of finance.

He added that a response from the insurance carrier is expected by the end of July. The specifics of the hospital's proposal were formulated based on discussions with Blue Cross, which covers about 13 percent of SUH's patient revenues.

The PBP is Blue Cross' Preferred Provider Organization (PPO), a recently mandated innovation in medical care reimbursement. PBP provides that physicians sign contracts to accept Blue Cross-established fees as full payment for services (except for deductibles or supplementary insurance).

Only physicians who have privileges at a hospital under PBP contract would be eligible to join. Reimbursement for physicians will likely be less than current levels, Blue Cross announced.

California's largest health insurer, Blue Cross has already reached agreement with 42 hospitals in its initial target areas of the state. SUH is in the second group of hospitals to negotiate with Blue Cross. Blue Cross has said it hopes to enroll 20 percent of its California membership in PBP during the first year of operation.

The intent of the program is to negotiate reduced rates with hospitals for PBP members, and to pass these savings on in the form of premiums that are lower than those for comparable standard coverage.

"Blue Cross will offer financial incentives for members of the PBP to use participating hospitals and physicians," said Leona Butler, director of provider contracting for Blue Cross. "Because this 'channelling' will enable participating hospitals to operate more efficiently, they have been able to offer Blue Cross a considerably reduced rate."

Blue Cross members will retain their free choice of provider hospitals and physicians; however, when a member receives care from a non-participating provider, he or she will be responsible for at least 20 percent more of the cost of care.

The medical staff of SUH is being surveyed to assess their willingness to participate in the PBP, and Chief of Staff James Silverman has emphasized that all staff members—including those in faculty, group and independent practices—would be equally entitled to participate if SUH accepts such a contract.

In seeking contracts for the PBP, which by the end of the year will be available in most areas of the state, the Blue Cross has approached hospitals in each area only to the extent required to meet estimated bed need during the first-year implementation.

Blue Cross emphasizes that it intends to continue its long-term "standard contracts" with hospitals not participating in the PBP. Members of other Blue Cross plans will still be able, as always, to receive care on a fee-for-service basis at almost all hospitals in the state by presenting their Blue Cross cards.

The *Campus Report* will keep readers informed of the status of SUH's contract negotiations with Blue Cross of California.



Gloria Linder, head reference librarian at Lane, conducts a computer search of literature for a Stanford physician. Now clinicians trained to conduct their own searches will be able to do so on five terminals soon to be placed throughout the hospital.

New terminals to make possible more independent computer searches

Five computer terminals that can give doctors direct access to a national library of medical literature in a matter of minutes will be placed throughout Stanford University Hospital next month, funded by a $10,000 grant from the Henry J. Kaiser Family Foundation.

The terminals represent the Medical Center's goal of giving clinicians access to the computer search opportunities currently used most by academic researchers, said Dr. Richard Lenon, the clinical assistant professor of medicine who helped engineer the program.

Physicians have had access at Lane Medical Library for over a decade to "MEDLINE," a computerized tie to all the medical book and journal listings in the National Library of Medicine. But until recently, with only a few reference librarians trained to use the system, the fairly time-consuming computer searches were more practical for scientists researching papers than for doctors seeking answers to treatment questions, Lenon said.

To help alleviate the problem, Lenon and Gloria Linder, head reference librarian at Lane, have taught several three-hour seminars on the computer since November, training about 70 physicians, nurses, and others interested in conducting their own searches. The five new terminals, Lenon said, will be located in Lane and the departments of Medicine and Pathology libraries, as well as in the oncology day care center and East 1A in the hospital, and should greatly facilitate independent searches.

Anyone interested in signing up for a free upcoming training seminar can call Lenon at 327-3487 or Linder at 497-6831.

The foundation that made the purchase of the terminals possible is based in Menlo Park, Calif., and was founded in 1948 as a charitable trust by the late industrialist Henry J. Kaiser.

In 1982, the foundation authorized grants of more than $15 million to support efforts in the field of health and medicine.

Med faculty openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The Division of Cardiology is seeking an assistant or associate professor willing to make a major commitment to both clinical activities and research; demonstrated research productivity is essential. The selected individual will direct electrophysiology laboratory; invasive laboratory skills are mandatory.

Applicants should send curriculum vitae to: Edwin L. Alderman, M.D., Search Committee Chairman, Cardiology Division, Stanford University School of Medicine, Stanford, CA 94305.

* * * *

Applications are invited for junior and senior faculty positions in the Department of Anesthesia. Candidates must have completed two years of clinical anesthesia training and one or more years of research in a related field, specialty training in another discipline of relevance to anesthesia, or additional training in a subspecialty of anesthesia.

They must be Board certified or eligible, and eligible for California license.

Applicants should submit curriculum vitae to: John P. Bunker, M.D., Professor and Acting Chairman, Department of Anesthesia, Stanford University Medical Center, Stanford, CA 94305.

* * * *

The Department of Obstetrics and Gynecology seeks a full-time assistant professor. The tenure track position requires someone certified by the American Board of Obstetrics and Gynecology and board eligible in Maternal-Fetal Medicine.

The selected individual must be an experienced ultrasonographer; have documented expertise in prenatal diagnosis and genetic amniocentesis; have experience in Perinatal Outreach and in clinical research specifically relating to parturition and fetal-neonatal and maternal cardiovascular dynamics; and have demonstrated teaching abilities.

Applicants should send curriculum vitae and names of three referees to Kent Ueland, M.D., Chairman, Search Committee, Department of Gynecology and Obstetrics, Stanford University Medical Center, Stanford, CA 94305.

Medical Center MEMO

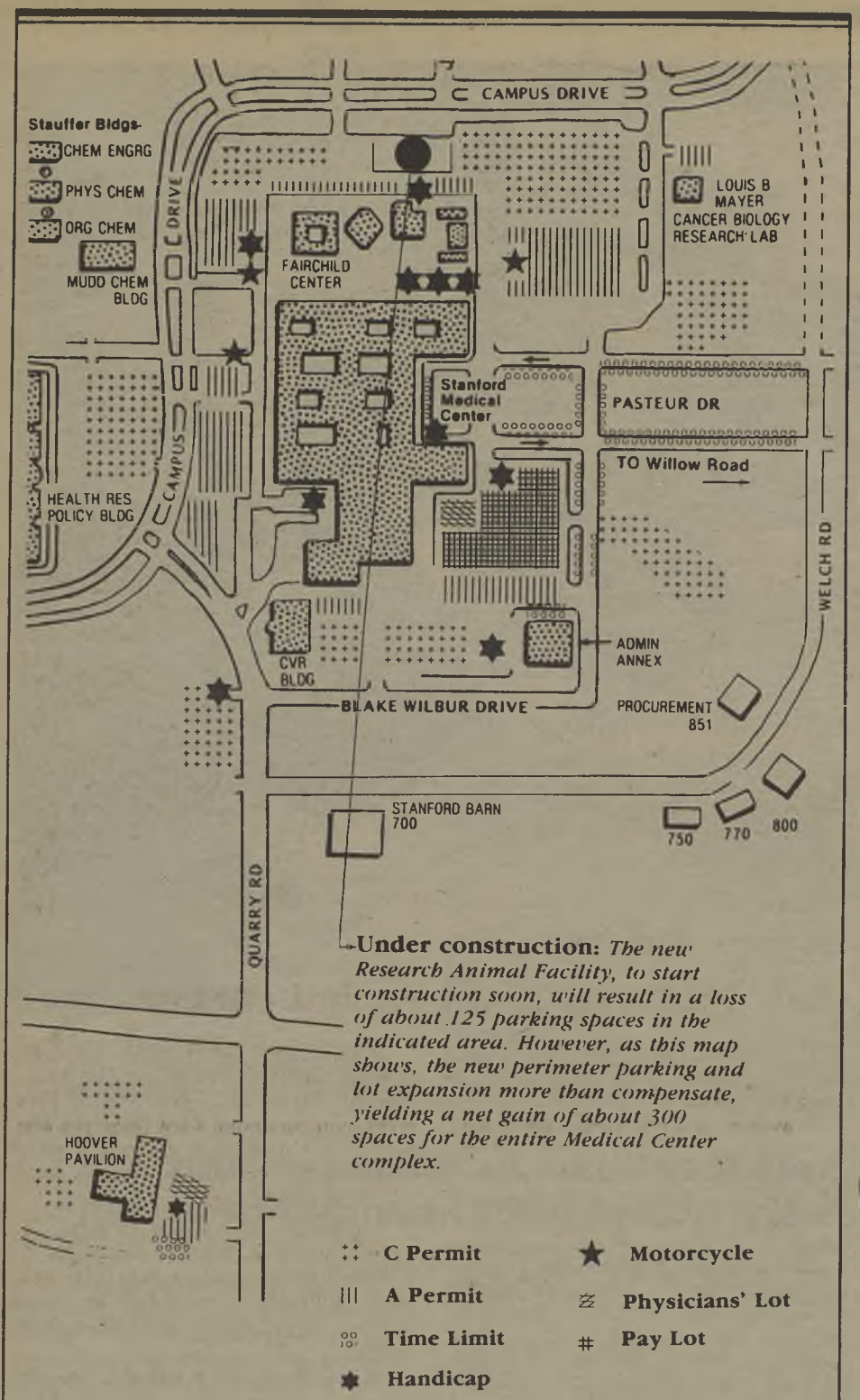
Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

Building for the Future

Several hospital equipment companies have been invited to exhibit selected products this week for review by hospital departments, administration and architects planning new equipment as part of the Hospital Modernization.

The equipment on display consists of six different wall monitor systems for patient rooms, and five typical samples of case work and cabinetry for laboratory use.

The exhibits are located in room P-1096, across the hallway from the HMP office. Viewing times have been scheduled by the HMP office for departments involved. Others wishing to view the exhibits may contact the HMP office at 497-6005.



Under construction: *The new Research Animal Facility, to start construction soon, will result in a loss of about 125 parking spaces in the indicated area. However, as this map shows, the new perimeter parking and lot expansion more than compensate, yielding a net gain of about 300 spaces for the entire Medical Center complex.*

Parking at the Med Center

The Medical Center has recently expanded its overall parking capacity, although certain specific areas may experience a loss in spaces.

The biggest gains were made by restriping the southern lots—which has increased the amount of compact spaces from 33 to 57 percent—and building the temporary C lot for construction workers, adjacent to the Cancer Biology Research Building.

Latest figures indicate that space in the Clinics lot (adjacent to the A lot between Campus and Pasteur Drives) has decreased by about six slots, but overflow patient traffic will continue to be accommodated free of charge in the pay lot.

Please note that handicap and motorcycle parking are by permit only, and violators will be fined for parking in these zones.



Philip Rector

Rector to leave for Arizona post

Philip Rector, director of Facilities at Stanford University Medical Center since May of 1979, has been named director of the University of Arizona's Division of Physical Resources.

His effective date of resignation at Stanford is October 3, 1983.

Rector first joined Stanford University in January of 1979, as associate director of service operations for Utility Systems. Prior to that he had worked as physical plant director at the California Institute of Technology in Pasadena, and at Georgia Institute of Technology in Atlanta.

Rector is a graduate of Georgia Tech, where he earned a mechanical engineering degree in 1955. He is a registered professional engineer. He was an Air Force pilot and later worked for the Southern Railway System before assuming his subsequent managerial posts.

He was given the Concern Award in 1974 by the Southern California Gas Company for recognition of energy conservation at Cal Tech. He served as president of the Northwest Atlanta Business Association for two years, and as a member of the Pasadena Chamber of Commerce Energy Committee.

He received the Meritorious Service Award in 1975 of the Association of Physical Plant Administrators of Universities and Colleges. He is now serving a second term as chairman of the long-range planning committee for the APPA.

In his role at the Medical Center, Rector has been in control of a department responsible for the maintenance of buildings, grounds and equipment throughout the complex, as well as management of major construction projects, including, for example, the Boswell Building Renovation.

At the University of Arizona, he'll be responsible for managing all engineering operations, maintenance and renovations for the 131-building, 320-acre campus, which includes the Arizona Health Science Center campus. There are about 600 employees in the division.

Rector will be succeeding Bill Varney, who has served as acting director of the division for the past 11 months.

Construction Corner

Boswell Building, second floor south:
As forecast in the July 13 "Construction Corner," the demolition phase of the Boswell Building Renovation, second floor south, has begun.

The entire south corridor of the building is barricaded to allow for construction procedures. Horizontal patient traffic through the second floor of Boswell is being rerouted through the third floor.

The corresponding areas on both the first and second floors are blocked by construction barriers.

The length of time for the barricades depends on when the areas become ready for occupation by the surgery, urology, and cardiovascular clinics on the second floor, and by the general internal medicine and medical specialties clinics on the first floor.

Women's Bathroom Shutdown:
Due to the upcoming remodel of rooms C050, C052, C052A, and C056 for the Department of Radiology, hyperthermia facility, the women's ground floor toilet room, lounge, and locker room in rooms C052, C052A, and C056 will be closed for an extended period of time starting 7 a.m. Saturday, July 30.

Provisions for temporary locker space and lounge have been made with the appropriate department heads.

Everyone is asked for cooperation with this renovation project. The Facilities Department will attempt to keep staff informed of its progress throughout construction. Alternative toilet rooms and lounges have been identified, and floor plans to illustrate them are being distributed.

Blake Wilbur Drive:
The discovery that a build-up of water from the winter's heavy rains had seeped through the road caused an unforeseen delay in reopening the Blake Wilbur Drive section under reconstruction last week.

Workers had to dig about 18 inches down, remove the wet soil and replace it with dry, before they could put down asphalt and complete the job.

Study seeks volunteers

Members of the community are reminded that volunteers are still needed to participate in a three-month study at the Cardiac Rehabilitation Program, to compare the health benefits of low and high level exercise. Researchers headed by Dr. Robert DeBusk are looking for healthy, sedentary men between 40 and 60 years old.

After phone screening, volunteers will undergo a preliminary medical evaluation. On completing the study, they will be given an individualized "prescription" for long-term exercise.

Those interested should call 497-6461 during regular business hours and ask for the "coordinator of the high/low study."

Physical therapy faculty awards

Two faculty members from the Division of Physical Therapy were recognized last month for their outstanding performance in the field at the 1983 American Physical Therapy Association Annual Conference in Kansas City, Mo.

Barbara Kent, professor, and Sarah Semans, associate professor emeritus of physical therapy, both received the Lucy Blair Service Award, which honors APTA members who have made exceptional contributions to the Association.



Barbara Kent

Kent has been a researcher and author for more than 30 years, with an outstanding reputation in the area of kinesiology. Her writings on functional anatomy of the shoulder and anatomy of the trunk, and editing of an international meeting of Orthopaedic Physical Therapists, have drawn nationwide acclaim. In 1972 she received the Golden Pen Award.

Kent's expertise includes many educational activities. She has served in an advisory capacity for both physical therapy and physical therapy assistant programs. She has held many state and national positions of the APTA.

Semans has served the profession for more than 50 years and was nominated for the Award "because of her exemplary service to students and teachers of physical therapy and her exceptional mastery of, and devotion to, the art and science of patient care."



Sarah Semans

Semans, an alumna herself of Stanford's division, is currently director of physical therapy at the Mid-Peninsula Health Center in Palo Alto.

She has continuously investigated new ideas in the area of neuromuscular disabilities, leading to the development of concepts and patient management.

In her years at the Spalding Crippled Children's School in Chicago, and the many summers she spent in poliomyelitis epidemic areas, Semans carried out research in treatment procedures.

Semans has shared her knowledge and expertise, particularly in the treatment of cerebral palsied children and adult hemiplegia. She was a pioneer in introducing the neurodevelopment approach to treatment in this country.

The Lucy Blair Service Award was established by the Board of Directors of the APTA in 1969 to honor the contributions of Lucy Blair, an outstanding clinician, supervisor, consultant, and former executive director of the Association. The first Award was presented to Blair at the annual conference in 1969.

Selection is made each year by the Board of Directors based on recommendations of the Mary McMillan and Lucy Blair Service Award Committee.



Sylvia Hupman at work in the eye clinic

Longest-term FPP staffer looks back on varied career

Sylvia Hupman started work here partly because "I love people" and partly because she wanted a 19-cubic-foot freezer.

It was nearly 33 years ago when Hupman, who had been raising vegetables at her Mountain View farm, found work outside the home to buy the freezer. "We just (recently) threw it away after it wore out," said the 61-year-old licensed vocational nurse who admits she feels so youthful, "I tell my (seven) grandchildren to call me 'aunt.' "

Hupman currently works in the Stanford University Clinics eye clinic and was honored at a recent Faculty Practice Program awards banquet as the employee with the most years of service.

That record of longevity began with a display of tenacity which began even before she was hired on Nov. 23, 1950, to work at Palo Alto-Stanford Hospital, the forerunner of the Medical Center.

"I would come in once a week to see if there were any positions available. Then between visits I would call up to ask. I think they hired me out of frustration," she said in a recent interview.

That first job was as a ward helper, a position which involved some housekeeping duties, running errands and a variety of miscellaneous chores.

She took about six months off in 1952 for the birth of her son Victor, who currently is supervisor at the hospital print shop.

Hupman was eventually promoted to nurse's aide, and she particularly remembers many of the celebrity patients who came to the hospital.

Among the famous patients Hupman counts on her list is comedian Joey Brown. "I put him to sleep with a good back rub," Hupman recalls.

Finally, however, in 1958 frustration again became an issue—this time for herself.

"It was total frustration," Hupman said, which led her to take a one-year leave of absence to attend San Mateo Junior College to become a licensed vocational nurse.

"I wanted to do so much (medically) for the patients, but that was not possible without further training," she explained. So with the encouragement of several faculty members and colleagues, Hupman was given one of the first leaves of absence granted at Stanford for a member of the nursing staff to upgrade her qualifications.

For several years Hupman served in a variety of units doing what she had dreamed of doing—helping to care for patients.

In 1963, after pulling a ligament in her hip, Hupman was transferred to the clinics where the physical demands appeared less hectic, she said.

Now Hupman works in the ophthalmology clinic where she assists with a variety of procedures, including anesthesia, ultrasound and laser treatments.

While work duties have changed through the years, much of Hupman's home life has grown as well. She still lives in the same Mountain View house she and her husband of 41 years, Addison, lived in when Hupman started hospital work more than three decades ago.

The family, which now includes two daughters, Elsie Louise and Ann Marie, in addition to son Victor, has seen their rural home gradually surrounded by commercial developments and subdivision houses.

"We stick out like a sore thumb," she said.

Hupman, a Los Angeles native who grew up next door to Addison in Berkeley, has no plans to retire. Her husband, however, retired recently from an engineering job with the Whisman School District in Mountain View.

The couple enjoys travel, most recently a vacation in Europe.

Her hobbies include lapidary work.

New home for the printed word

There's good news in the news department!

Now it will be easier for you to find extra copies of the *Campus Report* and other publications of interest to the Medical Center community, since five custom-made wooden dispensers were installed last week.

Four of the dispensers are located in the hallways near the escalators on each floor of the main hospital. One is in the main lobby of Hoover Pavilion.

The dispensers are hoped to help facilitate publications distribution at the Medical Center. They are designed to accommodate approximately 150-200 *Campus Reports*, 50 or more *Facts* booklets, 100 *Overviews*, 50 *Stanford Medicine* or other magazines, and about 100 other future newsletters or publications. Overflow will be accommodated on the lower shelves of the dispensers.

The dispensers were paid for by SUH employees with proceeds from the November, 1982 jewelry sale.

Please—now that the dispensers are here, help yourselves to their offerings, on a regular basis or whenever they catch your eye in passing. All publications are free for the taking, and you might just find some useful information!



Matthew Waldor exhibits *Torpedo californica*, a member of the stingray family. Researchers are using proteins from the stingray as part of their strategy for a new kind of treatment for diseases of the immune system.

PHOTO BY LAWRENCE STEINMAN

Steinman. . .

continued from page 12

sort of disease regulation in non-human primates, Steinman said, before any testing in humans might be done. Even after studying the mice for up to a year after the experimental treatment, no negative side effects have been detected, Steinman said, though toxicity will continue to be closely followed in further research.

Primate studies are scheduled to begin in Europe and the United States within the year he said, perhaps prompting studies in human patients within three to five years.

Prednizone, a steroid that induces a blanket suppression of the immune system, is one of the current popular treatments for myasthenia gravis that "work quite well," Steinman said, though side effects such as high blood pressure, weight gain, and increased vulnerability to infection make the drug less than ideal.

But another disease linked to an immune defect, multiple sclerosis, has no effective treatment at all, and might be the first target illness to be treated by the new therapy, if animal studies confirm early promise, he said.

In patients with multiple sclerosis, the fatty sheath that provides insulation for nerve cells is slowly eaten away by misguided antibodies.

For 20 years, scientists have searched without success for the mysterious m.s. antigens—the protein molecules that send up the alarm in the human body and bring the full power of the immune system to bear against the nerve cells.

"That may be telling us something," said Steinman. "There may not be a specific m.s. antigen, but instead a variety of antigens that trigger the disease. We've taken a different tack and decided that if we're not going to get anywhere looking for the antigen, let's take the next available clue and try to devise a therapy for the disease based on that clue."

The "clue" Steinman speaks of is the gene that scientists have identified that serves as a blueprint for the offending antigen. Identifying and "turning off" the gene would permit physicians to focus on the specific, defective part of the immune system that instigates disease, rather than suppressing all aspects of the body's ability to fight infection.

"It's a new and different type of immune regulation," said Steinman. "There's no certainty that it will work in humans, but it could be a major change from the fairly brutal types of immunosuppression that have been done in the past—hit the immune system with a crude chemical sledgehammer and hope for the best."

—**Deborah Franklin**

Becker dies in San Francisco

Dr. George Becker, a 1921 Stanford Medical School alumnus, died this month in San Francisco.

Becker, who practiced internal medicine in San Francisco, had established with his wife the George E. and Lucy Becker Professorship in Medicine at Stanford in 1979. Named in honor of Becker's late parents, the endowed chair is for "the alleviation and prevention of disease."

Becker was director of the Bureau of Communicable Diseases of the San Francisco Department of Public Health, vice president of the Independent Order of Foresters with responsibility for their tuberculosis hospital and aged residents' home, and a member of the Irwin Memorial Blood Bank Commission.

He was also a diplomate of the American Board of Preventive Medicine and Public Health, and a fellow of the Royal Society of Health in Great Britain.

...News Notes...

You should know. . .

All **Hospital employees** *are reminded that the month of August is the annual* **open enrollment period for health insurance plans.**

SUH employees who wish to change from one health plan to another may do so during August without a physical examination. Spouses may also be enrolled under the plans during August. Changes will be effective Sept. 1.

Employees are encouraged to carefully consider their personal needs and choose the plan that best suits them, since open enrollment takes place only once a year.

To assist in the decision, employees should refer to the benefits booklet for details of each plan. Minor rate changes will go into effect Sept. 1.

Anyone who has not received an information packet or who has further questions should contact Pension and Benefits, room E009, 497-5734. To change medical insurance, visit the office or complete the recently distributed forms and return.

* * * *

The annual **Summer Sale** *at the Hospital gift shop is currently in progress.*

* * * *

Dr. Peter Wood's lipid laboratory has moved, effective July 18, to a new location near his office, at **730 Welch Road**. *The phone numbers are 497-7820 and 497-6254.*

Jo Ann Hattner, R.D., M.P.H., and Dr. John Kerner, Jr., have coauthored a chapter in the recently released **Manual of Pediatric Parenteral Nutrition**, *edited by Kerner, an assistant professor of pediatrics.*

The chapter addresses "nutritional assessment of the pediatric patient." The book is available at the Stanford Medical Bookstore in Palo Alto.

* * * *

One **Haemonetic Cell Saver III**—*an automated blood recovery device which collects blood from a bleeding patient during surgery, filters out the debris, washes it, concentrates it and returns it to the same patient—was approved this month for funding by the SUH Auxiliary.*

The gift is by request of Dr. J. Kent Garman, associate professor and medical director of the Anesthesia Department, who said that the blood thus saved would otherwise be discarded during surgery. The system is especially appropriate for certain types of surgery.

There is currently only one of these devices in the Operating Room, and it is in heavy use and demand. It adds to safety by cutting down on the amount of transfused blood a patient would need during surgery.

A second device will be purchased with the trade-in of an outdated cell saver, plus the Auxiliary's gift of about $19,000.

Medical Center Calendar

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, JULY 27

Hematology Support Group: Support group meeting for patients with leukemia, myeloma, hemophilia, and other blood disorders. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

THURSDAY, JULY 28

Dept. of Medicine grand rounds: Lecture to be announced—Dr. Gary Gray. 8:30 a.m., Fairchild Auditorium.

FRIDAY, JULY 29

Dept. of Gynecology and Obsetrics grand rounds: "HCG Quantitation for Gestational Trophoblastic Disease: A Method for Detection of the Free B Subunit"—Dr. Alan Shapiro (fellow, reproductive endocrinology). 8 a.m., A336.

TUESDAY, AUGUST 2

Registration deadline for Nursing Educational Services Critical Care Course Level II: "Circulatory Assistance," to be held Tuesday, August 16, 8 a.m. to 4:15 p.m., 900 Welch Road, conference room 15. For further information or to register, call 497-6366.

Registration deadline for Nursing Educational Services Critical Care Course Level I: "Selected Topics in Medical and Surgical Critical Care," to be held Tuesday, August 9, 8 a.m. to 4:30 p.m., 900 Welch Road, conference room 15. For further information or to register, call 497-6366.

WEDNESDAY, AUGUST 3

SUH Dept. of Pensions and Benefits: "Pre-Retirement Counseling Program." First of a series on Wednesday evenings through August 24. 6 to 9:30 p.m., M112. Advance registration necessary. Priority will be given to employees within 10 years of retirement. For further information or to register, call 497-5734.

Dept. of Psychiatry and Behavioral Sciences lecture: "Opiate Receptor Regulation of Adenylate Cyclase in Neuroblastome/Glioma (NG108) Hybrid Cells"—Dr. Ping Yee Law (UCSF). 3 p.m., M108.

THURSDAY, AUGUST 4

Dept. of Medicine grand rounds: 8:30 a.m., Fairchild Auditorium.

SATURDAY, AUGUST 6

SUMC Auxiliary Volunteer Orientation: 9:45 a.m., W001. Call 497-6636 for further information.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.

GSA proposes broad expansion of censorship for unclassified research

A key Stanford official has sharply criticized federal efforts to impose government ownership and censorship over information developed in unclassified contract research.

Proposed patent and "rights in data" provisions of the Federal Acquisition Regulations (FAR) "jeopardize this country's progress and leadership in science and technology," Vice Provost Gerald Lieberman, dean of graduate studies and research, said on behalf of the University.

As proposed, the FAR regulations would require "prior written censorship by government officials. . .for the dissemination of research results in any. . .copyrighted form such as books, monographs, seminars, unpublished papers, graduate student theses, and other informal means of scholarly exchanges," Lieberman said.

The proposed regulations would permit copyrighted publication without prior government approval only of "scientific and technical articles. . .in an academic or technical journal," he noted.

"The (proposed) regulations are poorly written: many of the provisions are vague; some appear to lack statutory authority, and by their sheer breadth they raise First Amendment questions."

The administrative burdens on both academia and the government resulting from such regulations would be "unmanageable," he added.

As drafted, the rules "could prohibit universities from discussing government-contracted research with their own students, visiting scholars, or other researchers if any of these individuals were not 'employees'—even if they were U.S. citizens—while allowing release of that data to resident aliens," he said.

"The proposed regulations single out computer software as items to be owned by the government and which may not be released by university contractors. However, our software is merely the embodiment of research data in a copyrightable medium.

"More and more research results are taking the form of computer software, much of which (is) frequently shared among research scientists and industry.

"Indeed, Stanford recently established, in response to demand for software developed at the University, a distribution center designed to insure timely and efficient dissemination of research software.

"FAR would prohibit such dissemination, without even giving government officials the discretion to authorize release."

The proposed provisions concerning patent and "rights in data" should be "discarded as written," and reformulated with participation from the university community, he suggested.

His views were contained in a July 19 letter to Lawrence J. Rizzi, director of the General Service Administration FAR project at Suite 700, Webb Building, 4040 N. Fairfax Dr., Arlington, Va. 22203.

Lieberman sharply criticizes draft of Federal Acquisition Regulations

Following is the text of a July 19 letter to Lawrence J. Rizzi, director GSA FAR Project, from Stanford Vice-Provost Gerald Lieberman on proposed patent and data provisions of Federal Acquisition Regulations (FAR):

I am writing to express the concerns of Stanford University regarding recently proposed patent and "rights in data" provisions of the Federal Acquisition Regulations (FAR). If adopted as currently proposed, these regulations would jeopardize this country's progress and leadership in science and technology.

In general, FAR seeks to impose government ownership and censorship over information developed in the course of contract research; it would inhibit the free and open dissemination of unclassified research results which is essential in order for the United States to maintain its scientific and technological progress. However, the value of free exchange of research results is not acknowledged in the proposed regulations, which appear to be primarily concerned with the "property right or other valid economic interest" of research contractors (Section 27.402).

Moreover, the regulations are poorly written: many of the provisions are vague; some appear to lack statutory authority, and by their sheer breadth they raise First Amendment questions.

For example, the regulations permit copyrighted publication without prior government approval *only* of "scientific and technical articles. . .in an academic or technical journal." Section 52.227-18 (c) (1) (i). Prior written censorship by government officials would thus be required for the dissemination of research results in any other copyrighted form such as books, monographs, seminars, unpublished papers, graduate student theses, and other informal means of scholarly exchanges.

Not only would such actions be detrimental to the educational and research missions of universities, the administrative burdens of both academia and the federal government in implementing such provisions would be unmanageable.

Another example of inadequate drafting of these regulations appears in Section 52.227-18f(d) (iii), which requires either the permission of the contracting officer or an export license to disseminate information "subject to export control laws and regulations," except to university contractors, "employees who are U.S. citizens," or resident aliens, or to the government. As written, this provision could prohibit universities from discussing government-contracted research with their own students, visiting scholars, or other researchers if any of these individuals were not "employees'—even if they were U.S. citizens—while allowing release of that data to any resident alien.

What data is, or ought to be, subject to federal export control laws and regulations is a troubling issue that experts from the government and universities have been discussing for several years. FAR is not an appropriate forum for proposed resolution of these issues. Further more, no statutory authority exists to permit contracting officers to authorize an export in the absence of an export license, should one in fact be required.

A related issue involves "controlled data" and "data containing restrictive markings from the government," neither of which could be disseminated by universities, according to Sections 52.227-18(d) (i) and iv). These terms are not adequately defined and, in the absence of precise statutory authority, guidelines or regulations, are subject to potential misuse by the many government procurement officials who are charged with implementation. We are gravely concerned that effective communication among scientists will be impaired substantially by uncontrolled use of such secrecy powers.

The proposed regulations single out computer software as items to be owned by the government and which may not be released by university contractors. However, our software is merely the embodiment of research data in a copyrightable medium. More and more research results are taking the form of computer software, much of which are frequently shared among research scientists and industry. Indeed, Stanford recently established, in response to the demand for software developed at the University, a distribution center designed to insure timely and efficient dissemination of research software. FAR would prohibit such dissemination, without even giving government officials the discretion to authorize release.

FAR also contradicts the objectives of the "University and Small Business Innovation Act of 1980," and OMB Circular A-124, which strive for uniform regulations in order to promote technology transfer (PL 96-517) and reduce administrative burdens (A-124).

Given the many problems associated with the draft regulations, we strongly urge that parts 52 and 27 dealing with patent and data provisions of the Federal Acquisition Regulations be discarded as written and that new drafts be prepared with participation from the university community.

Thank you for this opportunity to comment.

Kennedy responds to Rusk, again defends academic freedom for research

Following is a reply from President Donald Kennedy to Loren Rusk of the Department of English:

Your letter to me of June 8, published in *Campus Report*, urges me to prevent the possibility of "weapons research" at SSRL, and asks me in conclusion to "re-examine your conscience and truly represent the community that you head."

First, I want to dispel some confusion about my job. It is not to "represent the community." The University is a complex entity. On some matters—for example, the stewardship of the University's assets and property—I have a good deal of authority. I do not, and should not, exercise it in a representational fashion.

We are a public trust, and I am therefore accountable to trustees—who don't believe, for example, that real estate transactions should be evaluated by campus referendum. On other matters, particular constituencies of the University hold the authority. For example, by powerful and longstanding academic tradition, the faculty is responsible for university policies relating to academic inquiry.

This principle exists for the best of reasons. Academic freedom really *means freedom of inquiry*. To be able to probe according to one's own interest, knowledge, and conscience is the most important freedom the scholar has, and an undissociable part of that process is to state its results openly. The rules of universities are carefully structured to protect freedom of inquiry, and accordingly they have always turned aside from regulating faculty inquiry, even when strong political forces were in favor of it. It is these very same rules that insist, as a complementary defense of freedom of inquiry, that the work be done and published openly.

Thus the academic community has surrounded research with the same kinds of protections that a democratic society has more generally given to speech. That is because the two are really very much alike. When the theoretical social scientist, working alone and without benefit of any equipment beyond a library, generates a radical idea we seldom argue about the need to accord every protection to the author's right to produce and to publish that idea.

That is because in such cases the identity between research and speech is so obvious.

It might be argued that research in the physical sciences is different because it depends upon complex hardware, involves the development of "technologies" and not just ideas, and frequently is supported by outside entities. All that is true; yet I do not believe that the size of a project, the specificity of the products, or the source of the funding provides a valid basis for casting aside the principle that faculty members should be free to inquire according to the dictates of their own professional interests and conscience. What possible principle could be used to differentiate some forms of "hard science" from the rest of scholarly work, for the purpose of regulating it differently?

At Stanford the Committee on Research, the faculty's agent for establishing and monitoring research policies has frequently been called upon to make restrictions on research that are based on prospective end-use or on the source of funding. The Committee has consistently reaffirmed its belief, most recently in the case of the SSRL project, that such restrictions should not be made. Although I have stated my own personal agreement with that view, I have tried to remind everyone—and I do so again now—that this is clearly an area in which the faculty has the responsibility. Were the President of the University able to set aside that policy so as to prevent a faculty member from doing a particular piece of research—with or without the claim to "represent" some community or other—we would have sacrificed a central element in our tradition of academic freedom. But let me comment, for myself, on the arguments you and others have raised.

Some have contended that the SSRL project is different because it involves outside institutions and a large capital investment. As a matter of fact, the proposed capital investment will make possible a variety of different kinds of work, most of them having nothing whatever to do with nuclear weapons or testing. However, as Stanford's rules require, a Stanford faculty member (one who, by the way, deserves respect for his conscience as well as for his Ms. scientific distinction) will be the principal investigator on the project, and will be responsible for it. It is thus clearly in the same category as other investigator-initiated research projects.

Others, like yourself, believe that this case is different for another reason. Because, it is argued, the research is related to nuclear weapons, and because nuclear weapons have the potential for great human destruction, the entire matter passes to a different ethical zone. That kind of argument is regularly advanced whenever a good set of principles produces a result with which many disagree, or which seem threatening. It is frequently used, for example, in favor of martial law in times of civil unrest. It is a tempting argument, but it is one we should resist.

Your letter ends with a challenge very familiar to those of us who agonized our way through the late 1960s; "No neutral move is available to you. . . you can either add to the danger of annihilation, or you can join those of us who believe that the least we must do is not allow it to begin in our own backyard." I find that a disappointingly familiar specimen of rhetorical righteousness, but at least the first part of it is correct: I can indeed make no "neutral move." That neither surprises me nor leaves me particularly uncomfortable, because I've learned that the more difficult decisions I make nearly all have to do with collisions between competing values, each of which has great merit. In the present case, I cannot begin to predict whether or how much this research (or any of a number of other kinds of research) will add to the danger of annihilation; but the nuclear imperative you offer does not persuade me that we should suspend a central principle of academic freedom because there is some chance that it might.

Guest Professorship Board 'tended to disrupt' McCloskey class, faculty find

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Guest Professorship Board until its present rules are changed.

The provost's actions followed the recommendations of political science Profs. David J. Danelski, Heinz Eulau, and Robert Horn, who conducted the probe, and Humanities and Sciences Dean Norman K. Wessells, who agreed there were "serious abridgements" of academic freedom by the Associated Students.

When he requested the inquiry on his own initiative May 18, Hastorf noted that "following faculty approval of the teacher and the course syllabus, any alterations in the lectures and readings must be the decision of the teacher."

Wessells expressed hope the Associated Students would revise its procedures so that the student-financed guest professorship program could continue. Present student legislation "virtually guarantees that academic freedom of guest professors and their students will be infringed," he said.



Pete McCloskey

Master-servant relationship

The faculty investigating committee noted that "because the ASSU invites and pays guest professors, it takes the position that they are its employees who may not without its consent change reading assignments in courses or invite guest lecturers. In other words, it has a master-servant view of its relationship with guest professors. That view has never been accepted at universities like Stanford."

The written record indicates that the Associated Students Council of Presidents and Guest Professorship Board "went far beyond permissible student participation in instructional matters" with McCloskey, threatening to cut his compensation by $1,000 or even discharge him as guest professor if he would not agree to ASSU control over his reading list and guest lecturers, the committee said.

The ASSU "abridged the academic freedom" of students by possibly denying them "full and free discussion of matters originally planned for the course." The Guest Professorship Board's actions "tended to disrupt the course and hinder learning in it," they added.

After McCloskey acquiesced in the invitation of guest lecturer he said the Guest Professorship Board had demanded for the final session of the course, he and Board Chairman Seth Linfield negotiated the amount of time the lecturer would be permitted to speak while the guest was actually talking in class.

While Linfield had proposed a payment of $4,500 for the course to McCloskey in January, he was finally paid $2,000 by the ASSU on June 6.

The three political science faculty members recommended that the University pay McCloskey for out-of-pocket, course-related expenses, totalling $258.99, and that his compensation be increased by an unspecified amount to a level that is "fair." Wessells and Hastorf agreed this should be done.

Conditions for credit

The committee recommended that ASSU Guest Professorship Board courses not be granted academic credit unless:

1) A written contract between the board and the guest professor, stating the amount of compensation to be paid, and a statement of administrative costs for the course are filed with an appropriate University official;

2) The ASSU deposits in a University account the total amount of the guest professor's compensation and the total amount of administrative costs for the course; and

3) An academic department or program approves the course for academic credit. . .and assumes all administrative responsibility for it.

"We believe that students may solicit names of candidates for guest professorships, they may nominate such candidates to academic departments and programs for their consideration, they may decide the amount of funding they will provide for the course, they may publicize the course, and they may at the course's conclusion receive a report from the Guest Professorship Board on it," the committee said.

"But as a practical matter, student participation may go no further, for after academic departments or programs appoint guest professors, those persons become members of the Stanford faculty.

"Thus, like other faculty members, they have the right to determine without interference the content and conduct of their courses, and this means they may choose reading assignments and invite guest lecturers of their own choosing.

"In regard to changes of reading assignments after the beginning of a course, sound pedagogy often requires it, especially in new courses. Faculty members may, of course, discuss such changes with students, but the right to make such changes belongs solely to the faculty members."

The political science faculty approved a proposed three-unit lecture course by McCloskey Jan. 19 in a divided vote, but rejected credit for a proposed five-unit seminar. The faculty did not pass on each specific reading proposed by McCloskey, but generally approved the course outline and the appropriateness of the readings indicated.

Part of the course covered "the search for a Mideast peace," and a great deal of subsequent discussions between McCloskey and the Associated Students focused on readings and lectures on this issue.

McCloskey was approved as a guest professor by an 11-5 vote of the Student Senate Feb. 22, one more than the two-thirds majority required.

Readings reviewed

McCloskey refused to delete a "Foreign Affairs" magazine article by George Ball, former undersecretary of state, from his reading list at Linfield's request. But he did delete I.L. Kenen's work on "Israel's Defense Line: Her Friends and Foes in Washington" and agreed to add several American—Israel Public Affairs Committee arguments at Linfield's suggestion.

While he agreed to have the course meet an additional day each week to hear a guest lecturer with views different from his own, McCloskey understood it was his prerogative to choose the lecturers.

On April 28, ASSU President Cynthia J. Mathewson wrote McCloskey that any changes in readings "made without the express consent of the (Student) Senate or its agent (the Guest Professorship Board) would be inappropriate and unacceptable. . . .

"The right to invite (guest lecturers) resides exclusively with the Guest Professorship Board. The selection of dates of appearance resides with you as instructor."

In accepting the faculty committee recommendations, Wessells placed "no blame on individuals. Though the operating guidelines of the Guest Professorship Board are now judged inadequate, we must remember that the faculty has accepted them for many years. So we should use this opportunity to set the house in order." He said the School of Humanities and Sciences would "ensure that Mr. McCloskey's total compensation for teaching Political Science 7 is a fair one."

He strongly urged an official apology to McCloskey.

Wessells expresses hope ASSU will revise program for guest professorships

Following is a letter from Norman K. Wessells, dean of Humanities and Sciences to Albert H. Hastorf, vice-president and provost:

Enclosed is the report of an *ad hoc* committee formed to investigate alleged abridgements of academic freedom in ASSU Guest Professor Paul N. McCloskey Jr.'s course, Political Science 7. The course, entitled "Congressional Decision-Making Process, 1964-1983," was offered in spring quarter of 1983. Heinz Eulau, the chairman of political science, formed the *ad hoc* investigative committee at our request and in response to your letter to me dated May 18, 1983.

As you will see, the committee centered its investigation upon written material, not including newspaper accounts. Direct testimony was not taken, since most of the concerned parties were not available on the Stanford campus. You will also see that the committee presents powerful arguments that serious abridgement of Mr. McCloskey's academic freedoms, as well as those of students, did occur.

In good part, the enabling legislation of the ASSU Guest Professorship Program, as well as the modifications to it in the so-called 1983 Reorganization of the Service Sector, virtually guarantee that academic freedom of guest professors and their students will be infringed.

I have reviewed the statements submitted on June 27, 1983 to the *ad hoc* Committee by Mr. Seth D. Linfield, director, ASSU Guest Professorship Bureau, and agree with the committee that they do not change any of the conclusions that they reached.

In accepting the *ad hoc* committee's recommendations, I mean to place no blame on individuals. Though the operating guidelines of the Guest Professorship Bureau are now judged inadequate, we must remember that the faculty has accepted them for many years. So we should use this opportunity to set the house in order, not only with respect to the GPB procedures, but also to any other instructors appointed by departments of the Schools.

Though such teachers may not be members of the Academic Council, they and their students deserve the same guarantees of academic freedom espoused by the *ad hoc* committee for regular professorial faculty.

First, I endorse the first recommendation of the *ad hoc* committee. At the beginning of the autumn quarter 1983-84 our office will inform all departments and academic programs that the current ASSU Guest Professorship Bureau guidelines are not in conformance with principles of academic freedom at Stanford and that sponsorship of ASSU Guest Professors, under existing guidelines, will not be approved by our Office.

Second, I endorsed the second set of recommendations of the *ad hoc* committee report and recommend that you urge revision of the ASSU Guest Professorship guidelines in accordance with those recommendations. In particular, we should ensure that any academic unit agreeing to sponsor an ASSU Guest Professorship accepts the responsibility for supporting and administering all aspects of that person's activities as a teacher.

Third, I endorse the third recommendation of the *ad hoc* committee. I believe we are obliged to reimburse Mr. McCloskey for any personal expenses he incurred while teaching the course. We will also ensure that Mr. McCloskey's total compensation for teaching Political Science 7 is a fair one.

In addition to the recommendations of the *ad hoc* committee, I would enter my strong personal plea that an official apology should be extended to Mr. McCloskey and to his students for the infringement of academic freeom that they suffered.

Perhaps it may be some small compensation to Mr. McCloskey that this case will cause us to revise our procedures so that future Guest Professors and other instructors at Stanford will enjoy the special protections that their positions warrant.

Finally, I hope sincerely that the ASSU will see fit to revise the Guest Professorship Bureau procedures so that the program may continue to exist at Stanford. Departments and Programs in humanities and sciences, have benefited from the Guest Professors in the past—we look forward to being able to join once again with ASSU in this valuable effort to bring teachers with special experiences and talents to Stanford classrooms.

Faculty probe finds McCloskey freedom abridged by ASSU leaders

Following is a report to Norman K. Wessells, dean of the School of Humanities and Sciences from David J. Danelski, Heinz Eulau, and Robert A. Horn, of the Department of Political Science Committee to Investigate Possible Abridgements of Academic Freedom in ASSU Guest Prof. Paul N. McCloskey, Jr.'s course, Political Science 7, The Congressional Decision-Making Process, 1964-1983.

On May 18, 1983, Provost Albert H. Hastorf wrote you expressing concern about the circumstances surrounding the political science course that Paul N. (Pete) McCloskey, Jr., taught as ASSU Guest Professor last quarter. Particularly concerned about possible abridgements of Mr. McCloskey's academic freedom, Provost Hastorf wrote:

Courses are offered for credit in this university when both the teacher and the course content are endorsed by the faculty—in this case the Department of Political Science. Following the endorsement, the precepts of academic freedom apply.

Certainly a professor is free to explore the course program with the students who will be taking the course and with any group of students who may be interested, but following the faculty approval of the teacher and the course syllabus, any alterations in the lectures and readings must be the decision of the teacher. The Guest Professorship Board may well feel that they did not breach Mr. McCloskey's academic freedom, but there have been enough public statements in regard to this controversy that I would like you to ask the Department of Political Science to look carefully into the matter and report to you. It is my understanding that the Political Science faculty appointed Mr. McCloskey to the academic staff for this spring quarter and endorsed his course syllabus. They are therefore the responsible faculty unit. I shall appreciate receiving a copy of their report.

The faculty are responsible for appointing instructors and then for approving their proposed courses. This is a crucial responsibility and I want to be assured that there were no violations of this fundamental process.

This is the report that Provost Hastorf requested from the Department of Poltiical Science. We base it on relevant primary documents obtained from the Associated Students of Stanford University (ASSU), Mr. McCloskey, and various offices in the University.[1] We do not rely on press reports of the events covered.

I. Factual narrative

On July 1, 1982, a member of the ASSU Guest Professorship Bureau (GPB) informally invited Congressman McCloskey to teach a lecture course and a seminar—both to be designed by him—as a Guest Professor for one quarter during the 1982-83 school year. About two weeks later, Mr. McCloskey accepted the invitation.

Under ASSU by-laws then in effect, formal invitations to Guest Professors involved a three-step process: 1) solicitation of names of candidates, 2) nomination of candidates by the GPB, and 3) confirmation of candidates by a two-thirds vote of the ASSU Senate.

In addition to soliciting names of candidates and nominating candidates, the GPB was also responsible for making arrangements for sponsorship of candidates by academic departments and programs in the University.[2] In December, a GPB member began making arrangements with the Department of Political Science for sponsorship of Mr. McCloskey and approval of his proposed courses for academic credit.

Early in the Winter Quarter, Mr. McCloskey submitted to the members of the Department of Political Science descriptions of a course on Congress he proposed to teach as a Guest Professor during the Spring Quarter and asked for advice in regard to reading assignments. Mr. McCloskey described his proposed course as follows:

This course will consist of a series of case-studies of specific congressional decisions made during the past 20 years, starting with the Gulf of Tonkin Resolution in 1964. Reference will be made to historical antecedents, but primary emphasis will be placed on the *manner* in which each modern decision was made, and the part played in that decision by four outside factors: the White House, the press, lobbyists, and public opinion. Relevant Supreme Court decisions of the past 20 years will be part of the assigned reading and discussion.

Four dominant themes will be explored:

1) the function of the Congress envisaged in the Constitution, compared with its actual workings today;

2) the evolution of the strong Presidency-weak Congress relationship following World War II into the weak Presidency-strong Congress relationship of the 1970s with the temporary reversal of that trend during the first two years of the Reagan Administration; the current question as to whether the Reagan Administration has now lost its momentum;

3) the importance and impact of specific constituencies and lobbying groups;

4) the current challenges of budget deficits, Social Security reform, nuclear arms issues, and the search for a Mideast peace.

Lectures will center on question and answer discussions of the assigned reading materials. The final grade will be based 25 percent on class participation and occasional quizzes, 25 percent on midterms, and 50 percent on the final examination.

On Jan. 18, 1983, Heinz Eulau, chair of the Department of Political Science, believing that the ASSU Senate had already formally invited Mr. McCloskey as a Guest Professor, circulated to Department members Mr. McCloskey's academic resume, a letter from him describing the lecture course he proposed to teach, and a syllabus and reading list for the course. In a covering letter, Prof. Eulau stated that the GPB had requested approval of two courses to be taught by Mr. McCloskey for political science credit during the Spring Quarter—a three-unit lecture course and a five-unit seminar dealing with the same subjects but in greater depth.

On Jan. 19, the Department of Political Science met to discuss the GPB's proposals.[3] The minutes of that meeting show that "the question of granting political science credit for the proposed course to be taught by Paul N. (Pete) McCloskey was discussed at length." By a divided vote, the Department approved the proposed three-unit lecture course but not the proposed five-unit seminar.

In taking this action on the lecture course, the political science faculty did not pass on each specific reading proposed by Mr. McCloskey; it approved generally the course outline and the appropriateness of the readings indicated. Although individual members of the Department were willing to help Mr. McCloskey in revising the course syllabus if he sought their advice, it was understood that this was a matter for his judgment.

As a result of the Department's decision approving the lecture course, papers recommending McCloskey's appointment as a lecturer in political science were prepared, and the Dean of the School of Humanities and Science, the Provost, and the Board of Trustees approved the recommendation.

On Jan. 25, Seth Linfield, director of the GPB, "moved that the (ASSU) Senate approve his resolution to negotiate the guest professorship of McCloskey." The Senate minutes show that a "lengthy debate ensued on the possibility of McCloskey using the classroom as a sounding board for his political thinking. The director pointed out that we had to protect academic freedom, but on the other hand we (the ASSU) control the purse strings and could cut off remuneration if things seemed to be going out of control." After the debate, during which several students voiced their objections to inviting Mr. McCloskey, the Senate passed Mr. Linfield's motion.

Mr. Linfield then met with Prof. Eulau to ascertain the meaning of the political science faculty's approval of McCloskey's proposed course. "Specifically," Linfield wrote on Feb. 14, "it is the understanding of the GPB that a majority of Political Science faculty believe that, first, Rep. McCloskey is an adequate scholar in the subject matter he proposes to teach, and second, Rep. McCloskey is possessed of sufficient pedagogic ability to convey his expertise to students." In the margin opposite that statement, Prof. Eulau wrote "Yes" and returned a copy of the letter to Mr. Linfield.

Before the GPB formally nominated Mr. McCloskey to the Senate for a Guest Professorship, it met with him on Feb. 17 to discuss his syllabus, reading list, and course requirements.

The GPB saw itself as Mr. McCloskey's prospective employer negotiating the course syallabus and readings so that it could later certify to the Senate that the course was "academically rigorous" and that its syllabus and assigned readings were "both relevant and balanced." Mr. Linfield and others on the GPB read the material on the reading list and made notes indicating deletions and additions.

Mr. McCloskey later said he understood those "notes on each lesson to be suggestions, not demands." Mr. Linfield thought, however, he had negotiated an agreed syllabus and reading list from which Mr. McCloskey might not depart without the GPB's permission.

Although Mr. McCloskey rejected Mr. Linfield's deletions of George Ball's *Foreign Affairs* article, "The Coming Crisis in Israeli-American Relations," and a chapter entitled "The Arab-Israeli Conflict" in Cecil V. Crabb, Jr. and Pat M. Holt, *Invitation to Struggle*, he later said that at Mr. Linfield's request he did delete I. L. Kenen's *Israeli's Defense Line: Her Friends and Foes in Washington*. Mr. McCloskey also said he supplemented his original materials "with several AIPAC (American-Israel Public Affairs Committee) arguments which were submitted by Seth Linfield."

Concerned about balanced presentation of views in Mr. McCloskey's course, the GPB proposed that the course meet an additional day each week to hear a guest lecturer whose views differed from Mr. McCloskey's and made available $2,000 ($200 a guest lecturer for 20 weeks) for that purpose. Mr. McCloskey agreed with the proposal, but understood that it was his "prerogative" to choose the guest lecturers. Finally, apparently at the request of GPB to make the course "academically rigorous," Mr. McCloskey agreed to add the requirement of a term paper in addition to a midterm and final examination.

At the ASSU Senate meeting on Feb. 22, Mr. Linfield endorsed Mr. McCloskey "for the position as Association Guest Professor this Spring to teach *Congressional Decision-Making 1964-1983*."

After saying that the "GPB and a majority of the Political Science faculty members believe that . . . McCloskey is an adequate scholar on the subject matter he proposes to teach . . . and . . . that McCloskey . . . is possessed of sufficient pedagogic ability to convey his expertise to his students," Mr. Linfield added: "Last Thursday, GPB and McCloskey reached agreement in principle on the syllabus; thus, we certify the syllabus as both relevant and balanced."

After extensive discussion, the Senate narrowly confirmed the GPB's nomination of Mr. McCloskey as a Guest Professor. At that meeting, the GPB set forth the standards it followed in selecting Guest Professors during the year. "First and foremost," it stated, "the GPB considers itself bound by the Principles of The American Association of University Professors and any relevant standards of Stanford University."

. . . we believe that the ASSU, through the GPB and the COP, abridged academic freedom in Mr. McCloskey's course.

. . . like other faculty members (guest professors) have the right to determine without interference the content and conduct of their courses. . . .

Because a large number of students expressed interest in Mr. McCloskey's course, the GPB expected an enrollment of more than 300 students and thus scheduled it to meet in Bishop Auditorium. As it turned out, 51 students enrolled in the course.

By the second week of the course difficulties developed between Mr. McCloskey and Mr. Linfield. On April 6, Mr. McCloskey complained about the lack of syllabi and course materials for the entire class and Mr. Linfield's assertion that he was to select the guest lecturers.

"This," Mr. McCloskey told him, "is not in accord with our agreement. Thus far, acting on your assurance that this was my prerogative, I have asked David Harris to speak on April 14, John Ehrlichman on April 28, and Dennis Hayes on May 5, assuring each of them as stated by you to me several weeks ago, that they would receive a check for $200."

Having heard that a member of the GPB had approached two members of the Hoover Institution to speak, Mr. McCloskey said he was scheduling their lectures in the course and told Mr. Linfield that if there were any other guest lecturers he wanted Mr. McCloskey to consider, he should let him know immediately.

Soon thereafter, Mr. McCloskey, believing he could not deal with Mr. Linfield, sought to obtain the names of the members of the GPB so that he could meet with them. When Mr. Linfield refused to disclose the names, Mr. McCloskey wrote Prof. Eulau on April 8, asking for help. Among the things Mr. McCloskey raised with Prof. Eulau was his compensation for teaching the course, saying the GPB had given him three different figures, the most recent being $3,500.

On April 13, Prof. Eulau answered Mr. McCloskey's letter saying he wished he could help, but the ASSU, not the Department, had administrative responsibility for the Guest Professorship and suggested that Mr. McCloskey seek help from Laura Selznick, head of the Undergraduate Special Program. Ms. Selznick in turn suggested that Mr. McCloskey

McCloskey/continued from page 19

contact the Ombudsman. On April 18, Mr. McCloskey made public his complaints against Mr. Linfield.

On April 19, Prof. Hubert Marshall, a member of the Department of Political Science, sent a statement to one of the students in Mr. McCloskey's course, saying the student might use it in connection with a meeting Mr. McCloskey was to have soon with the GPB. In that statement Prof. Marshall said: "In my experience the degree of ASSU involvement in this instance is unprecedented and is a violation of Mr. McCloskey's academic freedom."

On April 20, students in Mr. McCloskey's course wrote to Mr. Linfield that they were disturbed about the continuing controversy because it hindered their work in the course.

"(W)e feel," they went on to say, "that the ASSU Guest Professorship Board's 'review' of Congressman McCloskey's syllabus, assigned readings, and selection of guest lecturers is an unprecedented and intolerable act of infringement on Congressman McCloskey's academic freedom." In a later document, the students specified what they believed to be the infringements of academic freedom as follows:

The GPB has removed from the required reading list *Israel's Defense Line, Her Friends and Foes in Washington.*

The GPB has attempted to remove from the required reading list, "The Coming Crisis in Israeli-American Revolutions."

Although the GPB has "allowed" the class to read the foreign policy textbook, *Invitation to Struggle* by Crabb and Holt, it has attempted to "disallow" us from reading Chapter 4 of that book, which deals with the Arab-Israeli conflict.

On April 21, Mr. McCloskey, in response to a request to meet the ASSU Council of Presidents (COP), raised four issues he wanted the COP to decide:

1) The selection, timing, and compensation for the Thursday "Guest Professors,"

2) The mechanism and responsibility for printing the syllabus materials.

3) My own compensation and the time and conditions of payment, and

4) The matter of whether or not Mr. Linfield has the right to control what will or will not be printed in the supplementary reading syllabus or to delete textual materials previously approved by the Political Science Department for inclusion in the course.

The final issue, Mr. McCloskey stressed, concerned academic freedom.

On April 22, Mr. Linfield wrote Prof. Eulau saying that the GPB was "very proud of the manner in which we exercised our discretionary jurisdiction pertaining to (Mr. McCloskey's course) in the best educational interests of the students and the instructor and in accord with our discussions prior to the extension of a teaching invitation to Mr. McCloskey." Nonetheless, Mr. Linfield went on to say, if, in response to complaints Mr. McCloskey raised in the media, the Department of Political Science wished, "by virtue of its accreditation of the course, to assume all of the rights and responsibilities of the course, we (the GPB) would be happy to discuss an expedient process for quick changeover of administrative and academic responsibility." Prof. Eulau, believing it inappropriate to interfere in the administration of the course so late in the quarter, did not respond to Mr. Linfield's letter.

. . . the students on the GPB and the COP seriously misunderstood the permissible limits of student action in instructional matters in the University.

On the same day—April 22—members of the GPB and the COP met with Mr. McCloskey and submitted to him a document entitled "Memorandum of Understanding," in which they stated their version of the terms and conditions of McCloskey's Guest Professorship. Among its provisions were the following:

1) Mr. McCloskey is to be employed as an "Instructor" by the GPB for the Spring Quarter, 1983.

2) "GPB may discharge Instructor for just cause, and thereby terminate this agreement; provided, that instructor must be notified of the cause or causes for discharge and given the opportunity to appear before the ASSU Council of Presidents (COP) for a formal hearing prior to any action. Cause for discharge shall consist of conduct seriously prejudicial to Stanford University and—or ASSU through conduct in violation of law or commonly accepted standards of morality, failure to cooperate within the bounds of acceptable standards, unprofessional conduct reflecting great discredit on Instructor or the position of Guest Professor, neglect of duty, inefficiency, or incompetence, or other cause substantially prejudicing effective performance of the duties of the position."

3) "The textbooks, papers, and other readings and study aids shall be those which were agreed to by GPB and Instructor, so that the education of students and effectiveness of Instructor would be mutually enhanced on Feb. 17 (set out in detail in what the parties refer to as 'the lists' and attached as Schedule A). Changes in the selections may be made with the mutual consent of GPB and Instructor."

4) The GPB shall invite guest lecturers for each Thursday session of the course. Such invitations shall be made after consultation with Mr. McCloskey, and a written request by him not to invite a given lecturer "will create a presumption that GPB will not invite that (l)ecturer."

5) Mr. McCloskey's "compensation shall be in the amount of $2,000 payable on May 6, May 20, and June 3, 1983, in equal amounts. In addition, GPB will move the ASSU Senate to authorize an additional payment of $1,000."

Mr. McCloskey refused to sign the document on the gounds that it was not in accord with his earlier discussions with the GPB. He wrote to the COP on April 25 that he believed the execution of the document would violate an obligation to the students in Political Science 7 and the commitment the GPB had made to the Department of Political Science. He then added:

I was glad to accommodate the Guest Professorship Board's request for a third class each week with a different viewpoint to be expressed from my own. I was also agreeable to several additions or deletions in the reading syllabus which the Board suggested.

On others I was not. The syllabus readings which the Board printed for Lessons 1 through 10 reflect my final decisions. Seth Linfield, Board member who controlled the printing, made no protest whatsoever to the final materials that were sent to the printer on March 17, nor to those in Lessons 7 through 10 on or shortly after April 6. I understood his notes on each lesson to be suggestions, not demands. Your new proposal demands control of the syllabus, and to this I have not agreed and cannot agree.

After citing an example of an addition and two deletions of readings sought by Mr. Linfield, Mr. McCloskey concluded:

Both this addition and the two deletions are of course your privilege to request, but to *impose* them would be repugnant to a most important principle—Stanford's tradition of academic freedom. I hope you will reconsider and override the Board's position on this point.

As to his compensation for teaching the course, this was Mr. McCloskey's proposal:

I would suggest the $4,500, as originally proposed by Seth Linfield in January, to be paid on June 2, 1983, but *only* if either three-fourths of the class's 51 students or the Political Science Department certifies to you on that date that the class has been conducted fairly, professionally, and in keeping with the highest academic standards of Stanford University. If such certification is not provided, no compensation will be payable. The ASSU would cover my actual costs incurred in telephone calls, mailing, and duplication of materials, upon presentation of vouchers therefor.

On April 28, ASSU President Cynthia J. Mathewson answered Mr. McCloskey's letter. The most important statements in her response are as follows:

(A)ny changes (in course standings) made without the express consent of the Senate or its agent (GPB) would be inappropriate and unacceptable. . . .

(T)he right to invite visiting professors (guest lecturers) resides exclusively with the GPB. The selection of dates of appearance resides with you as instructor of the course. . . . Without GPB approval . . . you may neither invite guest lecturers nor promise payment on behalf of the Associated Students of Stanford. . . .

I do not feel that it would be advisable to promise you more than the $2,000 originally agreed upon and approved by the Senate. If, however, we can manage to come to agreement on most of the issues in question, the GPB and Mr. Linfield have already suggested moving another $1,000 on the Senate Floor. I am in agreement with the Bureau on this matter. Additionally, you may rest assured that all reasonable expenses which you incur as a Guest Professor will be paid for by the GPB, provided that it receives adequate documentation. . . .

I feel it is absolutely necessary for us to reach an agreement by (May 2, 1983). Failure to do so may result in Bureau actions affecting your status as Guest Professor. It is my genuine desire that such actions prove unnecessary.

Mr. McCloskey and the GPB and COP reached no agreement. He notified COP, however, of guest lecturers he invited to the Thursday sessions, and he reported a breakdown on tbe grades for the midterm examination. He also informed the COP that he had dropped the term paper requirement because of the heavy reading assignments in the course.

On May 3, the GPB reported to the ASSU Senate that it was Mr. McCloskey's employer and that it was "the Stanford University agency vested with plenary jurisdiction over the administration of Congressional Decision-Making 1964-83." The GPB further reported that as "an explicit condition precedent of receiving an invitation from the ASSU Senate, (Mr. McCloskey) agreed to the use of a syllabus which was worked out in consultation with him."

On May 24, the new Co-Directors of GPB—Nathan Brostrom and Enrique Lerner—wrote Mr. McCloskey saying they were "rather disappointed by the developments of the past week. Our main grievance is in the contents of the readings. . . . (T)here were some drastic departures from the agreements."

Referring to one of the lessons, the Co-Directors wrote: "Unfortunately for the class there were some obscure sources such as three articles that appeared in the Arab News, authored by Grace Halsell. Some students enrolled in the Political Science 7 commented that such articles had no place in a college level course and even less in a Stanford classroom." Despite the Co-Directors' disappointment, they said they would keep their word and reimburse the students for the last packet of readings.

Also on May 24, the Senate enacted legislation called the 1983 Reorganization of the Service Sector which affects a number of ASSU organizations, including the GPB, and supersedes the previous by-laws concerning the Guest Professorship Program. Section 7G, which sets forth the nomination and approval process for Guest Professorships, provides:

1) The Core Committee shall specify all administrative and financial requirements of a course, and shall be empowered to set academic criteria for all courses supplementing those in these By-Laws.

2) For each proposed course a three member select subcommittee of the Core Committee shall be formed to review the academic soundness of the course. The subcommittee shall insure that the course meets the academic criteria of the Bureau. The Director shall appoint the members of this subcommittee, of which at least one shall be a Core Committee member and at least one shall be a member of the Academic Council. The Director shall be an ex-officio member of this subcommittee.

3) Although informal consultation with the Senate is encouraged, a formal nomination must include the following information:

a) The name and academic-professional background of the nominee.

b) The complete plan of the coruse, including, but not restricted to, a description of lecture format, an outline of lecture contents, a complete reading list, and grading criteria.

c) Specification of all administrative arrangements for the course, including, but not limited to, expected enrollment and accreditation information from other departments-programs.

d) The complete budget for the course.

4) Nominations shall be approved by a two-thirds vote of the Senate at any meeting after the presentation of the formal nominations.

5) The formal nomination, as approved by the Senate, shall be considered a formal contract between all parties involved in the course, and specifically between the Association and the Guest Professor. The Director shall draft appropriate legal instruments to effect this contract.

6) Modifications to this contract may only be made through the following procedures.

a) The course plan may be modified upon the joint agreement of the Guest Professor and the appropriate select subcommittee of the core Committee, subject to a veto by the Core committee or any department-program accrediting the course.

b) Administrative arrangements may be modified by the Director in consultation with the Guest Professor, subject to the approval of the Core Committee.

c) The course budget may only be modified by the Senate upon the recommendation of the Core Committee, made in consultation with the Guest Professor.

7) Violation of contract.

a) The Director shall monitor compliance with the contract, and shall report any breaches to the Core Committee.

b) Upon breach of contract, or with just cause, the Core Committee may take any remedial action available to it including, but not limited to, revoking the title of, adjusting the salary of, or dismissing a Guest Professor. At least 48 hours written notice must be given to the Guest Professor, and he-she shall be given an opportunity to speak before the Core Committee.

c) The Guest Professor may appeal any action of the Core Committee to the Council of Presidents within 48 hours of written notice of the action from the Core Committee. The Council shall be the final arbitrator in any dispute arising under the contract.

8) The Director shall submit a final report and evaluation

continued on page 21

McCloskey/continued from page 20

of each Guest Professor to the Core Committee and the Senate at the end of each Guest Professor's service.[4]

In response to a mailogram sent by the GPB on may 27, Mr. McCloskey acquiesced in the invitation of a guest lecturer which he said the GPB demanded for the last session of the course. While the guest lecturer spoke, Mr. Linfield and Mr. McCloskey negotiated the amount of time the lecturer would be permitted to speak. Mr. Linfield wanted 25 minutes; Mr. McCloskey granted 10 minutes and then took questions from students.

On June 6, Mr. McCloskey received a check for $2,000 from the GPB in payment for teaching Political Science 7. As of that date, he had not been reimbursed for out-of-pocket, course-related expenses amounting to $258.99.

II. Conclusions

The above narrative indicates that the students on the GPB and the COP seriously misunderstood the permissible limits of student action in instructional matters in the University and the constraints the guarantee of academic freedom imposes on student action.

The nub of their misunderstanding is their view of the relationship between the ASSU and Guest Professors appointed to faculty positions in academic departments or programs. Contrary to the GPB's assertion at the ASSU Senate meeting on May 3, the GPB was not Mr. McCloskey's employer "with plenary jurisdiction" over the administration of his course. The ASSU, through the GPB and the COP, went beyond the traditional limits of student participation in instructional matters and in the process abridged academic freedom.

A. The Limits of Student Participation in the Guest Professorship Program

Provost Hastorf correctly points out that the "faculty are responsible for appointing instructors and then for approving their proposed courses." That responsibility, as he says, is "crucial" for the reasons set forth in the American Association of University Professors 1966 Statement on Government of Colleges and Universities:

> The primary responsibility of the faculty for such matters is based upon the fact that its judgment is central to general educational policy. Furthermore, scholars in a particular field or activity have the chief competence for judging the work of their colleagues; in such competence it is implicit that responsibility exists for both adverse and favorable judgments.
>
> Likewise there is the more general competence of experienced faculty personnel committees having a broader charge. Determination in these matters should first be by faculty action through established procedures, reviewed by the chief academic officers with concurrence of the board. The governing board and president should, on question of faculty status, as in other matters where the faculty has primary responsibility, concur with the faculty judgment except in rare instances and for compelling reasons which should be stated in detail.[5]

Student participation in instructional matters is necessarily limited, for the obstacles to such participation are great: "inexperience, untested capacity, a transitory status which means that present action does not carry with it subsequent responsibility, and the inescapable fact that components of the institution are in a position of judgment over the students."[6]

Yet there are some areas in which limited student participation is permissible. We believe that students may solicit names of candidates for Guest Professorships, they may nominate such candidates to academic departments and programs for their consideration, they may decide the amount of funding they will provide for a course, they may publicize the course, and they may at the course's conclusion receive a report from the GPB on it.

But as a practical matter student participation may go no further, for after academic departments or programs appoint Guest Professors, those persons become members of the Stanford faculty. Thus like other faculty members they have the right to determine without interference the content and conduct of their courses, and that means they may change reading assignments and invite guest lecturers of their own choosing.

In regard to changes of reading assignments after the beginning of a course, sound pedagogy often requires it, especially in new courses. Faculty members may, of course, discuss such changes with students, but the right to make such changes belongs solely to the faculty members.

Although we believe that student participation in the nomination of Guest Professors is permissible, we view the ASSU Guest Professorship as anomalous in the University's program of instruction in three respects:

First, in the procedures for selection of Guest Professors;

. . . the provisions of the 1983 Reorganization . . . puts in jeopardy the academic freedom of all future Guest Professors and their students.

Second, in the funding of instructional costs and budgetary procedures for paying those costs; and

Third, in the terms and conditions of employment that the ASSU through the GPB and COP has sought to impose on Guest Professors.

Because the ASSU invites and pays Guest Professors, it takes the position that they are its employees who may not without its consent change reading assignments in courses or invited guest lecturers. In other words, it has a master-servant view of its relationship with Guest Professors. That view has never been accepted in universities like Stanford.

Although faculty members are paid by the University, they are not, in the ordinary sense of the word, employees. In 1954, Judge Charles E. Wysanski, Jr., then President of the Board of Overseers of Harvard University, explained the relationship between faculty members and their universities in these words:

> A University is the historical consequence of the medieval *studium generale*—a self-generated guild of students or of masters accepting as grounds for entrance and dismissal only criteria relevant to the performance of scholarly duties. The men who become full members of the faculty are not in substance our employees. They are not our agents. They are not our representatives. They are a fellowship of independent scholars answerable to us only for academic integrity.[7]

The Board of Trustees' appointment of Mr. McCloskey as a lecturer upon the recommendation of the Department of Political Science made him a member of the Stanford faculty with the same rights, privileges, and responsibilities as other faculty members, and thus neither the Department of Political Science nor any other body in the University had the right to require its approval for changes in his course readings or invitations for guest lecturers in his course.

In regard to his teaching, Mr. McCloskey was accountable, like other Stanford faculty members, "only for academic integrity." We believe that the ASSU's view of its relationship with Mr. McCloskey and Guest Professors generally is contrary to the longstanding tradition of academic freedom and that the ASSU's attempt to require him to obtain its approval of changes in readings and invitations to guest lecturers in a course approved for University credit went far beyond permissible student participation in instructional matters.

B. Academic Freedom

Academic freedom is an important value in society as well as the university community. As Justice Brennan said in *Keyishian v. Board of Regents*, 385 U.S. 589, 603 (1967): "Our Nation is deeply committed to safeguarding academic freedom, which is of transcendant value to all of us and not merely to the teachers concerned." The ASSU shares that commitment, but some students in the ASSU seriously misunderstood the meaning of academic freedom. Thus we begin with an accepted definition of the concept:

> Academic freedom consists in the absence of, or protection from, such restraints or pressures—chiefly in the form of sanctions threatened by state or church authorities or by the authorities, faculties, or students of colleges and universities, but occasionally also by other power groups in society—as are designed to create in the minds of academic scholars (teachers, research workers, and students in colleges and universities) fears and anxieties that may inhibit them from freely studying and investigating whatever they are interested in, and from freely discussing, teaching, or publishing whatever opinions they have reached.[8]

Using this definition, we believe that the ASSU, through the GPB and the COP, abridged academic freedom in Mr. McCloskey's course.

First, we believe that the ASSU abridged Mr. McCloskey's academic freedom by threatening sanctions if he did not agree to ASSU control over the course reading list and invitations to guest lecturers. The clearest evidence of such threats is ASSU President Mathewson's letter of April 28, portions of which we quoted above. The meaning of the letter is obvious: if Mr. McCloskey did not agree to most of the ASSU demands, it was certain that he would receive $1.000 less in compensation for teaching the course and he might even be discharged from his Guest Professorship.

Second, we believe the ASSU abridged the academic freedom of the 51 students who took the course because the GPB's attempts to control the readings and invitations of guest lecturers and Mr. McCloskey's acquiescence in some of the GPB's actions may have deprived those students of full and free discussion of matters originally planned for the course. Furthermore, we believe that the GPB's attempts to control the readings and invitations to guest lecturers tended to disrupt the course and hinder learning in it.

We find the provisions of the ASSU 1983 Reorganization of the Service Sector dealing with the ASSU Guest Professorship Program as troubling as Mr. McCloskey's case, for that legislation, we believe, puts in jeopardy the academic freedom of all future Guest Professors and their students.

For the reasons we have given above, we believe review and monitoring of courses contemplated by the legislation goes beyond the limits of permissible student participation in instructional matters. Further, we believe that the ASSU assertion of authority to adjust the salaries and dismiss Guest Professors upon breach of contract—e.g., modifying a course plan without consent—"or with just cause" as determined by the Core Committee of the GPB, will lead inevitably to abridgements of academic freedom at Stanford.

Academic freedom is not only the absence of pressures and threats of sanction affecting the teaching and learning process; it is also protection from such pressures and threats. Faculty members and students whose academic freedom is in jeopardy have a right to institutional protection, which in the first instance is to be provided by the academic department sponsoring the faculty member and course.

In regard to Mr. McCloskey and his course, the Department of Political Science had that responsibility. Indeed, a member of the Department, Prof. Marshall, was the first to point out, in a letter of April 19 to a student in Mr. McCloskey's course, that in his experience "the degree of ASSU involvement in this instance is unprecedented and is a violation of Mr. McCloskey's academic freedom."

Although Prof. Marshall did not formally request a departmental investigation at the time, and although many of the crucial facts concerning the matter were not known to the Department until they were disclosed by this investigation, we nonetheless regret that the Department did not initiate an investigation at the time Prof. Marhsall first raised the issue.

III. Recommendations

We have three recommendations.

First, we recommend that the University make it clear that so long as Section 7 of the ASSU 1983 Reorganization of the Service Sector remains in force, the University cannot and will not grant credit for any course in the ASSU Guest Professorship Program. Whether such a statement would come most appropriately from the President, the Provost, or the Senate of the Academic Council we leave to others in the University. As a practical matter we realize that such action must result either in abandonment of Section 7 by the ASSU or the end of the Guest Professorship Program. It is best to be candid about this so that Stanford students and their chosen representatives understand exactly what is at stake.

Second, we recommend that ASSU Guest Professorship courses not be granted academic credit by the University unless:

a) a written contract between the GPB and the Guest Professor stating the amount of compensation to be paid and a statement of administrative costs for the course are filed with an appropriate University official,

b) the ASSU deposits in a University account the total amount of the Guest Professor's compensation and the total amount of administrative costs for the course, and,

c) an academic department or program approves the course for academic credit after the ASSU has agreed to invite the Guest Professor to teach it, and such a department or program agrees to assume all administrative responsibility for it, including the provision of course materials, the payment of compensation to the Guest Professor, and all other administrative costs in accordance with regularly prescribed University budgetary procedures.

Third, we recommend that the University pay Mr. McCloskey his unreimbursed, course-related expenses and increase his compensation for teaching his course.

Footnotes

[1]Copies of those documents are in Appendix A.
[2]The relevant ASSU By-Law provisions are in Appendix B.
[3]Only one member of this Committee—Prof. Eulau—was present at the meeting. Robert A. Horn is an emeritus professor who normally does not attend departmental meetings. David J. Danelski was at the time teaching in the Stanford in Britain Program at Cliveden.
[4]Section 7 of the 1983 Reorganization of the Service Sector Act is in Appendix C.
[5]American Association of University Professors, *Policy Documents and Reports* (Washington: AAUP, 1973), p. 38.
[6]*Ibid.*, p. 39.
[7]Quoted in Clark Byse and Louis Joughin, *Tenure in American Higher Education Plans, Practices, and the Law* (Ithaca: Cornell University Press, 1959), pp. 143-44.
[8]Fritz Machlup, "On Some Misconceptions Concerning Academic Freedom," in Louis Joughin (ed.), *Academic Freedom and Tenure: A Handbook of the American Association of University Professors* (Madison: University of Wisconsin Press, 1967), P. 178.

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□ **Academic yr. 83/84 or longer (flex.):** FURN. OR UNFURN.: 4BR/2½BA close-in LA Hills Mediterranean villa. Rural setting, 2 acre hilltop, quiet, secluded w/view, trees. 10 min. to Stanf. $2695/mo. Call 941-7190.

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□ **Academic yr. 83/84:** Furn. apt. nr. Tel Aviv Univ. 2BR/1BA, LR, view, phone & car EXCHANGE for housing nr. Stanf. Call (217) 333-9358 or in Israel, (03) 426-191.

□ **NOW:** Tahoe-Donner condo. 3BR/loft/2BA, spa, pool, tennis, golf, stable, $350/wk; $140 wknd. Call Bienenstock, 493-8649.

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□ **Late Aug. to mid-Jan. '84 (flex):** Furn. apt. 2BR/1BA, in Mtn. View, 15 min. to Stanf. No pets. Ideal for family w/small child (crib avail). $500/mo. + util. Call David & Jessica, 497-2672, day; 965-8981, eve. & wknd.

□ **July & Aug. '83:** Room in Palo Alto hse. Cple/single. $300. Nonsmoker. Call Carie or Dave, 493-3768.

□ **Late July-late Aug.:** Furn. 3BR/2BA spac. hse, DR, study. 10 min. to Stanf. Quiet cul-de-sac, great for children. $200/wk, $800/mo. Call John, 497-0837, day; 364-1244, eve.

□ **Sept. 21 to Nov. 17:** Furn. 2BR/2BA apt. in small, quiet complex. Lndry facil., dishwshr, pool. Located in Palo Alto 3-4 mi. fr. campus. $650/mo. Call Margie, 497-6461, day; 497-7754, eve.

□ **Feb. 1 to June 30, '84:** Fully furn, 4BR/3BA, FR, pool hse. in Crescent Pk. area, Palo Alto, 3 mi. to Stanf. $1500/mo. incl. grdnr, pool serv. Call 497-4933, day; 328-1791, eve.

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□ **Aug. 22 to Dec. 15 (flex):** ROOM in comfortable Palo Alto hse to SHARE w/3 women & pets. Vegetarians, nonsmokers. $225/mo. + util. + $37.50 dep. Call 858-0792.

□ **Aug. 15 thru academic yr. or longer:** FURN. or UNFURN. 4BR/2BA hse. nr. intersection Hwy. 280 and 85, spa, children OK, pets nego. $1200/mo. Call COLLECT (Colorado) (303) 755-2756 or lv. message.

□ **Now:** Fully furn. hse. 3BR/1BA & sep. shower. DR, bkfst nook, lrg. yrds. Quiet, creekside st. Bike to Stanf. $1200/mo. Call Larry, (415) 573-4998 day; 324-2469 eve or Eveleen, 322-6985 eve & wknd.

□ **Now:** Furn. 2nd fl. 2BR/2BA Pearce Mitchell campus condo. for Stanf. affil. Frpl., AEK, pool, jacuzzi, balcony, carport, clbhse., huge closets. Adult, nonsmokers, no pets. $900/mo. single, $1000/mo. cpl., 6 mo. and mo.-mo. thereafter (flex). Call 326-4213 or lv. message at 497-2576.

□ **Academic yr. '83-'84:** 3-4BR/2BA twnhse in central LONDON, AEK, dishwshr, dryr, TV, VCR, garage. New Barbican complex w/easy access to grdn, playgrnd, schl. and London Univ. in EXCHANGE for similar hse in Palo Alto for visit. scientist. Call Ian Benson c/o Desi Glassel, (415) 859-6487.

□ **Now:** Fully furn. apt. in Los Altos for SUBLET. Quiet, conv. located, ktchnware & lin. incl. Length of rent nego. though no long-term. Nonsmoker, no pets. $500/mo. incl. util. Call (415) 941-3501.

□ **Now:** ROOM in lrg. Los Altos hse. Priv. BA, full use of ktchn & use, quiet nghbrhd, 15 min. to Stanf. Mature, nonsmokers pref. $400/mo. incl. util. Call Patricia, (415) 859-4822, day; (415) 948-1713 eve.

□ **Aug. 3 thru 28:** Furn. 3BR/2BA hse. in midtwn. Palo Alto. Car poss. No pets, cpl. pref. $900/mo. Call George, 497-0603 day; 494-2955 eve.

□ **July, Aug., Sept.:** Tahoe-Donner hse. 4BR/3BA, deck overlooks Nat'l Forest. Hike, tennis, golf, Donner Lake access, hot tub. $450/wk; $200/wknd. Call 324-8559 eve.

□ **Sept. thru June '84 (flex):** Fully furn. 3BR/1BA in midtwn. Palo Alto. W/D, darkroom, patio. Quiet, creekside st. Bike to Stanf. Local ref. req. $950/mo. Call 322-2729 after 3 pm. wkday & wknd.

□ **Now:** Furn. 2BR/1BA contem. College Terrace hse., ww carpet, w/frpl, carport, storage. Nonsmokers pref., no pets. Dep. req. $850/mo. Call 948-5857 eve.

□ **Fall Qtr:** Fully furn. 2BR/2BA hse, LR, DR, study, DW, lrg sunny rms, covered patio, big yrd. 10 min. to campus. $700/mo. incl. yrdwork. Call 363-1658.

□ **Sept. '83 to June '84:** Fully furn. 3BR/2BA hse on 1/3 acre in Los Altos. 7½ mi. fr. Stanf. Nonsmokers. $1200/mo. incl. grdnr and water. Call (415) 961-6669.

□ **Now:** Female roommate wanted to SHARE 2BR/2BA hse. w/professional woman. Fully furn. except for BR, spacious, priv. exclnt Mt. View location. $315/mo. Call Marilyn, (415) 965-9128.

□ **Beg. Sept. 1-15 (flex):** Unfurn. hse, 2BR/1BA, LR, DR w/frpl, FR, new kitchen; frig, stove, DW, disp., W/D. Drapes, carpets. Encl. yd. Cul-de-sac. Nonsmokers, no pets, refs. req. Pref. cpl. or small family. $900/mo. + util. Lease req. Call 321-2384, eves, 6-9

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Services, P.O. Box 7772, Stanford, Calif. 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414 or Araya, 329-8828.

HOUSING NEEDED

□ **Beg. Sept. 1:** Resp. prof. woman seeks quiet, charming hse. or condo., furn. or unfurn., w/2 or more BR, pool, on or nr. campus. Nonsmoker. Up to $1500/mo. Call Nancy, 854-1981.

□ **Sept. or Oct. '83 to Oct. '84:** French MD seeks EXCHANGE or RENT furn. 2BR hse. or apt. nr. campus. Possible EXCHANGE for furn. 2BR hse. 5 km. south of PARIS, metro Bourg-la-Reine. Contact Dr. Jean Marc Davy, 43 rue de chateau fort, 92340 Bourg-la-Reine, France, tel. 1-350-97-53 or call Jim Conrad, 493-2597 morn. or eve.

□ **Beg. Aug. 22 for 5 wks:** Visit. scholar (recent Stanf. grad.) and wife wish to HOUSESIT. Will care for pets, plants and garden. Xclnt local ref. Call 325-6265.

□ **Beg. Sept. 1 thru academic yr. '83-'84:** Three mature, resp. business students 30+, nonsmokers, wish to rent 3BR hse. nr. Stanf. Will care for pets. Call 493-6445 eve or lv. message.

□ **Sept. 1 to June '84:** Female Stanf. fellow and dghtr, 13, w/quiet, polite German shepherd seek to rent or share hse. or apt. Local ref. avail. Call (415) 285-4109.

□ **Jan. 1, '84 (flex) for 6 mo.:** Visit. prof. on sabbat. at Stanf., wife, 2 girls, 11 and 15, seek 2/3BR furn. hse/condo. in Palo Alto or Los Altos sch. dist. Nonsmokers, no pets. Local refs. Call Ed, (415) 321-6584 eve.

□ **Aug. '83 to June 30, '84:** Adult physician cpl., nonsmokers, no pets, desire hse. or twnhse., furn. or unfurn. min. 2BR nr. Stanf. Call 497-7001, day; (415) 333-0168, eve.

□ **Beg. Nov. '83 for 1-2 yr.:** Visit. Australian MD, wife, 2 children, 5 & 2, seek furn. 3BR hse. on or nr. campus. Call B. Barnett, 497-5913.

□ **Now for 1 yr:** Immediately needed for delightful male Chinese scholar, long-term ROOM w/kfchn and smoking privilege (tobacco only). Call Gwen or Cecily, 497-3111 or 854-3300.

□ **Fall qtr or academic yr:** Single prof., nonsmoker, seek quiet, furn. hse. nr. Stanf. Will take care of hse. Ref. avail. Willing to pay dep. and full term rent in adv. Call Gary Eldred, (415) 848-6327.

□ **Beg. Sept. 1, '83:** Resp. family of 3 joining Stanf. staff (dghtr 8 yr.) want to rent 2/3 BR hse. nr. Stanf. Los Altos area pref. Long-term lease. Local refs. Call COLLECT (301) 474-3705.

□ **Dec. '83 to Aug. '84:** Visit. prof. and family seek furn. 3/4BR hse. on or nr. campus. Call (415) 841-0990.

□ **NOW:** Stanf. staff & prof. spouse, 2 children wish to rent clean, quiet hse in Palo Alto sch. dist. Nonsmokers, no pets. Refs. avail. Call 494-0756.

□ **NOW:** Young male prof. seeks rm. in EXCHANGE for handywork, gardening or security. Nonsmoker. Refs. avail. Call 547-4012.

□ **Sept. 6 to Dec. 20:** Visit. prof., wife, baby & well behaved dog need hse. or apt. to sit/rent. Will care for plants and pets. Up to $500/mo. Call 497-1745.

□ **Beg. Sept. 1:** Stanford European Dr. & family (2 children) need small hse, cottage, apt. Prefer Palo Alto, Menlo Park. Call (415) 493-4073.

□ **Beg. Sept. 15:** Married cpl, incoming Stanf. grad. students desire live-in, work-for-rent situation. Call Peter & Rebecca Hawthorne COLLECT, (203) 327-4620.

□ **Jan., Feb., Mar. '84 (flex):** Visit. prof. physician, wife, child need 2-3BR furn. hse/apt. to rent and/or hsesit nr. Stanf. Will care for plants, garden. Could EXCHANGE furn. 5BR/5½BA hse w/tennis crt., pool, 15 acre farm, Wynnewood, 25 min. to Phila. 15 min. by train. Call (215) 662-3795, day; (215) 642-6584, home.

□ **Aug. 15 for approx. 1 year:** Visit. prof. from Italy seeks furn. 3BR hse (not apt. or condo) for himself, wife, and 3 children. Up to $1200-mo. Call 497-7959.

□ **July 15 to Sept. 15:** Visit. prof. from Paris seeks hse to rent in Palo Alto, Menlo Park, Los Altos area. Possible xchng with a 4BR nice apt. and car in Paris (XVI district). Write to Jean Vuillemin, 76 rue de la Tour, 75116 Paris, France, Paris phone: 504 33 79; or c/o Harry Mairson, Computer Science Dept., Stanf., 497-1787.

□ **Beg. Aug. 1:** Professional cpl. seeks furn. or unfurn. hse or apt. within 15 mi. of Stanf. 1 yr. lease pref. Will pay $600-800/mo. Nonsmokers, no pets. Call 323-9730 after 6 p.m.

□ **Academic yr. 83/84:** Prof. fr. U. of Kentucky on sabbat. seeks 1 or 2BR furn. apt. w/ktchn & gar. for car. Nonsmoker. Call local 325-3612 around 7 p.m., ask for Gorindarajulu or call (606) 257-4950; (606) 223-9661.

□ **NOW:** $100 REWARD for info. leading to rental of cottage nr. Stanf. for resp. prof. woman. Call 326-4695.

□ **Aug., Sep., Oct.:** Yale & NYU grad stud. on sabbat. avail. for HOUSESIT. Nonsmoker, local refs. Call 454-5002.

□ **Beg. July 16 thru end of Aug.:** Grad stud. studying for oral exam avail. for HOUSESIT. Refs. avail., good w/plants, animals. Call 328-7947.

□ **Beg. Aug. 21 for 3 to 6 wks:** Professional cpl. & dghtr. wish to HOUSESIT in Stanf. area. Call 857-1641 or 325-6366.

□ **Beg. Aug./Sep.:** New Stanf. prof. seeks cheap, lrg. 1BR loft or cottage in attrac. surroundings. Good nghbrhd, local refs. avail. Call 848-4978.

□ **Beg. Sep. 1 for 9 mo.:** Visit. scholar, wife, 1 child seek 2-3BR furn. hse. or apt. nr. campus. Nonsmokers, clean living, homeowners. Will care for plants, pets. Local refs. Call (314) 875-2858 COLLECT eve.

□ **Aug. 1 to Oct.-Jan. '84 (flex):** Prof. cpl. (recent Stanf. grad.) seek apt. or hse. in Palo Alto area. Xclnt refs avail. Call 494-1310 eve.

□ **Sep. '83 up to 1 yr:** English visit. scholar on sabbat. seeks to rent rm. or hse. on or nr. campus. Write Dr. Roger Giblin, Electronics Dept., University College, London WC 1 ENGLAND.

□ **Beg. Aug. or Sep. to indef:** Female postdoc. & dghtr, 12, seek quiet, inexpensive apt. or shared hse. r. campus. Write J. Carey, 805 W. Stroughton Ave., Urbana, IL 61801.

□ **Aug. '83 to Aug. '84:** Visit. Prof. fr. Norway, wife, 2 children, seek 3BR, furn. hse on or near campus. Responsible, nonsmokers. Up to $1000/mo. Call 497-2040.

□ **Aug. for 2 wks or more:** UCR Prof. & wife would like to HOUSESIT for above time period—very flex. Will care for pets, plants, garden. Call parents on campus, 493-5198.

Carpools

Driver needed for existing carpool from SF (Noe Valley area) to Stanford, M-F, 9-6. Call David Thompson, 7-2454.

Carpool partner wanted, Oakland-Stanford. Leave Oakland 8:30 a.m., leave Stanford 6 p.m., M-F. Times somewhat flexible. Call Jon Bendor, 497-4480.

Carpool forming from SF (Bernal Heights) to Stanford, M-F, hours somewhat flexible. Share driving. Call Julia, 497-3811 (days), 648-4835 (eves.).

Ride sharing between Santa Cruz and Stanford Tues. and Wed. 9-5 (flexible), call Andy Carman at 497-6341.

Would like to form (or join existing) carpool from Los Gatos to Stanford, M-F, 9-6. Call Tom Holt, 7-2454 or (408) 354-6040.

Ride share between SF and Stanford M-F, mornings and eves (times flexible), call Jennifer at 346-6411 after 8 p.m.

Ride needed from Sharon Heights Shopping Center to Stanford, in exchange for gasoline. My hours are 8 a.m. to 5 p.m. Please call Dixie Dodson at 497-9150.

Accidents and injuries

Accidents and Injuries Occurring During Week of July 11-22

Type of Accident or Injury	Number of Incidents	Days Lost
Cut/puncture	3	(0, 0, 0)
Squeeze/crush	3	(0, 0, 0)
Animal/insect caused	3	(0, 1, 0)
Biologically caused	1	0
Fall from same level	1	0
Fall from height (incl. stairs)	1	1
Chemical inhalation	2	(0, 0)
Lifting	4	(0, 7 +, 3, 8)
Other	3	(0, 30 +, 0)
Stress related	1	20
Temperature related	1	0

Ph.D. oral exams

WEDNESDAY, JULY 27

Dwright Nishimura, electrical engineering, "Processing Methods for Improved Blood Vessel Imaging," 2:15 p.m., McCullough 134. **Dennis Alden Yao,** business, "Three Essays on Regulation with Application to the Automobile Industry," 2:15 p.m., Room 243, GSB.

FRIDAY, JULY 29

James J. Anton, economics, "Contractual Paradigms, Rational Expectations and Seniority Rules in the Theory of Long-Term Contracts," 9:15 a.m., 414 Encina. **Kathleen M. Gilbert,** education, "Mathematical Problem Solving in Cooperative Small Groups and Whole Class Instruction," 2:15 p.m., Room e230, Education Bldg. **Alicia Rodriguez-Castro,** economics, "A Subsidy Incidence Analysis of the Manufacturing Sector of Puerto Rico," 2:15 p.m, Encina 414.

MONDAY, AUGUST 1

Marie Sophia Tisak, education and psychology, 3:15 p.m., Room e114, Education Bldg.

TUESDAY, AUGUST 2

Joan A. O'Brien, education, "An Educational Personnel Planning Model for School Districts," 2:15 p.m., Room e114, Education Bldg.

WEDNESDAY, AUGUST 3

Charles E. Bethell-Fox, education and psychology, "Visual Networking as a Learning Strategy," 3:15 p.m., Room e114, Education Bldg.

THURSDAY, AUGUST4

Margaret Crosbie-Burnett, education and psychology, "Assessment of Stepfamily Adjustment," 2:15 p.m., Room e114, Education Bldg.

FRIDAY, AUGUST 5

Steven L. Flint, business, "Q-Ratios and Property-Liability Insurance Companies," 2:15 p.m., 243 GSB. **Stuart Angus Macmillan,** education, "User Models to Personalize an Intelligent Agent," 2:15 p.m., Room e114, Education Bldg. **Guaning Su,** electrical engineering, "Signal Subspace Algorithms for Emitter Location and Multidimensional Spectral Estimation," 3 p.m., Durand Bldg., Room 450.

TUESDAY, AUGUST 9

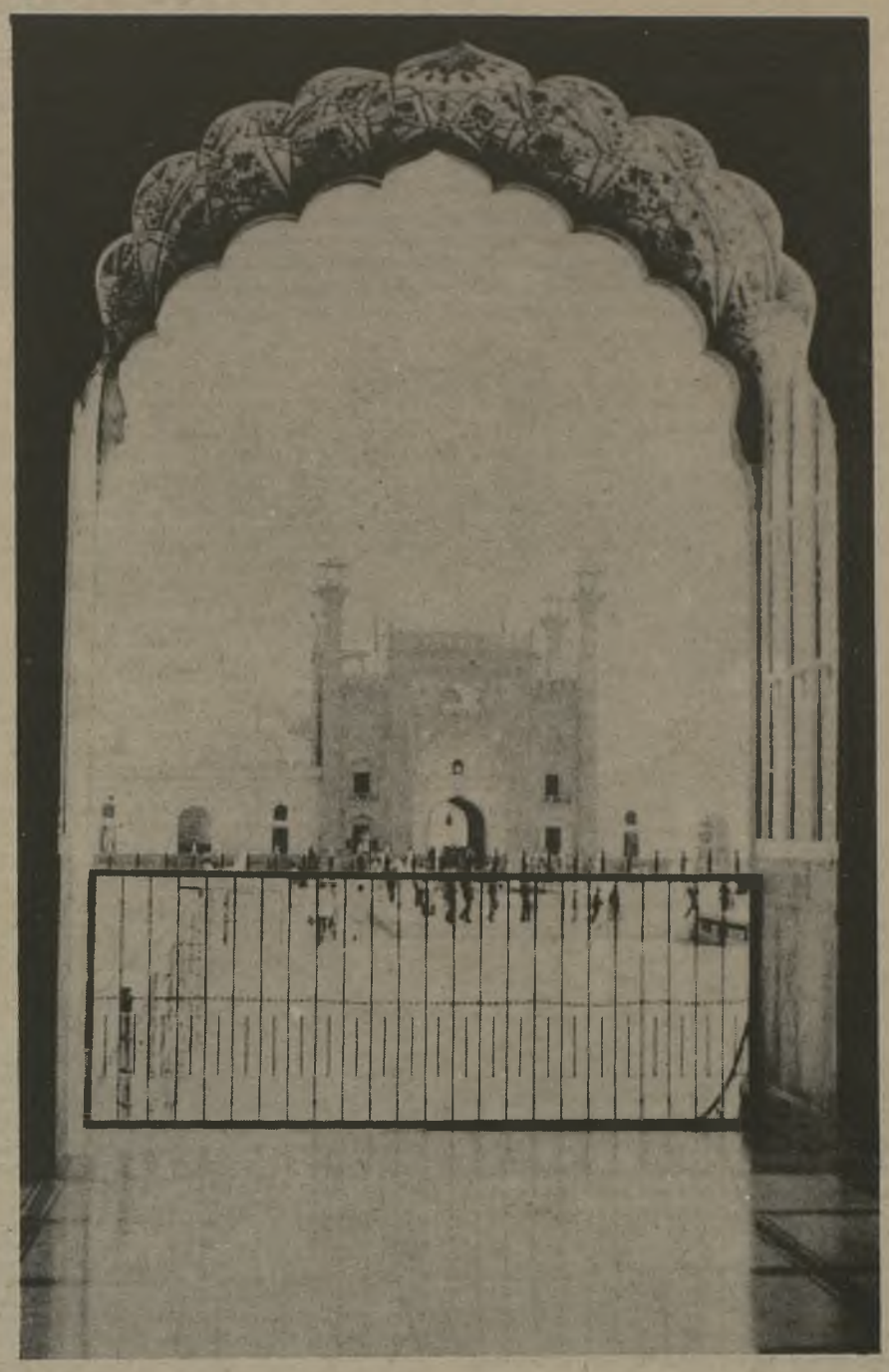
Timothy Scott Hayes, applied earth sciences, 2:15 p.m., 350 Mitchell. **Ross D. Schlueter,** mechanical engineering, "Study of Nonuniform Electrical Behavior of MHD Generators by Influence Coefficient Techniques," 9 a.m., Room 520G, Bldg. 520.

WEDNESDAY, AUGUST 10

Janet Lynn Collins, education, "Self-Efficacy and Ability in Achievement Behavior," 3:15 p.m., Room e230, Education Bldg. **Nesim K. Erkip,** industrial engineering, "Approximate Policies in Multi-Echelon Inventory Systems," 2:15 p.m., 363 Terman. **Kenneth Scott Feldman,** chemistry, "Cyclization Studies on Diene Epoxides Directed Toward the Synthesis of the Cardenolides," 2:15 p.m., Chemistry Gazebo. **Patrick C. Kyllonen,** education and psychology, "Information Processing Analysis of Spatial Ability," 9:30 a.m., Room e114, Education Bldg. **Harriet Andrea Neves,** education, "Children Talking in the Classroom and Second Language Acquisition," 2:15 p.m., Room e114, Education Bldg.

THURSDAY, AUGUST 11

Lauren Edelman, sociology, "The Social Foundations of Due Process in Organizational Governance: Grievance Procedures and Compensatory Justice," 1:30 p.m., Room 250, Bldg. 120. **Patrick John Maveety,** art, "Chinese and Southeast Asian Ceramics Discovered in Indonesia: Twelfth Through Sixteenth Centuries," 2:15 p.m., Room ar103. **June H. Schmieder,** education and psychology, "Women and the Elementary Principalship: Does Discrimination Exist at the Pre-Interview Stage of the Employment Process," 3:15 p.m., Room e114, Education Bldg. **David B. Wolf,** education, "Setting Goals in a Large Community College District," 9:30 a.m., Room e114, Education Bldg. **Eliahu Roth,** electrical engineering, "Multiple-Energy Selective Contrast Material Imaging," 10 a.m., Room 450, Durand Bldg.



Badshahi Mosque in Lahore, Pakistan—from an exhibition of photographs by engineering graduate student Aurangzeb Kahn in the Stanford Coffee House through July.

Campus crime report

July 11-25

Burglary/residence	2	Phone harassment	1
Burglary/nonresidence	3	Controlled substance	0
Burglary/Vehicle	3	Felony arrest	0
Theft/under $400	10	Misdemeanor arrest	18
Theft/over $400	4	Adult booking	15
Bicycle theft	19	Adult cite/release	3
Vehicle accident	8	Juvenile booking	0
Bicycle accident	0	Juvenile citation	0
Indecent exposure	1	Warrants served	8
Assault	0	Driving under influence	7

The information report is based on campus crime reported to SUDPS during the stated time period, and may not necessarily reflect current crime trends.

Help Stop Crime! Join Neighborhood Watch Program! Contact Dan Smith or Kat Berry in the Special Services Unit, 497-9633.

Residential Burglary:

Date	Time	Location	Property Lost
7/14-18	Unkn.	Lagunita Court	Radio
7/21	Even.	Florence Moore Hall	Jewelry (ring)

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

42853-AW (JCC:4076) PROGR/ANALYST GEN II: 75%; fixed term 7/1/83-7/1/84; participate in the development & maintenance of admin sys; support production computing activities w/ broad programming skills, good user & peer working relationships: prov daily support on the admin of the PACNET sys; plan, design, document, code & test small projs; automatic Answering Feature; respon for documentation for ADMIN & CONTACT/EMS; QUALIFICATIONS: exp in a serv oriented production shop; familiarity w/ documentation & other admin procedures of the computer applications group; knowl of SPIRES & WYLBUR; excel oral & written commu skills; require 1-2 yrs programming w/ emphasis on business functions using SPIRES; exp w/ SPIRES subj & maintenance & record entry; some training in math; ability to write formats.; C06; $1461-1831.

15007-LL (JCC:5588) LIFE SCI RES ASST I: Processing of spleen & other tissue to a cell suspension; genl tissue culture procedures; prep of serum & tissue extracts using isopycnic gradients, rotary evaporation chloroform extraction, & thin-layer chromatography; testing of extracts in tissue culture using microtiter wells & PHA stimulation of cells ; analysis of supernatants fr human hybridoma cultures, using protein determination, acrylamide electrophoresis, RIA & SLISA assays, radioactive labeling of proteins & sugars; prep of antigens using tech of cell membrane extraction column chromatography, & liposome prep; QUALIFICATIONS: knowl of genl biochemical lab tech; some tissue culture exp; must be able to evaluate results & proceed to next step of prep; evaluate & interpret results of assays; become familiar w/ literature related to various aspects of the work.; C05; $1756-2202.

28292-BP (JCC:2070) ADMIN ASST II: Admin Mgr of Computer Sys Lab; determines own procedures for ensuring that Lab functions smoothly, solvently, efficiently; administrator of 15-20 research grants; monitors budget statements; prep Purchase Reqs for capital eqpt of lab-wide use; administer clearing acct for lab copy machine; prep cost projections w/ detailed commentary; prep time/salary changes of all Lab citizens; maintains res assistantship records; conducts interviews for sec'l positions; attends CSL faculty mtg to interpret Univ police; QUALIFICATIONS: knowl of Stanford admin procedures & Stanford admin personnel helpful; send appl/resume to Beverly Yates, AEL 107.; C05; $1756-2202.

36402-JB (JCC:2160) ACCOUNTANT II: Forecast cash requirements for govt. grants & initiate cash requests when approp, based on analysis of expenditures & knowl of applicable govt regulations reconcile cash receipts to awarding agency records; maintain accurate record of cash position for each agency; report cash transactions; monitor cash position on non-govt grant to insure timely receipt of funds; supv 2 acctg assistants; review & approve acctg documents; prep mgmt reports as needed; QUALIFICATIONS: BA/BS in acctg or equiv work exp, plus 3 yrs of professional acctg exp; analytical ability & familiarity w/ computerized acctg sys essential; knowl of microcomputer applications & govt regulations helpful; supvry exp desirable; requires good oral & written commu skills, tact & sound judgment.; C06; $1948-2441.

27479-AW (JCC:3280) INFO EDITOR II: 75%; fixed term 8/1/83-8/31/84; Editor Analyst in Sponsored Projs Offc; respon for editing & preparation of reproducible copy for offc publications; prov support to SPO staff in prep for revisions to procedures manuals & handbook, & in researching/analyzing/-deve loping comments to proposed Federal Regulations; asst staff in analyzing, developing & preparing recom. on a broad range of technical & admins problems relating to regulatory policy & procedures; update & prov mat'ls for dept administrators grants & contracts training courses, etc; QUALIFICATIONS: ability to type/use terminal-accessed info & word processing sys to prepare, edit & revise text & info; WYLBUR knowl particularly helpful; knowl of or willingness to learn SPIRES demonstrated command of English usage: grammar, spelling, punctuation, basic editing skills; knowl of basic lib tech; exp/knowl of Univ organization, functions.; C05; $1317-1652.

27433-JB (JCC:1472) STU SERV OFFICER II: Assistant Director; entails travel, meeting w/ high sch'l students, parents, sch'l officials, conducting interviews & info sessions, maintaining application files, evaluating applications, corresp & representing Univ in a variety of capacities; QUALIFICATIONS: bachelor's degree or its equiv; should have an interest in & share the academic values of Univ; be sensitive to & tolerant of students fr various bkgrounds; be confident in speaking before large audiences; able to write well; be perceptive & knowledgeable in making critical judgment, & evidence both maturity & integrity; a respect for the academic values & goals of the Univ.; C06; $1948-2441.

27432-JB (JCC:1472) STU SERV OFFICER II: Assistant Director; entails travel, meeting w/ high sch'l students, parents, sch'l officials, conducting interviews & info sessions, maintaining application files, evaluating applications, corresp & representing Univ in a variety of capacities; QUALIFICATIONS: bachelor's degree or its equiv; should have an interest in & share the academic values of Univ; be sensitive to & tolerant of students fr various bkgrounds; be confident in speaking before large audiences; able to write well; be perceptive & knowledgeable in making critical judgment, & evidence both maturity & integrity; a respect for the academic values & goals of the Univ.; C06; $1948-2441.

30155-VW (JCC:2044) ADMIN SERVICES MGR III: Develop, maintain & update plans for academic computing; interface w/ academic senate committees & subcommittees; act as division genl mgr & administrator respon for personnel, budget, financial, & facilities mgmt; study new concepts; coord w/ sub-division directors; develop new ideas & strategy for their implementation; QAULIFICATIONS: combination of edu & exp in an Info Sys environ totalling 10 yrs; demonstrated mgmt/leadership exp w/ personnel and/or budgets; knowl of & ability to use computer as a means of commu; effective & persuasive commu skills, orally & writing; willingness & availability to travel.; C08; $2590-3313.

30047-AW (JCC:7542) FACIL ENGR/COORD III: Prov tech guidance & directions to proj mgrs relating to wide range of bldg sys projs; commu w/ clients; prep definitive proj scopes for all proj requiremts incl HVAC, lighting, plumbing, fire protection, & other engrg sys that may be reqd; work w/ consultants to obtain designs which satisfy Univ's requiremts & meet all applicable codes & standards; prov engrg direction as reqd during construction & activation; capable of performing mechanical engr design on small projs incl prep of design drawings; QUALIFICATIONS: BS in Mechanical Engrg; exp equiv to B.S.M.E.; good commu skills; requires appreciation of cost acctg & budget control procedures; proven exp in engrg design & design disciplines, codes & standards; C08; $2590-3313

33795-DS (JCC:8880/8880) Assistant Trader: 7am-4pm; involved in the cash & fixed income investing of Univ funds; collection & preparation of financial data & reports for decision making; daily maintenance of trading ledgers & liaison respon between the trading desk & investment operations; will serv as bkup in cash trading area, determining liquidity needs of the portfolio & structuring investments accordingly; QUALIFICATIONS: knowl of, education in basic acctg, statistics, economics & investment markets; C06 requires some brokerage or securities clearing exp; ability to work in an 'intense' enviornment.; C05/C06; $1756-2202/1948-2441.

41658-JB (JCC:2128) ACCOUNTANT II: Develop, enhance & oversee CIT cost acctg sys incl all feeder sys; work w/ CIT Mgr's & other staff to insure transactions & procedures in the cost area are in accordance w/ organizational & Univ policies; prep complex cost acctg studies to support the setting of over 60 indiv rates for products & serv offered to user clients; prep monthly usage & variance reports & prov detailed cost data for financial reporting; QUALIFICATIONS: BS or BA w/ acctg emphasis or equiv combination of exp & edu; knowl in areas of cost acctg, variance analysis, financial reporting, statistical analysis, budgeting; have demonstrate superior organizational & analytical capabilities required for complex problem solving; familiarity w/ electronic data processing, mgmt info sys, knowl of Univ acctg sys helpful.; C06; $1948-2441.

40569-LL (JCC:2262) FIN/MGMT ANALYST II: 8:30-5:30; Faculty Practice Program Sr. Financial/Market Analyst is responsible for analysis of the health care market environ as well as genl financial analysis; development & maintenance of a patient demographic data base, current & proposed serv analysis, & analysis of the impact of marketing efforts; participation in preparation of the annual FPP budget, budget/performance analysis, & long-term financial planning; computer models used; analyses presented both orally & in writing; QUALIFICATIONS: bachelors degree in business or economics w/ 6 yrs exp in finance or marketing; MBA highly desirable; highly developed analytical skills; excel verbal & written commu skills; knowl of data processing concepts; computer modeling skills.; C07; $2221-2875.

41661-JB (JCC:2270) FIN/MGMT ANALYST III: Financial Mgr; respon for all aspects of the CIT billing sys; maintenance & reporting on user accts, accts receivable & cost acctg tech & procedures; supv the collection, analysis, interpretation & reporting of a significant area of the financial activities of the organizations; supv 2 professionals & several clerical members; design, development & supvn of complex acctg documents & procedures that incorporates federal indir cost tech as required by various govt policy regulations that apply to the pricing of computer serv; serv as proj leader in the design & development of an automated cost acctg sys; QUALIFICAITONS: MBA or MS degree in a related field, or equiv combination of exp & edu; possess knowl in areas of cost acctg, financial analysis, mgmt tech & budgeting; demonstrated outstanding organizational & supvry capabilities for complex problem solving; familiarity w/ EDP, MIS & Univ Acctg Sys helpful.; C08; $2590-3313.

95732-JM (JCC:5158) COMPUTER SYSTEMS SPEC: Manage admin data processing group; perform some analysis & programming tasks; prov production support; make proj assignments, monitor development & production & assist in proj definition, priority setting & estimation of costs; hire & review professional & production staff; QUALIFICATIONS: proj mgmt exp; requires bkground as business programmer/analyst w/ specific exp in PL/1, systems design, production support, control langs or EXECS & utilities; knowl of acctg & genl business practices; exp w/ VM-CMS, data base development, interactive programming, selection of vendor supplied software & use of personal computers desirable.; C09; $3200-4000. APPLY AT SLAC

42633-LL (JCC:5588) LIFE SCI RES ASST I: Respon for prep of dissociated cell cultures derived fr mammalian neural tissue dissections; maintain fully stocked tissue culture lab; maintain cell cultures according to outlined res protocols, involving e.g. altered growth medium; optimize culture conditions, drawing upon both an understanding of principles involved & info in the literature; prep electrodes & solutions for cellular electrophysiological experiments; QUALIFICATIONS: prior lab exp w/ cell culture tech, preferably in dissociated mammalian neural cell culture; BA or BS degree or equiv edu & exp required; some exp w/ histologic tech & photographic methods desirable; special consideration given to indiv w/ prior exp in electrophysiological tech or w/ demonstrated ability to work independently on assigned projs.; C05; $1756-2202.

42778-VW (JCC:5588) LIFE SCI RES ASST I: Perform independent res based on the following specific skills: radioimmunoassay for cyclic GMP; process previously set-up RIA daily; calculate data fr prev RIA; perform guanylate cyclase assay; perform automated protein assay; asst postdoc res fellows in specific lab tech & procedures; work independently setting own priorities & proj standards as periodically reviewed by faculty member; helpful to have exp w/ protein phosphorylation - studies of smooth muscle; two dimensional gel electrophoresis; smooth muscle tissue bath studies measuring contraction & relaxation; set up experiments on effect of drugs on cyclic GMP in smooth muscle; QUALIFICATIONS: BS or equiv exp in closely related res fields; familiarity w/ eqpt & tech used in lab.; C05; $1756-2202.

1246-LL (JCC:5596) LIFE SCI RES ASST II: Recombinant DNA methodology; RNA, DNA isolation, generation of cDNA libs, gene cloning in plasmid & phage vectors, transfection of L cells, generation & screening of 'fusion' proteins encoding differentiation antigens; Northern & Southern analyses; In vitro translation of mRNA & immunoprecipitation; Oocyte translation; genl lab mgmt, incl ordering, budget, etc; respon for training new grad students & postdoctoral fellows; will design & carry out their own proj; involved in writing of manuscripts; QUALIFICATIONS: BS in biology, chemistry or equiv exp; exp w/ gene cloning in both lambda phage & plasmid vectors, & w/ the analysis of the structure & expression of genes using Northern & Southern blots.; C06; $1948-2441.

27068-VW (JCC:6818) SOC SCI RES ASST II: Fixed term; 1 yr appt fr date of hire w/ possibility of extension; res asst in Public Affairs Offc of Hoover Institution; maintaining forum of Hoover speakers & following thru on engagements; organizing program of news-clipping compilation & distribution; drafting press releases; excerpting & editing articles for media dissemination; assting in gathering info for & drafting/editing annual printed report & board report; supv student hrly employees; managing genl files & files on scholars; QUALIFICATIONS: prev public affairs & res exp desirable; some public policy bkground useful; requires writing/editing skills & a high degree of independence, judgment, & tact; ability to learn & willingness to use word processing eqpt; send appl/resume to George Marotta, Hoover Institution, Stanford, or call 497-0603.; C04; $1590-1983.

Nonexempt

32635-PM (JCC:8940) MISC CLERICAL: System Control Assistant assists Computer Operations Mgr in all phases of billing sys operation; providing offc support related to computer sys operation; schedules & prints sys output files; maintains production logs & provides status reports on production & sys problems; inventory maintenance & eqpt repair serv duties; updates & verifies changes to online database; trains new personnel in proper operation of computer sys; orders & monitors commu eqpt, etc; QUALIFICATIONS: typ 35-40; 2 yrs of directly related exp working w/ business computers, incl exp w/ basic data entry & in-depth database operation; some exp in healthcare field & familiarity w/ med terminology; flexibility in working hrs; word processing exp desirable; good organizational & mechanical skills; contact: Joseph Bayus, Systems Analysis Mgr/FPP, 525 Univ Ave.; B14; $1440-1514.

29367-AW (JCC:1972) UNIV MANAGER II: Manager of Housing Programs; works w/ Dir, Associ Dir & other members of the staff in executing housing & transportation programs for SU; principal functions are brokerage, escrow & transportation; QUALIFICATIONS: bkground in real estate, banking, financial analysis, economics or planning; college degree, preferably an MBA, JD or advanced degree in acctg or planning, or relevant work exp equiv to such advanced degree; computing exp desirable.; C08; $2590-3313.

New employee orientation

The next orientation sessions for new employees will be held at 9 a.m. Tuesday, Aug. 2 and 9, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

27480-BP (JCC:2596) SECY II-SPEC: Respon to 2 contract officer/analyst teams; proofreading & editorial work, 60-80% time working w/ word processing eqpt, primarily preparing routine corresp; learn about the contract & grant field; commu to Principal Investigators Info about the status of their proposals & awards; maintenance of appt calendars & arrangement of mtgs; screening of phone calls; coord of travel arrangement; transcription of corresp, etc; QUALIFICATIOINS: typ 65; accurate typing skills; thorough knowl of English grammar, punctuation & spelling; prior exp w/ client-oriented environ helpful; proficiency in word processing & data processing entry tech (or willingness to learn); good oral commu skills; send appl/resume to Mary Chandra, Encina Hall, Room 40, or call 497-2883.; B12; $1310-1373.

43086-BP (JCC:2630) SPECIALIST TYPIST: Operates Lexitron eqpt providing typed copies of contracts, purchase orders, invitations to bid, letters, memos & other mat'ls as required; maintains current files on mat'ls stored on diskettes; proofreads & edits all work; QUALIFICATIONS: typ 65; thorough grasp of good grammar, punctuation, spelling & working knowl of printer's marks and/or proofreading symbols; send appl/resume to B. Leans, 851 Welch Road.; B12; $1310-1373.

17045-TC (JCC:6188) PATIENT TEST TECH II: Involves monitoring of physiological parameters during sleep; these parameters incl electroencephalogram, electro-oculogram, electromyogram, respiratory & heart rate, arterial oxygen saturation, endoesophageal pressures & pH; expected to be familiar w/ sleep disorders at the technician level; activities will also incl reduction of data & routine data processing; routine maintenance & minor repair of eqpt; QUALIFICATIONS: prior patient contact; exp w/ the operation of a polygraph, data entry exp desirable; must have CPR certificate; bkground in social or biological sciences desirable.; B13; $1373-1440.

22845-BP (JCC:2462) OFFICE ASST III: Respon for Meal Ticket Procedures (selling meal plans, credit of board amounts, taking pictures, putting on labels on meal cards, checking of computer runs for accuracy of board purchased, typ letters regarding problems w/ meal tickets, etc); ordering of supplies for Food Serv Units & central offc; typing of menus & meat sheets wkly; use of copy machine, & mimeographing machine for various forms; answer phones; answer questions regarding board options & distribute meal both I.D. & U.S.; QUALIFICATIONS: typ 50; thorough knowl of standard offc procedures; effective verbal skills; working knowl of computers & CRT's helpful; send appl/resume to Kay Gaskin, 765 Pampas Lane.; B11; $1246-1310.

30705-PM (JCC:2462) OFFICE ASST III: Recruiting Asst; prov clerical/sec'l serv to Recruiting Coord & Recruitment Intern; understand the physical & academic profile nec for students to qualify as prospects for Stanford intercollegiate sports; learn & understand Univ life & culture to effectively promote Stanford to prospective athletes; utilize micro-computers to handle word processing & data base mgmt for recruit; transcribe letters & memos; edit copy & proofread for accuracy of all written documents; mass mailing of 500-1000 documents wkly during recruiting season; QUALIFICATIONS: typ 65; current Stanford exp preferred, involving heavy public contact & offc activities in promotions, fundraising, publicity, student organizations, athletics, or other related activities; excel verbal skills, English grammar/punctuation skills; prev exp on computer terminal; excel keyboard skills; available to work on selected Sat & Sun during football season (8/15-11/15) & during recruitment months of Jan & Feb.; B11; $1246-1310.

23597-PM (JCC:2462) OFFICE ASST III: Prov clerical & sec'l support to dept administrator & admin assistant; prep & follow-up on all Univ forms incl purchase reqs, interdept'l requests, expense reports, appt forms, work orders, telecommu requests, prep of various appt forms; petty cash custodian; maintain records of instructional handout & classnote costs & receive money for their sale; collect approx 30 Xerox auditron readings monthly & prep expense allocation of usage charges, etc; QUALIFICATIONS: typ 65; text-editing exp or willingness to learn

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Staff employment opportunities

Non-exempt jobs

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required; knowl of Univ forms & procedures; neat typing skills; good interpersonal skills; required to interface effectively w/ faculty, staff & students; send appl/resume to Marlie Yearwood, Bldg 460, Room 256.; B11; $1246-1310.

30416-BP (JCC:2462) OFFICE ASST III: 60%; asst in genl offc work incl screening of incoming calls, posting info on student cards & filing; help process leave of absence petitions, etc; help process all fellowships & assistantships for grad students; typ corresp as needed & reports; help process financial aid applications & maintain GAPSFAS files; asst in College Work Study program, etc; QUALIFICATIONS: typ 50; accuracy in math & typing essential for detailed work; use of computer terminal, typewriter & xerox machines; no smoking in offc; no student spouse because of confidential nature of mat'l; contact: Sue Haradon, Bldg 590, Room 209.; B11; $748-786.

27299-PM (JCC:2470) OFFICE ASST IV: Fixed term 8/1/83-2/1/85; asst w/ several major research projs w/in the Undergrad Res Offc; typ complex tables, reports & questionnaires; make revision of reports using NBI word processor; asst in compilation & publication of tables of results; maintain res files; code questionnaires; use statistical computer package to analyze data; handle most aspects of annual survey of graduating seniors; review & reconcile acctg records; act as liaison w/ people seeking info about various res projs; QUALIFICATIONS: typ 60; some exp w/ social res desirable; ability to deal w/ different forms of data; knowl of SPSS or SAS (statistical packages) & Wylbur helpful; familiarity w/ word processing eqpt; knowl of statistics & good computational ability helpful; knowl of Stanford admin procedures helpful; send appl/resume to Andrea Garwood, Bldg 1, Room 2U, Undergraduate Research.; B14; $1440-1514.

40651-PM (JCC:2504) OFFICE ASST II-SPEC: 80%; Tues-Fri; maintain files; typ corresp, reports, forms, etc; xerox, collate, & distribute mat'ls, incl semiannual bulk mailings to approx 500 persons; answer phones & greet visitors; maintain records; sort & distribute incoming mail; code questionnaires, per Coding Manual; run computerized reports; run errands as nec; QUALIFICATIONS: typ 55+; 1 yr offc exp or equiv; knowl of med & computer terminology or ability to learn; some familiarity w/ word processing (IBM Displaywriter) preferable; send appl/resume to Connie Hartnett, 701 Welch Road, Suite #3301, or call 497-7985.; B10; $951-997.

41551-BP (JCC:2554) SECRETARY II: Support staff to Engrg Development team composed of Assoc Dean for Development, Assoc Dir for Development, & Dir of Engrg Fund; referring calls/visitors to other staff or in answering questions; respon for master calendar of all engrg development events; establishes, revises, maintains engrg development files; develop working knowl of Central Files; performs accurate finished form typing on corresp, proposals, & agendas fr drafts & dictation; composes routine replies of mail in accordance w/ oral or written instructions; performs minor reconciling of dept'l budgets; makes travel arrangements; QUALIFICATIONS: typ 50; education & exp approp to position; capability to develop computer & word processing skills; send appl/resume to Judy McConica, Terman Engrg Ctr, Room 203; B11; $1246-1310.

29679-PM (JCC:2562) SECRETARY III: Typ scientific manuscripts & compose letters; screen phone calls; maintain files & arrange travel; oversee expenditures on res grants; process purchase reqs for lab supplies & eqpt; asst in budget prep; maintain serv contracts & blanket purchase orders; oversee purchase requests of a res group of 14; handle lab mgmt functions independently & use own judgment in making decisions; relieve supvr of semi-routine respon; QUALIFICATIONS: typ 65; strong sec'l exp desired; English grammar skills essential; knowl of word processors helpful; send appl/resume to S. Wray Wolfe, Biological Sciences, Herrin Labs, Room 223A.; B14; $1440-1514.

896-BP (JCC:2562) SECRETARY III: Sec to Dir of new Ctr for the Study of Lang & Info; screen telephone calls & visitors, routing them elsewhere when approp; make appts; coord receipt & mailing of journal articles to reviewers; compose letters & memo; prep Univ forms & typ corresp; make travel arrangements; organize filing sys; use computer/word-processing sys for text-editing; QUALIFICATIONS: typ 60; strong sec'l skills; good command of English; good interpersonal skills; ability to act w/ tact, discretion & diplomacy; exp w/ computers or word-processors desirable; send appl/resume to Joyce Firstenberger, Ventura 16.; B14; $1440-1514.

31516-PM (JCC:2562) SECRETARY III: Prov support to VP for Development, the Assoc VP, & the Deputy to VP; typing memos, letters, proposals, manuscripts & position papers; answering incoming calls; establishing & maintaining files; arranging mtgs; maintain & order supplies; make travel arrangements; maintain calendars of VP, the Assoc VP, & the Deputy; will work w/ word processor, IBM Sel II, dictating machine & computer terminals; QUALIFICATIONS: typ 65; excel typist; proficient in spelling, grammar & punctuation; able to work effectively w/ persons fr diverse bkgrounds & disciplines; willing to learn to operate word processor, dictating machine & computer terminal; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B14; $1440-1514.

26150-PM (JCC:2588) SECY I-SPEC: 8-4:30; Receptionist for Cardiology Division; channel incoming calls to faculty direct lines & fellow offices; page as nec; prov phone bkup on 3 lines for admin group & 2 lines for in-patient rep; receive, sort & distribute mail for Div; operate postage meter; receive & direct visitors; order supplies & maintain inventory, etc; QUALIFICATIONS: typ 50-60; require accurate typing; ability to typ fr dictaphone tapes; comprehension of work priorities; familiarity w/ med terminology preferred; excel English skills nec; require some editing; contact: Gale Pickering, Med Ctr C248E.; B10; $1189-1246.

41753-PM (JCC:2596) SECY II-SPEC: Support staff for 3 student organizations (50%); typing fr handwritten or typed drafts using IBM typewriter and/or wordprocessor (IBM-PC, Wordstar); sec support for 1 professor & for teaching fellows (50%); wordprocessing, tape transcription, corresp typing, & misc xeroxing, cut-and-paste work; QUALIFICATIONS: typ 70+; excel typing & transcription skills; ability to use most offc eqpt; able to commu well w/ people of all levels; knowl of or willingness to learn word processing eqpt; send appl/resume to Emily Chatfield, Crown Quad - Law School, 497-0352.; B12; $1310-1373.

41751-PM (JCC:2596) SECY II-SPEC: Faculty sec for law professors; primary respon will be for a law professor/author engaged in constitutional law & biography, w/ special interest in political & constitutional developments & humanities; transcribing tapes of corresp & drafts for articles & books, word processing; xeroxing & answering phone; QUALIFICATIONS: typ 70+; excel typing skills, tape transcription skills; good spelling & accuracy; send appl/resume to Emily Chatfield, Room 113, Crown Quad, Law School.; B12; $1310-1373.

27062-PM (JCC:1747) LIBRARY SPEC I: Lib Specialist in East Asian Collection of Hoover Institution Lib; labeling & mending Chinese & Japanese books, calligraphy, pamphlet binding, mail distribution, & occasional bkup to the circulation desk; QUALIFICATIONS: knowl of Chinese and/or Japanese lang (reading & writing skills required); able to write accurately & neatly Chinese & Japanese characters; send appl/resume to Mark Tam, East Asian Collection, Hoover Institution, or call 497-4271.; B10; $1189-1246.

31055-PM (JCC:2056) ADMIN ASST I (N): Be knowledgeable about universities & basic workings of govt, esp Congress & state legislature; asst professional staff in preparing analyses of legislative issues, impact statements, & reports; draft corresp; maintain schedules for professional govt relations staff; arrange mtgs; make travel arrangements; asst in hosting univ guests; prov clerical support; user of computer-based technology incl word processing, electronic mail, & database mgmt; will represent Assoc VP in various mtgs & w/ other Univ officials or staff; QUALIFICATIONS: typ 60; excel writing skills; knowl of universities essential; knowl of Stanford useful; ability to learn rudimentary skills in using computer-based technology; send appl/resume (w/ a cover letter) to Rene Cortinaz, Public Affairs, Bldg. 170.; B16; $1593-1671.

31189-PM (JCC:1747) LIBRARY SPEC I: Sun, 11:30am-8:30pm; Mon-Thur, 2pm-11pm; hrs vary during Summer Quarter & Intersession; performs duties in Access Serv Dept; helps oversee stack operation on work days; trains student assistants; opens & close stacks; types division corresp; reports bldg problems & gives instructions on emergency procedures; pages mat'ls fr Auxiliary Stack & keeps statistics & processes before placing on hold shelf; prep damaged mat'ls for repair by the bindery; respon for clearing, assigning, renewing & servicing lockers, etc; QUALIFICATIONS: typ 40; prev public serv exp; demonstrated clerical & organizational skills; demonstrated commu skills; knowl of word processing sys; prev academic or res lib exp; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B10; $1189-1246.

33505-PM (JCC:1747) LIBRARY SPEC I: 60%, Mon-Wed, 2-11pm; asst in registering new borrowers & maintaining an accurate up-to-date file of users; asst in circulation of all lib mat'ls incl Reserves; handle renewals, recalls, notifications, overdues, bills; discharge, sort, load & shelve returning mat'ls; search for missing mat'ls & participate in inventories; file cards in main catalog; prov directional & holdings info during hrs worked before 6pm; after 6pm prov assistance in using collection, verification of holdings & ready reference w/ systematic referral; QUALIFICATIONS: typ 40; public serv orientation; good physical stamina, the ability to stay on feet & shelve for extended periods & move heavy book trucks; good alphabetic & numeric sorting & filing skills; good telephone commu skills; prev lib exp; exposure to ready reference sources in med/biological literature desirable; knowl of French or German an asset; contact: B. Vadeboncoeur, 497-6691/7198.; B10; $713-748.

41756-PM (JCC:2210) ACCOUNTING ASST III: Coordinates payment process w/ outside vendors & other campus depts; monitors & reconciles monthly budget statemnts; prepares cost studies & financial reports; monitors monthly funds statements; assts Financial Mgr & Law Sch'l cost ctrs in processing expenditures & accountability reporting; maintains acct & fund ledgers & prepares periodic reports as requested by supvr; assts in programming & maintenance of offc computer sys; coordinating his/her efforts w/ other Finance Offc staff members; QUALIFICATIONS: typ 50; several yrs responsible exp in acctg (or closely related field) or 4 yrs degree in acctg, business or finance; familiarity w/ personal computer sys & related financial software; 10 key by touch; some light typing; contact: E. Chatfield, Room 113, Law Sch'l.; B14; $1440-1514.

39131-BP (JCC:2454) OFFICE ASST II: 50%; fixed term 9/1/83-5/31/84; receptionist for a very busy offc, working w/ up to 5 full-time staff, 4 student interns & 4 student employees/staff assistants; open sort, route mail; answer phones; typ corresp, forms & newsletters; operate mimeograph machine; greet visitors; monitoring offc supplies; QUALIFICATIONS: typ 45-55; knowl of Stanford helpful; exp & knowl of offc procedures; ability to win coop fr students, faculty, & staff of diverse cultural & ethnic bkgrounds; send appl/resume to Michael Ramsey-Perez, OSA/2nd Fl., Tresidder.; B09; $565-595.

30003-BP (JCC:2454/2462) Offc Asst II/III: Receptionist; answer 3 genl offc lines & refer calls as approp; greeting all visitors; open & stamp incoming mail; route inter-offc mail; maintain 3 conference room calendars; typ & process all purchase reqs & other acctg forms; follow-up on orders; maintain record of vacation & sick leave for exempt & non-exempt staff fr time cards & hrs worked forms; process hrly payroll forms each month; process Sick Leave Reports; Petty Cash Custodian for dept; bkup typist to other secs in the dept; level will depend upon incumbent's ability to perform tasks independentiy; QUALIFICATIONS: typ 60; prev offc exp; professional manner in dealing w/ public; punctuality & attendance of prime importance; good work habits; basic math aptitude; send appl/resume to Susan Sterner, Old Pavilion.; B09/B11; $1130-1189/1246-1310.

32213-PM (JCC:2554) SECRETARY II: 75%, 9-4; prov full sec'l support to Chairman & members of Minority Admissions Advisory Panel to the Med Sch Admissions Committee (incl 15-20 faculty & students), & genl staff support to Offc of Admissions; expediting approx 650 minority applications; coordinating MAAP mtgs; arranging travel accommodations & scheduling applicants for interviews on Campus & throughout US; preparing info regarding available recruiting funds, establishing network of recruiting contact & arranging recruiting trips w/ summer programs, etc; QUALIFICATIONS: typ 50; ability to carry out wide range of assignments w/ min supvn; good interpersonal skills; prev exp in genl offc work; strong phone, grammar & math skills; top organizational skills required; exp w/ word processing & dictaphone preferred; ability to speak Spanish helpful; exp w/ minority recruiting & affirmative action programs helpful; send appl/resume to C. LoMaglio/C. Brooks, 851 Welch Road, Room 154, Palo Alto.; B11; $935-983.

27065-PM (JCC:2562) SECRETARY III: Sec for Sr. Fellow of Hoover Institution; mgmt of offc, incl coord of work of several student res assistants; using word-processing sys for manuscript prep & instructing others in offc in use of same; coord of supvr's Univ commitments; coord of activities connected w/ his membership in national & international assoc, & dealings w/ publishers & the media; telephone & mail screening; records maintenance, calendar, itineraries, etc; prep of classroom mat'ls; use of word-processing eqpt; QUALIFICATIONS: typ 65; s/h helpful; prev sec'l exp, w/ strong typing skills; ability to handle pressure of meeting deadlines; coord numerous activities which occur simultaneously; handle some confidential mat'ls, recommendations, & grant mat'ls; college bkground in social science desirable; familiarity w/ SU procedures desirable; send appl/resume to S. Martin Lipset, Hoover Institution. Stanford Univ, or call 497-4741.; B14; $1440-1514.

44407-PM (JCC:2596) SECY II-SPEC: Prov full range sec'l duties to 5 faculty members; typ course mat'l, genl corresp, heavy technical manuscripts (equations w/ Greek & Math. symbols), handle mail & phones; QUALIFICATIONS: typ 70; excel grammer, spelling & Proffreading skills; familiarity w/ text editing/word processing helpful; send appl/resume to Barbara Fairlie, Math Department, Bldg. 380.; B12; $1310-1373.

27482-BP (JCC:2596) SECY II-SPEC: Respon to 2 contract officer/analyst teams; 60-80% time working w/ word processing eqpt (Datapoint); primarily preparing routine corresp; prov genl clerical assistance to tea analysts; maintenance of appt calendars & arrangement of mtgs; reproducing, distributing & making mtg minutes; screening of phone calls; coord of travel arrangements; transcription of corresp, reports, contract & other documents; QUALIFICATIONS: typ 65; thorough knowl of English grammar, punctuation & spelling; prior exp w/ client-oriented environ helpful; proficiency in word processing & data processing entry tech (or willingness to learn); good oral commu skills; send appl/resume to Keith Chinn, Encina Rm 40.; B12; $1310-1373.

32610-PM (JCC:2672) MED SERV ASST III: 8:30-5; performs clerical duties nec for clinic; patient appts, requisitioning lab & radiology exams, heavy telephone commu w/ patients, physicians & other depts; interviews patients for financial & insurance info to properly register patients into Faculty Practice Program; receives & documents patient cash payments; QUALIFICATIONS: typ 30-35; 1 yr exp in a med setting; able to work in a fast pace, high pressure environ; able to interact w/ the public & physicians; bilingual ability desirable; med terminology essential; computer knowl helpful; contact: Vicki Stewart, A367 Boswell Bldg.; B11; $1246-1310.

11747-LL (JCC:6810) SOC SCI RES ASST I: Administer questionnaires & psychiatric rating scales to patients on res ward; conducts diagnostic interviews; prep biological samples for assay incl measurement of urine, centrifuging blood samples, preparing spinal fluid samples for shipment; asst in prep of res grants; perform lib searches; perform record-keeping, filing, computer entry; evaluate symptoms fr videotaped observations, etc; QUALIFICATIONS: bkground or exp in use of structured diagnostic interview & in psychiatric rating scales. Hamilton, SCAG; bkground or exp in clinical res w/ psychiatric patients, res methodology, data collection & collation; strong writing skills.; B12; $1310-1373.

21751-BP (JCC:2454) OFFICE ASST II: Serv as receptionist in Career Planning & Placement Ctr & prov support for the on-campus recruiting program; providing genl info to students, alumni, univ personnel, & recruiters fr across the country representing business & industry, govt agencies & grad schools about CPPC & on-cmpus recruiting; assisting recruiters & grad schools w/ details about their visits to Stanford; assisting w/ recruiting schedules

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Bargaining unit

43548-AW (JCC:5292) COMPUTER OPERATOR: TMS Unit; shift work; operate the console & all associated computer peripherals under min supvn; receive & input jobs fr all users; monitor eqpt for malfunctions & respond in accordance w/ established procedures; commu operational problems to the Lead Operator or supvr; professional, tactful, & proj a 'helpful' attitude in dealing w/ the public; fulfill admin reporting functions; QUALIFICATIONS: willing & able to work any schedule on any of 3 shifts, overtime, & holidays as required; able to lift & carry boxes up to 50 lbs; manual dexterity sufficient to typ on a conventional typewriter; 2 yrs of direct operating exp on large IBM Mainframes using MVS.JES 2; knowl of WYLBUR preferred; high sch'l diploma or verification of equiv edu; good English lang & arithmetic skills; good commu skills.; A22; $ 8.25.

29574-JB (JCC:2900) TELECOMM OPERATOR I: TMS Unit; fixed term 8/1/83-8/1/84; operate centrex console direct dialing sys; prov dialing info; complete incoming calls & specified outgoing calls; sets up conference calls; operate OAIS computer info sys; operate motorola radio page for after hrs serv calls & Fax machine; will be trained to operate TWX & Telex machines, CRT, MagnaSync tape sys, & Watsbox tape sys; QUALIFICATIONS: typ 40; manual dexterity; clear telephone vocie; ability to receive & relay messages coming thru the console; flexible to the needs of the dept & able to work various shifts/hrs.; A14; $ 6.84.

43549-AW (JCC:5292) COMPUTER OPERATOR: TMS Unit; shift work; operate the console & all associated computer peripherals under min supvn; receive & input jobs fr all users; monitor eqpt for malfunctions & respond in accordance w/ established procedures; commu operational problems to the Lead Operator or supvr; professional, tactful, & proj a 'helpful' attitude in dealing w/ the public; fulfill admin reporting functions; QUALIFICATIONS: willing & able to work any schedule on any of 3 shifts, overtime, & holidays as required; able to lift & carry boxes up to 50 lbs; manual dexterity sufficient to typ on a conventional typewriter; 2 yrs of direct operating exp on large IBM Mainframes using MVS.JES 2; knowl of WYLBUR preferred; high sch'l diploma or verification of equiv edu; good English lang & arithmetic skills; good commu skills.; A22; $ 8.25.

32079-TC (JCC:5652) LIFE SCI TECH III: TMS Unit; fixed term 9/1/83-2/28/84; certified X-Ray Technologist works in Radiology research labs; occasional night or wkend work; procedures are mostly animal related; computerized Tomography, digital imaging, as well as routine radiography are employed in the res labs; QUALIFICATIONS: CT exp as well as some special procedure (angio) exp strongly desired; grad of an approved A.R.R.T. program; ARRT registered & have Calif License.; A30; $ 9.97.

33010-JB (JCC:2772) BUS EQUIP OPR I: TMS Unit; receive & process copy ctr work, price jobs, handle cash, answer phones; collate, staple, wrap jobs; operate & maintain small copiers, electric staplers; willing to learn to use Xerox & Kodak high volume microprocessor duplicators for small jobs & rush work; QUALIFICATIONS: deplomacy & tact in dealing directly w/ customers (staff, faculty, students, mgmt, visitors); know basic math to price jobs; exp operating small copiers & dealing directly w/ customers helpful; prefer employee worked in a production-oriented environ.; A10; $ 6.23.

33007-JB (JCC:3682) OFFSET PRESS OPR I: 6am-2:30pm; operates microprocessor controlled Xerox 9400/9500 series duplicating sys that require microcomputer programming decisions to automatically collate, make image reductions, margin shifts, change density & lens adjustment control; operates other small copiers, stitchers & staplers in the ctr; perform compuferized self-diagnostics maintenance of the machines to pinpoint & resolve problems; plans jobs for efficient production; cleans & maintains entire sys; deals w/ customers & handles cash occasionally; QUALIFICATIONS: possess mechanical aptitude; worked in a high-volume, production oriented environment.; A15: $ 7.00.

40490-JB (JCC:6452) PLUMBER/STEAMFITTER: TMS Unit; 8-4:30, available for call backs; performs sewers maintenance; repairs all sewers on SU property; operates cable machine & street machine; order mat'ls required; installs clean-outs, sump pumps; checks sewage ejection pumps inside homes, etc; performs preventive maintenance for all outside sewers; operates a large street machine plus electric & hand operated springs; performs installation, maintenance & repair of domestic hot water & heating sys, boilers, heat exchangers, hot water storage tanks, etc; maintains baseboard radiators, convectors & radiators, steam tables, etc; QUALIFICATIONS: knowl of methods, mat'ls & tools used in plumbing trade; ability to do plumbing work as described ; training & exp equiv to approx 4 yrs in plumbing trade; performs work in; A37; $11.80.

Modern photographic works on display at Stanford Museum

"Photographs—1920s-1980s," selections from the Stanford Museum of Art's collection, will be shown there now through Aug. 14.

Some 60 prints by American and European photographers are included.

The modern temper in photography made its public appearance in Alfred Stieglitz's journal *Camera Work*, published in New York in 1916. He described the photographs of Paul Strand as "of and about the 20th century." Pictorialism, the art-photography that Stieglitz had championed since the mid-1880s, became a dead issue.

The introduction of "fast" hand-held cameras in the 1930s gave photographers the ability to extract moments of motion from ongoing time. There are examples of this in the exhibition, from Kertesz in Paris in the 1930s to Winogrand in New York in the 1970s.

Concurrently, photographers have used a large-format camera on a tripod to portray distillations of time: Edward Weston, Manuel Alvarez Bravo, Wright Morris, among them.

A third sort of photography heightens reality to such an extent, that it becomes surreal. The photographs of Minor White, Jerry Uelsemann, Danuta Otfinowski, and Lorie Novak are examples of this tendency.

The Museum is open from 10 a.m. to 5 p.m. Tuesday through Friday; from 1 p.m. to 5 p.m. Saturday and Sunday.



Frankfurt, Watching a Motorcycle Race, 1930 **by Ilse Bing. Gelatin-silver photograph from the exhibition:** ***Photographs/ 1920's-1980's Selections from the Museum's Collection.***

Jobs...

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by 1 assigning rooms, checking students' qualifications, keeping track of 'no-shows' for interview appts; answering, screening & routing calls to approp CPPC personnel; prov genl clerical support; send appl/resume to Yolanda Morales, CPPC-Recruiting Unit.; B09; $1130-1189.

15600-BP (JCC:2454) OFFICE ASST II: Serv as receptionist in Career Planning & Placement Ctr & prov support for the on-campus recruiting program; prov genl info to students, alumni, univ personnel & recruiters fr across the country representing business & industry, govt agencies & grad schools about CPPC & on-campus recruiting; answering calls; scheduling counseling appts; helping students & recruiters w/ job placement info; prep wkly workshop sign-up sheets; asst Recruitment Supvr in misc recruitment tasks, primarily w/ Liberal Arts Bid Sys; QUALIFICATIONS: typ 45; offc/receptionist exp helpful, preferably in a college setting; clear & knowledgeable in the areas of telephone & reception; able to win coop of students, faculty, staff & recruitors fr diverse bkgrounds; send appl/resume to Yolanda Morales, CPPC - Recruiting Unit.; B09; $1130-1189.

31188-PM (JCC:2462) OFFICE ASST-III: 50%, 8-12 or 1-5; performs duties in Univ Archives; organizes & maintains dept files; typ corresp, guides to manuscript collections, & other archival finding aids; prep word-graphics, word processing & photograph reproduction requests; maintains financial records & invoices; maintains serials records; monitors collections for binding, prep serials for binding & maintains binding & finishing records; maintains interlib loan requests; serv as receptionist; QUALIFICATIONS: typ 50; prev public serv exp; prev exp w/ special collections or the archives dept; prev exp w/ WYLBUR; familiarity w/ SU history & organization; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B11; $623-655.

41757-PM (JCC:2470) OFFICE ASST IV: Fixed term, 6 mos fr date of hire; Personnel Assistant respon for initiation, follow-thru & maintenance of all personnel/payroll forms for non-exempt staff; prep of bi-monthly payroll; maintenance of exempt & non-exempt yrly leave records; prov assistance in annual prep of non-exempt salary budget process; counsels law school employees on personnel & related matters; prep all expense reports for offc; respon for appt calendar; typing of corresp, memos, etc; QUALIFICATIONS: typ 55; some exp w/ personnel procedures of SU desirable but not essential; familiarity w/ academic environ & procedures desirable; ability to interact effectively w/ faculty, students, staff & other campus offices; computer knowl of IBM/PC desirable, will train if nec; send appl/resume to; B14; $1440-1514.

32289-BP (JCC:2470) OFFICE ASST IV: Coord of a variety of info for EE Dept; respon for review, action & approval on grad students academic programs; prep & filing of degree applications, grade reports & petitions w/ approp Univ offc; prep of time schedule & coord of classroom scheduling; organize student & faculty info for registration & advance registration; maintains student academic files, dept'l academic records & enrollment data; prov bkup, phone support for receptionist; QUALIFICATIONS: typ 50; knowl of Univ policies & procedures essential; familiarity w/ Course & Degrees nec in relation to dept graduation requirements; send appl/resume to Julie Parker, McCullough 154.; B14; $1440-1514.

21975-PM (JCC:2470) OFFICE ASST IV: Prov offc & secl support for Controller & Med Schl Finance staff using word processing & other computer software; maintain historical faculty salary schedules for Med Schl faculty at SUMC & affiliated institutions; prep salary reports for Dean, department chairs, & outside agencies; process cash awards; assist in prep of mthly & qtrly financial reports, annual long range financial forecasts, and annual consolidated Med School budget; answer phones; filing of monthly statements; typing; overseeing dept budget, act as sec to small grants committe; QUALIFICATIONS: work effectively w/ Med Sch'l; mgmt & faculty & handle confidential mat'l w/ discretion; good arithmetic & analytical skills; use 10-key calculator, word processing eqpt (Lexitron) & computer sys (Wylbur & Multiplan preferred); knowl of Univ financial & personnel procedures & policies helpful; send appl/resume to Kathleen Roberts, 701 Welch Road G1, 497-6337; B14; $1440-1514

31551-PM (JCC:2504) OFFC ASST II-SPEC: Accurate data entry for 5000 applicants to MBA Program, proofing to insure correctness; updating applicant file w/ new or changing info; generating & verifying computer reports wkly; asst supvr w/ proofing & production of decision letters thru database linked word-processing sys incl interface w/ word-processing facility; open mail; input application names & addresses; run mailing labels,etc answer phones; serv as a first-line rep of Admissions Offc; QUALIFICATIONS: typ 50; prev exp w/ database input & word-processing desirable; essential skills inc typing, proofreading, atten to detail, good commu skills; knowl of Stanford MBA Program/Univ procedures helpful; send appl/resume to Cecilia Stickland, GSB Rm. 164, 497-2766.; B10; $1189-1246.

43651-PM (JCC:2554) SECRETARY II: Undergrad Students Sec; maintains student files; advises students on major requirements; prep student handbook; prov support to student association in career & peer advising & social functions; acts as liaison to student-alumni activities & to Overseas Studies Offc; conducts annual surveys; facilitates typing & reproduction of classroom mat'ls, using electronic typewriter, personal computer, & photocopy serv; answering phones & greeting visitors,etc; heavy interaction w/ faculty & students; interprets dept & Univ policies; QUALIFICATIONS: typ 65+; excel grammar & commu skills; deal effectively w/ students, faculty, & staff; detail oriented & well organized; exp in or willingness to learn computer usage; prev exp in academic environ desirable; send appl/-resume to Barbara Wawrzynski, History Dept.; B11; $1246-1310.

TRESIDDER CATERING SEC: Answer incoming phone calls & give genl info of Tresidder Catering Svcs; daily typing & billing of catering orders; some xeroxing & light offc work (posting orders on bulletin board, filing, sending confirmation letters, etc.). QUALIFICATIONS: must be pleasant over phone as well as person; knowl of typing; prev secl exp desired; contact Melanie Jones-Carter, Tresidder Union, Servomation Offc, 497-4324

Children's Dance to demonstrate work of summer classes Thursday at Roble

Children's Dance at Stanford will demonstrate the work of summer session classes at an open house from 4 to 6 p.m. Thursday, July 28, in Roble Dance Studio.

The informal showing will feature members of the Workshop on Dance and Microcomputers. Children between the ages of six and 12 will show their dances, exhibit the designs and dance notations which they made on the IBM PC, and demonstrate the creation of computer graphic designs inspired by dance and music.

The children's dance demonstration will begin with a Rhythms and Movement Class of three to five-year-olds. Next, the Dancing Outdoors class of six to 12-year-olds will show a piece they designed for the Roble courtyard.

Finally, the Workshop on Dance and Microcomputers will lead the group across Panama Street to S.M.I.L.E., (Stanford Microcomputer Instructional Laboratory Experiment) to demonstrate their use of IBM PC color graphics.

Children's Dance at Stanford is sponsored by the Dance Division within the Department of Athletics, Physical Education, and Recreation. S.M.I.L.E., a project of the Center for Information Technology, is cosponsor of the Dance and Computer Workshop.

For additional information, call Elizabeth Larkam, 497-4254.

Dance workshop plans new series

The Starts Summer Dance Workshop will continue with a second session of classes scheduled for weekday evenings through August.

Ballet classes will meet 7-9 p.m. Monday and Wednesday. Modern Dance will continue on Tuesday and Thursdays from 6:30-8 p.m. Modern Dance is preceded by Floor Barre, a class designed to increase flexibility, strength, and awareness of alignment.

All classes will meet in Roble Dance Studio for the first two weeks of August. During the last three weeks classes will meet in the Clubhouse Ballroom. Fees range between $4 and $5 per class.

All those interested in participating are asked to contact the instructors. For additional information and registration call Elizabeth Larkam, 497-4254, or Lisa Burnett, 854-4163.

Managers to learn about computers

The Stanford Alumni Association will sponsor a unique management training program in computers for executives with little or no computer background who are responsible for computer-based information systems on campus August 14-26.

According to program director Paqui Nelson, the course focuses primarily on management issues and covers such topics as "state of the art" hardware and software, database management, decision support systems, management information systems, networking, and personal computers.

An entire day will be devoted to anticipating the office of the future.

Called "Managing the Computer Potential" the course will draw on faculty from Stanford's School of Engineering, Graduate School of Business, and Department of Computer Science. Speakers will include Edward Feigenbaum, author of the best-seller, *The Fifth Generation: Artificial Intelligence and Japan's Computer Challenge to the World*.

The program includes time to chat with computer leaders of Silicon Valley. Space is limited to 50. Tuition, meals, and accommodations total $3,400.

Further information may be obtained by calling (415) 497-2021.



Barbara Allen

Piano concert set by Barbara Allen

The Department of Music will present pianist Barbara Allen in concert at 8 p.m. Friday, Aug. 5, in Dinkelspiel Auditorium. Allen founded the class piano program at Stanford, which she is teaching once again this summer.

She will perform Bach's *Chromatic Fantasie and Fugue, Sonata in B-flat minor, op. 35* by Chopin, and *Variations on a Theme by Paganini* by Brahms.

Allen received her Doctor of Musical Arts degree from Stanford in 1980 and subsequently was awarded a fellowship to study in Germany. She taught piano at Stanford for a year and now teaches and performs in the Boston area.

Tickets for Allen's Aug. 5 concert are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-2551 and the door.

Ramsey to direct summer choir concert

The Department of Music will present the Summer Choir in a free concert under the direction of William Ramsey at 8 p.m. Sunday, July 31, in Memorial Church.

The choir will perform Mozart's *Coronation Mass* with chamber orchestra and soloists, and Schubert's *Mass in G* with strings and soloists.

The choir numbers about 130 this summer, and is composed of Stanford students as well as members of the community.

Five recorder players plan concert Saturday

The Department of Music presents Pentafluit—a quintet of recorder players—in a free concert at 8 p.m. Saturday, July 30, in Annenberg Auditorium.

Members of the quintet are Judy Linsenberg, graduate student in music at Stanford, and fellow faculty members of Cazadero Baroque Workshop at Dominican College: Frances Blaker, Vicki Lee Boeckman, Kit Higginson, and Lisette Rabinow.

They will perform works by Boismortier, Holborne, Quantz, Hans Ulrich Staeps, and Dornel for two, three, and five recorders.

Pentafluit will repeat this concert at 8 p.m. Sunday, July 31, at Trinity United Methodist Church in Berkeley.

Julianne Baird, soprano, guest artist for two concerts

The Stanford Department of Music will present guest artist Julianne Baird, soprano, at 8 p.m. Saturday, Aug. 6, in Dinkelspiel Auditorium with the Lydian Ensemble and again at 8 p.m. Tuesday, Aug. 9, in Kresge Auditorium with a Baroque ensemble under the direction of Prof. George Houle.

An internationally known performer, Baird is completing her Ph.D. in music at Stanford amid her many concert and recording dates. She has soloed with the New York Philharmonic, the Waverly Consort, Badinage, Pomerium Musices, and Concert Royal, among others, and is currently on the faculties of Rutgers and Princeton universities.

Baird has recorded for Columbia, Nonesuch, Music Masters, and The Musical Heritage Soceity. A *Washington Star* critic wrote of her: "By far the evening's strongest performance came from Julianne Baird, a soprano whose radiant singing bathed the music with warmth and expressiveness. . . .

"Baird has one of the most extraordinary voices in the service of early music that this generation has produced. More than that, she possesses a natural musicianship which engenders singing of supreme expressive beauty."



Julianne Baird

The Lydian Ensemble is composed of Randall Wong, countertenor; Margaret Panofsky, viol; and Kent Underwood, theorbo. All three are well-known to Bay Area lovers of early music.

Their Aug. 6 concert with Baird will include chamber duets, duo madrigals, and solo cantatas for Baird and Wong by Steffani, Handel, Monteverdi, Carissimi, and Strozzi. Underwood will perform a Suite of pieces for Baroque guitar by Pellegrini, and Panofsky a Sonata in A minor for gamba and continuo by Telemann.

Wong just completed a performing tour of Europe, where he was a featured soloist in the 18th-century opera *Ascanio* at the Festival of Vicenza. He also performed in Vienna with the vocal ensemble Chanticleer. This fall he enters Stanford as a doctoral student in music.

On Aug. 9 Baird will join George Houle, Baroque oboe; Charlotte Mattax, harpsichord; and Glenna Houle, viola da gamba, for a concert of French and Italian music of the Baroque period. On their program are works by Strozzi, Sammartini, Handel, Clerambault, and Bernier. Baird, Houle, and Mattax will all be featured soloists.

Tickets for the Aug. 6 concert are $4 general, $2 students and senior citizens, available at Tresidder ticket office, 497-4317 and the door. The Aug. 9 concert is free.

Midsummer Mozart Festival to continue July 31, Aug. 7

The Midsummer Mozart Festival, now in its ninth season, will return to Stanford's Memorial Auditorium for Sunday afternoon concerts on July 31 and August 7, at 2:30 p.m.

Under Maestro George Cleve, the Festival Orchestra will perform two different all-Mozart programs.

The July 31 program will include: "Overture, Trio, and Quartet from Lo Sposo Deluso, K. 430," with soloists Evelyn de la Rosa, soprano; Nile Norton, tenor; and David Malis, baritone; "Sinfonia Concertante for Violin and Viola in E-flat, K. 364" with Daniel Kobialka, violin, and Robert Levine, viola; "Two Marches in D, K. 335-320a"; and "Serenade No. 9 in D, K. 320, 'Posthorn.' "

Kobialka is principal second violin with the San Francisco Symphony and concertmaster of the Festival Orchestra. Levine is principal viola with the St. Paul Chamber Orchestra and the Festival Orchestra.

The Festival will conclude on August 7 with "Serenade No. 6 in D, K. 239," "Serenata Notturna"; "Piano Concerto No. 16 in D, K. 451" with Rudolf Firkusny, piano; "Horn Concerto No. 3 in E-flat, K. 447," Wendell Rider, horn; and "Symphony No. 36 in C, K. 425, Linz."

Firkusny is well known for his interpretation of the Classical repertory, including Mozart, and as an authority on Czech music. He has played with most of the world's great orchestras and conductors.

For ticket information, call Tresidder ticket office, 497-4317, and all other BASS outlets.

These three Stanford concerts of the Midsummer Mozart Festival are cosponsored by the Lively Arts at Stanford.

Kujawsky conducts Summer Orchestra

The University Summer Orchestra, under the direction of doctoral candidate in conducting Eric Kujawsky, will perform at 8 p.m. Wednesday, Aug. 10, in Dinkelspiel Auditorium.

The free concert will include the *Overture to Semiramide* by Rossini, *Prelude to Afternoon of a Faun* by Debussy, and Brahms, *Symphony No. 1.*

Over 80 musicians are playing with the orchestra this summer.

Librarian honored

SLAC Librarian Louise Addis has won the division award of the Physics-Astronomy-Mathematics Division of the Special Libraries Association. The 1983 award was given jointly to Addis and Stanford Prof. Edwin Parker for the development of the SPIRES High-Energy Physics Data Base.

This is the first year that an online computer database rather than a printed book was the basis of the award.

Stanford will briefly become center for world's leading letter designers

About 125 of the world's leading designers of alphabet letters will attend a week-long seminar at Stanford July 31 to Aug. 7, including five public lectures Aug. 1 through 5.

Hermann Zapf, German type designer, will discuss "Future Tendencies in Type Design: The Scientific Approach to Letterforms" at 7 p.m. Aug. 1 in Annenberg Auditorium of the Cummings Art Building.

Admission to the lectures is $7 each or $25 for the series of five. The others, scheduled for 7:30 p.m. in Room 040 Jordan Hall, are:

Matthew Carter, type designer in England and the U.S., "Galliard: A Modern Revival of Types of Robert Granjon," Aug. 2;

Charles Bigelow, typographer and Stanford assistant professor of art and computer science, "Typeface Design for Office Automation," Aug. 3;

John Benson, American lettering artist, "The Work of the John Stevens Shop," Aug. 4; and

John Dreyfus, typographical adviser and historian, England, "Edward Johnson-His Work as a Calligrapher and Type Designer," Aug. 5.

Series tickets may be ordered in advance by sending a $25 check payable to Stanford University to Charles Bigelow (ATypI lectures), Department of Computer Sciences, Stanford University, Stanford, Ca. 94305, together with return name and address.

Sponsored by the Association Typographique Internationale Committee for Education and Research in Letterforms, the seminar is the first held in the U.S. by ATypI. Its theme is "The Computer and The Hand in Type Design: The Aesthetics and Technology of Digital Letterforms.

The seminar will include a review of traditional lettering crafts, including punch-cutting and stone cutting. Working installations of computer systems will be available to bring designers and engineers together on type design.

Working seminar sessions will be given in English, with translators for German and French.

Biology seminar by John Kinsey

There will be a special seminar in the Department of Biological Sciences at 12:05 p.m. Friday, July 29, 1983, in Herrin Labs, Room 294. The title is "Transformation in Neurospora with the Cloned *am* gene" and the visiting guest lecturer is Dr. John Kinsey of the Department of Microbiology, University of Kansas Medical Center."

Musical program Aug. 7-8 to explore 18th Century version of *The Art of Love*

The Stanford Department of Music will present an unusual program at 8 p.m. Sunday and Monday, Aug. 7-8, in Dinkelspiel Auditorium. Entitled *The Art of Love—The Late 18th-Century in Words and Music*, the program is the brainchild of clavichordist Joan Benson, actor Fritz Brun, visiting director Geoffrey Reeves, and Laurence Maslon, who is directing the performances.

Combining music for the clavichord and fortepiano, songs, prose texts, and poetry, Brun describes the program as "the 20th-century equivalent of that 18th-century institution, the *salon*."

The two performers will portray love in all its facets—from wit and wisdom to sadness and sentimentality, using the words of Casanova and Voltaire, the rhymes of Blake, Johnson, and Bellman, and the music of C.P.E. Bach, Haydn, Field, and Mozart.

The program will be no less varied geographically, taking the audience on a tour of the forests of early America, the gardens of Georgian England, the canals of Venice, the harbor of Lisbon, the stately homes of Hamburg, and the lakes of Sweden.



Fritz Brun



Joan Benson

Benson is a vital force in the revival of the clavichord and early piano. She will conduct a workshop on the subject at Stanford Aug. 1-12 for the Department of Music. Benson tours internationally with her own 18th-century piano and clavichords and performs on original instruments in the museum collections of Europe and the U.S.

Brun is working toward his Ph.D. in directing and dramatic criticism at Stanford. He has taken many leading roles for the Drama Department, most recently as the great seducer *Don Juan*.

Brun brings to America a 20-year career in the Danish professional theater as actor, director, and producer. He did his early training at the Bristol Old Vic in England.

Maslon—no stranger to love and the 18th-century, having directed *Don Juan* at Stanford and *Candide* in New York—recently received his M.A. in drama from Stanford. He has also directed several original plays Off-Off Broadway.

According to Brun, the *salon* was the invention of learned ladies and a contributing factor in making the 18th-century an age of reason and *joie de vivre*.

"The program is meant to speak to the hearts and minds of our own time with the words and music of an era more gentle and sophisticated than our own, yet with a voice clear, close, and accessible," he says.

Tickets for each concert are $4 general, $2 students and senior citizens, available at Tresidder Ticket Office (497-4317) and the door.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the two weeks in which the events occur. The next deadline is Wed., Aug. 3 to cover the two weeks of Mon., Aug.15 through Sun., Aug. 28. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, AUGUST 2

STARTS—Jazz Workshop Speaking Jazz Lecture Series: "Freedom vs. Structure: Influences of Trane, Konitz, Etc," Steve Heckman, followed by a concert with the Summer Jazz Workshop. Tenor and soprano saxophonist Heckman has played with such diverse artists as Slam Stewart, Jimmy and Tommy Dorsey, and Eddie Henderson. 7:30 pm. Tresidder Lounge. $3.

WEDNESDAY, AUGUST 3

Drama Dept Summer Workshop: "An Actor's Nightmare" by Christopher Durang. A hilarious comedy, directed by Leigh Sealy. Noon. The Nitery. Free.

Green Library Book Sale: Gift and Exchange Division, SU Libraries. Books and periodicals in many fields: hardbound $1.50 and up, paperback 25 cents and up, periodicals 10 cents. 11 am-1:30 pm. Green Library, West Wing, 1st floor, Rm 101.

STARTS—Jazz Workshop Speaking Jazz Lecture Series: "Jazz: Then and Now," Stan Getz. Getz talks about changes and similarities between today's jazz scene and when he played professionally in 1942. 7:30 pm. Tresidder Lounge. $3.

Aero-Astro—NASA—ASEE Seminar: "Coalinga and Akita: New Challenges to Earthquake Prediction"; Prof. Richard J. Jahns, Earth Sciences and Geology, Stanford. Open to the public. 8 pm. Terman Auditorium. Free.

THURSDAY, AUGUST 4

Drama Dept Summer Workshop: "An Actor's Nightmare" by Christopher Durang. A hilarious comedy, directed by Leigh Sealy. Noon. The Nitery. Free.

Stanford Arms Control and Disarmament Forum: "The Future of Intercontinental Ballistic Missiles," with Dr. Sidney Drell. Showing footage from Bill Moyer's program on the MX missile with discussion to follow. 7:30 pm. Cubberly, Rm 133. Free.

STARTS—Jazz Workshop Speaking Jazz Lecture Series: "Improvising Music: The Psychological Experience," with Danny Zeitlin. A lecture with musical demonstration by the internationally renowned pianist-composer-psychiatrist. 7:30 pm. Tresidder Lounge. $3.

FRIDAY, AUGUST 5

Drama Dept Summer Workshop: "An Actor's Nightmare" by Christopher Durang. A hilarious comedy, directed by Leigh Sealy. Noon, 8 pm. The Nitery. Free.

Music Dept Concert: Barbara Allen, piano. Program: Bach—Chromatic Fantasie and Fugue; Chopin—Sonata in B-flat minor, Op. 35; Bartok—15 Hungarian Peasant Songs; Brahms—Variations on a Theme by Paganini, Books I and II. 8 pm. Dinkelspiel Auditorium. $4, $2 .

SATURDAY, AUGUST 6

Music Dept Concert: Lydian Ensemble and Julianne Baird. Baroque cantatas and duets; music by Monteverdi, Handel, Steffani, and others, with Julianne Baird, soprano; Randall Wong, countertenor; Margaret Panofsky, viol; Kent Underwood, theorbo. 8 pm. Dinkelspiel Auditorium. $4, $2.

Drama Dept Summer Workshop: "An Actor's Nightmare" by Christopher Durang. A hilarious comedy, directed by Leigh Sealy. 8 pm. The Nitery. Free.

SUNDAY, AUGUST 7

Lively Arts at Stanford: Midsummer Mozart Festival, directed by George Cleve. Program: Serenade No. 6 in D, "Serenata notturna," K. 239; Piano Concerto No. 16 in D, K. 451, Rudolf Firkusny, piano; Horn Concerto No. 3 in E-flat, K. 447, Wendell Rider, horn; Symphony No. 36 in C, "Linz," K. 425. 2:30 pm. Memorial Auditorium. $12, $9, $7 (students: $10, $7, $5).

Music Dept Concert: Benson and Brun: "The Art of Love," words and music of the late 18th century. Joan Benson, clavichord; Fritz Brun, actor. 8 pm. Dinkelspiel Auditorium. $4, $2.

ASSU Sunday Flicks: "The Man With the Golden Gun." Roger Moore plays James Bond. 8 pm. Memorial Auditorium. $1.50.

MONDAY, AUGUST 8

Music Dept Concert: Benson and Brun: "The Art of Love," words and music of the late 18th century. Joan Benson, clavichord; Fritz Brun, actor. 8 pm. Dinkelspiel Auditorium. $4, $2.

TUESDAY, AUGUST 9

Hoover Institution TOWER TALKS: "British Trade Unions," Gerald Dorfman, Senior Fellow. 3:30 pm. Lou Henry Hoover Room, Hoover Tower. Free.

Music Dept Concert: Baroque Chamber Music. Sonatas and cantatas of the early 18th century by Handel, Bernier, and others. Julianne Baird, soprano; Charlotte Mattax, harpsichord; George Houle, Baroque oboe; Glenna Houle, viola da gamba. 8 pm. Kresge Auditorium. Free.

WEDNESDAY, AUGUST 10

Drama Dept Summer Workshop: SUMMER'S END—an original review. Directed by Lorne Buchman, this original production combines dance, drama, and song. Noon. The Nitery. Free.

Stanford Physicians for Social Responsibility: "The Last Epidemic." This film will be shown several times before the PSR-sponsored symposium in October. 8 pm. Common Rm, 3rd floor, Women's Clubhouse. Free.

THURSDAY, AUGUST 11

Drama Dept Summer Workshop: SUMMER'S END—an original review. Directed by Lorne Buchman, this original production combines dance, drama, and song. Noon. The Nitery. Free.

FRIDAY, AUGUST 12

Drama Dept Summer Workshop: SUMMER'S END—an original review. Directed by Lorne Buchman, this original production combines dance, drama, and song. Noon, 8 pm. The Nitery. Free.

SATURDAY, AUGUST 13

Drama Dept Summer Workshop: SUMMER'S END—an original review. Directed by Lorne Buchman, this original production combines dance, drama, and song. 8 pm. The Nitery. Free.

EXHIBITS

Propaganda Posters of Two Revolutions. Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8-Jan. 31.

The Stanford Horse Show. In conjunction with the renovation of the Red Barn at Stanford, the exhibit contains paintings, photographs, and Currier and Ives prints of Leland Stanford's celebrated trotting horses, bred and trained in Palo Alto. T-F 10-5; S-S 1-5; closed Mondays. Stanford Art Gallery. June 28-Aug. 14.

Paintings by Liz Cheney. Atmospheric style and designs by a student of the Stanford Fine Arts Dept. all building hours. Upper Lobby of Tresidder Union. July 3-Aug. 1.

Photographs by Aurangreb Khan. Coffee House Gallery, Tresidder Union First Floor. July 3-Aug. 1.

Sharon Chacko—Batik. International Center. July 4-Aug. 14.

Photographs—1920's-1980's: Selections from the Museum's Collection. Exhibit includes some sixty prints by American and European photographers, including Kertesz, Winograd, Weston, Bravo, Morris, White, Uelsemann, and Novak. T-F 10-5; S-S 1-5. Stanford Museum. July 5-Aug. 14.

The Art of Literature: California Authors and Their Printers. A retrospective look at California literature and fine printing, 1860 to present. On the occasion of the first American conference of Assn Typographique Internationale. Rotunda and Gallery: Green Library. Aug. 1-Oct. 5.

Photographs by Ann Sconberg. Coffee House Gallery, 1st. Floor of Tresidder Union. Aug. 1-Aug. 31.

"My Favorite City": Show and sale of paintings and lithographs from the Kamarov Gallery. Upper lobby Tresidder Union. Aug. 1-31.

CAMPUS REPORT

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Financial aid students get draft warning

Stanford has resumed mailing statements of selective service registration compliance to an estimated 4,000 financial aid recipients.

Temporarily delayed as a result of questions raised by Stanford Against Conscription, a voluntary organization, the statements are required under the provisions of the Solomon Amendment.

In an accompanying document, the University notifies students that "you will not be eligible to receive federal financial aid if you do not complete this statement."

After two paragraphs explaining the law's applicability, the notice adds that "students who are not able to complete this statement may wish to contact the Financial Aids Office."

In March, the University announced it would apply its current financial aid policies to those not registering for the draft.

Students who decline or fail to apply for governmental aid are considered on an individual basis for long-term loans and jobs through the University. These loans are more costly to students and must be repaid within five years of graduation.

According to Financial Aids Director Robert Huff, about 46 percent of all Stanford undergraduates receive scholarships and grants-in-aid. When loans are included, the proportion rises to 71 percent.

In a statement on government student aid and selective service registration, published in March, the University said:

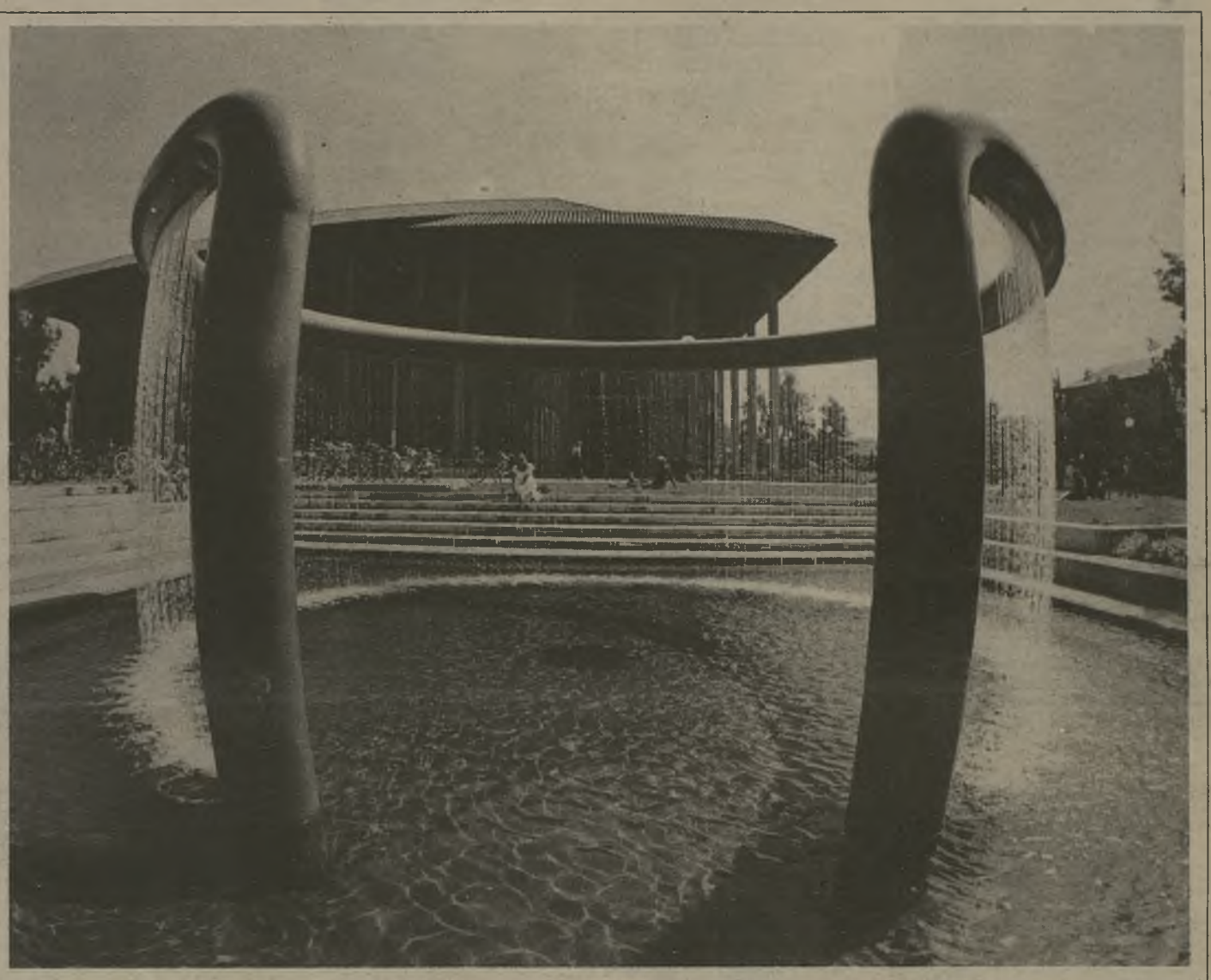
It has been University policy to award its own financial aid with the expectation that students will apply for and obtain any governmental assistance for which their financial situations make them eligible.

When students have declined or failed to apply for such governmental assistance, the University has been willing to consider replacing it with its own long-term loan and job resources. Decisions in such cases are made on an individual basis after consultation by the student with a member of the advising or senior staff of the Financial Aids Office.

It should be noted that the terms and conditions of University loans are less favorable—that is, more costly to the stu-

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A beautiful sight on a hot day—Shumway fountain with its shimmering curtain of water

Fundraising begins for old Stock Farm stable

A campaign to raise $500,000 toward restoration of Stanford's historic Red Barn and stables will begin shortly after Labor Day, President Donald Kennedy has announced.

Heading the volunteer effort will be L.W. (Bill) Lane Jr., chairman of the board of Lane Publishing Co., publisher of *Sunset Magazine*, Kennedy said. Lane, a Stanford graduate, is an avid horseman and, along with his brother Mel and other members of the Lane family, owns a large horse breeding and cattle ranch.

Target date for completion of the fundraising drive is Oct. 31.

The University's Board of Trustees last February approved the concept of restoring the Victorian barn, the most significant building remaining from Leland Stanford's Palo Alto Stock Farm and one of the oldest buildings on campus. The Stanford Golf Course now surrounds the structure and its adjoining paddocks and outbuildings.

Archival records indicate the barn probably was built between 1878 and 1880. The University, founded in 1885, opened in 1891 on stock farm land Leland and Jane Stanford donated to form the nucleus of the University's endowment.

Final project approval is expected from trustees within a few weeks, paving the way for restoration to begin as early as mid-September. University officials hope to complete exterior work before winter rains begin.

Lane and University officials currently are selecting a fundraising committee to

continued on page 11

What's happening at Hoover...

The Hoover Institution is the focus of much activity, over and above its normal research, this summer:

1) Three campus committees are looking into the proposal that a Ronald Reagan Presidential Library and Center for Public Affairs be located at Stanford.

2) Two faculty members are protesting that the proposal is being rushed without enough discussion.

3) FBI and other government investigators have spent several days going through Reagan campaign papers in the Hoover archives.

4) The study of the relationship between Hoover and the University continues.

Details follow.

Hoover study group

W. Glenn Campbell, director of the Hoover Institution, reported Aug. 9 that the Institution's Board of Overseers had "warmly endorsed" the proposal to locate the Ronald Reagan Presidential Library at Stanford University.

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People



Catherine Milton



Jeanette Pitts



Laura Anderson



Larry Horton



Thomas McBride

Catherine Milton

Catherine Milton, a widely respected worker for victim's rights legislation in Washington, will study ways of encouraging public service by Stanford students, faculty, and alumni.

Her one-year, half-time appointment, effective immediately, was announced by President Donald Kennedy. A former commissioner of the Food and Drug Administration, Kennedy has consistently encouraged students to devote a portion of their lives to public service.

Milton will seek ways of integrating and strengthening several existing programs on campus, as well as considering new initiatives.

The public management program of the Graduate School of Business, the new public interest loan program of the Stanford Law School, the Action Research Liaison Office, and the Stanford-in-Washington program for undergraduates are several current examples.

While based at Stanford, Milton plans to continue as a consultant to the U.S. Department of Justice on victim's rights legislation. Working with the Senate Special Committee on Aging, she conceived and drafted the Omnibus Victims Protection Bill of 1982, subsequently signed into law. Her previous experience includes serving as senior adviser to the Assistant Secretary of the Treasury for Enforcement and Operations; director of the female offender resource center for the American Bar Association; assistant director of the Police Foundation; professional staff member of the Presidential Commission on Campus Unrest; and working as a reporter for *The Boston Globe*.

She is the author of books on *Women in Policing*, *Police Use of Fatal Force*, *Little Sisters and The Law*, and coauthor of a *History of the American Negro*. She is married to Thomas McBride, associate dean of the Law School. They have two children.

She can be contacted on campus at Owen House, 497-0859.



The tradition continues—employees invited again to San Jose State game

Yes, there is going to be an Employee's Day again this year with a Stanford Family Tailgater in Frost Amphitheater and free reserved-seat tickets to the San Jose State game on Saturday, Sept. 24.

As soon as plans for the Day's events are confirmed, President Donald Kennedy will extend a personal invitation to the faculty and staff to "Come Join the Band" and each other in having a good time.

There will be free frosty and foamy drinks, food on sale for those who don't want to pack a picnic basket, special live music in addition to a performance by the Leland Stanford Junior Marching Band in Frost, and then "Entertainment Guaranteed" in the Stadium.

Kennedy emphasized to the Employees' Day planners that they should encourage all departments and work groups on the University, SLAC, and Hopsital payrolls to join in the special pregame party.

Larry Horton

Larry N. Horton, Stanford's director of government relations since 1978, has been promoted to associate vice-president for public affairs, effective immediately, Vice-President Robert Freelen has announced.

Described by journalists as "both energetic and persistent. . .a man on the run, especially in the halls of the Capitol building," Horton has worked closely with Freelen and Stanford President Donald Kennedy on a wide variety of issues in Washington and Sacramento.

To help higher education institutions keep abreast of legislative and executive branch developments, Horton recently created an electronic mail network for the Association of American Universities, based in Washington and headed by Robert M. Rosenzweig, former Stanford vice-president for public affairs.

He was named associate director of government relations in 1977 and director the following year. During 1979-81, Horton was cochairman of the Stanford Commission on Investment Responsibility.

Thomas McBride

Associate Dean Thomas McBride of the Stanford Law School has been named to a newly formed Presidential Commission on Organized Crime, the White House announced Thursday, July 28.

Former associate Watergate special prosecutor, McBride served as inspector general of the U.S. Department of Labor before coming to Stanford last October. He also headed the President's computer matching project, a key element in the Administration's anti-fraud program.

Cited personally by President Reagan as one of three outstanding managers in government, McBride served as inspector general of the Department of Agriculture during the Carter Administration. He calls himself a registered independent politically.

During 1961-65, McBride served as a trial attorney in the Organized Crime Section of the U.S. Department of Justice. He was deputy chief counsel of the Select Committee on Crime, U.S. House of Representatives in 1969.

During 1973-75, he directed the largest of the Watergate special prosecutor's task forces, examining campaign contributions.

Previously, he served as staff director of the Police Foundation, associate director of the Urban Coalition, and deputy director of the Peace Corps' Latin American region.

Pitts, Anderson

Stanford senior Jeanette Pitts of Kansas City and junior Laura Anderson of Los Angeles are participating in the Medical Education Reinforcement and Enrichment Program (MedREP) at Tulane School of Medicine this summer.

MedREP is a ten-week session geared toward identifying, recruiting, and motivating minority or disadvantaged students whose enriched experience will help them complete medical school and succeed in a medical career.

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The Kirkpatricks admire their impatiens, among the flowers from all over the world that adorn their garden.

Some strange quirks of geniuses recalled by Kirkpatrick

BY DONALD STOKES

Emeritus Prof. Paul Kirkpatrick of Stanford, aged 89, known for early work in x-ray spectroscopy, x-ray optics and holography, offers these reminiscences about physics at Stanford in the decades before World War II.

Second of two parts

A few striking characters stand out in my recollections of physics at Stanford in the 1930s.

The first was David Webster, a scientist of exceptional mental powers and eccentricities. He once told me that as a student he had planned to become a theorist but that accidents of fate had made him an experimenter. In his 70s he did become a theorist.

One of his distinguishing characteristics was an unfailing physical intuition; what physicists mean when they speak of getting a *feeling* for some area of study.

After tangling with him a few times on phenomenological matters or the prediction of consequences of some given initial conditions which neither of us had taken the time to analyze, I came off with distinct feelings of inferiority.

On such an occasion I was consoled by Bill Hansen, who said "Oh, there's no use bucking Webster when it comes to physical hunches. He's always right." (Hansen was later to have Stanford's W. W. Hansen Laboratories of Physics named after him).

Hansen's praise in this regard was as high as could be found, for he was himself a man of notable physical grasp, even as a student. In his first years at Stanford he was a worshipful disciple of Webster, but as his own knowledge grew, and at some times surpassed that of his teacher, the Websterian eccentricities and fabulous intellectual quirks moderated Hansen's adulation. Towards the end these contrasting individualists coexisted on a basis of civilized courtesy.

Hansen, the physical superman and amateur boxer, never saw his 40th year, being taken by a respiratory ailment perhaps related to his wartime exertions. His mental independence and originality were remarkable. His were the analytical brains that carried the klystron proposal to success.

Hansen was the only Ph.D. candidate whom I ever saw undergo the doctoral oral with obvious enjoyment and never a really wrong answer.

If, like Hansen, they have no possible stake in conformity as such they become known to the masses as "characters," or in advanced cases "crackpots." I take it that the advance of our species is in the hands of our crackpots, a view supported by the common practice of elevating crackpots to the pedestals of heroes after they are dead.

I now think of Hansen as, within certain bounded areas of activity, one of the greater minds of our time. But there were worthy fields of human effort which he consciously shunned, not because of any reasoned disrespect for them but because they called for other aptitudes than his. He thus combined a bounding self-confidence with a selective diffidence which found its best support in his association with Felix Bloch.

Bloch and Hansen were peers in the arena of physical science, with Hansen holding a clear advantage in experimental matters; but Bloch was at home in all human circles, could chat with the eminent in several languages or play in a trio with semi-pro competence.

What gained Hansen's admiration even more was Bloch's shrewdness in academic politics, and his ability to acquire and retain power. There were policy issues on which Hansen would withold his vote until he could talk it over with Bloch.

Assuredly he never took orders from Bloch, or from anyone else, but his respect for the practical wisdom of his friend generated a susceptibility which almost ensured agreement.

Another of Hansen's partnerships, and one of greater historical interest, was his friendship with Russell Varian. In my first year at Stanford, Hansen was a graduate student and Varian was a laboratory habitue of no definite status.

As a small boy in a Palo Alto school, Varian had been a slow learner and was considered retarded. Among his peers he was low on the pecking order. This drew the intervention of his kindly teacher, who adjured his more aggressive schoolmates not to expect too much from Russell.

Varian had, shortly before my arrival at Stanford, completed some low-energy observations of the Compton effect which had gained him a master's degree, but he had, it was said, been turned down as an unpromising candidate for the Ph.D.

Today, when Varian's inventiveness and physical insight have been internationally recognized, there is a tendency to recall with deprecating smile the Stanford action that denied a near genius even a chance to try to qualify for a doctorate.

While I had no part in the decision I believe that

continued on next page

Kirkpatrick/

continued from page 3

it was correct, and that Varian could never have survived the ordeal of the doctoral gauntlet. As he never learned to write his native language well, it is hard to believe that he could have gained the required proficiency in two foreign ones.

His oral communication was worth the listener's effort, but many were there who gave it up.

It is related that in one colloquium report he misspelled the same English word on the chalkboard in three different ways. Personally I think this was an exaggeration, but certainly the operation of his mind was like that of no other from which I have benefitted.

I have seen him stop in the midst of a public discourse and ponder silently for 30 seconds over a new idea suggested to him by his own words, while his understanding audience waited patiently for the programming of his brain to return to the previous question.

Although Varian's thinking led through involved logical and quantitative arguments he never acquired any mathematical skills or techniques beyond those of undergraduate calculus. One of his collaborators said, "Russ doesn't use logic. He has something better."

But Varian would have been the last to repudiate logic, and in his needs of its sophisticated expressions his friend Hansen supported him mightily.

Varian had more original ideas per day than any other man I have seen at work but, as Hansen came to recognize, they graded from brilliant to futile, and the sorting process called for the comprehension, criticism, and theoretical analysis that Hansen was well equipped to supply.

In the later 1930s this teamwork proceeded fruitfully, though I should certainly not like to convey that Hansen was not himself a distinguished originator.

It is reported that Maxwell was asked how he was able to bring to such elegant completion his work on the electro-magnetic equations, and that he answered simply, "By thinking about it all the time." This is surely the path of maximum achievement for minds of middling caliber as well as for those equipped with superior circuitry.

It is my impression that in the years before his marriage Hansen thought about physics all the time. This belief is supported by his productivity, his late hours, and his neglect of the conventional rites and responsibilities of academic citizenship.

Now Hansen and both the Varian brothers are dead, while their souls go marching on in the multi-million dollar ideas which they injected into the then exploding microwave science and industry.

Through the 1930s Webster's little research group had made many studies bearing on the probability of atomic ionization through electron bombardment. The fact and frequency of such ionizations were known from observations of the ensuing x-ray spectra, chiefly of the K series. Webster became dissatisfied with the range of bombardment energies afforded by his homemade high-potential power supplies. We formed a study committee to consider the possible ways of getting into higher energy ranges.

That committee was the first step on a path of progress which has brought us presently to the Stanford two-mile electron accelerator and is still leading on toward destinations unknown.

The first cyclotrons were functioning at Berkeley but we soon dismissed for cause the thought of circular electron accelerators. Hansen, however, did not forget the lesson that high particle energy does not necessarily mean great potential differences, and he started thinking about *linear* acceleration as a means of avoidance of the radiation energy loss.

Van de Graaff's electrostatic generators had not yet been announced and, as I remember it, we never gave a serious thought to possible static machines of any sort. Like other right-thinking physicists we would have dismissed them as impractical toys of the Franklin era.

The Stanford Electrical Engineering Department possessed a notable old set of high-voltage transformers capable of peaking at three million volts, and hurling 30-foot sparks across their huge sphere gap. It seemed obvious to us that no plans that engineers could contemplate for such a facility could compare in importance with our basic atomic investigations. Webster even had the audacity to invade the Electrical Engineering Department with such an argument.

That they did not speedily throw him out may be credited to the fact that they were indeed in some uncertainty about what to do next with their mammoth power supply. They were not admitting that the mammoth had evolved away its viability but Webster felt sufficiently encouraged to come back and start the planning of a budget.

It is easier to discover and accept the entirely new than to disarrange concepts that have become the habitual furniture of the mind.

—Paul Kirkpatrick



Paul Kirkpatrick cycles on campus every day.

It is easier to discover and accept the *entirely* new than to disarrange concepts that have become the habitual furniture of the mind. When we saw that our project was likely to cost $25,000 before the first datum could be read off we were about ready to give up.

Webster made a few calls on the president of the University and sent a number of letters in the direction of known coagulations of capital; the capital was there but not the interest, so the first high-finance research in physics at Stanford aborted in early gestation.

In present times, in the same department, sums like $25 *million* are mentioned with less awe than we accorded to a small fraction of that amount half a century ago.

In this atmosphere Hansen thought harder about electrons in fields and came up with the Rhumbatron and other cavity-resonant devices. Some of these were built and successfully tested, and plans were developed for linear electron accelerators employing the properties of microwaves, which Hansen and a few other physicists were beginning to understand.

Russell Varian, who was still about, became interested and conceived a tuned cavity device in which electron streams were bunched and caught in such a way as to perform signal amplifications and other vacuum-tube functions, but in the microwave frequency range. His original sketch, including original spelling, is still extant, and has become a valuable paper now that an industry has grown out of it.

Hansen was, of course, close to this development and was later named a co-inventor. Webster understood the idea perhaps better than did the originator, and a little later, after the tube had worked under laboratory conditions, he set forth the basic theoretical analysis in an elegant paper.

Following Webster's presentation of his theory to the local colloquium Hansen rose to praise it, but qualified his wonder by saying "I guess it's no surprise, considering who is doing it."

This was very handsome appreciation since a) Hansen was characteristically blunt in speech and not given to unnecessary politeness, b) he was no longer Webster's protege but had developed points of difference, both professional and social, which he took little pain to conceal, and c) Hansen almost without doubt was condemning himself for failure to achieve priority in the elucidation of the klystron.

This name (klystron) was the result of unusual interdepartmental cooperation. A deputation from Physics called upon the Department of Classic Languages and presented their terminological problem. They came back satisfied with the collaborative design of a word which, I am told, implies a relation between the flight of bunched flocks of electrons and the arrival of successive water waves on some Grecian shore.

Hansen was a great joker. Once he soldered a wood screw to a dime and screwed it into the hall floor outside his office door, where student traffic was often heavy. He, or his students, collected data on the considerable number of people who tried to pick it up.

Hansen was interested in sports, and particpated in some, and often discussed sports with graduate students. Some rivalry sprang up, which resulted in a challenge half-mile race between Hansen and one of the boys, Alex de Bretteville.

Hansen was easily beaten in the race, whereupon students with shop ability fashioned for Hansen an admirable lead medal bearing the Latin inscription: PLUMBUM EJECTA (roughly translatable as "Get the lead out").

Russell Varian's older brother, Sigmund, had had a varied career which I never understood in detail, though I knew him well. He had traversed the world, up and down and crosswise, partly as a Pan Am pilot. He brought to Stanford his family,

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Two die, ten survive in dramatic rescue by CIT computer programmers

Before the terrified eyes of their parents, 10 of 12 quail chicks who had fallen through a grating into a five-foot deep culvert were rescued by some agile computer programmers around noon Tuesday, July 26, at the Center for Information Technology (CIT).

Before noon the proud quail parents had been seen parading around Forsythe Hall, followed by a row of 12 newly-hatched chicks.

The bigger-footed mother and father quail waddled across the grating with no problem, but their peeping babies tumbled blindly, one by one, down through the grid. Mother and father quail circled about ruffling their feathers, squawking piteously and peering down at their whole family imprisoned beneath the surface of the earth.

Out of Polya and Forsythe Halls poured the CIT staff eager to come to the rescue. Shirley Melen, manager of technical support services, organized this very special support service.

The grating was removed, everyone cautiously mindful of the distraught parents underfoot. Mark Lawrence lowered 110-pound Melen into the pit.

Other programmers fashioned cardboard triangles into miniature stretchers for the chicks so that they would be uncontaminated by the touch of human hands.

Very, very carefully Melen scooped up each little quail and delivered the miniscule stretchers and downy contents to waiting hands above. Cheers and applause broke out among the onlookers as the 10 chicks emerged. Two of the tiny chicks had apparently suffered mortal injury in the fall.

The 10 survivors were placed in a cardboard box laid on its side, the grating was covered with a screen, and everybody tiptoed away.

Next morning mother and father quail were spotted marching around Forsythe Hall followed by a row of 10 little chicks.

Peggy Lyons, CIT

SUL's Suzanne Moore featured in magazine

The current issue of *Country Home* magazine contains an article about the restoration of an 1870s Wisconsin farmhouse by Stanford University Libraries exhibits coordinator Suzanne Moore and Joel Wollum.

The farmhouse is only one of several old buildings restored by the two. Others include two schoolhouses, a country inn, and a post office. Moore not only did the designing, she also was involved in the actual construction, doing all the plastering necessary in the farmhouse.

At Stanford, Moore handles all the details of Department of Special Collections exhibitions. She discusses ideas for them, coordinates with researchers, and helps select the books to be shown. Her design for an adjustable book mount has simplified the exhibitions.

At Stanford since April 1, Moore also will be responsible for exhibition publicity and graphics, including posters and catalogs.



Alice Forbes— a 'walking encyclopedia' who prescribes over the phone.

Workshops help employees discover how to cope with administration maze

A new employee at Stanford may have to contend with unfamiliar expenditure statements, completing payroll-personnel forms and travel expense reports, preparing and administering grant proposals, or figuring out which procurement form he or she should use to get a nameplate.

Training Coordinator Alice Forbes bears in mind the needs of new employees as she designs and runs workshops to enable them to:

- better understand the Stanford accounting system;
- learn how to complete Controller's Office forms, when to use them, and where to send them;
- become familiar with Controller's Office resources for solving problems; and
- clear up misconceptions about Controller's Office policies and procedures.

Workshops on seven different topics are scheduled quarterly. A new employee who attended a workshop on each topic would emerge, 31 hours of instruction later, well-versed in Stanford's accounting system, travel policy, equipment administration, payroll-personnel policy and procedure, fund accounting, grant and contract administration, and procurement process.

In addition, this spring Forbes introduced update workshops, designed to give staff the opportunity to discuss problems, new issues, and changes in the accounting system.

The first two update workshops (one on payroll-personnel and one on grant and contract administration) have paved the way for sessions featuring different topics and guest speakers.

One new administrator who went through all of the workshops last year called Forbes "a walking encyclopedia." She works hard to present the most up-to-date information; she often team-teaches and tries to bring managers and supervisors into the workshops.

However, Forbes believes that presenting current policies and procedures is only half the key to a good seminar. Successfully communicating the information is the other half. So she establishes a relaxed, noncompetitive atmosphere "to enable maximum learning to take place."

She encourages participants to learn from each other by asking questions and sharing information. And the time she sets aside for participants to practice using the manuals and completing the forms that their jobs require reflects her view that "people learn best by doing."

Ideas for new workshops frequently germinate in Forbes's conversations with managers and with workshop participants. This spring, for example, she worked with Tom Keenan's Budget Control group to create a Budget Process workshop.

This workshop gave Forbes the opportunity to try a new strategy for allaying beginners' fear of computers: she allocated time for each participant to actually manipulate data at a computer terminal.

"It worked," she said. "People who had never touched a terminal before said, 'It's so easy.' "

Quantifying the dividends the workshops pay in terms of increased staff productivity and efficiency is almost impossible. But the constant stream of participants—1,233 in 1981, 1,072 in 1982—attests to the need the workshops fill.

Even when Forbes isn't designing and directing workshops, she spends most of her time addressing or anticipating questions about the Controller's Office.

Just as a good physician should know how the body works from the smallest molecule to the most complex system, the training coordinator needs to understand the Controller's Office on every level from the simplest procedure to the most general policy. Unlike most doctors, however, she is usually ready to prescribe a remedy over the telephone when an extraordinary question arises.

Forbes also practices preventive medicine. With the hope of answering questions before they come up, she has written manuals on how to read and use the Office's forms and statements.

Forbes continually revises these manuals to keep the information and examples up to date. She is now working on a new revision of the Forms manual.

Whether it's classes or manuals, Forbes works to keep Stanford's work flowing smoothly. A schedule of current workshops is available from her at ext. 7-4531. *Campus Report* also prints them before the beginning of each quarter.

Kate Metropolis
Controller's Office

Taxis help elderly, handicapped

Elderly and handicapped Stanford campus residents are now eligible for low-cost taxi services from the City of Palo Alto's "Project Mobility" program.

Trips may be taken from any point within Palo Alto and Stanford to Menlo Park, Mountain View, to Kaiser Hospital in Redwood City, or to medical facilities in Los Altos.

The extension of these services to eligible Stanford residents, including students, is made possible by an additional grant from the Metropolitan Transportation Commission requested by the city to expand the program's service area.

Participants may purhcase one book of eight tickets per month for $4.80. Tickets are paid to the taxi or chair-lift van driver in lieu of cash fare. For trips within the Palo Alto-Stanford area, one ticket is surrendered for each one-way trip.

The basic eligibility criteria are: residence in Palo Alto or on the campus; must be 18 years old or older; cannot drive or have access to transport by another member of the family; cannot use public transportation; and must be able to ride in a vehicle without causing danger to one's self or any other passenger.

Screening and enrollment of participants is being handled through the Palo Alto Senior Center at 450 Bryant Street, phone 327-2811, 9 a.m. to 5 p.m. Kathleen McConnell, director of individual services for the Senior Coordinating Council, is in charge of the enrollment of Stanford residents in the program.

It's the loose stuff that can hurt you

Experts estimate that more than 70 percent of the injuries in a major earthquake are caused not by building collapse, but by the movement of the building contents during the shaking.

Furniture and equipment can fall, topple, or slide, causing serious injuries and damage. This is a hazard that you can correct now, before an earthquake strikes.

You need only examine your surroundings with a critical observant eye to identify the hazards inherent in your building's contents.

In offices, book cases and file cabinets can easily tip over in an earthquake. In shops, machinery can tip over or slide across the room. In laboratories, bottles of chemicals and other apparatus can fall from shelves and break.

A few relatively simple and inexpensive measures can help alleviate these hazards. Furniture and equipment should be bolted down or secured to withstand shaking. Light fixtures can also be braced and mounted securely.

For detailed information on how to secure the contents of your building, contact Facilities and Services for the Quick Fixes manual.

In laboratories, contact the Department of Health and Safety for the Laboratory Earthquake Safety manual.

For other earthquake safety information, contact your department Health and Safety committee, or call Stanford Earthquake Information at 497-0569.

SLAC Summer Institute hears report on weakons discovery

The European winners of the race to find three crucial subatomic particles reported their discovery to their American competitors, Friday, July 29.

The experiments, which were the high point of this year's Summer Institute at the Stanford Linear Accelerator Center (SLAC), found the particles that are thought to transmit the weak force responsible for radioactive decay.

The discovery is expected by many physicists to earn a Nobel Prize.

The particles, collectively called "weakons" (or more technically, intermediate vector bosons) were first conceived in the 1930's and formally predicted by the 1979 Nobel Prize-winning "electroweak" theory which unifies two of the four basic forces of nature, the weak interactions and electromagnetism.

While physicists had been searching for the particles since the 1950's, it was only after the current generation of very high energy accelerators were built that scientists could create and detect the heavy particles.

Since confidence in the weakons' existence was high, the major particle physics laboratories over the globe competed to be the first to find the particles.

The winners were two groups of researchers, each working with different detectors, at the 12-country European Organization for Nuclear Research (CERN) laboratory located outside Geneva.

Late last year CERN scientists observed their first weakons, the charged W and W- particles, by making protons collide with their anti-matter particles at a total energy of 540 billion electron volts (GeV).

As a result of the collision, the particles annihilate, creating for a brief instant, a state of pure energy from which a large variety of complex particles, including the weakons, can be produced. These particles then decay, emitting a shower of lighter particles such as leptons (the family of particles to which electrons belong).

Computers reconstruct the paths of the emitted charged particles recorded by the detectors (called UA1 and UA2 for underground areas). Scientists must then sort through what look like still photographs of a fireworks display, hunting for the weakon "signature"--the unique pattern of leptons ejected in the weakon decay.

By screening billions of collision events, CERN researchers in the two groups have found to date a total of 78 W particles and 14 of their neutral counterparts, the Z weakon.

While the discovery of the particles was expected, physicists were surprised that the weakons were so easy to identify in the jungle of other particles born in the proton collisions.

Some scientists had believed that the weakons would be unambiguously visible only in experiments that annihilated electrons and positrons which are considerably lighter and less complex than protons.

Such an experiment has been planned by SLAC when its newly approved $112 million linear collider (SLC) is completed in 1986. Physicists are looking forward to SLC because it will be a veritable factory of weakons, producing millions of particles a year.

At the SLAC conference, the CERN researchers also announced their most recent estimates of the masses of the W and Z particles. The 138 member UA1 group, which has already published its results in the July 7 issue of *Physics Letters*, reported about 80.9 GeV for the W and 95.2 GeV for the neutral Z. The UA2 group, consisting of 61 scientists, has recently submitted for publication their values of about 81.0 GeV for W and 91.2 GeV for the Z.

All of the measurements are in excellent agreement with those predicted by the electroweak theory. **Stefi Weisburd**

Watch out for the superwoman syndrome

- To combat the "superwoman syndrome," women should:
- Recognize they can't be perfect in every dimension of daily life;
- Take care of themselves physically and emotionally;
- Determine what's central, and allocate effort accordingly;
- Schedule time for themselves, their partners, and each child; and
- Work together to change institutions to meet the needs of women.

These suggestions come from Marjorie Shaevitz, a Stanford-educated career counselor at the Institute for Family and Work Relations in La Jolla, Calif. She spoke at a recent corporate seminar arranged by Stanford's Center for Research on Women.

Since women "tend to take care of themselves last," those with families should recognize that "it's in your husband's and kids' best interest" to exercise, eat properly, and "do what pleases you," she advised.



SUPER WOMAN

Many women now are so overwhelmed that they can't even describe what really pleases them, she noted. But "lack of leisure time" was cited as the most serious concern of working women in one recent national survey.

Physical signs of the "superwoman syndrome" include difficulty sleeping, headaches, dizziness, menstrual irregularity, high blood pressure, and ulcers.

Psychological signs include feeling chronically tense and pressured, anxious and angry. Often, women may recognize these signs only after more than a week's vacation.

At work, the symptoms may include high absenteeism, chronic lateness, lower productivity, and more conflict with fellow workers.

At home, while husbands can rarely be singled out as the only source, women feel "incredible anger" that they are unfairly overloaded with household work.

"If you stay upset, you don't have a chance to change things," Shaevitz observes.

Conflicts with babies and teenagers can be common—not just in the U.S., but also in Scandanavian countries.

In trying to balance many different roles—wife, mother, homemaker, employee, volunteer—it helps to choose carefully before saying "yes" to anyone.

Older women generally come from more traditional families, and may find the changed expectations challenging. While middle and upperclass men may express intellectual support for women, "their behavior's not involved," Shaevitz said, citing research at UC-San Diego.

Women may find it difficult to lower their standards and delegate household tasks. Remaining a "one-woman band" may seem easier than getting helpers to meet your standards, but in the long run such perfectionism has a high personal cost, she noted.

Chronic low-level anger at a spouse may suddenly erupt in anger. "He doesn't help, so you cry and hope he changes."

Not feeling good about yourself—a constant feeling you should be thinner, taller, more assertive, etc.—is a sign of the syndrome. "If most of what you say to yourself about yourself is negative, watch out," she noted.

Women who work may find it useful to apply some of the organization skills they practice at work in their home environment.

Raised by "very traditional" Danish parents, Shaevitz and her husband coauthored *Making It Together as a Two-Career Couple* and have four children from two families.

"We're in a transition group," Shaevitz told her mostly female audience. "We have one foot in the past, another in the future. We need to change ourselves, and help men and institutions do the same."

"But there's status in being overworked," one listener responded. "If you have it all together, people think you're strange. They really resent it."

Newly discovered particle

SLAC physicists confirm existence of fifth quark

Physicists at the Stanford Linear Accelerator Center (SLAC) have measured the decay lifetime of a recently discovered particle called the "B-meson", thereby confirming the existence of the fifth quark and hinting at the existence of a sixth, it was announced Thursday, July 28.

The measurement, which is the first of its kind, was performed by two independent detectors at SLAC's Positron-Electron Project (PEP) storage ring. The announcement was made at the topical conference of the 11th annual SLAC Summer Institute.

The B-meson, which was first observed last year by scientists at Cornell University, is predicted by a theory called the "Standard Model."

In this model, the six basic constituents of matter, named "quarks" can combine in a variety of ways to create a whole zoo of more complex particles called "mesons" and "baryons." So far researchers have found experimental evidence for all but one quark, the "top" quark.

The B-meson is made from the "b" quark, and an anti-matter quark of a different type, or "flavor." Scientists at SLAC made B-mesons by colliding "bunches" of electrons and positrons, each traveling at energies of 14.5 billion electron volts.

When an electron collides with its anti-particle the two annihilate, thereby producing a photon of pure energy from which a myriad of particles, including the B-meson, can be created.

One of the more difficult tasks of the SLAC scientists was to identify those reactions which produced B-mesons, because the newly born particles quickly decay into showers of lighter particles. The B-meson is particularly short lived--so much so that the distance it travels is too small to be "seen" within the limits of the detectors used.

Marcello Piccolo, representing the MAC detector group, reported to the conference that by tracking the paths of its unique decay products researchers were able to reconstruct the trajectory of the B-meson. From this a lifetime of about 1.8 picoseconds was determined. (A picosecond is one thousandth of a billionth of a second).

SLAC physicist Nigel Lockyer, working with the Mark II detector, reported a lifetime of about 1.03 picoseconds. The two values agree well within statistical errors.

The lifetime experiments are important because they give physicists information about the "weak" interactions responsible for radioactive decay.

The lifetime is also related to the masses of quarks. Scientists are most interested in predicting the mass of the as-yet-undiscovered top quark.

In addition to the B-meson measurements, Lockyer also reported on the status of several other experiments at PEP:

- The lifetime of the neutral D particle (made from a charm and an anti-up quark) was measured using the PEP ring and agrees well with the world average found by other methods.

- A high precision measurement of the lifetime of the tau particle, a heavy cousin to the electron, produced results that support the idea that electrons, muons and taus (collectively known as leptons) all couple in the same way to the recently discovered W particle which carries the weak force between interacting particles.

- Physicists searched for the "selectron", a particle predicted by a popular theory called "supersymmetry", but were unable to find it at energies below 22 billion electron volts.

Experiments testing the coupling between leptons and the neutral Z particle (another carrier of the weak force) are almost complete and strongly support the Standard Model. Measurements of coupling between the Z and the b quark are beginning.—**Stefi Weisburd**

Bone grey powder in milk shake blender

Making mudpies is serious stuff for petroleum engineers

Esther Soelberg pours the bone grey powder into the milk shake blender and watches the thick liquid swirl and mix.

Like all good culinary artists, Soelberg measures her ingredients with care. She checks her recipe for the desired results. Does it have the proper consistency? Does it flow correctly? She tests for acidity, even weighs her creation. She does everything except taste it.

Soelberg, a senior petroleum engineering major, is making mud.

With such deliberate preparation however, it is clear that this is no ordinary mud. This carefully proportioned mixture of clay, water and chemicals is used by oil companies to facilitate the costly drilling process. Mud is one kind of "drilling fluid" that is made to circulate through the well in order to lubricate and cool the drill bits, control the pressure of the oil reservoir, and carry pieces of cut rock away from the bits up to the surface.

Soelberg is making this particular sample of mud for Petroleum Engineering 151C, a required laboratory course concerned with the fine-tuning and testing of drilling fluids, notably muds.

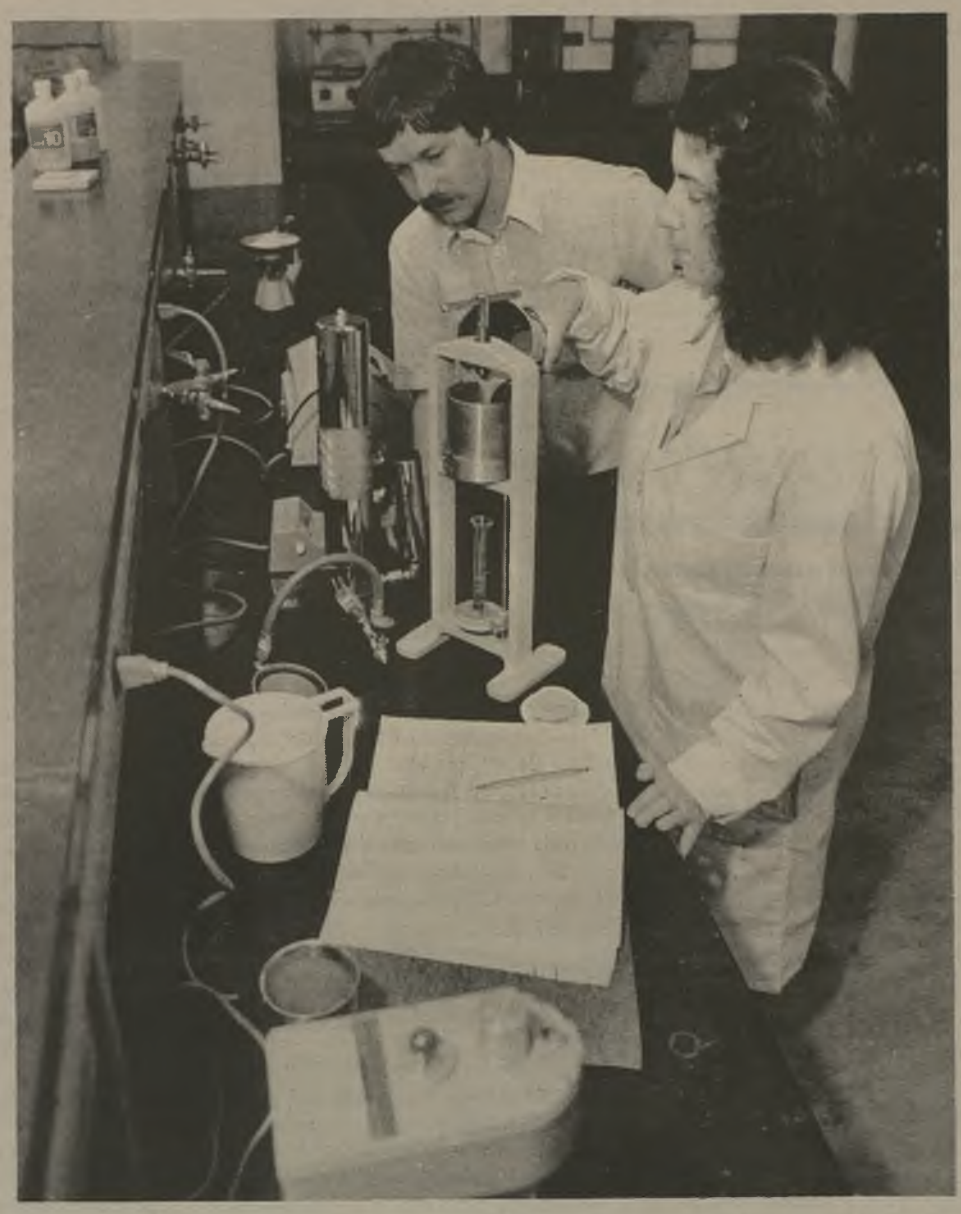
According to Dr. Louis Castenier, the research associate who teaches the course, the primary purpose of the "mud lab" is to "place students in the type of situation they can expect to encounter in the field."

Castenier notes that a student's first job experience will frequently require knowledge of drilling muds and a familiarity with the associated equipment.

"We try to give students the same tools available in industry," he says.

Research in drilling fluids started shortly after the advent of oil drilling in the eastern U.S. in the late 19th century. At that time engineers used water mixed with the dirt surrounding the well site as a drilling fluid until they discovered that some clays seemed to work better than others.

Castanier notes that today most of the research is done by oil companies which have developed other drilling fluids such as foams for high temperature drilling. Still, mud remains the most common drilling fluid and so it is the primary fluid studied in the drilling fluids lab.



Luis Castaneda and Esther Soelberg make mud

Adapting to conditions

Since actual well sites vary widely in terms of depth, temperature, and the composition of the soil and rock formations, it is essential that the students be able to design drilling muds for a variety of conditions.

But as Soelberg notes, choosing the correct composition of the mud can be hampered by a set of often conflicting requirements on the properties of the mud. The viscosity, for example, must be high enough to ensure that the cut rock debris, or "cuttings" are lifted away from the bits. Too high a viscosity, on the other hand, might make it difficult to pump the mud, especially if the circulation in the well has ceased.

Similarly, the mud's density must be selected carefully because the weight of the mud column in the well is used to balance the pressure of the underground oil or gas reservoir. If the density is too high, the reservior could become blocked by the drilling mud; too low and the reservoir can "blow out" of the well, resulting in an uncontrolled and environmentally hazardous loss of oil.

With these concerns in mind, Castanier has structured the class around the preparation and measurement of two mud samples, emphasizing several specific properties of the mud, including the viscosity and density.

In the first part of the lab, the 25 students are asked to prepare one gallon samples of mud given particular values of the viscosity. Two types of natural clays are used: bentonite from Wyoming and attapulgite, the most commonly used clay. By combining each clay with chemical additives, the mud is tailored to the desired specifications.

Castanier says that in spite of their preparation and sophistication, the students at the beginning of the lab are "very surprised when they see they're making actual mud. The clay looks just like dirt and water."

The students then measure the properties of the mud with a variety of instruments housed in the basement of the Mitchell building. Since ARCO donated $20,000 and the dean's office contributed $10,000 to the undergraduate labs two years ago, Castanier notes that the "lab equipment is brand new and in excellent shape—which is a nice change."

Students also work with older instruments that are still used for quick, although less accurate measurements in the field.

Measuring mud's properties

In addition to the viscosity and density, several other properties such as the acidity of the mud are measured. The students also pressurize the mud in order to replicate the thin layer of compressed mud, or "mud cake" that forms along the surface of the real well. This surface layer prevents the flow of water and clay to the oil formation. The best mud cakes are thin and highly permeable.

In the second part of the laboratory, students add salt to their mud samples since one problem frequently encountered in the field is contamination of the mud by impurities such as salt and cement. Since these contaminants can radically alter the properties of the mud, new measurements are made to determine how the desired properties have been degraded.

In the final section of the course, students restore the original properties by adding chemicals called thinners to the mud.

The theoretical part of the class includes lectures on clay colloidal chemistry, the physics of clays and non-Newtonian fluid theory. Besides muds, the latter is also applicable to the study of "everything from paint to chewing gum, cements," says Castanier.

While Stanford does not have a research program on drilling fluids, the petroleum engineering department keeps up with industry technology and findings in the Mud Lab.

"I think we are the only university which has this drilling program for undergraduates," Castanier says. **—Stefi Weisburd**

Financial aid...

continued from page 1

dent—than aid from governmental programs: Most University long-term loans bear an in-school interest charge and must be repaid within five years of graduation.

The University plans no change in this policy.

The reason for restating it at the present time is that, effective July 1, 1983, all men who are required by law to register with Selective Service and have not done so are ineligible for federal student aid under Title IV of the Higher Education Act. The specific programs included are Pell Grants, Supplemental Educational Opportunity Grants, State Student Incentive Grants, National Direct Student Loans, Guaranteed Student Loans. Auxiliary Loans to Assist Students (called CLAS in California) and College Work-Study jobs. It is estimated than 4,200 Stanford students are currently receiving assistance under one or more of these programs. Of this number, close to 2,000 are male students born after Dec. 31, 1959.

The University does not plan any addition to existing loan and job sources: no decision has been made about how these resources will be allocated should they prove insufficient.

Ph.D. oral exams

FRIDAY, AUGUST 12

Peng-Huat Ang, electrical engineering, 3 p.m., Durand 450.

MONDAY, AUGUST 22

Kevin J. Malloy, electrical engineering, "Characterization of Heavily Doped $A1_xGa_{1-x}As$:Te Grown on Semi-Insulating GaAs," 1:30 p.m., McCullough, Room 240.

O'Connor's loot to be auctioned off Sept. 17 at Stanford Police Department

In what appears to be the final resolution of the Robert Lee O'Connor cat-burglar case, Stanford Police Capt. Raoul Niemeyer has announced that an auction to dispose of thousands of dollars of unclaimed stolen property is set for Saturday, Sept. 17, in the Stanford Police Department parking lot.

Time of the auction will be announced at a later date.

Previously scheduled for July 9, the auction was delayed when O'Connor sought a court hearing claiming the property was his.

In an agreement worked out with Stanford Police, O'Connor was given all property he could satisfactorily prove belonged to him prior to his 1978 crime spree. Niemeyer, who "feels good about the settlement," said 90 percent of the items are clothes, shoes, and other personal effects.

The agreement "precludes lengthy lawsuits and appeals," Niemeyer said.

O'Connor, suspected of involvement in at least 181 Midpeninsula burglaries between 1978 and 1982, pled guilty to 21 counts of of burglary March 22. He leaves later this week to begin serving a 19 year sentence at Folsom prison.

Preview Sept. 16

A public preview of the items to be auctioned will be held from 10 a.m. to 5 p.m. Friday, Sept. 16.

Niemeyer said a closed preview is scheduled between 8 and 10 a.m. Sept. 16 to give burglary victims and others who have made legitimate claims a final opportunity to try to identify their property. It will be open only to persons who were burglary victims between 1978 and 1982 in Menlo Park, Palo Alto, Los Altos, and at Stanford.

Victims must make prior arrangements with the Santa Clara County Public Administrator's Office to attend the preview. A form provided by the Public Administrator's Office must be filled out in advance. Copies may be obtained by calling the office at (408) 279-6131. Victims also must provide a detailed description of stolen items and a copy of their police report.

O'Connor had been dubbed the "connoisseur burglar" and the "jogging burglar" because of the high quality of items he sought and his athletic method of scouting targets. Police recovered an estimated $2 million in furs, antique guns, violins, jewels, Oriental rugs, gold dinner plates, and other items following his Nov. 5 arrest in La Honda.

O'Connor was sentenced to prison in November 1973 for grand theft and receiving stolen property. He escaped in September 1974 but was recaptured in February 1976 during an Indian artifact store burglary. He was sent back to prison in April 1976 and then paroled in early 1978.

Since November Stanford Police have stored the recovered merchandise in two trailers and persons from more than 2,000 households have sifted through the items searching for their belongings.

Proceeds from the auction, which will be conducted by Neale and Sons, will be funneled through the Public Administrator's Office. Stanford Police are to be compensated for storage costs, which have totaled about $11,000.

Under terms of Prop. 8, the "Victims' Bill of Rights," persons who feel they were not fully compensated for their losses can file claims with the Public Administrator. Claims will be decided by the courts. If any money remains, it will be turned over to the Santa Clara County treasury.

Team physician Behling honored

Dr. Frederick L. Behling, team physician to all Stanford's sports teams, received the tenth annual President's Cup Challenge Award from the 8,000-member National Athletic Trainers' Association (NATA) in June.

Behling, a Stanford Medical School clincial professor of surgery and an orthopedic surgeon with the Palo Alto Medical Clinic, also is team physician to the San Francisco Giants, the annual East-West Shrine Games, and until recently the San Francisco Forty-Niners. He has been Stanford's team physician since 1961.

Behling is regarded as a leader in sports medicine. He has strongly advocated eliminating the use of the neck in blocking and tackling and has been instrumental in greatly reducing other hazards of the game.

Accidents and injuries

Accidents and Injuries Occurring During Week of July 25-Aug. 5

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	3	(0, 0, 1)
Cut by sharp object	1	0
Pinched, squeezed, crushed	2	(+6, 0)
Fall from height (incl. stairs)	1	0
Fall from same level	1	0
Foreign body (i.e., in eye)	2	(0, 0)
Lifting improperly	5	(0, 0, 0, 0, 0)
Other	1	0
Temperature extreme	1	0

Kirkpatrick/

continued from page 4

including his wife Winnie, the daughter of a British Foreign Service officer.

Sig's body was never retrieved from his last flight—off the Mexican west coast—and Winnie shortly thereafter found grieving unbearable and abruptly terminated it.

The Varian brothers were credited equally for the early klystron patents, and I presume they shared alike in the rewards that lifted them both from near poverty to the higher income brackets.

Of course this surge of prosperity did not follow immediately from one bright idea but developed over a period of years through the good fortune, government patronage, and professional management of Varian Associates, a manufacturing enterprise built up by but not restricted to klystrons.

The respective contributions of the two brothers to all this were vastly different in kind and in importance. Russell was always the man of ideas, while Sig, a pretty good mechanic, was the implementor.

There is little in the slight amount of published literature on them, or in the journalistic and promotional prominence that came to their names, which indicates the great differences in their personal gifts and achievements.

I had never forgotten the unsolved problems of the continuous x-ray spectrum, and now seemed a time to take them up again, for at Stanford we had found out how to make thin targets and how to nurse them through series of observations without destruction.

It was clear that the *thick* target was never going to uncover explanations of radiation processes in terms of atomic events, for there is too much going on in such sources. What we mean by a thin target is one in which the bombarding electron will in all probability have either no productive collisions or just one, and that one while continuing in almost its original direction of motion.

I put four graduate students to work on measurements of spectral energy and polarization by the use of new methods, and all of them secured new basic data. In all cases these young experimenters found about what they expected to find, that is, their quantitative results were in rather good agreement with such theoretical predictions as were then to be found in the literature.

It is worth noting that most Ph.D. aspirants feel well satisfied with such an outcome, and never suffer the disappointment which Eddington said every experimenter ought to experience when his research merely confirms his opinions, and so teaches him nothing new.

In the area of continuous spectrum theory the papers of Arnold Sommerfeld and his students were highly respected but seldom read. It seemed that the only physicists capable of reading them with critical appreciation were theorists unsoiled by the laboratory. Certainly I was never capable of finding faults in these papers or of deriving logical conviction from their extended and admirable arguments, yet it was necessary for me at least to know what the papers had to teach us about the probable nature of the spectra.

What an experimenter would like to have from the friendly theorist is a set of curves, but the Sommerfeld papers stopped far short of anything so realistic. After considerable labor and much help from a friend who really understood the labors of the Sommerfeld school, I found that I could calculate one point (not one curve) by the performance of 1,200 operations on my desk calculator.

I felt sure that each point so secured put me in possession of knowledge never before possessed by anyone, and I was fortunate enough to find a collaborator willing to spend months on computation.

As a result, we published in *Physical Review* a paper which added not one new thought to the lore of the continuous spectrum, but which by its graphs and algebraic equations made it possible for any physicist to see what accredited theory really predicted.

Judging by the number of reprint requests received, this uncreative article was among the most popular papers I ever wrote. Today, of course, results of this kind can be whipped out in short order by electronic computers.

Kirkpatrick's reminiscences go on to cover the World War II period, and his subsequent acceptance of the chairmanship of the Physics Department, and how after six years he passed that responsibility to Leonard Schiff. He took a two-year leave to work in the Philippines, and returned to Stanford for the final year before his retirement.

Among the lighter moments, Kirkpatrick organized a "bottle orchestra" in which physics staff people took part. Each bottle was "tuned" to give the right note when blown across its mouth. Full harmonized music was performed. His hobbies included the writing of poetry and songs.

My University duties terminated before the present students were born. I find retirement a busy and pleasant status; some aging colleagues complain that it has no vacation, and others that it has too much.They need a variety of interests. My desk tends ever toward the high-entropy condition that marked it a quarter of a century ago.

Most of us die a little at a time. My judgment on the process of getting on has been put this way:

I was happy to find I could spare
my formerly flowing hair.
Though my vision is dimming somewhat
these spectacles help it a lot.
If I have a few bodily ills
there are always plenty of pills
My old adolescent agility
would have little present utility.
To afflictions like these I'm resigned,
But Oh how I do miss my mind.

John Metcalfe's retirement will allow full-time attention to new project

John D. Metcalfe, director of the Language Lab in Stanford's Meyer Library, will retire August 31, and it's a good thing.

Now he'll have plenty of time for his next project—a complete list of all the languages of the world, both ancient and modern, including geographic location and cross-indexing of names.

"The idea came out of this job," he admits. People asked questions he couldn't answer, and there were no references in which to find the answers.

Metcalfe is already 4,000 3x5 cards into his project, and he's only up to the Ds.

"I expect to spend about 10 years on it," he says, "and of course I'll have to travel to foreign libraries to do research."

Metcalfe's travel habit was firmly planted during his 22 years in the U.S. Navy, and he and his wife Jean have continued it since he left the service. They've managed to see a lot of Europe, the Orient, and Australia, sometimes using a trip to search for tapes or books on little-known languages.

Their most recent jaunt was a short one to France and Belgium. Longer trips are planned for Europe (Germany, Italy, Spain, and France in February 1984) and Australia (November 1984), where he'll give the Canberra Library some heavy use.

After his Navy career, Metcalfe spent 10 years—six of them at SRI—involved with electronics and computers in the Bay Area. He has done all the maintenance of equipment at the Language Lab as well as directing it.

The Language Lab consists of four rooms with small carrels where students listen to language tapes through earphones and record their own voices to compare accent and accuracy. Each room has a central monitoring machine so that instructors may listen and talk to students individually.

If you pass by the Lab when it's in use, you'll hear people quietly talking to themselves in various languages, pausing to listen, then speaking again.

Nearly 20 percent of Stanford's language tapes are made in the Lab's recording studio. A few years ago the collection was on reel-to-reel tape, but it all has been transferred to cassettes, for easier use.

There are more than 100 languages available on cassettes now, some of them searched out by Metcalfe on his travels. For at least one of them—Senufo, an Ivory Coast tongue—a long hunt ended when he found it in Stanford's own Green Library.

Besides directing the Language Lab, Metcalfe has taught a yearly course in language lab techniques, for people who want to manage similar operations. He also has functioned as a campus notary, handling an estimated 10,000 documents in his 11 years at Stanford.

While Metcalfe pursues the languages of the world, his successor, Carolyn Parks, will be the new director of the Language Lab.

Parks, who will start work September 12, comes to Stanford from the Language Lab at the University of Maryland.



John Metcalfe

New engineering institute starts up with a $2 million grant from IBM

The School of Engineering here is forming the Stanford Institute for Manufacturing and Automation (SIMA) to produce graduates who not only know how to run the manufacturing end of industry but can compete in the corporate offices with the lawyers and the MBAs.

The Institute will also engage in research in manufacturing processes and automation, linking several disciplines in engineering with computer sciences and artificial intelligence. SIMA expects considerable industry support.

The institute has received a $2 million grant from IBM to start up.

SIMA is expected to produce 30 students with a Masters of Science degree in Manufacturing Systems Engineering (MSMSE), according to Anthony Macias, associate dean of engineering for development.

"That degree really is supposed to be an alternative for someone who wants to be conversant in technology and equally conversant in the business aspects of manufacturing systems engineering," Macias said.

"We envision the candidates for this degree to be those who eventually find their way to the upper echelons of large companies.

"It's common to find at the chief operating officer position people with MBAs or people with law degrees, people who aren't necessarily trained during their educational programs to chat comfortably with the guy on the manufacturing floor, or the technicians or the researchers at the plant."

Three components

SIMA will have three components, Macias said.

The Center for Teaching and Research in Integrated Manufacturing Systems (CTRIMS) will be the degree-granting component. The Centers for Automation and Manufacturing Sciences and Design Research, will be the research components. Charles Kruger, chairman of mechanical engineering, and Warren Hausman, chairman of industrial engineering, who is also a professor by courtesy at the Graduate School of Business, will head CTRIMS.

Macias said other centers may be formed as the institute grows.

The Center for Automation and Manufacturing Sciences is already in existence under Robert Cannon, chairman of the Department of Aeronautics and Astronautics, combining some of the robotics research in engineering with research into automatic control projects in his department.

The Center for Design Research is under the directorship of Larry Leifer of Mechanical Engineering, and will center on design processes and developing advanced design manufacturing systems.

There are no plans for a building or separate facility for SIMA.

Macias said the program will be interactive with industry, following the model established by the Center for Integrated Systems in electronics.

During the four-year period of funding from IBM, he said, SIMA intends to seek support from other corporate participants. The goal is 20 sponsors.



Palo Alto Fire Department Capt. Ken Carleton tackles an unusual assignment—replacing the rope on the Post Office flagpole.

SIMA thinks about $1.5 million a year from corporations will keep the educational component funded and provide seed money for the research centers.

"We have presented a 'talking paper' to a number of companies and the uptake has been very strong," Macias said. "We even had one company come out a couple of months ago for a day's presentation . . . and we made the presentation to a vice-president for manufacturing and he was very, very high on this program.

"He said that not only would his company be very interested in participating in this program but he would think we would have no problem whatsoever in getting 20 other companies to participate.

"The only thing that he warned against was waiting too long."

He said it was widely felt that "the educational curriculum has to be put within a context of research, and the two research centers . . . enhance the activity of the masters program.

"It is the research that provides the underpinning for the state-of-the-art thinking that goes on at an institution like Stanford. It's the research component which will eventually be taking a lion's share of the gifts once we have the full complement of sponsors."

All but a small percentage of the IBM money will be going into the educational component.

The university will be offering six fellowships for the coming fall semester to start the program. The students will have undergraduate degrees in engineering. They will take a rigorous 45 credits for the degree.

The institute will be under the auspices of William Kays, the dean of the School of Engineering. The steering committee, made up of center chairmen, will select a chairman for the institute.—**Joel Shurkin**

Sierra Camp opening

The Sierra Camp seeks applicants for assistant director. Copies of the position announcement are available from Bowman Alumni House (497-2021) or the Camp itself.

Thomas A. Bailey, outspoken American historian, dies at 80

Emeritus Prof. Thomas A. Bailey of Stanford, nationally famed American historian, died Tuesday, July 26, at the University Branch Convalescent Home in Menlo Park, following a lengthy paralytic illness. He was 80.

He was the author of at least 17 books, including *The American Pageant* (1956), a high school and junior college textbook which sold well over one million copies in six editions, and "The Diplomatic History of the American People" (1940), adopted in more than 250 colleges and universities for more than 40 years through at least 10 editions.

Once regarded as the "bad boy" of the history profession because "I've always believed that history should be easy to read and fun to learn," Bailey walked from his campus home to his office daily and continued writing until a few months ago. "I expect to die in harness," he told a student interviewer four years ago.

A San Jose native, he commuted by interurban electric car from his parents' prune orchard to Stanford, enrolling as a freshman in 1920 and earning his Ph.D. seven years later. He joined the faculty in 1930, teaching until his retirement in 1968.

Books the key

He soon saw that the way to get to the top as a professor was "to publish books, not articles," he recalled in an interview last year. "The front office was evidently more impressed with scholarship embalmed within hard covers."

To reduce conflict of interest in requiring students to read his text on diplomatic history, he bought an adequate number of copies for those who could not afford the books and put them on reserve at the library.

"In apologizing to students at the first meeting of the class, I immodestly but truthfully remarked. . .that if they were taking this same course at some other institution, the chances were rather good that my book would be the one required," Bailey told Donald Stokes of Stanford News Service.



Thomas A. Bailey

While his lectures recast material in the book, "some students do not get the point even when it is presented both orally and in print," he added with a smile. For years, Bailey synchronized the sweep-second hand of his watch with the beginning class bell, leaving students awestruck when he finished a few seconds before the closing bell.

Noting that absenteeism could run as high as 30 percent in some classes, he observed that "education is just about the only salable item that many people are willing to pay millions of dollars for and make strong efforts not to receive."

Holder of the Margaret Byrne professorship in American history, Bailey told Stanford yearbook editors in 1967 that "students expect too much of the University; it's like monogamy: disenchantment is inevitable because of the general overestimates of the rewards."

His comments on politics were equally pithy. In 1956, Bailey told Stanford alumni: "we must learn to live with crisis. The cold war, if we are lucky, may go on for generations. . . .

"Modern wars are won in laboratories, and it is a chilling fact that the Soviets are making more spectacular progress than we are in selecting and training the best young minds. . . .

"Our democracy is on trial before the world. The best way to preserve it is to practice it."

Three years earlier, at the height of the Joseph McCarthy era, he told Stanford alunmni: "It is my considered judgment that McCarthy has done more harm to the democratic cause than all the so-called communists he has run out of government. What shall it profit a nation if, to preserve its democracy, it adopts tactics that destroy democracy?"

Extremely active as a scholar following retirement, he joined with Paul B. Ryan of the Hoover Institution to challenge widely publicized claims the ship Lusitania had been deliberately exposed to German submarines to provide an excuse for the U.S. to enter World War I. Reports that the ship carried 12 six-inch guns simply were not true, they wrote in "The Lusitania Disaster" (1975).

In 1976, following publication of his book on *Voices of America: The Nation's Story in Slogans, Sayings, and Songs*, Bailey suggested that the lack of catchy bumper stickers in the Carter-Ford campaign was a regretable sign of those times. "Personally, I hope they both lose," he added.

In a 1979 book coauthored with Ryan on "Hitler versus Roosevelt," Bailey concluded that Pearl Harbor was as much a surprise to the Nazi leader as it was to FDR.

In "The Pugnacious Presidents," published in 1980, Bailey said "no President or group of Presidents and no political party can be stigmatized as hell-bent for war."

Throughout his retirement, he averaged one new book or revision a year.

In 1939-40 he was one of the early members of the Institute for Advanced Study at Princeton. He headed the Stanford History Department in 1952-55 and again in 1957-59. He was elected president of the Organization of American Historians in 1967 and first president of the Society for Historians of American Foreign Relations in 1968.

He is survived by his wife, Sylvia Dean; their son, Arthur Dean Bailey, of Sunnyvale; and two grandchildren, James Arthur Bailey, of Sunnyvale, and Sylvia Luise Shirley, who lives in Southern California.

At his request, there will be no funeral and no memorial service. Inurnment is planned at Alta Mesa Cemetery in Palo Alto.

Memorial contributions may be made to the Thomas A. Bailey Book Fund, 301 Encina Hall, Stanford University, Stanford, Calif. 94305.

Chemistry Prof. Philip Leighton dead at 86; was early foe of air pollution

Emeritus Prof. Philip A. Leighton of the Stanford Department of Chemistry, widely known for his work on air pollution, died Tuesday, Aug. 2, at his home near Solvang, Calif. He was 86 and had been in declining health for several months.

Leighton, an early and outspoken critic of smog, was coauthor of a widely used monograph, "The Photochemistry of Gases" with William A. Noyes Jr. in 1941 (reprinted as a paperback in 1966) and wrote "The Photochemistry of Air Pollution" (1961), regarded as the Bible of its field for more than a decade.

Leighton received the 1961 Chambers award of the Air Pollution Control Association and the 1966 Air Conservationist of the Year award. In 1963, he received an honorary Doctor of Science degree from his alma mater, Pomona College. He received his bachelor's in chemistry there in 1920. He later went to Harvard, earning his master's in chemistry in 1925 and his doctorate in 1927.

After a year in Germany, he joined the Stanford faculty in 1928, rising through the ranks to full professor in 1937. He headed the department from 1939 until he took early retirement in 1954. In addition, he served as chairman of the Department of Physical Science from 1940 to 1942 and dean of the School of Physical Sciences from 1946 to 1950.

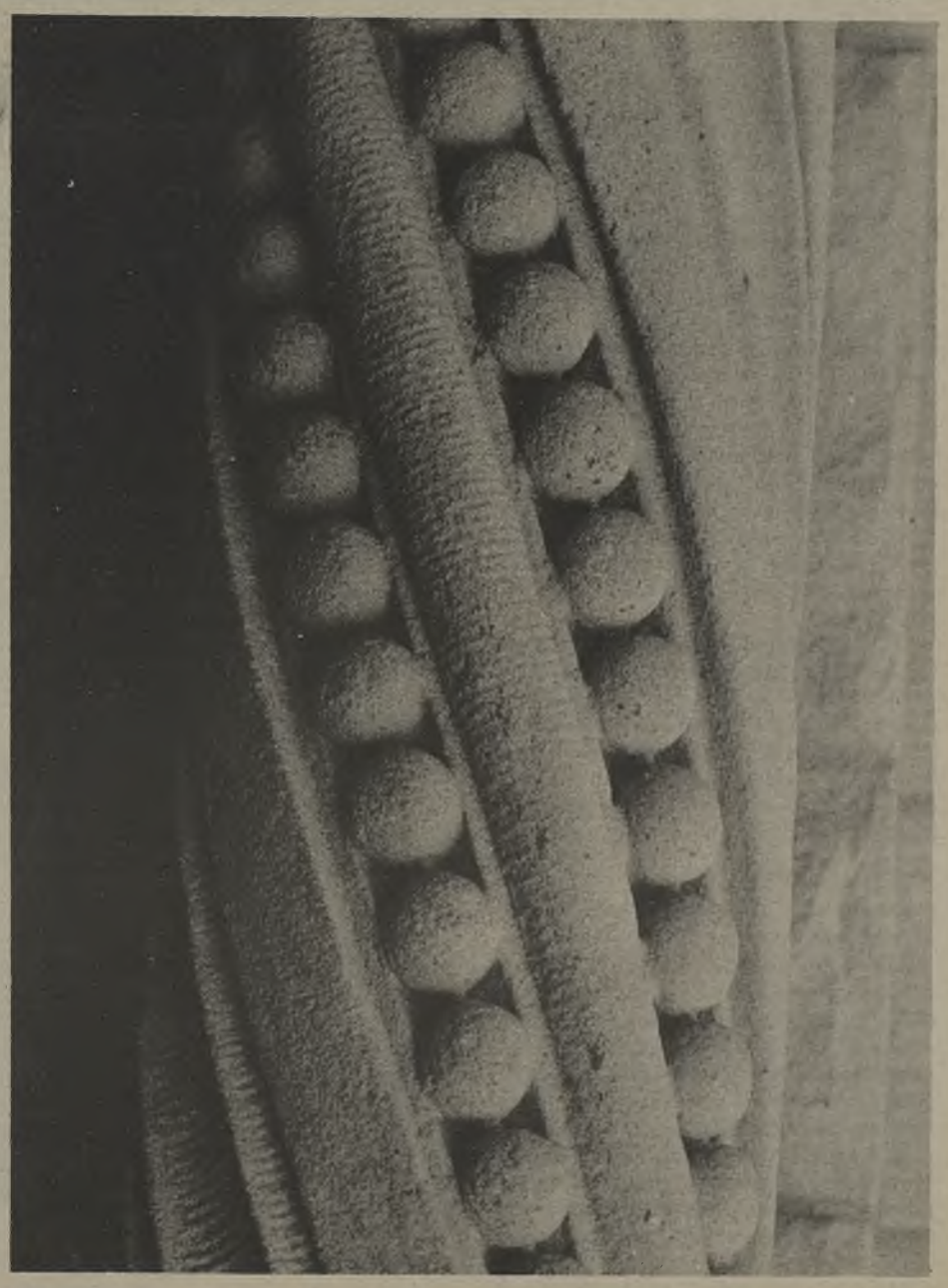
In 1945, he received the Legion of Merit medal for his work as director of technical operations for Dugway Proving Grounds in Utah during 1943-45. After World War II, he set up the Aerosol Laboratory at Stanford, funded by contract from the Chemical Warfare Service. In 1960, this separated from the University as Metronics Associates, with Leighton serving as a director and chairman of the board.

Following retirement, he continued studies of atmospheric pollution problems, consulting for the Air Pollution Foundation and writing books on *Man and Air in California* (1964) and *Earth, Life and Time.*

Services are planned later this week in Solvang.

Survivors include a son, Philip D., of Stanford; a brother, Wesley, of Claremont; a sister, Leisel Nixon, of Salinas; and a stepson, James Blaisdell, of Friday Harbor, Washington.

The family prefers donations to the Susan Leighton Memorial Fund, 301 Encina Hall, Stanford University, Stanford, Calif. 94305.



The arcade in front of Memorial Church boasts intricate carving.



The Red Barn (above) was the training stable for Senator Stanford's trotting horses.

Barn restoration planned...

continued from page 1

help with the ambitious undertaking. "We have already made contact with some individuals and organizations and are very encouraged by the acceptances," Lane said. "The committee will have a broad spectrum of faculty, staff, students, and local riding enthusiasts," he added.

Active in conservation and historic preservation projects, Lane said he has long been interested in the barn because of its "historical relationship to Senator Stanford's Palo Alto farm, which preceded the University and played a large part in making the latter possible."

The barn's restoration, now pegged to cost $950,000, will include constructing a concrete foundation, straightening the sagging walls, installing a new roof, replacing the electrical system, restoring architectural details, adding fire sprinklers, and rebuilding the interior to make it more functional as a stable. The exterior will be authentically restored and replicated.

A mix of funds from the University and from a prospective tenant, who will operate an equestrian training and boarding facility in the restored barn, will comprise the additional $450,000 needed to complete the project.

According to Lane, the growing popularity of pleasure riding has put pressure on local stable and training facilities. "The unique part about Senator Stanford's beautiful barn and adjoining riding facilities is that they are so accessible to Stanford students, faculty, staff, and friends of the University living in the area," he said.

When the restoration is complete, riding classes again will be offered to Stanford students through the Department of Athletics, Physical Education, and Recreation. The classes, which have been taught at the facility since the mid-1940s, were suspended last fall when unsafe conditions forced closure of the century-old barn and removal of the horses to smaller buildings.

Lane said he is "thrilled that the barn will be part of an educational program" and he expressed hope other improvements—including better roads and fences—could be made in the area surrounding the barn.

In the 1880s, Senator Stanford gained wide recognition for experiments he conducted in horse breeding and training at the site. He also commissioned photographic experiments by Eadweard Muybridge which proved Stanford's theory that at one point in its gait a horse has all four feet off the ground. The experiments gave rise to the idea of moving pictures.

The Palo Alto Stock Farm, in operation from 1876 to 1903, included a small thoroughbred (racing) department at what is now Escondido Village, but it was the Senator's trotting department—which extended from the current golf course to Lagunita—that was internationally famous. Nineteen world records were set by Leland Stanford's trotters.

The Red Barn was the trotting department's training stable.



Museum curator Carol Osborne and Sunset magazine publisher L.W. (Bill) Lane Jr. discuss a reprint of horse-related articles in Sunset dating from 1900 and 1901 during a recent tour of "The Stanford Horse Show," a display of Palo Alto Stock Farm memorabilia at the Art Gallery. Lane is heading a $500,000 fundraising effort to help restore the Red Barn. During the tour, Lane offered to loan Osborne a silver bridle, reported to be from the Red Barn, acquired by his father at a University sale in the 1950s. It was added to the exhibit last weekend. Sunday, Aug. 14, is the last day of the show, after which the gallery closes to the public for more than a month. The exhibit, however, will be left in place until mid-September for Lane's private use in fundraising.

Medical Center MEMO



"We must constantly keep pace, and our costs escalate even if the consumer price index remains relatively stable." —*Sheldon King*

Board to act on new budget and hospital room rates

The Board of Hospital Directors is expected to act today on a 1983-84 net operating budget of $174.4 million for Stanford University Hospital (SUH).

Also submitted by the hospital administration for approval by the board is a capital budget of $5.3 million. Major projects earmarked for the fiscal year beginning Sept. 1 are a renovated intensive care unit, $500,000; relocation and modernization of the tissue typing lab, $250,000; and modernization of the radio page system, $250,000.

The budget is based on projected net revenues of $182.9 million, which reflect an average price increase of 8.4 percent, said Sheldon King, SUH director and executive vice president. The revenue figures include $3.3 million for contingencies and future capital improvements.

Less than 1 per cent of the increase has been earmarked for the hospital modernization program, the project expected to bring the hospital up to modern standards in coming decades, King said.

Ancillary services, which account for 60 percent of the hospital's revenue and include all services (such as X-ray, operating room, drugs) except the basic room rate and professional fees, will increase an average of 7.5 percent effective Sept. 1.

Room rates, one of the largest single items for which hospitals must charge, will rise an average of 9.7 percent. Typical daily increases are from $205 to $225 per day for a well newborn baby; from $350 to $384 for a semi-private room for most medical/surgical patients receiving the services of housestaff. The highest rates—for a handful of patients receiving the maximum level of intensive care—will rise from $1825 to $1995 per day. (Forty separate rates are in effect).

Last year, SUH raised room rates 5.9 percent on May 15 and 13 percent on Sept. 1.

King said that while room rates are increasing, there is a mitigating tendency for the rooming portion of a patient's bill to decrease, because the average length of hospital stay is declining gradually.

"In past decades, when hospital care tended to be custodial, we charged patients for the room and hoped they got better," King said.

"Every year we are able to offer more specific services, which, realistically, result in higher costs.

"Hospitals are more vulnerable to inflation and rising costs than other segments of the economy," King said. "We cannot forego a new development or innovation simply because it is expensive. We must constantly keep pace, and our costs escalate even if the consumer price index remains relatively stable."

Despite economic pressures, King pointed to an ongoing cost reduction program which is expected to save the hospital $5.2 million in the next fiscal year. Areas targeted for savings include conservation of materials, inventory control, and selected cutbacks through attrition of personnel in areas now functioning with greater efficiency.

—Mike Goodkind

Hospital to participate in innovative Blue Cross plan

Stanford University Hospital has been selected to participate in Blue Cross of Northern California's preferred provider organization insurance plan.

"We are very pleased that our hospital has been selected to participate in this innovative program," said Sheldon King, director and executive vice president of SUH.

King announced Friday that agreement with the Oakland-based insurance provider had been reached and that a formal contract was expected to be signed this week.

"We are very optimistic that this new insurance plan will offer the probability that health costs will be economical for our patients while enabling us to continue to improve our high quality of health care," King said.

Under the PPO, which Blue Cross is marketing under the name Prudent Buyer Plan (PBP), hospitals agree to accept Blue Cross-established fees as full payment for services (except for deductibles or supplementary insurance). Physicians who have privileges at a hospital under contract would be eligible to join and receive reimbursement for their fees in much the same way as hospitals.

Dr. James Silverman, chief of staff, has said that all SUH physicians, including those in faculty, group or independent practice, would be equally eligible to participate.

Blue Cross has said it hopes to sign up 20 percent of its California membership in the PPO during the first year.

King said SUH is the largest Blue Cross provider in Northern California. Currently Blue Cross plans cover 15 percent of SUH's total admissions, including many referral patients from outside the Bay Area. Blue Cross also accounts for 13 percent of all patient revenue, King added.

SUH was one of only eight hospitals in Santa Clara County receiving a Blue Cross PPO. With a relatively limited number of hospitals participating, King said SUH has the potential to serve more patients and thus provide more economical care.

(Children's Hospital at Stanford has also been named a participating hospital in the PBP under a special agreement applicable to children's hospitals, said John Williams, executive director of CHAS.)

"Programs such as this are advantageous for everyone, because they streamline our administration, enabling us to concentrate more of our resources on medical rather than accounting matters," King said.

Blue Cross is the first insurance company to offer the hospital a PPO, although other insurers are reportedly formulating their own plans.

Bidding the linen return home



Linen amnesty bins abound these days at the Hospital and Hoover Pavilion parking lots. These red and white striped containers are marked "Linen Return," and are meant to make some of the bospital's lost linen reappear. Employees are asked to help SUH save money and conserve resources by returning linen or scrubs inadvertently taken home. The bins will be up through Aug. 21.

To combat the disease that took his son. . .

New fellowship honors contributor to kidney research

An Israeli citizen from Iraq has been named first recipient of the Delano Large Fellowship in Nephrology at Stanford, at ceremonies last week honoring a man who contributed widely to kidney disease research after his son battled renal failure for nine years.

This year's fellowship recipient, effective July 1, 1983, is Dr. Ovadia Shemesh, who received his M.D. at Hadassah Medical School in 1973, and later did research on leukemic tissue culture at the Weitzman Institute in Israel.

As a fellow at Stanford, Shemesh has dealt with many diabetic patients. Now he plans, with Dr. Bryan Myers, associate professor of medicine and director of clinical nephrology, to study patients with either of two types of kidney disease, trying to characterize in a quantitative way how the normal kidney functions and what precisely can go wrong.

The researchers hope, through mathematical analysis of data, to be able to distinguish and thus predict deterioration of the filtration process that characterizes kidney failure. This should help physicians determine early on the potential for thwarting the condition, through appropriate therapies. It should also help them judge the potential role of various new treatments.

Experimental methods involve infusing substances of known molecular size into the patient's bloodstream and, with unique analytic equipment, determining the kidney's ability to clear them from the patient's blood into the urine. The infused substances are meant to simulate proteins—to which diseased kidneys are abnormally permeable, allowing them to leak through into the urine while toxic materials remain clogged behind, causing protein depletion and kidney failure.

"Now that we can recognize the different phases of kidney disease," Myers said at the ceremony, "we will look at the early stages, with an eye towards prevention of renal failure. At least we might be able to prolong an ailing kidney's ability to function.

"This will all take a few years," he added. "But the first two will be the most critical, and with the help of this fellowship, Dr. Shemesh will be able to make important contributions to the research."

Upon completion of his work here, Shemesh plans to return to Israel for a career in academic medicine.

"The new fellowship serves two purposes," said Dr. Rex Jamison, professor of medicine and chief of nephrology at Stanford. "One is to honor Delano Large's memory; the other is to enable us to continue to train people to try to discover causes and treatments for the disease that felled his son Jeff."

Jamison and Dr. Norman Coplon, clinical associate professor of nephrology, hosted the August 1 event at the Faculty Club.

Large, who graduated from Stanford in 1937 and later received his M.B.A. at the Graduate School of Business, died of cancer on his 69th birthday June 16, 1983, at Stanford University Hospital. He and his wife Jean had become actively involved in fighting kidney disease when their son Jeffrey developed end-stage renal disease at the age of 24 in 1964.

Jeffrey became only the second Californian patient to undergo dialysis treatments at home, after being trained for the procedure by Dr. Belding Scribner, a Stanford alumnus, in Seattle. At that time there were few dialysis centers, Jean Large recalls, and none in this state.

Jeffrey also underwent four kidney transplants, only one of which succeeded—and that one lasted only six months. He spent eight years on hemodialysis, until his death in 1973.

A native of Monterey and longtime resident of Palo Alto, Delano Large helped found a Northern California affiliate office of the National Kidney Foundation, and in 1966 started the Mid-Peninsula Chapter, which is still active.

The new annual fellowship in his name is being sponsored by Satellite Dialysis Centers Inc. of San Jose, a non-profit organization which Large helped found With Coplon in 1973. Initial funding of the fellowship is for 10 years.

Large owned a construction contracting firm which he operated for nearly 40 years. He was helpful in the building phases of Stanford's hemodialysis unit, Jamison recalls.





Jean Large (above, left) spoke with Rex Jamison at last week's ceremony honoring her husband, Delano Large (inset).

"Delano Large was a warm, unassuming person, who listened carefully and gave sage advice," said Jamison. "He was a generous man with a fine sense of humor."

Jean Large was active in the Stanford University Hospital Auxiliary for about 20 years, up until this spring.

—Lisa Ames



Dr. Ovadia Shemesh, the first recipient, uses unique analytic equipment in his lab to examine the early stages of kidney disease, with an eye towards prevention of renal failure.

Medical faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

Applications are invited for a dual appointment to Stanford Medical School and the Palo Alto Medical Foundation, as an associate or full professor of endocrinology. The position is based at the Research Institute of the Palo Alto Medical Foundation.

Candidates should have demonstrated ability to successfully develop an active, independent research laboratory and be prepared to establish a new endocrine research program at the Foundation. The individual will fully participate in the clinical and teaching activities of the Endocrinology Division at Stanford.

Applications are being reviewed jointly by the two institutions. Those interested should send a curriculum vitae and the names of three references to: David Feldman, M.D., Head, Division of Endocrinology, Stanford University School of Medicine, Stanford, CA 94305.

Stanford program featured in Harvard's anniversary show

The Stanford Heart Disease Prevention Program is star of "The Heart of the Matter," the final program in the *Faces of Medicine* television series honoring the 200th anniversary of Harvard Medical School.

"The Heart of the Matter" will be aired locally by KQED 9:30 p.m. Thursday, Aug. 18 on channel 32, and 7 p.m. Friday, Aug. 19 on channel 9. It follows SHDPP's director Dr. John Farquhar and his team, as they motivate participants to adopt into their daily routines various measures to improve circulation and lower stress.



John Farquhar

Each year, some 435,000 Americans lose their lives to heart disease. "Despite our colossal Gross National Product, our magnificent hospitals, even our trips to the moon, today's middle-aged adults cannot expect to live appreciably longer than their counterparts did in 1900," said Farquhar. "The dream of abundant good health and longevity has remained outside our reach. It need not. It is merely a matter of choices and priorities."

Farquhar is a veteran cardiologist who became.disillusioned with treating heart attack victims whose predicaments, he felt, were often avoidable. SHDPP seeks a preventive approach to cardiovascular disease, the nation's number one health problem.

SHDPP has launched a unique program in five northern California communities that not only investigates the presence of cardiovascular diseases, but tries to modify lifestyle patterns to minimize traditional cardiovascular risk factors: high blood pressure and cholesterol, cigarette smoking, obesity, physical inactivity and stress.

In "The Heart of the Matter," interviews with residents involved in the model project reveal steady improvements in the fight against the dangerous symptoms of heart disease.

Faces of Medicine, distributed to most public television stations throughout the nation, was made possible by a grant from the Johnson and Johnson family of companies. The half-hour weekly series examines the impact of modern medical developments on the lives of doctors, researchers, patients and their families.

The series offers a human perspective on the highly technical world of medical research. It is hoped to provide a deeper understanding of the rewards and risks of our rapidly advancing medical technology.

Each broadcast highlights a person or project that has significantly contributed to advancing medical science, including an eminent Boston surgeon with a unique teaching style, doctors who treat premature infants, bone marrow transplantation for leukemia patients, and artificial skin for burn victims.

Faces of Medicine, a production of Metromedia, Inc., is a co-presentation of WNET/New York and WGBH/Boston. Host and executive editor for the series is Dr. Timothy Johnson of Harvard, a leading medical communicator.



A jogger taking responsibility for her own health as prescribed by the Stanford Heart Disease Prevention Program, to be profiled in "The Heart of the Matter" on KQED.

Acne study

Interested members of the community are reminded that the Department of Dermatology is seeking volunteers, ages 16 to 30 with moderate to severe facial acne, to participate in a study testing the effectiveness of a new topical treatment.

Volunteers must be off any acne medications for at least two weeks prior to joining the three-month study, and then for the duration of the study. For further information or to volunteer, call Nicole at 497-6319.



Floyd Estess

Estess appointed to two new posts

Dr. Floyd Estess will become clinical professor of psychiatry emeritus this fall. He has accepted a post as medical director of the Mental Health Unit at Hoag Memorial Hospital Presbyterian in Newport Beach, Calif.

Estess, a psychiatrist and psychoanalyst, came to Stanford in 1973 to head the adult and child psychiatric clinics. He is noted for his interest in treating depression.

In addition to his responsibilities at Hoag, he will also maintain a private practice there.

Longtime staffer dies



Buck

Elizabeth (Betsy) Buck, former secretary for the EEG Laboratory and its medical director Dr. Barry Tharp, died July 22.

Buck, who came to SUH in 1963, retired in 1981. Nominated for the Thomas A. Gonda outstanding hospital employee award in 1981, she was one of five persons chosen to receive a special commendation.

Construction Corner

Research Animal Facility-I:

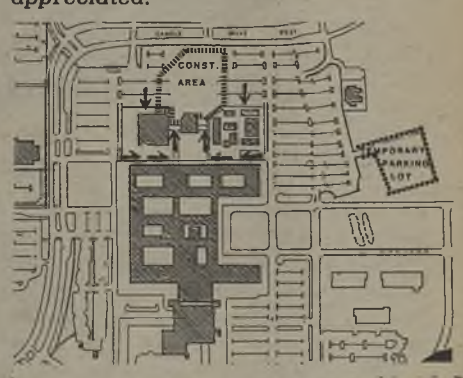
Preparation of the construction site is under way. A construction fence in the parking lot area will be erected later this month, and is expected to cause some disruption with the necessary loss of parking space. But with the recent completion of the temporary parking lot, and the expansion and restriping of the south parking lot, it is hoped that inconvenience will be minimized, and ample parking slots will be available.

(The temporary lot, located adjacent to the Cancer Biology Research Building, is to be used by construction workers only; this is to ensure everyone's safety as well as adequate parking facilities.)

Excavation of the site is expected to begin in late August. Dirt trucks will be using Campus Drive West to Junipero Serra to mitigate conflict with Medical Center traffic as much as possible.

Utilities relocation work incidental to RAF-I construction is already under way. This work, being handled by Charles Byrnes of Stanford Utility Systems, includes moving steam and condensate lines to the Cancer Biology Research Building.

The accompanying map identifies the construction area for RAF-I and access points. Everyone's continued tolerance of disruptions caused by the project is appreciated.



Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.

...News Notes...

Spotlight on. . .

Daniel Lessler, *who will begin his third year of medical school at Stanford in the fall, has been awarded a Medical Student Research grant of $1,000 from the March of Dimes.*

Working in conjunction with Dr. Merton Bernfield, professor of pediatrics, he will study "Control of Pulmonary Vasculature Smooth Muscle Growth in the Fetal Calf" over a three-month period.

The grant is awarded by the March of Dimes Birth Defects Foundation to encourage gifted medical students to participate in such research.

* * * *



Arundell

Dr. Faye Arundell, *clinical associate professor of dermatology, has been appointed chairman of the Food and Drug Administration's Advisory Committee on Dermatologic Drugs.*

She has served on the committee for the past six years and is currently also vice-chairman of the Advisory Council of the American Academy of Dermatology, and an examiner for the medical license exams of the State of California.

* * * *

Three chaplains from East Germany *paid a visit to SUH last week, said Frank Geer, hospital chaplain.*

The three came to the U.S. to attend the third International Congress on Pastoral Care and Counseling, to be held Aug. 10-17 at U.S.F.

Geer, who will also attend the Congress, hosted their Stanford visit. "In state-run hospitals of East Germany there are no regular chaplaincy services," he explained. "But these are neither forbidden nor condoned in religious hospitals. There the chaplains prosper mainly because they have the support of doctors and nurses."

One visiting chaplain, Geer said, works in a crisis counseling center, where the effort is to move away from a "ministry of propaganda," towards a "ministry of care." The idea is to train chaplains to provide spiritual and human support, rather than try to convert or become politically provoked so as to upset the government.

"We face much of the same problem here, though not in a political sense, in trying to focus on pastoral care rather than religious argument," Geer said.

A Scottish pastor will be the next Congressional delegate to come visit SUH at the week's end. Chaplain Ernie Young will host that visit.



Walker

Duane Walker, R.N., M.S., *director of Nursing Services at SUH, was recently appointed to the California State Providers Task Force, a group of health professionals formed to provide input to state senators on health care policy.*

In appointing the task force, government leaders stated the group's primary objective as "developing suggestions which will contribute to the restraint of health care cost escalation and improvement of the health care delivery system."

* * * *

In the July 13 issue of Medical Center Memo, *the title of* **Dr. Shirley Tom** *was listed incorrectly. She is a clinical associate professor in the department of gynecology and obstetrics.*

We regret the error.

* * * *

During a recent several-week teaching stint in Europe and Asia, **Dr. Michael Bresler,** *associate director of the Department of Emergency Services, presented a series of lectures in Switzerland for the American College of Emergency Physicians.*

He also helped teach medical personnel in the Himalayas as a guest of the royal government of Bhutan.



Friedman

As of Aug. 1, **Steven Friedman** *has joined the Hospital as director of clinical engineering, announced Mary Catherine Krawec, associate director of SUH.*

Friedman, a biomedical engineer, comes to Stanford from a similar post at UC Irvine Medical Center. He will oversee the department responsible for the repair, operation and maintenance of medical, surgical and laboratory equipment throughout the Medical Center.

He will report to Krawec and can be reached in E006, or at 497-7131.

* * * *

Karen Axnick, R.N., *has been appointed director of Care Review/Risk Management, announced Carole Runyan Price, associate director of the Hospital.*

The promotion recognizes Axnick's coordination of the areas of risk management, quality assurance, utilization review and infection control at SUH.

Several changes have taken place in Patient Admitting Services, said Sandra Perkins, director of the department.

Barbara Bellucci, R.N., *has assumed management and supervisory responsibility for the Rooming Unit in Admitting. In this capacity, she oversees daily enactment of rooming policies and procedures. The rooming clerks and ICU rooming coordinator will report to Bellucci. She can be contacted at 497-6034.*

Debi (Savasta) Ecker *is now involved in various projects within the department, in addition to her management and supervisory responsibilities. She is at 497-7950.*

And effective Aug. 1, **Susan Taylor** *has assumed the role of acting assistant director of Admitting, during Judy Krakower's leave of absence. During that time, Bellucci will handle matters relating to the Medi-Cal Extension Unit.*

Taylor's phone number is 497-7930.

* * * *

You should know. . .

A self-help group for persons with **eating disorders** *is currently being formed in cooperation with the National Association of Anorexia and Associated Disorders (ANAD).*

Led by Drs. David Wexler, Michael Horne, and Melvin Gallen, all clinical faculty members in psychiatry, the group is designed to aid people suffering from anorexia, bulimia, and related disorders, to understand and control their eating patterns.

The sessions are free of charge and will take place at the Peninsula Psychotherapy Center in Menlo Park. Those interested in joining the group should call April Holman, M.A., or Jeannette Poumadere, Ph.D., at 325-9306.

* * * *

Third quarter **fire drills** *are being conducted throughout August on every work shift at the hospital and Hoover Pavilion, said Ruben Perez, assistant director of Safety/Security Services.*

Each department and nursing unit will be evaluated during the drills to prepare staff in the event of fire or other emergencies. Perez advises department managers to review the SUMC Fire Plan with their personnel.

* * * *

The Cellar Restaurant in Los Altos is sponsoring a **wine tasting** *Sunday, Aug. 28, to benefit the Intensive Care Nursery at SUH.*

Tickets for the event, scheduled to take place from 2 to 6 p.m., are $12.50 per person and can be purchased in advance or at the door. For further information, call 964-0220.

Med Center Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, AUGUST 10

Hematology support group: meeting for patients with leukemia, myeloma, hemophilia and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, room TF-122c. Call 497-6961 for further information.

Div. of Hematology Wednesday noon conference: presented by Dr. Carl Grumet, director, Transfusion Service. Noon, S102.

AUGUST 10 through 12

Dept. of Dermatology veterinary dermatology conference: 7 a.m. to 10 p.m., Fairchild Auditorium. For further information, call 497-7854.

THURSDAY, AUGUST 11

Dept. of Medicine grand rounds: "Interferons: A Case Study in Biotechnology"—Dr. Thomas Merigan, 8:30 a.m., Fairchild Auditorium.

FRIDAY, AUGUST 12

Dept. of Gynecology and Obstetrics grand rounds: "Toxic Shock Syndrome"—Dr. Patricia Duff (chief, OB division, Letterman Army Medical Center, San Francisco). 8 a.m., A336.

WEDNESDAY, AUGUST 17

Medical Center Auxiliary volunteer orientation. 9:45 a.m., W001. Call 497-6636 for further information.

Div. of Hematology Wednesday noon conference: topic to be announced. Noon, S102.

Physicians for Social Responsibility lecture: "Beyond War—What About the Russians?"—Dr. Harold Sandler (director, scientific research, Ames Research Center). 8 p.m., Medical Student Lounge.

THURSDAY, AUGUST 18

Dept. of Medicine grand rounds: "Recent Progress in the Management of Cancer of the Ovary"—Dr. Branimar Sikic. 8:30 a.m., Fairchild Auditorium.

FRIDAY, AUGUST 19

Dept. of Gynecology and Obstetrics grand rounds: Gynecologic Case Studies by Residents. 8 a.m., A336.

WEDNESDAY, AUGUST 24

Physicians for Social Responsibility film: "The Last Epidemic." 8 p.m., 3rd floor, Old Union Clubhouse, common room.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Teaching method features learning centers to train children in science

A Stanford School of Education program designed to develop thinking skills in math and science among language-minority children has won a grant of $72,882 from the Walter S. Johnson Foundation of Menlo Park.

The new approach was developed by Education Senior Lecturer Edward De Avila, who has been working with Education Prof. Elizabeth G. Cohen for several years in developing techniques of classroom management and implementation.

The grant will enable De Avila and Cohen to create an effective model whereby the new type of instruction becomes self-sustaining in schools and school districts.

Called Finding Out—Descubrimiento, and designed for second through fourth grade children in linguistically diverse classrooms, it features multiple learning centers that operate simultaneously during a 15-week curriculum. The learning centers represent concepts in math and science, such as the plotting of coordinates, latitude, and longitude, and physical principles of heat and light.

Each learning center has an activity card with instructions for the learning task in English, Spanish, and pictographs. Although each child must complete each learning center with its accompanying worksheets, the children also are trained to work in cooperative relationships.

This complex approach to teaching requires teachers skilled in management as well as a good deal of organizational support. The Stanford staff has worked out a model for such management and organization, which will serve as basis for installing this method of instruction in Bay Area schools and beyond.

Significant gains

Finding Out—Descubrimiento has been tested in nine San Jose classrooms, resulting in significant learning gains in standardized math achievement test scores, particularly the word problems section; reading achievement test scores; and in scores on a special content-referenced science test.

The Bilingual Consortium, an umbrella group of schools and districts in the San Jose Unified School District supporting education for language-minority children, has implemented Finding Out—Descubrimiento in 10 more schools in the San Jose area.

The Johnson Foundation grant will support the development of an implementation manual, evaluation and technical assistance for the Consortium and participating schools, and documentation and evaluation of the effectiveness of the model.

Education doctoral candidate Cecilia Navarrete, a teacher who worked on the development of the same approach with migrant workers' children in New Mexico, is working on the manual project. It will provide a source of practical information for schools using the new learning method.

Schools that wish to use Finding Out—Descubrimiento will be able to contract with Stanford, on a nonprofit basis, for the training and support services necessary for full implementation of the model.

After receiving training, they will be able to buy the learning activity cards and Teacher's Handbook from De Avila. Most of the activities call for common materials that can be collected by parents and schoolchildren.



Hispanic teachers don't get jobs in bilingual education

"Contrary to criticisms of government and union leaders, bilingual education funding has not resulted in a jobs program for Hispanics," says Craig Richards of Stanford University's Institute for Research on Educational Finance and Governance.

"To the extent that Hispanic teachers have been employed in public schools, they have been placed in highly segregated schools," he adds.

Richard's conclusions are based on a statewide study of public school employment and assignment practices in California. He was especially concerned with determing whether Hispanic teachers had benefitted from bilingual education programs as Black teachers had from the compensatory education programs of the 1960s.

"It is widely presumed that public schools in general, and bilingual programs in particular, have been a major source of employment since the early 1970s," says Richards.

"Indeed, 39 percent of all Hispanic teachers in California are bilingually certified. However, California's public schools have never been a significant employer of Hispanic teachers.

"A 1959 survey concluded that Hispanic teacher employment in California public schools was even lower than that of Black teachers. And in 1980, less than six percent of all California public schoolteachers were Hispanic."

California, with the largest and fastest growing Hispanic population of any state in the nation, also receives the largest percentage, 26 percent, of federal aid directed toward Hispanic students.

Additionally, California supports bilingual categorical programs from state resources. For the 1980-81 school year, the 18 California State Universities and Colleges received a total of 29 state and 14 federal bilingual grants specifically to train bilingual teachers, 1,299 of whom were enrolled.

"While Hispanic pupils now represent well over one-third of all California students," explains Richards, "only one out of every 20 teachers is Hispanic.

"By 1985, Hispanic students are projected to represent nearly half of the California student population, and indications are that the Los Angeles Unified School District may become entirely Hispanic in the next decade.

"Even so, the one to 20 ratio of Hispanic to non-Hispanic teachers is not likely to improve given current hiring practices. For example, of the 9,678 new teachers hired in 1980 in California's public schools, about 84 percent were Anglo and 10 percent were Hispanic."

In 1981, California had 810,605 students whose primary language was not English; of these, 612,362, or 76 percent, were Spanish speaking.

Among students who spoke Spanish, 136,689 could not speak English and another 148,875 had limited proficiencies in speaking English. But according to the California Commission for Teacher Preparation and Licensing, the supply of bilingually certified teachers is meeting only about 50 percent of the demand. Nor is the gap between supply and demand likely to close over the next few years.

Richards' analysis is contained in "Bilingualism and Hispanic Employment: School Reform or Social Control?" and is available for $2 from the Institute for Research on Educational Finance and Governance, CERAS 402, Stanford University. Phone (415) 497-2754.

Kennedy, Hastorf ask for help in finding outstanding freshmen for awards

Following is an August 4 memo to members of the faculty and teaching staff from Provost A. H. Hastorf and President Donald Kennedy concerning academic distinction among students completing the freshman year:

We are intruding on your summer to ask assistance. The information you might provide will be valued immediately but will be useful if it arrives—addressed to the Office of the Registrar, Old Union 133—by Friday, September 9. That is the Friday following Labor Day.

Recent discussions among the Undergraduate Cabinet convince us of two things: that we need to find more tangible ways to express how much we value academic excellence among undergraduates, and that we ought to recognize intellectual distinction as we find it throughout the undergraduate years and not simply wait until honors are conferred at Commencement. The Booth Prizes in freshman writing and in Western Culture have allowed us to make a beginning, but these prizes cannot reach the variety of academic distinction achieved by freshmen throughout the curriculum.

Consequently, we are making plans to honor some modest number of students whose freshman academic records have been particularly distinguished for a combination of overall merit and particular excellence. We expect to announce the roster of these unusual students at a Sophomore Convocation to be held at the beginning of autumn quarter.

To identify some of these students is the reason we need your help.The Registrar can give us a variety of analyses of the grade records of students who were freshmen during 1982-83. But only teachers and advisers will have encountered the intellectual energy and disciplined imagination that marks the most able students, those whom we should expect to encourage to special opportunities during the continuation of their undergraduate experience. Think of the kinds of students we should encourage to honors programs, for example.

Can you tell us who in your experience this past year seem to have the unusual students? You may have seen none or only one or two; on the other hand, you may have encountered several. Simply drop us a note with the names of such students, and a brief comment on what, in your view, distinguishes them. It may be that a particularly worthy student will be mentioned by only one of you and that others will be reported by several. Simply direct your replies to us, in care of Registrar Sally Mahoney, Old Union 133, no later than Friday, September 9.

Late in the summer the Undergraduate Cabinet will meet to review the overall records of freshman year achievement and whatever nominations you will have been kind enough to make to us.

Based on their review, they will select a group of students to be honored at the Sophomore Convocation. Their names, of course, will be announced in the various campus media, and we expect to find additional ways to encourage them throughout the year.

In addition to the two of us, the Undergraduate Cabinet consists of Vice-Provost Herant Katchadourian, Deans Cox, Kays, and Wessells of the three Schools with significant undergraduate programs, Dean of Student Affairs James Lyons, Dean of Undergraduate Admissions Fred Hargadon, Associate Dean of Humanities and Sciences for Undergraduate Programs Carolyn Lougee, Registrar Sally Mahoney, presidential assistant George Robert Hamrdla, the chairman of the Committee on Undergraduate Studies, and two students—one from the COP and a second representing the ASSU Senate.

Finally, we would welcome any additional ideas or suggestions about how we might recognize academic distinction among our undergraduates and by recognizing such achievement, encourage even more of it.

Letters to the editor

Robert Cohn details the limitations, mistakes of the women's movement

Editor, *Campus Report*:

A considerable amount of information has emerged of late to indicate that the women's movement has gotten us into grave difficulties and, probably for that reason (at least in part), has retreated radically.

The Dean of the Education School here reported a few weeks ago that the movement was the number one cause of the drastic decline in the quality of public schools. A national commission commented on that decline that our worst enemy couldn't have brought us low more effectively. Shortly before that, we learned from the U.S. Department of Education that the children of full-time working mothers score much lower on aptitude tests. Again, the basic *fabric* of culture which women have traditionally nourished has taken a beating through massive unwisdom abetted by the utopian presumption of the intellectuals.

We have learned that divorces have increased with devastating impact on the children (particularly boys). That husbands of working women are prone to heart attacks. That birth defects are up alarmingly (almost double) due to women's being exposed to toxic substances in the work place, smoking more, etc. And the new women age faster, are guilt-ridden, are dying younger, commit more crimes. The men are more insecure. And so on, depressingly.

What happened to the great claims of revolution which academics tended to endorse unanimously, or at least did nothing to counter? It seems, as stated in a *Campus Report* recently and confirmed by CBS news, that either there is no real change in the nature of women's jobs (except for a small percentage, almost token) or that when women occupy "unusual" positions they are often resented and tend to regret it. A subtle new kind of segregation arises *within* the position.

And then one notices that there is still, after many years of bold rhetoric, only a handful of women in Congress. The Army has had to give up training them with men (because of a forty percent disparity in upper arm strength, for example). Nothing really has changed in the domination of men in sports, chess, math, musical composition, etc.

None of the above has altered my belief that women are superior to men in the most important ways and are central on this earth. Nor am I surprised that individual women can outdo almost all men at almost anything. It has always been so, and one suspects a sort of bell-curve "crossover" of roughly ten percent. If there has been increased flexibility of opportunity in the job market to accommodate that natural fact, one can only applaud—that much is to the good. But to extend that ideologically to include a very broad spectrum of women has ben proven wrong. That is why many young women who are rising in "male" careers express total disinterest in feminism and see their careers as an individual matter. But even they have something to learn about limitations in this life, and one expects that many of them will give up some of their cockiness later on. There are basic impulses which one thwarts at one's peril. Sexual expression is one but, however hidden, the need to bear children is even greater, no doubt. And to nourish them spiritually. . . .

We seem to be returning, rather sheepishly, to these home truths. This is no sign of lack of sophistication, on the contrary. It is the "ultra-moderns" who have misled us for decades who are the true provincials.

Robert Greer Cohn
Professor of French

Fund drives helped by many—Skrove

At the beginning of June, I wrote to you via *Campus Report* to offer my help to those who needed information regarding the Combined Health Agencies Drive (CHAD) on the Stanford campus, and also to tell you that according to the latest figures I had received, we might well exceed last year's donations, which, at the end of December 1982, totalled $45,234.

Thanks to your generosity, I am happy to report that as of August 4, $46,307 had already been raised—an increase of $1,073 four months before the books are officially closed by CHAD at the end of 1983.

I am sure you are aware that the success of both CHAD and the United Way campaigns is made possible only by the teamwork of many individuals and departments within the University, the Hospital, and SLAC. Long before the actual campaigns commence, the preparations begin with my meeting with representatives of the two agencies. Then the various links of the chain begin to connect. And, for once, I would like to mention some of those links: Jim Smith, the University forms analyst, who designs the three pledge cards; Nina Absher and Lynne Vitero in News and Publications, who order the necessary envelopes; John Corales, Bernie Lighthouse, and Don Thomas of the Personnel Offices of the campus, SLAC, and the Hospital, who are responsible for providing the necessary sets of mail labels; Ann Keating in Mailing Services who undertakes the task of having the envelopes stuffed and mailing as many sets of materials as are necessary to all the employees; and last, but certainly not least, the two people who physically handle the actual donations—Dinah Osafo, the cashier, who receives the deluge of pink envelopes containing checks and pledge cards (both of which she has to keep an accounting of), and Shirley Smith in Payroll who has the arduous task of preparing the pledge cards for payroll deductions.

Without the cooperation and help of all these individuals, who undertake this extra work in addition to their regular duties, neither of the campaigns could take place. As it is, during the past several years both drives have been successful enough to well exceed the figures of the prior years.

On behalf of the University and CHAD, thank you all for your continued support and generosity.

Jan C. Skrove
University Events and Services

Smith asks layoff option for SLAC workers involved in SSRL research

Following is an August 5 letter to President Donald Kennedy from United Stanford Workers President Patrick W. Smith:

It is important that it be clearly understood that I am not taking issue with the Weapons Research proposal at SSRL. To do so would greatly overstep my responsibilities and authority. It is my duty as President of the United Stanford Workers to represent the concerns of my constituents. In this instance I am writing on behalf of those workers who for reasons of conscience find it repulsive to participate in the weapons-related research that is being proposed for SSRL.

At an extraordinary faculty meeting held at SLAC on May 26, 1983, you indicated to me that the University would try its best to accommodate in other areas of the University those who refused to participate in weapons research. I assume this offer is not limited to those covered by the bargaining unit agreement but includes all members of the SLAC/SSRL community.

Frankly, sir, there are more individuals affected in this situation than I think you realize, and I don't believe the University has the capacity to absorb them all. Your lack of perception is exemplified in your continual references to the academic freedom of Principal Investigators. The truth of the matter, however, is that the freedom of the Principal Investigator is almost immaterial in a situation where the research being conducted requires the collaboration and participation of hundreds of individuals.

In my letter to you of July 7, 1983 . . . I addressed the issue of these workers. I particularly raised this question: if the University can offer no appropriate, alternative assignment, will the affected workers be offered the option of being laid off? That option at least affords them, through severance pay and unemployment compensation, a modicum of security while they seek other employment.

It could be argued that if people sincerely object to participating in weapons work, they should quit and seek employment elsewhere. I have witnessed such actions in the past, especially in circumstances where individuals came to realize slowly or suddenly, that the work they were doing was objectionable to their consciences. It is unfortunate when people must give up the pay necessary to survive in order to live according to their consciences, but it will be a very sad day indeed when people are willing to sacrifice their consciences for mere economic security and social position.

The situation here, however, is not like ones I have witnessed. The difference is that people are not accepting employment in full knowledge of its nature, nor are they slowly or suddenly realizing that they object to what they are doing. On the contrary, the terms of the employment they chose are being changed without their consent: they are being told that the nature of the work they hired on to do is going to change radically and that the understanding which existed regarding the nature of their work, dedicated to basic research, is no longer in effect.

As you must know, sir, many people have come to work at Stanford because they knew that weapons research was not done here. Indeed it has been a safe refuge for some from the many industries in the area where much military work is done. But now, if you bring to an end the era of strictly basic research at SLAC by initiating weapons-related research at SSRL, you are violating the consciences of those people and potentially of every employee at SLAC from the director's office on down.

The consciences of the workers who are expressing their growing concern to me are shaped by their religious beliefs. If, having changed the terms of their employment, you leave them only the options of working or quitting, you are violating their freedom to live according to their religious convictions. You are indeed instigating an institutional form of religious discrimination. Our freedom of religion is guaranteed in the Bill of Rights, and our equality of treatment—our guarantee against discrimination on religious as well as other grounds—is provided for in Article II section c.1 of the 1982 agreement. Changing the nature of people's work in such a way that they must resign their livelihoods and security to live with their consciences not only blatantly disregards their religious convictions but discriminates against them and in favor of those without such religious convictions.

In suggesting that you offer people the option of layoff, I hope you understand that I am trying to find a responsible solution to a problem which is basically religious in nature and therefore potentially volatile. I hope you will find the time in your busy schedule to address this issue.

Patrick W. Smith, SLAC
President, United Stanford Workers

Stanford/U.C.-Berkeley joint program wins Rockefeller Foundation funding

The Rockefeller Foundation has awarded $1 million to Stanford and the University of California at Berkeley for a new joint program on Soviet international behavior.

A similar grant was made to Columbia University following a national competition among all major centers of Soviet studies.

The new program links Stanford's Center for Russian and East European Studies and Berkeley's Center for Slavic and East European Studies.

It is designed to stimulate innovative, advanced research and collaborative graduate training, using relevant intellectual resources at both institutions. The program will not entertain applications for individual grants.

A joint committee overseeing the program will include Prof. Alexander George, holder of the endowed Graham Stuart professorship in international relations at Stanford; Prof. Alexander Dallin, history, chairman of the International Relations Program at Stanford; Prof. George Breslauer, chair of the Berkeley Center; and Associate Prof. Gail Lapidus, political science, former director of the Berkeley Center.

Others involved in the program at Stanford will include Coit Blacker, associate director of the Center for International Security and Arms Control, and Assistant Prof. Condoleezza Rice, political science.

Stanford ranks 3rd in research funding

Stanford ranks third nationally in federal research funding, according to a recent National Science Foundation report.

During fiscal 1981, federal obligations to the University for research and development totalled $106 million, excluding the Stanford Linear Accelerator Center.

Johns Hopkins ranked first, with $363 million, including $238 million for the Applied Physics Laboratory. MIT was second, with obligations totalling $146 million.

Three groups and faculty will study Hoover developments

continued from page 1

The action took place at the board's semi-annual meeting in July, he said.

Discussions regarding the proposed library, and a related Ronald Reagan Center for Public Affairs, at Stanford, have been going on for two years.

Campbell also announced the appointment of a consultative group of senior Hoover scholars to advise him on the proposed public affairs center.

Its members are Martin Anderson, chairman; Dennis L. Bark, Richard T. Burress, John H. Moore, Rita Ricardo-Campbell, Milton Friedman, Robert E. Hall, Seymour Martin Lipset, Henry S. Rowen, Thomas S. Sowell, Richard F. Starr, and George J. Stigler.

Last week, Stanford President Donald Kennedy named a faculty committee to provide guidance on the library and center proposals, and another group of Stanford administrators is exploring possible campus sites. Both are due to report to Kennedy by Oct. 2.

The Kennedy and Campbell groups will meet together later this month, Kennedy said.

Manley, Rebholz cool on Reagan library proposal

Members of the Stanford faculty have warned that plans for a Ronald Reagan Center for Public Affairs and a Reagan presidential library at Stanford may seriously divide the Stanford community unless provision is made for full and open campus discussion of the proposed Reagan center.

Political Science Prof. John F. Manley and English Prof. Ronald A. Rebholz, who led the drive last spring that gathered 84 faculty signatures on a petition calling for an investigation of relations between the Hoover Institution and Stanford University, said that "The Hoover Institution should not be allowed to bring the Reagan Library to Stanford without the opportunity for the Stanford community to discuss and debate the many complex issues involved."

Calling attention to the October 1 deadline for an ad hoc faculty committee report to Stanford President Donald Kennedy, and to Kennedy's announced plan to put the proposal before the University's Board of Trustees at their October meeting, Profs. Manley and Rebholz noted that such a schedule would present the Stanford community with a "fait accompli."

"If press reports are accurate, an October deadline would effectively preclude any meaningful public discussion at Stanford," they said. Noting that many faculty and most students are away from campus in the summer, and that the fall term does not begin at Stanford until late September, the professors said it would be a "grave mistake" for the University Administration "to appear to rush this proposal through before those who have legitimate questions and concerns about the deepening ties between Stanford, Hoover, and the Reagan Administration have a fair opportunity to be heard."

The professors noted that last spring over 1,500 students and 84 faculty members signed petitions raising questions about the political activities of the Hoover Institution, and the Faculty Senate in May voted overwhelmingly for a study into the allegations.

"We are not saying that there are no good arguments for locating the Reagan library here. What we are saying is that those members of the Stanford community who have questions about the University's links to the Hoover Institution and to the Reagan Administration should have a chance to air them before any final decisions are made."

"If this is not done," the professors warned, "it will look as if the proposal was rushed through without fair hearings." This, they said, could make the reassessment of relations between the Hoover Institution and Stanford "unnecessarily acrimonious."

Faculty group to help Kennedy decide

Stanford President Donald Kennedy has announced the appointment of a faculty consultative group to advise him on the prospect of the Ronald Reagan Presidential Library being established at Stanford University.

The committee's purpose, Kennedy said, is to "give me some consultation on the kinds of academic benefits that might accrue to Stanford through the possession of papers and presence of the Reagan library on campus." The main element of the committee's study, he added, is "to define and state the University's interest in having these presidential papers here." He called the papers "a valuable scholarly resource."

Informal discussions between the White House staff and Glenn Campbell, director of the Hoover Institution, about placing the library at Stanford have been going on for some time. An investigation of possible sites already has begun, but no decision has been reached.

Also proposed, as an adjunct to the Reagan Library, is a Ronald Reagan Center for Public Affairs, and the committee will investigate its "academic impact on Stanford."

This would be part of the Hoover Institution, and, according to Campbell, would "provide facilities to bring together scholars and academicians, journalists, legislators, government policy makers, and business men and women to discuss, debate, and analyze issues of domestic and foreign affairs critical to our nation's past, present, and future."

Cost of the library would be met through private fundraising, and Kennedy asked the committee to investigate "possible costs to Stanford." He noted that "we assume" this fundraising would be "noncompetitive" with ongoing Stanford fundraising. All operating and maintenance costs would be the government's responsibility.

"Stanford's direct costs," he said, "would consist of the value of the land lease plus administrative expenses."

The committee's chairman is Prof. James N. Rosse, economics, and director of the Center for Economic Policy Research. Members are Profs. Elie Abel, communications; Barton Bernstein, history; Carl Degler, history; Alexander L. George, political science; James L. March, Graduate School of Business; and Ezra Solomon, Graduate School of Business; Dr. Paul H. Mosher, University Libraries; and Dr. Charles Palm, Hoover Institution; and Fernando de Necochea, assistant provost.

Kennedy asked the committee to complete its report by Oct. 1.

FBI agents complete Reagan papers search

Federal Bureau of Investigation agents left the Reagan campaign and transition archives at Stanford's Hoover Institution Friday, July 22, Acting Archivist Charles Palm confirmed Thursday, July 28.

"As far as I know, they're finished," Palm said. No original materials were removed from the collection. "As expected, they did a good job of maintaining the integrity of the materials, from the viewpoint of a professional archivist," he added.

Ten FBI agents took charge of the search of the materials July 13.

At that time, Palm said the agents "may make whatever copies they want of anything they want" in the archives.

Now as then, he indicated any further comments about the results of the search should come from the FBI.

Another investigation...

A second group of investigators arrived at the Hoover Institution archives Aug. 4 to search through Reagan campaign files for documents stolen from the Carter White House.

A few weeks ago several FBI agents spent 10 days combing the files for any papers relating to the Carter documents which ended up in Reagan campaign staff hands prior to the presidential debate of 1980.

The new probers are from a House subcommittee, investigating the incident for Congress and General Accounting Office.

Board of Overseers pledges cooperation

The Hoover Institution Board of Overseers has pledged to cooperate fully with the Stanford Board of Trustees in a forthcoming study of relations between the Institution and the University.

At their July 21 meeting, the overseers said they were "deeply concerned by the recent unfounded charges by some members of the Stanford community which threaten academic freedom."

They thanked "the many distinguished professors at Stanford" who signed a petition organized by Profs. Alphonse Juilland, John McCarthy, and Oleg Sherby which opposed an investigation of alleged partisanship by the Hoover Institution as a grave threat to academic freedom.

The text of the motion concerning the Stanford-Hoover study follows:

"We, the members of the Hoover Institution Board of Overseers, are deeply concerned by the recent unfounded charges by some members of the Stanford community on the Hoover Institution which threaten academic freedom.

"In our judgment, the direction and operation of the Hoover Institution are, and have been, in complete conformity with the basic understandings and agreements that apply to the Hoover Institution and its more than 60 year relationship to Stanford University. We are proud of the Hoover Institution and its staff, and believe that their record of accomplishments and achievements has brought distinction and credit to the entire Stanford community.

"As Overseers we have a duty and a responsibility to both the Hoover Institution and to Stanford University. In fulfilling this obligation, we will, in every way possible, cooperate with and assist the Stanford Trustees."

An ad hoc group of four University trustees currently is considering how the study should be conducted. Its members include Board President William Kimball, Los Angeles attorney Warren Christopher, San Francisco attorney Frank "Sandy" Tatum, and Nancy Barry Munder, who also serves on the Hoover Board of Overseers.

The group plans several meetings this summer to recommend the composition and charge for a study committee to be appointed by the board this fall.

Campus crime report

July 25-Aug. 8

Burglary/residence	1	Phone harassment	0
Burglary/nonresidence	6	Controlled substance	1
Burglary/Vehicle	3	Felony arrest	3
Theft/under $400	10	Misdemeanor arrest	20
Theft/over $400	2	Adult booking	11
Bicycle theft	28	Adult cite/releases	4
Vehicle accident	5	Juvenile booking	0
Bicycle accident	1	Juvenile citation	8
Indecent exposure	0	Warrants served	12
Assault	0	Driving under influence	3

Residential Burglary:

Date	Time	Location	Property Lost
6/14	Day	600 blk San Juan	Art Print

The information report is based on campus crime reported to SUDPS during the stated time period, and may not necessarily reflect current crime trends.

Help Stop Crime! Join Neighborhood Watch Program! Contact Dan Smith or Kat Berry in the Special Services Unit, 497-9633.

Stanford Industrial Park

First such research park in the U.S. still most successful

The Stanford Industrial Park was "the first university-related industrial park established in the U.S. and is widely considered the most successful," a new federal report declares.

Its success "hinges on the university's ability to combine encouragement of industrial interaction and community service with a continuing commitment to the highest standards of academic excellence," the report adds.

Titled "The Federal Role in Fostering University-Industry Cooperation," the study was prepared by the General Accounting Office for the House Committee on Science and Technology and the Senate Committee on Commerce, Science and Transportation.

"The most important role that the federal government has played in stimulating university-industry relations in research parks is indirect," the report notes. "By taking upon itself the stewardship of basic research in the U.S. and increasing support of applied mission-oriented research, the government has helped develop a research capacity in some universities that has made them a magnet for high-technology industries. . . .

"This federal support has led to creation of new firms founded by university researchers interested in pursuing commercial applications of their own work. These firms often secured considerable financial support in their early years from government research and development and procurement contracts.

"The availability of government research support protects the independence of university researchers and allows them to pursue only those industrially-sponsored research opportunities that also contribute to scientific progress in their fields of expertise."

The federal government has indirectly aided the formation of research parks through providing land, moving government facilities there, and funding innovation centers on the premises.

The Environmental Protection Agency is the largest single employer in North Carolina's Research Triangle Park, for example. The University of Utah Research Park's land was acquired from the federal government and the National Science Foundation funds an innovation center there.

A 1980 study by Ohio State University identified 27 university-related research parks started since 1951, the year Stanford's park opened. Of these, six clearly succeeded, 16 failed, and five were "in between."

North Carolina was among those regarded as a clear success, while Utah was "in between," in the Ohio State study.

Now filled, the Stanford Park has about 90 firms employing approximately 25,000 people, hundreds of whom are Stanford students.

"The most dramatic contribution to innovation appears to be made by the research parks," the GAO report says.

Close links between academics working at the frontiers of science and companies on the leading edge of technology are provided through industrial employment of faculty consultants, adjunct faculty appointments for industrial research specialists, shared laboratory facilities, part-time employment of graduate students, special graduate courses for industrial employees, and joint research projects and seminars.



The Stanford Industrial Park combines the best of academic and business qualities that has made it a magnet for high-technology industries.

"The most intense interaction we observed occurred at the Stanford Research Park, where we found that the philosophy of industrial collaboration has been fully integrated into the academic mission of the university," the GAO study observes.

"A major consequence is that communication and rapport between academic and industrial sections have reached a higher level than in any other research park we have reviewed (North Carolina and Utah).

"This interaction increases the flow of information and ideas that affect the research agendas of both sectors and increases academic sensitivity to the possible commercial sensitivity of emerging ideas and research findings. . . .

"The Stanford success can be attributed in large measure to an extremely favorable set of circumstances that prevailed for more than two decades during the creation and early development of the research park.

"Stanford owned many acres of undeveloped land that was available for long-term leases, but could not be sold; the federal government was rapidly expanding its funding of basic and applied research at universities; and Stanford had a leader (the late Fred Terman) with exceptional vision dedicated to the research park concept who was greatly respected by academic, industrial, and government sectors.

"Although it is unlikely that such an ideal situation will emerge again, we believe that. . .it is possible for other research parks to emulate many of the successful attributes demonstrated at Stanford."

Single copies of the report are available free on request from the U.S. General Accounting Office Document Handling and Information Services Facility, P.O. Box 6015, Gaithersburg, Md. 20760. Phone (202) 275-6241).



A multi-tenant office building currently leased by Hewlett-Parkard.



OceanRoutes is a computerized navigational tracking and planning company.



The building detail at right reflects the pleasant working environment.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

33127-BP (JCC:2070) ADMIN ASST II: Fixed term, 9/1/83-6/30/84; dir energy awareness & conservation programs in student residences; prep & present edu'l mat'l to student groups; meet w/ student groups to promote energy conservation; dir incentive program for student groups; maintain & analyze energy usage records & computerized data base; prep reports; conduct energy audits; train & supv 3-5 student employees; appt & train approx 65 students as energy reps in residences; administer Stanford Energy Conservation Proj Fund; QUALIFICATIONS: strong commu skills; exp in or knowl of energy conservation tech; limited tech knowl of heating & lighting sys; proven ability to motivate college students; send appl/resume to John Eaton, 859 Escondido Road, Stanford, CA 94305.; C05; $878-1101.

18064-AW (JCC:2068/2070) Admin Asst II/III: Data Base Coordinator; respon for creating & maintaining user specifications for all Benefits/Records projs; designing & organizing user testing required to implement benefit/records changes, corrections or additions to Payroll/Personnel sys; creating & maintaining user documentation for Payroll/Personnel sys; analyzing, debugging & researching tech reasons for incidents or any unusual sys behaviors; tech resource person for SU community & Benefits/-Records; primary resource person for reporting function; QUALIFICATIONS: familiarity w/ computer sys concepts; exp working w/ computer sys as a user; some exp in analytical problem-solving, such as that attained thru computer programming, data analysis, statistics, sys analysis or equiv edu'l bkground; good verbal & written commu skills; prior exp w/ software in use at SU on IBM/3081 (Wylbur, Spires & Mark IV); exp coordinating admin projs in a large complex organizational environ.; C06/C05; $1948-2441/1756-2202.

30155-VW (JCC:2044/2048) ADMIN SERVICES MGR III/IV: Develop, maintain & update plans for academic computing; interface w/ academic senate committees & subcommittees; act as division genl mgr & administrator respon for personnel, budget, financial, & facilities mgmt; study new concepts; coord w/ sub-division directors; develop new ideas & strategy for their implementation; QUALIFICATIONS: combination of edu & exp in an Info Sys environ totalling 10 yrs; demonstrated mgmt/leadership exp w/ personnel and/or budgets; knowl of & ability to use computer as a means of commu; effective & persuasive commu skills, orally & writing; willingness & availability to travel.; C08/C09; $2590-3313/3122-3846.

41552-AW (JCC:1069) ASST DEAN-ADMIN: 50%; organizing & supvg tutoring & counseling programs for minority students; recruiting minority grad students; coord fundraising activities for engrg minority projs & education programs; administering minority scholarships; advising directors of school outreach programs on Stanford policies & resources; preparing program budget & maintaining projs accts; QUALIFICATIONS: ability to write clearly & effectively; ability to define problems & propose effective solutions for all areas of respon; knowl of genl budgeting & acctg procedures; knowl of principles & practical aspects which form the basis of univ affirmative action program & objectives; exp in working w/ minority community; demonstrated admin exp.; C06; $974-1221.

29367-AW (JCC:1972) UNIV MANAGER II: Manager of Housing Programs; works w/ Dir, Associ Dir & other members of the staff in executing housing & transportation programs for SU; principal functions are brokerage, escrow & transportation; QUALIFICATIONS: bkground in real estate, banking, financial analysis, economics or planning; college degree, preferably an MBA, JD or advanced degree in acctg or planning, or relevant work exp equiv to such advanced degree; computing exp desirable.; C08; $2590-3313.

43507-TC (JCC:5588) LIFE SCI RES ASST I: 80%; perform research in genl area of virologic & cell culture; independently carry out experiments of viral propagation, cell fusion & hybridoma selection; familiar w/ techniques of solid phase radioimmunoassay, polyacrylamide gel electrophoresis, gel chromatography & ultracentrifugation; asst in planning & designing experiments & render judgment about the progress of the res; QUALIFICATIONS: BA or BS in science; 1 yr's exp in working in a res lab utilizing some of the above tech.; C05; $1405-1762.

26605-LL (JCC:6818) SOC SCI RES ASST II: Research Asst to one Professor; respon incl the conduct of res projs w/ children, analysis of data, preparation of experimental programs for implementation on microcomputers & assistance in preparation of literature reviews; QUALIFICATIONS: Bachelor's degree in psychology (or equiv) w/ strong bkground in statistics & experimental design; exp in res w/ childres & own transportation to schools; computer programming skills (especially Basic, Pascal, Logo) & ability to use statistical packages for data analysis.; C04; $1590-1983.

21695-JB (JCC:7526/7534) Facilities Engineer I/II: Maintenance Scheduler reports to Asst Mgr of Craft Shops; respon for work requirements in certain maintenance programs & in some craft shops; contact between various cost ctrs, supvrs, mgrs & customers to ensure that commitments & required completion dates are met; use data processing on a mini computer to design & generate reports; reviews all work orders for accuracy; maintains bldg number tables, space & surface inventories; asst shop supvrs w/ inventory control, produces reports & maintains files pertinent to the scheduling process; C07 level is expected to have demonstrated ability in proj or construction mgmt, & possess full range of engrg skill & knowl; QUALIFICATIONS: customer serv tech; genl understanding of computer & terminal operation; report writing; scheduling: critical path, short interval scheduling; estimating for construction or maintenance.; C06/C07; $1948-2441/2221-2875.

32036-DS (JCC:8880) MISC PROFESSIONAL: Training Dir for Ctr for International Security & Arms Control; supvsg & monitoring progress of ongoing fellows program; helping develop & recruit candidates for new fellows program; developing active undergrad program; serv as sr. teaching fellow or head teaching asst for 3 basic arms control courses offered thru Pol. Sci. curriculum; working w/ Ctr faculty & others to plan master's degree program in arms control & internat'l security studies; QUALIFICATIONS: advanced degree (preferably a recent Ph.D.) in internat'l relations or related field w/ strong interest & bkground in arms control/internat'l security; some teaching exp required, w/ interest & competence in full range of undergrad & postgrad training in arms control & internat'l security.; C05; $1756-2202.

41673-AW (JCC:8880) MISC PROFESSIONAL: 50%; fixed term 9/1/83-2/28/84; This is a one-half time position within CIT in support of the CIT directors' role in the compliance w/contractual & other legal obligations & the protection of CIT's interest through appropriate legal tools; responsible for analysis of requirements for software protection related to contract compliance & license restrictions; advise on the use of such legal tools as copyrights, trademarks, contracts, licenses, non-disclosure agreements, etc; QUALIFICATIONS: Law degree plus practice in computer law including software licensing, or equivalent combination of education & exp in computer related legal activities; BA in computer-related or tech field or equiv ed & exp; familiarity w/Stanford depts.; C07; $1111-1438.

20114-TC (JCC:1514) TEACHER: 11-6; asst in planning & implementing the program for young children, completing written developmental reports on children, setting objectives for teaching-learning activities for children; meeting & conferencing w/ parents, participating in res projs which are ongoing at Bing, & participating in school-wide activities & events; this opening is in the nursery school-age extended day program for 3-5 yr olds; QUALIFICATIONS: knowledgeable & exp'd in the field of Early Childhood Edu; BA in child-development, early childhood edu, or related field & at least 2 yrs exp teaching young children; a current Calif. teaching credential w/ emphasis in ECE desirable; waiver of the undergrad degree possible depending on prev exp.; T01; $1313-1702.

31515-LL (JCC:3150) DEVELOPMENT OFFICER III: Respon for development of Genl Appeal Program; coord dir mail & phone appeal fund-raising; develop new strategies & procedures; coord field staffing assignments & respon; monitor staff involvement in program w/ annual fund director & field staff mgr; perform genl program evaluations w/ staff & volunteers, prov feedback; prov staff support for volunteer chairperson of program & program steering committee; meet regularly w/ National Chairperson to review program performance & recommend action; develop budget for program &, allocate approp; supv Dir, Class Agents/Reunion Giving; Mail Coordinator, Phone Assoc, Report desk; QUALIFICATIONS: exp in univ admin, marketing, or gift procurement is required; field staffing exp essential; college degree or equiv exp helpful; good verbal & writing skills; budgeting skills; ability to use mgmt info sys.; C08; $2590-3313.

41666-AW (JCC:5000/5008) Programmer Analyst II/III: Prov guidance to programmer/analysts during development & installation of admin applications in a highly volatile tech environ; develop & maintain sys & procedures nec to install new & modified application components; perform quality control function on new & modified components; manage production & emergency libs; prov staff support to SSA Mgr; supv work performed by SAA clerical staff; QUALIFICATIONS: exp in IBM OS JCL, terminal usage (Wylbur, Spires) EXEC LANG programming; exp in a serv organization in a large-scale computing eqpt production environ, usually assoc'd w/ at least 4 yrs or equiv combination of edu & exp; knowl of SU, CIT in particular, is highly desirable; demonstrated skills in oral & written commu, interpersonal relationships, self-motivation, organization; level II would not necessarily have exp in all the desired qualifications but would demonstrate the potential for growth to a level III.; C06/C07; $1948-2441/2221-3545.

44500-AW (JCC:4084) PROGR/ANALYST GEN III: Join team of programmers charged w/ implementation & design of online sys which interacts w/ RLG's very large database; sys allows input/update & display of bibliographic & other types of variable records to facilitate the operation of RLG's collection development, preservation, & technical processing programs; primarily respon for development & maintenance of SPIRES-based RLG Special Databases & Sys; sys design; specifying programs; program module development; sys maintenance; serv as SPIRES consultant/trainer to other members of the team; QUALIFICATIONS: ability to develop & maint interactive sys using SPIRES DBMS & its assoc'd Formats & Protocols development tools; knowl of high-level structured programming lang; ability to commu effectively in speaking & writing; familiarity w/ interactive & batch processing; exp w/ large computing facility (CIT) helpful; knowl of PASCAL & PL/I.; C07; $2221-3545.

195-VW (JCC:5008) PROGR/ANALYST GEN III: Fixed term for 18 mos, might extend to 24 mos; direct, develop, & implement the expansion of dept'l computer operations; maintains a patient data base, uses microcomputers for cardiac monitoring, & runs statistical programs on an IBM 3081; make recommendations regarding an optimal configuration, evaluate & implement sys to asst w/ offc mgmt functions; define I/O requirements for statistical programs; patient scheduling, trends & forecasting; staff allocation; patient billing; QUALIFICATIONS: strong sys analysis bkground; ability to interview users & analyze existing procedures, prep design proposals, & make recommendations regarding sys configuration; posses a familiarity w/ software packages such as word processing & mail; good commu skills.; C07; $2221-2875.

27196-VW (JCC:5544) STATISTICIAN II: 50%; prov statistical consultation to members of biobehavioral res team regarding use of statistical packages for analysis of data; act as data analyst in certain biobehavior res projs; act in consultation w/ faculty & participate in development of new statistical methodology incl lib res as well as theoretical & empirical res; involve writing reviews & reports of data fr various res projs; QUALIFICATIONS: training in statistics, preferably MA level incl exploratory analysis, nonparametric & multivariate tech; exp in design & analysis in biobehavioral res & in the use of statistical packages; computer exp & programming skills nec.; C07; $1111-1438.

15008-TC (JCC:5588) LIFE SCI RES ASST I: Basic function is the production & assay of monoclonal antibodies; cell culture; solid state immunoassays; direct & indirect immunofluorescence; analysis of antibodies & antigens by immunoprecipitation & SDS-polyacrylimide gel electrophoresis; inoculation of rodents w/ hybridoma clones; harvesting & purification of hybridoma antibody fr rodent ascites fluid; testing of antibody prep for sterility & freedom fr pyrogens, etc; QUALIFICATIONS: BS degree or equiv in training & exp; at least 1 yr of lab exp as a lab technician; prepared to work on an intermittently irregular schedule.; C05; $1756-2202.

Bargaining unit

26109-LL (JCC:5638) LIFE SCI TECH I: Inject mice w/ hybridoma cells & harvest growing ascites; care for mice used to produce ascites; maintain hybridoma cells in tissue culture; monitor hybridoma activity using ELISA assay & fluorescent cell scanner; maintain accurate & detailed records; setting up apparatus, maintenance & cleaning of glassware, hoods, genl lab work areas & eqpt; asst w/ unpacking, order & inventorying lab supplies; QUALIFICATIONS: ability to follow detailed instructions & keep accurate records; some lab exp essential.; A18; $7.50.

42607-TC (JCC:5844) ANIMAL CARE ASST II: TMS Unit; Mon-Wed & Sat-Sun, 7:30-4pm; prov conscientious daily care & maint to a variety of lab animal species as assigned, such as dogs, cats, primates, rabbits, rodents, reptiles, fowl & farm animals; required to coop & collaborate w/ other animal care workers, res tech, investigators, veterinary staff & mgmt; prov food & water to assigned animals; changing cages; observing animals for signs of illness, disease, injury & complete required reports & forms; QUALIFICATIONS: prefer extensive prior exp in care & maintenance of lab animals in an academic/res environ; requires manual dexterity, personal habits of cleanliness, neatness & organizational ability; capable of handling & restraining all species of lab animals w/out undue fear; some mech ability; thorough knowl of lab animal care, husbandry & tech at a level consistent w/ that required for AALAS certification at the LAB ANIMAL TECH level; ability to lift 50 lbs or more; physical exam required; free of allergic reactions to animals.; A16; $7.16.

43676-JB (JCC:3690) OFFSET PRESS OPR II: TMS Unit; 7-4; work w/ a variety of complex offset duplicating machines to duplicate multi-color & black/white charts, graphs, brochures, etc; clean & maintain rollers & machines as required; QUALIFICATIONS: exp in duplicating black/white & multicolor charts, graphs, brochures, etc.; A20; $ 7.91.

Nonexempt

149-PM (JCC:2470) OFFICE ASST IV: 50%; act as bldg & serv ctr mgr for Sch'l of Earth Sci; monitor Mitchell Bldg use for efficiency, safety, energy consumption, security, & genl maintenance; manage photocopy, lapidary, electronics, machine & drafting/photography shops; QUALIFICATIONS: typ 40; supvry exp or training; ability to organize & order prior; willingness to get involved w/ all aspects of the work to be done; some knowl of tech matters helpful; some knowl of SU helpful; send appl/resume to Ruth Sloan, 101 Mitchell Bldg.; B14; $720-757.

41766-PM (JCC:2478) OFFICE ASST IV: Admissions Offc Mgr; respon for staff supvn of Admissions Offc personnel; schedules & reviews work assignments; makes recommendations on hiring; train new staff; screens applications for admission to Law School; handles all routine corresp; prep spec letters for Dir's signature; perform sec'l duties for Dir as required; compiles & analyzes statistics; works w/ computer in preparing wkly & other periodic reports on admission & scholarship activity; respon for the Offc of Admissions in the Dir's absence; QUALIFICATIONS: typ 65+; maturity of judgment; supvry skills; excel typing; college bkground very helpful; significant offc exp, preferably some in supvn; considerable work w/ computer required; quick learner; send appl/resume to E. Chatfield, Law School, Rm 113.; B14; $1440-1514.

29621-PM (JCC:2504) OFFICE ASST II-SPEC: Answer phones (6 lines); handle incoming & outgoing mail; using word processor typ business letters, manuscripts, grants & statistical reports, patient corresp & reports for fellows & nurses; bkup sec'l work for vacation relief; process payroll forms; maintain payroll records; process petty cash forms, using Univ forms, purchase subscriptions & pay dues, etc; QUALIFICATIONS: well-trained & exp'd in med sec'l duties, offc work & med terminology; use of dictaphones; good phone answering skills; good numerical skills; cardiology or cardiovascular terminology preferred; contact: Mary Ferari, Med Ctr A309, 497-5771.; B10; $1189-1246.

39413-PM (JCC:2512) OFFICE ASST III-SPEC: Genl sec'l respon on behalf of 2 physicians; handle patient & non-patient related transcription promptly & accurately; assist w/ screening of Div calls; schedule patients for surgery; assist faculty & residents w/ various peripheral arrangements; prep charge documents for physician professional serv; QUALIFICATIONS: knowl of med terminology (Orthopaedics preferred); accurate typing & transcription; knowl of (or willingness to learn) the use of NBI word processing eqpt; pleasant telephone manner; able to interact effectively w/ Faculty & Residents, & w/ other co-workers in close proximity; non-smoker preferred; contact: Jane Pelton, 497-7609.; B12; $1310-1373.

39412-PM (JCC:2512) OFFICE ASST III-SPEC: Genl sec'l respon on behalf of 2 physicians; handle patient & non-patient related transcription promptly & accurately; assist w/ screening of Div calls; schedule patients for surgery; assist faculty & residents w/ various peripheral arrangements; prep charge documents for physician professional serv; QUALIFICATIONS: knowl of med terminology (Orthopaedics preferred); accurate typing & transcription; knowl of (or willingness to learn) the use of NBI word processing eqpt; pleasant telephone manner; able to interact effectively w/ Faculty & Residents, & w/ other co-workers in close proximity; non-smoker preferred; contact: Jane Pelton, 497-7609.; B12; $1310-1373.

27069-PM (JCC:2554) SECRETARY II: Sec for Africa/Middle East Collection Curator/Sr. Fellow, Deputy Curator/Sr. Fellow, & Asst Curator; heavy typing load of corresp, reports, articles, & draft manuscripts; typ & file book recommendations, orders, receipts; check serials & newspapers for receipt & claim missing issues; make initial lib search of publications; answer & screen calls; screen & route mail; make travel arrangements & prepare expense reports; liaison w/ users of collections; arrange housing, ID cards, etc for visiting scholars; xerox publications & obtain books for curators fr Stanford Lib; QUALIFICATIONS: typ 50-55; accuracy & attention to detail nec; familiarity w/ using a univ lib; some knowl of French or Portuguese helpful; send appl/resume to Peter Duignan/Karen Fung, Hoover Institution or call 497-2072.; B11; $1246-1310.

42883-PM (JCC:2562) SECRETARY III: Answer & screen incoming calls (3 lines) & receive visitors; open & screen mail; maintain files for professor & his res personnel & animal facility personnel; grant & fellowship application preparation; manuscript prep - NBI Word Processin Sys; maintain personnel files; purchase offc supplies; maintain records of all grant & fellowship acct expenditures; reconcile monthly budget statements; prep purchase reqs, expense reports, travel advances, etc; QUALIFICATIONS: typ 65+; familiarity w/ SU sys; familiarity w/ NBI Word Processing sys helpful; contact: Shayne Frankel, D307 Fairchild Bldg, 497-9207.; B14; $1440-1514.

31983-PM (JCC:2596) SECY II-SPEC: Fixed term, 9/19/83-3/30/84; sec to 2 faculty members & several postdoctoral fellows; answer & direct phone calls; transcribe & typ corresp; operate Xerox 860 word processor; typ manuscripts, grant proposals & reports; maintain files; make travel arrangements; order lab supplies; prep expense reports & other Univ forms; set up mtgs; extensive use of dictaphone; QUALIFICATIONS: typ 65; rapid, accurate typing; familiarity w/ med terminology; prev sec'l exp, preferably in Med Ctr; familiarity w/ the use of dictaphone & Xerox 860 word processor; contact: Robyn Kizer, Med Ctr S155, 497-7887.; B12; $1310-1373.

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Staff employment opportunities

Non-exempt jobs

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25335-PM (JCC:2630) SPECIALIST TYPIST: Typing of Orthopaedic Surgery Clinic notes, letters to referring physicians, discharge summaries, consultation reports & other pt-related documents using NBI word-processor; specialized archiving of patient-related transcription for electronic storage of Orthopaedic Surgery med records; QUALIFICATIONS: knowl of med terminology (Orthopaedics preferred); knowl of or ability to learn the use of word-processing eqpt; superior typing skill & accuracy; non-smoker preferred; contact: J. Pelton, 497-7609.; B12; $1310-1373.

29684-JB (JCC:7650) CUSTODIAN WKG SUPVR: 7:30-4pm; supv the cleaning, training & other duties of custodians assigned to you; create & maintain a clean, safe, 'home-like' atmosphere for residents; check daily arrival & departure time of each custodian; daily check of bldgs/grounds & promptly report security, damages, maintenance & housekeeping problems to approp offc; submit monthly bldg maintenance & housekeeping report; order supplies; attend approp classes; work & commu w/ students, residential edu, resident fellows & coworkers, etc; QUALIFICATIONS: be flexible performing job; have good supvry skills; demonstrated admin skills, i.e. report writing, attendance records & memo; ability to acquire exp & knowl regarding employee relations & USW contract; supvry exp required: excel commu skills a must.; S09; $1632.

31192-PM (JCC:1763) LIBRARY SPEC III: Performs duties in Serials Dept; supv day-to-day operations of Continuations/Maintenance Unit of the Serials Records Div; receives & claims serials mat'ls & processes invoices for serials mat'ls; supv 3 Lib Specs; supv & performs manual & on-line claiming of missed issues, defective issues & lapsed subscriptions; supv & resolves complex problems; prov bkup to Head, Serials Records Div; QUALIFICATIONS: typ 45; prev tech processing exp required; prev supvry exp required; good commu skills; ability to learn RLIN II or other automated sys; prev exp in serials records work & RLIN desirable; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B14; $1440-1514.

41763-PM (JCC:2078) ADMIN ASST I (N): Distributes & receives financial aid applications; meets w/ students on financial aid policies & procedures to solve problems & insure compliance w/ rules; maintains current records of all financial aid awards, incl scholarships, loans, & pt-time work assignments; collects & maintains info on pt-time work opportunities for students; works w/ Dir of Admissions, Dean & Assoc Dean in developing annual scholarship & loan budgets; writes & annually revises Law School financial aid policy pamphlet; QUALIFICATIONS: thorough knowl of financial aid procedures & methods & familiarity w/ Federal Student Loan requirements highly desirable but not rquired; analytic ability; excel written & oral skills; if not exp'd w/ computers, quick to learn the reading & maint of computerized reports; send appl/resume to E. Chatfield, Law School, Room 113.; B16; $1593-1671.

40556-PM (JCC:2202) ACCOUNTING ASST II: 8:30-5:30; respon for maintaining cash records for patient acct receipts & disbursements; reconciling bank deposits records & monitoring billing sys payment batches, refunds, & returned checks; reconciling the balance in the genl ledger cash clearing acct to the records of unposted cash; substantial interaction w/ both mgmt & clerical personnel in patient acctg & Univ acctg required; QUALIFICATIONS: an assoc degree in acctg w/ several yrs of work exp preferred; excel verbal & written commu skills; competence in the use of ten-key adding machine by touch; contact: Chris Cervantes, F04 Admin Annex, 497-6752.; B12; $1310-1373.

28234-BP (JCC:2454) OFFICE ASST II: Answering phones; greeting & directing visitors; processing incoming & outgoing mail (plus UPS serv); replenishing postage meter & processing UPS billings; typing genl corresp & Univ forms; running errands; establishing procedures & coordinating bkup coverage for receptionist position; filing; QUALIFICATIONS: tact & diplomacy in dealing w/ the public; work quickly & accurately; receptionist skills & knowl of offc procedures; consistency in attendance; typ 50; send appl/resume to Helen Williams, Pine Hall, Rm 175 (497-9656).; B09; $1130-1189.

31164-PM (JCC:2454) OFFICE ASST II: 50%; performs duties in Catalog Dept; photocopies & distributes letters, memos, minutes, bulletins, etc; maintains dept'l files & documentation; maintains supply cabinets; assts dept sec to answer telephone & take messages; typ letters memos charts for dept chief, asst chiefs, unit heads & staff using typewriter or automated sys; QUALIFICATIONS: typ 45; demonstrated clerical & organizational skills; prev offc exp desirable; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B09; $565-595.

41762-PM (JCC:2462) OFFICE ASST III: Serv as Placement initial contact for students, alumni, visitors & employers; edit, type & mail bi-wkly job bulletin; route, answer & file incoming mail incl determination of approp form letters; determine routing & posting for job announcements & related resource info; take incoming telephone job orders; order & update mat'ls for Law Placement lib; prep employer Interview & students packets on a daily basis; typ schedules, copy & assembly packets; collect, code & input info into WYLBUR datasets, IBM-PC word processor; QUALIFICATIONS: typ 65-70; flexibility to handle multiple assignments; have considerable tact & patience; knowl & exp using Wylbur helpful, or willingness to learn; familiarity w/ IBM personal computers incl WordStar & MailMerged desirable; send appl/resume to E. Chatfield, Law School, Rm 113.; B11; $1246-1310.

43002-BP (JCC:2462) OFFICE ASST III: 75%; Ticket Offc Asst Mgr supv all box offc operations in mgr's absence, shares in decision making on Ticket Offc policy & makes decisions on policy application in mgr's 1 absence; training of student cashiers & in supvsg their sales & clerical work; handling customer problems; working knowl of all acctg processes ; prep final box offc reports; open & close Tresidder box offc & work on-site box offcs; do billing for orders fr outside agencies; process mail orders; answer corresp; inventory & order offc supplies; QUALIFICATIONS: exp w/ cash register, 10-key adding machine nec; exp w/ computerized ticket sys helpful; theatre or box offc related exp preferred; ability to train people; send appl/resume to Karen Wright, Tresidder Union Ticket Offc, P. O. Box 6508,Stanford, CA 94305.; B11; $935-983.

31523-PM (JCC:2462) OFFICE ASST III: Research Assistant performs duties under the direction of Res Supvr in Offc of Development & coordinator of new prospect program in Offc of Med Development; use of a variety of reference files, lib resource mat'ls & other misc records; indiv'l judgment required when abstracting info & strict atten to confidentiality required; development of info & prep of res worksheets on indivls, corporations & foundations; preparation & typing of own reports in final form w/ atten to accuracy & overall appearance; QUALIFICATIONS: typ 45; ability to compose written text; basic understanding of simple financial reports; ability to typ, proofread & correct one's own errors; exp w/ or ability to learn to use computer terminals; good memory for names & familiarity w/ Offc of Development helpful; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B11; $1246-1310.

39292-BP (JCC:2470) OFFICE ASST IV: Prov sec'l support to the Assoc Dean, Asst Dean-Programming, Asst Dean-Dir Hsing, & Dir. Admin for Residential Edu; act as a resource/info indiv for resident fellows, resident assts, & field staff members; edit & typ corresp, reports forms, Univ acctg forms, etc; serv as receptionist in fast-paced, diversified offc; answer phones; open & sort mail; answer questions; take inventory & order supplies; schedule appts; supv & instruct student offc help; assume payroll respon as nec; QUALIFICATIONS: typ 60; ability to work w/ diverse group of people; ability to work w/ numerical detail accurately & quickly; accuracy in typing & proof reading ability; good written & oral commu; ability to win coop fr wide spectrum of indivs; ability to maintain confidentiality; send appl/resume to E. Hiyama, 311 Old Union, Stanford, CA 94305.; B14; $1440-1514.

42868-BP (JCC:2512) OFFICE ASST III-SPEC: 50%, 10-2; using WYLBUR to key documents into text editor; edit them for clarity, grammar, style & conformity to documentation standards; formatting, compiling, collating & updating lib of documentation, & program libs; maintains files, & records minutes of bi-wkly mtgs; maintain proj mgmt PAC II sys by tracking proj team time; respon for creating data dictionary & inputting via WYLBUR; running proj mgmt reports; QUALIFICATIONS: typ 50; thorough comprehensive knowl of offc procedures & practices; ability or willingness to learn WYLBUR & SCRIPT; prior exp w/ terminal desired; send appl/resume to Linda Williams, ASA, F29.; B12; $655-687.

27483-BP (JCC:2520) OFFICE ASST IV-PREM: Reviews & processes proposlas submitted to govt & nongovt agencies for contracts & grants funding Univ programs in res & training; drafts transmittal letters & memo; ensures that proposals conform w/ Univ policy & agency guidelines & that proposed budgets are arithmetically correct; enters statistical data into computer sys concerning proposal award process; is involved in programming info into Datapoint sys; QUALIFICATIONS: good commu skills, arithmetical & analytical skills, & ability to work effectively w/ faculty & dept administrators & sponsor reps; articulate in both written & spoken word; requires light typing & ability to operate simple calculator; ability to use (or learn) Datapoint; send appl/resume to Phyllis Hall, Encina Rm 40.; B15; $1514-1593.

40451-BP (JCC:2554/2596) Sec II/II-S: 50%, 9-1; fixed term 8/1/83-8/31/84; may increase to 75% time; prov sec'l support for the Instruction & Research Info Sys group as bkup to the full time sec; distribute incoming mail to staff; maintain supplies & order thru online Stores sys(Spires); prov support to instructors & asst in prep of class mat'ls; coord rm scheduling for conference rm; maintain files; typ corresp; use text editing/formatting (Wylbur) & on-line mail as approp, etc; QUALIFICATIONS: typ 45-50; excel interpersonal & commu skills; good offc skills; accurate typing; filing; writing, & arithmetic skills; excel telephone answering skills; knowl of SU extremely helpful; level II-S must have exp in use of WYLBUR & SPIRES or other equiv sys; send appl/resume to Anna Eredia, Polya Hall Rm 102.; B11/B12; $623-655/655-687.

43851-PM (JCC:2554/2596) Sec II/II-S: 9-4; prov sec'l support & assistance for academic Dept; receive calls & visitors make appts; sort mail; compose & typ routine corresp; maintain files; update & mail summer session brochure; typ & duplicate class mat'ls & placement exams; respon for end-quarter grade reports & grade changes; typ Univ forms; order textbooks & offc supplies; QUALIFICATIONS: typ 55+; prev sec'l exp required; good interpersonal skills required to interact effectively w/ a variety of people; exp w/ IBM personal computer desirable (or willingness to learn); Sec II-S requiring knowl of Chinese or Japanese; send appl/resume to Jean Mahoney, Asian Languages, Bldg. 250.; B11/B12; $1246-1310/1310-1373.

43855-PM (JCC:2554) SECRETARY II: Receptionist for Offc of Dean of the Sch'l of Humanities & Sciences; represent the Dean's Offc effectively in person & on phone; heavy contact w/ faculty & sr. admin staff of the Univ; receive & screen phone calls (16 lines) & visitors; open, sort, & distribute mail; typ routine corresp fr drafts; filing; asst in organizing social events; prov genl clerical assistance to Dean's admin staff; QUALIFICATIONS: typ 60; excel interpersonal/verbal skills; accurate typing, spelling, punctuation, & grammar; prior exp interfacing w/ the public & managing multiple phones; prev exp in academic setting highly desirable; send appl/resume to Jacqueline Bryan, Humanities & Sci, Bldg 1.; B11; $1246-1310.

21758-BP (JCC:2554) SECRETARY II: Provide sec support to advising & counseling unit of the CPPC; gather statistics & collect data; assist in preparation of written reports for counseling unit; prepare & edit appropriate handouts/mailings for students & alumni, supervise student assistants; independently compose correspondence w/users of service; provide receptionist svcs; accept job description listings by telephone; process mail; QUALIFICATIONS: Good interpersonal skills, including the ability to interact effectively w/concerned students & alumni; work well under pressure; excellent typing skills & good oral & written communications skills; type 60; Apply to: Valerie Thomas, CPPC; B11; $1246-1310.

27071-PM (JCC:2554) SECRETARY II: Sec to Assoc Dir for Lib & Archival Operations for Hoover Institution; full range of sec'l support, heavy typing corresp, reports, proposals, & articles; maintaining files; answering telephones; preparing expense reports & other univ forms; making travel arrangements; QUALIFICATIONS: typ 60+; prev sec'l exp & knowl of standard offc procedures; ability to learn & use word processing sys (word-11); s/h ability desirable but not essential; high level of accuracy in typing & proofreading; send appl/resume to John D. Dunlop, Hoover Institution, (415) 497-4273.; B11; $1246-1310.

39138-BP (JCC:2554) SECRETARY II: Report to Asst. Dean & prov prompt support serv in separate small Chicano theme co-curricular ctr; handle all routines of a busy single person offc, e.g., budget, expenditures, appts, regular errands, facilities/eqpt monitoring, scheduling; prep memo, take notes, transcribe rough copy to finished form; serv as first-line rep to Asst. Dean; use micro-computer/word

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New employee orientation

The next orientation sessions for new employees will be held at 9 a.m. Tuesday, Aug. 16 and 23, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

SLAC jobs

95523-JM (JCC:6492) LAB MECHANICAN III: TMS Unit; perform a variety of unusually complicated tasks in fabrication of precision instruments & microwave components; QUALIFICATIONS: requires full model maker skills; ability to work fr blueprints & sketches; be familiar w/ copper machining techniques; ability to operate all machine shop tools; familiar w/ standard shop practices; NC exp desirable.; A41; $2250. APPLY AT SLAC

94199-JM (JCC:2462) OFFICE ASST III: Assemble & prepare Invitations for Bids & Requests for Proposals, Addenda, Modifications; prep legal reports for Dept of Energy; draft routine corresp; issue keys & coord lighting maintenance; maintain files & logs; QUALIFICATIONS: requires prev offc exp w/ demonstrated initiative & good basic knowl of genl offc procedures, practices & methods; good interactive skills; knowl of good grammar, syntax & punctuation; ability to work indepednently & under pressure; typ 60; exp on IBM Memory (75) typewriter & word processing preferred.; B11; $1246-1310. APPLY AT SLAC

95555-JM (JCC:3790) GRAPHICS TECH II: TMS Unit; prep of tech illustrations to be used in professional journals conference proceedings & other publications; drawing, inking & leroy lettering of charts, graphs, mechanical drawings & assorted diagrams; leroy lettering mandatory; QUALIFICATIONS: knowl of physics terminology helpful; some exp desired at similar level or demonstrated ability to perform work; ability to work under pressure; good interactive skills.; A20; $1371. APPLY AT SLAC

95516-JM (JCC:2562) SECRETARY III: Prov sec'l serv to large group of physicists, engrs & support staff; typ forms, corresp & manuscripts using physics/engrg terminology on IBM Sel III or word processor; keep time reports, prep payroll, process misc forms; arrange mtgs; make appts; file & keep records; compile monthly status report; QUALIFICATIONS: several yrs sec'l exp; exp w/ tech typing (Greek & math symbols); ability to work under pressure & handle a variety of complex respon; ability to use word processor or willing to learn; typ 60; knowl of punctuation, syntax & spelling; willingness to use dictaphone preferred.; B14; $1440-1514. APPLY AT SLAC

95604-JM (JCC:1988) UNIV MANAGER IV: Full mgmt respon for production serv of a large scale scientific computing sys & support for distributed printing & computing (VM/370 on large scale IBM 3081 computers); manage operations staff; develop training programs & syllabus & evaluations procedures; respon for budget & hiring; QUALIFICATIONS: MS or equiv in Computer Sci or related field; extensive exp w/ VM/370 or CP/67, IBM printers sub-sys, COM, graphics devices & network eqpt required; strong tech knowl of IBM or PCM mainframe hardware & peripherals; detailed installation planning required; exp in programming, Assembly lang, FORTRAN, PL-1 or PASCAL.; C10; $3494-4330. APPLY AT SLAC

94721-JM (JCC:2296) PROG PLANNER II: Develop a cost acctg sys approp to klystron production; develop & maintain required reports on status of subassemblies, mat'l flow, tube starts, acceptance yields, etc; review time cards for proper use & accuracy; process daily input of product movement thru assembly & test; prov nec input for critical path network (CPN) needs, incl task definition & duration estimates; QUALIFICATIONS: college training, preferably w/ completion of BA degree or equiv in economics, acctg, business admin or related field; ability to conduct studies, formulate conclusions & recommendations; familiarity w/ cost acctg & CPN scheduling; several yrs exp in proj monitoring in an electronics/mechanical environ desirable.; C07; $2113-2750. APPLY AT SLAC

95546-JM (JCC:6492) LAB MECHANICIAN III: TMS Unit; perform a variety of unusually complicated tasks In fabrication of precision instruments & microwave components; QUALIFICATIONS: requires full model maker skills; ability to work fr blueprints & sketches; be familiar w/ copper machining techniques; ability to operate all machine shop tools; familiar w/ standard shop practices; NC exp desirable.; A41; $2250. APPLY AT SLAC

95524-JM (JCC:6492) LAB MECHANICIAN III: TMS Unit; perform a variety of unusually complicated tasks in fabrication of precision instruments & microwave components; QUALIFICATIONS: requires full model maker skills; ability to work fr blueprints & sketches; be familiar w/ copper machining techniques; ability to operate all machine shop tools; familiar w/ standard shop practices; NC exp desirable.; A41; $2250. APPLY AT SLAC

95184-JM (JCC:8638) S&E TECH - ELECTRON: TMS Unit; repair of multichannel electronics of large spectrometer; locate channels & schedule repair; layout & minor design of cabling & electronics; do electrical drafting; QUALIFICATIONS: AA degree in electronics (some physics) or equiv knowl of math thru algebra or higher; exp w/ large scale multichannel electronics sys; ability to do troubleshooting & repair; exp w/ use of LSI microprocessor & CAMAC; some layout & electrical drafting exp.; A28; $1647. APPLY AT SLAC

95517-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; asst engrs in the development, testing, maintenance & troubleshooting of new & existing RF drive & phasing sys; design, assemble, test & repair new & existing electronic, electro-mechanical & microwave eqpt; QUALIFICAITONS: AA degree or equiv; several yrs exp in microwave industry; ability to demonstrate good basic knowl of microwave theory & practice; some knowl of electronic analog & digital circuitry required; competent in use of genl electronic & microwave test instruments; have skills in use of hand tools; some drafting skills desirable.; A34; $1901. APPLY AT SLAC

94780-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; fabricate & test various & specialized electrical & electronic chassis & impromptu circuits for stand-alone or detector & machinery monitoring & control or computer interfacing fr sketches & verbal instructions; integrate chassis'/circuits w/ other devices & computer sys; maintain & repair monitoring, control & safety sys; QUALIFICATIONS: AA degree in electronics or equiv; college tech course or equiv military serv sch'ls in electronics; specialized exp in cryogenics, photography & optics desired; genl shop skills; knowl of & exp w/ digital I.C.'s, transistors, relays, transformers, etc; good interactive skills.; A34; $1901. APPLY AT SLAC

94717-JM (JCC:6406) SCI & ENGR ASSOC I: Supv testing of klystrons & test stand operation; coord activities of test stand operators on three daily shifts; set up test programs & specify procedures to be followed by the various crews; develop acceptance & rejection criteria for new line of klystrons & revise methods used in testing existing types of klystrons; recruit & train new personnel; QUALIFICATIONS: AA degree or equiv required; familiarity w/ test methods commonly followed for high power microwave tubes; understand operation of high power modulators & associated electronics; exp w/ microwave measurement tech.; C99; $2500-3000. APPLY AT SLAC

95383-JM (JCC:8880) Mechanical Engr: Mechanical design & analysis of components & sys for the linear collider proj involving stress, heat transfer, vibrations, electro-magnets, vacuum & cryogenics; follow-up of fabrication, procurement, assembly & installation of components & sys; QUALIFICATIONS: BSME or equiv; knowl of mech design, stress analysis, heat transfer analysis & shop practice desirable; serveral yrs related exp.; C99; $2000-2700. APPLY AT SLAC

Rental housing

HOUSING AVAILABLE

□ **End of Sept. '84 to Apr. 1, '85 (flex):** Furn. 3 or 4BR/2 or 3BA campus hse. Nonsmokers, cat lovers (must care for res. cat) can be seen up to Aug. 20, '84. Call 326-3842. Thereafter write Prof. Tuttle, Mathematics Dept., Amherst College, Amherst, MA 01002.

□ **Beg. Sept. '83 for 1 yr:** Fully furn. 3BR/2BA Eichler w/frpl. 10 min. to Stanf., nr. schools, pet poss. $1200/mo. util. extra. 1st & last mo. dep. req. Call Susan, (415) 494-2196.

□ **NOW:** 3BR/2BA 2 story hse. in Palo Alto. Corner lot, AEK, microwave, DR, den, lrg. LR, 2 car garage, brick patio, yrd. w/grdn (grdnr paid). Xclnt sch. dist. Min. 1 yr. lease (pref. 2). Dep. req. Call (415) 324-9193.

□ **Aug. 27 to Oct. 16:** Short term, completely furn. 1BR and den/2BA Oak Creek apt. Ref. req. $1250/mo. Call (415) 328-6189.

□ **Sept. 27 to Nov. 20:** Fully furn. campus hse. Grdnr & cleaning woman provided. Reasonable rent in exchange for pet care. Pref. single or cpl. Call 494-3000 or 857-0674.

□ **Aug. 21 to Sept. 25:** 2BR/2BA Peter Coutts condo. Study, pool, jacuzzi, car, $900/mo. Call 497-0833 day; 493-6273 eve & wknd.

□ **Dec. '83 to Dec. '84:** Fully furn. 5BR/2½BA hse. in Stockholm, Sweden. EXCHANGE for similar in Stanf. area. Write Prof. L. Bergdahl, Thoracic Surgical Clinic, Karolinska Sjukhuset, S-10401, Stockholm, Sweden.

□ **Aug. 28 to Oct. 31:** Furn. 2BR, full study adult Atherton hse. $1500/mo. Call Dr. Arnold, 321-4121, ext. 387.

□ **Now:** S. Lake Tahoe Vacn/ski hse., furn. 2BR, frpl, color TV, phone. Adj. Nat'l Forest. Walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine 497-2501 day; (408) 739-3141 eve.

□ **Now:** Clean, unfurn. 3BR/2BA hse. AEK, frpl, lrg. enclosed patio, 2 car garage. Menlo Pk. Bus to Stanf., SRI, USGB. 1 yr. lease. $875/mo. incl. grdnr. Call (408) 484-9159.

□ **Beg. Sept. '83:** 2BR/2½BA twnhse. W/D, lrg. ktchn, sep. DR, sunken LR, wet bar, 2 car garage, priv. patio, pool and jacuzzi. 15 min. to Stanf. Perfect for cpl./cpl. & child. $1100/mo. Call 961-8364.

□ **Fall qtr. approx. mid-Sept./mid-Dec.:** Fully furn. campus hse. Solar pool. Grdnr, pool, cleaning serv. Nonsmokers, no pets. $1270/mo. Call 857-1497.

□ **Oct. 15, '83 to Mar. 30, '84:** Fully furn. 3BR/2½BA hse. on 2½ acres in Westridge, Portola Valley. AEK, sep. DR, study guestrm., Creekside setting, pool, grdn, paddle tennis crt., caretaker cottage w/caretaker, horse pasture, corral facil., grnhse. Children OK, no pets. 10-15 min. fr. Stanf. $1800/mo. + util. + $1500 sec. dep. Call Guy Blase, (415) 327-6700 day; (415) 851-8004 eve & wknd.

□ **Sept. thru Dec. 15, '83:** Furn. 1 or 2BR apt, pool, gym, sauna, jacuzzi, racqball, adult complex. 1 apt. air cond. Rt. #280, 15 min. to Stanf. $600/mo. for 1BR, $700/mo. for 2BR, depo. & ref. req. Call Prof. Arnold, 968-0951 or (408) 255-8909.

□ **Sept. 21 to Nov. 17:** Furn 2BR/2BA apt. in small, quiet complex lundry facil., dishwshr, pool. Located in Palo Alto, 3-4 mi. to Stanf. $650/mo. Call Margie, 497-6461 day, 494-7754 eve.

□ **Sept. 5, '83 thru Oct. 22, '83:** 2BR/2BA Oak Creek apt., frpl, frnt & bk fenced patio, pool, tennis, gym, spa. $1500/mo. incl. all hsekeeping necessities. Call 327-9245 or 497-3649.

□ **Beg. Sept. 1:** Small attractive furn. studio w/priv. deck in campus (Frenchman Hill) home. $425/mo. Call 493-1019 after 7 pm.

□ **From Sept. 1:** 3BR/2BA hse. w/lrg. yrd., redwood trees. Walk/bike to Stanf. swim, tennis, Leland Rd. in Palo Alto. 1 yr. lease. $1250/mo. Call 493-0599, eve & wknd.

□ **Now:** Summer rental, 3BR/1½BA cabin, W/D, phone, sleeps 10, Alpine Meadows, TAHOE. $180/wk. Call 493-4139 eve.

□ **Regularly Available:** 1 & 2BR furn. & unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk., in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **Now:** HAWAII (Kauai), lovely, furn. 2BR/2BA twnhse, pool, tennis, priv. club atmosphere. $50/day. Call Howarth, 591-5190.

□ **Now:** Tahoe-Donner condo. 3BR/loft/2BA, spa, pool, tennis, golf, stable, $350/week, $140/wknd. Call Bienenstock, 493-8649.

□ **Late Aug. to early Feb. '84:** INVERNESS, beautiful furn. solar hse. v. private, bay vw., hot tub, sleeps 8, all conveniences, close to Pt. Reyes Nat'l Seashore. $1000/mo. Call (415) 669-1122.

□ **Beg. Sept. 1:** Female roommate wanted to SHARE lovely 2BR hse., hardwood fl., lrg. backyard w/deck. Quiet, safe nghbrhd in Menlo Pk. 5 min. fr. dwntwn Palo Alto. Nonsmoker, no pets, pref. grad. student or faculty (no undergrad.) $365/mo. Call Cathy, 948-9428, day; 328-4432, eve.

□ **Beg. Sept. 1 or earlier for 1 yr:** Fully furn twnhse, 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min to Stanf. Xclnt for writer/scholar. Prefer cpl, single adult, nonsmoker. No pets. $1300/mo. Call Judy Donnelly, 497-1065, day; 854-3889, eve.

□ **Avail. immediately:** New twnhse, 2BR/2½BA, furn., frpl, AEK, W/D, fenced yd, El Camino & Page Mill, 5 min. bike to Stanf. $1125/mo. incl. grdnr. Call COLLECT (213) 990-5302, (415) 849-0888.

□ **Aug. 15 to June 1, '84:** Unfurn. hse. 3BR/2BA, FR, office, studio, storage, lndry. 20 min. to Stanf. $1250, poss. rent rebate. Call 851-3322.

□ **Sept. 15 to Oct. 15:** HOUSESITTER needed. Nr. Stanf., care for pool; tennis crts, 2 dogs, 2 cats, garden, watering. Call (415) 948-2737, (408) 722-2164.

□ **Sept. 1 for 6-9 mos:** Furn. 3BR/1½BA hse, all appl., great view, deck, frpl, hot tub. 15 min. to Stanf. $975/mo. Call (415) 948-5607.

□ **Feb. 1 to June 30, '84:** Fully furn. 4BR/3BA, FR, pool hse. in Crescent Pk. area, Palo Alto, 3 mi. to Stanf. $1500/mo. incl. grdnr, pool serv. Call 497-4933, day; 328-1791, eve.

□ **Now:** Furn. 3BR/2½BA hse. avail. for 1 yr. lease. Family rm. w/bar, 2 frpls., pool. $2500/mo. Call 365-1911.

□ **NOW:** Unfurn. 3BR/2BA hse., AEK, wshr, dryr, garage, lease. $950/mo. Call (415) 326-2612 or (408) 255-5751 after 6 pm.

□ **Beg. Aug. to Oct. (flex. if take over lease):** UNFURN. or FURN. 1BR/1BA Oak Creek apt. across Stanf. Med. Ctr., pool, jacuzzi, tennis. Unfurn. $650, furn. $750. Call Steve, 856-1204 or Judith, 326-1625.

□ **Aug. 22 to Dec. 15 (flex):** ROOM in comfortable Palo Alto hse to SHARE w/3 women & pets. Vegetarians, nonsmokers. $225/mo. + util. + $37.50 dep. Call 858-0792.

□ **Aug. 15 thru academic yr. or longer:** FURN. or UNFURN. 4BR/2BA hse. nr. intersection Hwy. 280 and 85, spa, children OK, pets nego. $1200/mo. Call COLLECT (Colorado) (303) 755-2756 or lv. message.

□ **Now:** Fully furn. hse. 3BR/1BA & sep. shower. DR, bkfst nook, lrg. yrds. Quiet, creekside st. Bike to Stanf. $1200/mo. Call Larry, (415) 573-4998 day; 324-2469 eve or Eveleen, 322-6985 eve & wknd.

□ **Now:** Furn. 2nd fl. 2BR/2BA Pearce Mitchell campus condo. for Stanf. affil. Frpl., AEK, pool, jacuzzi, balcony, carport, clbhse., huge closets. Adult, nonsmokers, no pets. $900/mo. single, $1000/mo. cpl., 6 mo. and mo.-mo. thereafter (flex). Call 326-4213 or lv. message at 497-2576.

□ **Academic yr. '83-'84:** 3-4BR/2BA twnhse in central LONDON, AEK, dishwshr, dryr, TV, VCR, garage. New Barbican complex w/easy access to grdn, playgrnd, schl. and London Univ. in EXCHANGE for similar hse in Palo Alto for visit. scientist. Call Ian Benson c/o Desi Glassel, (415) 859-6487.

□ **Now:** Fully furn. apt. in Los Altos for SUBLET. Quiet, conv. located, ktchnware & lin. incl. Length of rent nego. though no long-term. Nonsmoker, no pets. $500/mo. incl. util. Call (415) 941-3501.

□ **Now:** ROOM in lrg. Los Altos hse. Priv. BA, full use of ktchn & use, quiet nghbrhd, 15 min. to Stanf. Mature, nonsmokers pref. $400/mo. incl. util. Call Patricia, (415) 859-4822, day; (415) 948-1713 eve.

□ **July, Aug., Sept.:** Tahoe-Donner hse. 4BR/3BA, deck overlooks Nat'l Forest. Hike, tennis, golf, Donner Lake access, hot tub. $450/wk; $200/wknd. Call 324-8559 eve.

□ **Now:** Furn. 2BR/1BA contem. College Terrace hse., ww carpet, w/frpl, carport, storage. Nonsmokers pref., no pets. Dep. req. $850/mo. Call 948-5857 eve.

□ **Sept. '83 to June '84:** Fully furn. 3BR/2BA hse on 1/3 acre in Los Altos. 7½ mi. fr. Stanf. Nonsmokers. $1200/mo. incl. grdnr and water. Call (415) 961-6669.

□ **Now:** Female roommate wanted to SHARE 2BR/2BA hse. w/professional woman. Fully furn. except for BR, spacious, priv. exclnt Mt. View location. $315/mo. Call Marilyn, (415) 965-9128.

□ **Beg. Sept. 1-15 (flex):** Unfurn. hse, 2BR/1BA, LR, DR w/frpl, FR, new kitchen; frig, stove, DW, disp., W/D. Drapes, carpets. Encl. yd. Cul-de-sac. Nonsmokers, no pets, refs. req. Pref. cpl. or small family. $900/mo. + util. Lease req. Call 321-2384, eves, 6-9 pm.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Services, P.O. Box 7772, Stanford, Calif. 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414 or Araya, 329-8828.

HOUSING NEEDED

□ **Beg. Sept. 1:** Resp. prof. woman seeks quiet, charming hse. or condo., furn. or unfurn., w/2 or more BR, pool, on or nr. campus. Nonsmoker. Up to $1500/mo. Call Nancy, 854-1981.

□ **Jan., Feb., Mar. '84 (flex):** Visit. prof. physician, wife, child need 2-3BR furn. hse/apt. to rent and/or hsesit nr. Stanf. Will care for plants, garden. Could EXCHANGE furn. 5BR/5½BA hse w/tennis crt., pool, 15 acre farm, Wynnewood, 25 min. to Phila. 15 min. by train. Call (215) 662-3795, day; (215) 642-6584, home.

□ **Sept. or Oct. '83 to Oct. '84:** French MD seeks EXCHANGE or RENT furn. 2BR hse. or apt. nr. campus. Possible EXCHANGE for furn. 2BR hse. 5 km. south of PARIS, metro Bourg-la-Reine. Contact Dr. Jean Marc Davy, 43 rue de chateau fort, 92340 Bourg-la-Reine, France, tel. 1-350-97-53 or call Jim Conrad, 493-2597 morn. or eve.

□ **Beg. Aug. 22 for 5 wks:** Visit. scholar (recent Stanf. grad.) and wife wish to HOUSESIT. Will care for pets, plants and garden. Xclnt local ref. Call 325-6265.

□ **Beg. Sept. 1 thru academic yr. '83-'84:** Three mature, resp. business students 30+, nonsmokers, wish to rent 3BR hse. nr. Stanf. Will care for pets. Call 493-6445 eve or lv. message.

□ **Sept. 1 to June '84:** Female Stanf. fellow and dghtr, 13, w/quiet, polite German shepherd seek to rent or share hse. or apt. Local ref. avail. Call (415) 285-4109.

□ **Jan. 1, '84 (flex) for 6 mo.:** Visit. prof. on sabbat. at Stanf., wife, 2 girls, 11 and 15, seek 2/3BR furn. hse/condo. in Palo Alto or Los Altos sch. dist. Nonsmokers, no pets. Local refs. Call Ed, (415) 321-6584 eve.

□ **Aug. '83 to June 30, '84:** Adult physician cpl., nonsmokers, no pets, desire hse. or twnhse., furn. or unfurn. min. 2BR nr. Stanf. Call 497-7001, day; (415) 333-0168, eve.

□ **Beg. Nov. '83 for 1-2 yr.:** Visit. Australian MD, wife, 2 children, 5 & 2, seek furn. 3BR hse. on or nr. campus. Call B. Barnett, 497-5913.

□ **Now for 1 yr:** Immediately needed for delightful male Chinese scholar, long-term ROOM w/ktchn and smoking privilege (tobacco only). Call Gwen or Cecily, 497-3111 or 854-3300.

□ **Fall qtr or academic yr:** Single prof., nonsmoker, seek quiet, furn. hse. nr. Stanf. Will take care of hse. Ref. avail. Willing to pay dep. and full term rent in adv. Call Gary Eldred, (415) 848-6327.

□ **Beg. Sept. 1, '83:** Resp. family of 3 joining Stanf. staff (dghtr 8 yr.) want to rent 2/3 BR hse. nr. Stanf. Los Altos area pref. Long-term lease. Local refs. Call COLLECT (301) 474-3705.

□ **Dec. '83 to Aug. '84:** Visit. prof. and family seek furn. 3/4BR hse. on or nr. campus. Call (415) 841-0990.

□ **NOW:** Stanf. staff & prof. spouse, 2 children wish to rent clean, quiet hse in Palo Alto sch. dist. Nonsmokers, no pets. Refs. avail. Call 494-0756.

□ **NOW:** Young male prof. seeks rm. in EXCHANGE for handywork, gardening or security. Nonsmoker. Refs. avail. Call 547-4012.

□ **Sept. 6 to Dec. 20:** Visit. prof., wife, baby & well behaved dog need hse. or apt. to sit/rent. Will care for plants and pets. Up to $500/mo. Call 497-1745.

□ **Beg. Sept. 1:** Stanford European Dr. & family (2 children) need small hse, cottage, apt. Prefer Palo Alto, Menlo Park. Call (415) 493-4073.

□ **Beg. Sept. 15:** Married cpl, incoming Stanf. grad. students desire live-in, work-for-rent situation. Call Peter & Rebecca Hawthorne COLLECT, (203) 327-4620.

□ **Beg. Oct. 1 to Apr. '84 (flex):** Visit. prof. fr. England & wife seek furn. studio or 1BR apt. nr. Stanf. Prefer walk/bike dist. to campus. No children or pets. Call Mrs. Sehgal, 493-5650.

□ **Now or Fall qtr. for 1 yr or more:** Married Stanf. cpl. wish to rent 1 or 2BR hse. Xclnt w/grdn and home maintenance. Xclnt refs. Call 497-0761, day; 494-1548, eve.

□ **Now:** Artist recently returned fr. Europe seeks quiet cottage or studio. Willing to accept some responsibilities. Call 948-8257, eve.

□ **Now to July '84:** Professional cpl. willing to HOUSESIT. Will care for plants and pets. Local refs. Call (408) 295-5460 day.

□ **Sept. thru Dec. (flex.):** Stanf. grad. student (P.A. native) seeks to HOUSESIT. Loves pets, nonsmoker. Refs. avail. Call Carolyn Kline, 858-2829 early morn. best.

□ **Beg. Sept. 20 (Sept. 1 poss.):** Resp. single prof. lady seeks to HOUSESIT or pay minimum rent. Presently housesitting on campus. Local refs avail. Call 857-0268 wknds.

□ **Oct. 1 for 6 mo. (flex):** French aristocratic cpl. seeks to take care of hse, grdn, pets. Absolutely reliable, nonsmokers, no child. Local refs. Call (415) 326-7053.

□ **Aug., Sept., Oct.:** Yale and NYU grad. on sabbat. avail. for HOUSESIT. Nonsmoker, local refs. Call 454-5002.

□ **Sept. 1 for 9 mos:** Resp. sabbatical M.D. & wife, 2 mature children, 12 & 15, seek 3BR furn. or unfurn. hse. on or nr. campus. Nonsmokers. Loving care of home. Local refs. Call COLLECT (503) 222-2464.

□ **Sept. '83 to Aug. '84:** Visit. scholars seeks furn. rm., studio, or 1BR apt. nr. campus. Nonsmoker, no pets. Will do chores, fix-up, etc. for reduced rent. Call John McAdams, COLLECT (414) 224-6842.

□ **Now:** Responsible, neat woman seeks to HOUSESIT. Great w/plants and pets. Xclnt refs. Call Karen, 324-1780 day; 484-1116, eve.

□ **Aug. '83 to Aug. '84:** Visit. prof. fr. Norway, wife, 2 children seek 3BR, furn. hse. on or nr. campus. Responsible, nonsmokers. Up to $1000/mo. Call 497-2040.

□ **Now:** $100 REWARD for info. leading to rental of cottage/small hse. for resp. prof. woman. Call 326-4695.

□ **Beg. Sept. 1:** Stanf. librarian and UCSC prof. husband seek apt. or cottage nr. Stanf. w/character & privacy. No children or pets. Local refs. Call (415) 848-2137.

□ **Beg. Sept. 1 thru Oct. 10 (flex):** Israeli, female, Stanf. Grad. Visit., nonsmoker seeks cheap ROOM or HOUSESIT. Will do lite child care/hsewrk. Local refs. avail. Call (415) 493-2259.

Carpools

Ride needed from Stanford to Oakland (near airport) in exchange for gasoline costs. Would also consider a ride to a BART station, preferably Fremont or San Francisco. Please call Nalini at 493-0356 after 8 p.m.

Driver needed for existing carpool from SF (Noe Valley area) to Stanford, M-F, 9-6. Call David Thompson, 7-2454.

Carpool partner wanted, Oakland-Stanford. Leave Oakland 8:30 a.m., leave Stanford 6 p.m., M-F. Times somewhat flexible. Call Jon Bendor, 497-4480.

Carpool forming from SF (Bernal Heights) to Stanford, M-F, hours somewhat flexible. Share driving. Call Julia, 497-3811 (days), 648-4835 (eves.).

Ride sharing between Santa Cruz and Stanford Tues. and Wed. 9-5 (flexible), call Andy Carman at 497-6341.

How To College providing big payoff for three fun-lovers

Three Stanford liberal arts graduates have struck paydirt by poking fun at the preppies.

Their self-published book, *How to College: A Humorous Guide to the Four Years* has gone into a third edition after selling 50,000 copies.

Bill Jeakle, Eugene Reardon, and Ed Wyatt spent thousands of tuition dollars researching this subject. Trying to make "all those all-nighters and frat parties pay off," they carefully compiled results on a campus computer.

Disaster loomed when administrators discovered 30 accounts had been created for a petroleum engineering class in which only a handful of students were actually enrolled. The computer files included depth reports on beer drinking, dating, and similar collegiate subjects.

Before the accounts were frozen and the files erased, editorial colleagues "put on trench coats and sunglasses" and using what Jeakle describes only as "student know-how" obtained copies of their creation suitable for a print shop.

After raising money from friends and family, the students launched The Primer Press to produce and market their college guide.

Parents and high schoolers were duly warned that the college choice "will affect your every resume, date, and cocktail party for the rest of your life.

"Be careful. There's nothing worse than a boring cocktail party."

When choosing a college, they advised, "You must take all the factors into account: reputation, number of the opposite sex, libraries, number of the opposite sex, post-graduate placement record, and number of the opposite sex."

To ease the pressure a bit, they added, "if you picked at random, you'd probably



be happy, so don't take the decision too seriously."

So far, their advice has stood the test of both the marketplace and a cross-country tour of more than 50 campuses.

"A lot of people are more vocationally oriented and concerned about getting jobs after college, than when we were at Stanford," says Jeakle, a 1982 graduate.

"It's funny. Because of that, they party a lot harder. They seem to have more to forget.

"We used to sit around with beer and pizza, and call it a meaningful philosophical discussion." Travelling from one fraternity house to another, the Stanford entrepreneurs often had to sleep through parties or found their brethren still celebrating as they went out the door to promote their books early in the morning.

"Being new publishers is both a boon and a bane," Jeakle says. "People don't know if you're really serious. They put you on hold.

"But when you're persistent, they give you a break. When that happens, the book usually sells." Hundreds of copies were snapped up at both the Stanford and Harvard Bookstores, the focal points of several new student entrepreneurs.

"We learned the hard way you don't get paid for books until 90 days after they're sold," Jeakle says. We had practically no money when we started, so we had to keep the rent low." The total after several months on the road was only $9.40 for a single night when the entrepreneurs realized they simply wouldn't be able to sleep through a fraternity luau at the University of Minnesota. They moved to a commercial camp instead.

"It's been a real business course for us," Jeakle says. The students are getting into distribution with Waldenbooks and into publicity with Glamour and Playboy.

Things are looking up. "We're not driving a Rolls yet, but we're turning a profit and can drink beer and eat popcorn for the rest of our lives," says Jeakle.

"We enjoy doing this. We're kind of astounded at the results so far. We were asked to New York by a publisher early this year, but there was so much time and red tape involved we decided to continue on our own." Another humorous "how to" book is now in the planning stage.

The advice offered in jest to worried parents and prospective collegians works out well in practice, he adds. "No matter what college you pick, you get a lot out of it. Everyone thinks their college is best.

"Parents shouldn't prejudice the choice. They put a lot of pressure on kids to pick certain schools. But students usually end up liking wherever they are."

For those who can't find or won't wait to discover *How to College*, copies may be ordered at $5.95 each, plus $1 postage, from The Primer Press, 12 Sherman Bridge Rd., Wayland Mass. 01778.

Nonexempt...

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processor; QUALIFICATIONS: typ 50-60; significant offc exp; commu w/ diverse campus personalities; exercise discretion on confidential matters; good English skills; editing skills; knowl of or desire to learn micro-computer/word processing; Spanish speaking & college coursework helpful; contact: Michael Perez, 497-3542.; B11; $1246-1310.

32548-PM (JCC:2596) SECY II-SPEC: Prov sec'l support to 3 part-time faculty & coord annual program for American Academy of Otolaryngology—Head & Neck Surgery; answer & direct calls fr M.D.'s & patients; schedule faculty calendar; routine corresp; typing of manuscripts, reports, syllabus, grants; make travel arrangements & prep trip expense reports; respond to routine corresp; prep monthly calendar of events for the Division, etc; QUALIFICATIONS: typ 65+; exp working w/ M.D./s highly desirable; familiarity w/ med terminology; word processing ability or ability to learn IBM Displaywriter; ability to organize, & work independently in handling AAO annual program; contact: Karen Hanami, Edwards R127A, 497-7104.; B12; $1310-1373.

31438-PM (JCC:2672) MED SERV ASST III: M-F; 8:30-5:00; performs clerical duties necessary for the clinic; duties include patient appointments; requisitioning lab & radiology examinations; heavy communication w/patients, physicians & other depts; works under the direction of the clerical supvrs in ENT Clinic; interviews patients for financial & insurance info to properly register patients into the Faculty Practice Program; receives & documents patient cash payments; QUALIFICATIONS: Type 30-35; 1yr exp in med setting; able to work in fast pace/pressure environment; must be able to work w/public & physicians; computer knowledge helpful; med terms essential; bilingual ability desirable; Contact: Vicki Stewart, A367 Boswell Bldg.; B11; $1246-1310.

33463-LL (JCC:3480) BOOK PRODUCTION ASST III: 50-94%, 8-12, 1-4:30; designs book manuscripts & jackets at all levels of complexity by furnishing specifications for format, type & illustration size & position, & incorporating any other elements of the manuscript into the design; prepare info for book production; checks all stages of proof for quality & accuracy; after consultation w/ supvr, commissions & supv work of free lance people on individual projs; coop w/ editors, other staff members, & suppliers on all stages of design & production; QUALIFICATIONS: 5 yrs exp in book design or related fields; some familiarity w/ new technology of computer composition, word processors, etc; thorough knowl in all aspects of book production; energetic & able to work under pressure & w/ a variety of people; send appl/resume to Anita Scott, SU Press Bldg.; B16; $797-836/1497-1571.

43087-BP (JCC:7006) PROCUREMENT ASST II: Process customer sales orders, written or phone orders & enter into computer; print sales orders, verify pricing & distribute; answer customer questions regarding order or item status; process debit & credit memos; prov bkup to sys operator; enter merchandise receipts into computer; QUALIFICATIONS: typ 50; ability to use 10-key calculator; knowl of computer terminal or willingness to learn; send appl/resume to B. Leans, Commissary, 765 Pampus Ln.; B12; $1310-1373.

28410-TC (JCC:5644) LIFE SCI TECH II: TMS Unit; 50%; prep & maint of primary cultures of muscle cells & passage & care of pheochromocytoma, myeloma, & hybridoma cultures; dissect chick embryos to remove ciliary ganglia for use in biological assay; perform biological assay to analyze prepared cultures; prep & sterilization of solutions, ordering of lab chemicals & supplies, genl maintenance; analysis of radiochemical experiments by high voltage paper chromatography; QUALIFICATIONS: exp w/ the prep & maint of primary & transformed cell cultures, the prep & sterilizatio of solutions, fine free-hand dissection, handling of radio chemicals, high voltage electrophoresis & genl lab procedures.; A24; $ 8.65.

31194-PM (JCC:1755) LIBRARY SPEC II: 50%; fixed term 9/1/83-8/31/84; performs duties in Genl Reference Dept; searching & verification duties; prov clerical support in completing forms such as transfer, cancel conservation forms; retrieves & charges mat'ls, both fr the STK & other campus libs; typ & photocopies bibliographic instruction mat'ls; compiles statistics; typ corresp, etc; QUALIFICATIONS: typ 40; ability to learn a variety of sys & procedures; prev public serv exp; prev lib exp; bkground in Social Sci & exp in a univ or res lib desirable; contact Bob Johnson, Green Lib, Rm 223, (497-3152).; B12; $655-687.

31195-PM (JCC:1755) LIBRARY SPEC II: 50%; performs duties in the Music Cataloging Unit of the Catalog Dept; searching, distribution & maintenance of manual sys for matching cataloging copy w/ music scores & sound recordings for which no copy was found upon receipt, incl main entry & form of music uniform titles for each title so as to match acquisitions slips w/ incoming LC cards; alphabetized & files LC cards by main entry for scores & sound recordings; prep mat'ls for bindery; inputs printed copy or original cataloging worksheets for books, scores, sound recordings in 3 different MARC formats & RLIN files; QUALIFICATIONS: typ 40; prev lib exp; knowl of music as a scholarly discipline & a performing art; ability to learn AACR2 rules of entry & construction of uniform titles for music; ability to learn MARC tagging for music in 3 formats; ability to learn RLIN; reading knowl of 1 non-English Western European lang; contact Bob Johnson, Green Lib, Rm 223, (497-3152).; B12; $655-687.

35883-BP (JCC:2454) OFFICE ASST II: 9/1/83-5/31/84; 10-4; Receptionist in 12-person office; handle busy 5-line phone system; receive visitors; convery Univ & Dean of Student Affairs info; schedule meetings; advise students on procedures for filing leaves of absence & provisional registration; daily mail distribution; key operator for XEROX; prepare monthly report for Xerox billing; perform various clerical duties; QUALIFICATIONS: Type 50; able to win cooperation from faculty, staff, students; excellent phone & interpersonal skills; perform basic arithmetical calculations; knowledge of variety of standard office procedures; previous office exp; Apply to N. O'Leary, 323 Old Union, Stanford, CA 94305.; B09; $712-749.

27502-PM (JCC:2454) OFFICE ASST II: 50%; maintain Financial Aid Offc filing sys; serv as bkup reception/phones; photocopy, collate & distribute mat'ls; typ forms fr budget sheets; hand-carry forms to campus; collect data for reports; distribute forms in student mailboxes; QUALIFICATIONS: typ 50+; meticulous atten to detail; ability to deal w/ pressure; ability to relate effectively w/ students & staff in person & on phone; ability to perform many diverse tasks punctuated w/ interruptions; send appl/resume to Nancy Smith, M127, School of Medicine.; B09; $565-595.

21757-BP (JCC:2454) OFFICE ASST II: Prov support to Administration & Records unit of CPPC; facilitating student registration process & providing assistance by answering questions relating to employment & Grad Sch'l application process; prov bkup support for daily operations; collecting registration fees, maintenance of fee log & budget expense log; typing routine forms & itrs, photocopying, filing & order confirmation & spec projs as assigned by supvr; QUALIFICATIONS: typ 50; good organization & recordkeeping skills; ability to win coop fr diverse group of students, alumni, staff & faculty; send appl/resume to Valarie Thomas, CPPC.; B09; $1130-1189.

42779-PM (JCC:2462) OFFICE ASST III: Answer phones; take messages & sort & distribute mail to res lab; prov sec'l serv for res lab; operate Xerox Word Processor for reports, corresp, grant proposals, mailing lists, etc; act as a resource person in ordering supplies, training others to use the word processor; order lab, offc & any other supplies nec; organize & update res accts for ordering, grant awards, travel, budget statements; keep time sheets for hrly employees; typ grants, annual reports, manuscripts, & learn how to use IBM memory typewriter; act as key operator for dept copy machine; QUALIFICATIONS: typ 60; good typing & offc skills; learn or use of Xerox Word processor; aptitude for figures; ability to work w/ both Stanford & VA accts, personnel, work orders & req; send appl/resume to Dr. Ferid Murad, VAH A610 (111) Dept. of Medicine, VA Hospital, Palo Alto, CA 94304.; B11; $1246-1310.

27296-PM (JCC:2562) SECRETARY III: Prov sec'l support to Asst to President; distribute large volume of daily mail; handle & refer phone calls fr Trustees, faculty, admin staff & students; maintain files & distribute info concerning Board of Trustees; plan & schedule meetings; handle heavy calendar scheduling for Trustees & other mtgs; use NBI word processor for corresp & retrieval of info; typ corresp fr drafts; compose routine corresp; take minutes & prov staff support for various mtgs; monitor & reconcile budget acct; prep Univ acctg forms; proofread Board of Trustee minutes, agenda & documts; QUALIFICATIONS: typ 60; excel sec'l skills; good judgmt in handling confidential & sensitive mat'l; good organizational skills; knowl of word processing desirable; send appl/resume to Elaine Gloystein, Bldg 10, President's Offc; B14; $1440-1514.

30457-PM (JCC:2596) SECY II-SPEC: 50%; 11-4pm; sec'l duties for res group of approx 20 people incl faculty, staff & grad students; typ corresp (tech & non-tech); tech typing of manuscripts for publication; thesis & classroom typing; tech reports; prep of Univ forms; handle budget statements & check for correctness; answer phone; open mail; filing, etc; QUALIFICATIONS: typ 65; sec'l exp required, w/ tech typing exp preferred; knowl of Univ procedures helpful; send appl/resume to Dena Polyhronakis, Varian Bldg., Room 108.; B12; $655-687.

42503-PM (JCC:2596) SECY II-SPEC: Full sec'l serv for one Doctor & his research staff; receptionist & telephone answering; open, sort & organize mail; answer routine corresp, memos; make appts & keep calendar for supvr; travel arrangements; typing of corresp, protocols, manuscripts, grants/contracts; knowl & advise on Univ policy w/ regard to budget statements, financing; order & authorize requisitioning of lab supplies, offc supplies, subscriptions & publications; asst in prep of preliminary budget info for grant & contract proposals; use Lanier transcriber, Xerox Memorywriter, Xerox 860 word processor; QUALIFICATIONS: typ 60; excel verbal & written skills; knowl of genl offc procedures; exp at Stanford desired; med & scientific terminology desired; knowl of WYLBUR; good typing skills; contact: Shirley Coles, 497-7423.; B12; $1310-1373.

Krasnyansky, Cherkas, show work at union

Works by former Soviet painters Anatol Krasnyansky and Constantine Cherkas will be shown in Tresidder Union through the month of August.

A reception for the artists will be held from 3 to 5 p.m. Sunday, August 7, at the Union.

Cherkas, born in Moscow in 1919, has been called a Russian Rouault. Indians often appear in his American western scenes because they blend so well into the American landscape.

Krasnyansky, born in Kiev in 1930, works primarily in watercolor, with excursions into oil painting. His work is a return to a more romantic era, echoing childhood dreams and fairytales.

Both artists have exhibited in the U.S.S.R. and other European and Asian countries as well as in the U.S.



Right: 'Sunset on roofs in Tallin' by Anatol Krasnyansky, part of the exhibition at Tresidder.

S.U. Press publishes letters of Trollope

The Letters of Anthony Trollope (1815-1882), one of the great writers of the manners and morals of Victorian England, has just been published by the Stanford University Press (cloth: $87.50).

Edited by N. John Hall, professor of English at Bronx Community College and the Graduate Center, City University of New York, the two volumes contain almost 2,000 annotated letters that show Trollope in all of his diversity: as the enormously prolific writer of *Barchester Towers* and many other works, as friend of some of the era's most famous writers, as government official (he worked for the British Post Office), and as traveler to the U.S.

The letters, many of them previously unpublished, chronicle his daily life and show him commenting upon his own work.

In an exchange with a publisher he writes, "It is hardly possible for a novelist who depends more on character than on incident for his interest always to make the chief personages of his stories pleasant acquaintances. His object is to show what is the effect of such and such qualities on the happiness of those on whom they act; and in doing this he can hardly contrive that a nice young man should always be there to be married to the nice young woman."

To an unidentified correspondent who pointed out certain errors in *The Last Chronicle of Barset*, he wrote, after acknowledging his errors:

"But I console myself with thinking that a novelist, in dealing as he must do, almost necessarily, with many affairs of life, with many professions and with various trades may be excused, perhaps, the blunders if his pictures are generally true.

"Not to be false in sentiment, not to be untrue to nature, not to be dull, not to be grandiloquent, not to be injurious in his teaching, not to be immoral in his pictures—these I think should be his attempts. Do not suppose that I think myself to have been successful in all, or always in any."

Create your own image at Tresidder!

Art and fashion expert Shelley Komarov will present a "Create Your Own Image" seminar from 7 to 10 p.m. Monday, Aug. 15, at Tresidder Union.

"My seminar approaches today's fashions from conceptual, historical, and practical directions," she says.

"I won't tell people what to wear. Instead I will show how individuals can link their own personality to a style—how they can pick, then project, a specific dramatic image through fashion."

Drama is an important aspect of Komarov's seminar. She earned master's degrees in fine arts and economics in Leningrad, U.S.S.R., and became an award-winning fashion and costume designer in her native country.

As a costume designer, she created for the Leningrad Ballet, stage and motion picture productions. At the same time, she taught fashion design and history at the Leningrad Design College.

Komarov left the U.S.S.R. in 1978 and has been successful as a designer and partner in an art gallery in Los Angeles.



Shelley Komarov

To enroll in the seminar, send a check for $30 to Tresidder Union, Room 270. For more information, call ext. 7-9671.

Stanford Tennis School begins Aug. 15

The famous annual Stanford Tennis School, with Coach Dick Gould, will offer two sessions this summer, August 15-19 and August 22-26.

Classes will be three hours daily: mornings 9 a.m. to noon for adults, afternoons 1-4 p.m. for youths or adults, and evenings 5-8 p.m. for adults.

The registration fee is $125. For more information or to register contact Gould at 497-1160.

Buhler's art at H&S till Oct. 15

Paintings and prints by Walter Buhler of Palo Alto will be exhibited in the School of Humanities and Sciences, Building 1, from August 15 until October 15.

Buhler's works often reflect summer travels in the Bay Area, Oregon, the Midwest, and Switzerland, where members of Buhler's family still live.

The artist travels with sketchbook in hand and works from these sketches when he returns to Palo Alto where, for the remainder of the year, he is the chairman of the art department at Palo Alto High School.

Buhler describes his work as "somewhat realistic," but is not aiming for photorealism. He paints things he wants to "hold on to."

His early interest in architecture is expressed in paintings of buildings and places—some from the small Midwestern towns where he spent his childhood, others of Oregon seaside communities and still others of buildings closer to home in Palo Alto where the Buhlers have lived for 20 years.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the two weeks in which the events occur. The next deadline is Wed., Aug. 17 to cover the week of Mon., Aug. 29 through Sun., Sept. 12. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

LATE ANNOUNCEMENTS

Sunday, August 14: Evensong service. A Jacobean choral evening service presented by Cantabile. Music and liturgy of the period will be used. 6:30 p.m. Memorial Church.

SUNDAY, AUGUST 21

University Public Worship: Preacher: R.G.Hamerton-Kelly, Dean of the Chapel. 11:00 a.m. Memorial Church.

WEDNESDAY, AUGUST 24

Stanford Physicians for Social Responsibility: "TheLast Epidemic". This film will be shown several times before the PSR-sponsored symposium in October. 8 pm. Common Rm, 3rd floor, Women'sClubhouse. Free.

SUNDAY, AUGUST 28

University Public Worship: Preacher: Ernle W.D.Young, Associate Dean of the Chapel. 11:00 a.m. Memorial Church.

EXHIBITS

"Propaganda Posters of Two Revolutions". Featuresover 40 posters from the Russian Revolutions and Civil War,1917-1922, as well as the German Revolution of of 1918-1919 and theGerman elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover MemorialExhibit Pavilion. June 8—Jan. 31.

The Art of Literature: California Authors and TheirPrinters. A retrospective look at California literature andfine printing, 1860 to present. On the occasion of the firstAmerican conference of Assn Typographique Internationale. Rotundaand Gallery: Green Library. Aug. 1—Oct. 5.

Photographs by Ann Sconberg. Coffee House Gallery,1st. Floor of Tresidder Union. Aug. 1—Aug. 31.

Show and sale of paintings and lithographs by variousartists from the Komarov Gallery. Upper lobby, Tresidder Union.Aug. 1—Aug. 31.

CAMPUS REPORT

Volume XV, Number 43 | A publication for Stanford University faculty & staff | August 24, 1983

'A' parking permit fees to rise $25

Stanford University faculty and staff will have to pay $25 more this year for "A" and "E" parking permits, according to new rules issued by the Stanford Committee on Parking and Transportation.

Effective Sept. 1, fees to park in convenient "A" spaces will rise from $75 to $100. Less convenient "C" parking, Escondido Village, and student housing parking will remain $20, while service vehicle permits will rise to $120. All current stickers are due to expire Sept. 15.

Parking fines have also been raised from $7 to $10, according to a new Santa Clara County ordinance.

Mason Yearian, professor of physics and chairman of the Committee on Parking and Transportation, attributes the price hikes to inflation and increased expenditures for an improved Marguerite Shuttle serivce which will begin operation this fall.

"The increase really should come as no surprise," Yearian notes. "It is the first permit price increase since 1980-81.

"The committee took great care to keep the cost of 'C' stickers down," he adds.

Those who pay for "A" stickers this year will find it easier to get spaces,

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Representatives of the Shanghai Museum spent a day touring the Stanford Museum recently with Patrick J. Maveety, curator of Asian Art at Stanford. From left to right are Li Junjie; Zhu Mon'ling; Gail Inlander (Asian Art Museum, San Francisco); Zheng Wei, curator of the exhibition Treasures from the Shanghai Museum—6,000 Years of Chinese Art; and Zhou Xiuqin with Maveety. The visitors were impressed by the generosity of the Stanford family's gift to the good of humanity.

Six university presidents call for public school support

Six presidents of the nation's leading research universities, describing themselves as "partners and advocates" for the public schools, have suggested 10 ways academic institutions can forge stronger school ties.

The first concerted university response to the flood of reports critical of the schools followed a three-day conference organized by Presidents Derek Bok of Harvard and Donald Kennedy of Stanford with leading education school deans and other experts at Pajaro Dunes Aug. 14-16. The top-level meeting was believed to be the first of its kind in about 80 years.

The presidents, who included Hanna H. Gray of Chicago, Robert McNeil of Wisconsin, Harold Shapiro of Michigan, and Michael Sovern of Columbia, sounded more supportive of the schools and more concerned with their financial support than several of the recent reports.

In a joint statement the group said:

"Over the past two decades, substantial progress has been made in improving access to our system of public education and in improving the academic achievement of younger children. Our next task is to press for continuing gains in achievement, without sacrificing our accomplishments in educating all of our young people. . . .

"Federal support, as well as assistance from state and local government, will be essential for real improvement."

They added "the American public has, as it should have, high expectations of the schools. Recent reports, including that of the National Commission on Excellence in Education, have crystallized a general conviction that the schools are not doing as well as they might, and that they need improvement.

"We agree; but we also emphasize that as a nation we ask a great many different things of our schools, and often fail to provide them with the resources to fulfill our expectations.

"Responsibility for the well-being of the schools is not localized in society, but widely distributed. Government at all levels must assert a responsibility."

Because of the diversity among universities, "it is impossible to write a prescription for our institutions' commitment to the schools. But each university should look to activities such as the following, and choose those appropriate to its capabilities:

- "Strengthening existing affiliations with elementary and secondary schools, or initiating new ones;
- "Making improvements in educational practice through collaboration of university faculties with the schools;
- "Improving teacher education programs, including opportunities for helping classroom teachers;
- "Providing opportunities for the continued professional development of superintendents, principals, and other school leaders;
- "Sponsoring special programs on campus for enriching the experience of students and of school personnel;
- "Emphasizing research programs that are aimed at deepening understanding of education and at the improvement of teaching and learning;
- "Encouraging institutional and faculty participation in collaborative curriculum development projects;
- "Encouraging our own students to consider devoting part or all of their lives to teaching;
- "Emphasizing the importance of teaching in the schools by recognizing

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People

Pacific Basin discussed

National Security experts gather at Hoover conference

Sixty national security experts, high Navy officers and ambassadors met Aug. 15-17 at the Hoover Institution for a conference on the security concerns in the Pacific Basin.

The objective of the conference, according to the Hoover Institution Director W. Glenn Campbell, was to bring together the best of scholarship and statesmenship to address those problems. Campbell noted that the conference represents one of many events of the Institution's program on National Security Affairs.

Conference organizer Claude Buss said that among the participants Admiral Bobby R. Inman, former Deputy Director of Central Intelligence; Admirals Lloyd Vasey and Thomas Hayward; former American ambassadors James Hodgson and U. Alexis Johnson, the ambassadors from Thailand and South Korea to the United Nations; and the Head of the Strategic and Defense Studies Center at Australia National University as well as a number of Hoover scholars.

The participants shaped their remarks with a view to suggesting policies that will contribute to the maintenance of peace and stability while providing the maximum opportunity for growth and economic development in the Pacific region.

Keynote speakers included Dr. Paul Wolfowitz, Assistant Secretary of State for East Asia and the Pacific, and Admiral R.L.J. Long, who retired in July as U.S. Commander in Chief, Pacific. Admiral Long, whose recent former command encompassed over three hundred thousand personnel and an area of half the earth's surface, stressed in his opening address to the conference what became a recurrent theme among the experts.

They pointed to the increasing importance of the Pacific Basin to vital security and economic interests of the United States, which is a major member of the Pacific community. The United States trades more with the Asia-Pacific region than with any other region on earth.

Another of the main themes dealt with the expanding military and naval presence of the Soviet Union in the Pacific Basin. The Soviet's Pacific fleet is now the largest of the USSR's navy, and along with Moscow's land-based military build up and missile deployment in Asia, constitutes a growing security threat to the region. Many of the prominent scholars, naval officers, an diplomats addressed the issue of how the United States and its Pacific allies can effectively ensure a balance of power in the area. They presented assessments of the current situation in Pacific countries and set forth recommendations on political and military policies for such pivotal countries in the region as Japan, Australia, New Zealand, the Philippines, and the Republic of Korea as well as the United States.



Frans Alkemade

Alkemade wins Kodak's Kinsley trophy

A Stanford optomechanical specialist has been awarded the Eastman Kodak Company's Charles A. Kinsley Memorial Trophy for the best three nature prints entered in the 1983 Photographic Society of America Intenational Photography Competition.

Frans P. Alkemade received the trophy for his color photographs "Sunset in Yellowstone," "Geyser Country," and "Spring in the Redwoods." Last week at the PSA's annual convention in San Francisco.

The trophy is given in recognition of the three best photographic entries in each of 10 categories, including color slides, nature slides, and nature prints, pictorial slides, pictorial prints, photojournalism slides, photojournalism prints, photo travel slides, stereo slides, and motion pictures. The exhibition, considered the biggest international competition of its kind in the world, featured entries from 50 countries.

"A winning photograph has to have impact—it could be striking colors, a moody scene, something unusual. It must do something emotionally to you one way or the other," Alkemade explains. "It also must be technically perfect."

Alkamade has been interested in photography for the past 20 years, first photographing people in his native Holland and later in Paris. He became interested in nature photography after immigrating to the United States in 1964. Since then he has won numerous awards at various local and international exhibitions, including Best of Show and Best Composition at the Santa Clara Valley International Exhibition.

Alkemade has been a science and engineering associate in the Department of Physics at Stanford since 1966. A number of his photographs are on display on the second floor of the Varian Physics Building.

Aerospace R.A. applications sought

RESEARCH ASSOCIATE: A position is open for a research associate to continue research on propulsive flows and on thrust augmentos in particular. Applicants should be of at least Ph.D. standard with postdoctoral experience in aerodynamic analysis of high lift systems and viscous-inviscid interactions in thrust-augmenting devices. Solid background in the area of theoretical fluid mechanics is essential. Experience in the application of nonlinear optimization to aerodynamics is also required. Applicants should be capable of formulating and organizing a long-term research program. Salary will be in the range $31,000—$33,000 per annum depending on applicants' qualifications and experience. Please send resume and names of at least two references to Mary C. Clark, P.O. Box 5816, Stanford, Calif. 94305.

Stanford University is committed to equal opportunity through affirmative action and we are especially eager to identify qualified women and minority candidates.

Wayne Ross

Wayne Ross, property administrator for the Controller's Office, will retire August 31 after 21 years at Stanford.

Ross came to Stanford in 1962 after 20 years in the U.S. navy. Starting as assistant supervisor in Accounts Payable, he soon became supervisor and later took over responsibility for the Travel Section.

In 1979 Ross spent seven months as acting business manager in Athletics, then became Stanford's property administrator, with responsibility for all the capital equipment on campus

John B. Dunlop

John B. Dunlop, professor and chairman of the Department of Germanic and Slavic Studies at Oberlin College, has been appointed senior fellow and associate director for library and archival operations at Stanford Hoover Institution, effective August 1. He was a national fellow at the Institution in 1978-79.

As one of three associate directors, Dunlop will oversee the operations, maintenance and development of the Institution's world-renowned library, which contains more than 1,500,000 volumes documenting political, economic, and social change in the 20th-century.

He will be responsible for the Institution's Archives, which houses one of the largest private collections of historical materials in the U.S. The Archives contain 4,475 separate collections.

Dunlop has an extensive background in the history and literature of Russia as well as in Slavic languages. He received his B.A. degree from Harvard University and his M.A. and Ph.D. degrees from Yale University.

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Prof. Jean Mayers in his office, with mementoes of his long career in astronautics.

'Mother' space platform designed by Stanford grad students

Aerospace organizations are studying with interest a projected flotilla of spacecraft for the 1990s, designed by 40 graduate students at Stanford in the School of Engineering's space engineering course.

The conceptual plans call for a "mother" platform, with perhaps as many as eight to ten co-orbiting satellite spacecraft, all unmanned, and a "space tug" to maintain support among the group pending shuttle visits.

First publicly displayed at a June unveiling on campus, when it was watched over closed-circuit TV by representatives of NASA and several leading space organizations, the project, called Pleiades, has since received growing interest.

"No negative comments have been received," said Jean Mayers, professor of aeronautics and astronautics at Stanford, in a campus interview. "No one has questioned the feasibility of the concept."

Mayers has been the driving force behind the project, together with Profs. Peter Banks and John Breakwell and Assoc. Prof. Bruce Lusignan.

Mayers has spent 35 years studying the problems of flight systems in the atmosphere and outer space. he was a principal figure at Sperry Rand in developing and producing the U.S. Army's Sergeant missile, and he played a key role in providing technical guidance to the U.S. Army from 1963 to 1971 in connection with the overall design and testing of the structural aspects of the high-performance, high-reliability Spring ABM system.

Among those represented at the public showing and critique in June were NASA, Lockheed, Hughes, Rockwell International, and TRW. Among those who had lent support during the period of creation were NASA, Astro Research, General Dynamics, Ford Aerospace, Jet Propulsion Laboratory, Lockheed, and TRW.

"This space flotilla was not created to meet any specific requirements suggested by outside organizations," said Mayers. "It was the group's response to what it thinks scientists will want as a base for their future experiments in space, eommencing in the 1990s."

Mayers agreed that several other organizations had published plans for space platforms, but pointed out the unique features of the Stanford project's design. "It is neither a single space platform, nor a manned platform—it is a platform system consisting of a central or coordinating platform with dependent co-orbiting free flyers.

"Our Pleiades system answers the problem of how to conduct high-quality space experiments at lower cost, including those that must be isolated either due to size considerations or because of the requirement for a low-disturbance, contamination-free, and unobstructed-field-of-view environment. That is why certain experiments have been separated from the central platform and placed in co-orbit as free flyers.

"Our team claims that our system is unique, and that scientists will opt for this basing concept. The co-orbiting spacecraft will have separation distances of up to 100 kilometers, but will use the coordinating platform for data processing and communication through geosynchronous relay satellites with ground-based facilities.

"The co-orbiting 'daughter' platforms, which are structural replicas of the repeatable units forming the central platform, only have the ability to communicate with the 'mother' platform, which in turn sends the processed data to a geosynchronous satellite for transmittal to the ground facility.

Our concept provides the inviting opportunity to increase experiment quality and decrease cost, which normally are conflicting requirements.

"By the 1990s, scientists will need to have a space platform system compatible with their demanding requirements. It would be accessible to scientists in universities, industry, and government there in the U.S., as well as to their counterparts in the international community."

Mayers says that Project Pleiades should prove to offer a more practical option to the experimenter. Also, the cost would be considerably less than basing on a manned platform that is only partly dedicated to accommodating the science mission.

The project would, of course, require stable funding, but in terms of the benefits it would bring, its probable development costs of a maximum of $200 million a year would be well worthwhile.

"It would provide an essentially unlimited facility in terms of lifetime and availability," said Mayers. "It could be the seed of a coherent plan for multidisciplined scientific investigation free of Earth's atmosphere."

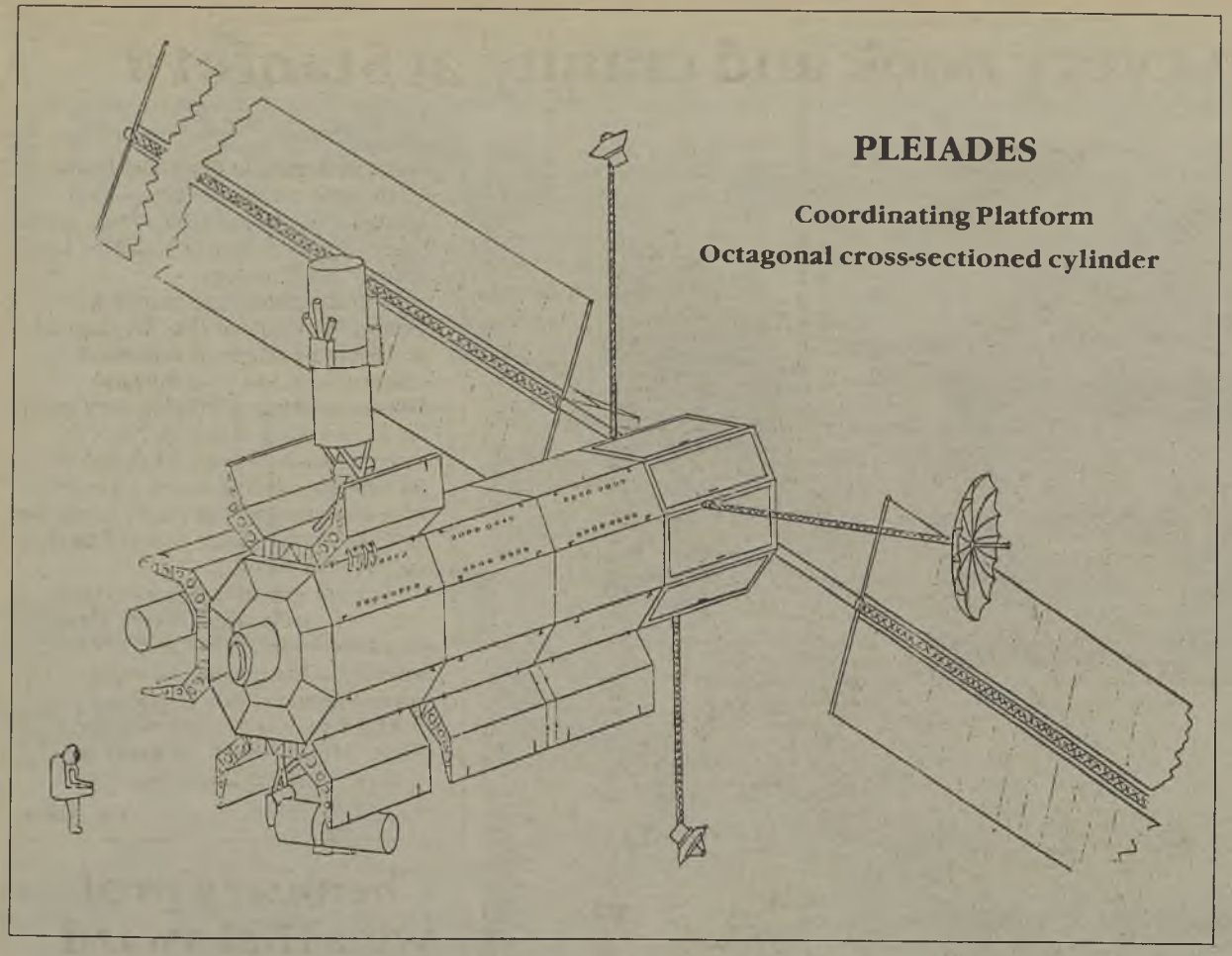
The flotilla would be maintained in the same orbit, be compatible with shuttle service, and have limited repair facilities via the service vehicle, a free-flying teleoperator, which travels to and fro between the central platform and the co-orbiting spacecraft. Visits from Earth to the flotilla by the shuttle would be necessary only every six months, or longer periods up to two years. The centralized mission control center would be on Earth with a data distribution center and a constant monitoring system.

The capability for five major scientific experiments is envisaged on the central platform; these would be the ones that do not require isolation. Those experiments which require absolute isolation would be placed on the co-orbiting platforms.

Asked what would happen when the orbit pattern of the flotilla decays, Mayers replied: "There will be reboost capabilities so that all the components can be kept in position. Admittedly, this is a challenging system problem but hardly an insuperable one.

"All satellites have to be continually corrected in order to maintain correct orbit. When this is done with the flotilla, it should stay in orbit for at least 20 years, given shuttle transportation and changeout

continued on next page



Mayer/ continued from page 3

capability, as well as the ability to provide for refueling, refurbishing, and repairs."

Won't the free flyer experiments become contaminated by a visit from the "space tug" or the shuttle? "No, if necessary, the experiments would either be afforded protective devices in sensitive areas or be turned off temporarily."

Mayers is careful to say that Pleiades will probably not be the next step in man's exploration of outer space. "Logically, it should be, but the next step appears to be the manned station that is being planned by NASA.

"The difficulty with that will be that the presence of humans will inevitably introduce increased cost and complexity into the system design, and tend to compromise the many sensitive scientific experiments requiring a benign environment.

"My experience over a long period in association with complex flight vehicle systems is that one has to attack the design problem with a building-block approach, rather than pursue the high-risk path, particularly when funding, schedule, and performance requirements are all critical.

"An unmanned station is the most suitable next step for achieving high-quality space science experiments, not the least of which would be the use of the science platform as a test bed for ultimate design of the much larger space station.

Remember that there is no precedent for a large structure in space, and that such a structure would have to be successful on the initial mission. The Pleiades platform is constructed on the ground and is strong enough to accept both launch and aborted-mission loads, and stiff enough to meet dynamics requirements in space, both for the science experiments and the control system.

"A decision by NASA to go for a manned station raises enormous difficulties, including finding the huge funds required. It will need an effort on a national scale. Then, it becomes a political decision, with the guiding factor being the overt and deliberate efforts of the Russians for about two decades towards a space station.

"The manned station is expected to start off with a minimum budget of a billion dollars annually for about six years. Imagine what costs will mount to in the face of inevitable overruns and slipped schedules for the manned system, given the scope of other projects competing for funding, and the current and projected status of the required R and D base."

Mayers downplays his own part in Pleiades. "All I did was to organize and direct the course. The students did most of the work, and the quality of the final product is to their credit. I was one of only four professors, each of whom advised on a particular aspect of the work."

Prof. Peter Banks advised the Science group; Assoc. Prof. Bruce Lusignan the Communications-Power group; Prof. John Breakwell the Guidance-Control group. Mayers himself advised the Spacecraft group.

Out of the 40 graduate students taking part in the two-quarter project, 16 came from the Aeronautics and Astronautics Department; 10 from Electrical Engineering; two from Materials Science; four from Mechanical Engineering; and one each from several other departments, including Art.

Mayers speaks with affection and awe of Nicholas Hoff, emeritus professor of engineering at Stanford, whom he describes as the most important professional influence in his life. "A very great and brilliant man," says Mayers. "When I was a sophomore at the Polytechnic Institute of Brooklyn, Hoff became my first, last, and only major field adviser in both undergraduate and graduate studies. Ever since then he has been my mentor.

"Hoff's influence on me changed my whole career, first as an undergraduate student, then as a graduate student, and finally as an engineer, researcher, and teacher.

"His magnanimity must be mentioned, too. On three widely separated occasions, I have given him a negative decision in response to offers of research and teaching positions.

"In the last instance, he was chairman of the Aeronautical Engineering Department at Stanford when I wrote to him in 1961 inquiring about the advisability of moving from a technical management position in industry to a more scientific environment in a research and development laboratory. He replied by offering me an appointment as a visiting associate professor.

"After a year, a regular appointment was offered, but I demurred, unsure that teaching was my destiny. It was a foolish decision on my part. Anyway, we compromised on another year in visiting status, and when the regular appointment was offered again, reason held sway.

"Having been schooled by Hoff, I worked on research at Stanford in the same general area as he, which was examining the stability of the lightweight structural elements common to flight vehicles.

"The things we did have gradually found their way into textbooks and engineering practice. Specifically, in application to the semimonocoque construction found in aerospace vehicles, and in development of advanced theories for use in understanding the ofttimes anomolous behavior of realistic as opposed to overidealized conventional, sandwich, and other advanced composite structures.

"Most recently, we have developed an understanding of the failure mechanism causing crippling of composite plate structures, and have essentially closed the gap between theory and what has been observed in the laboratory."

Mayers showed to the interviewer different types of composite structures which have been developed for various purposes in space and aeronautics. "The goal is to distribute the combination of material and geometrical configuration to the point where you have the lightest structure to provide the greatest strength and stiffness for the static, dynamic, and thermal loadings expected.

"Naturally, factors such as cost, confidence, producibility, and maintainability limit the optimization process. Real-world linear behavior poses the greatest challenge.

"People are working on these problems all over the world, but we think our team is one of those at the forefront in attacking and solving problems in nonlinear structural mechanics, particularly those that would lead to realizing more efficient flight vehicle structures.

"Unfortunately, since the advent of advanced composites about 1960, research and development efforts have been rather piecemeal, and no concerted and organized effort has been undertaken in the U.S. to create a data base for composites comparable to the one that grew steadily and methodically for the aluminums, titaniums, and steels."

Mayers showed a specimen of the material chosen, after thorough tradeoff studies, to construct the major portions of the Pleiades system. It is a smooth, shiny, avocado-colored composite called graphite epoxy. It is made by putting together layers of bidirectionally woven graphite cloth impregnated with epoxy and bonding them together under pressure and temperature in an autoclave.

"It is extremely strong and stiff for its density," said Mayers. "It has the best combination of strength and stiffness per unit weight of any material currently available today at justifiable cost.

"For example, beryllium is stiffer but not as strong on a unit-weight basis. Some glass filament layups are often stronger, but not as stiff on a unit-weight basis."

Asked whether the Pleiades material was in advance of anything the Soviets had produced, Mayers said he thought this was probably so with respect to quality. "However, for a number of years now, this country has lagged behind in R and D. Not only Russia but Europe and Japan are pressing hard to forge ahead in R and D for aerospace systems.

"I hope the epitaph of the U.S. will not be 'We invented and others implemented.' Over the past two decades we have faltered in recognition of the critical importance of the R and D role and, of course, commensurate funding. Thus, other nations are either overtaking or surpassing us.

"We have no corner on intelligence or manufacturing ability. It all depends on who wants to compete. Certainly, there has been a huge transfer internationally of technology.

"As the records clearly show, we have educated in the U.S. a host of talented foreign graduate students in aerospace and related disciplines for some time now. A significant number of graduate engineering departments around this country would have vanished from the scene in the mid-70s had it

continued on page 23

Carpenter has been in every nook and cranny at Stanford

Carpenter Dick Meyer has been practicing his craft on the Stanford campus for 32 years, and like other artists, he signs his work.

"There's nowhere on campus where I can't find a job I did," he muses. "My name and the year I did the work is hidden all over. I have my name in the steam tunnel under the President's Office, in the dome of Memorial Church, the attic of the Museum, behind office walls, and under cabinets."

In the process Meyer thinks he has met and worked with more campus people, both faculty and staff, than anyone else at Stanford. The numbers are augmented by weekend work he has done for them in their own homes.

The occasion for reminiscing is his forthcoming retirement at the end of September. As for many other Stanford staff members, retirement for Meyer is the beginning of a whole new career—he and his son, Chris, will form Meyer Construction Company in Chico.

The way it was

When Meyer came to Stanford in 1952, the conditions of his employment included using his own car to get around the campus, and supplying and maintaining his own tools and work clothes. He took the job, however, because construction work outside the university had slowed down considerably, and his wife, Jean, was pregnant with their first child.

Encina Hall was still a men's dorm then, and Meyer laughs when he remembers the repairs that were needed every year.

"The minute students left Encina for the summer, we came in with a thick pile of work orders," he recalls.

On the other hand, the old construction still impresses the carpenter—"I marvel when I go up in the attic in the Quad. You don't find construction like that any more. It was all the best materials and workmanship."

Since then, Meyer says, he's been in every nook and cranny at Stanford. "I've been in every attic, in every basement, and on every roof on campus."

He's come to work from his Cupertino home at 3 a.m. to patch roofs during the winter rains, and to board up windows during the 1970 window-breaking sprees. He's seen buildings that he worked on disappear to make room for new ones.

"Few people today remember Woodpecker Lodge, the Oaks, Madrona, Russell House, and the old Post Office," he says. "The change I've seen is tremendous.

"People were very appreciative of the work we did. Things were different back then—they were a lot more personal.

"I went over to the Sterlings' house one rainy day to patch one of their flat roofs, and the President himself came out with an umbrella to meet me.

"Mrs. Sterling didn't like to bother us too often, but this time the leak was right over her bed."



Dick Meyer (left) shows graduate student Drew Batavia the changes made in his Escondido Village apartment to make it as easy as possible for him to maneuver a wheelchair.

Meyer values highly the personal relationships he's developed with faculty and staff members he's worked with—"So many people over the years."

He's also been inspired and challenged by Stanford's growth, both personally and in his work.

"Serving an outstanding and dedicated faculty, staff, and the great students has made my work meaningful and spurred me to do a better job. I'm thankful that I was able to be part of the challenge to excellence at Stanford."

The University has been growing ever since Meyer came to the campus, and it hasn't always been easy.

"There were growing pains in trying to keep pace," he admits, "but we've done it."

He believes that Associate Vice-President of Business and Finance Jason Mavis has been instrumental in making Operations and Maintenance a real supporting arm to Stanford's main goals of teaching and research.

What were the most interesting jobs Meyer has done?

One was building the platform from which U.S. President Gerald Ford spoke at the Law School dedication in 1974.

The most recent has been the remodeling of three Escondido Village apartments for quadriplegics.

"Jerry Parks (manager of Escondido Village) is a great guy," says Meyer. "He gave me a free hand to do whatever had to be done. I was able to work closely with the students to make the apartments functional for them on their own."

Doorways were enlarged or replaced with folding doors. Structural changes made room to maneuver a wheelchair throughout the apartments. Meyer built special furniture at the proper level for people who cannot use their hands in the usual ways.

Meyer, who came to Stanford with less than one child, now has four grown children. Bill teaches in Tracy High School while studying for a master's degree at Hayward State. Chris, with whom he will go into business, teaches at Chico State while studying for his master's degree in industrial technology.

Both daughters are married. Nancy, who earned two AA degrees at de Anza College, is a medical assistant in a San Jose hospital. (Meyer anticipates missing very much his frequent contact with Nancy's three-and-a-half-year-old daughter, his only grandchild so far.) Trudy, who also attended de Anza, works for an Oldsmobile dealer in the East Bay and lives in Newark.

"I'm not going to run away and forget about Stanford," says Meyer. "It's hard to leave, because of the wonderful people and working environment here."

And how could Stanford ever forget Meyer, when his name is written in all the buildings?

Pat Black

Chemistry prof wins IBM award

Nathan S. Lewis, assistant professor of chemistry at Stanford, has received a $60,000 Faculty Development Award from the International Business Machines Corporation.

IBM gives the award "to support universities in their effort to recruit and retain oustanding young faculty in key scientific and engineering areas."

Lewis received his Ph.D. in inorganic chemistry from the Massachusetts Institute of Technology in 1981 and came to Stanford shortly thereafter. He has done significant research on photovoltaic cells and is the author of 25 articles.

Scott appointed assistant dean

Beverly Scott has been appointed assistant dean of Graduate Studies and Research. Her primary duties will be to recruit and provide academic support services for Black graduate students.

Scott received her B.A. and M.S. in psychology at San Jose State University and her Ph.D. in social psychology from Stanford in 1974. She later served as an instructor and assistant coordinator of the Multicultural Department at DeAnza Community College.

Since returning to Stanford in 1979 she has served as assistant dean for minority programs in the School of Engineering and as assistant dean for extra-departmental programs in the Office of the Dean of Undergraduate Studies.

Ph.D.orals

WEDNESDAY, AUGUST 31

Curt Terwilliger, electrical engineering, 3 p.m., AEL 109.

Bollards, traffic bumps to improve safety on Via Crespi, Sequoia Lane

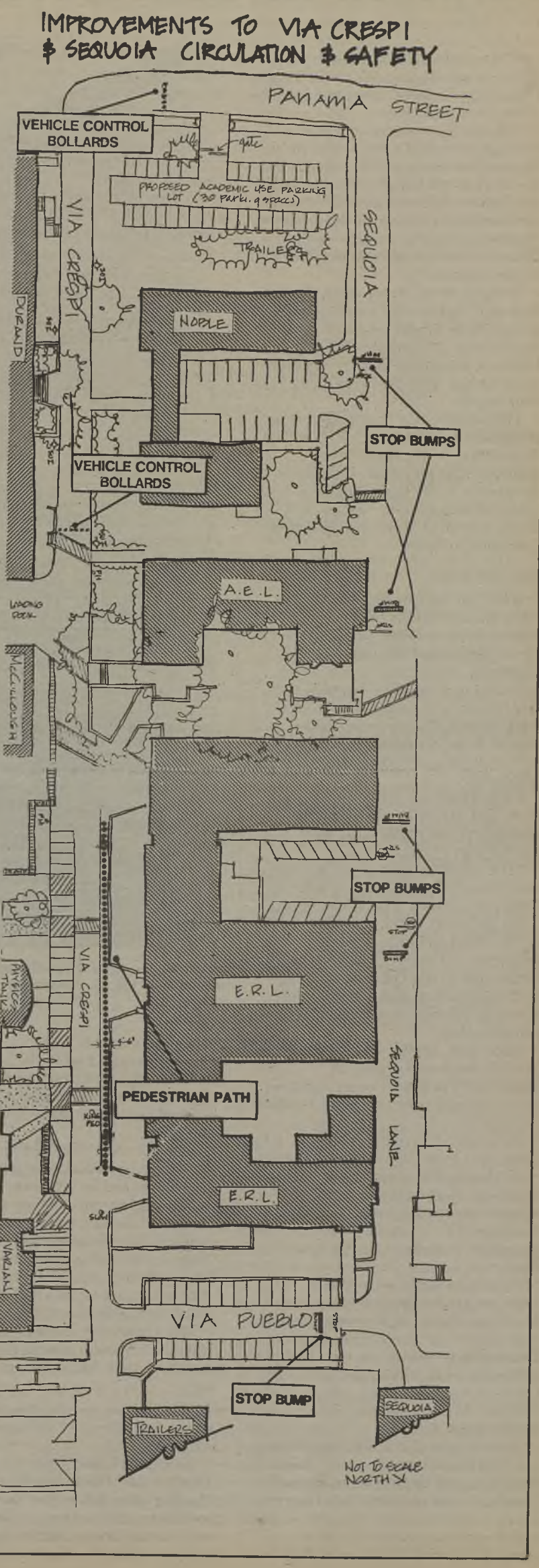
Conflicting and hazardous circulation conditions voiced by occupants of the Sci Tec Quad along Via Crespi and Sequoia Lane have prompted the implementation of several traffic safety improvement measures for this area.

In order to achieve safer conditions along these heavily trafficked thoroughfares, a system of vehicle control barriers (bollards), stop signs, "stop" bumps, crosswalks, and pedestrian paths is planned for installation in the immediate future.

Currently used throughout the campus, new wood bollards will be installed at two locations. One set will be placed across Panama Street east of Samuel Morris Way (the street between Terman Engineering Center and Roble Gym) on the northwest side of Terman Center, closing off northbound through traffic down Via Crespi; the other set will be situated a third of the way down Via Crespi between the Noble and Applied Electronics Labs (AEL) buildings, preventing southbound Via Crespi traffic.

"Stop" bumps will appear at four locations along Sequoia Lane and will serve as a gentle reminder that stop signs are positioned just a few yards ahead. A three and a half to four-foot gap on either side of the "Stop" bumps will provide safe passage for bicyclists. However, they too, should take heed of the newly posted stop signs.

To define a safer travel zone for pedestrians, a pedestrian path will extend the length of the Electronics Research Lab (ERL) along the west side of Via Crespi. Existing crosswalks will be repainted and several new crosswalks will be added to further increase the overall level of pedestrian safety.



Employee flu shots to be offered

Stanford will provide influenza vaccinations at no charge to all employees who want them between 1:30 and 4 p.m. every Friday, Sept. 23 to Nov. 11.

This year the flu vaccine will include three types of influenza: A/Brazil, A/Philippines, and B/Singapore. It will not contain swine flu. Adults and children over 12 years old will require only one dose.

Immunization will not be given to people who have colds or other infections, or who are allergic to egg or chicken. Each person will be required to sign an informed consent form that outlines possible risks in taking the vaccine. Immunization completed by Nov. 11 will have full effectiveness during the flu season.

The flu vaccine is recommended only for the following high-risk groups: those with heart disease, chronic lung disease, chronic kidney disease, diabetes mellitus or other chronic metabolic disorder, chronic severe anemia, such as sickle cell diseases, and conditions which compromise the immute mechanism, including certain cancers and cancer therapy. Those over age 65 should receive immunization; pregnant women must have their doctors' permission.

Parking permit fees to rise, cont.

continued from page 1

Yearian says. More "A" spaces will be created, especially by Memorial Auditorium, and they will now be "overbooked" by only 150 percent instead of the usual 200 percent.

Another change this year will affect those who drive more than one vehicle to work. Effective Sept. 1, employees will be allowed to purchase either an additional permanent sticker at full price for each vehicle or a "floater" sticker which may be transferred from one car to another and hung on the inside rearview mirror. If the floating permit is lost, stolen, or destroyed, however, a new one must be purchased at full price.

Three-member carpools will receive an "A" floating permit free of charge; two-member pools will receive a complimentary "C" floating permit.

"Many other institutions have used this 'floater' method effectively," Yearian notes.

Computer printed applications are currently being sent by I.D. mail to all faculty and staff whose 1982-83 parking stickers are due to expire Sept. 15. Those who have current stickers are encouraged to wait until they receive their applications before attempting to buy new stickers from the Police Department.

Those who do not have current parking stickers will be able to purchase their new ones on or after Sept. 1 in Room JE015 of the Stanford Medical Center or at the Stanford Police Department.

For further information, all employees are urged to read the summary of parking regulations issued by the Stanford Police Department. All comments on the new rules should be sent to the Committee on Parking and Transportation in care of Police Services, 711 Serra St.

Accidents and injuries

Accidents and Injuries Occurring During Weeks of Aug. 8-19

Type of Accident or Injury	Number of Incidents	Days Lost
Chemical inhalation	1	0
Impact with object	5	(0, 0, 0, 0, 1)
Cut by sharp object	3	(0, 0, 0)
Pinched, squeezed, crushed	2	(0, 5)
Fall from same level	5	(6, 0, 0, 0, 3)
Lifting improperly	1	5
Other	3	(0, 0, 8)
Overexertion	1	50

Chemistry pioneer awarded for 'leadership, dedication'

Stanford Prof. Henry Taube, one of the pioneers in modern inorganic chemistry, has been named winner of the 1983 Welch award in chemistry.

The award, $150,000 tax-free, will be given at a banquet on Nov. 7 in Houston.

Taube has already begun to spend the money. "My wife Mary now has a custom-made wooden screen door," he said.

In its citation the Robert A. Welch Foundation said the award was for Taube's "decades of leadership and dedication...."

"Taube's work in inorganic chemistry does not necessarily result in the direct development of consumer goods that are familiar to the general public, but his ideas and experimental methods are now the standard tools of many scientists in the field. He has changed inorganic chemistry to a degree that has been matched by very few others," said Jack S. Josey, president of the foundation, which was created by Texas oil man Robert A. Welch.

A native of Saskatchewan, Taube received his PhD from UC-Berkeley, and taught at Cornell and Chicago before coming to Stanford as a full professor in 1961.

His first teaching experience at Chicago was responsible for his interest in the reaction of metal complexes.

"I was asked to give an advanced class in chemistry, and I'd never given an advanced class. . .before, so I chose the particular field of coordination chemistry. It really embraces most of inorganic chemistry," he said.

"The organic chemists had done a good job during the '30s and '40s measuring and trying to understand the rates for organic reactions; there was virtually nothing in the field of inorganic chemistry of this kind, so in a sense it was a subject waiting for investigation.

"In the course of developing my lectures, I saw that there were many opportunities for research. This is an instance where there was really an important connection between formal teaching and developing a program of research."

Taube said the reasons the field was left open to him was that organic chemistry seemed, on the surface, more exciting.

"If you take an ordinary citizen he's going to be more interested in organic compounds. After all, the miracle drugs are organic compounds, the things we eat are organic compounds...it's the stuff out of which living cells are made."

"Historically, I guess, inorganic chemistry developed before organic--people were interested in the mineral world, but as the connection between chemistry and living matter developed, I think that was when the emphasis shifted."

Taube noted that living cells can't live without inorganic elements, metals such as zinc and iron, so inorganic research is hardly irrelevant.

Much of his research has centered around understanding reactivity, an important aspect of catalysis, vital to life processes and to industrial chemistry.

Henry Taube

"Most industrial catalysts are solids and the reactants are in a fluid state--it would be a gas or a liquid. The chemical reaction takes place on the surface of the solid, that's the place where all the business occurs," he said.

"It's very difficult to find out the nature of the catalytic site on the surface because they represent such a small amount of the total solid. Not every sites on a surface has catalytic action."

"There's another approach to the problem, and that's by studying catalysts in solution...because now the ordinary machinery of preparative chemistry is available. You can fashion a particular compound according to known procedures, find out if it's catalytically active, and you can begin to develop a relationship between catalytic activity and molecular structure.

"That's the direction that much current research is going.

"I think that the directions I took in 1950 are relevant to this kind of effort."

The Welch award was established in 1972 "to foster and encourage basic chemical research and recognize research which will contribute to the betterment of mankind. The winner is nominated by the foundation's scientific advisory board, comprised of leading scientists from throughout the nation."

The foundation was founded in 1954, and has provided more than $130 million in research grants to scientists in 49 Texas colleges and universities. "It sponsors chairs in chemistry, a lectureship program of outstanding scientists, a high school chemistry scholarship program, and an annual chemistry conference which each year draws to Houston some of the world's leading chemical scientists.

Taube has won many other awards, including the National Medal of Science, the Willard Gibbs Medal, and the American Chemical Society's award for Distinguished Service in the Advancement of Inorganic Chemistry. He is the eighth scientist to win the Welch award.

200 plan experiments for double-ring research center

More than 200 potential users of the Stanford Synchrotron Radiation Laboratory (SSRL) met here early this month to plan possible experiments for a new, two-ring research center that SSRL is considering to be plugged into the main linear accelerator.

SSRL may request funding for research on the feasibility of the double-ring concept in fiscal 1985.

The new facility is being considered because of the increasing demand for experimental time at the radiation laboratory, and because the increased brightness of the vacuum ultraviolet and X-ray radiation will make entirely new experiments possible, according to SSRL director Arthur Bienenstock.

The idea for the new facility, conceived by an SSRL committee formed last October, was announced at a recent physics meeting in Santa Fe, N.M., by Herman Winick, the deputy director.

The cost would be between $100-150 million.

"Support for synchrotron radiation has blossomed," Bienenstock said. "There's a belief among many that it is one of the most exciting ways to study matter. Technically, we have advanced beyond anyone else in the world, and everyone knows that."

Bienenstock said the current facility is turning away experimenters.

Considerable applications

Synchrotron radiation is a by-product of high energy physics. SSRL, an independent laboratory based at the Stanford Linear Accelerator Center, makes use of this radiation for experiments. The radiation has considerable commercial and medical applications.

The new facility would be built at Station 10, about two-thirds of the way down the accelerator.

SSRL hopes to build two storage rings--rings of vacuum pipe in which high energy electrons or positrons circulate at almost the speed of light and produce radiation as they pass through magnets--one on top of the other. In one, the electron energy would be five to six billion electron volts (GeV) producing X-rays.

The electron energies in the other would be one to two GeV, yielding soft X-rays and vacuum ultraviolet radiation.

Radiation would be split into 58 beam lines.

Both rings would take advantage of the latest technologies of wigglers and undulators, magnetic devices that increase the intensity of the radiation. The technologies were pioneered at SSRL

Old intensities insufficient

"What we're finding is that as we mature, the intensities that seemed so immense to us 10 years ago, are just insufficient for some of the things we dream about going after," Bienenstock said.

"When SSRL was first being built, we recognized that one of the things we would be able to do is look at a 'messy' material and get the atomic arrangements around a particular type of atom, some specific species that we wanted to study.... Synchrotron radiation was beautiful for that.

"As we had more time and more intensity, that technique has developed so that we can now tell about the surroundings of an atom that's present in concentrations like one part in 100,000.

"Why is that important? That takes you to the level of metals present in metaloproteins and metaloenzymes in biological systems. You can tell how the atomic arrangements are changing in those (systems) as the material is undergoing biological processes."

"What is more, we can now tell about atomic arrangements on the surfaces of materials.... Suppose you want to study how a chemical reaction occurs on the surface of a material, or oxidation, rust. In the very early stages, you have a small number of oxygen atoms and a large number of metal atoms on a surface. We can now tell the surroundings of just those metal atoms that are next to oxygen."

The new, more powerful facility can also be used to further studies in how catalysts work, or in the study of protein crystals.

Bienenstock said the purpose of a two-ring facility is that the new ring must be very large. "In order to get a very bright beam you need a very large storage ring," he said. "Once you do that you've got a lot of space in between different beam lines because the ring has a very large circumference, and therefore you can put two rings on top of each other and alternate beam lines for each."

He added that having both rings in the same building is more efficient for the staff.

The location has been determined because SSRL wants to use positrons, antimatter electrons, to produce the beam. Each of the stations along the line would be able to provide space and radiation for several experiments.

Bienenstock said that the new federal budget contains $1.5 million as the first part of a $12.6 million expansion of SSRL. The new money would provide ultrabright X-rays from the 16 GeV storage ring, PEP, would provide more space, and would improve the ability of the laboratory to continue operations through a larger part of the year.

Additional funds would go toward adding a new beam line at SPEAR.

The university administration said it had not made a decision on whether the university would make the appropriate investment on the project. **—Joel Shurkin**

Hennessy receives Villanova award

John L. Hennessy, assistant professor of electrical engineering and computer science at Stanford, has been presented with the Gallen Award from Villanova University, Pennsylvania, "for technical efforts which have yielded advancement in the engineering profession."

Hennessy received his undergraduate degree from Villanova in 1973. He later received his Ph.D. in computer science and taught at the State University of New York at Stony Brook and at Villanova.

An authority on VLSI design systems and architectures and programming design and implementation, Hennessy has published numerous articles and has worked as a consultant for a number of major corporations. He has been at Stanford since 1977.

Villanova presents the Gallen Award "to recognize oustanding contributions to the field of engineering, as an incentive to students to emulate excellence, and to personify the achievements of the college and its alumni." The recipient must also have maintained a strong interest in the promotion of Villanova's College of Engineering.

Nigerian students may face hardships if currency restrictions continue

Nigerian students at Stanford may face economic hardships if their country's new restrictions on currency export continue, say University officials.

A *New York Times* story last week reported that at least 10,000 Nigerian students—or half the Nigerian students in the United States— are not getting financial support from their homeland and may be forced to leave school because of that country's shortage of foreign currency.

Currently there are 12 Nigerian graduate students and one post doctoral student at Stanford. They receive funding from a variety of sources, including grants from the Nigerian Ministry of Education, several Nigerian Universities, private sponsors, and the Nigerian federal and state governments.

"So far there have been no real payment problems" says Ann Fletcher, assistant to the graduate dean for international admissions. A survey of Nigerian students taken last May showed no outstanding bills from Nigeria since 1975, she says.

The *Times* reported that the United States Agency for International Development is currently encouraging universities to require payment of Nigerian expenses a year in advance.

Although Stanford is not going that far, "We are watching the new students extremely carefully," Fletcher notes. Confirmation papers for Nigerian government scholarships must be in perfect order, she says.

Those students supported by personal funds coming from Nigeria may have the most difficulty, she adds. "We're asking those on personal funds to be sure that they have money with them when they arrive and to obtain official clearance for the transfer of funds by the Nigerian Central Bank.

"We're being very cautious and have even written extra letters to the students asking them to be sure that their finances are in order," she says.

Nigeria obtains most of its foreign currency from oil revenue. Current economic problems have been attributed to the recent oil glut and resulting lower prices.

Stanford Nigerian students study in a variety of fields, including history and business; electrical, mechanical, petroleum, and civil engineering; medical microbiology and materials science.

Humboldt Award winners meet Aug. 29

About 200 scientists from Germany and the western United States will gather to discuss current problems in the natural sciences at the Second Bi-National Colloquium for Humboldt Award winners, to be held Aug. 29-Sept. 1 at Stanford.

Among the speakers will be Stanford Linear Accelerator Center Director Wolfgang Panofsky, who will discuss "Current Topics in Arms Control," and Stanley Cohen, professor of genetics, who will comment on "The New Genetics: Opportunities and Problems."

Other topics will include "Free Trade: Crucial for the Prosperity of Western Enterprise?," "In Search of the Big Bang," "Accelerators and Physics," "Conserved and Variable Elements of the Genomes of Higher Organisms," "The Ebb and Flow of Atomic Chaos," and "Atom Probe Analysis of Alloys." A final round-table discussion will focus on "Transatlantic Scientific Cooperation."

Wolfgang Paul, president of the Alexander von Humboldt Foundation; J. E. Wallace Sterling, Stanford chancellor; and Donald Kennedy, Stanford president, will make opening remarks.

Hans Leeusink, former German federal minister; Heinrich Pfeiffer, secretary-general of the Humboldt Foundation; and Peter Hermes, the German ambassador to the United States, will also attend.

All sessions will be held in Bishop Auditorium, Stanford Graduate School of Business.

The Humboldt Award was established in 1972 by the Federal Republic of Germany to commemorate the 25th anniversary of the Marshall Plan. It is given annually to internationally recognized American scientists, enabling them to carry out research in the Federal Republic of Germany.

Since its modern establishment in 1953, the Humboldt Foundation has supported some 1,800 American scientists and scholars for one or two-year research stays in Germany.

The Stanford colloquium represents the foundation's continuing effort to maintain close contact with its former research fellows and award winners.



Art history graduate student Gerard Koskovich represented Stanford's GLAS (Gay and Lesbian Alliance at Stanford) at the Troisieme March Nationale Homosexuelle et Lesbienne June 18 in Paris. The March proceeded from the Place 18 Juin to the Palais Royale.

Installations, repairs delayed

AT&T dispute will affect campus

The labor dispute between AT & T and several labor unions will affect the telephone service provided Stanford University and Medical Center, as described below:

New installations, moves, and changes of lines, circuits, and station equipment have ceased as of midnight Saturday, August 6. Pending service orders process by Stanford Telecommunications and delivered to PT & and T on or before August 5 will be held by PT & T for post-strike rescheduling.

Any request for service received by Stanford Telecommunications between August 8 and August 12 will be processed and delibered to PT & T for inclusion in post-strike scheduling. Service requests received after August 12 will be date stamped, reviewed, and filed chronologically by Telecommunications for release in conjunction with strike settlement.

Any *urgent or life support* related service requirements should be communicated directly to Telecommunications, 7-1845, for special handling.

Repairs and system maintenance will be handled by PT & T management personnel. Any malfunction of station equipment should be reported to PT & T by calling (800) 242-2121. "Out of service" conditions will be given priority over lesser forms of equipment failure. Any *major* system failures, especially transmission facilities (tie-lines, foreign exchange, WATS) should be communicated directly to Telecommunications, 7-1845.

Telecommunications will keep the campus posted on the situation.

Letters to the editor

Kirkpatrick story needs correction

Editor, *Campus Report:*

I read with great interest the story on Emeritus Professor Paul Kirkpatrick, particularly the reminiscences of my father, Russell Varian. My knowledge of my father is dependent on others' memories as he died when I was 7.

I would like to make a couple of corrections, however. My uncle's name was Sigurd and he was a few years younger than my father. When Sig's plane crashed off the coast of Mexico his body was washed up on shore a day or two later.

Susan Varian Hammond, Director
Post Adoption Center for Education and Research
Palo Alto

'Wife and mother' isn't newsworthy

Editor, *Campus Report:*

If Catherine Milton's status as wife and mother is truly newsworthy, is it not equally appropriate to inform readers that Thomas McBride is also married and the parent of two children?

Or, to avoid redundancy, perhaps we should have been informed that the two of them have engaged in their joint family effort in addition to their many successes as individuals. As written, your "People" section of Aug. 10 is a depressing example of well-intended but not even very subtle journalistic sexism.

Wendy Gibson
Development Office

McBride's status as a husband and father was included in the story announcing his appointment as the Law School's associate dean in Sept. 1982.

Cohn: what feminism is all about

Editor, *Campus Report:*

I read Prof. Cohn's letter on feminism with interest and some understanding.

My thoughts, of course, immediately flew to the veiled Moslem women living under house arrest, the African women upon whom infibulation is practised, to the Indian women who are burned alive: a while ago it was witch burning and footbinding. . . .

This is what feminism is about. The enormous outrages and tragedies that are still *practiced* on human beings (women) in the names of religion and social custom are the greatest of all the stains on mankind.

It is sad that Prof. Cohn thinks that American society is falling apart because women are stepping outside their traditional role of slave lynch-pin to the family and seeking personal fulfillment and financial independence.

But imagine the converse, if men stepped outside their traditional roles of hunters, aggressors, and power-seekers we might have:

Peace on Earth.

Helen Kendrick
Los Altos



Fred Hechinger, president of the New York Times Company Foundation (in striped shirt), sneaks a glance at the *Chronicle* while (left to right) Michael Sovern, Donald Kennedy, Patricia Graham, Lawrence Cremin, and Robert Rosenzweig confer.

A reporter's notebook on the Pajaro Dunes conference Aug. 14-16, 1983

Universities respond to school plight

On Aug. 14-16, Presidents Derek Bok of Harvard and Donald Kennedy of Stanford convened an unusual meeting of research university presidents and deans of education at Pajaro Dunes, California.

Other participants included J. Myron Atkin, dean of the Stanford School of Education; Ernest Boyer, president of the Carnegie Foundation for the Advancement of Teaching; Lawrence A. Cremin, president, Teachers College, Columbia; Bernard R. Gifford, dean of the School of Education, UC-Berkeley; Patricia Albjerg Graham, dean of Education, Harvard.

Also: Hanna H. Gray, president, University of Chicago; Fred M. Hechinger, president, New York Times Company Foundation; Robert O'Neil, president, University of Wisconsin system; Robert Rosenzweig, president, Association of American Universities; Harold Shapiro, president, University of Michigan; Michael Sovern, president, Columbia University.

Michael Heyman, chancellor of UC-Berkeley, was represented by Doris Howes Calloway, provost for professional schools and colleges.

Muriel Cohen of the *Boston Globe* attended on the invitation of President Bok; Bob Beyers, director of Stanford News and Publications Service, attended on invitation of President Kennedy, compiling the following set of notes.

After dinner discussion Sunday, Aug. 14

Kennedy: This is a conversation among friends. It is not hyper-organized.

Since the initial plans for this meeting, there has been substantially greater momentum associated with public school policy. This is welcome, but it presents a problem: is the momentum derived from accurate feelings about public

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Presidents offer ten education guidelines

Following is the text of the Pajaro Dunes conference statement on research universities and the public schools Aug. 16, 1983:

We believe that the nation's schools are critical to the vitality of our society. Over the past two decades, substantial progress has been made in improving access to our system of public education, and in improving the academic achievement of younger children. Our next task is to press for continuing gains in achievement, without sacrificing our accomplishments in educating all of our young people.

The American public has, as it should have, high expectations of the schools. Recent reports, including that of the National Commission on Excellence in Education, have crystallized a general conviction that the schools are not doing as well as they might, and that they need improvement. We agree; but we also emphasize that as a nation we ask a great many different things of our schools, and often fail to provide them with the resources to fulfill our expectations.

Responsibility for the well being of the schools is not localized in society, but widely distributed. Government at all levels must assert a responsibility; Federal support, as well as assistance from state and local government, will be essential for real improvement.

Similarly, universities must play an active role if we are to insure excellence in a full-access system of primary and secondary schools. As university educators, we have a special concern for the centrality of *academic* objectives in the schools, and for the importance of teaching as an activity. We therefore welcome a role as partners and advocates for our colleagues in the public schools.

Help from the universities must derive from their institutional strengths and from their diversity. That help needs, furthermore, to be consistent over time: episodic interventions, like volatile government support, will merely raise expectations and then leave them unfulfilled. The way in which each university can help will depend upon its character and circumstances. Like schools, universities differ widely. Some have schools of education, others do not. Some have long histories of interaction with local schools, whereas others have little or no experience. For that reason, it is impossible to write a prescription for our institutions' commitment to the schools. But each university should look to activities such as the following, and choose those appropriate to its capabilities:

- Stre .gthening existing affiliations with elementary and secondary schools, or initiating new ones;
- Making improvements in educational practice through collaboration of university faculties with the schools;
- Improving teacher education programs, including opportunities for helping classroom teachers;
- Providing opportunities for the continued professional development of superintendents, principals, and other school leaders;
- Sponsoring special programs on campus for enriching the experience of students and of school personnel;
- Emphasizing research programs that are aimed at deepening understanding of education and at the improvement of teaching and learning;
- Encouraging institutional and faculty participation in collaborative curriculum development projects;
- Encouraging our own students to consider devoting part or all of their lives to teaching;
- Emphasizing the importance of teaching in the schools by recognizing especially successful teachers, or in othe ways;
- Serving, where needed, as sources of advice in the shaping of public policies affecting education.

Although the responses of our institutions will vary according to their situation, our intention is firm that they will respond positively. Recognizing the central importance of the nation's schools, we further commit ourselves to assist, by personal advocacy, the cause of public education.

Pajaro Dunes Conference

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education or are there misconceptions which should be dealt with when the train goes down the track?

Rosenzweig: Should we focus on public or institutional policy?

Kennedy: Both, but public policy probably is more important.

Bok: The focus should be on what the universities can do to help the schools including educating the public about the situation. We need some clarification about the true state of public education. The weakest part (of most recent public reports on the schools) comes in trying to figure out what should be done. There's a real paucity of concrete remedies.

Graham: Besides the material you have been sent in advance, there are reports forthcoming from the National Science Board on precollegiate math-science education, Ernest Boyer, and Ted Sizer, books by Diane Ravich on *The Troubled Crusade*, by Sara Lawrence Lightfoot on *Portraiture* and John Goodlad's study. These may prove more substantive and thoughtful than any committee documents. "What we have is a call to arms; what we don't have is a solution."

Kennedy: The politics of the present situation is interesting. The "Nation at Risk" report is a "kind of keynote," providing a large part of the political momentum, but very few specific cures or sources of funds for remedies.

The political momentum has been obtained at the expense of public regard for what we have (in the schools). To use a Vietnam analogy, some may feel "we have to bomb the village in order to save it."

Universities ought to try to channel the political momentum, try to repair damage to public confidence in the schools, to build public support for change.

Cremin: (After extensive discussions with Prof. Michael Kirst of the Stanford School of Education, past president of the California Board of Education) Legislative changes like those which have occurred recently in California and are under consideration in New York have been several years in the making.

(It is important for universities to correct some elements in the debate). "It simply is not true that this is the first generation that will have a poorer education than its parents." Universities need to carry forward the argument in the interest of truth. (He cited Barbara Lerner's recent Public Interest magazine article on How America's Schools Are Doing as more influential than warranted on policy).

Atkin: "Universities have been largely silent as institutions with regard to reform (of the public schools) especially since the late 1950s." The impetus now is from politicians, combined with extraordinary corporate interest.

Bok: There are four kinds of tasks the times call for:

1) To clarify what the situation in the schools really is: the data are inherently controversial, hard to figure out. The public view that everything's deteriorating is not true. There have been some striking successes—with younger children, for example. The greatest problems are in the high school, especially on middle class white students.



It's incredible how little we know about our average students. About 25 percent need remedial education . . .

—Robert O'Neil

2) To help the public to recognize that many groups and institutions share in the responsibility for the state of public education. Concern over the deteriorating student performance, the reduction in homework, the declining quality of textbooks, shorter school days, etc. is framed in a way that makes it look like the schools' fault. "Initially everyone . . .has some role to play in improving" the schools, "not blame excessively" those in the schools.

3) To overcome the "deplorable lack" of specific, instructive remedies by suggesting practical policy measures.

4) To work directly with the schools in preparing teachers, discussing curricula, etc.

Shapiro: It's right not to blame the schools. . . . The fact that there are some good schools doesn't solve the deep concerns for the system as a whole. There are lots of recommendations for more order, more homework, classwork, etc. but no operative plans.

Graham: There's lots of talk, not much concrete advice. "The 'how' part is in short supply."

Shapiro: Even though the schools may be better, the gap between where we are and where we need to be is greater than before.

Kennedy: It's a very delicate question: how to (improve the schools) without blaming the victim. (The poor academic standing of high school graduates considering teaching reflects the fact that) "for 10 years or more, society has been implicitly, explicitly discouraging teachers." Not explaining the complex array of social problems (affecting the schools) adds to the discouragement (of finding solutions). As a tactic, we might be more encouraging than we feel about exogenous problems so we can tackle them better.

Sovern: (Don't minimize the problems).

Hechinger: Public education is overadministered, largely by people who are less capable than teachers and principals. Most reports increase the power of educational administrators, mainly through the state, thereby further discouraging (those in the front lines).

Most proposals give additional orders to school boards and administrators—very little to improve the quality of the people and locate more power where the action is.

Past reforms often failed because they didn't deal with the problems of teachers, and didn't make them part of the process (of solutions). Universities can help try to reverse this process 1) by improving the quality of the teachers and principals, 2) by improving training, and 3) by working for improvements at the grass roots—not have outsiders tell teachers to do more of the same.

To improve education on the firing line, universities may run around legislative proposals, state commissions, etc.

Gifford: It's no accident this window of opportunity for education is not the result of university presidents or campus-based educational reform.

Over the past decade, major research universities were not only negligent but in many ways aided and abetted conditions we now find deplorable.

High schools and schools are very much governed by the universities, at least as seen by one from the belly of the largest school system in the country. Universities are intensively, positively ignorant of the impact of their policies on students. When UC or Columbia change admissions or requirements, students in high school feel the impact. My personal impression is that students who choose to study education are systematically discouraged on college campuses).

Major research universities have had nothing to say to the people who govern schools, and it shows. High school teachers find no sympathetic community of scholars. Research universities are part of the problem, but we haven't realized the connection between our behavior and the decline in the schools. Many have given up on schools of education. They have written off the enterprise only to reap the results of neglect. Major research universities are not in the forefront of reform.

Graham: A hundred years ago, faced with similar problems, Princeton and Wisconsin went down to very different tracks: Princeton resuscitated Lawrenceville, while Wisconsin started to work very closely with the high schools in the state.

O'Neil: One of the consequences is that we know much less about our entering freshmen. The cozy relationship may have led to a very deficient data base. It's incredible how little we know about our average students. About 25 percent need remedial education, chiefly white students from urban and suburban high schools.

Boyer: This is an important meeting. It could help give direction (to change in the future). I'm not sure what's going on today: not sure it's a great reform, a political aberration or a media blitz. I hope we are in a period of great reform. "Current interest in reform may be a mile wide and an inch deep."

Corporate America became interested in the schools several years ago. The interest of educators themselves in reform was not strong and went "relatively unnoticed."

Demands for minimum competency spread rapidly across the country.

A look at demography—the aging population, growth of minority enrollment, etc. (including decline in families with children in school)—you could argue that public schools are more vulnerable, and that this period of transition if not constantively sustained could leave us worse off than before.

It's not like the late 1950s, when the issue touched every family.

I'm suggesting that this is not necessarily an authentic reform movement. We may simply have a series of reports, with the President riding in on a white horse. We need more responsible voices. Corporate America helped somewhat out of enlightened self-interest.

University leaders are still voices of stature, credibility. (University presidents, corporate leaders, and maybe a clergyman or two can get the White House to return their calls.) When people in these institutions (universities speak), others listen. (laughter)

Current headlines have so highlighted internal failings (of the schools) they could (make solution of problem more difficult). Older people may simply set back and say they'll do nothing until "those school people fix it."

"If (reform) is not well directed (school support) could evaporate as quickly as it exploded." Consensus (for change) is shaped by responsible media. (People need to) hear about the practical steps they can take.

Kennedy: I agree universities are not active enough. It could be very useful to combine a statement to the public with what (our) institutions should do. Too many people in research universities have lost interest in schools. The wan-

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Robert Rosenzweig and Patricia Alberg Graham

Pajaro Dunes Conference

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ing started when the bubble of science curriculum reform started collapsing in the 1960s.

Graham: Within universities, schools of education remain relatively poor in resources.

Cremin: Universities train people and illuminate public discourse. The next phase of curriculum development is not updating (what we already have). Universities and the schools haven't wrestled seriously with the problem of teaching math, algebra, and other subjects to the last third of those enrolled in the schools.

Universities need to work with teachers on curricula for those who are more difficult to teach than they do for those who are easy to teach (so students will not opt out in favor of films or less substantive academic material) I hope for collaborative efforts to produce new curricula.

Atkin: To even begin, universities have to convey understanding and even sympathy for what the schools are trying to do. The rhetoric of reform has been harsh, suggesting willful misbehavior. We can use a softer language, with honesty.

Teachers are no more stupid—or less stupid—than politicians, businessmen, and others. They are dealing with a complex situation, often very intelligently.

Public schools are very responsive institutions. If we see their adaptive quality, then we may make suggestions that have possibility of success. Collaboration doesn't come simply. It often requires a different attitude than one finds among professors.

Bok: As a rather sober prelude, what have universities done that has been of lasting, constructive value for the schools? A great deal of the history of reform resembles a pendulum. A lot hasn't stood the test of time. (Conant urged school consolidation in the 1950s, now Goodland favors smaller schools, for example). What's made a constructive difference, a real difference?

Graham: We need to distinguish between what universities have done regarding public policy and what they've learned through research. Universities as a matter of policy and self—interest created a network of relatively easy access: this filled the freshman class as well as a public commitment to educational opportunity.

Cooperation (between the universities and the schools) existed concerning curriculum and progressive education (in the Eliot era at Harvard, for example). There have been relatively few of these kinds of meetings (i.e., like Pajaro Dunes) in the last 30 years or more.

In research, there are several good things to say: we know more about teaching kids to read, for example, even though the findings have been "sold" with difficulty to the publishing industry.

Universities are at their best in training teachers who go into schools. (Referring to major research universities) "we've largely gotten out of the business of teacher training in the last two decades. Years ago, I fought a long and largely unsuccessful effort to get Columbia undergraduates recognized for teaching in the schools. That's still a very important issue. As long as we regard high school teaching as laughable (not much good will happen)."

Bok: What about the impact of curricular reform?

Graham: I have a rather iconoclastic view: What youngsters need from schools is minimal mastery of the basic tools of writing, speaking, math, etc. coupled with unbridled enthusiasm for science, history, etc. University-based reforms have not sought to instill enthusiasm but to master the subject material.

Atkin: 20 or 25 years ago, university reforms enhanced high school teaching. High school teachers, for example, would identify themselves as "physicists," where now they would call themselves "teachers."

Kennedy: The significant work product wasn't books.

Sovern: During the Vietnam War, a great number of very talented youths became teachers to avoid the draft. They took this work very seriously. (That's an impression, not highly documented by research.)

Graham : The first year, they were likely to be pretty bad teachers, but in the second or third year they could become pretty good.

Bok: What was the effect of the MAT (Master of Arts in Teaching) at Harvard and elsewhere?

Graham: Men were more likely to stay in the system, while women stayed three or four years, then got out for other options opened by the women's movement or simply for "domestic bliss." The women tended to come from higher social class backgrounds and were more intellectually gifted than men in the MAT program.

Boyer: What about the universities' influence on standards in the high school curriculum? Schools tend to gobble up and duplicate these with "an absolutely stunning influence" from the top down.

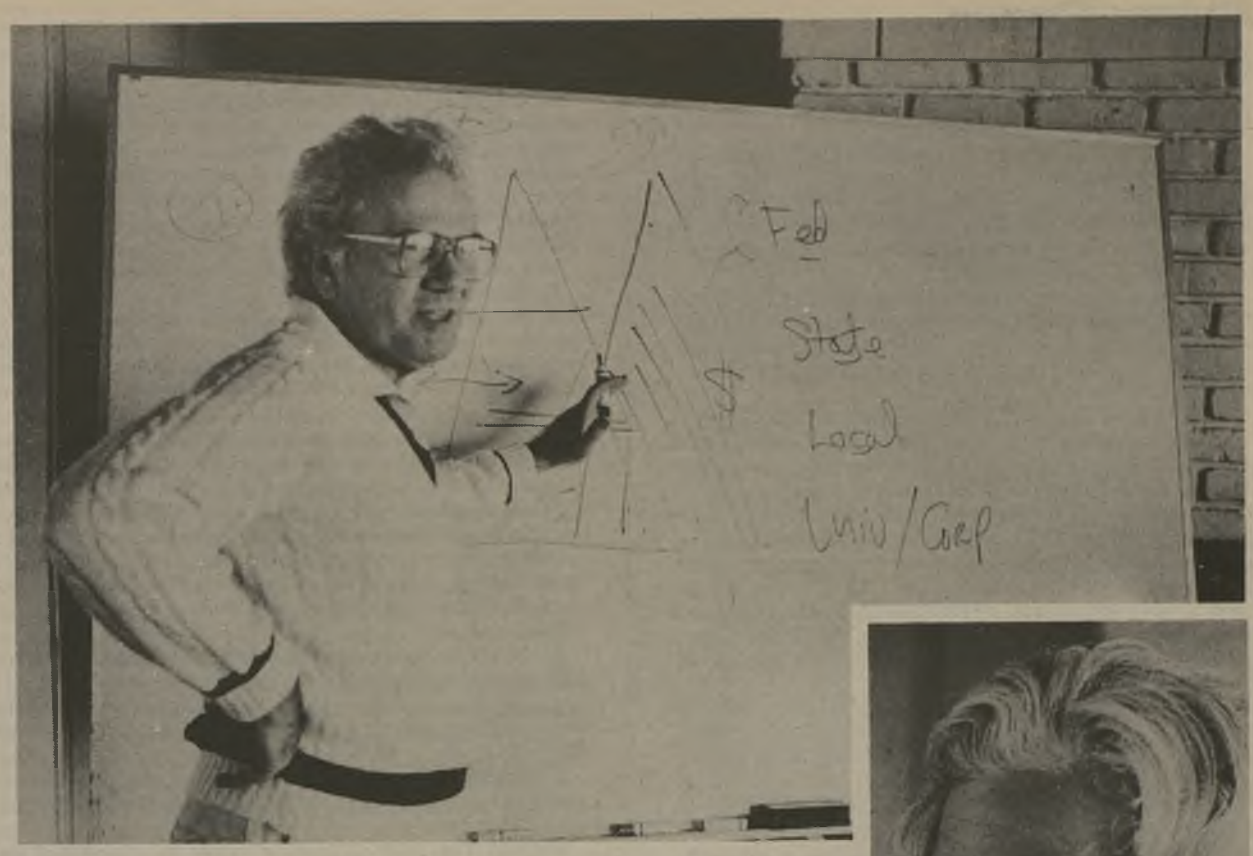
Cremin: From roughly the 1880s to the 1920s, universities, education schools, and high school teachers were one profession. The College Board and the Committee of Ten came into being. But the profession was dominated by the universities.

There was a progressive separation during the 1920s, '30s, and '40s. In the 1950s, a rapprochement began, with the universities no longer so powerful. In some cases, the universities abandoned their standards.

Now we're trying to define rapprochement on a new basis. The U.S. Office of Education, under Francis Keppel and Harold Howe in the 1960s, had funding for a tremendous variety of cooperative activities between universities and the schools. But later the universities fled from the schools: cooperative programs with individual schools didn't work because of the arrogance of the faculty, the intractability of the problems, and the desire for greater autonomy among the people who were being "done to."

Graham: Isn't that a good cautionary tale?

Cremin: Yes.



There's a sense among teachers especially—and also among principals—that they're trapped, unrecognized . . .

—Ernest Boyer



Hanna H. Grey

Monday, Aug. 15

Bok: The way reports on the schools are understood by the public "the picture is painted in too uniformly gloomy terms" and significant achievements are overlooked. The country is wakened to a problem by being "hit over the head," not by an even-handed approach. This tactic may attract the public's attention but only by weakening the morale of those who work in the schools.

A large part of the public's confusion comes from scholars in the universities trying to attract attention to themselves with "very strong criticism." "We in the academy should recognize our rule in creating confusion and our responsibility to try to reduce it.

There appears to be a "heartening" consensus on the factors responsible for our problems. But these are not put in a social context. As a result, the schools and people in them are blamed without recognizing the effects of family, community, and other social factors that limit what schools can accomplish.

Fred Mosteller "guesses" from exemplary schools that achievement could be improved by one-third to one half a standard deviation if schools adopted the best possible practices. That's worth doing, but it's not nirvana. There's a danger of overpromising what the schools can do by themselves to improve.

Suggested remedies are the "most deficient" part of the recent reports. Like the statements by political candidates concerning education "they don't strike me as hard hitting, effective, or well thought through.

Now that public concern has been pumped up, the concern could blow over with no lasting effect or hasty, impromptu reforms could be passed without adequate analysis. There's a very high stake in doing everything we can to achieve significant change.

Kennedy: The proposed remedial actions are "disappointingly vague." The "Nation at Risk" report was "outlandishly incongruent" in issuing "a clarion call for action" and then "exempting the Federal government from any responsibility,". . .there isn't any free lunch.

Shapiro: How confident are we that we can deliver if society decides to give the schools a greater share of the national wealth?

Bok: Is it possible to agree on a limited number of reforms?

Boyer: Money is clearly part of the response, but the nub of the problem is people. There's a sense among teachers especially—and also among principals—that they're trapped, unrecognized, not connected professional with colleagues who can give them status.

At the heart of the problem is how we can convince people in the schools that teaching is an important job. Only then can we draw more people into the schools as teachers.

Universities can play an important role, both symbolically and in fact. Teachers are asked to do a great deal with little support and very little recognition.

For the President to raise the problems of the schools as a natural crisis and then walk away is a bit like announcing World War III and then saying "tennis, anyone?"

The President should urge full funding of Title I and bring it up into the junior and senior high schools. The past record of Title I for compensatory education is encouraging.

Similarly, the NDEA teacher training program had important impact following sputnik. It was one of the key recovery mechanisms we had, a mixture of attitude and substance that renewed the profession. Universities and the schools were brought together.

In teacher recruitment, those in the schools need a sense of status. "You can't recruit good people into a bad profession."

Conditions in the schools are often "very grubby"; there is no time for professional development. Most school districts don't even have a dime for travel (by teachers to professional conferences).

Teaching has been in a downward spiral. We kid ourselves by proposing a longer school day or longer year while ignoring people.

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Pajaro Dunes Conference

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Gifford: The dollar problem is large. To make change, we need to increase salaries 25 to 30 percent to attract good people. California has authorized $800 million more this year, $900 million next. The last $200 to $300 million is crucial. If the state falters and full funding doesn't materialize, it could all come to nothing.

Graham: The most fundamental problem is there's no unanimity among educators and the public about what the schools should do for children. Many school people believe a significant portion of the children simply can't be educated. Part of the public agrees.

Ambivalence, ambiguity over goals hurts recruitment.

Cremin: The Gallup polls in 1981, 1982 bear out this concern. They showed more consensus for tighter academic standards well before the recent flurry of reports.

My hunch is that the best reform effort won't see a basic difference in the kind of federal involvement in the schools. . . . The 1965-72 authorization packages provide a really feasible set of reforms. . . (In a 1972 article on the Great Society educational reforms, published in Public Interest, Ralph Tyler found the reforms worked extraordinarily well but to make the system truly universal would cost even more than we thought. . . .

If we're going to move ahead on the federal agenda broadly included under equity, we can't pass education for handicapped children without putting money in to enable teachers to deal with the mainstream kids. I'm for including it under equity, but (that act) created quite a degree of chaos in the schools by court mandates forcing teachers to deal with new clienteles without funding, training, or research.

The enactment of noble dreams, supported by the federal courts, contribute to the disspirited feeling of teachers and loss of achievement in the schools.

Bok: If there's agreement on goals, then progress is possible. But if there's disagreement on goals—excellence versus equity—then it will be very difficult to agree on a coherent program of reform.

Graham: This set of reform proposals caught the public mood of concern.

Boyer: Equity has been regarded as a federal obligation.

(Using charts he shows goals, attitudes, and programs are related) Conflicting goals reflect federal actions, court decrees, and changes in family life which have tended to make schools a social service center.

Sovern: Don't despair on dollars. Corporations recognize the country has been deficient in human capital investment. This may be the moment when it's possible to generate substantial additional support. It's obvious the Democratic candidates think so.

If one can articulate the importance of investment in human capital as well as physical capital, a national commitment of new funds may be possible.



With the right incentives, teaching could again become a popular way to spend all or part of one's life. **—Michael Sovern**

Rosenzweig: (From President Reagan's perspective, California's recent actions may illustrate the value of keeping the federal government commitment down and watching the state commitment to schools increase).

Hechinger: University role should include speaking out on federal policy, such as tuition tax credits. To gain credibility, universities should lay out their own program for involvement with schools.

There's never going to be consensus about what kids should learn. Universities schools together should arrive at basic curriculum acceptable to all students. Shouldn't be done the way the College Board did; that was totally irrational.

Universities should encourage faculties to work directly with schools, and enlist teachers from outset in reform. Nine out of 10 teachers are trained in small institutions, some of which are pitiful. If some research universities set up model teacher training programs, they could have an enormous impact. They might also help struggling institutions.

Atkin: There's a clear government roles in helping fund education for the handicapped. Universities should be much more central on curricular questions historically, universities have unique strength in teacher preparation and a strong influence on school curricula.

O'Neil: How important is it for research universities to acknowledge past errors, such as withdrawal from teacher training, laboratory schools, education school cutbacks. At Wisconsin, I found education enrollments dropped 25 percent since the mid-1970s, following a 20 percent decline in the early 1970s. Overall, about 20 percent of the faculty positions for education were eliminated.

Bok: *Nostra culpa* would increase our credibility.

Kennedy: That's right.

Some very modest federal expenditures could have highly leveraged effect on schools. Universities can encourage more people to enter teaching. Salaries are a state obligation.

Graham: Don't forget the federal role of support for research.

Gifford: For the past three years, UC-Berkeley Chancellor Michael Heyman has invited the principals of the 30 schools that provided the largest number of students to our campus. One result of these meetings is a marked improvement in the spirit and morale of these key actors in Berkeley's education interests. Also, we try to let high schools know how well their students have done at Berkeley. This feedback also helps to improve the university's relations with the high schools.

In the 1960s, American Physical Society had lectures by high school teachers and by professors concerned with science education in schools. Now professors have turned their backs on those who produce the apprentice scientists. Good teachers in the schools feel isolated, unappreciated, and unloved. Professional schools might encourage prospective students to consider teaching for a few years before enrolling for full time study.

Sovern: The same suggestion might be considered for Ph.D. candidates in science. It's interesting to note that the professions of law, medicine, and dentisty—even some fields of engineering—appear overpopulated. With the right incentives, teaching could again become a popular way to spend all or part of one's life.

Boyer: These are very exciting suggestions. They sound almost embarrassingly simple. Still, you can't overstate their value. Recognition which may look marginal inside the university but it can carry real clout outside.

Graham: My sense is there's going to be a teacher shortage. Universities aren't noted for their lightning speed in responding to such changes. We need to rethink teaching careers. Teaching isn't bad for 21-year-olds. It offers a lot more autonomy than most fields.

Nontraditional sources of teachers can include older women, engineers trained in the 1940s and 1950s, and graduate students, especially in the humanities, if there's a way to get them certified.

Sovern: Many first class writers (free lancers average about $5,000 annually at present) could welcome income from teaching English.

Graham: Schools have to be flexible enough to use people. Often nontraditional teachers don't fit into the school culture easily.

Monday afternoon, Aug. 15, review of education school programs

Atkin: Stanford has built on its strength in applied special science while emphasizing its role as a professional school encouraging the faculty to rediscover its professional roots. A three year, $1.5 million study of Stanford and the schools involves six districts from San Francisco to San Jose. We have worked intensively with school people to define areas for study, try to make sense of findings, develop recommendations. Social scientists from outside the Education School have been working closely with us. There haven't been as many faculty from other areas, particularly subject fields of high school curriculum. We've identified 12 to 20 people, but don't have a significant share of their time.

Shapiro: Yale's New Haven project has the same problem, especially in science.

Atkin: Long term hope is for a permeable boundary between schools, university. Prof. Larry Cuban now holds seminars for Santa Clara, San Mateo county superintendents. I hope some of these superintendents will contribute to the analytical literature. They have much to say.

We need to inject greater stability into the (national school) system. Periodic overcorrections are a problem. First there's too little joy, then too much.

Stanford is serious about teacher education. We have a four quarter program, whose enrollment has increased to 48. We get extraordinary students, about half from Stanford. GRE scores are exceptionally high. There is a cadre of students interested in teaching, even at research universities.

Professors Gage and Shulman are running a seminar for teacher educators from SF State, San Jose State, Hayward, UC, and other institutions.

Stanford Teacher Education Program is heavily internship based. It had been a STEP-child, but now haas a regularly assigned faculty billet.

I'm concerned about overcorrection, especially large reforms such as tuition tax credits or vouchers. "If your goals are not great, you're not paralyzed" and can make meaningful changes.



Bernard Gifford and

We need to inject greate (national school) system. P are a problem. First there's too
—J. Myron

The effect of principals has been mainly shown at the elementary school level. There's reason to think elementary principals are more like high school department heads than high school principals.

Atkin: Politicians deal with issues very rapidly. James Guthrie of UCB and Michael Kirst of Stanford have a proposal on policy analysis for California education, geared to political timetable (a professorial night shift) for short-term analysis. This would be for very short term analysis. The Institute for Educational Finance and Governance provides long-term work. We enjoy close relations with Sacramento.

Shapiro: Universities may be fundamentally unsuited for that kind of activity.

Cremin: They also can become political scapegoats.

Graham: At Harvard, over the past 20-30 years the issue of mission has been a central concern, we're also highly tuition dependent. Teachers have great difficulty coming up with $8,320 a year. Increasingly we are a professional school.

In 1979, the faculty voted unanimously to reengage with the schools. Now about half to two-thirds of our faculty are so involved. The extraordinary interest in public policy has receded.

We are taking a different approach from Stanford. For school leadership, here's a Principal Center which enrolls 500, including 70 Boston area principals (about one-third are actually not principals but other school leaders). The curriculum is heavily driven by the principals. Summer institute drew 100 this year.

All summer superintendents seminars included dinner with Bok, which was profoundly important symbolically, plus a series of philosophical talks by Harvard faculty on science, demography, etc.—NOT how to finance schools, etc.

Graham: Harvard voted to get out of teacher training in 1972, voted to go back in this spring. Our reading laboratory was almost closed several years ago, but now is active. Research done years ago is now beginning to pay off in improved reading. Research interest is now shifting to writing and comprehension; results will take a decade to see.

In public policy analysis, I'm terrified of overpromising. Frank Keppel is working with graduate students, who have professional experience in the schools.

Our problems include student interest; money, we may be pricing ourselves out of the market for education professionals; interest in the schools—about 40 percent of our total faculty effort now is directed in this area; and overpromising.

Cremin: You'll lose to the divinity school; they'll promise anything. (Laughter)

Kennedy: The conventional wisdom is that schools of education are poor development prospects. Our development staff is surprised at how much support has become



and J. Myron Atkin

eater stability into the . Periodic overcorrections too little joy, then too much...
yron Atkin

available for the Stanford and the schools project.

Shapiro: It's not as hard as people say. It may be much easier when a proposal is related to something outside the Education School—having the English Department involved in a writing project, for example.

Hechinger: (on school involvement). The University of Pennsylvania helped sponsor professional meetings for teachers from the high schools. The program has now spread to 15 states.

Gifford: The Bay Area Writing Project, now gone national, has helped to spawn a new profession; teachers of writing. The Bay Area Math Project has found that math teachers often don't know each other, even in the same district. It's not difficult to arrange: in Oakland 50 to 70 teachers got together for the first time in 30 years.

Boyer: Harvard's priorities are very much in keeping with the ideas of our study: leadership from the great centers of learning can revitalize school leadership. The Harvard institute for principals is a good example.

Here's another suggestion: corporations that have their own campuses could open them to principals for one or two weeks, with the companies providing scholarships and the universities providing professors for the program.

In teacher training, educating those already in the clasroom may be a better short-term good than making changes for newcomers. For the immediate future, excellence lies with those now in the schools.

Shapiro: Should resources be reallocated to inservice training?

Atkin: Stanford is likely to put more resources into inservice education. The average age of teachers on the Peninsula now is 52.5.

Gifford: List of expectations and hopes at Berkeley:

Teacher education programs now almost the same as those as state colleges. Entire school ought to be experimental.

We need to increase understanding, support of education as a field of study. Heyman swam against the tide in keeping the School.

We need to reinvent, rationalize the professional degree Ed.D. regarded as second rate.

We need to define the mission of the school. We have a natural advantage in math, science, technology education.

Need to upgrade concern for gifted. We have 320 students age 10-14 who score above national norm in SATS. The gifted are uniformly neglected, sometimes even punished in the schools.

Next year plan a microcomputer institute similar to Stanford's.

Hope to give Stanford, Harvard a run for their money, especially in language, literacy, math, science, and technology.

Bok: To paraphrase the women's movement, you have to be twice as good as Harvard and Stanford to receive recognition. But fortunately that's not too hard. (Laughter)

Gifford: That's the same as what my family used to say. My grandmother fed me a steady diet of black biographies—Jackie Robinson, Ralph Bunche, etc.

Cremin: Teacher's College is much larger, more autonomous than the schools of education at Harvard, Stanford, or Berkeley. (It has its own board of trustees, for example). We're probably closer to Columbia academically and intellectually than we've been in a long time.

Our effort during the past decade has been to broaden teaching from a school of schooling into a school of education. By that I mean we've given more and more attention to the education that goes on in families and day care centers and nurseries and workplaces and over television. But we've also continued to be deeply interested in the work of schools, especially in the context of the education carried on by these "other educators."

We have a new pre-service Ed.D. program that prepares people for entry into a variety of educational roles, including school teaching but also leaders in museums, daycare centers, and telecommunications agencies.

We have a new program for preparing professional, in day care, and a new Infants and Parents Center that's been widely used as a model, including at Middlebury College.

We have a new research center on education and the American economy, a master's program for education leaders in business organizations, a new dept of communications and telecommunications.

Our Horace Mann—Lincoln Institute has a network of 50 schools involved in defining is research. Unlike others, we did not close out our teacher education programs. When enrollments declined, we completely redesigned our initial teacher training program. We have our own subject matter specialists—in English, history, biology, and music and art—on the faculty as well as our own specialists in teaching and learning.

There's been a tremendous development of continuing education. This year we cut our summer courses drastically, put money into 80 workshops and a mob of people came in for periods ranging from a weekend to three weeks. We designed programs with people in the field, particularly alumni.

Our formerly separate departments of administration and curriculum are now collaborating , we're moving toward a more generic program.

Columbia has started its own relationships with local schools above and beyond the above of Teachers College, involving faculty members in the liberal arts from Columbia College and the Graduate School of Arts and Sciences.

Gray: The University of Chicago abolished its School of Education in 1974 but continued a graduate department in education with faculty from many social sciences disciplines, often in joint opportunities. It has been very intensively engaged with its neighborhood for 30 years. It also operates a private school and a school for special children (established by Bruno Bettehheim). MAT is not heavily subscribed, but remains quite vital.

The University runs a summer seminar with Chicago school superintendents and has a large investment in a program for inner city youth aged 10-12 to 16-18.

Scientists generally are interested especially in talented students and faculty in those who are college-bound. Faculty can be "terribly conflicted" and have "especially strong, unrealistic views" of what education can do. They may have in mind only one kind of student. But they also have broader concerns as citizens about secondary education more generally.

The internal culture of research universities often looks down on educlation social work, library science. There's a pecking order of professional education. Some make a desperate attempt to become "pure" researchers for status involved.

Kennedy: The dynamics of getting faculty involved in the schools may be both hurt and helped by the presence of a school of education.

Bok: Hunch that Yale, Chicago "probably have a distinct edge" in getting faculty involved because of the vacuum left without an education school. Elsewhere faculty may simply "leave it to the education school." (Graham later questioned this.)

Cremin: Princeton has only a very small teaching program and practically no faculty involvement in schools. It depends on tradition, the president, and other local factors.

Kennedy: We may need to find the moral equivalent of the curricular reform movement of the late 1950s to give high school teachers the same access to professionals in the colleges.

Graham: That could be a two-edge sword. . .we need to find ways to inspire teachers to reach the bottom half of the student body.

Hechinger: The overwhelming majority of science and math teachers start growing more professional once they start teaching.

Bok: Community colleges, state colleges may be better to do updating of teachers. To bring science teachers into Harvard Physics Department for this purpose is "not sensible."

Shapiro: Agree. I'm very skeptical of making teachers colleagues. Having people come in from the universities to the schools won't do.

Atkin: You have to capture the university professor's interest intellectually.

Boyers: Case studies suggest that course success (for teachers brought to universities) depends 1) on faculty quality and 2) teacher involvement in shaping curriculum for the course. They want to feel part of the action, get the best of what's offered.

Rosenzweig: (Questions pessimism. Notes that NDEA programs for teachers worked well, and that NEH is successful now.)

Bok: Suggests faculty interest diverted by summer stipends for research.

Kennedy: Disagrees. Peak of summer institutes and research support coincided.

Graham: Typically strongest members of university departments are apt to be interested in working with high school teachers. Toughest problem is to match what professor wants to teach with what teachers want to learn.

Atkin: Faculty interested in undergraduate education also are often willing to work with high school teachers. Quite senior people may become involved in revamping curriculum—they want to discover new ways of presenting material.

High school teachers may fear the uncertainty that professors like in presenting material.

Bok: Perhaps there should be more work with videotapes to help people become better teachers (cites tennis instruction as example). Notes Harvard has set up branch in Medical School for this purpose. "Soon the main office will be there," Kennedy quips.

There's been considerable success with microteaching.

Graham: notes AFT is doing teacher training in Toledo.

Atkin: Teachers rarely have opportunity to see how other teachers handle problems. A videotape library could help.

Long, sustained relationships with state agencies can make a difference . . .

—Harold Shapiro



Bok: Very few people have any idea how they look in the act of teaching. I'm surprised how many young teachers are willing to expose themsevles and how much they get out of seeing themselves (on TV).

Calloway: Berkeley established the Lawrence Hall of Science as a public teaching museum. Some faculty have participated in its programs but it is staffed principally by nonfaculty professionals. Some Berkeley faculty not from the School of Education also volunteer time to the public schools. (At Berkeley, Marian Diamond goes out into the schools with a model of the brain. A neurophysiologist, she believes young students will be more interested in studying humans first, rather than animals).

Kennedy: Lawrence Hall of Science, and the Exploratorium, as "swing institutions" have a significant impact on science education in the Bay Area.

Boyer: Some irreverent thoughts: "perhaps universities should more systematically encourage student interest in teaching even at the high school level through Future Teacher Clubs or summer institutes for future teachers. Why not invest in future teachers like we do in athletics.

Universities might ask incoming freshmen to name their outstanding teachers in high school, then letters of recognition could be sent to these great teachers or they might receive summer fellowships. We need to remind faculty they're dependent on high school teachers. (Stanford School of Engineering brings the most influential teachers of its top graduating senior students to campus at university expense, Kennedy noted later).

A lot more could be done to accelerate gifted students. The University and schools program at Syracuse offers adjunct positions to gifted high school teachers, who then lead advanced placement classes in the schools.

One other point: science equipment in high school labs is "absolutely appalling." Some "can't even find funds for test tubes," others "draw diagrams of lab" for students. "No faculty member would spend an hour"; maybe faculty should go to school boards and argue the case for equipment. Faculty could provide consultation on how to equip labs at reasonable cost.

Kennedy: Terrific idea. There's a lot universities could do to design a minimal lab.

Bok: In California, Florida, Utah, public universities have

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Pajaro Dunes Conference

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taken the lead in curricular standards. Many school principals, superintendents welcome higher admissions standards.

Boyer: Thinking about curriculum ranks above all others in effectiveness. Universities have enormous leverage, which they underestimate. Trashing the schools about the curricular smorgasboard is a bum rap; they took seriously what universities did 15 years ago.

Done unilaterally, however, such changes may lose some of their educational value. Also, they can miss half the population in schools (who don't go to college).

Bok: (After noting influence of Fred Hargadon's letter to high school counselors from Stanford in 1978) suppose a half dozen well-known private university admission officers and high school principals outlined what college bound students should consider taking in order to prepare themselves well.

Boyer: The right 10 people at this time could have a stunning influence (harks back 80 years to the Committee of Ten).

The time has come to think about assessing student achievement in ways that break out of the SAT stranglehold. We need to assess progress in terms of curriculum (i.e., what's being taught). Hope the time may come in the next decade when universities help the schools break out; the SAT has outlived its usefulness, both in screening students for college and in measuring achievement.

We need to update curriculum and its assessment. SAT is 60 years old, an essentially obsolete instrument. We need to relate assessment to content.

Cremin: The original Committee of Ten said, in effect, this is the education everybody needs. The communion on the reorganization of secondary education made the same argument in 1916, but with a program that led us a stray for 40 years.

O'Neil: University of Wisconsin, State Superintendent of Instruction jointly developed recommendations almost identical with those presented later by Commission on Excellence, and close to those of College Board, then mailed to every parent of eight graders in the state. The impact was initially uncertain, with few districts so far carefully analising its requirements.

Hechinger: (Puzzled by lack of university response to reports)

Sovern: Without a plan for increased support, proposals for a longer school year probably are not taken seriously.

Kennedy: (surveying national issues) National Commission on Excellence deficient with respect to remedies; should have expansion of federal programs for research on schools professional improvement for teachers (NDEA), foregiveable loans to encourage students to become teachers.



If nothing else, the job of the universities is to articulate academic goals . . .

—Lawrence Cremin

Cremin: Some reports still aren't in. Predict reactions in middle 1983-84. People are getting revued up. Many were quite surprised at reception given President's report.

Hechinger: "Extraordinary public interest" in schools will last only year or two at most. . .then probably no other opportunity for a decade or more.

Bok: (Suggests lower priority on responding to reports). If universities enter public debate should be concerned about what they can contribute. The batting averages on faculty picked as political advisors not high. There clearly are some useful things to discuss.

Shapiro: Michigan economic policy studies show that long, sustained relationships with state agencies can make a difference.

Atkin: Focused conferences of experts on a particular topic may be helpful. Stanford plans one in October or November on teacher preparation, involving state officials.

Boyer: I strongly favor universities taking serious responsibility for helping shape the public debate and giving guidance. University interests are inordinately involved. "New laws are made by half-informed people running around, grabbing slips of paper" I don't see how universities can justify detachment (on school policy questions.)

Atkin: Note growing move to push teaching toward apprenticeship model with master teachers. If universities are now going along with dramatic changes. . .eventually, wehther or not university education required to become a teacher could be an issue.

Graham: Some states want the universities to get out of the business of preparing teachers.

Kennedy: When university presidents converge on an issue, they often express concerns through associations like the AAU or the NAS. There's no natural vehicle apparent for this when it comes to policies involving the schools.

Boyer: There's widespread belief that prestigious universities have withdrawn from the schools. Almost anything you do will send an important message—to the general public, legislators, teachers.

Kennedy: There is a lot of consensus on usefulness, need to reaffirm commitment to public schools.

Hechinger: There isn't any doubt about the state commitment. The federal government is bowing out but making new demands on the schools.

Cremin: The principal news is the universities commitment to the schools. This implies a readiness to follow up on a number of things at each institution.

Public has variety of goals for the schools. If nothing else, the job of the universities is to articulate academic goals. Presidents are uniquely appropriate group to articulate academic goals. (Parents might articulate goals for character development, etc.) . . .Public wants kids to achieve more.

Gifford: Remarkable increase in access of schools to all society should be celebrated. We're trying to complete reforms started in 1960s and partially consolidated in the 1970s. Once doors are open, challenge is to narrow disparities in performance.

Atkin: Consistent, long-term institutional involvement is needed.

Bok: Every university ought to recognize responsibility (toward schools). A number of actions are possible, with or without schools of education. An illustrative list might help.

Boyer: Research, clarifying elements of a good education, investing in people, more flexible arrangements for students. . . .

Bok: Big commitment is schools of education moving heavily back into schools.

Public schools...

continued from page 1

especially successful teachers, or in othe ways;

- "Serving, where needed, as sources of advice in the shaping of public policies affecting education."

University help to the schools "needs to be consistent over time," the presidents added. "Episodic interventions, like volatile government support, will merely raise expectations and then leave them unfulfilled."

The presidents' declaration followed extensive discussion with four prominent education school leaders: Lawrence A. Cremin, president of Teachers College, Columbia, and Deans J. Myron Atkin, Stanford; Bernard R. Gifford, UC-Berkeley; and Patricia Albjerg Graham, Harvard.

Other participants included Ernest Boyer, president of the Carnegie Foundation for the Advancement of Teaching; Fred M. Hechinger, president, New York Times Company Foundation; Robert M. Rosenzweig, president, Association of American Universities; and Doris Howes Calloway, provost for professional schools and colleges, representing Chancellor Michael Heyman of UC-Berkeley.

"It may not be a first, but it's damn rare" for major research university presidents and education school leaders to meet so extensively, said Cremin, a noted educational historian.

In individual comments during the conference, Cremin said "it simply is not true that this is the first generation that will have a poorer education than its parents," flatly contradicting one of the highly publicized quotes from the National Commission on Excellence in Education.

Kennedy said the same report was "outlandishly incongruent" in issuing "a clarion call for action" and then "exempting the federal government from any responsibility...there isn't any free lunch."

Boyer said that for President Reagan to raise the problems of the schools to a national crisis and then walk away is "a bit like announcing World War III and then saying, 'tennis, anyone?' "

Bok observed that the way the reports on the schools are understood by the public "the picture is painted in too uniformly gloomy terms" and significant achievements are overlooked.

A large part of the public's confusion comes from university scholars trying to attract attention to themselves with very strong criticism of the school, he added.

Boyer, whose own report on the schools is due out this fall, said he still is not sure whether the nation is seeing "a great reform, a political aberration, or a media blitz.

"Current interest in reform is a mile wide and an inch deep." If reform is not well directed, school support "could evaporate as quickly as it exploded," he added.

Atkin noted that "universities have been largely silent as institutions with regard to school reform, especially since the late 1950s.

"Universities have to convey understanding and even sympathy for what the schools are trying to do. The rhetoric of reform has been harsh, suggesting willful misbehavior. We can use a softer language, with honesty."

Gifford said that over the past decade major research universities were not only negligent but in many ways aided and abetted conditions they now finbd deplorable.

The dollar problem is large, Gifford added. To make change, schools need to increase salaries 25 to 30 percent to attract good people. While California has authorized $800 million additional this year and $900 million next year, the last $200 to $300 million is crucial. If the state falters and full funding doesn't materialize, it could all come to nothing.

Don't despair on dollars, Sovern advised. Corporations recognize that the country has been deficient in human capital investment. This may be the moment when it's possible to generate substantial additional support. It's obvious the Democratic candidates think so.

Bok said he personally is "not very optimistic that very good proposals (for reform) will emerge. I'm not heartened by what I hear on the campaign trail."

Boyer suggested that full Title I funding should bring compensatory education up into the junior and senior high schools. The past record of this program is encouraging.

Teacher training programs similar to those in the National Defense Education Act were "a mixture of attitude and substance which renewed the teaching profession," Boyer said. This could bring universities and schools together again.

Graham noted that Harvard voted to get out of teacher training in 1972 but decided to return this spring. "My sense is there's going to be a teacher shortage," she observed.

Research done years ago has begun to pay off in improved reading, she added. Research interests are now shifting to writing and comprehension, but results may take a decade or two to become apparent in most classrooms.

Two years ago, Kennedy and Bok convened a Pajaro Dunes conference of university an undustry leaders on biotechnology which set the tone for much subsequent discussion of this controversial, newly emerging field.

After what several participants conceded was decades of neglect of the schools, the university presidents appeared moving to exert leadership in a field already marked by highly publicized corporate, legislative, gubernatorial presidential and public concern.

About 80 years ago, meetings of The Committee of Ten, a university-led group, played a central role in setting goals and standards for the nation's secondary schools.

Pajaro Dunes is a Pacific Coast resort west of Watsonville and south of Santa Cruz in Northern California.

Medical Center MEMO

OK'd: kidney transplants

The Medical Center has been given state approval to resume a renal (kidney) transplant program.

Dr. Rex Jamison, professor of medicine and chief of the division of nephrology, said kidney transplants—initially about 25 to 30 annually—could begin here in about a year. A renal surgeon and transplant nephrologist will be recruited and hopefully hired within coming months.

SUMC was notified earlier this month by the Office of Statewide Health Planning and Development that a Certificate of Need (CON) had been granted for the project.

To receive a CON to begin or resume certain medical services, institutions must prove that they are medically and financially sound, and fundamentally, that the project fulfills an area need.

Patricia Stone, a Stanford health care planner, noted last week that the Santa Clara County Health Systems Agency had waived its review of the application, filed March 30, enabling the state to reach a decision quickly and without public hearings.

Cost of the project is about $18,000 for therapeutic equipment, and no construction is planned, Stone said.

SUH had a renal transplant program between 1965 and 1971, and then the specialized program became inactive.

Jamison noted that recent developments in immunosuppresive drugs—needed to prevent the body from rejecting the foreign organ—have increased survival of transplanted kidneys.

In its CON application, Stanford noted that currently no renal transplant program exists in Santa Clara County, where more than 80 persons under age 50 were waiting for new kidneys. Currently these persons must seek transplantation at centers outside the area, Jamison said.

In northern California, the only existing renal transplant facilities are at the University of California at San Francisco and Pacific Medical Center, San Francisco. Both of these institutions are experiencing long waiting lists, Stanford said in its CON application.

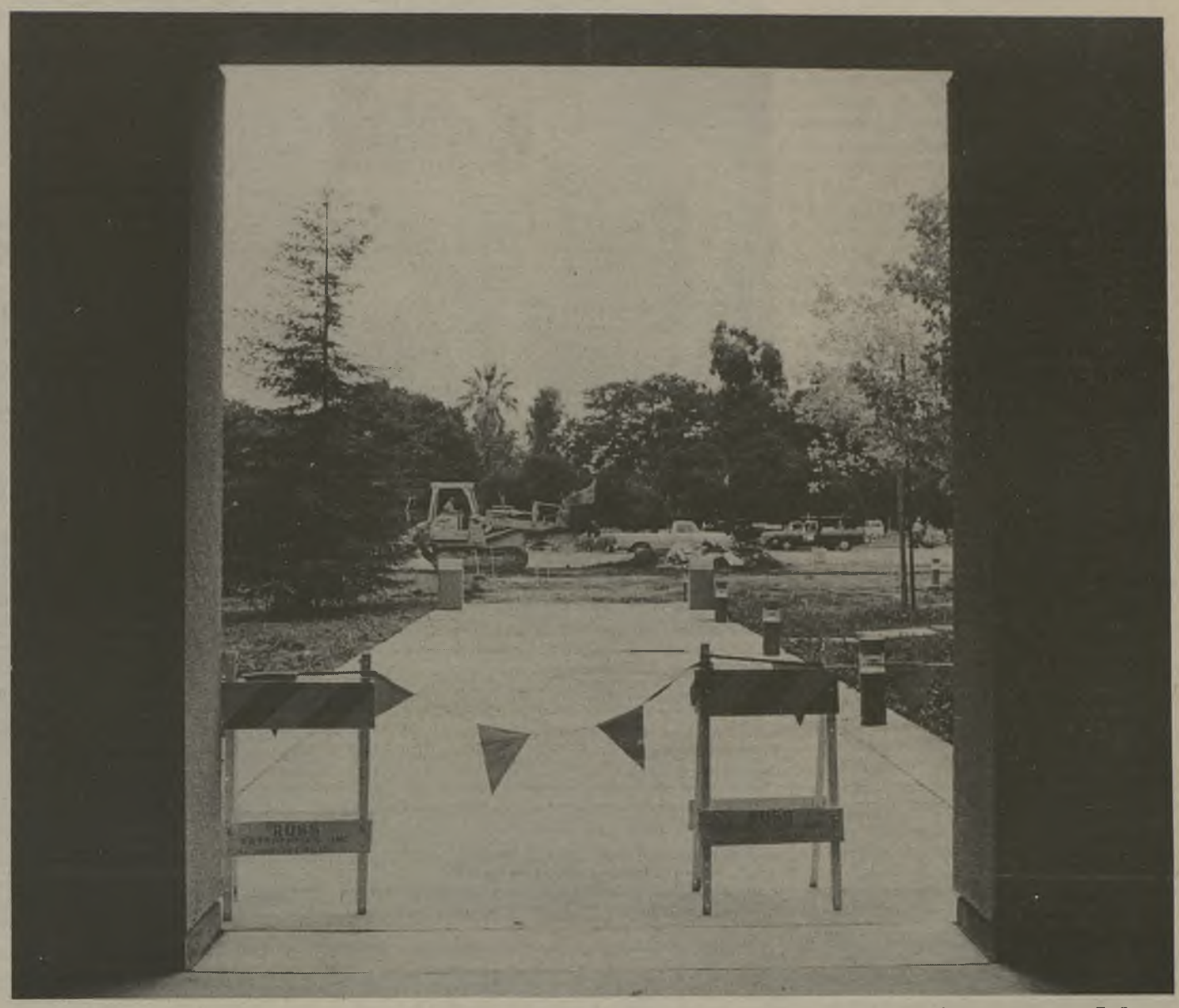
The transplant program will be a joint venture between the University's department of surgery and the department of medicine's nephrology division.

Stanford's existing nephrology program includes a hemodialysis unit, where about 40 patients undergo regular maintenance dialysis.

Other Stanford transplant programs include hearts, heart/lungs, corneas, and within a few years, bone marrow.

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



As seen from the walkway at Fairchild, mass excavation for the new Research Animal Facility is under way. PHOTO BY ED SOUZA

Whitlock uses genetic tricks to demystify dioxin

While U.S. lawmakers and physicians debate the human health risks of dioxin, Dr. James Whitlock Jr., a pharmacologist at Stanford University Medical Center, is using the chemical to explore, on a genetic level, how some people are able to disarm the same toxic compounds that cause cancer in others.

Dioxin, also called TCDD, has been controversial around the world, as a contaminant in "Agent Orange," an herbicide used as a defoliant during the Vietnam war. Industrial accidents and improper disposal of the compound in communities in Missouri and Italy have frightened citizens into fleeing their homes.



Whitlock

The chemical can be potently lethal, but there is great variation among animal species in their susceptibility to toxicity. Despite recent public concern about possible long-term effects of exposure, the only consistent and well-documented symptom in humans accidentally exposed to dioxin has been a temporary, severe form of acne. Scientists still have only a murky understanding of how the chemical causes changes inside humans and animals.

At a recent meeting of the International Union of Biochemistry held at Stanford, Whitlock, an associate professor of pharmacology, described the ways dioxin affects an enzyme system commonly used by most animals and man to process large molecules that might otherwise get caught and cause harm within the body.

Usually, such enzymes are useful in helping the cell eliminate potentially harmful compounds. But occasionally the enzymes are more hindrance than help.

Whitlock studies "benzopyrene," a common environmental carcinogen found in auto exhaust, industrial emissions and cigarette smoke, as it moves into cells and is broken apart and recombined into cancer-causing components.

"Many compounds, like benzopyrene, aren't themselves carcinogenic," Whitlock said, "but during their metabolism within the cell they may be activated to metabolites that are active carcinogens. We're interested in those enzymes and in how the cell deals with foreign compounds."

Whitlock and his colleagues have used biochemical tools and genetic tricks to track the chemical's movement inside the cell. Chief among their tools is dioxin, which induces an increased production of the enzymes that process benzopyrene into both harmless metabolites and harmful cancer causing compounds.

By isolating several mutant strains of cells that don't respond to dioxin and comparing them with cells that do, Whitlock has begun to understand how genes regulate the production of the enzymes. His studies have revealed a nuclear protein which "recognizes" dioxin and acts as a "switch" to turn the enzyme gene on and speed production of both beneficial and harmful enzymes. Currently Whitlock is trying to pin down exactly how this "dioxin receptor" controls production of each type of enzyme.

Although Whitlock's studies have been conducted with liver cells from mice, the enzyme systems also play an active role in humans and may serve as a good model for the way chemicals may act in concert to cause human cancers, he said.

"It's not at all clear what the effects of dioxin are on humans," he said. "There has been a lot of hysteria, but what we need to do is to find out exactly what's going on inside the cell."

—Deborah Franklin

Levy's work proceeds. . .

Hammer's gift funds expanded lab for cancer research

A $500,000 gift from industrialist Armand Hammer will help expand and finetune the promising new use of specialized protein "bullets" in battling several types of cancer, said Dr. Ronald Levy, Stanford cancer researcher, at a dedication ceremony at Stanford Medical Center Thursday, Aug. 18.

Hammer joined Levy, Vincent DeVita Jr., director of the National Cancer Institute, and other dignitaries at the christening of an expanded laboratory funded by the Hammer gift.

"We've had some preliminary results that are very promising, and Dr. Hammer's gift will help us expand our laboratory facilities and move a lot faster to test the possibility of making this into a therapy that we hope eventually can be made available to large numbers of patients," Levy said.

Hammer, chairman and chief executive officer of Occidental Petroleum Corporation, and chairman of the President's Commission on Cancer, said DeVita had recommended Levy's work to him as one of the most exciting areas of cancer resarch.

In 1981, Levy, an associate professor of medicine/oncology, used the special proteins, called "monoclonal antibodies," to treat a 67-year-old man dying from a rare form of lymphatic cancer.

Previous treatments with conventional and experimental drug therapy couldn't halt the disease that was slowly ravaging his liver, spleen and lymph nodes. But after a four-week regimen of custom-tailored antibodies, the cancer began to recede.

Today, more than two years after treatment, the man remains completely free of disease.

The early success triggered hope in scientific circles and in the general public that monoclonal antibodies, already valuable as tools to diagnose disease and detect cell differences too tiny to be seen any other way, might have a new use in eradicating cancer.

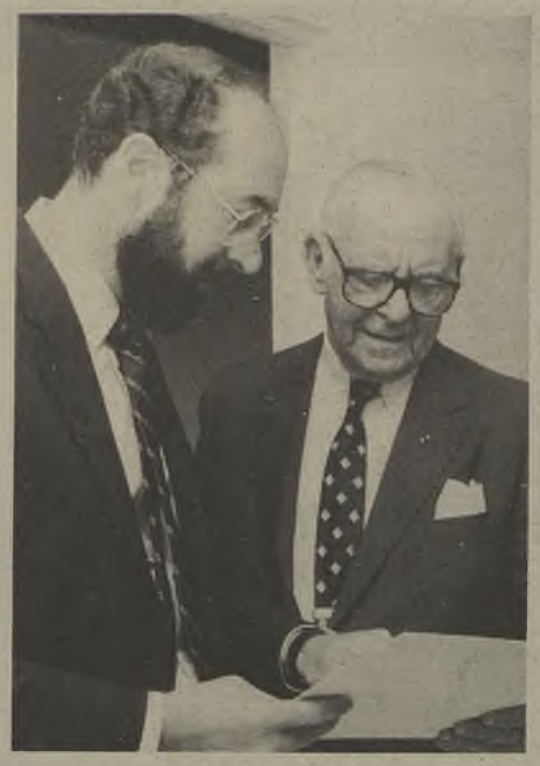
Five patients have completed the treatment, and the scientists have begun the six-month-long process of manufacturing the custom-tailored antibodies for eight more patients. The results have been "encouraging," Levy told reporters at a press conference preceding the ceremony, though it is still too soon to tell exactly how successful and how generalizable the results will be.

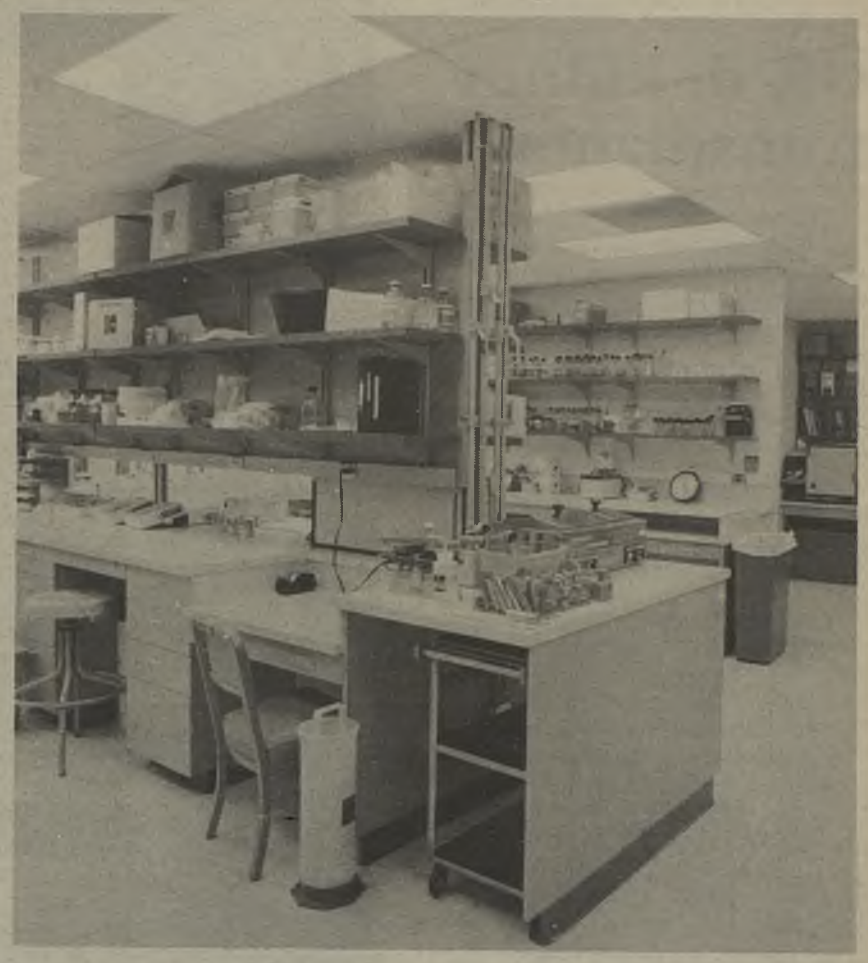
Monoclonal antibodies were first developed by researchers George Kohler and Cesar Milstein in Cambridge, England, in 1975, as a variation of the normal antibodies that every mammal produces to attack any foreign substance—virus, bacteria, or cell—that invades the body.

Each antibody is designed to precisely match a specific site on the invader's surface and to latch onto it like a key in a lock. Once the antibody and foreign substance are joined together, other cells of the immune system are alerted to join the battle and destoy the invader.

A wide variety of slightly different antibodies may be produced in response to a typical infection, but Kohler and Milstein developed a method of screening the mixture to select and harvest only the specific type of antibody they desired and to produce it in large amounts.

Levy and other researchers have capitalized on the specificity of the monoclonals to develop a potentially powerful treatment for some types of cancer.





Above, Levy (left) and Hammer, at last week's ceremony to dedicate the lab (right) where, with the help of Hammer's gift, Levy will continue and refine his studies on the therapeutic value of monoclonal antibodies in cancer treatment.

"We're finding that the more sharply the antibody can distinguish between normal cells and tumor cells, the better effect we can get," Levy said. "And the best distinction between tumor cells and normal cells is attained by making a different antibody for each patient. That's a long and laborious process."

To produce the antibodies they use in treatment, Levy and his colleagues first inject mice with cancer cells filtered from a blood sample of the patient to be treated. A few days later, they remove the mouse's spleen, which now contains large numbers of white cells, the blood-borne factories where infection fighting antibodies are produced.

Some of these white cells have become sensitized to the injected cancer cells, and will produce antibodies that can specifically seek out and destroy cancerous cells in the patient's body without harming healthy tissue.

The scientists then fuse the white cells in a laboratory dish with cells from a mouse tumor, creating a new, immortal cell line or "factory" that can produce large quantities of the desired antibodies.

Currently it takes Levy's team an average of six months to produce enough antibody to treat a single patient, at a cost of approximately $50,000. If and when the experimental procedure is proven effective within the next couple of years, private companies could take over the production of the proteins on a large scale, and greatly reduce the treatment cost, Levy said.

All the patients he has treated thus far have suffered from one of several types of lymphoma and leukemia. The scientist said he has limited the treatment for primarily two reasons: as cancers that float through the bloodstream, lymphomas and leukemias are relatively easy targets for the special treatment, in comparison to solid tumors.

Also, even more importantly, leukemic cells have well defined "targets" on their surface that antibodies can easily identify and lock onto. Currently, such targets have been identified for only a few specific types of lymphomas and leukemias, but researchers around the country are seeking such targets for "virtually every type of cancer," he said. "When people understand what those targets are, then we'll know how to make antibodies against them."

"We really don't know what the final role of monoclonal antibodies will be in the total treatment of a person with cancer," Levy said. "I don't think that they will ever replace the current therapies that really do work, but I do think that they will be useful, probably in an adjunctive role."

While Levy has used the antibodies alone in treatment, other researchers are investigating the possibility of tagging the proteins with a radioactive isotope or chemical poison which they could aim exclusively at the cancer cells, sparing the healthy tissue that is inadvertantly killed through conventional cancer treatments.

"Eventually we hope to add monoclonal antibodies to the other modalities of treatment we have," Levy said, "to be used in different combinations, depending on the needs of each individual patient."

"This is only one step in the work that has to be done in the path to finding a cure for all cancers," said Hammer, who recently established a $2 million fund to support research towards a cancer cure. "But I think it is an important step."

—Deborah Franklin

Artificial heart: panel formed

Lois Christopherson, manager of patient relations for the Faculty Practice Program, has been appointed to a national advisory committee on the artificial heart.

She is the only Stanford representative on the 12-member panel formed by the National Heart, Lung and Blood Institute of the National Institutes of Health.

Claude Lenfant, director of the NHLBI, said the group is expected to study the artificial heart and other mechanical circulatory support systems, and then advise the institute on issues, actions and policies relevant to the research and potential therapeutic use of such devices.

Christopherson and her colleagues are scheduled to meet for the first time Sept. 13 in Bethesda, Md., and are expected to complete a report on "the broad medical, societal, ethical and economic aspects" of mechanical circulation by the end of 1984.

Called the Working Group on Mechanical Circulatory Support, the panel is chaired by Dr. Robert Van Citters, professor at the School of Medicine of the University of Washington.

Christopherson served for many years as clinical social worker for Stanford's cardiac transplantation program. In 1981, she left SUH to attend the Graduate School of Business' Sloan program, graduating with an M.S. in business before joining the FPP in her current position.

Volunteer finds hospital duties varied, but always uplifting

Joyce Vincenti has traded in the contrasts of tone on an oil painting canvas for the sometimes wider contrasts of joy and stress encountered at Stanford University Hospital.

And like in the paintings she once sold to galleries, the emotional contrasts often blend together in a volunteer work schedule that might find her reassuring the anxious family of a surgery patient, cuddling a premature infant, or sharing the joy of a couple going home with a healthy newborn.

Vincenti even found time to update the *Visitor Information Book* recently, as part of her responsibility on the SUH Auxiliary Board. The book contains a guide to local hotels, restaurants, entertainment and important phone numbers, as well as SUH information, parking rules, and campus maps.

And as if all these duties weren't enough, Vincenti spreads herself thinner by serving on the planning committee for the Auxiliary's annual educational seminar, and by volunteering time each week on various nursing units.

"I enjoy it," she said, "and besides, we don't have enough volunteers to be able to take it easy."

A Los Altos Hills artist, Vincenti has a studio in her home. "But I decided a few years ago I wanted to get out and interact with people," she said, adding that she's made a group of new friends through the Auxiliary—"some fine men and women."

In earlier days Vincenti taught elementary school in Rosemead, Calif., before meeting her husband Walter, an aeronautical engineering professor at Stanford who just won this year's Dinkelspiel Award for outstanding contributions to undergraduate education.

Walter and Joyce have been married for 35 years and have two children. She likes to tell the story of how they met:

"I had been visiting my cousin at a naval base in Cuba, to rest after an illness. I ended up teaching fourth graders there for a year. With all those officers, it was a nice place for a young single woman—I was 28 at the time.

"Anyway, I finally took the ship back to New York. On the last leg of the trip, the train ride from New York home, I met my husband."

Later Joyce Vincenti did volunteer work at the Children's Health Council in Palo Alto. She's always found hospitals fascinating, so when she was looking for such work again it seemed natural to join the Stanford Auxiliary. She recalls it wasn't hard for her neighbor Helen Brown, a now retired member, to convince her of that one day when they met in the market.

Today Vincenti insists that her duties as an Auxiliary member are always uplifting. "I constantly met people who have been through so much and are still so spirited," she said.

But part of her job, Vincenti explained, is to "sense when people want to be left alone" as well as when they might like to chat. This holds especially true with families at the surgery reception area, or waiting room.

"It always seems a long time that they have to wait," Vincenti explained. "Some are eager to talk and confide; others really want to keep to themselves.



PHOTO BY ED SOUZA

"I constantly meet people who have been through so much and are still so spirited."

—Joyce Vincenti

"But most look up from time to time, at whoever's on duty, for some sort of reassurance"—provided, perhaps, by the sight of uniforms and unworried expressions.

Thus, while her job may appear to consist of making coffee and pointing out the direction of the cafeteria, it is really much more than that, and the appreciation of those served is obvious. Not long ago, Vincenti said, a grateful gentleman simply took out his checkbook and gave the Auxiliary $100!

Once visitors sign in at the desk, she explained, they are sure to be looked after by the Auxiliary member on duty. "We check with the O.R. We're told when the patient is transferred to the recovery room, and then tranferred to another unit. We relay this information to the family."

Finally, they remind the doctors to come out and talk to the family.

Recently, Vincenti recalls, a family had waited nearly the entire day when the patient's heart stopped just as surgery ended.

In cases like this, there is usually a friend around to offer comfort, and the Auxiliary staffer can help most by providing information about the hospital's chaplaincy service, social services, and other practical matters.

(A special green phone, courtesy of Community Relations, is available for families, to communicate directly with the O.R. at night when the reception desk is not staffed.)

On another day of the week, Vincenti shifts gears to help provide direct patient services on the well baby and surgical nursing units. This, she explained, involves running errands, getting patients the newspaper or something from the gift shop, and wheeling them out upon dismissal from the hospital.

The happy sight of newborns going home for the first time contrasts, Vincenti admits, to the premature and critically ill babies she has attended to as a sort of "visiting grandma" when needed.

This contribution began when the Intensive Care Nursery's social worker, Charlene Canger, put in a special request for a baby whose mother was unable, because of personal problems, to visit her regularly. Most parents do come, and there's a special rocking chair in the ICN for their use. Canger asked whether an Auxiliary member might be able to fill in the gap (as one had some years before) for this particular infant, and Vincenti jumped at the chance.

"I visited with that baby for about three months, until one of the unit nurses adopted her.

"At first she was in an isolette, and I couldn't really touch her," Vincenti recalls. "So I'd talk to her, and play her a nursery rhyme tune—I don't even know if she heard it.

"Then, gradually they let me hold her and give her a bottle." Vincenti did become somewhat attached to that little girl.

Canger emphasizes that the role Vincenti played with this and other ICN babies served as a "real impetus for us to expand our parent support activities," and she has since received Auxiliary funding to do just that.

A new ICN reception desk, plans for the first ICN graduate reunion party, and newly formed ICN parent support groups are just a few examples of the kinds of activities taking place on the unit these days.

"The volunteers now," said Canger, "play a more indirect role with families than Joyce did."

Once, Canger recalls, "I felt very nervous because a mother came to visit her baby when Joyce was there too. It was a complicated case because she was a high risk, single mother who lived far away. When she first met Joyce she was a bit bristly.

"But Joyce quickly established herself as a loving aunt rather than a substitute mother. She said, 'I thank you for letting me share your son,' and then talked about the baby's long eye lashes and sociability. Soon she and the mother were friends.

Joyce was always sensitive to the baby's and the family's needs, and that with no special training," Canger remarked. "What's more, she always checked with the nurses and listened to what they said about the differences between preemies and other newborns."

Sometimes, Canger explained, it is unwise for a critically ill infant on a ventilator, for example, to be stimulated by touching or cuddling. ICN infants do or do not require social contact, depending on their medical progress.

"It's an individual clinical decision and a balance," said Canger. "It's a matter of looking at that little person's psychological and emotional development, in light of overall medical requirements."

Vincenti claims that personality traits are discernible even in these very young, often very sick, infants. "Some babies you'll just never forget. I remember one who was so alert and friendly, everyone was crazy about him."

As for the nurses, she said, "Besides the human caring, there's so much advanced technology they have to be familiar with in the ICN—I really admire that staff."

Vincenti considers herself lucky in terms of the variety of tasks she's had on the Auxiliary. "I just sort of fell into it all," she said.

But after almost 2,000 hours of volunteer time ("not much compared with other members") since she joined the group in 1977, Vincenti is still content with the services she's on. "There are a lot of areas one could switch to in the hospital, and maybe someday I will—but not now," she smiled.

—Lisa Ames

Satir to speak at Social Work's anniversary party

The 70th Anniversary Celebration Banquet for the Department of Clinical Social Work at SUH will feature Virginia Satir, internationally renowned therapist and author, speaking on "Families in the'80s."

The banquet will be held Thursday, Sept. 15, at the Faculty Club. A fee of $18 per person will be charged, with no host cocktails to begin 5:30 p.m. and dinner at 6:30.

Satir, who has shared her work and beliefs all over the world, was named the most influential therapist for other practitioners in the field by the Group for the Advancement of Psychiatry, in the early 1970s.

She is frequently thought of as *the* innovator of the approach that brings the entire family into the therapist's office. Considered unorthodox 30 years ago, her approach has now been adopted throughout the world.

Recognizing that the foundation for personal growth is primarily developed in the family, Satir applies this learning to business, institutional practices, and other human systems.

She was one of the founders of California's Mental Research Institute. In 1976, she created the AVANTA Network, a teaching network of people who have studied with her and who now give workshops around the world. She was a director, and the first director of residential training, at the Esalen Institute in California.

The awards and recognition banquet is the culmination of a year-long celebration as social services at Stanford attains its 70th year of existence and evolution.

Stanford's was one of the first departments of clinical social work to be established in a hospital in this country, said Wilbur Wright, director. "It was certainly the first on the west coast, started about two years after the first one began at Massachusetts General Hospital in Boston."

The Hospital Auxiliary was responsible for the department's funding support through 1940, Wright said.

The banquet will include, besides Satir's talk, an awards ceremony and a presentation of the department history to both the University and Hospital archives.

Those wishing to attend should respond by Sept. 2 to the department office, C136, at 497-5615. Further information can also be obtained at this number.

Cellar hosts benefit

The Cellar Restaurant in Los Altos is sponsoring a wine tasting Sunday, Aug. 28, to benefit the Intensive Care Nursery at Stanford University Hospital.

Larry Hancock, owner of the restaurant, organized the benefit to show appreciation to the ICN since his son, Joshua, was a patient there for six weeks in 1971.

The event is scheduled for 2 to 6 p.m. Tickets are $12.50 per person ($15 at the door), and all proceeds will be donated to the ICN.

The Cellar is located at 4926 El Camino Real in Los Altos. For further information, call Jeff Barile at 964-0220.



Participants in Back-Evac two years ago practiced the swing carry, a method of supporting a patient for evacuation in an emergency.

Back-Evac is back, for another series of training workshops

Hospital department representatives will be taught proper back care and patient evacuation techniques at the fourth annual series of Back-Evac training workshops to begin Sept. 6.

Terry Nordstrom of the physical therapy department is coordinating the classes. Each hospital department is asked to designate a "trainer" to attend the workshop. These people will then instruct all employees in their department on proper back care as well as in safe, effective patient evacuation techniques, should an emergency ever occur at SUH.

The yearly refresher program was initiated at the request of the Disaster Planning Committee, the Health and Safety Department, and Hospital Administration.

Various times are available for new and returning trainers, but class sizes are limited, so call 497-7225 soon to reserve a place.

Construction Corner

CVRB—parking disruptions:

The Cardiovascular Research Building project has advanced to the point that landscaping is planned to begin Sept. 6.

This work will result in a temporary loss of about 80 parking spaces in the area, but plans have been made to compensate for the loss.

Spaces lost in the afternoon lot will be replaced by creating two new areas of reserved afternoon C parking, and some A spaces will be relocated to the A lot between the pay lot and the Administrative Annex.

Additional day C parking will continue to be available in lots F and Q.

Maps illustrating these changes are available from Safety/Security Services. These will also be mailed later this month with a memo to all departments and units to clarify the impending activities.

Upon completion of this phase of the project, the parking spaces will revert to their former usage. Everyone's continued cooperation and understanding will be appreciated during this period of inconvenience.

Med Center Calendar

WEDNESDAY, AUGUST 24

Div. of Hematology Wednesday noon conference: "Clinical Application of White Cell Scanning"—Dr. Ross McDougall. Noon, S102.

Hematology support group: Meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

Depts. of Pathology and Structural Biology seminar: "pH Dependent Fusion Mediated by VSV G-protein Reconstituted in Phospholipid Vesicles"—Dr. Robert Blumenthal (National Cancer Institute). Noon, D102.

Physicians for Social Responsibility/Stanford and Mid-Peninsula Chapter film: "The Last Epidemic." 8 p.m., 3rd floor, Old Union Clubhouse, common room.

THURSDAY, AUGUST 25

Dept. of Medicine grand rounds: "Survival on a Mucosal Surface: Marvels of Neisseria Gonorrhoeae"—Dr. Gary Schoolnik. 8:30 a.m., Fairchild Auditorium.

FRIDAY, AUGUST 26

Dept. of Gynecology official monthly staff meeting—Dr. Jonathan Parmer. 8 a.m., A336.

MONDAY, AUGUST 29

Dept. of Gynecology Reproductive, Endocrinology and Infertility conference: "Adrenal Gland Function and Control"—Dr. Alan Shapiro. 8 a.m., A336.

TUESDAY, AUGUST 30

Dept. of Biochemistry seminar: "In vitro splicing of mRNA precursors"—Dr. Richard Padgett (MIT). Noon, M316.

WEDNESDAY, AUGUST 31

Div. of Hematology Wednesday noon conference: Pediatric Presentation. Noon, S102.

Hematology support group: meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

Registration deadline for Nursing Educational Services "Basic EKG Interpretation Workshop": to be held Sept. 14, 21, 28 and Oct. 5. For further information or to register, call 497-6366.

THURSDAY, SEPTEMBER 1

Registration deadline for Nursing Educational Services "Sports Medicine: A Team Approach": to be held Friday, Sept. 9, 8 a.m. to 4:30 p.m., Sports Medicine Library, 3250 Alpine Road, Portola Valley. For further information or to register, call Carole Kidder at 497-6366.

Registration deadline for Nursing Educational Services "Pediatric Critical Care Course Level II—Congenital Heart Disease": to be held Wednesday, Sept. 21, M104. For further information or to register, call Carole Kidder at 497-6366.

Dept. of Medicine grand rounds. 8:30 a.m., Fairchild Auditorium.

SEPTEMBER 7 through 9

Nursing Educational Services: "Cardiovascular Nursing in the '80s: Third Annual Symposium." For further information or to register, call 497-6366.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear.

...News Notes...

Spotlight on. . .

Dr. Elizabeth Langston *has been awarded a grant of $3,000 by the Committee to Combat Huntington's Disease, for research into a means to detect that disorder earlier than is presently possible.*

Huntington's is a hereditary neurological disease which usually strikes people in middle age. It is characterized by uncontrollable, irregular muscle movements and progressive mental deterioration.

Langston, a part-time fellow in neurology, is currently completing her medical internship at Santa Clara Valley Medical Center. In collaboration with Dr. John Hotson, assistant professor of neurology at SUMC, she will investigate whether a certain type of subtle eye movement, characteristic of those with late-stage disease, is detectable in persons who have had Huntington's only a year or two.

If people in relatively early stages exhibit such eye movement, Langston suggests, possibly those carrying the disease but not yet showing obvious symptoms do as well. Combined with other evidence, this could make early detection easier and allow for better genetic counseling.

* * * *

Duane Walker, *director of Nursing Services, has been chosen to lead a U.S. delegation of nurse administrators in September to the People's Republic of China cities of Beijing, Shanghai, and Guangzhou, as well as Hong Kong.*

Topics he will discuss include "Research and Its Implication for Nursing Practice," "Nursing's Role in Health Care Delivery," and "Image Making—Nursing in Today's Society."

The delegation is sponsored by Professional Seminar Consultants, Inc.

* * * *

Marilyn Tucker *has been promoted to manager of Systems Services for SUH, announced Ron Kreutner, assistant director of Finance/Controller.*

With SUH for over 20 years, Tucker has worked since 1974 primarily on computer systems involving Patient Accounting, most recently in the Patient Accounting Conversion.

She was recently honored at the 25th annual Thomas A. Gonda hospital employee awards ceremony for her special contributions both in the conversion project and in solving information needs and systems problems for many hospital departments.

* * * *

Eddie Ferraz and **Romulo Alvarez**, *both of Operations and Maintenance, were honored Aug. 15 at a ceremony in recognition of their completion of a four-year crafts apprenticeship program.*

The two men are the first SUH employees to complete this innovative program, which was begun here in 1980, to teach employees specialized crafts. Ferraz' apprenticeship was in



Ferraz (left) and Alvarez

carpentry; Alvarez' was in maintenance mechanics. Both finished their training early, said Bill Gilmore of SUH Employee Relations.

The program offers the opportunity for Hospital employees to become qualified for internal promotion and to receive a State Certificate of Apprenticeship relative to their craft, according to Ron Just, director of Operations and Maintenance.

Just hosted last week's ceremony. Also present were Sheldon King, director of SUH, and Mary Catherine Krawec, associate director, both of whom expressed their appreciation of the two men's achievements.

You should know. . .

The **Palo Alto Fire Prevention Bureau** *will inspect the Medical Center early next month to reaffirm that corridors are not blocked and that no combustible materials are stored in exit ways, said Ruben Perez, assistant director of safety/security services.*

The inspection is necessitated by recent problems in these areas. Safety/Security Services has arranged with Operations and Maintenance to clear such items from inappropriate areas prior to the Fire Prevention Bureau inspection. All improperly stored materials will be given a Fire Safety "warning tag," and then removed Sept. 1 and 2.

Meanwhile, Perez reminds personnel to remove inappropriately placed materials immediately. Questions may be directed to him at 497-7225.

* * * *

Hospital escalators *are now operating until 8:30 p.m. every evening, instead of the usual 5 p.m., to accommodate both patient and visitor needs, according to Ron Just, director of operations and maintenance.*

He said the extra hours are expected to have minimal impact on energy use.

Just also confirmed that periodic stoppage of the escalators is not due to problems, but is for normal maintenance and cleaning to keep them operating smoothly. They are closed two days each month for this service.

New **parking permits** *for 1983-84 go on sale Sept. 1, from 7:30 a.m. till noon and 1 to 3:30 p.m., Monday through Friday.*

Fees are $100 for A and E permits; $20 for C and Designated Student Housing; and $120 for Service Vehicle Permits. The Vehicle Registration Office for the Medical Center moved Aug. 17 from the Personnel Department to Room E015 in the hospital basement, across from the Credit Union.

The Department of Public Safety has sent out computerized, individual packets of information to all Stanford faculty and staff who had vehicles registered here before Aug. 5, 1983. Departments are encouraged to designate one person to gather applications together for processing.

Parking applications may be mailed in or dropped off at the Vehicle Registration Office. They will be ready for pick-up within three working days in E015. Permits will not be delivered or mailed.

* * * *

Discounted tickets *are available to employees for a soccer game featuring the Earthquakes versus the Seattle Sounders, 8 p.m. Sept. 3, at Spartan Stadium in San Jose.*

Tickets are on sale through Aug. 29 for this event, which is Tailgate and Fan Appreciation Night. For information on where to mail payments, call Susan Cabral, at 497-6251.

* * * *

The Hospital's **linen amnesty drive** *has already resulted in the return of items which, to replace, would have cost the institution about $450, said Joyce Miller, associate director of Nursing.*

As of August 14, items returned include: 30 doctors' shirts, 17 pairs of scrub pants, 23 scrub dresses, nine bath towels, four isolation gowns, three bib aprons, one surgical towel, and one X-ray gown.

Miller announced that the red and white linen return bins, placed at various locations around the parking lots, will remain up for about another month. Encouraged by success so far, efforts to get lost linen back will continue. All employees are asked to check for items they may have inadvertently taken home—and to return them to the bins.

* * * *

New guards *will provide security service beginning Sept. 1, said Hilary Ryniewicz, director of safety/security services.*

Security officers from Guardsmark, Inc. will cover the entire Medical Center area, wearing dark gray uniforms, white shirts, and ties.

Ryniewicz noted the selection of Guardsmark was the result of a normal bid request process occurring every few years.



Dietetics offers weight loss class

A 10-week weight control program, to be conducted by registered dietitians from the department of dietetics at SUH, will be held Sept. 27 through Nov. 29.

The course is open to the public and will be held Tuesday evenings at the Hoover Nursing Cottage.

Highlights of the program include a personalized weight loss plan, low calorie cooking demonstrations and snacks, menu planning, behavior modification techniques, and a dining out experience.

Kristine Birge and Patricia Kearney, registered dietitians at the Hospital, will conduct the classes. Stanford guest speakers will include Dr. Mary Southam of the Behavioral Medicine Program, and Elad Levinson of Human Resources Development.

"We want to show that there are safe and healthy ways to achieve weight control," said Birge, "while making the experience an enjoyable one with group discussions and active participation."

Many of the instructional materials developed for use in the course will be used by the dietitians in patient care programs as well, she said.

Enrollment in the "Enlightening Experience" program is limited to 20 participants. Early registration is advised. For more information, call Birge at 497-5440.

Medical faculty opening

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The Department of Surgery seeks an assistant professor for a full-time position in the Medical Center's division of pediatric surgery.

The applicant must have completed an approved pediatric surgical training program and be eligible for the Certificate of Special Competence in Pediatric Surgery. Strong clinical skills and training, strong interest in clinical and/or laboratory investigation, and excellence in teaching will all count substantially in evaluating candidates.

Letters of inquiry and curricula vitae should be sent no later than December 1, 1983, to: John A. Collins, M.D., Chairman, Dept. of Surgery, Stanford University School of Medicine, Stanford, CA 94305.

Applications are being accepted for a senior faculty position (full or associate professor) as chief of the section of cardiology at the Palo Alto Veterans Administration Hospital.

Qualifications include proven academic accomplishments in cardiovascular disease, and clinical and administrative experience.

Send applications to Dr. John Schroeder, Cardiology Division, Stanford University School of Medicine, Stanford, CA 94305.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

31937-VW (JCC:3150) DEVELOPMENT OFFICER III: Assoc Area Dir respon for an assigned geographic region to prov staff support of gift procurement activities designed to produce gifts of $25,000 & above fr indivds, certain private foundations & closely held corporations; duties cover a full range of activities related to major gift development incl specialized analytical res, donor relations, dir contact w/ volunteers, donors, & prospective donors, & other tasks related to the gift procurement process; initial assignment will be in S.F. & the Bay area, although assignment is subj to change; QUALIFICATIONS: knowl of tech aspects of gift procurement, Univ admin, marketing & finance preferred; good commu skills; good judgment; familiarity w/ Stanford & the Development Offc desirable; ability to travel & work on wkends & evenings required; arithmetical & statistical skills essential.; C08; $2590-3313.

41626-DS (JCC:4084/4092) Programmer/Analyst III/IV: SU seeks to develop a comprehensive student info sys that will meet the operating & analytical requirements of the offcs charged w/ processing & maintaining student records & info; P/A must possess a high degree of expertise/exp in sys design, coding, testing & implementation; ability to analyze into cohesive sys design, 2 or more Univ functions, interface w/ other complex sys & programs & be able to consider decisions regarding relationships among admin subsys; prov technical direction & leadership; QUALIFICATIONS: thorough knowl of sys environments & capabilities of such eqpt as IBM 3081/370; Offc info sys; WP; PC's; knowl of financial acctg; expertise in software such as COBOL; expertise in DBMS; 2 yrs exp in SPIRES preferred; familiarity w/ standard batch sys approaches, w/ on-line tp sys required, w/ structured analysis/design tech & prototyping tools helpful, & w/ Univ subsys; exp in financial acctg practices/procedures & payroll sys.; C07/C08; $2221-3545/2590-4079.

40527-VW (JCC:5116) PROGR SCIENTIFIC III: Involves applications programming for an oncology protocol mgmt sys; requires significant exp w/ artificial intelligence techniques & the LISP or Interlisp langs; learn an already existing, large expert sys; QUALIFICATIONS: Masters level training in computer sci & prev exp w/ personal workstations highly desirable.; C07; $2221-3545.

897-DS (JCC:5166) COMPUTER SYSTEMS SPEC: Sr. Computing Offcr; Dir of computing sys for lang res institute; participate in design, then manage installation & development of multi-sight computing network of over 100 LISP-based computers, w/ laser printers, commu links, file serv, etc; supv engrs, sys programmers, admin personnel; develop integrated hardware & software environ based on new res in programming langs & linguistic sys; QUALIFICATIONS: exp managing large complex res computer installation & supvg personnel; strong computer sci bkground; interest in design & creation of state-of-the-art computer environments.; C09; $3122-4653.

36187-TC (JCC:5588) LIFE SCI RES ASST I: Major activities relate to the mechanism of action of catecholamine receptors; experiments will be conducted independently & w/ postdoctoral fellows; cell culture, protein purification, radioimmunoassay & measurement of receptors using radioligands; some handling or rats as well as genl lab duties such as ordering supplies; QUALIFICATIONS: Bachelor of Sci degree or equiv required; genl exp w/ techniques such as radioimmunoassay, chromatography (incl HPLC) & radioimmunoassay, would be helpful; extensive exp w/ cell culture methods highly desirable.; C05; $1756-2202.

36627-LL (JCC:5588) LIFE SCI RES ASST I: Utilize biochemical & chemical analytical tech in neurochemical & psychiatric res; perform biochemical assays for neurotransmitter enzymes, assays for neurotransmitters & their metabolites, receptor assays, & protein purification; establishing procedures for maintaining primary adrenal medullary cell cultures & adrenal medullary explant cultures for biogenic amine enzyme regulation studies; QUALIFICATIONS: BS or MS in chemistry or biochemistry or equiv edu & exp required; familiar w/ & can perform basic lab skills absolutely essential; use of serological & micropipettes, balances, pH meter, liquid scintillation counter, ultraviolet & visible spectrophotometers, high pressure liquid chromatography instrumentation, high speed & ultracentrifuges, polyacrylamide & agarose gel electrophoresis apparatus; sufficiently versed in theory to recognize problems, adapt & modify methods.; C05; $1756-2202.

20739-LL (JCC:5596) LIFE SCI RES ASST II: Set up, maintain, & keep accurate records of sterile in vitro cell culture sys using animal & human tumor cells & various hybridomas, maintain hybridoma cultures in vitro or in vivo (ascites), & purify monoclonal antibodies; prep assay & dilute radiolabeled mat'ls for in vitro & in vivo experiments; perform in vitro experiments using whole blood, blood cells, tumor cells, tissue culture cells, etc to study cell uptake, receptor binding kinetics, competitive inhibition of binding, transport mechanisms, etc, of various radio-labeled compounds incl monoclonal antibodies; process & count human blood & urine samples; QUALIFICATIONS: knowl of scientific theory assoc'd w/ a Master of Sci degree or equiv edu & exp in an applicable sci; knowl of nec lab skills.; C06; $1948-2441.

16484-JB (JCC:6826) SOC SCI RES ASST III: Fixed term, 10/15/83-10/14/85; asst Dir & Assoc Dir to conceptualize types of analyses to be performed on specific data sets; coord the DAP; identify & make recommendations of data sets to acquire for SCCR archive on Chicano machine-readable data files; develop process for validating study design, data collection procedures & resultant data of acquire data sets; designate approp forms of graphic representations of results; prep reports & proj summaries; train & supv grad & undergrad res assistants in secondary data analysis, etc; QUALIFICATIONS: doctorate or advanced grad training in population social demography, or related social sci field; exp in social res & data analysis; knowl of special design, sampling & analysis issues in performing secondary analyses of existing data sets for cultural & linguistic minority populations, particularly Chicano & Spanish-origin groups.; C05; $1756-2202.

21698-DS (JCC:7566) FACIL ENGINEER/COORD III: Facility Engr in charge of C.I.S. bldg operations & maintenance is a line mgmt position reporting to Mgr of Craft Shops in O&M; supv a staff of 2 technicians, also craftsmen or contractors performing work inside the bldg; respon for implementing a complete maintenance program associated w/ a highly technical semiconductor facility; prov CIS faculty w/ the internal capability of monitoring, adapting, controlling & consistently managing facility related issues 24 hrs/day, etc; QUALIFICATIONS: Bachelor's degree in mechanical engrg or equiv related engrg field; 5 yrs applicable exp; able to oversee 24 hr operation; proven tech exp in bldg maintenance; in supvn, & in dealing w/ a technically oriented group of clients; thorough understanding of health & safety hazards of semiconductor industry.; C08; $2590-3313.

42451-JB (JCC:8706) HEALTH & SAFETY SPEC II: 50%; makes fire & life safety inspections of Univ facilities incl bldgs under construction or renovation in orde: to ascertain compliance w/ applicable codes, ordinances & fire protection standards; writes reports of hazards or deficiences noted & suggests corrective measures; reviews plans of renovations to existing bldgs or construction of new bldgs incl fire protection suppression & alarm sys; conducts selected fire safety training & edu programs for Univ community; QUALIFICATIONS: ability to read & interpret bldg construction & fire proteciton sys plans; commu effectively both verbally & in writing; deal effectively w/ Univ officials, reps, & public in genl; knowl of principles, procedures & methods of modern fire protection eqpt & sys; knowl of state & local laws & ordinances & recognized fire protection standards; AS or AA degree or equiv major course work in fire science; significant exp as a fire inspector in a fire dept, fire prevention bureau or equiv organization.; C07; $1111-1438.

26733-PM (JCC:2094) ADMIN ASST II: Prov admin support for SUMEX Computer Proj, a dynamic national resource for res in artificial intelligence in med; serv as offc mgr & user community liaison w/ respon incl budget prep/mgmt, expenditure control, personnel admin, property/space admin, representing SUMEX in admin/public relations matters, supv of offc staff in clerical duties & computer sys file mgmt admin, & provision of basic computer sys usage instruction to users; design effective sys to administer the above, & know/interpret/apply Univ & NIH policies & procedures; QUALIFICATIONS: Admin Asst I or equiv exp, w/ working knowl of sponsored res admin incl Univ & NIH policies/procedures; excel skills in oral/written commu; effective supvry skills; exp w/ computer-assisted text-processing & admin tools, or ability to learn; send appl/resume to Ed. Pattermann, Med Ctr, TB105 or call 497-5569.; C05; $1756-2202.

36403-JB (JCC:2160) ACCOUNTANT II: Identification, acctg & distribution of all payments to SU; interview, hire & train staff incl part-time employees for registration peaks; respon for safety & accuracy & timely depositing of funds, maintenance of audit trails, & processing of student registrations; QUALIFICATIONS: Bachelor's degree or equiv exp in Acctg or a related field; familiarity w/ banking procedures & exp w/ foreign collection items, UNESCO coupons, bank transfers, etc; knowl of computer applications; banking exp nec; supvry skills; demonstrated commu & organizational abilities a must.; C06; $1948-2441.

43757-DS (JCC:2254) FIN/MGMT ANALYST I: Prov analytical & admin support for CIT's Operations Div; collection & analysis of financial data for the budgeting & planning processes of Operations' 12 cost ctrs; asst cost ctr mgrs in developing financial procedures & sys for budgeting, costing, & reporting; prep monthly financial status rpts on the Div's cost ctrs; asst CIT Finance in the costing of services provided by Operations; required to serv as support staff for periodic mtgs; required to act as bkup for any of the Div's admin staff during their absence, etc; QUALIFICATIONS: Bachelor's Degree in acctg, economics, business admin or a related field, & a knowl of financial analysis, acctg & computing; exp in researching complex tech & admin issues & making recommendations related to these issues; outstanding written & oral commu skills; ability to commu effectively w/ sr. staff members on sensitive issues; knowl of technology & terminology of computer operations.; C05; $1756-2202.

SLAC jobs

94621-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; rotating shift; installation, modification, checkout, operation & maintenance of precisely regulated SCR power supplies, computer peripherals & other associated eqpt; asst in breadboarding & testing of new designs & construction of eqpt & prototypes; QUALIFICATIONS: electronics training to senior level; several yrs related exp; must be able to troubleshoot electronic control circuits.; A34; $11.52. APPLY AT SLAC

95704-JM (JCC:2546) SECRETARY I: Prov sec'l support to professional staff; primary respon incl, but not limited to performing accurate finished-form typing of corresp, memos, rpts, studies, etc. using correct grammar & spelling; establish & maintain files; route & screen mail; asst w/ overload as assigned; answer phones; take messages; serv heavy walk-in traffic; operate Telex; use independent judgment, knowl & tact to solve problems; QUALIFICATIONS: requires sec'l skills at level assoc'd w/ several yrs exp or equiv edu & exp; accurate typing of 50; good commu/interactive skills; bkground in serv-oriented environ.; B09; $1187-1248. APPLY AT SLAC

95547-JM (JCC:6484) LAB MECHANICIAN II: TMS Unit; fr drawings, sketches & verbal descriptions, perform machine work on diverse types of eqpt & produce components or parts; QUALIFICATIONS: requires full journeyman level skills; operate all machine shop & hand tools; use all types of precision measuring devices; familiar w/ rigging methods & operation of various types of hoists; familiar w/ standard shop practices; knowl of welding, brazing & sheet metal.; A37; $12.39. APPLY AT SLAC

95021-JM (JCC:2454/2504) Offc Asst II/II-S: Maintain document collections; typ fr drafts; make travel arrangements; do misc offc duties; make visitor arrangements & committee work; typ manuscripts into text editor; QUALIFICATIONS: good typing & spelling skills; ability to carry out a wide range of duties under minimal supvn; some knowl of computer terminals desirable; candidates w/ computer data entry/retrieval skills in addition to above will be considered at OA II-S.; B09/B10; $1187-1248/1248-1308. APPLY AT SLAC

Nonexempt

27299-PM (JCC:2470) OFFICE ASST IV: Fixed term 9/1/83-2/1/85; asst w/ several major research projs w/in the Undergrad Res Offc; typ complex tables, reports & questionnaires; make revision of reports using NBI word processor; asst in compilation & publication of tables of results; maintain res files; code questionnaires; use statistical computer package to analyze data; handle most aspects of annual survey of graduating seniors; review & reconcile acctg records; act as liaison w/ people seeking info about various res projs; QUALIFICATIONS: typ 60; some exp w/ social res desirable: ability to deal w/ different forms of data; knowl of SPSS or SAS (statistical packages) & Wylbur helpful; familiarity w/ word processing eqpt; knowl of statistics & good computational ability helpful; knowl of Stanford admin procedures helpful; send appl/resume to John Boli, Bldg 1, Room 2U, Undergraduate Research.; B14; $1512-1590.

25594-PM (JCC:2462) Offc Asst III: Help w/ production of daily news releases to media; operate small off-set press, computerized typesetting sys, & various other offc machines; help maintain computerized mailing lists, extensive news files; help w/ genl offc routine, incl answering phones; help proofread news releases & do minor editing; QUALIFICATIONS: able to work under deadline pressure; mech aptitude (to operate machines) & good command of English (for proofreading); courteous in contacts w/ media reps & public; prev exp w/ offc machines not required, will train.; B11; $1308-$1376; call Enelda Wade, News and Publications, 497-2558.

29575-BP (JCC:2454) OFFICE ASST II: Genl offc clerical duties in Telecommu Dept; answers dept phone; typ ltrs, rpts, forms; open, stamp & distribute incoming mail; maintain reading files, periodicals distribution, eqpt maintenance records; prep personnel records forms & payroll forms; monitor & order supplies; operate photocopier & electric typewriter; bkup sec'l work in vacation relief; may learn word processor and/or microcomputer applications; QUALIFICATIONS: typ 50; knowl of offc procedures; good organizational, recordkeeping, & report compilation skills; willingness to learn microcomputer & word processor; send appl/resume to M. Trimm, 333 Bonair Siding.; B09; $1187-1248.

44352-BP (JCC:2454) OFFICE ASST II: Respon for Credentials Window every afternoon for 3 hrs; answering questions of students concerning their transcripts, study lists, grades, petitions, etc; when policy quesitons are involved, answer them accurately or refer students to the proper offcs; respon for completion of verification forms; pulling records & files, & filing petitions; QUALIFICATIONS: Stanford student bkground extremely helpful; able to deal effectively w/ students & have the capacity & patience to handle routine as well as specially assigned tasks; send appl/resume to Dana Curry, Room 133, Old Union.; B09; $1187-1248.

33796-BP (JCC:2454) OFFICE ASST II: 50-75%; to assist w/ various clerical duties, incl typing, filing, messenger to & fr campus, switchboard relief; QUALIFICATIONS: typ 50; some offc exp; reliable, willing to learn Datapoint wordprocessor; 18 yrs of age & have valid driver's license; neat appearance & pleasant phone manner; knowl of campus helpful; send appl/resume to Lee Berman, 209 Hamilton Ave., Palo Alto.; B09: $1187-1248.

15134-BP (JCC:2462) OFFICE ASST III: Respon for selling parking stickers; issuing carpool permits; answering phones; typing corresp; taking theft reports & various police reports both at the counter & over the phone; filing supplies, procurement, statistical reports; typing of various Univ forms; some delivery & pick-up of supplies & corresp; QUALIFICATIONS: typ 50; high sch'l grad; bi-lingual helpful; ability to cope w/ irate customers & crisis situations that arise on a daily basis; confidentiality is mandatory as a police dept employee is exposed to highly sensitive info on a daily basis; BANK TELLER EXP. VERY HELPFUL; send appl/resume to Ramona Kelley, 711 Serra Street.; B11; $1308-1376.

29484-PM (JCC:2462) OFFICE ASST III: Job sharing possibility; receptionist for GSB deans, Faculty, admin offcs, & alumni offc; greet & asst visitors at GSB; answer & respond to questions on a 30-button call director; asst in structuring of approp acctg sys for depositing $120,000 membership dues, deposit monies, & interact w/ bank; prov qrtly rpts to Alumni Assoc; compose & typ routine corresp; QUALIFICATIONS: typ 50-55; proven ability in dealing w/ public; professional telephone manner; punctuality & attendance of prime importance; accurate finished typing skills & proofreading ability; mathematical aptitude; willingness to acquire computer skills; send appl/resume to Mary Hughes, GSB Rm 174 or call 497-4046.; B11; $1308-1376. 1

41770-PM (JCC:2462) OFFICE ASST III: Assts the Registrar w/ operation of the Student Services Offc; ordering of texts, assignments to limited enrollment courses; prep mat'l for filing w/ various State Bar Assoc concerning the academic records of grads; assts in registration & changes in registration of students, recording of grades, does reports for Deans, handling of student petitions & admin of final exams; helps answer 7-line call director incl 2 main school lines & 2 lines to Dean's offc; QUALIFICATIONS: typ 50; good typing & accuracy in detail work essential; ability to organize work extremely important; ability to establish rapport w/ student, faculty, staff; college bkground very helpful; able to handle confidential mat'l w/ discretion; contact: Erika Kaltenbach, 497-3574.; B11; $1308-1376.

44354-BP (JCC:2462) OFFICE ASST III: Act as receptionist to the offc; greeting visitors, students, & faculty concerning services of the offc; offc supply & eqpt orders; respon for petty cash fund, assistance w/ budget monitoring; offc payroll/personnel processing; issuance of visiting scholar courtesy cards; declaration of majors for students; drafting corresp for supvrs; sec'l support for other staff as needed; QUALIFICATIONS: typ 50-60; knowl of Stanford helpful; good organizational skills; good commu skills, both verbal & written; ability to work w/ a diverse group of people; knowl & exp w/ computer programs such as SCRIPT & WYLBUR very helpful; send appl/resume to Dana Curry, Room 133, Old Union.; B11; $1308-1376.

30903-PM (JCC:2462) OFFICE ASST III: 50%; 9-1pm; performs duties in Meyer Lib; film-booking for faculty, staff & Stanford-affiliated groups recognized by Offc of Dean of Student Affairs; maintain a collection of film rental catalogs & asst patrons in their use; prov rpts of film rentals to approp Meyer bibliographers at regular intervals; suggests purchase of approp film reference publications & responds to bibliographers' requests for info regarding rental films; maintains Edu Film Lib Assoc evaluations & indices; QUALIFICATIONS: typ 60; demonstrated clerical & organizational skills; atten to detail; excel written & oral commu skills; prev public serv exp; prev genl offc exp; interest & knowl of the film as a medium of edu desirable; contact: Bob Johnson, Green Lib, Rm 223 (7-3152).; B11; $654-688.

27503-PM (JCC:2462) OFFICE ASST III: 50%; generate grad change notices, verify, record, & commu changes w/ campus registrar; drop/add petitions; xerox & process students' evaluations, record grades on End Quarter Reports, working transcripts, files, res problems & notify instructors or clerkship coordinators when evals not received; verify end quarter reports, res problems, mail EQR's, notify instructors of missing grades; file maintenance; asst w/ clinical registration 4 times a year; heavy phone coverage; QUALIFICATIONS: prior univ registrar or acctg or data gathering exp, tabulation, res, mathematical affinity; prior exp working w/ students, student records, faculty; detail oriented; prior med school work helpful; contact: Charlotte Crucean, M105 Med School, 497-5410.; B11; $1308-1376.

41768-PM (JCC:2462) OFFICE ASST III: Processing of admissions applications, incl compiling, posting,

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Staff employment opportunities

Nonexempt jobs

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filing, coord of mat'ls for each applicant, & assembling the file into a finished product for committee review; typing of letters; answering of phones & questions on application procedures & Law Sch'l programs; serv as admissions reference source in absence of Admission Offc Mgr; codes admissions data for pre-programmed computer retrievals & uses in-house CRT for data input; assts Mgr in retrieving nec reports on a wkly basis; QUALIFICATIONS: typ 50+; college bkground helpful in reading grad/college transcipts, & in checking applicant credentials; good typing & genl offc skills; assumes heavy workload during peak periods fr both admissions & for financial aids; quality work required; accuracy extremely important; able to learn computer input & retrieval procedures; send appl/resume to Erika Kaltenbach, Room 112, Law School.; B11; $1308-1376.

41576-BP (JCC:2470) OFFICE ASST IV: 75%; fixed term 9/22/83-9/30/84; sec'l, clerical support for COFHE Grad Res Proj; info dissemination; maintain personnel records for employees; typ corresp; typ proposals & reports; supv production, printing & dissemination of reports; supv, hire & train clerical assistants; complete proper univ forms; make arrangements for proj mtgs; organize mailing lists & coord mass mailings; asst in compilation & production of complex tables of results, code questionnaires, asst w/ data cleaning; QUALIFICATIONS: typ 65; some exp in soc sci res desirable; accurate typing; knowl of offc machinery (xerox, calculator); knowl or willingness to learn word processing; knowl of Wylbur desirable; send appl/resum to Karlene Dickey, Bldg 1, 2nd Fl., Rm 2R.; B14; $1512-1590.

27072-PM (JCC:1747) LIBRARY SPEC I: Performs duties in Acquisitions Dept of Hoover Institution Lib; ordering books published in Western Langs, mostly in Spanish & German langs; receiving & processing shipments of such mat'ls & handling the corresponding invoices; searching public catalog & acquisition files to avoid duplicates; preparing wkly book truck; maintaining accurate records & compiling statistics; QUALIFICATIONS: typ 45; working knowl of Spanish & German; accurate typing ability; prev lib exp & familiarity w/ RLIN or other lib automated sys desirable; send appl/resume to Joseph Kladko, Hoover Tower, Rm 114 or call 497-2054.; B10; $1248-1308.

31199-PM (JCC:1763) LIBRARY SPEC III: Sun-Thur, 2-11pm; hrs vary during Dead Week, Final Exam Week & Intersession; some holiday work required; performs duties in Circulation Services Div of Meyer Lib; manages all circulation operations during evening hrs, incl supvg 1 full-time Lib Spec II & 2.5 FTE portal monitors; training & evaluation of student assistants; prepares schedule for opening & closing the bldg; schedules Loan Desk & compiles statistics; serv as a member of the divisional planning team; QUALIFICATIONS: typ 40; prev lib exp; prev supvry exp; prev public serv exp; demonstrated oral & written commu skills; ability to learn RLIN & SOCRATES searching tech; prev circulation exp & SU supvry exp desirable; contact: Bob Johnson, Green Lib, Rm 223 (497-3152).; B14; $1512-1590.

33346-PM (JCC:2058) ADMIN ASST I (N): Administer the Stanford Rock Physics Proj & the Integrated Reservoir Studies Proj established to conduct res under contracts fr industrial & govt sponsors; projs involves 6 faculty members & up to 20 grad students, as well as 2-4 other scientists, 1-2 part-time secs, & 1-2 techs; represent the Principal Investigators w/ sponsors, Stanford's Sponsored Projs Offc, subcontractors & outside vendors on most matter of a business/admin nature & attend mtgs; prep monthly & qrtly tech rpts; coord proposal prep & submission, reporting to funding agencies & publications; edit & establish format for proposals & manuscripts using word processing & computers; respon for financial planning, fiscal control, & budget prep, etc; QUALIFICATIONS: exp in managing an offc of 10-15 people; knowl of offc eqpt, word processing, use of computerized spread sheets & data bases; independence & decisiveness in planning & execution of admin tasks, etc; send appl/resume to Carol Vonder Linden, Room 365 Mitchell Bldg.; B16; $1673-1755.

42680-PM (JCC:2202) ACCOUNTING ASST II: Process invoices; prep check requests & transfer of expense forms; keep records of charges to various accts & be able to use computer to convert offc ledgers to machine managed data sys; monitor budget & fund statements; prev acct status info for approp depts in the lib; record daily lib cash receipts & arrange for depostis of money; process time sheets for payroll; maintain leave records; collect money fr copying machines; coord activities & work schedules w/ Dir's sec during regular offc hrs; QUALIFICATIONS: acctg procedures exp & excel arithmetic skills needed; outstanding organizational ability & sound independent judgment required; lib sci knowl & exp are important advantage; familiarity w/ some European Langs to process foreign payment documents helpful; accuracy, neatness, & ability to work w/ details are mandatory; contact: B. Gallo, Jackson Lib, Grad Sch'l of Business, 497-2161, M-F, 10-12 & 3-5.; B12; $1376-1442.

41671-BP (JCC:2454) OFFICE ASST II: Fixed term; 6 mos fr date of hire; 9-6 or 8-5; receive customer serv calls, record accurate info to be referred to NCC staff; execute specific follow-up serv procedures; prep, ship & verify the operation of various data commu eqpt, incl modems, cables, switching devices & MSDs; operate online data base entry sys to code, transfer, reconcile & document files on NCC statistics, inventory, order processing & various other activities; QUALIFICATIONS: prev exp receiving customer serv calls; take accurate info fr users, vendors, & central staff; aptitude for touch typing on both a typewriter & a CRT w/ good accuracy; possess basic skills w/ WYLBUR text editing or other similar data entry methods; able to prep & pack for shipment electronic hardware send appl/resume to Wes Ramirez, Laurel 111.; B09; $1187-1248.

31514-PM (JCC:2554) SECRETARY II: Prov full-range of sec'l support to Dir of Med Fund & Assoc Dir of No. Cal; receive & screen calls/visitors; schedule appts; open/sort mail; draft ltrs/rpts independently or fr oral/written instructions; maintain calendar; make travel arrangements; prep exp rpts & take respon prep volunteer mat'ls & progress rpts; coord several annual mailings; bkup receptionist for Offc of Development; QUALIFICATIONS: typ 55; knowl of offc procedures; ability to take initiative to see that work flows smoothly are essential; ability to handle heavy workloads at peak program periods; commu effectively; good writing skills; exp w/ computers/-word processors helpful; send appl/resume to Liz Trujillo, 301 Encina Hall, Stanford, CA 94305.; B11; $1308-1376.

40337-PM (JCC:2554) SECRETARY II: 50%; between 9-4; prov sec'l support for Health Improvement Program for faculty & staff; answer phone & greet visitors; answer questions regarding program & classes; perform telephone interviews for periodic surveys, keep community & Stanford referral list current & make referrals; typ corresp, reports, minutes, memos, forms, manuals; maintain supplies; establish & manage offc procedures; use WYLBUR computer program for mailing lists & record keeping; prep deposits of checks, etc; QUALIFICATIONS: typ 60; prior offc exp; excel interpersonal & commu skills incl effective telephone manner; good vocabulary & knowl of grammar; knowl of or willingness to learn WYLBUR or other text editor; interest in fitness, nutrition or health desirable; knowl of SU policies & procedures preferred; typing test required; contact: Fran Carl, SHDPP, HRP Bldg. Room 114.; B11; $1308-1376.

30418-BP (JCC:2554) SECRETARY II: Prov full sec'l serv to Assoc Dean of Grad Studies & Research; use dictaphone; understand, apply & explain Grad Div policies on financial support & academic regulations to depts & students; screen calls & visitors; make appts; coord mtgs & collect approp bkground mat'l for such; prep travel reqs & expense rpts; maintain variety of files; ordering Univ Fellowships for grad students; use computer terminal; student spouse not acceptable due to confidential student financial records; may not smoke in offc; QUALIFICATIONS: typ 65; s/h desirable; ability to carry out wide range of assignments w/ min of instruction; deal w/ depts & other univ offcs, w/ students pleasantly & effectively; handle phone calls fr all over U.S. in regard to national committees; basic math skills; use dictaphone; contact: Mary Lou Scott, Bldg 590, Rm 209.; B11; $1308-1376. 1

29542-PM (JCC:2554) SECRETARY II: Prov sec'l serv for 2 staff members of Med Development Offc; respon for fund raising, donor relations, & events; typ corresp w/ high level of accuracy & appearance; draft routine corresp; arrange appts & group mtgs; maintain calendar & tickler file; prep various Univ forms; asst in plans for spec events; prep letters on word processing eqpt; code & retrieve computer info; check monthly budget statements; screen mail; res prospects bkgrounds; QUALIFICATIONS: typ 60; detail oriented; excel spelling, grammar, & punctuation skills; good typing; neat & legible handwriting; willingness to interchange job assignments; commu effectively by phone; take independent action when nec; send appl/resume to Liz Trujillo, 301 Encina, Stanford, CA 94305.; B11; $1308-1376.

29541-PM (JCC:2554) SECRETARY II: Prov full range of sec'l serv for 2 line fund raisers; typ corresp w/ a high level of accuracy & appearance; draft routine letters & reports; prep various Univ forms; prep letters on word processing eqpt; code & retrieve computer info; screen mail; maintain calendar; make travel & mtg arrangements; reconcile monthly budget statements; answer phones; QUALIFICATIONS: typ 60; excel typing, spelling, & grammatical skills; effective telephone commu skills; willingness to interchange job assignments; establish prior & work well under pressure of assignments fr 2 staff members; send appl/resume to Liz Trujillo, 301 Encina, Stanford, CA 94305.; B11; $1308-1376,

29965-PM (JCC:2570) SECRETARY III: Prov sec'l serv to 2 chemistry professors & their res groups; use of word processor to prep scientific manuscripts, proposals, reviews & corresp; respon for development of grant proposal budgets & monitoring of monthly res expenditures; process purchase of res supplies as requested; travel arrangements; prov monthly budget projections & establish expenditure control procedures; assure compliance w/ Univ, govt, & funding agency regulations; QUALIFICATIONS: typ 65; rapid & accurate typing; recent sec'l exp; knowl of word processing or willingness to learn; good English skills; acctg knowl & exp w/ SU forms & procedures helpful; send appl/resume to Robin J. Maslin, Dept of Chemistry.; B14; $1512-1590.

19061-BP (JCC:2596) SECY II-SPEC: Sec'l serv to 5 full-time faculty members; respon for class mat'l, corresp, tech manuscripts, journal articles, & rpts; filing; responds to phone inquiries; routes messages & mail; significant student contact; QUALIFICATIONS: typ 65; tech typing exp required; accurate proofreading; willingness to train on computer terminal text-editing NBI sys; knowl of Univ procedure helpful; send appl/resume to Robert J. Moffat, Bldg. 500, Rm 500K.; B12; $1376-1442.

28296-BP (JCC:2596) SECY II-SPEC: The Space Plasma Physics Group consists of 2 professors, 2 Sr. Res Assoc, & several other res personnel as well as grad student res assistants; work of the group is mainly res of the near earth environ, & is strongly oriented toward NASA Shuttle & Spacelab programs although not exclusively; filing, corresp, telephones & genl sec'l duties; use all standard offc machines; extensive use of computer based word processing & electronic mail; make travel arrangements; schedule & make mtg arrangements, etc; QUALIFICATIONS: typ 60; able to handle visitors, phone calls, & interactions w/ other staff in a courteous & efficient manner; able to adapt to flexible offc routine; tech typing, or word processor, or computer exp nec; send appl/resume to Beverly Yate; B12; $1376-1442.

42499-PM (JCC:5500) DATA AIDE IV: Respon for the day to day supvn of a complex data entry unit for SU Faculty Practice Program; assure the accurate posting of transactions, incl patient demographic & financial info, clinic charges & receipts; respon for FTEs, incl input into evaluations, training, interviewing & routine day to day operations; perform data entry functions; QUALIFICATIONS: 1-3 yrs computer data entry exp, preferably in health care setting; working knowl of health care billing; basic understanding of principles of mgmt & supvn as they relate to a prof'l practice offc setting helpful; good knowl of cash acctg controls & procedures; Analytical & problem solving skills; high sch'l edu or equiv work exp; typ 40; send appl/resume to Joe Bayus, 525 Univ Ave., Palo Alto.; B15; $1590-1673.

26608-TC (JCC:6810) SOC SCI RES ASST I: 50%; Res Asst for Prof Ellen Markman, Dept of Psychology; run subjs in studies of cognitive development; requires working w/ children ranging in age fr 1 to 18, as well as working w/ college students; requires working w/ children individually rather than in groups; having children solve problems, group objs, construct pictures, follow instructions, & answer questions about stories & essay they hear; compiling & coding data; helping to analyze the data; occasional lib res; QUALIFICATIONS: college degree desirable w/ strong bkground in experimental psychology; strong bkground in statistics desirable; exp working w/ children; transportation nec since much of the res is conducted in public schools.; B12; $1376-1442.

40530-PM (JCC:8940) MISC CLERICAL/ASST RES NURSE: Research Assistant for hypertension studies; contacting & interviewing patients to participate in study; recording of clinical data, blood pressure monitoring; perform venipuncture; dispense medication; monitor study subjs; asst nurse practitioner in organizing criteria of study protocol; perform appt scheduling & follow-up; filing; ordering supplies, etc; QUALIFICATIONS: knowl of principles of health sci res methodology; basic understanding & knowl of clinical aspects of hypertension; working knowl of med terminology; good verbal & written skills; LVN license preferred; contact: Valerie Vierra, 493-5000x5918 or Linda Deasy, 497-7404.; B14; $1512-1590.

New employee orientation

The next orientation sessions for new employees will be held at 9 a.m. Tuesday, Aug. 30 and Sept. 6, in Room 282, Tresidder Union.

The sessions are open to all new employees without preregistration.

Bargaining unit

36641-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; maintaining (feeding, freezing, passaging) mammalian cells, incl human; prep of tissue media & other solutions, & sterilization; prep of gels; fluorescent labelling of cells w/ monoclonal antibody; mycoplasma screening; QUALIFICATIONS: familiarity w/ tissue culture of mammalian cells, incl media prep & sterilization; bacterial culture, incl agar prep, pouring of plates, screening colonies.; A18; $ 7.88.

22962-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; ordering supplies, stock control, prep of stock solutions & media, fixing & embedding tissue, sectioning plastic-embedded & frozen tissue, microdissection, operation of light microscopes & darkroom printing; opportunities exist for training in use of electron microscope; QUALIFICATIONS: approx 1 yr's exp in a lab.; A18; $7.88.

42886-VW (JCC:5644) LIFE SCI TECH II: TMS Unit; fixed term 9/1/83-8/31/84; radiolabeling herpesvirus infected cell cultures; gel electrophoresis of extracted proteins & nucleic acids; immunoprecipitation & immunoadsorption of viral antigens w/ antiviral monoclonal antibodies; hybridization of radiolabeled DNA probes to immobilized viral RNA or DNA; QUALIFICATIONS: specific exp in herpesvirus growth, 1 titration, precautions, monoclonal antibody tech, polyacrylamide & agarose gel electrophoresis; tissue culture; isolation of virions, viral & plasmid DNA, & viral proteins; working knowl of all genl microbiological & biochemical lab eqpt as well as genl lab tech.; A24; $ 9.08.

31601-LL (JCC:5644) LIFE SCI TECH II: TMS Unit; animal surgery involving stereotaxic implantation of cannulae in brains of lab animals; removal & dissection of the brain; prep of brain tissue for high pressure liquid chromatographic analysis of neurotransmitters; requires delicate manipulations & fine observation on a routine basis; the use of high performance liquid chromatography for the analysis of neurotransmitters; QUALIFICATIONS: sufficient skills & bkground to be able to learn highly skilled procedures in training capacity; familiar w/ stereotaxic surgery on lab animals, microdissection of nervous sys tissue & chemical analysis of such tissue; bkground in analytical chemistry; exp in chemical analysis incl fluorescence & high performance liquid chromatography w/ electrochemical detection extremely helpful, as would exp in neurophysiological preps & learning preps.; A24; $9.08.

39408-TC (JCC:5652) LIFE SCI TECH III: TMS Unit; Life Sci Tech for basic cancer res; perform skilled & highly skilled procedures, incl protein isolation & prep, gel electrophoresis, column chromatography, & hybridoma production (tissue culture); keep accurate records & maintain a clean lab; QUALIFICATIONS: 3 yrs of lab exp; exp'd in tissue culture & able to do gel electrophoresis & column chromotography w/ minimal supvn; able to work w/ students.; A30; $10.47.

28298-DS (JCC:7132) rec/ship/furn assembler: TMS Unit; receive deliveries fr off campus vendors & SU Stores Dept; check deliveries for accuracy & damage; record & deliver mat'l to requestor; makes daily pick-up of merchandise by petty cash purchases or SU purchase orders in Palo Alto & other peninsula cities; makes various on campus pick-ups & deliveries daily; pick-up mail fr SU Post Offc; sort I.D. & U.S. mail; prep various types of mat'l for mailing & shipping; QUALIFICATIONS: clerical aptitude high school or equiv; valid Calif drivers license required.; A21; $ 8.48.

17471-DS (JCC:7324) FOOD SERVICE WORKER IV: TMS Unit; Mon-Wed, 6:15-3:15pm; Sat/Sun, 9:15-6:15pm; prep of entrees, soups, breakfast, lunch & dinner according to cooks daily work sheet; coord helpers in cooking methods; keep work areas neat & orderly; maintain highest quality of food prep & serv thru use of specified portion, temperature control, attractiveness of food & sanitation using specific guidlines; order fr storeroom when nec; report needed repairs & maintenance; QUALIFICATIONS: knowl of cooking terms, recipes, ingredients, & eqpt for institutional cooking; able to read, write, speak & understand English; able to follow recipes; able to meet Health & Safety Regulations for Food Serv workers.; A20; $ 8.31.

29761-JB (JCC:7654) CUSTODIAN: TMS Unit; 8-4:30; performs custodial duties; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot cleans, shampoos, waxes, dusts, & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift 25-75 lbs; ability to withstand extensive walking, pushing, stooping, & squatting.; A13; $7.01.

29763-JB (JCC:7654) CUSTODIAN TMS: Unit; 8-4:30; performs custodial duties; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot cleans, shampoos, waxes, dusts, & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift 25-75 lbs; ability to withstand extensive walking, pushing, stooping, & squatting.; A13; $7.01.

29762-JB (JCC:7654) CUSTODIAN: TMS Unit; 8-4:30; performs custodial duties; daily cleaning, mopping, waxing, vacuuming, cleaning restrooms, etc; washes walls & woodwork by hand or using industrial eqpt; spot cleans, shampoos, waxes, dusts, & oils furniture; QUALIFICATIONS: knowl of cleaning & waxing methods & mat'ls used in industrial cleaning; knowl of related safety procedures; ability to lift 25-75 lbs; ability to withstand extensive walking, pushing, stooping, & squatting.; A13; $7.01.

22961-VW (JCC:6484) LAB MECHANICIAN II: TMS Unit; fabrication, construction, maintenance & repair of instruments, tools, eqpt & apparatus used by depts of Neurobiology & Structural Biology; eqpt for optical sys, neurophysiology set-ups, Laser instruments, chemical & physical lab; all the above will be accomplished by working fr blueprints, sketches or verbal instruction; recognize simple mistakes or errors in drawings in advance; tolerances up to + or .0005 in;. QUALIFICATIONS: ability to use all standard machines, such as lathe, milling machine, drill press, toolroom grinder, hand & table saw as well as a wide selection of hand tools & precision measuring devices; work w/ a variety of ferrous & nonferrous mat'ls, a wide range of plastics, Teflon, Delrin, Nylon & PVC, rubber mat'ls, epoxies etc; knowl & skills in use of welding operations, soft & silver soldering.; A37; $12.39.

28295-DS (JCC:6638) S&E TECH - ELECTRON: TMS Unit; process wafers for manufacturing of integrated circuits; be trained on an Electron Beam Pattern Generator & mask steppers; proceed w/ the operation of semiconductor related process eqpt; perform some routine maintenance on related eqpt; prov support for sr. staff & grad students of I.C. Lab; QUALIFICATIONS: 1 or 2 yrs' exp in I.C. processing.; A28; $9.98.

Rental housing

HOUSING AVAILABLE

□ **End of Sept. '84 to Apr. 1, '85 (flex):** Furn. 3 or 4BR/2 or 3BA campus hse. Nonsmokers, cat lovers (must care for res. cat) can be seen up to Aug. 20, '83 Call 326-3842. Thereafter write Prof. Tuttle, Mathematics Dept., Amherst College, Amherst, MA 01002.

□ **Beg. Sept. '83 for 1 yr:** Fully furn. 3BR/2BA Eichler w/frpl. 10 min. to Stanf., nr. schools, pet poss. $1200/mo. util. extra. 1st & last mo. dep. req. Call Susan, (415) 494-2196.

□ **NOW:** 3BR/2BA 2 story hse. in Palo Alto. Corner lot, AEK, microwave, DR, den, lrg. LR, 2 car garage, brick patio, yrd. w/grdn (grdnr paid). Xclnt sch. dist. Min. 1 yr. lease (pref. 2). Dep. req. Call (415) 324-9193.

□ **Sept. 27 to Nov. 20:** Fully furn. campus hse. Grdnr & cleaning woman provided. Reasonable rent in exchange for pet care. Pref. single or cpl. Call 494-3000 or 857-0674.

□ **Aug. 21 to Sept. 25:** 2BR/2BA Peter Coutts condo. Study, pool, jacuzzi, car, $900/mo. Call 497-0833 day; 493-6273 eve & wknd.

□ **Dec. '83 to Dec. '84:** Fully furn. 5BR/2½BA hse. in Stockholm, Sweden. EXCHANGE for similar in Stanf. area. Write Prof. L. Bergdahl, Thoracic Surgical Clinic, Karolinska Sjukhuset, S-10401, Stockholm, Sweden.

□ **Now:** S. Lake Tahoe Vacn/ski hse., furn. 2BR, frpl, color TV, phone. Adj. Nat'l Forest. Walk to lake, Tahoe Keys. $120/wknd, $200/wk (5 days). Call Janine 497-2501 day; (408) 739-3141 eve.

□ **Now:** Clean, unfurn. 3BR/2BA hse. AEK, frpl, lrg. enclosed patio, 2 car garage. Menlo Pk. Bus to Stanf., SRI, USGB. 1 yr. lease. $875/mo. incl. grdnr. Call (408) 484-9159.

□ **Beg. Sept. '83:** 2BR/2½BA twnhse. W/D, lrg. ktchn, sep. DR, sunken LR, wet bar, 2 car garage, priv. patio, pool and jacuzzi. 15 min. to Stanf. Perfect for cpl./cpl. & child. $1100/mo. Call 961-8364.

□ **Fall qtr. approx. mid-Sept./mid-Dec.:** Fully furn. campus hse. Solar pool. Grdnr, pool, cleaning serv. Nonsmokers, no pets. $1270/mo. Call 857-1497.

□ **Oct. 15, '83 to Mar. 30, '84:** Fully furn. 3BR/2½BA hse. on 2½ acres in Westridge, Portola Valley. AEK, sep. DR, study guestrm., Creekside setting, pool, grdn, paddle tennis crt., caretaker cottage w/caretaker, horse pasture, corral facil., grnhse. Children OK, no pets. 10-15 min. fr. Stanf. $1800/mo. + util. + $1500 sec. dep. Call Guy Blase, (415) 327-6700 day; (415) 851-8004 eve & wknd.

□ **Sept. thru Dec. 15, '83:** Furn. 1 or 2BR apt, pool, gym, sauna, jacuzzi, racqball, adult complex. 1 apt. air cond. Rt. #280, 15 min. to Stanf. $600/mo. for 1BR, $700/mo. for 2BR, depo. & ref. req. Call Prof. Arnold, 968-0951 or (408) 255-8909.

□ **Sept. 21 to Nov. 17:** Furn 2BR/2BA apt. in small, quiet complex lundry facil., dishwshr, pool. Located in Palo Alto, 3-4 mi. to Stanf. $650/mo. Call Margie, 497-6461 day, 494-7754 eve.

□ **Sept. 5, '83 thru Oct. 22, '83:** 2BR/2BA Oak Creek apt., frpl, frnt & bk fenced patio, pool, tennis, gym, spa. $1500/mo. incl. all hsekeeping necessities. Call 327-9245 or 497-3649.

□ **Beg. Sept. 1:** Small attractive furn. studio w/priv. deck in campus (Frenchman Hill) home. $425/mo. Call 493-1019 after 7 pm.

□ **From Sept. 1:** 3BR/2BA hse. w/lrg. yrd., redwood trees. Walk/bike to Stanf. swim, tennis, Leland Rd. in Palo Alto. 1 yr. lease. $1250/mo. Call 493-0599, eve & wknd.

□ **Now:** Summer rental, 3BR/1½BA cabin, W/D, phone, sleeps 10, Alpine Meadows, TAHOE. $180/wk. Call 493-4139 eve.

□ **Regularly Available:** 1 & 2BR furn. & unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk., in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **Now:** HAWAII (Kauai), lovely, furn. 2BR/2BA twnhse, pool, tennis, priv. club atmosphere. $50/day. Call Howarth, 591-5190.

□ **Now:** Tahoe-Donner condo. 3BR/loft/2BA, spa, pool, tennis, golf, stable, $350/week, $140/wknd. Call Bienenstock, 493-8649.

□ **Beg. Sept. 1:** Female roommate wanted to SHARE lovely 2BR hse., hardwood fl., lrg. backyard w/deck. Quiet, safe nghbrhd in Menlo Pk. 5 min. fr. dwntwn Palo Alto. Nonsmoker, no pets, pref. grad. student or faculty (no undergrad.) $365/mo. Call Cathy, 948-9428, day; 328-4432, eve.

□ **Beg. Sept. 1 or earlier for 1 yr:** Fully furn twnhse, 2BR/2BA, office/study, AEK, W/D, frpl, pool, 7 min to Stanf. Xclnt for writer/scholar. Prefer cpl, single adult, nonsmoker. No pets. $1300/mo. Call Judy Donnelly, 497-1065, day; 854-3889, eve.

□ **Avail. Immediately:** New twnhse, 2BR/2½BA, furn., frpl, AEK, W/D, fenced yd, El Camino & Page Mill, 5 min. bike to Stanf. $1125/mo. incl. grdnr. Call COLLECT (213) 990-5302, (415) 849-0888.

□ **Sept. 15 to Oct. 15:** HOUSESITTER needed. Nr. Stanf., care for pool; tennis crts, 2 dogs, 2 cats, garden, watering. Call (415) 948-2737, (408) 722-2164.

□ **Sept. 1 for 6-9 mos:** Furn. 3BR/1½BA hse, all appl., great view, deck, frpl, hot tub. 15 min. to Stanf. $975/mo. Call (415) 948-5607.

□ **Oct. 8 to Christmas or mid-Jan. (flex):** Furn. 2BR/2BA 1st fl. condo. unit avail. for visit. scholar. Den w/single sofabed, frpl., Indry, fenced patio, pool, jacuzzi, car nego. 5 mi. fr. Stanf. $1,200/mo. util. incl. Dep. & refs. req. Adults only, no pets. Call (415) 36-1492.

□ **Beg. Sept. 1:** Unfurn. 3BR/2½BA hse., big enclosed yd, sport court hot tub, jen-air stove in ctr. isl. of ktchn. 25 min. to Stanf. Children, pets OK. $1300/mo. Call (415) 1264 eve.

□ **Beg. Sept. 1:** 4BR/2BA hse. w/AEK, frpl., grdnr. Cul-de-sac, midtwn Palo Alto. $1200/mo. + util. + $1200 sec. dep. Pref. family, nonsmokers. 1 yr. lease. Call Mary Ash, (415) 363-4749, day; 493-3501 eve. & wknd.

□ **Sept. '83 to June '84 (flex):** Quiet furn. hse. Upstairs: 1BR, LR, DR/ktchn, 1BA; dwnstrs: util. rm, office. Lrg. wooded lot, 2 decks w/view. 15 min. to Stanf. via 280. Poss. EXCHANGE for similar apt. in CAMBRIDGE. $800/mo. Call Frank 364-2843.

□ **Sept. 1 thru early Feb. '84:** Furn. 3BR hse. in french RIVIERA, Le Lavandou, 25 mi. frm. St. Tropez. Dbl. LR, wash, dishwshr, TV, fenced yrd., phone. Quiet, overlooking sea. $900/mo. or $250/wk. util. incl. Call (415) 858-2490 or Paris, (1) 727 78 31.

□ **NOW:** Fully furn. hse. 3BR/1BA & sep. shower, DR, bkfst nook, lrg. yrds. Quiet, creekside st., bike to Stanf. $1200/mo. Call Larry (415) 573-4998, day; 324-2469 eve; Eveleen 322-6985, eves or wknds.

□ **Sept. '83 to June '84:** Fully furn. 3BR/2BA hse. on 1/3 acres in Los Altos. 7½ mi. fr. campus. Nonsmokers. $1200/mo. incl. grdnr & water. Call (415) 961-6669.

□ **Mar. 10 to Sept. 15, '84:** Charming furn. 3BR/2BA story hse. on classic st. in old Palo Alto. Lrg. study (4th BR), DR, AEK, solarium, small library, pool. Less than 1 mi. fr. Stanf. $1650/mo. incl. grdnr & pool serv. Call 497-2664 day; 321-9213 eve.

□ **Beg. Sept. 1:** Deluxe furn. garden flat on campus for nonsmoking female. Lrg. bed-sitting rm, study and BA. Light cooking. $450/mo. Call Mrs. Berger, 493-6770 eve.

□ **NOW:** Lrg. furn. 1BR junior apt, 6th floor w/nice view & balcony. $620/mo. all util. incl. Call 854-3300 ext. 3214 day; 857-9553 eve. & wknd.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Services, P.O. Box 7772, Stanford, Calif. 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414 or Araya, 329-8828.

HOUSING NEEDED

□ **Now to July '84:** Professional cpl. willing to HOUSESIT. Will care for plants and pets. Local refs. Call (408) 295-5460 day.

□ **Sept. thru Dec. (flex.):** Stanf. grad. student (P.A. native) seeks to HOUSESIT. Loves pets, nonsmoker. Refs. avail. Call Carolyn Kline, 858-2829 early morn. best.

□ **Beg. Sept. 20 (Sept. 1 poss.):** Resp. single prof. lady seeks to HOUSESIT or pay minimum rent. Presently housesitting on campus. Local refs avail. Call 857-0268 wknds.

□ **Oct. 1 for 6 mo. (flex):** French aristocratic cpl. seeks to take care of hse, grdn, pets. Absolutely reliable, nonsmokers, no child. Local refs. Call (415) 326-7053.

□ **Aug., Sept., Oct.:** Yale and NYU grad. on sabbat. avail. for HOUSESIT. Nonsmoker, local refs. Call 454-5002.

□ **Sept. 1 for 9 mos:** Resp. sabbatical M.D. & wife, 2 mature children, 12 & 15, seek 3BR furn. or unfurn. hse. on or nr. campus. Nonsmokers. Loving care of home. Local refs. Call COLLECT (503) 222-2464.

□ **Sept. '83 to Aug. '84:** Visit. scholars seeks furn. rm., studio, or 1BR apt. nr. campus. Nonsmoker, no pets. Will do chores, fix-up, etc. for reduced rent. Call John McAdams, COLLECT (414) 224-6842.

□ **Now:** Responsible, neat woman seeks to HOUSESIT. Great w/plants and pets. Xclnt refs. Call Karen, 324-1780 day; 484-1116, eve.

□ **Aug. '83 to Aug. '84:** Visit. prof. fr. Norway, wife, 2 children seek 3BR, furn. hse. on or nr. campus. Responsible, nonsmokers. Up to $1000/mo. Call 497-2040.

□ **Now:** $100 REWARD for info. leading to rental of cottage/small hse. for resp. prof. woman. Call 326-4695.

□ **Beg. Sept. 1:** Stanf. librarian and UCSC prof. husband seek apt. or cottage nr. Stanf. w/character & privacy. No children or pets. Local refs. Call (415) 848-2137.

□ **Beg. Oct. 1 to Apr. '84 (flex):** Visit. prof. fr. England & wife seek furn. studio or 1BR apt. nr. Stanf. Prefer walk/bike dist. to campus. No children or pets. Call Mrs. Sehgal, 493-5650.

□ **Now or Fall qtr. for 1 yr or more:** Married Stanf. cpl. wish to rent 1 or 2BR hse. Xclnt w/grdn and home maintenance. Xclnt refs. Call 497-0761, day; 494-1548, eve.

□ **NOW:** Artist recently returned frm. Europe seeks quiet cottage or studio. Willing to accept some responsibilities. Call 851-1282 day.

□ **Beg. Sept.:** Medical worker avail. for HOUSESIT. Good w/pets and plants. Good refs. Call 497-5597 day; 854-7824 eve.

□ **Academic yr. '83-'84:** Four v. resp. & academic, nonsmoking Stanf. seniors seek 3-4BR hse. Pref. in faculty ghetto or close to campus. Will housesit if for whole academic yr. Refs avail. Can move in as early as Sept. 15. Write Barbara Levenson, 251 Scripps Ct., Palo Alto, CA 94306 or Vance McMahan, 5706 Tecumseh Circle, Houston, TX 78751.

□ **Nov. 1 thru April 30, '84:** Prof. fr. Weizmann Inst. in Israel on sabbat. at nearby research inst. seeks 3BR furn. hse. for self, professional wife, & 3 teenage children. Call Barbara Harley, 856-8444.

□ **Academic yr. '83-'84:** Female grad. student, nonsmoker, avail. for HOUSESIT, short or long term, and/or exchange work for rent. Loves pet, good refs. Call Gillina, (212) 473-7967 COLLECT if necessary.

□ **Beg. Sept. 1:** Physician (single) joining Stanf. Med School seeks 1-2BR unfurn. hse. or cottage. Enjoys rural atmosphere. Resp., quiet, refs. Around $750/mo. Call Mike or Peggy, 349-2774 eve.

□ **Beg. Oct. '83 for academic yr:** Visit. prof. fr. England seeks 1BR furn. apt. Bike/bus distance fr. campus. Call 497-4377 day.

□ **Sept. 15 for 1 yr:** Finnish post-doc and family (wife, 2 children) seeks furn. 2-3BR hse. nr. Stanf. for rent/lease or EXCHANGE for furn. 2BR apt. in HELSINKI nr. universities. Call 858-2948 or write Martti Mantyla, Vattuniemenkatu 16 b A 9, 00210 Helsinki 21, Finland.



Stanford offers weight loss course

The Health Improvement Program (HIP) is offering a weight loss course by mail designed for those not wishing to participate in traditional weight-loss classes.

Research conducted by the Stanford Heart Disease Prevention Program and investigators at the University of Minnesota suggests that self-administered weight-loss formats which minimize contact between participants and program staff can be as effective as more intensive, face-to-face treatment approaches.

The Health Improvement Program self-help course has been tested by Stanford Heart Disease Prevention Program researchers in Monterey and Salinas as part of its Five City Project in an effort to improve the cardiovascular health of the general populations in the two areas.

The available evidence indicates that the program is as effective as those using group treatment formats.

Orientation meetings to describe the course will be held at the HIP office in the Stanford Heart Disease Prevention Program Trailer next to Cypress Hall.

Meetings are scheduled for the following times and dates: Tuesday, September 8, 5:15-6:15 p.m.; Friday, September 9, 12 noon-1 p.m.

Enrollment in the course is limited; to reserve a place at one of the meetings, telephone HIP at 497-9649 between 1 and 3 p.m.

Expert to discuss computers, nukes

"Computer Reliability and Nuclear War" will be discussed at Stanford by Alan Borning, professor of computer science at the University of Washington, at 7:30 p.m. Thursday, Aug. 25 in History Corner Room 2.

Borning will discuss the dependency of both the U.S. and U.S.S.R. nuclear weapons systems on computers, and the danger of a computer failure precipitating an accidental nuclear war.

The talk will also cover the implications of new weapons strategies, and computer reliability in command, control, and communication systems in case of an actual nuclear war.

The lecture is hosted by the Stanford Arms Control and Disarmament Forum.

Antiquarian book fair scheduled

The second Antiquarian Stanford Book Fair, sponsored by the Associates of the Stanford University Libraries, will be held Friday through Sunday, Sept. 9-11, at Roble Gym.

The preview, from 6 to 10 p.m. Friday, Sept. 9, will include wine and refreshments as well as first look at all the books for $6.

More than 60 dealers will display books, prints, ephemera, maps, Californiana, etc. Proceeds will benefit the Stanford Libraries.

The Fair will be open from 10 a.m. to 7 p.m. Saturday, Sept. 10, and from 10 a.m. to 5 p.m. Sunday, Sept. 11. The charge of $2 covers both days.

NASA talk slated

A group of 20 engineers will give the final report after 10 weeks of study of a manned American space station at 9 a.m. Friday, Aug. 26.

John Hoge of NASA, director of NASA's Space Station Task Force, will speak at 8:30. The proposed space station, which will carry seven to nine astronauts, would be placed into orbit 250 miles above the Earth.

All sessions are in the Physics Tank, Room 100, and are open to the public.

Bike tour Aug. 28

A bike tour and fitness festival will begin at 6 a.m. Sunday, Aug. 28 with registration in the Tresidder Union parking lot. The event is sponsored by the University and *City Sports* magazine.

The bike tour, starting from Tresidder at 8 a.m., will proceed up through Los Altos Hills and Portola Valley and back to the campus. It will cost $10 ($9 in groups of 10 or more), which includes a tee shirt, refreshments along the way, and drawings for prizes.

The free fitness fair will present celebrities, clinics, lectures, slide shows, exhibits of fitness equipment contests, and antique bikes. It is expected to last until about 4 p.m.

For more information on the tour or festival, call *City Sports* at 788-2611.

Step-parents aided

On July 15 Drs. Emily and John Visher, authors of *How to Win As A Stepfamily*, and *Stepfamilies: Myths and Realities*, addressed a group of employees from the Stanford community.

The lecture discussion, organized by Help Center staff member John Preston, was just one of many planned for the upcoming year by the Help Center, Stanford's Employee Assistance Program.
Participants discussed their concerns regarding such issues as:

- children and bonding to the new stepparent;
- the integration of two households;
- the role of the stepparent and disciplines;
- visitation and the impact on the "new family."

The Center is now in the process of establishing an ongoing stepparent support group to be facilitated by Preston, who also is a stepparent.
The group is scheduled to begin in early September. Interested persons can register by contacting the Help Center, Monday through Friday 9 a.m. to 5 p.m. at 497-4577.

Carpools

Carpool partner wanted; San Bruno to Stanford, 8-5, M-F; call Bella 7-6941.

Wanted, codriver to Pennsylvania, departing Aug. 26. Expenses paid. Hank Sims, 321-7604.

Ride needed from Stanford to Oakland (near airport) in exchange for gasoline costs. Would also consider a ride to a BART station, preferably Fremont or San Francisco. Please call Nalini at 493-0356 after 8 p.m.



Challis Gore's photo *Valley of Death* was taken from Zabriskie Point, Death Valley, in 1955.

California photographer honored by three daughters

Seventy prize-winning photographs by the late Challiss Gore, including several owned by the Stanford Museum of Art, have been collected and published for the first time.

Challiss Gore . . . The California I Saw (1983 Preservation Press, $25) was compiled by daughters Judith Gore Hogness, wife of Stanford biochemistry professor David Hogness; Mary Gore Shirey and Janet Gore Venolia as a memorial tribute to their father.

The black and white photographs depict California in the 1950s and '60s, including scenes of native trees, the Mother Lode region, Death Valley, San Francisco architecture, missions, and coastal areas. The book also features photographs from the Gore family album.

"Gore's insistence on perfection led him to produce the rich black colors so difficult to achieve in the darkroom, yet so satisfying in the finished print, to give that special intensity to a dramatic subject," the editors note.

Born in 1887, Gore didn't pursue photography seriously until he was 60 years old. He quickly progressed from novice to prize-winner, and was recognized in hundreds of exhibitions throughout the country, in London, Tokyo, and South America.

He remained quite active in his later years until glaucoma and cataracts took his sight. He died in 1979 at the age of 92.

Copies of the book may be obtained at the Stanford Bookstore, at Stacey's on University Ave., or by calling Judith Gore Hogness at (415) 857-9694.

Mayer...

continued from page 4

not been for enrollment of foreign students."

The Stanford course, Space Systems Engineering, that created Pleiades, reflects a growing interest by students in space problems, focussed mainly on the space shuttle, interplanetary probes, and the increasingly sophisticated use of satellites.

"The course gives the participants real-world experience, as close as we can simulate the way it is done professionally," said Mayers. "The students run their own course through organization into four main groups. Each has a leader, and there is a program manager bearing overall responsibility.

"Being a systems engineering effort, we stress compromise. Eventually, individuality diminishes, and the initial class of 40 program managers devolves into the desired organization capable of the monumental effort and accomplishment that Project Pleiades represents."

The group's effort will be documented in a comprehensive report. Each participant has submitted a coordinated contribution.

. . . .

When a youngster some 50 years ago, Mayers spent every available minute building and flying model planes. He has been absorbed by problems of flight ever since. He received his pilot's license before his driver's license.

He was a naval aviator in World War II, in Catalina amphibians, first in North Africa, then the Caribbean. On demobilization he returned immediately to Brooklyn Poly and the M.S. program in aeronautical engineering, with Prof. Hoff as his thesis adviser.

He became an aeronautical research scientist for the National Advisory Committee for Aeronautics (forerunner of NASA) at Langley Field, Va. Here he did research in structural mechanics and in 1952, using SEAC at the National Bureau of Standards, was among the first to use a digital computer for scientific programming.

After eight years he went to Sperry Rand where he became, first, chief of structures and then manager of the Systems Analysis and Evaluation Department. He remained till, in 1961, the Sergeant missile system reached operational readiness status, on schedule.

Mayers and his wife Reva Lee have been married for 38 years. Both of their children are Stanford graduates—Eileen in English and history in 1967, and Laurence in art design in 1972.

With his 40-plus years in the military, NACA, industry, and the university to reflect upon, Mayers will retire at the end of this year to professor emeritus status.



Shem-Tov Levy

Israeli musician to perform here

Shem-Tov Levy, a major force in Israel's developing musical culture, will perform his own jazz and popular compositions at 8 p.m. Wednesday, Aug. 31, in the Tresidder Union Large Lounge at Stanford.

Tickets are available from the Stanford Hillel office and at the door ($6 general, $5 for students and senior citizens.)

A flautist, pianist, singer and composer, Levy is a well-known figure in modern Israeli popular music. His songs, while heavily oriented toward Western styles in their inclusion of jazz and popular motifs, also draw from Oriental traditions for much of their inspiration.

Born in Rehovot in 1950, Levy served in the Central Command Troupe, an Israeli army entertainment group, and studied in the Academy of Music at Tel-Aviv University. He later worked with the popular Israeli singer Arik Einstein and in 1977 formed the group Sheshet, which gave Israeli singer Yehudit Ravitz her first exposure in Israel.

He has produced several albums, including solos *Matzav Ruach* ("In the Mood") and *Hit'orirut* ("Waking Up"). He was recently selected to be musical director and primary composer for the album *Eretz Shemesh*, produced by the Israel Broadcasting Authority around and theme of Eastern and Western influences in Israeli music.

Levy's performance is sponsored by Stanford Hillel, the Palo Alto Orthodox Minyan, the Jewish Community Federal (South Peninsula Office), the Albert L. Schultz Jewish Community Center, and the Israel Students Organization.

For more information contact Neva Yarkin at (415) 497-4746.

Personal computer tapes available at Stanford's CIT

CIT has obtained copies of two interesting videotaped series called "Understanding Personal Computers" and "Bits, Bytes, and Buzzwords." These tapes are available to be seen at CIT, or you can arrange to see them elsewhere, for instance, in your own department or office.

The series "Understanding Personal Computers" consists of four tapes: "Introduction to Personal Computers," "Introduction to Personal Computer Hardware," "Introduction to Word Processing," and "All about Printers."

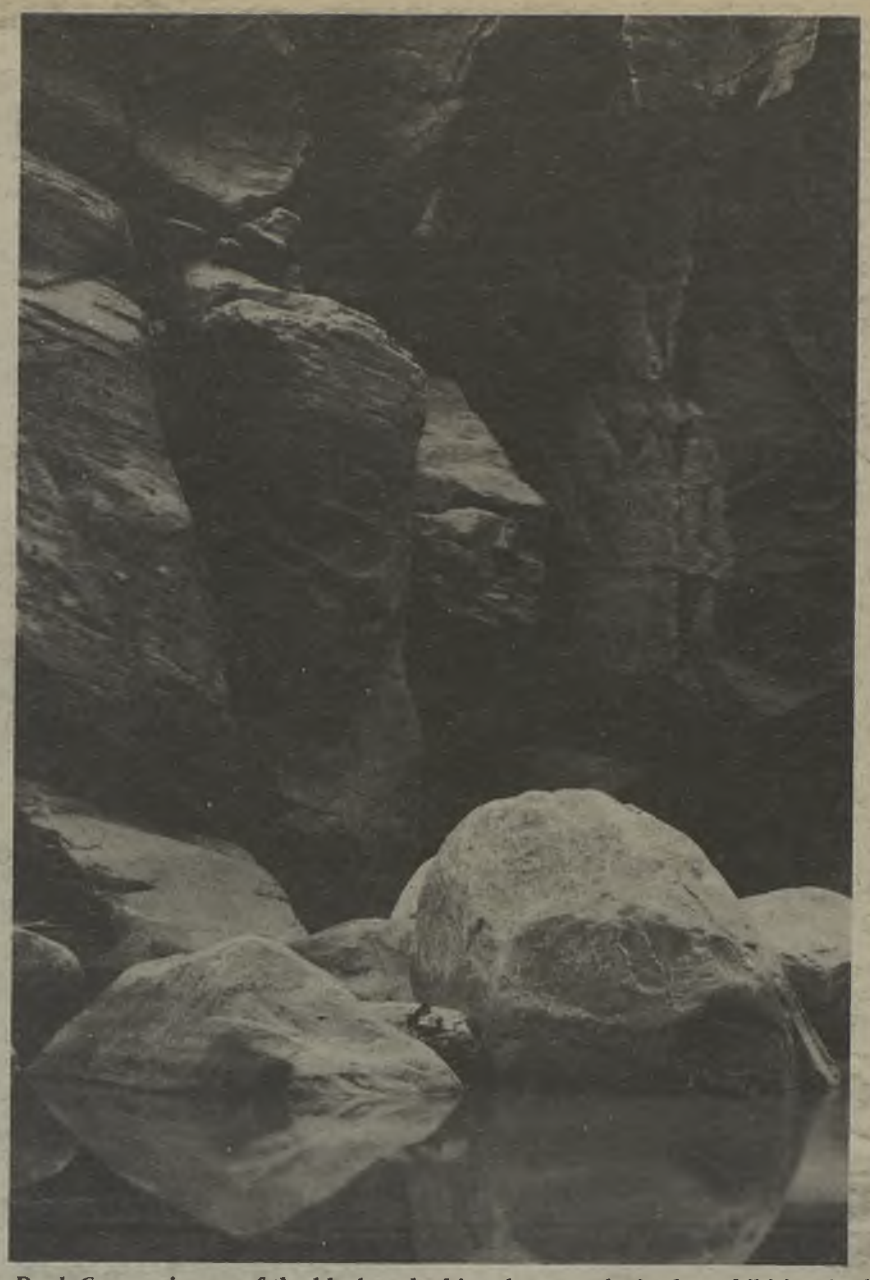
They are introductory tutorials that will teach concepts, computer jargon, advantages, and disadvantages of personal computers, and what to think about when deciding to buy one. Concepts discussed include word processing, financial analysis, data bases, project planning, graphics, accounting, electronic mail, teleconferencing, and hardware components.

The other series, "Bits, Bytes, and Buzzwords," is a five-part production of KQED, which TV-watchers may have seen earlier this year.

The series is for the person who is considering getting a microcomputer system for everything except games. It discusses many business applications for the microcomputer, and includes interviews with experts on various aspects of personal computing such as word processing or graphics, as well as a demonstration of a programming language called LOGO.

The single tapes in both series last about 30 minutes, so they are ideal for showing during lunch or within the context of a meeting.

Contact Jane Kingston at CIT (7-4807) for more information on arranging to see them.



Dark Canyon **is one of the black and white photographs in the exhibition Back Roads and Wilderness by James Loveless, at the International Center through the month of September.**

Wilderness photos to be exhibited at Bechtel I-Center

An exhibition of black and white photography by James Loveless titled "Back Roads and Wilderness" will be on view at Stanford's International Center from Sept. 2-30.

A reception for the artist will be held at the Center from 5-7 p.m. Friday, Sept. 9.

Loveless grew up in the mountains and deserts of the American West and spends most of his time outdoors in his native Utah. During the summer he is climbing instructor and leader of Primitive Land Survival courses. The winters find him leading cross-country skiing expeditions in the Rockies. He has been photographing in the wilderness and back roads of Utah and Wyoming for the past 10 years.

Loveless does his own darkroom work but, because of his busy outdoor schedule, seldom exhibits his photographs. He feels that photography is "the people's art, the special medium that allows anyone to develop the artistic self. The skill lies not in a steady brush or a clever hand, but in the ability to 'fall in love' again and again. It is all I ever hope to do to be aware and rejoice in those moments when my ability to perceive equals the sensory experience available."

The artist attended schools in Utah and is a graduate of Brigham Young University. He is currently in a master's program in recreation administration.

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Aug. 31 to cover the week of Mon., Sept. 12, through Sun., Sept. 25. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

Calendar

MONDAY, AUGUST 29

Biological Sciences Seminar: "Comparison of DNA Repair between Human and Mouse Cells," by Dr. Hiraku Takebe, Kyoto University, Japan. Noon. Rm T-175, Herrin Hall, Dept of Biological Sciences. No charge.

WEDNESDAY, AUGUST 31

Hillel concert: Shem-Tov Levy playing Israeli jazz and modern music. 8 pm. Tresidder large lounge. $6 general, $5 students and seniors.

SUNDAY, SEPTEMBER 4

University Public Worship and Communion: Preacher: Donald R. Caughey, Assistant Dean of the Chapel. 11:00 a.m. Memorial Church.

FRIDAY, SEPTEMBER 9

Library Associates: Second Antiquarian Stanford Book Fair. Exhibitors, 60 booksellers, maps, ephemera, etc. Opening. 6-10 pm. Roble Gym. Exhibitors, booksellers, prints, maps, ephemera. Opening night includes wine and refreshments. $6.

The Stanford University Museum of Art and the Stanford Art Gallery are closed for the summer.

The Museum will reopen on September 20, the Art Gallery on October 4.

SUNDAY, SEPTEMBER 11

University Public Worship: Preacher: Ernle W.D. Young, Associate Dean of the Chapel. 11:00 a.m. Memorial Church.

EXHIBITS

"Propaganda Posters of Two Revolutions". Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8 - Jan. 31.

The Art of Literature: California Authors and Their Printers. A retrospective look at California literature and fine printing, 1860 to present. On the occasion of the first American conference of Assn Typographique Internationale. Rotunda and Gallery: Green Library. Aug. 1 - Oct. 5.

Photographs by Ann Sconberg. Coffee House Gallery, 1st. Floor of Tresidder Union. Aug. 1 - Aug. 31.

Show and sale of paintings and lithographs by various artists from the Komarov Gallery. Upper lobby, Tresidder Union. Aug. 1 - Aug. 31.

Sculpture and Paintings by Amelia Solomon. Upper Lobby of Tresidder Union. Sept. 1 - Oct. 1.

CAMPUS REPORT

Volume XV, Number 44 A publication for Stanford University faculty & staff September 7, 1983

Kennedy urges tax exemption for tuition remission plans

Tuition scholarship programs benefitting the children of college employees should remain tax exempt, Stanford President Donald Kennedy believes.

His views are developed in an Aug. 23 letter to Representative Fortney Stark, a member of the Subcommittee on Select Revenue Measures. It currently is considering legislation (H.R. 3525) which would tax tuition scholarships used on a portable or exchange basis at other institutions.

"Unlike many of the fringe benefits that have been called into question within the past few years, the benefits received under all forms of tuition remission are unquestionably excluded from income and have been excluded since the beginning of the income tax," Kennedy noted.

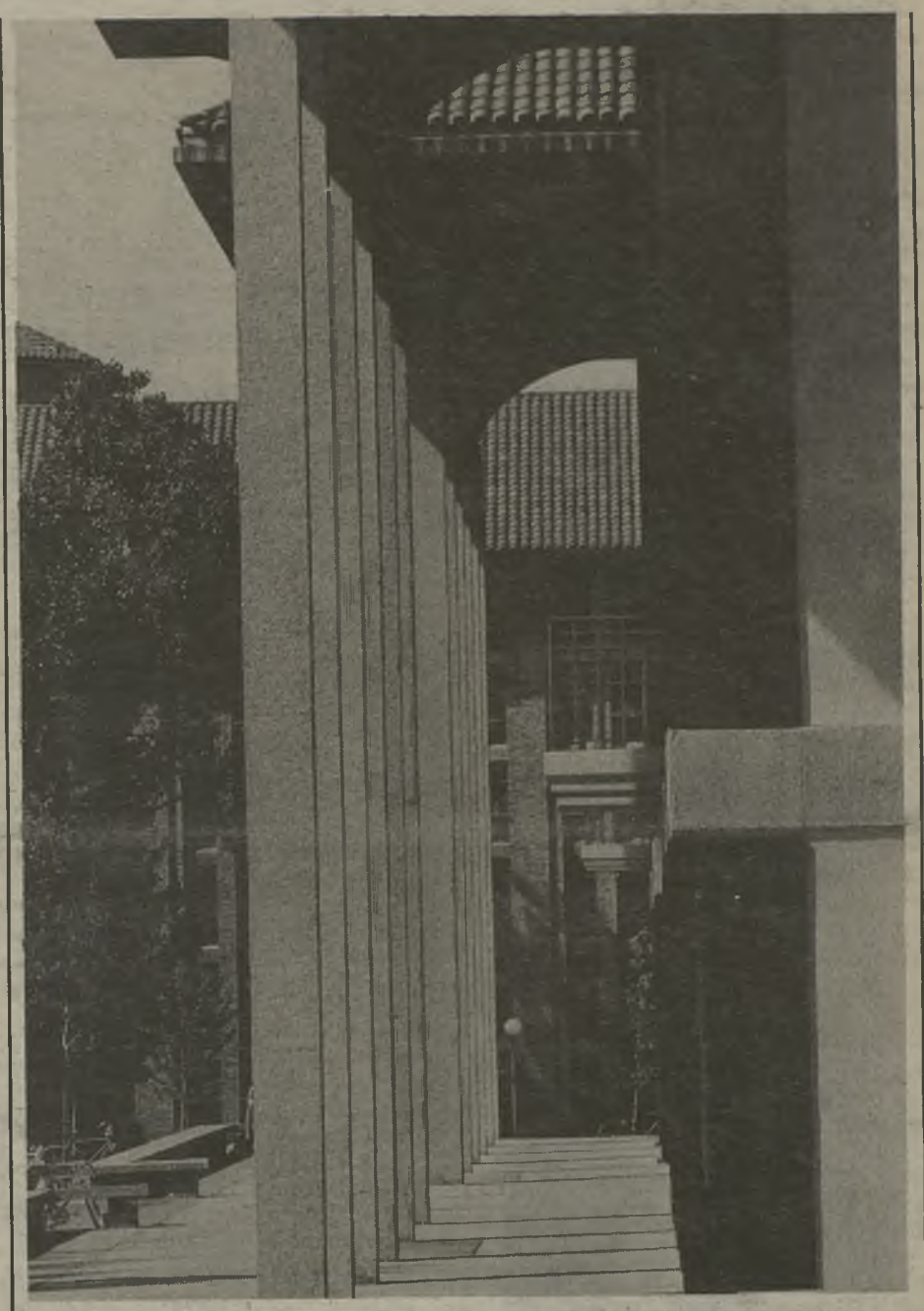
While the proliferation of tax-free benefits has attracted Congressional concern, "the number of colleges and universities participating in both tuition exchange and off-campus grant programs has not grown in the past decade," he added. Continued budget pressures have forced some colleges to restrict portable tuition scholarships, either by date of employment or in dollar amount.

During 1982-83, 130 children of eligible Stanford employees were enrolled at the University, receiving one-half tuition as a scholarship. An additional 845 children were enrolled at other accredited American institutions, where they were eligible to receive actual tuition and required fees up to a maximum of one-half of Stanford's tuition.

"Many students choose not to enroll at their home institution as they may feel awkward taking courses from colleagues of their parents," Kennedy observed.

"Many believe that getting away from

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Meyer Library—peaceful now, but not for long

'Fresh discussions' sought on Stanford West proposal

Stanford University Thursday, Sept. 1, proposed "fresh discussions" with Palo Alto on the 1,100-unit Stanford West housing project, saying it "cannot proceed under the conditions that have been proposed" by the city.

William F. Massy, vice-president for business and finance, described the University's position in a letter to Palo Alto Mayor Betsy Bechtel. *(See page 18.)*

"We stand ready to reexamine the design and configuration of Stanford West," Massy said, if the project "can be freed of the extrajurisdictional conditions and excessively high costs" imposed by the city.

In July, the city council voted to require that 85 acres of Stanford land outside the city be used only for academic purposes in the future. The land is located across Willow Road from the 46-acre Stanford West site.

The city also stipulated that there be no access from the 85-acre area to Willow Road and Pasteur Drive and that there be a 150-foot setback from the road.

Massy said these conditions remain "unacceptable" to the University.

The $12 to $15 million cost of below-market-rate units and mitigation requirements still give the University "great concern," he added.

"At the same time, we recognize the urgent need for housing at Stanford and in this area. We believe that the 46-acre site is well suited for this purpose, as evidenced by the fact that it is zoned for housing and designated as such in Palo Alto's comprehensive plan."

Massy noted that the Architectural Re-

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This issue of *Campus Report* is the last for summer quarter. The next issue, on Sept. 21, will begin regular weekly publication for fall quarter.

James McClenahan, page 3
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Med Memo, pages 6-9
McCloskey, pages 10-12
Staff Development, pages 14-15
Jobs, pages 16-17
Rental Housing, page 18
Retirement Plans, page 19

Students criticize report on McCloskey class

Six Stanford student leaders have denied that former Congressman Pete McCloskey's academic freedom was abridged as a guest professor at the University last spring.

The Associated Students Council of Presidents and Guest Professorship Board "neither interfered with the contents of the course reading list" after it was approved in February "nor threatened to decrease Mr. McCloskey's salary," they declared in a 15-page reply to a faculty investigation of the incident.

Based on the faculty report, Provost Albert Hastorf said July 26 the University would not grant academic credit for any future course in the guest professorship program, until current student regulations are changed. The guest professorships are funded through student fee assessments.

The students said Hastorf's "ultimatum is not only disturbing by its demonstration of unwillingness to admit further dialog, but due to its imprecision is impossible to comply with."

Hastorf and other University officers have continued to discuss their concerns with students, and two Associated Student committees have been asked to work on issues highlighted by the controversy.

While the faculty recommendations "may eventually be adopted in whole or in part," the students urged that they "not be considered authoritative statements of University policy."

Under the students' constitution, the Associated Students "must retain responsibility for all funds spent," the students said. The faculty report and Hastorf said the funds for paying guest professors should be placed under University control.

The students said an offer by Cynthia Matthewson of the Associated Students Council of Presidents to recommend an increase in McCloskey's salary as guest professor "was not designed to affect his actions."

Cancellation of another guest professorship course had made more funds available. "It is extremely difficult to see how the promise of recommending an increase in McCloskey's compensation above a mutually agreed upon level could be construed as an abridgement of academic freedom," the students said.

In an April 28 letter to McCloskey, Matthewson said "any changes (in course

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Academy of Sciences honors three profs

Three Stanford University faculty members have been elected members of the Institute of Medicine of the National Academcy of Sciences.

Dr. Robert Hofstadter, 1961 Nobel Prize-winning professor of physics, was one of five persons honored in August by direct election to senior membership.

Dr. Hugh McDevitt, professor of medicine and medical microbiology, and Dr. Robert Schimke, research professor of biology, were among 36 persons elected to regular membership.



Hofstadter received the 1961 Nobel Prize in physics for obtaining the first and most accurate measurement of the density distributions of electric charge in nuclei. More recently he was the recipient of an Alexander Von Humboldt Foundation award "in recognition of his accomplishments in research and teaching."



McDevitt has been credited with many of the crucial discoveries which appear to underlie the association between HLA (Human leukocyte antigens) and disease.



Shimke is internationally known for his work in the field of gene expression and protein synthesis, research which may influence treatment of malignant tumors. He has been chairman of Stanford's Department of Biological Sciences and Department of Pharmacology and editor of several major professional journals.

Following the recent elections of the new members who will take office Jan. 1, the institute now has 456 active members and 194 senior members.

The Institute of Medicine was chartered by the NAS in 1970 to enlist prominent physicians and others to examine policy matters pertaining to the public health.

New members are elected by present active members from among candidates chosen for major contributions to health, medicine or related fields. The institute's charter requires that at least 25 percent of the members be drawn from outside the health professions.



Artist's sketch shows Campbell Recital Hall extending west wing of Braun Music Center.

Trustees approve $2.3 million Braun Music Center addition for Summer '84

Stanford's Board of Trustees recently approved a $2.3 million addition to Braun Music Center: the Samuel J. and Ileen B. Campbell Recital Hall.

Braun Music Center is scheduled to open this January; Campbell Recital Hall next summer.

Major gifts from Mr. and Mrs. Campbell, plus a generous gift from the Hewlett Foundation, will fund the recital hall, which also will function as a choral rehearsal hall and large classroom. It is one of the four expansion phases originally designed for Braun Music Center by architects Marquis and Associates of San Francisco.

The Campbells met as students at Stanford, graduating and marrying in 1914. Mrs. Campbell died in 1978, Mr. Campbell in 1981.

Site preparation for Campbell Recital Hall already is underway, and most of the heavy work should be completed by November.

The hall will have 225 fixed seats with tabular arms in raised, semi-circular rows, providing sorely needed space for many Music Department concerts currently held in Tresidder Union and Dinkelspiel Auditorium.

The 9,500-square-foot addition will also include five teaching studios-faculty offices, a choral workroom, box office, computer room, and an enclosed courtyard for gathering during intermissions.

It will extend to the west of Braun, with a separate entrance on the south side facing Tresidder parking lot to make it immediately accessible to concert-goers.

The other three planned expansion phases for Braun Music Center are 1) library and archive expansion, 2) facilities for CCRMA (Center for Computer Research in Music and Acoustics, which will be housed in the Knoll), and 3) completion of interior spaces, including a production shop and stair tower-elevator to Dinkelspiel Auditorium.

Employee Day scheduled for Sept. 24

Invitations from President Donald Kennedy to Employee Appreciation Day will be in the Campus Mail this week to all faculty and regular staff on the Hospital, SLAC, and University payrolls who work 50 percent time or more.

The Day, Saturday, Sept. 24, will include a Stanford family "Tailgater" in Frost Amphitheater beginning at 11 a.m., followed by the Stanford-San Jose game in the Stadium at 1:30 p.m.

A special program featuring country and swing music by the "Good Ol' Persons Band" and the Leland Stanford Junior University Marching Band. Kennedy will be the host and M.C., assisted by an able crew of administrative keg tappers.

Football tickets will be distributed according to the three separate payrolls at specified locations and times. President Kennedy strongly urges departmental and work group participation. He suggests that friends plan to get together at the "Tailgater" in Frost and sit together at the game.

In order to accommodate that, employee I.D. cards, which must be presented in order to obtain tickets, may be taken by one person representing an employee group to that group's designated ticket office. Ticket distribution is not scheduled to begin until Tuesday, Sept. 13.



Reasonably priced lunches will be available at Frost for those who do not wish to prepare a picnic. Quarter-pound burgers with chips, condiments and a brownie, $3, or hot dog with the same for $2.50. Add 25 cents for cheese. The cold soft drinks and beer will be provided at no charge.

In order to plan for the "Tailgater" part of this Stanford Family day, its organizing crew needs to know how many intend to come and also how many intend to buy their lunch instead of bringing one. All employees are asked to indicate their plans when they pick up their football tickets.

Brian K. Reid
Werner Trattnig

Two members of the Electrical Engineering Department's Computer Systems Lab have received faculty development awards from the International Business Machines Corporation. Receiving the awards were Assistant Prof. Brian K. Reid and Acting Assistant Prof. Werner Trattnig.

Reid, who received a Ph.D. in computer science from Carnegie-Mellon, is working with Stanford University's fast Turnaround Laboratory. His group designed the initial version of a representational language called FABLE. His primary research interest is in the area of applied programming languages.

Trattnig received a Ph.D. in computer science from the Technical University of Vienna in 1980 and a Ph.D. in business administration from the University of Vienna in 1982. His research has focused on highly concurrent computer systems covering three principal areas: programming languages, computer architecture, and interactive software environments.

Ramon Myers

Ramon Myers, senior fellow and curator-scholar of the Hoover Institution's East Asian collection, has received a $10,000 postdoctoral grant for research on China from the American Council of Learned Societies.

Myers will use the grant to analyze Chinese crop surveys, which will lead to a better understanding of China's agricultural and economic history.

Myers received his Ph.D. in economics from the University of Washington in Seattle in 1960. A specialist in East Asian economic development and international relations, he has been at the Hoover Institution since 1975.

Funds for the grant were made possible by the Ford Foundation, the Andrew W. Mellon Foundation, and the National Endowment for the Humanities.

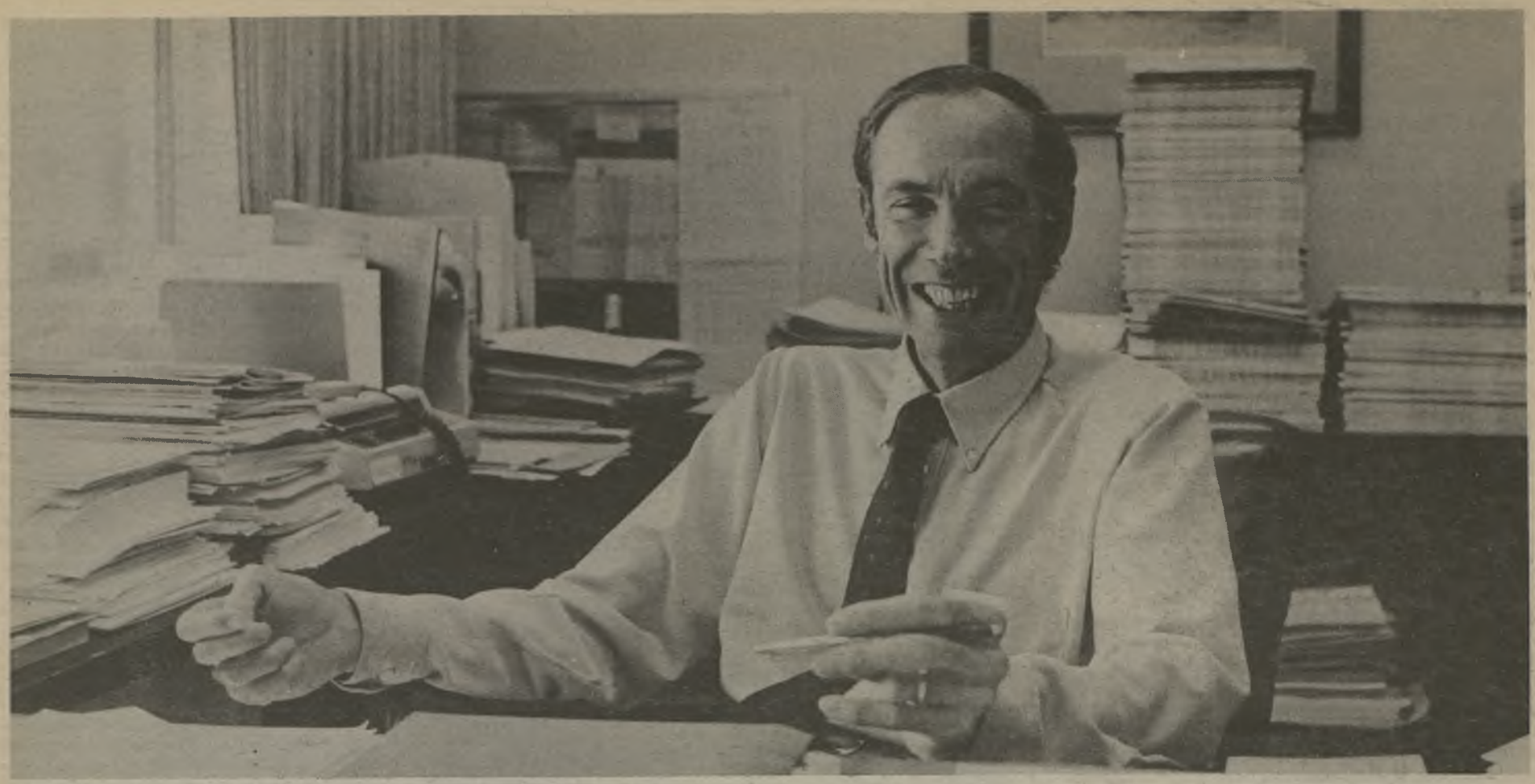
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"It's time for me to repot!" smiles Dr. James McClenahan.

Cowell health director reflects on student lifestyle changes

BY DONALD STOKES

After 20 years of taking care of the health of Stanford students, Dr. James B. McClenahan, director of Cowell Health Center, has decided to 'repot' and work in another field.

After pondering several new careers, which included working on an Indian reservation, doing clinical research for a Silicon Valley firm, and serving the U.S. Army overseas, he has decided to become Public Health Officer for Amador County, in the Sierras. He takes up his new duties this month.

McClenahan has seen the campus population change considerably in style and outlook since he first arrived during the troubled 1960's.

Underneath the easier, open way of 1983, with its frankness about sexuality, its more conservative outlook in politics and work patterns, its emphasis on fitness, McClenahan thinks that basically students have not altered.

"We tend to think that students are more sophisticated than their parents used to be, and in a broad sense that is true, but there are still a number of areas where attitudes have not changed very much", said McClenahan in a campus interview. "I don't think, for example, that most students can talk to their parents about sexual problems much more easily than was the case 25 years ago.

"Neither have the pressures faced by students changed greatly over the years. For many students, coming to a university is a time for great readjustment and pressures, with all the effects of leaving home, finding self-identity, choosing a career, keeping up with the course demands, knowing one's sexuality, choosing a mate, and so on.

"A great many students come to us who are not sick emotionally, but they are distressed as part of the process of sorting out their development problems.

"Presently we have from 40 to 45 thousand calls on our services every year, counting all aspects of the Health Center services.

"By the time a student graduates from Stanford, the chances are from 80 to 90 per cent that he or she will have at some time come to Cowell for treatment or counseling. Of course, some students rarely come, while others come often. Each year about nine per cent of the student body come to us for some form of counseling.

The number of students who come to Cowell has gone down slightly during the last five years. We hope this has something to do with our health education program but we cannot tell for sure.

The biggest social change seen at Cowell in the last 20 years has been the turnabout in the attitudes toward sex. The new atmosphere of liberation has particularly affected the lives of women."

When McClenahan first became director the policy was that contraception aid could not be given unless the patient was to be married within the next three months. When the decision was made that contraception should be dealt with like any other health service, it had to go up for confirmation through all the channels of administration before it was finally adopted, and then it was featured in a national news magazine.

In a similar way, Stanford Hospital was among the first to provide abortions, but in those days the rule was that two psychiatrists had first to give their advice to the woman.

"One result of changing sexual attitudes is that unwanted pregnancies have increased significantly during the last five or six years",said McClenahan. "They still run at less than 100 a year.

"Functionally , the system is in place to help the women concerned—to help them decide whether to have the child, to abort, or to place the child for adoption. Most women elect to abort.

"Since I have been here we have offered a range of health services to women, including contraception classes. There is a more general openness about sexual problems, here as in the rest of the country. Naturally, the new atmosphere has sometimes brought with it new sorts of problems, both emotional and physical, and these we do our best to solve".

Today, more people are delaying marriage. Whereas in the previous generation the average age for marrying was 22, nowadays it is more usual for marriage to be delayed till the parties are 28 to 30.

Among the 5,000 or so women on campus the Pill is still the most favored method of birth control, but the diaphragm is coming back into more frequent use.

McClenahan is lean and fit, is 6'2" tall and weighs 135 pounds ("It is helpful to my job to be in good shape—then I can be preachy to the patients."). He does not jog, because of a leg problem, but he uses a stationary bicycle at home. He is a non-smoker and watches his diet carefully.

"Most Americans eat too much", he says, "and especially too much fat. I eat very few dairy products and drink only skim milk. Not that I am too holy about diet—every now and then I'll have a piece of pie or candy".

Because of more advanced medical therapies the Health Center now sees a number of students with significant medical diseases, such as cancer, and there are also those with psychological problems. The Center also sees a larger number of students who are disabled or handicapped. Some students are blind, others deaf or paraplegic; there are a number of quadraplegics.

The most visible sign of change in health attitudes is that smoking has almost disappeared among young people at Stanford. "We have a very low percentage of smokers among students, only from three to four percent. This is a big change from previous generations.

"Students take pride in keeping in shape. They run and swim and take much better care of themselves than the previous generation.

"There is also less difficulty with drugs. I am not sure there ever was widespread regular use of marijuana on campus, but undoubtedly there was a great deal of experimentation. Hard drugs? The few who used them regularly became addicted and simply had to drop out of school.

"Among the minority who use hard drugs today, the use of cocaine is the most typical.

"Throughout the 20 years I have been here the worst 'addiction' problem on campus has been with

continued on next page

McClenahan . . .

continued from page 3

alcohol. Though serious alcohol abuse is confined to a small number of people, it has resulted in some serious accidents and fatalities.

"Though there is widespread use of alcohol among students, a relatively small percentage are problem drinkers."

The Health Center has worked with the Dean of Student Affairs Committee on Alcohol to adopt a long-range strategy against alcohol abuse. Among the methods used is to urge all departments and students to deemphasize alcohol at public events. Individuals observed to be high-risk in their use of alcohol are identified and advised.

Asked whether homosexuality had increased on campus during his 20 years at Cowell, McClenahan said he doubted whether there were any more homosexuals of either sex than in previous years. "There is more openness today about all sexual matters, and probably we see more medical problems connected with homosexuality than used to be the case. This is partly because people are more willing to come forward and discuss them.

"There are a number of medical problems associated with gay males and those who live certain sexual lifestyles; these problems include herpes, some intestinal infections and hepatitis. Cowell is available to help".

The total staff at Cowell numbers about 70, including a wide range of professionals. The Infirmary (the inpatient facility) employs 25 people.

"There is a marvellous team here which covers nearly every aspect of medical care and education and counseling. They help students to take responsibility for their own health care. They are keys in the transition between home life to taking responsibility for their own health."

McClenahan pays tribute to Dr. Doryn Davis, who has been director of Cowell's Health Promotion Program for nearly four years: "She has succeeded in focussing health awareness widely on campus, and has secured the cooperation of many departments.

The program directs particular attention to cardiovascular disease, because nationwide half the population dies of heart disease or strokes.

"It would be pretty difficult to interest a 20-year-old in the possibility that he might have a heart attack at the age of 60, so we go about it another way"says McClenahan. "We try to get him to eat correctly and to exercise regularly." A popular innovation recently has been the Cowell Fitness Trailer. Designed to assess the physical fitness of students, it was received enthusiastically when it first began last fall. Student volunteers gave on-the-spot tests which could guide in weight control and general fitness.

In particular, students were intrigued by the on-site computer, which provided an individualized, computerized fitness profile for each participant.

There are now about 2,000 foreign students at Stanford, out of a student body of some 13,000. "We see unusual illnesses because of the influx from other lands. We see malaria, parasitic infections and an occasional case of TB. Many of the foreign students bring their wives and children, so we have to make provision for treating them also".

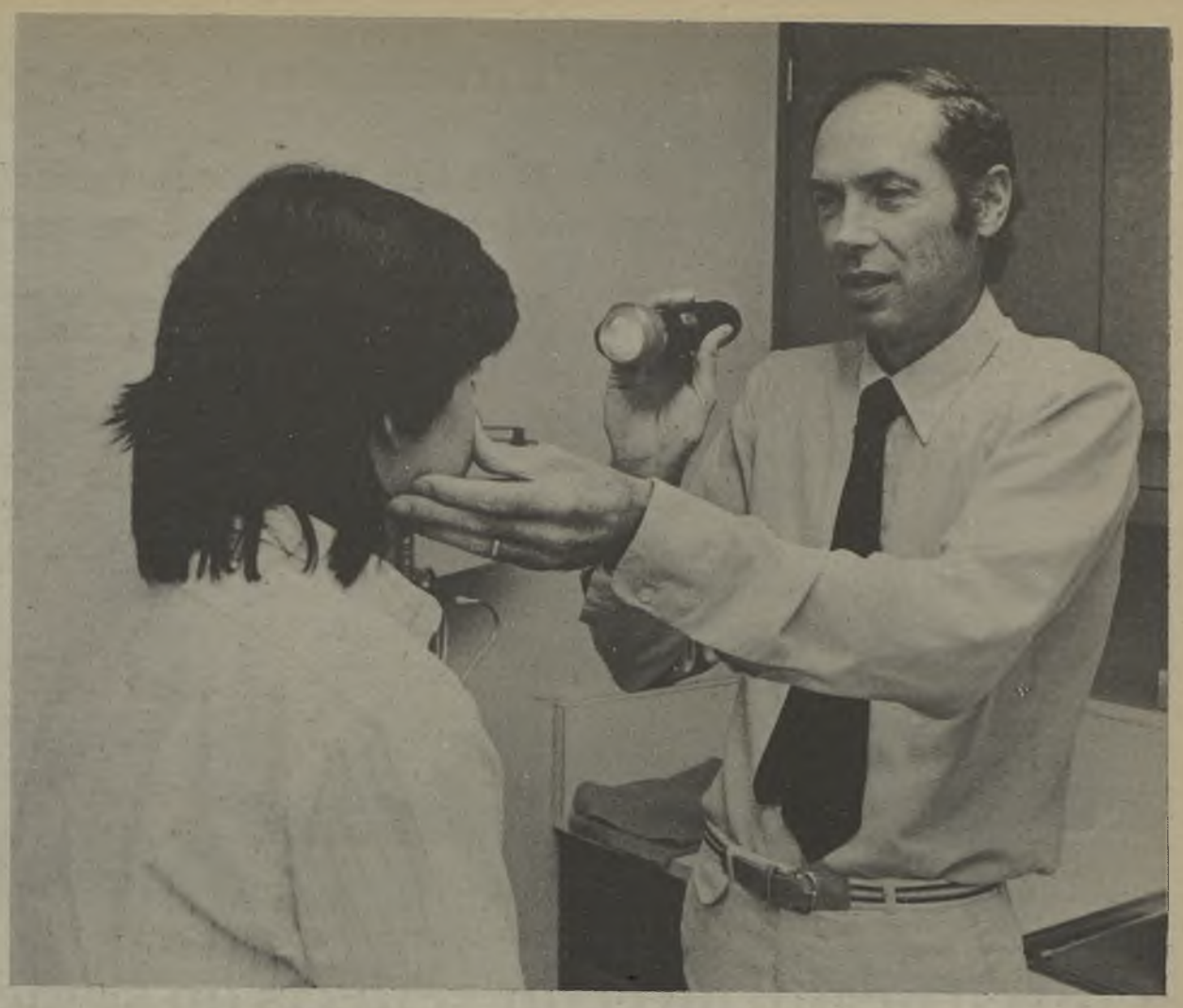
McClenahan thinks that the Health Center bears comparison with any similar organization. "I think we have built up a pretty good model. My task has been to see that Cowell meets the needs of all the students, and has the people to cope with the needs. I think we have done that, so that is one of the reasons I am looking for a new challenge.

"When minorities, primarily blacks and chicanos, began to be admitted to Stanford in larger numbers a decade ago, a number of problems arose because of the unfamiliarity of the newcomers with the patterns of Stanford life, and how they could relate to other students who had very different backgrounds.

"As the years have gone by these differences have tended to disappear, so that ethnic issues do not loom so large as they once did.

McClenahan has a personal interest in the Indian students at Stanford, and he tries to help with some of their special problems. "Many Indian tribes have beliefs and customs which are different from the typical white middle-class way of life.

"For instance, there have been Indian students here whose parents lived in hogans without running water or any modern facilities as we understand them. The transition of these students to Stanford can be very traumatic."



Dr. McClenahan examines a student in Cowell Health Center. He has supervised the health care of a quarter of a million young people.

It would be pretty difficult to interest a 20-year old in the possibility that he might have a heart attack, so we go about it another way . . . we try to get him to eat correctly and to exercise regularly.

Born in Des Moines, Iowa in 1931, son of a traveling salesman who dealt in flour, McClenahan graduated from De Pauw University, Indiana, in 1953. His inclination was to go into the ministry or to study medicine. He gained his M.D. at Washington University School of Medicine, St. Louis, in 1957.

He started his medical career at the University of California in San Francisco, and after that spent two years working in cardiology and pulmonary physiology at Hammersmith Hospital, London, England. While working as a cardiologist he became interested in the problems of open heart surgery.

He became a staff physician at Cowell Health Center in 1963 and served in that capacity for four years before being appointed acting director in 1967, and director a year later.

In his new post as Public Health Officer of Amador County, McClenahan will deal with the whole spectrum of health problems, including alcohol and drug abuse programs, immunization, well babies, family planning, sanitation and air pollution. "And of course there will be some politics" he smiles.

For the moment, McClenahan will live in Amador county and commute to his Palo Alto home weekends. Mrs. McClenahan is a travel agent.

The McClenahans have three children, all grown. Wynn, 24, graduated in human biology at Stanford and now works for a law firm in New York City. Kristine, 22, also graduated in human biology and is a research assistant in psychiatry at the Veterans Hospital, Palo Alto. Brian, 20, is a junior at Lewis and Clark, Portland.

McClenahan intends to maintain the lean hardness his health regime has given him.

Asked to name the golden rules to attain a long and happy life, he gave them as:

1. Eat right 2. Exercise correctly 3. Don't smoke 4. Avoid excess stress 5. Watch blood pressure.

"Most important of all" smiled McClenahan," choose your parents wisely".



Fine tuning Stanford's pianos was Robert Burton's task

He kept 75 instruments in best possible shape, earning Golden Hammer from piano technicians

Stanford owns about 75 pianos. The man responsible for keeping most of them tuned and repaired since 1961—Robert Burton—has just retired. Those who have depended on him all these years agree that his is a hard act to follow.

Burton started tuning pianos for pay 60 years ago at the age of 15. He learned from his father, who was also a professional clarinetist and teacher of all instruments. Until he moved to Palo Alto in 1959, Burton and his brother ran the largest piano tuning, rebuilding, and retail shop in the state of Washington.

Burton opened a piano service shop on Emerson Street and soon after signed contracts with Stanford's Music Department, Housing Office, Associated Students and what is now called Lively Arts to keep their pianos tuned and repaired. He has often been on stand-by during concerts in case a piano needed attention during intermission. For 15 years he tuned the piano in Frost Amphitheater for the Fiedler-Symphony concerts.

Burton was also a brass player, mainly tuba, and taught brass instruments in high school for six years during the Depression.

When asked recently if he had perfect pitch, Burton grimaced and called the question "a bugaboo for tuners. We're concerned not with absolute pitch, but with relationships of pitches, the intervals between notes.

"The note A hasn't always been the same. When I started to tune it was 435 vibrations per second. Now it's 440, and some orchestras want 442 or even 444. In the old days bands were tuned to 435 and opera orchestras to 452. My father always carried two sets of clarinets for the different pitches. The pitch for A was raised mainly to accommodate the oboe, which can't adjust its pitch very much.

"Pitch has also been raised for a more brilliant, penetrating sound. There's some evidence that people's acuity of hearing is diminishing due to the constant battering of noise around us."

Fifty years ago, 20 to 30 good makes of pianos were produced in this country. Today there are only about five.

"There used to be more brands of pianos made in Boston than there are now in the whole country," Burton recalls.

"Early pianos were built mainly in small shops by expert cabinet makers. The first American factories started up in the early 1800s, and by 1900 there were over 100 piano makers.

"From 1840 to 1860 there was a real exodus of European piano builders to the U.S., including Chickering, Kurtzman; Sohmer, Hardman, Steinway, Stieff, Knabe, Weber, Henry F. Miller, Mathushek, Kranich and Bach, Hallet and Davis, Haines, Fischer, Emerson and Decker—all major names in the development of the American piano.

"Some very good pianos were built in the U.S. between 1885 and World War I, and no major improvements have occurred since then. The war was the first big blow to piano production because all the spruce, which was used to make piano soundboards, was commandeered by the government to build aircraft. Many craftsmen were lost to the war. Then radio came in and that hurt the market badly.

"During World War II piano production stopped entirely except for the pianos Steinway and Weaver were commissioned to build for the armed forces. They came only in olive drab or battleship gray. Since there was no metal for the frames, they were built out of plywood and fell apart in a few years.

"The top American pianos today are Steinway, which has always been a leader; Baldwin, Sohmer, which was the last high quality American piano company to be owned and operated by members of the family which founded it; Mason and Hamlin; Chickering; and Knabe. The Aeolian Piano Corp., which manufactures the last three, recently closed down but is being reorganized and has actually begun production again.



Robert Burton shows the award given him by the Piano Technicians Guild.

Pitch has been raised for a more brilliant, penetrating sound. There's some evidence that people's accuity of hearing is diminishing due to the constant battering of noise around us.

—Robert Burton

"Yamaha is an excellent piano. In the past 50 years the Japanese have acquired the knowledge and skills that Europeans and Americans spent nearly 200 years developing. Kawai is also very good and there's an up-and-coming Korean piano—Young Chang.

"The European piano makers tend to prefer a more singing tone and slightly lighter touch, and the mechanical workmanship is usually excellent. The tensions on the strings are not as great. American pianos generally have 20-25 tons of pressure on them. The most expensive production piano in the world is the Boesendorfer, made in Vienna, and now owned by the Kimball Piano Co. of Jasper, Indiana.

"For purposes of testing someone for admittance to the Piano Technicians Guild, a good quality grand piano is tuned aurally by three or four experienced tuners and the resulting consensus of those tunings, in the form of numbers, is fed into a computer. The candidate's tuning of the same piano is then graded against the computer's scale."

At the Guild's recent 26th annual convention, Burton was awarded their highest honor, the Golden Hammer, "in recognition of exceptional personal service in and for the piano technological profession over a period of years."

Burton has been under contract to tune every Music Department piano (there are 50-55) every quarter and the four concert grands before concerts. Most visiting artists specify in their contracts that their pianos be tuned just before they perform. In the past few years Burton has had assistance from a few other technicians, especially Tom Gorley, Leonard Hanitchak, and Des Wilson.

"Actually, most pianists know very little about the mechanics of their instrument, unlike other instrumentalists, especially string players," he notes.

"The typical home piano goes out of tune mainly due to changes in humidity and temperature; moderate playing doesn't affect them as much. Certainly, many hours of playing, much of it very hard, such as most of the pianos at Stanford get, will knock a piano out of tune and regulation much faster."

Burton recommends home pianos be tuned four times the first year and twice a year thereafter, depending on the weather. "A piano in Half Moon Bay, for instance, goes out of tune quicker than one in Palo Alto."

Burton is retiring partly because he prefers to quit before losing hearing acuity at the extreme ranges of the piano. "It isn't unusual to find people who can't hear the top and bottom few notes on the piano at all. I've had my hearing tested every two or three years and it's still that of a 55-year-old. There are some tuners who don't have very good hearing and rely completely on electronic devices."

Twenty years ago, Burton thought there would be a great scarcity of piano tuners and rebuilders because young people did not find it an attractive field. But in the late 1960s and early 1970s, "young people by the dozens started to learn. They wanted to work with their hands and independently." Burton always had apprentices at his shop, which he moved from Palo Alto to a larger space in Redwood City in 1975 and sold in 1978.

"There are three or four charlatans in the area," says Burton. "We've kept them out of the Guild, but we can't stop them tuning. There's no real regulation of tuners and too many people can't tell if they've gotten their money's worth.

"There are some good piano tuners who do not belong to the PTG, but the Guild provides the only certification that a member has the basic qualifications to be a satisfactory piano technician."

Burton tunes only grand pianos now; "the uprights are too hard on my shoulders." Pretty soon he will stop altogether.

Music Department administrator John Planting says of Burton: "He has given us years and years of very dependable, helpful, friendly, courteous service, as well as good advice on maintenance and which pianos to acquire. And he's always been willing to come out at odd hours, fitting his work schedule to our needs. He'll be very hard to replace."

—Julia Sommer

Contoversial memo prompts committee

The chairman of the department of gynecology and obstetrics has agreed to participate in a faculty-resident-staff committee being formed to deal with internal difficulties highlighted by a controversial memo.

Dr. Toni McCain, a resident in the department, said Friday, Aug. 26, that she and two colleagues had agreed to help form the committee at the suggestion of university officials, including Dr. Dominick Purpura, dean of the medical school.

The three women physicians had sought support from the president and dean after one of them, chief resident Zena Levine, was the recipient of a July 21 memo—later rescinded—from department chairman LeRoy Heinrichs.

The memo, copies of which were sent to department faculty, chief residents and several administrators, noted that Levine was pregnant and requested that she postpone a planned vacation for scheduling reasons.

The memo contained material which Heinrichs in an Aug. 6 apology noted was "offensive to many."

The rescinded memo stated in part:

"Pregnancy can also ultimately affect patients who must bear the frustrations of your colleagues who must work with you or those who remain in your absence. Some faculty members express the modern view that responsible career women do not risk incurring the age-old criticism of women as unreliable professional colleagues, and some advise me, for that reason, to appoint no more women as residents in this program."

Purpura called the memo, which was released by an unidentified person to members of the news media, as "highly inappropriate, offensive, insensitive, and most importantly, unusable."

Heinrichs has apologized to the resident and her colleagues, and both he and Purpura have reaffirmed the school's desire to uphold Stanford's policy of affirmative action in the hiring of women.

Heinrichs noted that under his leadership, half of the department's 18 residents are women, consistent with current national trends.

He said the intent of requesting the change in vacation schedule was prompted by a desire to ensure that adequate medical staff was available and avoid placing a burden on residents already busy, a problem endemic to residency programs.

Dr. Allen Barbour, associate ombudsman for the medical center, said new approaches to relieve the problem of covering for absent residents are being explored.

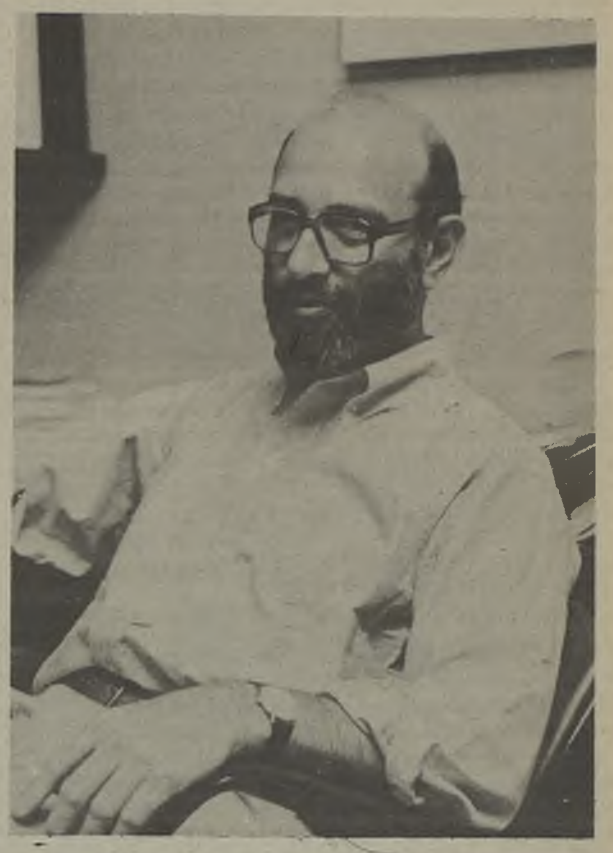
McCain, Levine, and a former chief resident now in private practice, Barbara Peters, had asked both Purpura and university President Donald Kennedy to take action about the memo.

Purpura asked that the residents initiate a committee to help deal with departmental tensions.

continued on page 8



A lysed (burst) *E. coli* cell with DNA running out of it.



Stanley N. Cohen

Transforming genetics. . .

Cohen describes progress, and future hopes

Research advances in the last 20 years have transformed the field of genetics from one of textbook descriptions to an experimental field where the only real obstacles seem to be the limits of scientific curiosity, geneticist Stanley N. Cohen told a meeting of American and German scientists at Stanford last week.

"Remarkable events have occurred in genetics in the last couple of decades," said Cohen, professor of genetics and medicine at Stanford, who highlighted geneticists' new ability to cut and paste the genes of bacterial and mammalian cells as they continue to unravel the mystery of the information bank that builds and regulates all living organisms.

Cohen, who pioneered techniques in the early 1970s for recombining genetic material in new ways, addressed more than 100 scientists at the second colloquium of the Alexander Von Humboldt Foundation, a German organization that, since 1972, has sponsored more than 800 American scientists for two-year research fellowships in Germany.

Alumni of the program and their German hosts in fields ranging from geochemistry to zoology and physics, gathered at Stanford for a three-day scientific smorgasbord presented by leaders of several fields.

"We've left the stage where genetics was a descriptive science, and instead it has become an experimental science in the manipulative sense," Cohen said.

One key event that gave rise to the transformation, he said, was the discovery in 1970 of "restriction endonucleases," chemical scissors that can cleave tiny chains of genetic material at precise points. Together with genetic glue called "ligases," the chemical cleavers permitted researchers to pry open loops of genetic material, insert a gene from a different organism, and splice the loop together again.

Armed with their splicing tools, scientists turned to the problem of reintroducing the altered genes into the living cell.

Nature's answer came through the discovery of relatively small loops of genes, called plasmids, that travel normally back and forth between cells, permitting bacteria to exchange genes such as those that control the organism's ability to cause an infection and its power to resist antibiotics.

Cohen, and researchers from other laboratories, found that by clipping off the bit of genetic material they were interested in, inserting it in the plasmid, and sneaking the plasmid into a bacterium, they could harness the organism's genetic machinery to produce virtually any protein they desired.

Already, biotechnology firms are using the techniques to produce relatively large quantities of human insulin, growth hormone, and virus-fighting interferon. These are medically valuable substances that, until recently, could only be gleaned through expensive processing of human and animal cadaver organs.

The early success prompted a new wave of research into identifying new cleaving compounds—there are now more than 200 compounds that each cut genetic strands in different places—and ways of splicing genes together.

While the common intestinal bacteria *Escherichia coli* has played the role of biological factory in the first experiments, scientists around the world are now testing other organisms which might be better suited to producing the new and

continued on page 8

Clinics nurses to vote next week on union representation by CRONA

Sixty registered nurses at Stanford University Clinics and Medical School are eligible to vote in a Sept. 14 election to decide if they want to be represented by a labor union.

The National Labor Relations Board (NLRB) is conducting the balloting on whether the nurses wish to form their own unit of the Committee for the Recognition of Nursing Achievement (CRONA), which had requested that the NLRB conduct the elections.

CRONA, a non-affiliated labor organization, is the collective bargaining representative for registered nurses at Stanford University Hospital, a separate employer from the university-operated clinics and medical school.

Clinic nurses provide care to outpatients of the Faculty Practice Program. Nurses are also employed by the school in a variety of research and education projects.

Voting is scheduled from 8 a.m. to 6:30 p.m. in room M114.

News delivery change

Because of patient care concerns and mailroom considerations, the *Campus Report* will no longer be delivered to each nursing unit beginning with the issue of Sept. 21, 1983.

Instead, nursing staff are reminded to check the recently installed publications dispensers for the newspapers and other reading materials. The dispensers are located near the escalators on each floor of the hospital. There is also one in the Hoover Pavilion lobby.

This new policy is being implemented to meet various concerns. First, the mail service is centralizing its bulk-type distributions in order to better serve expanding center-wide activities and areas with their present staff and mail carts.

The mail service has increased its workload with central distribution services, and most importantly, patient care concerns must be given highest priority. The loss of important patient care or lab documents under a stack of newspapers could delay attention to an urgent matter.

Call Lisa Ames at the news bureau, 497-6911, or Ron Creamier at the mail service, 497-5130, with any special questions or concerns. All units and departments are asked to continue to keep these offices informed when distribution problems arise.

Communications move

Stanford University Medical Center's office of communications, which includes the news bureau, has moved to a new location effective Thursday, Sept. 1.

The new office is at 750 Welch Rd., Suite 301, Palo Alto, Calif. 94304. The phone number remains 497-6911.

The move was necessitated by the consolidation of the medical center's public events office with the office of communications, and the department of medicine's need for more academic space. The office of communications is adopting a typesetting computer system that will interface with the university's news and publications service, allowing a more efficient service, said Spyros Andreopoulos, director of communications.

The communications office prepares the *Medical Center Memo* section of the *Campus Report*, sends out news releases about the medical center to media, and provides a number of other communications services. It also publishes *Stanford Medicine*, the new medical center-wide magazine scheduled to debut this fall.

The magazine, to be of higher quality and more consumer-oriented than previous publications, will be distributed to faculty, staff, patients, referring physicians, donors, foundations and medical alumni, among others. It replaces *The Healing Arts* and *Stanford M.D.*.



Arthritis self-help group members discuss medications with their leader Ruth Erickson (left foreground).

Arthritis sufferers help themselves

The thumb-walk, the elbow chop and the heel-toe dance are just a few of the exercises taught in Stanford's arthritis self-help classes, a new series of which is scheduled to begin in October.

The classes, which have been cosponsored by Stanford and the Mid-Peninsula Health Service for the past four years, aim to drive home the fact that there are numerous things arthritis sufferers can do to help themselves.

And now, in addition to looking at the efficiency of patient education, researchers plan to expand the project to look at the psychological outcomes of teaching people to manage their own arthritic pain. "We'll conduct a two-year study to look at the effectiveness of long-term reinforcement as well," said research associate Dr. Kate Lorig.

The courses are open to anyone with arthritis. They provide information about arthritis, how best to use arthritis medication, how to design an appropriate exercise program, how to deal with emotional and physical problems created by the condition, and how to work more closely with one's physician.

Participants practice exercises and relaxation techniques and discuss nutritional concerns. They complete questionnaires at several intervals during the course and are continually compared to a control group of future participants.

The fall series will last six weeks. Each class is taught by two community leaders who have been trained by Lorig. Many leaders have arthritis themselves or in their families, some are retired health care professionals, and others are simply people interested in helping others.

Morning, afternoon and evening sessions will be held at 14 locations in the Bay Area including Palo Alto, Cupertino, Sunnyvale, Santa Clara, San Jose, Redwood City, San Mateo, San Francisco and South San Francisco. Classes meet for two hours weekly.

Pre-registration is necessary and enrollment is limited. A small fee will be charged, and scholarships are available. For information or applications to the arthritis self-management course, call 497-7935.

Diabetes study seeks volunteers

Do people with diabetes metabolize blood glucose inefficiently?

Diabetic volunteers are needed to help answer this question by participating in research conducted by Dr. Gerald Reaven and associates at the clinical research center at Stanford University Hospital.

To be eligible for this study, volunteers must have adult onset diabetes; be between 20 and 80 years of age, male or female; and be in good general health.

Part cipants will be offered the following free of charge: evaluation of blood sugar and insulin; routine health evaluation including liver and kidney function test, cardiogram, physical exam, and dietary evaluation.

Anyone interested or wishing further information should call Dr. Chris Donner or Dr. Clarie Hollenbeck, at 497-6973 between 9 a.m. and noon; or Ann Coulston, R.D., at 497-5430 between 1 and 5 p.m.

Campus Report goes weekly again

Please note that the next issue of *Campus Report* (Sept. 21) will mark the end of the summer schedule of publication for this year. During the summer the newspaper appears only every other week.

Starting with the Sept. 21 issue the newspaper, including the *Medical Center Memo* section, will again appear weekly throughout the academic year. Please plan publicity and announcements through the news bureau accordingly.



Last week's playoffs went to three games with the last one into an extra inning, when Psychiatry finally beat out X-ray Therapy (XRT) as this summer's coed softball champion team. Above are members from each team, up to bat: Rich King (left) of XRT; and Rick Ward, captain of Psychiatry. Behind Ward is XRT catcher Sue Lewis. This year's league was made up of 18 teams from throughout the medical center.

...News Notes...

Spotlight on. . .

Management changes have taken place in **Patient Accounting**, *said Suzanne Cameron, assistant director of the department. Former management positions have been reorganized based on functional responsibilities, and a new manager has been hired to fill a vacant position.*

Larry Dutch *has joined the staff to head the data control department (formerly patient accounting quality control). He came to Stanford from a position installing hospital financial systems for a computer software firm and was previously the director of data processing at Roseville Community Hospital near Sacramento. He is available at 497-6584.*

Yolanda Zesati *is the new manager of accounts receivable collections. Here at SUH, Zesati has extensive management experience in various accounts receivable departments, as well as in data control. She can be reached at 497-5560.*

Dan Thompson *is now manager of government program receivables, He joined the SUH staff in 1979 as assistant accounts receivable manager. In his new capacity, he will be involved in claims processing and preparation in patient accounts receivable. He is at 497-6022.*

* * * *

Warren Weeks *and* **Gary Rotzin** *of the facilities department have announced their intentions to resign from SUMC in the coming months.*

Weeks, whose resignation will be effective in November, plans to join Philip Rector, current director of SUMC facilities, at the University of Arizona. Weeks will serve as assistant director of physical resources at Arizona; Rector will be director.

Weeks has served at SUMC as associate director of facilities since 1979. Since coming to Stanford in 1970 he has also worked on central campus and at SLAC.

Rotzin, who resigns effective Sept. 16, plans to pursue other personal and professional goals. He has been associate director of facilities/projects at SUMC since 1979, and will continue on a consulting basis until January.

Since 1974 he had served as assistant manager of construction and engineering in the university's facilities planning and construction office.

With the departure of Rector, Weeks and Rotzin, a new structure for the facilities department will begin to be developed in the fall, said Sheldon King, director of the hospital.

* * * *

Dr. George Waltuch, *a hematologist at Menlo Medical Clinic and a clinical associate professor of medicine at Stanford, began a two-year term Aug. 23 as president of the SUH Medical Staff.*

Waltuch, who most recently served as vice president of the staff, succeeds Dr. Robert Hill, a cardiologist at Palo Alto Medical Clinic and a clinical assistant professor of medicine.

Dr. Melvin Britton, *a specialist in general internal medicine and a clinical associate professor of medicine, was unanimously elected vice president. Elected unanimously as members-at-large of the Medical Board were* **Dr. E.W. Fredell**, *an internal medicine specialist at Menlo Clinic and a clinical professor of medicine; and* **Dr. Robert Stebbins**, *an oncologist in Palo Alto who serves as clinical assistant professor of medicine and physician specialist at SUMC.*



Edwards and Kersten

The office of medical school development has appointed two new staff members, announced Sally Agle, deputy director of the department.

Carol Kersten, *a Stanford law school graduate, is now assistant director of medical development. Her duties will include working with several divisions of the department of medicine, and the departments of dermatology, neurology and nursing, as well as developing a solicitation program for medical school non-alumni parents.*

Paul Edwards, *who comes to the post of associate director of medical development from the university's office of development, will focus on major gifts programs for modernization of the hospital and construction of the new Children's Hospital at Stanford.*

You should know. . .

There's still time to register for the 10-week **weight control program** *offered by the department of dietetics at SUH.*

Classes will be held Tuesday evenings, Sept. 27 through Nov. 29, at the Hoover Nursing Cottage.

The "Enlightening Experience" program will emphasize safe and effective weight loss through group participation. It will be coordinated by registered dietitians Kristine Birge and Patricia Kearney. Guest speakers include Dr. Peter Wood of the SHDPP, Dr. Mary Southam of the Stanford behavioral medicine program, and Elad Levinson of the hospital's human resources department.

Cost of the program and materials is $300. A refund of $50 will be made if the participant's weight loss goal is achieved at the conclusion of the program.

To register, call Birge or Kearney at 497-5440.

* * * *

The Health Improvement Program (HIP) is sponsoring a **weight loss by mail program**, *developed by the Stanford Heart Disease Prevention Program (SHDPP). The course teaches participants to lose weight without attending classes.*

One-hour informational meetings are scheduled for Wednesday, Sept. 7 at 5:15 p.m.; Thursday, Sept. 8 at 5:15 p.m.; and Friday, Sept. 9 at noon. All will take place at the SHDPP trailer next to Cypress Hall.

A fee of $25 will be charged for the course. To reserve your place in the program, call HIP at 497-9649 between 1 and 3 p.m.

* * * *

Hospital employees are invited to attend the department of emergency services' **open house** *planned for later this month to celebrate the completion of redecorating in the ER lobby, said Barbara Behrens, assistant director of emergency services.*

Also attending will be members of community organizations who have contributed to emergency department programs.

New furniture for the waiting area was funded through employee purchases at the 1981 annual jewelry sale, sponsored by hospital employee relations.

* * * *

This year's hospital employee relations **jewelry sale**, *which took place Aug. 23, grossed $7,782. Employee Relations will receive 12 percent, or $933, of that total.*

The funds will be used for an employee relations project as yet undetermined. Past sales have helped fund, for example, the ER lobby refurbishing (see above) and the purchase of publications dispensers.

Winners of drawing prizes were employees Diane Madgic, dietetics; Candy Fisher, payroll; Anne Kinder, dean's office; Gail Nakayama, diagnostic microbiology; Vicki Hayden, financial data review center; and Stephanie Gray, radiology.

* * * *

A one-day **retreat** *for hospital department heads and cost center managers will be held Wednesday, Sept. 28, at Vallombrosa Center in Menlo Park.*

In small group sessions participants will discuss and help define the hospital culture and value systems. Department heads and managers will also participate in setting hospital goals for the future.

The retreat is being planned and coordinated by Sheldon King, director; Carole Price, associate director; Elad Levinson of Human Resources Development; and Jenny Steinmetz, MBO consultant.

Get your tickets!

Hospital and Medical School employees are once again included in President Donald Kennedy's invitation to a tailgater and football game for Stanford Employee Appreciation Day, Sept. 24, at Frost Amphitheater.

Two complimentary tickets are available for all regular full-time and part-time members of the hospital and medical school staff. Tickets may be picked up by categories of staff only at the times and locations listed below:

- **Hospital employees at the main center:** Room E009; Sept. 13, 14, 15, 16 and 19; 7:30 a.m. to 4:30 p.m.
- **Hospital employees at Hoover Pavilion:** Cafeteria (N126); Sept. 14 only; 2 to 3:30 p.m.
- **Medical School employees:** Human Resources (M118) or Maples Pavilion; Sept. 13, 14, 15, 16 and 19; 8 a.m. to 4:30 p.m.

People who wish to sit together must pick up their tickets together. Anyone with questions should call Susan Cabral, SUH employee relations, at 497-6251.

Cohen/ *continued from p. 6*

improved antibiotics, vaccines, and agricultural and industrial products biotechnology firms hope to produce with the new techniques.

"Using the full range of methodologies, it is now possible to express, in bacterial cells, genes from almost any source," Cohen said.

While the industrial applications of the new techniques are exciting, their value as tools to understand human genetics can't be emphasized enough, Cohen said. Although the relatively simple genetics of *E. coli* are fairly well understood, the meter-long string of genes packed tightly into every human cell remains comparatively mysterious.

Recombinant DNA techniques offer new ways, he said, to probe the complex genetic map that serves as a basis for life.

—Deborah Franklin

Heinrichs/ *continued from p. 6*

Departmental committees on well-being have become common at Stanford Medical School in recent years. McCain has prepared an invitation to residents, faculty and staff to participate in the proposed committee. Heinrichs has said he would sign and distribute the letter.

"This is an invitation to participate in a new approach to intradepartmental communication and problem-solving," says the proposal drafted by McCain.

Commmittees "are intended to be frank and open sessions where pertinent facts on particular issues are presented and suggestions are made which lead to real solutions."

"This (the committee) certainly has the potential to be useful," Levine said.

Peters, who has a clinical faculty appointment pending, said "open discussion through a committee is a powerful antidote to potential misunderstandings." **—Mike Goodkind**

Medical Center MEMO

Prepared as a section of the *Campus Report*, by members of the Medical Center News Bureau staff. Editor is Lisa Ames, who can be reached at 497-6911.



Dr. Philip Sunshine (right), director of the Intensive Care Nursery at SUH, tastes and talks with fellow wine lovers at a benefit held by The Cellar restaurant in Los Altos Aug. 28. The wine-tasting raised more than $3,000 for the ICN, where Joshua Hancock, son of the Cellar's owner Larry, spent six weeks as a patient in 1971.

Medical Calendar

To schedule Fairchild Auditorium and Lobby, Alumni Green, Grant Courtyard, and Dean's Courtyard, call 497-6389.

MEDICAL CENTER TOUR: Every Thursday, 1:30-2:30 p.m. Reservations required. Call 497-6389.

WEDNESDAY, SEPTEMBER 7

Hematology support group: meeting for patients with leukemia, myeloma, hemophilia, and other hematologic diseases. Family members and significant others welcome. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

THURSDAY, SEPTEMBER 8

Dept. of Medicine grand rounds has been **CANCELLED** due to Rosh Hashana.

FRIDAY, SEPTEMBER 9

Dept. of Gynecology and Obstetrics grand rounds: "Postmenopausal Sexuality"—Jean Dixon, Ph.D. 8 a.m., A336.

Dept. of Pediatrics grand rounds: "Sports Related Injuries in Childhood and Adolescence"—Dr. James Gamble. 8 a.m., M106.

Registration deadline for Nursing Educational Services "Pediatric Critical Care Course Level II": to be held Sept. 19 and 20, M104. Program coordinated by Kaaren Peterschmidt, R.N., M.S. For further information or to register, call Carole Kidder at 497-6366.

Nursing Educational Services: "Sports Medicine: the Team Approach." 8 a.m. to 4:30 p.m., Sports Medicine Library, 3250 Alpine Road, Portola Valley. For further information or to register, call 497-6366.

SEPTEMBER 7 through 9

Nursing Educational Services: "Cardiovascular Nursing in the 80s: Third Annual Symposium." For further information or to register, call 497-6366.

SATURDAY, SEPTEMBER 10

Div. of Cardiology: "Current Status of Anti-Arrhythmic Drugs." 8 a.m. to 5 p.m., Fairchild Auditorium. For further information, call 497-5635.

MONDAY, SEPTEMBER 12

Div. of Otolaryngology/Head and Neck Surgery Resident lecture series: "Physiological Acoustics—Operation of the Mechanical System"—Dr. F. Blair Simmons. 7:30 a.m., R117.

TUESDAY, SEPTEMBER 13

Registration deadline for Nursing Educational Services "Critical Care Course Level I": to take place Sept. 27, Oct. 4, 11, and 18, 900 Welch Road, Room 15. For further information or to register, call Carole Kidder at 497-6366.

WEDNESDAY, SEPTEMBER 14

Hematology support group: For patients and their families and significant others. 10:30 a.m. to noon, TF-122c. For further information, call 497-6961.

Nursing Educational Services: "Basic EKG Interpretation Workshop." 7 p.m. to 9 p.m., 900 Welch Road, room 15. Additional sessions to be held Sept. 21, 28 and Oct. 4. For further information or to register, call Carole Kidder at 497-6366.

THURSDAY, SEPTEMBER 15

70th Anniversary of Social Work at Stanford celebration banquet: Virginia Satir will speak on "Families in the '80s." 5:30 p.m., Faculty Club. For fee information or reservations, call Carol Piercy at 497-5615.

Dept. of Medicine grand rounds: "Clinical Aspects of Male Hypogonadism"—Dr. Carlos Carmargo. 8:30 a.m., Fairchild Auditorium.

Dermatology Special Guest Lecture: "The Conquest of Venereal Disease in The People's Republic of China"—Dr. George Hatem (Institute for Dermatologic Research, Peking). 5 p.m., M112.

FRIDAY, SEPTEMBER 16

Dept. of Gynecology and Obstetrics grand rounds: "Postcoital Testing"—Dr. Emmet Lamb. 8 a.m., A336.

Dept. of Pediatrics grand rounds: "Neonatal Polycythemia and Hyperviscosity Syndromes"—Dr. Herbert Schwartz. 8 a.m., M106.

MONDAY, SEPTEMBER 19

Discussion with patients' group by author of *Vital Signs: a Young Doctor's Struggle with Cancer*: Dr. Fitzhugh Mullan (NIH). 5 to 8 p.m., C122 Darwin Library. *(See article this issue.)* For further information, call 497-6171.

TUESDAY, SEPTEMBER 20

Fitzhugh Mullan will address faculty and staff. *(See Sept. 19 entry, and article this issue.)* 8 to 9 a.m., S092. For further information, call 497-6171.

SEPTEMBER 19 and 20

Nursing Educational Services Pediatric Critical Care Course, Level II. 7:30 a.m. to 4:15 p.m., M104. For further information or to register, call Carole Kidder at 497-6366.

WEDNESDAY, SEPTEMBER 21

Nursing Educational Services Pediatric Critical Care Course, Level II. 8 a.m. to 3:45 p.m., M104. For further information or to register, call Carole Kidder at 497-6366.

Human Resources Group—New Employee Orientation. 9 a.m. to 1 p.m., Fairchild Auditorium. To register, call Dorothy Thompson at 497-7541.

Calendar items must be received in the Office of Public Events, 750 Welch Road, Suite 300, by the Wednesday noon seven days prior to the issue in which the activity is first to appear. Contributions from the Hospital, Medical School, and Clinics are welcome. For further information call 497-6389.

Medical School faculty openings

Stanford University is an equal opportunity employer and welcomes nominations of women and minority group members and applications from them.

The Department of Medicine seeks a laboratory investigator-clinician for a tenure track position as an assistant or associate professor in the department. Candidates should have independent investigative capability and training in medical oncology.

Send resumes to Dr. Ronald Levy, Chairman, Search Committee, Div. of Oncology, Room S025, Stanford University School of Medicine, Stanford, CA 94305. Resumes will be treated confidentially.

Applications are invited from qualified pathologists/hematologists with strong academic orientation for the position of assistant professor or non-tenured associate professor in the Department of Pathology.

Applicants must be qualified to assume direction of the Coagulation Section of the Clinical Laboratories in the Hospital. Responsibilities will include supervision of laboratory personnel, test development, monitoring of quality assurance, and substantial teaching and consultative interactions with medical students, house officers and clinical colleagues.

Postgraduate training and certification in pathology are desirable, but regardless of area of primary specialization, an extensive laboratory background is essential.

Candidates must have demonstrated their capacity to conduct first-class research and will be expected to establish an independent and fundable research program in coagulation or cognate areas of laboratory medicine or pathology. A record of prior publications is essential.

Applications should be dated no later than Oct. 6, 1983, for an appointment to commence March 1, 1984. Send curriculum vitae and the names of at least three references to Dr. Howard H. Sussman, Director of Laboratories, Dept. of Pathology, Stanford University Medical School, Stanford, CA 94305.

Cancer surviving M.D. to speak

The author of *Vital Signs: a Young Doctor's Struggle with Cancer* will visit the Stanford community later this month to discuss the educational needs of the cancer survivor.

Dr. Fitzhugh Mullan is the chief medical officer in the Office of Medical Applications of Research, National Institutes of Health. A former cancer patient himself, he is concerned with educational and psychological strategies for re-entry—the challenges and problems of rejoining life as a cancer survivor.

Such challenges, often surfacing within the first five years after diagnosis, include fear of recurrence, living with compromise, health observation and maintenance, acceptance by society, and creating community among cancer survivors.

Mullan will address the need for future investigational activities in these areas. He'll also describe his own role changes as he went from doctor to patient, and then to doctor again.

Mullan will speak to a patients' group in the department of radiology from 5 to 8 p.m., Sept. 19, in the Darwin Library, C122. The following day he'll address faculty and staff, room S092, from 8 to 9 a.m., Sept. 20.

The talks are sponsored by the division of radiation therapy. They are open to all, as space permits. For further information call 497-6171.

Volunteers Needed. . .

How does diabetes affect sexuality?

Female volunteers are needed for a study investigating whether diabetes affects sexual response, said Dr. Diane Morrissette, a visiting scholar in Stanford's department of physiology.

The study will involve insulin-dependent diabetic women, between 21 and 43 years of age, in four one-hour sessions which can be arranged to fit the individual's schedule.

Volunteers will be provided with results of laboratory tests measuring hormonal levels in the blood.

For more information, contact Morrissette at 497-2432.

Student leaders chastise faculty report on McCloskey

Factual errors resulted from improper, unfair investigative procedures

Following is the response of the Associated Students of Stanford University to the Report of the Political Science Department Committee Investigating Possible Abridgement of Academic Freedom in Political Science 7, taught by P.N. McCloskey, Jr.:

INTRODUCTION

The report of the Political Science Department Committee formed to investigate possible abridgement of academic freedom in ASSU Guest Professor Paul N (Pete) McCloskey's course this past spring (Campus Report, July 27, 1983) was critical of a number of actions taken by last year's Guest Professorship Bureau (GPB) and Council of Presidents (COP). The present ASSU Senate established a committee to investigate these charges and to make any warranted response.

We have found significant and substantial inaccuracies in the Report relating both to the course of events and to their interpretation. These inaccuracies result in large measure from the following of investigative procedures which must be seen variously as improper, insufficient, or unfair.

Thus, in the following response to the Committee's Report, we will first examine some of its principal factual errors, and we will then address matters of procedure which distorted the investigation. A third section will consider the extent to which the Report's recommendations are founded upon its factual errors. A concluding section will present our recommendations for further action.

FACTUAL ERRORS IN THE REPORT

The Report of the Political Science Department Investigating Committee contains several factual errors. Some of the major errors examined in this section are those involving the selection of course readings, course administration, course finances, and the actions of the various parties towards resolving difficulties as they arose.

Informal Invitation to Mccloskey

The Report states that on July 1, 1982, a member of the GPB (David Marks) "informally invited Congressman McCloskey" to teach a course at Stanford in the winter quarter. In actuality, no member of the GPB has the authority to extend invitations to a prospective Guest Professor, informal or otherwise, and only the Director can authorize formal discussions. Mr. Marks therefore discussed the possibility of a Guest Professorship for Mr. McCloskey without proper authorization and this was made clear to all parties at that time.

Moreover, Mr. McCloskey had expressed interest in teaching at Stanford in a letter to President Kennedy before his discussions with Mr. Marks. It is clear that Mr. McCloskey was at least as eager to teach at Stanford as the GPB was in eventually inviting him.

Selection of Course Readings

The manner in which readings were selected for the course has received considerable attention. On January 19 the Political Science Department reviewed the proposed course and agreed to its accreditation. The proposed course outline stated merely that there would be a set of unspecified "selected readings" for each lecture. At least one member of the Department faculty, Professor Abernathy, protested both the lack of adequate review given to these "selected readings" and the hurried nature of the Department's accreditation of the course.

At the ASSU Senate meeting of January 25 two primary concerns regarding these readings were expressed: 1) did the readings have a direct bearing upon the topic of the course (Congressional Decision Making); and 2) in light of Mr. McCloskey's lack of previous experience, did they address the issues raised in the course in a sound academic manner as befitting a Stanford course.

At its meeting with Mr. McCloskey of February 17 the GPB made it clear that the Senate would not approve the proposed course unless these concerns were satisfactorily addressed. It was made clear to Mr. McCloskey that he would be asked to make commitments concerning the course readings, commitments which would be taken as binding. Mr. McCloskey voluntarily agreed to this understanding.

Based upon discussions between Mr. McCloskey and the GPB (the Political Science Department declined to be involved in this process), the Senate approved the course, including its readings. Director Linfield stated at that time that Mr. McCloskey and the GPB had agreed that all future modifications to this list of readings would be made in consultation between both parties, in a manner similar to that used in formulating the original list.

Final Senate approval of the course was given at its public meeting of February 22. Dozens of interested members of the community attended this meeting, several of them addressing the Senate in an open forum. The campus media (notably the *Stanford Daily* and the *Stanford Review* covered this meeting extensively.

From that date onward the precise procedure by which the selected readings had been compiled, and the procedure by which they would be modified, were known to the general public, including members of the Political Science Department, the Dean, and the Provost. These procedures were explicitly modelled upon those of comparable programs, such as SWOPSI, and no protests were heard at that time from any quarter. Indeed, the Report explicitly approved of the GPB reviewing proposed course readings before final approval had been given, reserving its condemnation for interference by the GPB in subsequent modifications of the original list of readings.

Modifications of the Course Readings

Throughout the Report the GPB is characterized as having "demanded" various "additions and deletions" to the reading list. This characterization of events seems particularly confusing. Given that the GPB extensively pre-screened and agreed with the original reading list, one wonders why it would subsequently "demand" various alterations.

Specifically, the Report cites assertions by various students taking the course that the GPB attempted to do the following:

- To "remove" from the required readings Si Kenan's book *Israel's Defense Line, Her Friends and Foes in Washington.*
- To "remove" from the required readings George Ball's article "The Coming Crisis in Israeli-American Relations."
- To "disallow" the reading chapter 4 of Crabb and Holt's book *Invitation to Struggle.*

Each of the instances cited above occurred on or before February 18, prior to the final approval of the course. Specifically, the GPB undertook the following actions:

- Suggested to Mr. McCloskey that Kenan's book not be used as a primary reference source due to its lack of a bibliography and footnotes. Mr. McCloskey agreed, and subsequently moved it to the list of recommended readings.
- Suggested that Ball's article be used in conjunction with lecture 18 (on Congressional approval of the AWACS sale) rather than with lecture 11 (Domestic Energy Policy). Mr. McCloskey agreed that the material should be covered in this latter lecture, and it was actually covered to some extent in both lectures.
- Suggested that Crabb and Holt's book not be used as a primary reference source due to the lack of a bibliography and footnotes. Mr. McCloskey expressed his desire to include chapter 4 of the book, and the GPB readily concurred.

Apparently the Committee (like some students in the course) was confused as to the precise chronology and nature of these events. These events were not examples of interference by the GPB in the selection of course readings by an instructor. Rather, they were instances of a review of readings conducted before the course (and instructor) received final approval. While the former action is condemned by the Committee, the latter is explicitly approved.

In actual fact the GPB never "demanded" various modifications to the original readings. Rather, Mr. McCloskey made various modifications without consulting the GPB. In some instances these modifications were simply such adjustments in a reading list as one expects from an instructor as shehe gains further experience and insight during the teaching of a course. In these instances there were no substantive disagreements between Mr. McCloskey and the GPB. In other instances it appeared that Mr. McCloskey either was reversing himself on previous agreements with the GPB, or was introducing material of insignificant academic interest or irrelevance to the stated topic of the course, Congressional Decision Making. In these instances (confined exclusively to the latter half of the course) the GPB displayed great reluctance to support his modifications.

In those instances where Mr. McCloskey and the GPB found themselves at odds there was real and genuine concern by the GPB that the course was veering away from the topic of Congressional Decision Making and becoming a course on American foreign policy, specifically American Middle East policy. The academic freedom of an instructor clearly and simply does not extend to converting an Economics 1 class into a Physics 53 class.

Specifically, the comments, cited in the Report, of the new co-directors of the GPB on May 24 regarding "difficulties they had had with Mr. McCloskey over the past week," can best be understood in light of the extensive changes in the selected readings which had just been made by Mr. McCloskey. In a lecture dedicated to the ratification of the Panama Canal treaty (definitely a matter of proper concern for the course) Mr. McCloskey wanted to devote the majority of the selected readings to the Suez Canal and Arab-Israeli relations. This was seen by the GPB as a clear deviation from the focus of the course, Congressional Decision Making, and an explicit and substantial departure from agreements and understandings they had with Mr. McCloskey before the course was approved.

Course Administration

The GPB did not suggest to Mr. McCloskey that a term paper be added to the course requirements in order to make it more "academically rigorous." Rather, Mr. McCloskey expressed interest in adding more course requirements, and specifically suggested the addition of weekly quizzes. The GPB advised him that a term paper might be more appropriate than weekly quizzes for a variety of reasons. Based upon these discussions the term paper requirement was freely adopted by Mr. McCloskey.

Only one instance of administrative laxity on the part of the GPB was found: although the copies of the selected readings for lessons 1 through 5 were made available in the Bookstore on time, the GPB mistakenly did not give the Bookstore appropriate pricing information, delaying their sale for several days.

The controversy during Spring quarter between the GPB and Mr. McCloskey did hinder the progress of the students in his course. However, the greatest hindrances to the course seems to have been Mr. McCloskey's use of class time to discuss his problems with the GPB. Indeed, delays in the distribution of the early readings can hardly compare to the distractions such a discussion generated.

Course Finances

The Senate approved the course budget on February 22, at the time at which it gave final approval to the course. The salary of Mr. McCloskey was set in the budget at $2000. No other figure had beendiscussed with him by Director Linfield either before or after the Senate's action.

This is part of the public record, and thus Mr. McCloskey's salary has been known since late February. Unfortunately, the Committee may not have received copies of the course budget. The lack of adequate communications between the ASSU and the Committee during its investigation is a result of the Committee reluctance to discuss these issues in an open forum, in which this major factual error would certainly have been detected and remedied. However, Cynthia Mathewson of the COP actually did state that the salary had been set at $2000 in her letter of April 28 to Mr. McCloskey, which the Committee did receive and and from which it quoted extensively.

In that letter Ms. Mathewson also suggested that the Senate be requested to authorize an additional $1000 for Mr. McCloskey once most of the concerns of all parties had been laid to rest. The Report states that "the meaning of the letter is obvious: if Mr. McCloskey did not agree to most of the ASSU demands, it was certain that he would receive $1000 less in compensation." This interpretation of the letter is difficult to understand. At *no* time was there threatened a decrease of the $2000 salary authorized by the Senate . Only the Senate has the power to modify budgets, and the Senate was never even consulted on this matter.

Ms. Mathewson's offer to recommend to the Senate an *increase* in compensation for Mr. McCloskey was *not* designed to affect his actions. Rather, the GPB had found after the cancellation of the Greenburg and Chambers course that its budget constraint was substantially relaxed, enabling it to recommend that Mr. McCloskey be granted additional compensation. The COP, concerned about the status of relations between the GPB and Mr. McCloskey, wished to delay actually recommending such an increase in compensation to the Senate until all parties could reach an understanding on other outstanding issues.

The report cites this episode as the "clearest evidence" of abridgment of Mr. McCloskey's academic freedom. It is extremely difficult to see how the promise of *recommending* an *increase* in Mr. McCloskey's compensation above a mutually agreed upon level could be construed as an abridgment of academic freedom. The reluctance of the COP to recommend to the Senate an increase in compensation can hardly be regarded as a restraint or pressure "designed to create in the minds of academic scholars. . .fears and anxieties that may inhibit them from freely. . .teaching." The Senate's approval of a $2000 salary should have been the final word on this issue. Finally, if Mr. McCloskey subsequently wished to request an increase in compensation, then he could have simply approached the Senate directly, as is the usual practice, bypassing the COP entirely.

The budget approved by the Senate also authorized various administrative expenditures. The normal procedure would be for Mr. McCloskey to present documentation to the Director of the GPB, who would then insure that the expenses were authorized by the budget and process a reimbursement request. Any disputes concerning the reimbursements would be presented directly to the Student Financial

Manager (the Controller of the ASSU) for disposition. As things stand, the Student Financial Manager issued a check to Mr. McCloskey 3 months ago, has notified him in writing twice of its availability, and is still waiting for him to pick it up. It is mystifying that Mr. McCloskey has not picked up his money and that the Committee did not inquire further into this matter before including it in their Report.

Finally, the Report recognized the legitimacy of the ASSU setting the course budget. The ASSU has always been very conscious of potential misuse of the budgetary process, and has adopted an elaborate series of controls designed to insure fiscal accountability without impeding operations. But to assume that depositing funds with the University Controller would prevent the ASSU from misusing its budgetary authority is unrealistic. Such action could only prevent the Student Financial Manager from defying the wishes of the Senate as expressed in the budget. Clearly that type of protection is not needed, for the Senate (which appoints and can remove the Student Financial Manager) will, as it always has, insure that its powers are not diluted.

Memorandum of Understanding

The proposed memorandum of understanding between the GPB and Mr. McCloskey, which was quoted in its entirety by the Report, was simply a concrete formulation of agreements which had already been made in the process of securing approval for the course. The provisions for removal were modeled upon those found in the *Academic Staff Handbook*, published by the Provost's Office; those concerning reading materials upon the current practices of comparable programs (such as SWOPSI); and the salary of Mr. McCloskey was simply the amount that had already been approved by the Senate.

None of the terms of this memorandum were novel inventions of the GPB or the COP. They were, as far as could be determined, established University policy as codified in such documents as the *Academic Staff Handbook*. or demonstrated in comparable programs (such as SWOPSI). If they are contrary to the Committee's interpretation of University policy, then either the GPB and COP were mislead by other agencies in formulating their guidelines, or their interpretation is not accepted in practice by all elements of the University. In either event further University action would seemed called for.

Political Science Department Actions

The Report cites numerous "misunderstandings" by the various students involved in this controversy. In many such junctures a minor effort by the Department might have satisfied the concerns of all parties. But in all these instances the Department displayed a lack of knowledge and of energy preventing it from exercising its rights and responsibilities as the accrediting agency.

On Jan. 19 the Department recommended Mr. McCloskey's appointment as a lecturer before the Senate had taken any action with respect to his nominations. Members of the Department were led to believe that the Senate had *already* approved the course in question. It is difficult to comprehend how such misinformation could have guided the Department's actions.

Moreover, within a week the *Stanford Daily* began a series of articles highlighting the Senate's decision to authorize the GPB to "conduct negotiations with" Mr. McCloskey. At that time all members of the Department should have been aware that the Senate had not yet approved the course, and that if the Senate did not do so, the Department would be left with a teacher but no salary to pay him.

The Senate was led to believe that the Department's decision was only designed to give the ASSU guidance as to the Department's eventual willingness to sponsor Mr. McCloskey if he had received Senate approval. While this was also apparently in error, the Department's decision was made in a closed faculty meeting, with no publicity attending it, making it impossible for Senators to easily discover that their belief was mistaken.

The Report, in its factual narrative, gives the misleading impression that Mr. McCloskey's appointment as a lecturer by the University was made quickly after the Department's decision. The actual appointment of Mr. McCloskey by the Board of Trustees was made on May 10, over three and a half months after the Department's decision.

Thus the Department had ample opportunity to correct the mistaken impression that the Senate was obviously working under, and even to reconsider its earlier decision. Its failure to do so was the first instance of a communications failure that plagued all parties for the next several months.

Professor Marshall's letter to the *Daily* on April 19 concerning the now public controversy between the GPB and Mr. McCloskey prompted immediate action by the GPB. Director Linfield on April 21 wrote to Chairman Eulau and offered to turn responsibility for the course over to the Department as soon as possible. His inability even to reply to Director Linfield's letter left the GPB totally in the dark with respect to the Department's intentions.

This point cannot be emphasized enough - if the Chairman had responded to Director Linfield, then *any* of the Department's wishes concerning the administration of the course, the content of readings, etc... would have been accepted by the GPB. If the violations of academic freedom which the Report discovered are as obvious as it concludes, then it is extremely difficult to believe that *some* statement by Chairman would not have been appropriate at this juncture. The Chairman's consistent refusal to address any of the issues raised was understood by the GPB to constitute tacit consent for it to continue its (hardly secret) actions. Indeed, while the Report concluded that course administration is an inappropriate area of student involvement, the Chairman's inaction forced the GPB to maintain completely unsupervised administration of the course against its expressed wishes.

Throughout Winter and Spring quarters the Department acted without sufficient information when it was readily available from the GPB, COP, Senate, or even the news media; it refused to advise the GPB when requested, indeed when practically begged to offer advice and assistance; and it consistently failed to communicate with ASSU officers (of the GPB, COP, and the Senate) when questions or difficulties arose. The Report correctly concludes that a program such as the Guest Professorship Program is very difficult to administer, but this difficulty is compounded out of all proportion when parties fail to participate in a meaningful way.

Handling of McCloskey's Grievances

As Spring quarter progressed Mr. McCloskey encountered what he interpreted as opposition to his handling of the course from the GPB. The Report relates how he then sought assistance from a variety of sources before making his complaints public in the *Stanford Daily* and other news media. An impression is given that only after all appropriate administrative avenues of redress were exhausted did Mr. McCloskey "go public."

Specifically, after he concluded that discussions with Director Linfield would be unfruitful, Mr. McCloskey requested the assistance of the Political Science Department. Chairman Eulau declined to aid him directly, referring him instead to Ms. Selznick of the Undergraduate Specials Program (which has no connection with either the ASSU or the GPB), who then referred him to the Ombudsman. At this juncture Mr. McCloskey decided to approach the press with his grievances.

Normally, according to the *American Association of University Professors* (AAUP) *Model Case Procedure*, "all parties to an academic controversy refrain from publicizing their differences in order to protect the investigative procedure from the impact of uninformed or uncritical reactions and in order that the door may be held open to mediation." It is not usually considered proper for an individual to appeal to a "trial by press" unless and until all administrative remedies had been exhausted.

Unfortunately, Mr. McCloskey came nowhere near exhausting proper administrative remedies. The Report relates his inability to obtain the names of the members of the GPB. Considering his close relationship with at least one member of the GPB (David Marks) and the fact that these names were in the public record (anyone in the ASSU Office, COP, or Senate could have made them available to him if the GPB Director had - wrongfully - refused), it is difficult to see how he could not have obtained them. On several occasions he was invited to attend meetings of the GPB to discuss his difficulties, invitations that he declined.

If after having met with the GPB Mr. McCloskey had found the GPB unresponsive to his concerns, then he could have approached the COP and have requested its assistance. Indeed, immediately upon reading in the press of Mr. McCloskey's grievances, of which until that time they had been unaware, the COP invited Mr. McCloskey to a meeting to discuss his difficulties. Finally, if all else had failed, he could have brought the matter to the attention of the Senate.

Although it is impossible to ascertain precisely Mr. McCloskey's state of knowledge throughout this affair, it is reasonable to conclude that an individual who had worked with the GPB intensively for months, and who had a close working relationship with at least one of its members, would have been able to follow simple grievance procedures. Thus it appears that he had no desire to seek appropriate administrative remedy for any just grievances. This lack of motivation, together with his actions, were in violation of both the letter and the spirit of the AAUP standards, and made a reasonable resolution of differences between the parties impossible.

New By-Laws

The new By-Laws for the GPB were enacted on May 17 (not May 24 as stated in the Report). It had been the sole object of discussion for two meetings of the Administration and Rules Committee. The Senate heard presentations by interested students (including those currently enrolled in Mr. McCloskey's class) and debated the bill at length. Contrary to the impression given by the report, none of the changes enacted affected Mr. McCloskey's class, since all agreements made with him were under the old By-Laws. The customary practice in these cases, and the one followed in this instance, is to "grandfather" current officers, practices, and agreements to protect them from the uncertainties of retroactive legislation.

Tone of the Report

On several occasions the Report asserts the intentions of the GPB. Given that no member of the GPB was allowed to make statements to the Committee, and given that the GPB's statements in the public record are extremely broad and general (as indeed they had to be), it is difficult to see how the Report could have repeatedly ascribed specific attitudes to the GPB concerning specific events.

Throughout the Report the actions of the GPB were characterized as "demanding," while those of Mr. McCloskey were frequently portrayed as "acquiescing." This gives rise to the Report's denunciation of a "master-slave" relationship between the GPB and Mr. McCloskey. In fact, the relationship between these parties was on the whole a cooperative one during Winter quarter, when almost all of the course decisions were actually made. In so far as it was not cooperative, most of that can be traced to misunderstandings which unfortunately were allowed to fester without quick resolution.

These characterizations in the Report, especially those in the "factual narrative" section, gravely distort the interpretation of events. Since the Committee's recommendations are stated without explicit justification, such distortions in interpretation carry a particular importance. The assigning of such intentions and the use of such loaded words almost guarantee an unfavorable finding towards the GPB no matter what the actual facts.

THE AFTERMATH OF THE COURSE

On 18 May 1983, Provost Hastorf, through Dean Wessels, charged a committee of the Political Science Department to investigate any possible violation of Mr McCloskey's Academic Freedom. The Committee produced a report in which it made recommendations with regard to the Guest Professorship program as a whole, and presented this to Dean Wessels on 30 June 1983. The report was released by the Provost and published in the Campus Report of July 27, 1983. The procedure followed in this process is analyzed below.

Choice of Investigating Agency

Given that the issue under investigation was the possible infringement of Mr McCloskey's academic freedom, and that there were only two parties involved in the supervision of the course - the Guest Professorship Bureau of the ASSU and the Political Science Department - neither should have been chosen as the investigative agency. In fact, as we have seen above, the chairman of the Committee, Prof. Eulau, was himself a major actor in the events that transpired with regard to the McCloskey course.

Investigatives Techniques Employed

The manner in which the Committee went about the business of collecting facts gives rise to questions about the impartiality of its inquiry. The Committee declined to take testimony from the people involved in the course because they "were not available on Stanford Campus". Whereas the Committee's statement is literally correct, it should be noted that Mr. Linfield had specifically said that he would be available to appear before the Committee, Mr McCloskey is working with a law firm in Palo Alto, and Ms Mathewson lives just off-campus.

Since testimony was not taken and specific questions not addressed, the Committee had to rely solely upon whatever information it obtained from the parties involved in response to a general request that the Committee made. In consequence, the Committee was unable to cross-check statements that it received. This resulted in its giving, at places, greater credence to hearsay, in the form of letters written by Mr. McCloskey, than to the written record of public meetings of bodies such as the ASSU Senate.

Scope of of the Committee's Recommendations

Whereas the Committee was constituted to investigate any possible abridgement of Mr. McCloskey's academic freedom, it made recommendations with regard to the Guest Professorship program as a whole. If the Guest Professorship program as a whole were to be reviewed it is undesirable that such a review be conducted without consultation with the ASSU or the Guest Professorship Bureau or with other academic departments at Stanford that have accredited Guest Professor courses in the past, or that the review be conducted with either the secrecy or the haste of the one conducted by the Committee. In fact, the Committee did not ask for, or receive from the ASSU, complete information with regard to the functioning of the GPB (or even details about the finances of the course), other than those relevant to the determination of the question with regard to academic freedom.

Moreover, it is strange that such a review of the Guest Professorship program be conducted by a single department when the recommendations are going to affect several academic departments at Stanford in addition to the ASSU. For example, the Guest Professorship Bureau has approached the English, History, and Religious Studies departments for possible courses in the coming year, and their views on the new by-laws or on the program as a whole were not, to our knowledge, even taken cognizance of.

The Release of the Report

The ASSU had been concerned about any possible viola-

continued on next page

ASSU/McCloskey...

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tion of Mr McCloskey's academic freedom, and on its behalf President Watson and Senator McGrath had, early in July, made an appointment for Friday, 29 July, with Dean Wessels to discuss the findings of the Political Science Department study. With full knowledge of this, Dean Wessels recommended and Provost Hastorf released the report to the Campus Report of July 27. Until the publication of the report in the newspaper, the ASSU and the Guest Professorship Bureau were kept completely in the dark about the contents of the report, and expected it to deal solely with the issue of Academic Freedom.

Considering that Dean Wessels was meeting with officers of the ASSU in the near future, and especially considering that the Political Science department had made recommendations far beyond its charge in castigating the entire Guest Professorship program at Stanford, he should have, by any norms of fairness and efficacy, if not by common courtesy, held up the release of the report until he had discussed its contents with officers of the ASSU. Likewise, Provost Hastorf should not have released the report before discussing it with the ASSU. Subsequently, the Provost apologized to officers of the ASSU for the manner of release of the report. But this was an oral apology made in private for a written indictment made in public.

STUDY OF THE RECOMMENDATIONS OF THE INVESTIGATING COMMITTEE

A clearer understanding of the facts gives cause for reconsideration of the recommendations presented in the Report.

The first recommendation of the Report was that the University not "grant credit for any course in the ASSU Guest Professorship Program" as long as "section 7 of the (ASSU By-Laws) (dealing with the GPB) remains in force." As has already been noted, this recommendation is outside the scope of the Committee's charge.

Furthermore, this recommendation, couched in terms of an ultimatum, does not specify what points in section 7 are of concern to the Committee. Extrapolating from arguments presented elsewhere in the Report, one can guess the extent of the Committee's concern, but since many of their specific concerns were based upon an improper understanding of the facts of this particular case and the operations of the GPB and the ASSU in general, it is difficult to see exactly what actions on behalf of the ASSU would satisfy the Committee. Such an ultimatum is not only disturbing by its demonstration of unwillingness to admit further dialogue, but due to its imprecision is impossible to comply with.

The second recommendation of the Report is actually a series of three recommendations. The first is that a "written contract between the GPB and the Guest Professor stating the amount of compensation to be paid and a statement of administrative costs for the course" be "filed with an appropriate administrative officer." The GPB is already directed by section 7 of the ASSU By-Laws to draw up such a contract, and filing a copy with an appropriate administrative officer should be a simple procedural matter.

The second of these is that the ASSU should deposit "in a University account the total amount of the Guest Professor's compensation and the total amount of administrative costs for the course." This recommendation is entirely unnecessary, being founded upon a misunderstanding of ASSU budgetary and controllership procedures and responsibilities. If the ASSU (through the GPB) and a Guest Professor enter into a written contract, then the salary and administrative costs cannot be altered without the consent of both parties. Thus this recommendation would only prevent the Student Financial Manager from refusing to implement the budget of the course as approved by the Senate. Such an unprecedented situation would, as mentioned earlier, probably result in the firing of the Student Financial Manager.

The third of these is that the accrediting departmentprogram should approve the course "for academic credit after the ASSU has agreed to invite the Guest Professor" and it then "agrees to assume all administrative responsibility for the course, including the provision of course materials, the payment of compensation to the Guest Professor, and all other administrative costs." The first part of this recommendation seems reasonable, provided that it does not preclude the accrediting agency from advising the ASSU on the academic soundness of a proposed course while the ASSU is making its decision. Indeed, it is the procedure the ASSU has always sought to follow. But the quick decision of the Political Science Department prior to Senate consideration of the proposed course prevented the ASSU from following it in the present instance. As far as the second part is concerned, the ASSU does welcome a greater and more defined role for the accrediting agencies in course administration. But in the past these agencies have been reluctant to assume any responsibility in this area. Thus it is unclear whether these agencies should be *forced* to assume *full* administrative responsibility. However, in the realm of financial administration the objections cited above apply, limiting the scope of this recommendation.

The final recommendation of the Report is that the University "pay Mr. McCloskey his unreimbursed, course-related expenses and increase his compensation for teaching his course." While one can hardly object to the University spending its funds as it deems appropriate, it is clear that this recommendation was founded upon an erroneous understanding of the facts, and thus should be considered with caution.

CONCLUSIONS

The COP and GPB neither interfered with the contents of the course reading list after the course had been given final approval in February nor threatened to decrease Mr. McCloskey's salary. The Committee Report's conclusions to the contrary can be traced to errors in fact which can in turn be traced primarily to faulty investigative procedures. Thus, while the ASSU should take into account the concerns raised in the Report when debating subsequent actions, and while the specific recommendations made in the Report may eventually be adopted in whole or in part, we must recommend that these recommendations not be considered authoritative statements of University policy.

The Report ignored some issues of primary concern to the ASSU in addressing the future of the GPB program. For one, the Senate must insure when spending student funds that these funds are being expended in the manner proscribed in an approved budget. In particular the ASSU must retain controllership responsibility for all funds spent. Indeed, this is actually required by the ASSU Constitution.

Even on the subject of academic freedom, which has been characterized as the primary issue, there appears to be a fundamental problem of interpretation of what it consists of. The *Academic Staff Handbook* states that the statement on Academic Freedom (which applies in full to all members of the faculty) "shall apply to members of the Academic Staff in a manner appropriate to their *role* and *responsibility* (emphasis added)". No guidelines as to what is an "appropriate" degree of coverage for a lecturer with a one quarter appointment is given.

There seems to be a fundamental confusion between preserving academic freedom and insuring academic integrity. The GPB and the COP were concerned that Mr. McCloskey was not acting in good faith or in a professional manner - possibly calling into question his academic integrity. The *Academic Staff Handbook* allows for the termination of a lecturer for "just cause, including substantial and manifest incompetence or professional misconduct." However, the procedures for termination outlined in the *Academic Staff Handbook* were not designed for short term (1 quarter) appointments. Moreover, the procedures do not seem easily applicable to situations where course expenses are not being borne by the University.

On these questions concerning academic integrity guidance is required from the faculty. Without such guidance the ASSU has been forced in the past to assume a responsibility it is perhaps not best suited to exercise directly. The Senate has instructed its Graduate Education and Research Committee to work in cooperation with the faculty in devising appropriate guidelines that can be used for all programs involving short term academic appointments (GPB, SWOPSI, etc...).

On matters regarding the actual administration of the GPB program, the Senate has instructed its Administration and Rules Committee to consult with appropriate academic officers in its examination of the By-Laws of the program.

In closing, a further examination of the facts of this case in an open and cooperative investigation is necessary before the future of the GPB can be decided. It is hoped that all parties will enter into these subsequent discussions with open minds and in full realization that more work must be done on this issue before a Guest Professorship Program operating under mutually acceptable guidelines can be established.

Roc Blumenthal, Senator
H. V. Jagadish, Senate Chair
James P. McGrath, Senator
Douglas J. Puffert, Senator
Suzzanne S. Uhland, President
Karol E. Watson, President

Six Stanford student leaders deny that McCloskey's freedom was abridged

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standings) made without the express consent of the (Student) Senate or its agent (the Guest Professorship Board) would be inappropriate and unacceptable. . . .

"The right to invite visiting professors (guest lecturer in McCloskey's course) resides exclusively with the GPB."

In their report, the students said McCloskey had been issued a $2,000 check three months ago, but still has not picked it up. They found this "mystifying."

The student report said "there was real and genuine concern" by the Guest Professorship Board that McCloskey's course "was veering away from the topic of Congressional decision-making and becoming a course on American foreign policy, specifically American Middle East policy.

"The academic freedom of an instructor clearly and simply does not extend to converting an Economics 1 class into a Physics 53 class."

"The greatest hindrance to the course seems to have been McCloskey's use of class time to discuss his problems with the Guest Professorship Board."

The faculty report, based entirely on written materials, noted that in one instance McCloskey and Guest Professorship Board Chairman Seth Linfield were debating the time to be given a guest lecturer in the course while the guest was on the platform.

The Guest Professorship Board and student Council of Presidents "were concerned that McCloskey was not acting in good faith or in a professional manner, possibly calling into question his academic integrity," the student report said.

"On these questions concerning academic integrity, guidance is required from the faculty. Without such guidance, the ASSU has been forced in the past to assume a responsibility it is perhaps not best suited to exercise directly.

"The Student Senate has instructed its Graduate Education and Research Committee to work in cooperation with the faculty in devising appropriate guidelines that can be used for all programs involving short-term academic appointments."

The Senate has instructed its Administration and Rules Committee to consult appropriate academic officers in examining by-laws governing the guest professorship program.

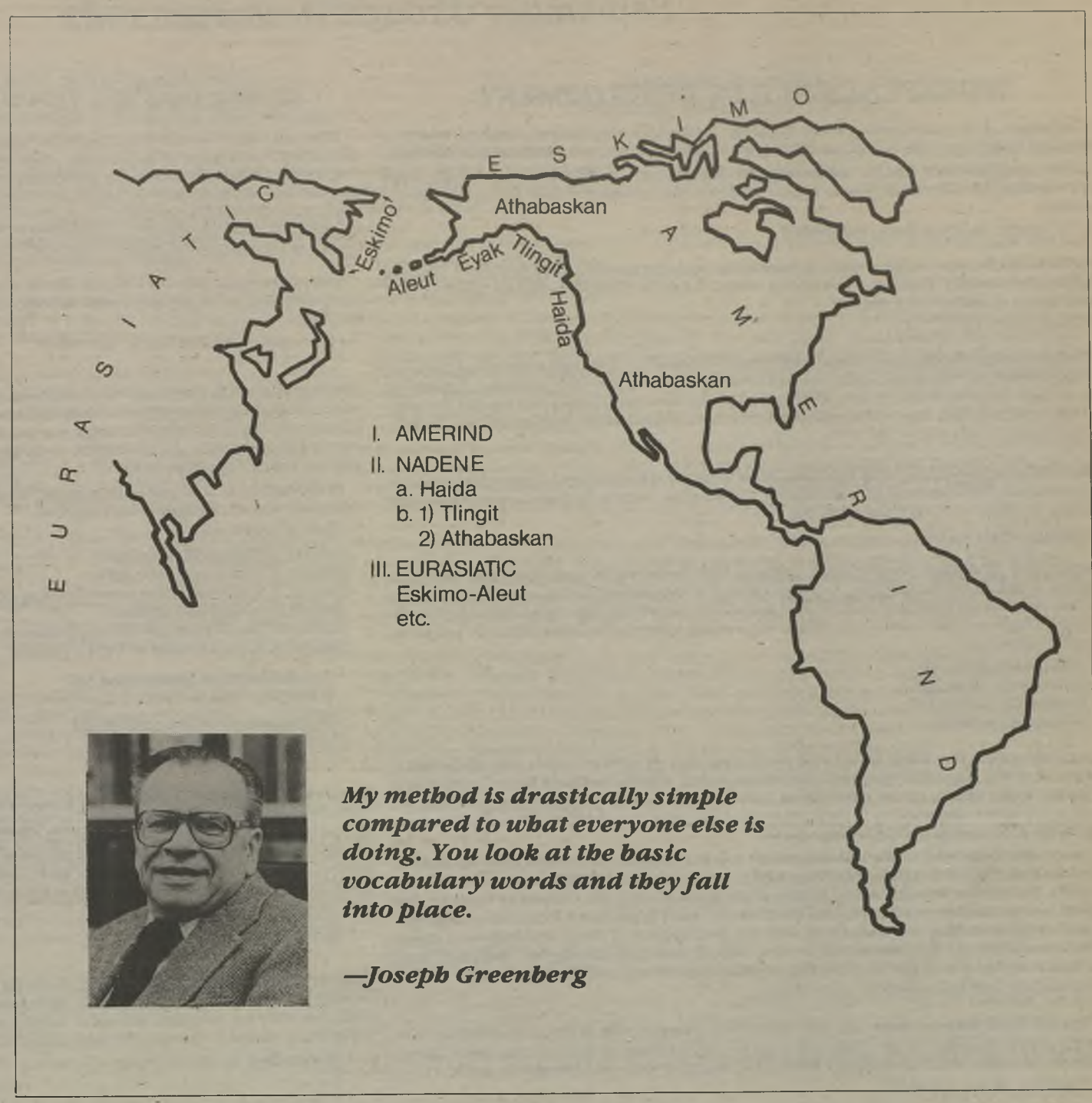
"More work must be done" before a guest professorship program "operating under mutually acceptable guidelines can be established," the students said.

Authors of the report included Student Senate Chair H.V. Jagadish, Senators Roc Blumenthal, James P. McGrath and Douglas J. Puffert, and Suzzanne S. Uhland and Karol E. Watson of the Council of Presidents.



Three anthropologists learn first hand about coincidence

Words, teeth, and blood types tell the story of three waves of migration



My method is drastically simple compared to what everyone else is doing. You look at the basic vocabulary words and they fall into place.

—Josepb Greenberg

Sometimes, if you're lucky, science works this way:

A Stanford anthropologist studying the native languages of the America's concludes that the presently-believed organization of those languages is wrong, and that there are really only three families of languages in the Hemisphere.

He goes to give a lecture at the University of Arizona and runs into a former student who has been studying blood types around the world. The former student has found there are apparently only three kinds of blood types in the Western Hemisphere, and they seem to exactly match the language map produced by the Stanford professor.

The Arizona researcher tells him about another scientist, at Arizona State University, who has studied teeth structures in the Americas, and has concluded that there are three types. They also match the language map.

Conclusion: it seems very likely there were three major waves of migrations from Asia to the Western Hemisphere, the oldest about 12,000 years ago, and all American Indian people derive from those three migrations.

Until now, anthropologists thought there were two.

The three anthropologists, Joseph Greenberg at Stanford, Steven Zegura at Arizona, and Christy Turner at Arizona State, are preparing a paper for Science Magazine describing their discovery.

"I'm basically an anthropological linguist," says Greenberg. He began preliminary work on Western Hemisphere languages in the 1960s, formulating the theory then that there were three language groups.

The conventional wisdom holds that there are as many as 200 different language families. "The trend had been to break them up into more and more separate groups."

If one assumes that each language group is indicative of a separate migration over the Bering Sea Bridge, the overcomplexity makes any interpretation impossible.

"It's hard to draw any historical implications if you've got 200 separate families; it seems utterly unlikely that you can draw from that that you had 200 separate migrations. It just wouldn't make sense," he says.

"My method is drastically simple compared to what everyone else is doing," Greenberg says. "You look at the basic vocabulary words and they fall into place.

"Eight words, basic words, like the numbers 1 and 2, and certain parts of the human body, like 'eye', 'nose', 'tooth,' words like that. I just wrote down 25 languages in Europe, standard languages, and the interesting deviant ones like Basque and so on.

"By the time you get to the third word you've got the correct classification, and in fact, you've got the correct sub-groupings of the Indo-European languages.

"People don't believe it's that simple."

Using library sources, Greenberg found there were only three families. Nine-tenths of the hemisphere can be lumped into one family, which he simply calls Amerind.

A second group includes the Athabascan. They are located mostly in the Canadian interior, although some Athabascan tribes still live in northern California. The Apaches and Navahos apparently share the same language tree. This group is collectively called the Na-dene.

"They would be quite different linguistically and not related at all to this big group," he says.

The third group are the Eskimos and the people of the Aleutian islands, called by linguists the Eskimo-Aleuts. Their language is related to Japanese, Inu and Korean.

The group comprising the Amerinds probably arrived in North American about 12,000 years ago, and spread out, reaching as far as the tip of South America. The Na-dene came about 6,000 years ago, the Eskimo-Aleuts about 4,000.

Greenberg is putting all this in a book for the Stanford University Press.

In the spring of this year, he travelled to Tuscon to give a lecture, and there ran into Zegura. Zegura had been a student of Greenberg's when he was an undergraduate at Stanford in the '60s.

Zegura had been studying the literature of blood groups. "What I was looking for was to see if any of the baseline data was coincident."

While preparing a lecture of his own he had discovered that he could lump American Indians into three blood group families. They matched what Greenberg had shown as a language map. He told Greenberg what he had found, and also told him about Turner in Tempe.

Turner has spent 20 years studying teeth, excellent tools for the anthropologist because they are very hard and tend to survive when other parts of the body fall to dust. He has identified 30 distinct features of teeth, including several characteristics indicative of certain people. For instance, the first bottom molar in Europeans have two roots, while the same tooth has three roots in Asians.

After looking at thousands of teeth from the Americas, he concluded that there were three groups. He could trace the first migration to people who lived in the Lena River Valley of northeast Asia.

The Eskimo-Aleuts can be traced to the Amur River area of China.

The Na-dene may be a combination of the two, coming to the Americas between the other migrations. Other anthropologists believe they were the result of mixed marriages between the other two peoples, but Turner does not agree.

Changes in teeth take too long for intermarriage to produce the Na-dene teeth, he says.

The three groups he found closely match Greenberg's language map and the blood groupings found by Zegura.

Both Greenberg and Turner are fairly sure of their conclusions, Zegura less so.

"I pointed out a probablistic thing," Greenberg says. It is not likely that the three men, working independently on entirely different data, could come up with the same results unless those results were true.

Correlation does not prove causality, Zegura warns. The people speaking the languages today, for instance, may not be descendants of the same people. Nonetheless, he adds, perhaps he, Turner and Greenberg really have something.

—Joel Shurkin

Stanford Staff Development Courses

September through December 1983

WORKPLACE SKILLS DEVELOPMENT

Challenges of the workplace will be explored in the following courses, each of which is structured to develop skills helpful to effective work performance in many different kinds of jobs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore, please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Telephone Techniques—This workshop focuses on using the telephone and having an effective telephone personality. Topics include an overview of the skills required, tactful phraseology, and examination of issues and problems.

- Wednesday, 10-19; 1-3

Office Interaction: Getting and Giving Cooperation—Does your job include answering questions, giving information, assisting people who call or come to your office? This workshop focuses on how to make these interactions both efficient and productive. Participants will explore the ways that they and the people they work with experience the communication-problem solving process.

- Wednesday, 10-12; 9-11:30

Office Interaction: Working With Pressure—How to function at your best in spite of the pressure of continuous office interactions. Participants will examine ways to increase concentration and patience for effective workplace relations.

- Friday, 10-14; 9-11:30

Assertiveness Training—Assertiveness Training introduces verbal and nonverbal skills for handling uncomfortable situations. As a result of active involvement in this course, participants will be able to ask for what they want in clear statements, assertively deal with conflict on the job, maintain a feeling of self-worth while effectively dealing with manipulative demands, and make assertive decisions.

- Wednesday, 10-5; 1-5
- Wednesday, 10-12; 1-5
- Wednesday, 10-19; 1-5
  (Attend all sessions.)

Career Exploration Workshop assists staff members in making more effective career decisions. It consists of seven sequential one-hour workshops which provide methods for self-assessment (interests, skills, values, career motivations, interpersonal skills), information about Stanford career possibilities, and practice in decision making and development of action plans. Checking ideas against job market reality is emphasized.

Some of the tools used in the self-assessment process include the Strong-Campbell Interest Inventory Test, the Quick Job-Hunting Map, Firo-B, and problem-solving and values clarification exercises. Discussion includes reality testing of the kinds of skills the University looks for, the kinds of jobs on campus, and the personal qualities necessary to get ahead. Exercises on strategizing and decision making are used along with the development of short- and long-term career goals. Instruction and information on resume writing and interviewing are included, with information on the use of the Stanford Employment Department and its organization.

- To register, call Marilyn Gilla, ext. 7-0659.

On-The-Job Goal Setting—How can you focus your energies and skills more effectively to increase the satisfaction you get from your work, as well as the contributions you make? Susan Strong will provide practical steps for setting and reaching well-stated workable goals.

- Thursday, 10-13; 1:30-4:30

Skills Development Center—The clerical skills program upgrades skills of employees on their present jobs, helps them prepare for additional responsibilities, and provides clerical training specifically related to Stanford's policies and procedures.

For information about the clerical skills program, call Marilyn Gilla, clerical skills program coordinator, ext. 7-0659.

Is lack of typing skills getting in the way of effective use of your computer terminal? Marilyn Gilla teaches both beginning and intermediate keyboard skills for staff members starting to use a terminal. For information, call ext. 7-0659.

SPECIAL INTEREST COURSES

Employment Procedures and Record Keeping Made Easy

This workshop on employment procedures and record keeping, presents information about Stanford's employment process and an approach to record keeping and file management as it relates to the employment process for decentralized positions. Specific topics include an overview of the employment process, forms preparation, and setting up an effective record keeping system.

This workshop is for those who have administrative responsibilities in personnel matters (processing forms, record keeping) who want to streamline their personnel paperwork and record keeping, want pointers on how to fill out forms (Personnel Requisition-SU-9, Appointment Confirmation and Search Summary-SU-24), and want to get a quality job done in the least amount of time.

- Schedule to be arranged. Limited enrollment.
- To register, call Bea Tracy, 7-0657

SUPERVISORY DEVELOPMENT PROGRAM

The supervisory development program includes a two-session orientation to the personnel administration aspects of supervision, two intensive supervisory skills courses, and shorter workshops on specific aspects of supervision. All courses and workshops combine theory and practice and apply directly to participants' on-the-job experience.

Supervisory courses and workshops are given regularly through Staff Development. They may also be adapted to specific departmental needs and presented in departments. New workshops are developed to meet general and departmental needs.

Class size is generally limited and enrollments accepted in the order received. Classes often have a waiting list; therefore please inform us if you cannot attend a class for which you are enrolled.

- To register, call Bea Tracy, ext. 7-0657.

Fundamentals of Supervision—is a course in how to develop employee performance, establish effective supervisor-employee communication, and establish and maintain the supervisory role. Participants learn through discussion and practice of skills, incorporating new skills into their own supervisory style. An orientation meeting prior to the sessions introduces the basic principles on which the course is based.

Participation in the course requires at least three months of experience as a supervisor. Attendance at all sessions is also required.

Session topics are:

Session 1, Setting Job Standards
Session 2, Teaching a New Job
Session 3, Communicating about Performance
Session 4, Giving Recognition
Session 5, Identifying and Solving Performance Problems
Session 6, (Group Choice of Topic) Review

Fundamentals of Supervision (A)
- Tuesday, 10-4 to 11-15; 9-12

Fundamentals of Supervision (B)
- Thursday, 10-6 to 11-17; 9-12

Supervisory Problem-Solving—Five weekly three-hour sessions for supervisors who have completed Fundamentals of Supervision. You will increase your ability to handle the predictable and not-so-predictable problems involved in supervising others. Supervisory Problem-Solving emphasizes accurate identification of problems and approaches to solving them. The course focuses on joint problem-solving for such issues as conflicts and complaints and problem performance and behavior. Participants work to resolve on-the-job problems through discussion and practice.

- Monday, 10-21 to 11-21; 1-4

Effective Interviewing—introduces methods for making productive hiring decisions by getting sufficient appropriate information in interviews. The workshop is centered around practice exercises that are progressively more complex; participants will learn to plan and conduct interviews related to the specific responsibilities and duties of open positions.

- Wednesday, 11-16; 8:30-4:30

Managing Conflicts—which can and do occur in any work setting, and when well handled can renew motivation and be a catalyst for innovation. When ignored or mismanaged, however, conflicts can cause serious damage to morale, productivity, and well-being. Effective conflict management involves guiding the disputants to solve their own problems. In this workshop participants will learn how to find out the nature and scope of the conflict, how to elicit suggestions, and how to get agreement to an action plan while controlling bickering and outbursts without taking either disputant's side.

- Friday, 10-7; 8:30-4:30

Self-Control of Speaking Anxiety—If you are ready to break out of your scared-to-death frame of mind, Self-Control of Speaking Anxiety will help you develop qualities and techniques enabling you to speak with more ease. You will learn positive ways of controlling physical tension while you prepare and give presentations.

- Monday, 10-3; 8:30-4:30

Confident Speaking—This workshop is for staff members who regularly present talks as a routine part of their jobs. Special techniques to help you prepare, practice, and deliver your train of thought will be demonstrated and practiced in class.

- Monday, 10-10; 8:30-4
- Tuesday, 10-18; 1-5
- Tuesday, 10-25; 1-5
  (Attend all sessions.)

Giving Directives is a practical three-step procedure for giving directives of all kinds. Participants will also learn the specific effects of language on directives.

- Tuesday, 11-29; 8:30-4:30

Basic Attending Skills—Listening actively and intelligently is a major supervisory skill. In this workshop participants learn to follow what is being said, to ask open questions, and to paraphrase content, to reflect feeling, and to summarize. These skills, taught through demonstration, discussion, and practice, help supervisors and others to build relationships and bring about change.

- Friday, 10-21 to 11-18; 8:30-10:30

Stanford Staff Development Courses

September through December 1983

CONTROLLER'S OFFICE WORKSHOPS

The Controller's Office schedules these workshops throughout the year. For more information and-or the current schedule of workshops, call Alice Forbes, ext. 7-4531.

Course 1: Introduction to the Stanford Accounting System—(two two-and-a-half-hour sessions). For employees new to Stanford who monitor either departmental or auxiliary activity expenditure statements. The course includes the organization of the Controller's Office, discussion on account numbers, responsibility for the use of funds and record retention. Practical work includes practice in reading an expenditure statement and in forecasting for future results.

Course 2: Travel—(one two-and-a-half-hour session). For employees who need to understand the University's travel policy (Guide Memo 36.7) to complete travel and expense reports. The Travel Workshop summarizes travel policy, defines allowable travel costs, and provides practice in completing the necessary forms for Advances (SU-34A) and Expense Reports (SU-35).

Course 3: Equipment Administration—(one two-hour session). For employees who are new to the field of equipment administration as well as for those who want to "brush up" and-or need more information on the new computerized system. The emphasis of this workshop is on how to use the manual, forms and reports.

Course 4: Payroll-Personnel—(three two-hour sessions). For employees completing forms related to Payroll-Personnel actions and record keeping. This workshop includes a review of policies and procedures, and practice in completing all necessary forms.

Course 5: Payroll-Personnel Update—(one two-hour session). This workshop is planned for administrators and other interested employees to discuss specific topics involving the payroll-personnel system. Topics are announced each quarter.

Course 6: Fund Accounting at Stanford and How to Read Fund Statements—(two two-hour sessions). The purpose of this workshop is to teach interested employees the fundamentals of fund accounting as practiced at Stanford. The University's financial statements are discussed as well as fund statements and fund summary reports.

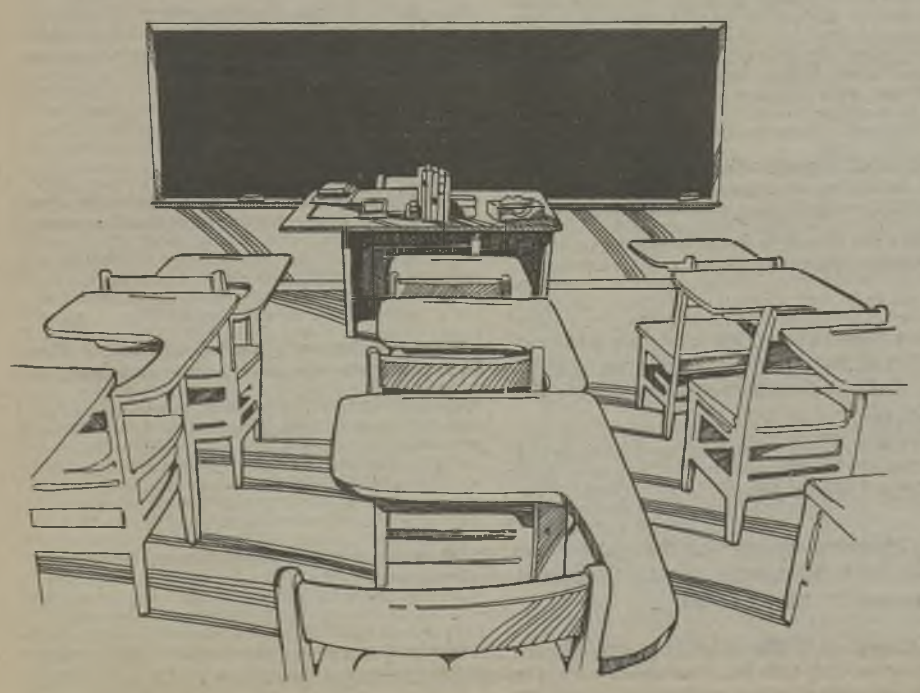
Course 7: Fundamentals of Grant and Contract Administration—(five two-hour sessions). This workshop is planned for administrators and others involved with the preparation of proposals as well as accounting procedures for expenditures, monitoring, and forecasting for sponsored research projects. Members of the Sponsored Projects Office will participate in the workshop. The sessions planned are:

1. Introduction and Overview of Definitions, Federal Regulations and the role of SPO.
2. Proposal Preparation.
3. Proposal Processing and Post-Award Administration.
4. Contract and Grant Rebudgeting, Forecasting, and Financial Management.
5. Grant and Contract Closeout, Updates, Issues, and Trends.

Course 8: Grant and Contract Administration Update—(one two-hour session). This workshop is planned for administrators and other interested employees to discuss current issues and problems in grant and contract administration. A specific topic will be chosen for each update session.

Course 9: Procurement—(two two-hour sessions). This workshop reviews the procurement process along with criteria for choosing the correct form amongst the SU-10, SU-11, SU-12, SU-13, SU-14, SU-15, SU-34A, SU-34B, SU-35, SU-40, SU-41, and SU-43.

Course 10: The Budget Process—(two two-hour sessions). Included in this workshop is the University's budget process, a discussion on how budget decisions are made, the budget calendar and production schedule, how to complete schedules A-E, their relationship to employee data sheets, and instructions on how to input data using the new on-line SPIRES budget system.



Courses from the Learning Assistance Center

The following courses have been developed by the LAC to respond to specific staff training requests. Each course combines classroom instruction and individual tutorials with the instructor. Class size is limited to provide for maximum participant involvement, and enrollments are accepted in the order received.

Writing II—For those who have taken Letters, Memos, and Minutes, and who wish to continue to develop their writing skills.

- Thursday, 10-6 to 12-1; 12:30-1:30

Effective Writing: Letters, Memos, Minutes—Is writing an increasingly important part of your work? In Effective Writing, participants review fundamentals of skillful writing, analyze and develop their writing style, and practice purposeful writing of letters, memos, and minutes. The class meets for one hour a week for eight weeks, and the instructor meets with each participant for five individual half-hour sessions.

- Monday, 10-3 to 11-28; 12-1

ESL I—Speaking and Understanding Conversational English—One hour per week of class, five 30-minute conferences, plus language lab. Practice in pronunciation and listening skills. Some work with English spelling as related to pronunciation of written words. Limited to 15.

- To arrange your first conference, call the Learning Assistance Center, ext. 7-2207.

Time Management—Is a day simply not long enough? This workshop helps participants discover where their time goes, set up a schedule and establish priorities, and become more effective at accomplishing what they decide to do. The class meets four times (one hour each time), and the instructor meets with each participant for three individual half-hour sessions.

- Wednesday, 11-2 to 11-30; 12-1

Principles of Copyediting—A practical workshop on copyediting will be offered on six consecutive Tuesday evenings. The course is designed for anyone wishing to gain expertise in the field. The instructor for the program is Karen Judd, production manager at Random House in San Francisco and author of *Copyediting: A Practical Guide*. Lectures will be complemented by copyediting exercises; participants will be expected to have a grasp of the fundamentals of copyediting. Sample copyediting tests will be given in the sixth session.

- Tuesday, 10-11 to 11-15. For more information, contact Bill Peabody at Bowman Alumni House, 497-2021.
- The registration deadline is September 23.

Courses from the Association for Continuing Education

The Association for Continuing Education delivers courses accredited by local colleges and universities. For more information call ext. 7-0657.

BUS 84S—Business English I—Instructor: Alice Stiebel. This is the first of a two-part, 4-unit course. Part II is offered Winter Quarter. A thorough review of the fundamentals of grammar and spelling needed to develop good English usage and writing skills. From the foundation of these basics, students will proceed to learn communication techniques appropriate for the specific needs of a business environment. *Prerequisite:* None. (2 Quarter Units)

- Tuition $96; book $20.84
- Monday and Wednesday, 9-26 to 11-30; 12-1

BUS 1AS—Principles of Accounting I—Instructor: Allen Lindsley. This is the first of a two-part, 4-unit course. Part II is offered Winter Quarter. An introduction to the theory and practice of accounting. Analysis of books of original entry and their relationship to the general ledger; accounting equation; classification of accounts; preparation of working papers; adjusting and closing entries; and financial statements as these relate to the service and business enterprise. *Prerequisite:* None. (2 Quarter Units)

- Tuition $96; book $34.72
- Tuesday and Thursday, 9-27 to 12-1; 12:20-1:10

MATH C103—Mathematics for Managers—Instructor: Frank Clauss. A basic course in the mathematics necessary for graduate study. Topics include algebra, graphing, functions, systems of equations, logarithmic and exponential functions, mathematics of finance, matrices, and introduction to differential calculus. *Required of all students without a similar college-level course in mathematics.* (2 Semester Units)

- Tuition $120; book $26.57
- Wednesday, 9-28 to 11-30; 5:30-8 p.m.

The Staff Training Assistance Program

The Staff Training Assistance Program provides reimbursement of tuition costs to $125 a quarter for courses and academic programs related to job performance. If tuition costs for a given quarter are less than $125, costs for textbooks and other required course materials can be partially or fully reinbursed. (If costs exceed $125 in a given quarter, departments may provide financial assistance beyond that available through STAP.)

Courses may be taken at Stanford or elsewhere. To receive STAP reimbursement a staff member completes a STAP form, available through Staff Development, ext. 7-0657. Supervisory approval is required.

- You must include a receipt and-or canceled check to be reimbursed.

Staff employment opportunities

Listed here are those job openings received by the Stanford and SLAC Employment sections last week before noon on Wednesday. This listing contains only the most recent listings. A complete listing of all employment opportunities may be viewed at Campus or SLAC (for listings coded JM) Personnel. The salary range information listed indicates starting salary. Some candidates (usually internal) may be made employment offers at higher salaries depending upon applicable experience.

To obtain an application or more information or to apply for positions not listing a contact person, call or visit Personnel at Old Pavilion, Serra and Galvez Streets, 497-1827, or SLAC Personnel, for jobs coded JM, 2575 Sand Hill Road, 854-3300, ext. 2353. *Stanford University is an equal opportunity employer through affirmative action.*

Exempt

44356-AW (JCC:1464) STU SERV OFFICER I: The Academic Standing Advisor respon for reviewing student records for deficiencies each quarter, advising students having academic difficulty, working w/ faculty, representatives fr Offc of Dean of Student Affairs,Financial Aids, Academic Info Ctr, Residential Edu, the Athletic Dept, & various other offcs; reviewing all petitions for late fee waivers, leaves of absence, overloads, 13th quarter, Pass/No Credit after deadline, etc; advising students about Univ academic & registration procedures; prov staff support for specified committees, arrange mtgs, taking minutes, etc; assisted by FTE & respon for supvsg 2 FTE; QUALIFICATIONS: excel commu skills; knowl of Univ academic regulations & procedures; ability to write minutes & reports of committee proceedings; good planning & organizational skills for managing heavy student traffic, committee activities & large volume of paperwork; exp w/ computer sys; supvry exp helpful.; C04; $1590-1983.

23725-AW (JCC:5192) COMPTG DOC WRITER II: Planning, outlining, writing, & preparing for pub. RLIN users' training mat'ls, references, manuals, eqpt manuals, explanatory papers; RLG program manuals; varied short info pieces; cover ltrs to pubs; copy ed or rewriting mat'ls fr/for other RLG staff; prep revs & update pkgs for current pubs; using computer word-processing sys to create pubs; coord w/ in-house style guidelines & procs; designing & overseeing creation of publications artwork; QUALIFICATIONS: skills in writing, rewriting, & copy editing, w/ emphasis on info gathering, source checking, awareness of audience & clear, simple expression; ability to produce clean drafts quickly; eye for formatting & attractive layout; consistence in style & usage; knowl of or willingness to learn computer word-processing sys to prep mat'ls; knowl of lib operations highly desirable; BA or comparable exp; approx 3 yrs' exp in prep printed descriptive or explanatory mat'ls; exp in DP environ desirable (programming not required).; C06; $1948-2441.

27180-LL (JCC:5596) LIFE SCI RES ASST II: Teaching, performance & preliminary interpretation of clinical echocardiography; teaching of these skills, as well as theory & physics underlying the method, to physicians in training is a significant part of the job; maintenance of smooth operation of the lab in all aspects & to deal effectively w/ diverse personalities; QUALIFICATIONS: undergrad univ degree; prior exp & a high level of skill in performance & interpretation of M-mode, two dimensional & Doppler echocardiography; completion of the exam as a Registered Diagnostic Med Sonographer expected; ability to teach physicians at various levels of med training required; organizational skills & ability to work smoothly under the daily stress of a busy time schedule is nec.; C06; $1948-2441.

14438-DS (JCC:8880) MISC PROFESSIONAL: Stanford Employment Experience Program Counselor; respon for facilitating the adaptation of minimally trained adults to Univ working environ; effectively utilizing counseling tech for the purpose of motivation, conflict resolution, transitional training & implementation of performance evaluation activities; develop & implement interview & screening procedures for all program applicants; coord all job training activities at specific job sites; identify training objectives for participants in conjunction w/ job site supvrs & prov liaison serv between Univ & community job training agencies; draft vacancy announcements in addition to developing mat'l for program newsletter; QUALIFICATIONS: exp developing & administering skill tests; exp working w/ the economically disadvantaged & handicapped; BA degree or equiv exp in counseling, psychology or related field desirable.; C04; $1590-1983.

31554-LL (JCC:5108) PROGR SCIENTIFIC II: Asst in applications programming tasks, the developmt & maintenance of software, & facilities support; aid the Mgr to establish & maintain the functionality of existing GSB software used in res, teaching, & various admin projs; consulting for users; computer instruction to user community; writing of sys documentation; prov programming support to other programmers; asst GSB sys programmer in maintenance & creation of high-level-lang sys software; prov some end-user consulting on microcomputer use, etc; QUALIFICATIONS: prev work under the TOPS-20/TOPS 10 operating enviorn w/ substantial exp in FORTRAN, Pascal, & BASIC programming in non-trivial applications, incl substantial exp w/ LINK, compiler obj-time sys, & run-time symbolic software debuggers (the various DDTs) essential; exp w/ DBMS essential; programming exp in high-level langs, incl C, SAIL, & LISP expected; knowl of MACRO assembler, database structures, & statistics is essential; non-smoking area.; C06; $1948-2441.

40396-JB (JCC:6406) SCI & ENGR ASSOC I: Work closely w/ scientists & engrs to develop precision optical/mechanical mechanisms & related components for use in ultra-high-vacuum beam lines; respon for design, engrg considerations, construction & installation phases of projs; producing the required working drawings per standard design/-drafting practices; distribute work & supv work of other designers & drafters; QUALIFICATIONS: AA degree min; completion of a 2 yr design/drafting curriculum; min 3 yrs practical exp in design & machine shop fabrication practices essential, w/ demonstrated ability to produce working hardware; exp in ultra-high-vacuum design & fabrication tech very helpful.; C99; $1948-OPEN.

31560-VW (JCC:1972) UNIV MANAGER II: Dir of Alumni Relations; reports to Assoc Dean for External Relations & is respon for all alumni activities of GSB; hosting spec events such as Alumni Wkend & class reunions, overseeing the activities of 23 alumni chapters, counseling alumni in career planning & placement areas, working closely w/ GSB faculty in developing advanced mgmt edu, & advising editor of qrterly alumni magazine to insures that it meets the alumni needs & interests; manage a budget of $450,000, etc; QUALIFICATIONS: demonstrated ability to conceptualize, develop & implement organizational strategies; strong ability to commu effectively w/ sr. mgrs, staff members, & peers; excel verbal & written skills; exp in program admin & budget mgmt; exposure to MBA program desirable.; C08; $2590-3313.

40398-JB (JCC:2028) ADMIN SERVICES MGR I: Affirmative Action Officer; resource for staff & supvrs; admin of staff appts, performance evaluations & salaries; salary equity studies; admin of personnel policy guidelines & funding agency contractual requirements; hands-on development of computerized listings; property control & mgmt; property retirement; property reporting; surplus property admin; maintenance of real property descriptions & costs; admin of commu sys, offc eqpt & furnishings; QUALIFICATIONS: 4-8 yrs dir & supvs'l exp w/ personnel sys, personal property sys & real property sys, preferably in a federally-funded environ; hands-on exp w/ microcomputer-based data & data-mgmt sys highly desirable.; C06; $1948-2441.

40399-JB (JCC:2120) ACCOUNTANT I: Versatile Accountant reporting to Budget Administrator; respons range fr basic bookkeeping functions to problem analysis: statement verification & resolution; maintenance of 100 accts which represent one major contract, a grant & an operating budget; prep of statements for lab staff responsible for budgeted monies; prep of annual close-out reconciliation & establishment of new fiscal yr accts; trouble shooting for staff-related acctg problems; using computerized acctg sys; QUALIFICATIONS: BA in acctg w/ related field exp or 5 yrs of exp resulting in acquired knowl of acctg theory & practices; computer sys exp as well as micro computer exp highly desirable; knowl of SU acctg sys helpful.; C05; $1756-2202.

40554-VW (JCC:2262) FIN/MGMT ANALYST II: 8:30-5:30; respon for all F.P.P. financial reporting functions; supv/coord consolidation of income, expense, activity, accts receivable & other info on FPP depts into a comprehensive financial report on a monthly basis; analysis of this data in written form to accompany monthly distribution of the report & follow-up analysis to highlight potential problems & solutions; reporting on indiv physician performance; participation in budget development, analysis of cost reimbursement alternatives, & expense analysis; QUALIFICATIONS: Bachelor's degree in business or economics w/ 5 yrs of work exp or equiv; MBA desirable; excel analytical skills; excel verbal & written commu skills; knowl of complex physician billing & acctg sys desirable; knowl of data processing concepts w/ some exp w/ spread-sheet software; some knowl of statistical analysis; open to change & willing to learn new skills.; C07; $2221-2875.

SLAC jobs

95668-JM (JCC:2262) FIN/MGMT ANALYST II: Asst in preparing annual budget documents for submittal to DOE; review & analyze cost performance against budget; participate in special analyses as required; asst in long range planning process; establish group/proj budgets; development & maintenance of computer models; QUALIFICATIONS: BS or equiv exp in Business Admin, Economics or technical discipline w/ some acctg bkground; MBA desirable; ability to commu both orally & in writing.; C07; $2221-2950. APPLY AT SLAC

94622-JM (JCC:8940) MISC CLERICAL: Electronic Production Controller; inventory & store electronic kits; pickup & deliver mat'ls; maintain accurate records & files using computer terminal; work w/ engrs, physicists, graphic & electronic techs & fabricators; prov assistance to outside vendors; QUALIFICATIONS: high sch'l or equiv coursework/exp in offc & genl sci related subjs; prev training and/or exp in component identification, recognition of basic electronic schematics, parts fabrication drawings, etc; computer terminal exp; able to qualify for govt driver's license.; B15; $1590-1673. APPLY AT SLAC

94779-JM (JCC:2058) ADMIN ASST I (N): Conduct manpower planning & scheduling; generate & authorize purchase & work orders; maintain personnel records; participate in salary reviews & performance evaluations; operate computer terminals in VM using XEDIT & SCRIPT; edit operational procedure manuals; initiate & compose corresp; prep & verify dept bi-monthly payroll; QUALIFICATIONS: several yrs sec'l exp & performing moderately complex admin functions; exp w/ computer terminals usage; ability to commu effectively both orally & in writing; typ 60; ability to assume respon & exercise good judgment.; B16; $1673-1755. APPLY AT SLAC

95640-JM (JCC:6646) SR S&E TECH - ELECTRON: TMS Unit; all shifts; operation & testing of high power klystrons; perform measurements of high power pulsed microwave signals utilizing direct & indirect monitoring & detecting methods; conduct performance tests & evaluate tube conformance to established standards; asst in training; QUALIFICATIONS: AA degree in electronics or equiv Electronic military training desirable; several yrs exp in troubleshooting, test & repair of eqpt; specialized training in microwave theory & pulse techniques acceptable for some required exp; good math skills essential; ability to commu effectively both orally & in writing.; A34; $11.52. APPLY AT SLAC

94324-JM (JCC:7082) STOREKEEPER II: TMS Unit; independently perform supply tasks incl stocking items, inspections, inventories incoming shipments, wait on customers, etc; QUALIFICATIONS: several yrs exp in storekeeping; mechanical aptitude & ability to organize records & mat'ls; able to qualify for govt driver's license; ability to meet physical requirements of job.; A22; $ 8.66. APPLY AT SLAC

Nonexempt

44357-BP (JCC:2058) ADMIN ASST I (N): Staff the Committee on Undergrad Studies & its Subcommittee on Distribution Requirements, as well as the Committee on Academic Appraisal & Achievement & its Subcommittee on the Evaluation & Improvement of Teaching; act as liaison to Registrar's Offc staff to inform them of committee issues which may affect offc policies & procedures; update computer file on certified distribution requirement courses; edit related sections of Univ info bulletins; serv as assistant to Univ Mgr III to be hired; prov bkup to central offc personnel as needed; QUALIFICATIONS: prior committee exp desirable; good commu skills, both verbal & written; text editing exp helpful; knowl of or desire to learn about student info sys; knowl of Stanford helpful; send appl/resume to Dana Curry, Old Union Rm. 133.; B16; $1673-1755.

42857-BP (JCC:2462) OFFICE ASST III: Fixed term, 9/1/83-9/1/84; schedule heavy calendars for Dir & Deputy Dir of AIS; open & screen mail; prov clerical support for various groups & committees w/in AIS; scheduling mtgs; prep & distribution of agenda mat'ls; providing monthly status reprots on inventory; asst w/ prep & planning of dept functions; prov bkup support to receptionist & other secs; typ orders, forms & memos; QUALIFICATIONS: high sch'l grad & equiv work exp; excel verbal & written commu skills; exp w/in a high-level organization; knowl of searching & updating in SPIRES for the yrly AIS sys plan; send appl/resume to L. Williams, Polya 163.; B11; $1308-1376.

29765-BP (JCC:2462) OFFICE ASST III: 50%, 1-5pm; prov sec'l & clerical support for Governor's Corner Housing Facilities offc; organize mat'ls & files; accurate record keeping & atten to detail; prep corresp; answer & screen telephone calls; prep & process personnel, payroll & other univ forms; input work orders via HP3000 computer terminal; relay info to Custodial Supvr & custodial staff; QUALIFICATIONS: typ 50; knowl of genl offc routine & use of offc machines; willingness to learn HP3000 (computer terminal); accurate typing skills; effective public relations; ability to file accurately, handle corresp & maintain various files/recordkeeping sys; send appl/resume to Glenn Carroll, 345 Lane L.; B11; $654-688.

36588-BP (JCC:2470) OFFICE ASST IV: Financial Aid Specialist; coord schedule for staffing reception window & phones; hire, train & supv student employees who perform these functions; screen mail for Advising & awarding section; asst in the review & awarding process of financial aid applications; coord grad work-study; bkup person for reception activities; QUALIFICATIONS: typ 45; proficiency in CSS Uniform Methodology help; excel oral & written commu skills; organizational skills & problem-solving abilities essential; high energy level & an ability to think well under pressure in an enviorn characterized by a continuous & high level of activity; send appl/resume to Roberta Johnson, 214 Old Union.; B14; $1512-1590. 1

11748-PM (JCC:2512) OFFICE ASST III-SPEC: Receptionist; takes messages; refers callers to approp resources; answers questions regarding Clinical Res Ctr policies & procedures; opens & sorts mail; drafts, types & proofreads corresp utilizing Wang word processor; maintains files; edits, proofreads & corrects manuscripts, drafts; orders & maintains offc supplies, etc; QUALIFICATIONS: typ 60-70 accurately; exp w/ or some knowl of word processing sys(training & further exp offered); familiarity w/ med terminology helpful; genl offc exp, editing & proofing; send appl/resume to Dr. Philip Berger/-Meredith Berger, PAVAMC, Bldg 4, Ward 4C2.; B12; $1376-1442.

40395-BP (JCC:2562) SECRETARY III: Sec in X-Ray Div of Stanford Synchrotron Radiation Lab; serv as Proj Sec for SEPFF construction program; prep bkground mat'l for periodic mtg, reports, & res proposals, incl some writing & editing; supvn of proj files; typing scientific manuscripts; answering corresp & composing memoranda for signature; receive calls & visitors; QUALIFICATIONS: typ 60; ability to compose ltrs, memo & reports independently or fr genl instruction; 2-4 yrs of sec'l exp; able to typ correctly & transcribe fr a machine; genl knowl of, & interest in sci or med res desirable; send appl/resume to G. S. Brown, SSRL Bldg 120.; B14; $1512-1590.

900-BP (JCC:2596) SECY II-SPEC: Sec to faculty members at new Ctr for the Study of Lang & Info; typ corresp, manuscripts, & reports; set up & manage files; prep Univ forms; answer phones; make appts; manage schedules; make travel arrangements; run errands; use computer sys for text-editing & message networking; QUALIFICATIONS: typ 60; good sec'l skills, well organized; physically able to run errands; exp w/ computers or word-processors highly desirable; send appl/resume to Joyce Firstenberger, Ventura 16.; B12; $1376-1442.

32612-PM (JCC:2672) MED SERV ASST III: 8:30-5pm; performs clerical duties nec for clinic; patient appts; requisitioning lab & radiology exams; heavy telephone commu w/ patients, physicians & other depts; works under the direction of Clerical Supvr in the Eye Clinic; interviews patients for financial & insurance info to properly register patients into Faculty Practice Program; QUALIFICATIONS: typ 30-35; 1 yr exp in a med setting; work in a fast pace, high pressure environ; able to interact w/ public, physicians & employees; biligual ability desirable; med terminology essential; computer knowl helpful; send appl/resume to Vicki Stewart, A367 Boswell Bldg.; B11; $1308-1376.

30906-PM (JCC:1747) LIBRARY SPEC I: 50%; performs duties in the Binding & Finishing Div of Acquisitions Dept; hand letters spine info on books & pamphlet covers; selects approp info regarding author, title, subtitle & call number; corrects old spine lettering info when nec, using an electric stylus & transfer foil; typ binding tickets; assigns bindery control numbers; maintains binding ticket file cards; sorts items for various binding styles; QUALIFICATIONS: typ 45; ability to print by hand clearly & evenly; ability to use electric stylus; commu well in English, both orally & in writing; knowl of one or more foreign langs, preferably French, German, Portugese or Slavic langs; send appl/resume to Bob Johnson, Green Lib, Room 223 (497-3152).; B10; $624-654.

33506-PM (JCC:1771) LIBRARY SPEC IV: Operational control of the Circulation/Stacks Maintenance dept during the 104 hrs/wk the lib is open; hire, train, supv, schedule & evaluate staff in dept; dir the work of the dept; emergency on-call; develop procedures for circulation, reserves & stacks maintenance; ensure staff development opportunities; coord support for Info Desk; maintain statistics & admin records of dept & coord data gathering surveys as required; QUALIFICATIONS: typ 45; strong leadership/supvry skills; strong commitment of public serv; supvry exp; lib exp; excel commu skills; problem solving skills; exp in Circulation/Stacks desired but not required; contact Valerie Su, 497-6831.; B16; $1673-1755.

36409-BP (JCC:2058) ADMIN ASST I (N): Able to quickly familiarize w/ all complex govtl regulations; donor/Univ restrictions pertaining to loans; possess sufficient acctg knowl to understand all acctg aspects of Univ loan sys; maintain all controls & trails; understand the functioning of Student Loan Computer Sys to control, maintain & develop sys; substitute for supvr in her absence; familiar w/ work of each member of the section (8 FTEs) to asst and/or substitute when other section members are out of the offc; asst in prep of reports, maintenance of manuals, monitoring changes in regulations & outside interest rates, balance & reconcile all controls to G/L & the compuer sys; conduct interviews w/ students, monitor 'holds' & their releases, etc; QUALIFICATIONS: typ 45-50; requires excel organizational skills & problem-solving abilities; working knowl of acctg & data sys; excel verbal & written commu skills; ability to work independently & to work effectively w/ people; send appl/resume to Jean Kitaji, 104 Old Union.; B16; $1673-1755.

36406-BP (JCC:2210) ACCOUNTING ASST III: Respon for assisting in the review & financial reconciliation of capital eqpt acquisitions on approx 250 contracts & 750 grants involving 5000+ active budget accts; asst dept mgrs to locate & resolve difference & recommends course of action that is consistent w/ Govt & Univ policy in order to bring accts into balance; reviews & approves SU-48 & SU-13s; interface w/ Surplus Property Sales on disposal problems; plans, organizes & schedules academic depts/non-academic depts for govt mandated biennial capital equip inventories; prov data entry sys support for 2 Acctants via IBM PC; prov support for month end & yr-end closing activities; QUALIFICATIONS: 3 yrs at lower level or equiv exp level in acctg; working knowl of SPIRES, WYLBUR, EASYMARK, VISICALC, use or ability to acquire this knowl quickly (daily use of

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Staff employment opportunities

Nonexempt jobs

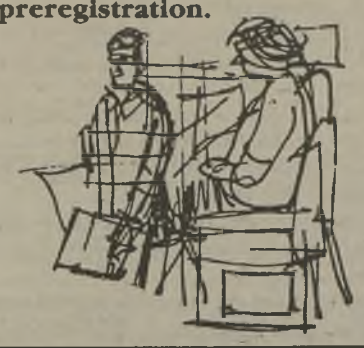
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computer terminal required); excel commu skills & good, strong acctg bkground & knowl; send appl/resume to M. Willis, 200 Encina Hall.; B14; $1512-1590.
41771-PM (JCC:2454) OFFICE ASST II: 50%, 8-12; prov major staff support to Dir of Alumni Relations which requires exceptionally accurate clerical skills, knowl of basic offc procedures, strict attention to detail & highly developed interpersonal skills, all of which will be exercised in preparing various Univ forms, heavy telephone & personel contact w/ alumni, keeping track of details & reservations for several simultaneous alumni events & taking respon for & working indepednently on a given proj; QUALIFICATIONS: typ 60; good typing skills nec because of heavy work demands & pressures; strong telephone & commu skills; work well w/ other members in the team; send appl/resume to Erika Kaltenbach, Room 112 Crown Quad.; B09; $594-624.
33737-BP (JCC:2454) OFFICE ASST II: Answer phones; receive Ctr visitors; sort & deliver Ctr mail; organize bulletin board mat'l; operate the postage meter; order supplies; prep requests as needed for the Work Info Ctr & other plant services' attentn; update Newsletter mailing list & asst w/ large mailings; prov bkup support to the other offc secretaries; genl filing; respon for lib recordkeeping; QUALIFICATIONS: typ 40, excel telephone answering skills, as well as inter-personal skills; some academic bkground preferred; send appl/resume to Estela Estrada, CROW, Room 30, Chemistry Bldg. or call 497-1994.; B09; $1187-1248.
43601-PM (JCC:2462) OFFICE ASST III: Prov typing & genl clerical support for Pediatrics Dept incl housestaff affairs & clerkship program, Grand Rounds notices, transcription fr dictaphone & genl corresp; asst in coord of Pediatric Core Clerkship for approx 14 students every 8 wks; asst in arranging student orientation program; solicit & collect evaluations fr students & faculty; asst AA & Chief Resident in organization of housestaff training program; QUALIFICATIQNS: typ 55-60; genl offc skills; excel commu skills, both orally & written; med terminology or ability to learn; ability to transcribe fr dictated tapes; contact: Toni Whytoshek, Med Ctr S332, or call 497-5131.; B11; $1308-1376.
39297-BP (JCC:2462) OFFICE ASST III: 50%; serv as contact w/ residence staff on admin matters & refers students' quesitons about housing & other Univ matters, prepares newsletters; schedules facilities; order supplies; liaison w/ custodial staff; prep work orders, channels space requests for guest rooms, audiovisual eqpt; maintains rosters, keys, resident agreements, & offc files; asst residence staff in coordinating arrival arrangements; QUALIFICATIONS: typ 45; thorough knowl of, & ability to perform, offc procedures, practices, & methods; good commu skills; accuracy w/ numbers & details; a sensitivity to residence programming & ability to prov program support; send appl/resume to E. Hiyama, 311 Old Union.; B11; $654-688.
39296-BP (JCC:2462) OFFICE ASST III: Serv as receptionist; answer phones; open & sort mail; may be respon for scheduling appts w/in established guidelines; typ corresp, rpts, forms, etc; arrange layout of mat'l for printing; perform accurate finished typing of corresp, manuscripts, & forms; maintain offc inventory & order supplies; maintain a variety of files; compile & select data fr a variety of sources & organize data in specific rprts; QUALIFICATIONS: typ 45; knowl of & ability to perform offc procedures & methods; ability to coop fr students, staff & faculty of all ethnic bkgrounds; good oral & written commu skills; accuracy w/ numbers & detail; ability to evaluate admin procedures & prov useful feedback; send appl/resume to R. Whitney, 311 Old Union.; B11; $1308-1376.
30271-PM (JCC:2470) OFFICE ASST IV: Writes, edits & approves brochures for Program promotion; supv contract personnel doing typesetting, graphic design & printing of promotional & educational mat'ls for Program; coord edu'l mtgs & conferences; make application for CE & CME credit for upcoming conferences to approp agencies & maintain mandated files; typ, proof, edit & file corresp, projs & plans as requested; respon for Program mass mailings w/in region; respon for grant budget mgmt; QUALIFICATIONS: some travel required to assist w/ major edu'l Program presentations; flexibility essential; excel commu skills; frequent contact w/ public & multiple professionals; must be self-directed, self-starting, capable of setting own priorities & work schedule; send appl/resume to Cecele Quaintance/Trish Berlin, Boswell A346, 497-5763.,; B14; $1512-1590.
29341-BP (JCC:2470) OFFICE ASST IV: Coord all TV Network scheduling & facilities requests; dispatches student production assistants & tech directors as required by facilities requests; respon to find student replacements, often on short notice, to cover all production requests; schedules studios for Stanford & outside use & respon for seeing SITN meets all production needs; first line public phone interface, etc; QUALIFICATIONS: excel overall organizational skills; complete knowl of SITN organization & production serv or equiv; excel public relations/phone skills; send appl/resume to J. Lemon, 450 Durand Bldg.; B14; $1512-1590.
16027-PM (JCC:2478) OFFICE ASST IV: 50%, 8-12; respon to the co-directors of Program for full coord of interdisciplinary program w/ relevant Univ depts & offcs; prov specialized support to the participating faculty & teaching fellows; supv program's reading room; control admin of annual budgets; prep memo, reports, & all program info; coord & oversee the work of teaching fellows; hire & supv work study & other clerical personnel; QUALIFICATIONS: typ 50; bilingual skills (Spanish & English); ability to commu effectively in both verbal & written form w/ wide range of students, faculty & staff; exp and/or edu'l bkground that is conducive to working w/ faculty & program participants; knowl of Univ policies & procedure desired; send appl/resume to J.Porras/-J.Leckie, c/o Chicano Fellows Program,; B14; $756-795.
31555-PM (JCC:2562) SECRETARY III: Prov full range of admin & sec'l support for Assoc Dean for Academic Affairs; familiar w/ a variety of Univ procedures & policies; commit supvr's time; plan & organize calendar; block off prep time for mtgs & appts; make travel arrangements; draft letters/reports independently or fr oral/written instructions; coord & carry out all logistical activities related to Faculty Advisory Board, Dean's Advisory Group, & GSB Faculty Mtgs; organize & maintain filing & retrieval sys; QUALIFICATIONS: typ 65-70; sec'l exp w/ proven ability to handle respon independently, show judgment & discretion in dealing w/ sensitive situations; excel writing, editing, & typing skills; knowl of or willingness to learn word processing, text editing, printing; send appl/resume Norma Sandy, GSB Rm. 24, 497-3012.; B14; $1512-1590.
44411-PM (JCC:2596) SECY II-SPEC: Prov full range sec'l duties to 5 faculty members; typ course mat'l, genl corresp, heavy technical manuscripts (equations w/ Greek & Math symbols); handle mail & phones; primary emphasis of this position is typing of tech manuscripts, manuscripts, abstracts & other reports; QUALIFICATIONS: typ 70; excel grammar, spelling & proofreading skills; familiarity w/ text editing/word processing helpful; send appl/resume to Barbara Fairlie, Mathematics Dept., Bldg. 380.; B12; $1376-1442.
12781-PM (JCC:2596) SECY II-SPEC: 75%; 9-3:30; prepares tech Petroleum Engr reports for publication as well as for theses & dissertations; preparation incl initial entry into NBI wordprocessor; proper formatting of reports for publication medium essential; checks manuscript for proper grammar, punctuation, consistency as appropriate; typ class notes & exams; QUALIFICATIONS: typ 75; wordprocessing, typing multi-page reports, preferably scientific/-technical; send appl/resume to Ted Sumida, SUPRI, Noble 117.; B12; $1032-1082.
32637-PM (JCC:2738) MED SERV ASST IV-PREM: 7:45-4:30; respon for the day to day handling of patient inquiries either by phone, in person, or thru written corresp; requires intensive knowl of physician billing, Medicare, medical insurance billing as well as training in data retrieval for patient acctg & FPP policies & procedures; intensive patient contact; maintain accurate acctg & billing info or pàtient accts; QUALIFICATIONS: 1-2 yrs college edu w/ business & commu emphasis plus a min of 3 yrs exp in business offc dealing w/ public or equiv combination or both; knowl of commercial & govt insurance billing procedures, & understanding of FPP policies; knowl of med terminology & procedures; typ 35; contact:Lois Christopherson, 525 Univ. Ave. Suite 400, Palo Alto, CA 94301, or call 328-5461x18.; B15; $1590-1673.

New employee orientation

The next orientation sessions for new employees will be held at 9 a.m. Tuesday, Sept. 13, and Sept. 20 in Room 131, Tresidder Union.

The sessions are open to all new employees without preregistration.



Bargaining unit

5430-TC (JCC:5638) LIFE SCI TECH I: TMS Unit; 9-6; injects mice w/ tumor cells; monitors tumor sizes by serial caliper measurements; under supvn, treats mice w/ drugs, X-rays, & hyperthermia; maintains accurate records of treatment times, dosages, temperatures, etc; aids in analysis of data by using microprocessor; maintains tumor cell bank & routinely subcultures cells; maintains bibliography files & performes file searches; QUALIFICATIONS: 1 yr college biology & physics (or applicable exp); some knowl of BASIC & mathematical skills would be an asset; neatness & ability to maintain files essential.; A18; $ 7.88.
33250-VW (JCC:5638) LIFE SCI TECH I: TMS Unit; asst w/ res on infections in human subjs caused by herpes viruses, w/ emphasis on varicella-zoster virus infections; performance of radioimmunoassay FOR IgG, IgM & IgA antibodies to VZV in human serum; maintenance of tissue culture lines: melanoma cells, human fibroblasts; make media, buffers, other routine reagents according to standard protocols; help clean & maintain lab eqpt performance of routine cellular immunity assays unsign purified peripheral blood cells stimulated w/ viral antigen; keep routine records of patient samples; help to contact patients to be enrolled in clinical studies; QUALIFICATIONS: bkground in biological sci useful; prev lab work requiring sterile tech desirable; shares eqpt, mat'ls & work space w/ other workers; commu w/ a variety of people.; A18; $ 7.88.
29880-TC (JCC:5786) LAB ASST I: TMS Unit; 50%, 8:30-12:30; conduct genl lab work; make solutions; measure cellular dimensions; greenhouse maintenance, planting, & watering; simple clerical & recordkeeping in lab; xeroxing; logging of chemicals & use of instruments; QUALIFICATIONS: min exp in lab connected w/ biology desired; self discipline; capability to follow instructions w/ precision.; A13; $ 7.01.
29881-LL (JCC:5794) LAB ASST II: TMS Unit; asst in field & lab sampling programs; collect , sort , & analyze plan & soil samples; collect & summarize environ data; asst in greenhouse maintenance & field plots; asst in lab growth chamber experiments w/ SO2; QUALIFICATIONS: prev work w/ plant mat'l; must have flexible schedule & be able to work w/ little supvn.; A16; $ 7.52.
42615-TC (JCC:5835) ANIMAL CARE ASST I: TMS Unit; Fri-Tues, 7:30-4pm; basic husbandry & care of lab dogs & other species cleaning cages, watering, feeding, conducting daily observations for signs of illness or disease; work w/ a variety of animal species; report signs of animal illness/death to Supvr on prescribed forms; conduct assigned duties on wkends under a reduced level of supvn; QUALIFICATIONS: prefer extensive prior exp in care & maintenance of lab animals; requires manual dexterity, personal habits of cleanliness, neatness & organizational ability; ability & willingness to follow written & oral instructions; capable of handling & restraining most species of lab animals w/out undue fear; some mechanical ability; thorough knowl of lab animal care/husbandry tech at a level consistent w/ that required for AALAS certification at the Asst Lab Animal Tech level; a physical exam is required at the Div's expense, as are immunizations if required.; A12; $ 6.87.
18941-DS (JCC:7308) FOOD SERVICE WORKER II: TMS Unit; 6:30-3:30; sets up breakfast & sack lunch buffets; serv & supplies food during meal serv; cleans dining room after breakfast; gets utensils for serv & serves hot food during lunch; makes coffee; keeps dining room looking neat & attractive; freshens flowers; replaces ctr place mats & salts & peppers; washes tables & chairs; does heavy house cleaning at quarter breaks; QUALIFICATIONS: able to speak, read & understand English; able to stand for long periods; must wear a prescribed uniform incl closed in shoes; must work w/ student helpers.; **A10; $ 6.54.**
42881-TC (JCC:5644) LIFE SCI TECH II: To assist in the isolation & characterization of genes specific to B & T lymphocytes; to prep RNA & DNA fr tissues & cultured cells, recombinant phage & plasmids; in vitro labeling, DNA sequencing, Northern & Southern blotting; some lab organizational duties such as ordering & indexing; QUALIFICATIONS: exp in handling RNA & DNA preferred.; A24; $ 9.08.
29888-TC (JCC:5786) LAB ASST I: TMS Unit; 8:30-5:30; approx 80% time to be spent in maintenance of a colony of experimental insects; involve growing plants & feeding them to the immature growth stages of the insects; sorting & organizing insect pupae in prep for adult emergence, caring for adult insects, mating adult insects & collection of their eggs; cleaning of plant pots & cages for insects; 20% time to be devoted to learning & performance of various routine biochemical lab procedures: solution making, column chromatography, gel electrophoresis, etc; QUALIFICATIONS college level exp w/ biological sci; relevant tech employment exp helpful; capable & well-motivated.; A13; $ 7.01.

20 universities join SPIRES data base management system for administration

Soon after Stanford chose SPIRES as the data base management system for its administrative systems development, the Center for Information Technology undertook establishing a SPIRES Consortium of universities.

The 30 institutions that held licenses to use SPIRES were extended invitations. Twenty have joined, announced Jon Sandelin, CIT's general manager for the SPIRES Consortium—well above the number required for a viable consortium. Among the new member universities are UC-Berkeley, Princeton, the University of Illinois, the University of Michigan, and the University of Waterloo.

The purpose of the Consortium is to increase the sharing of applications developed with SPIRES and to provide better underlying support to installations using SPIRES. Such support includes installation, consulting, and documentation improvements. The support is funded by member institution annual fees.

Future plans include extending membership to universities not now holding SPIRES licenses. A brochure describing SPIRES and the Consortium has been prepared, and sessions on SPIRES are being held at various conferences. Further information about SPIRES is available from Sandelin.

Accidents and injuries

Accidents and Injuries Occurring During Weeks of Aug. 22-Sept. 2

Type of Accident or Injury	Number of Incidents	Days Lost
Impact with object	5	(0, 0, 2, 1, 0)
Cut/puncture	1	0
Squeeze/crush	2	(0, 0)
Animal/insect caused	1	0
Biologically caused	2	(7, 7)
Fall from same level	2	(0, 1)
Lifting	1	3
Temperature related	1	0

Kennedy defends tuition scholarship benefits for children of employees

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home and being exposed to a new environment is integral to their educational experience. In addition, some students want . . . to attend a single sex college instead of a coeducational one, or a liberal arts college instead of a university, etc.

"Tuition scholarship benefits are not offered, and have never been offered, as compensation. No cash or other benefit is provided to other employees, their spouses, or children who do not participate in such programs.

"Furthermore, there is no benefit if the eligible person elects not to attend college. The beneficiary is not usually the employee but a child who has no obligation to the institution. In fact, some institutions offer such scholarships to the children of deceased or retired faculty."

Kennedy noted that "portable tuition has always been codified as a scholarship." With the enactment of the 1954 tax code, a portable tuition remission program was the only example used of a scholarship which was excluded from taxable income.

In testimony to the House Committee on Ways and Means Aug. 1, Vice Chancellor Jeff Carr of Vanderbilt University noted that 27,974 students received tuition remission benefits at 1,033 colleges and universities in 1981-82. While most programs are offered only at the home campus, approximately 4,300 students are eligible for portable tuition grants offered by 218 colleges and universities.

"This number has remained fairly stable over the last two decades," Carr said. "Under the terms of H.R. 3525, the financial assistance provided to this group of young Americans would be terminated at the end of the next academic year. . . .

"Estimates indicate that the revenue realized from the taxation of these scholarships will be small, perhaps less than $5 million. We suggest that the value to the nation, measured concretely by productivity and taxable income of the citizens educated under these plans, is many times greater. . . .

"In these days when many young scholars are drawn to other, more lucrative careers, tax-free tuition scholarships make it possible for those with children to remain in higher education without precluding basic educational opportunity for their children."

Carr testified on behalf of the American Association of University Professors, the American Council on Education, the Association of American Universities, the Association of Catholic Colleges and Universities, the Association of Jesuit Colleges and Universities, and the National Association of Independent Colleges and Universities.

Massy calls for Stanford West review

continued from page 1

view Board, the Planning Commission, and the City Council all questioned certain features of the project. The University is ready to reexamine the design and configuration of Stanford West, Massy said, but before doing so "we would first want to join in fresh discussions to establish a set of acceptable guidelines before adding to the considerable investment we have already made.

"Stanford and Palo Alto have devoted hundreds of hours to Stanford West. It seems entirely appropriate that we work further to create housing that fits within the policies of both parties.

"We appreciate your past consideration of this proposal and look forward to further discussions."

The University proposed to build 1,100 units on a site zoned for 1,600 units, providing three times the open space required and covering only half the area allowed for this purpose.

Oak Creek condos

Plans to convert the 759 unit Oak Creek apartment complex into condominiums have been called off.

Both Stanford University and Oak Creek associates, a partnership holding an option to acquire Oak Creek for conversion, have agreed that the conversion is no longer financially feasible, according to Frank Morrow, Stanford's director of real estate.

The conversion, first proposed in 1981 by Scott Carey, a partner in Oak Creek Associates, would have been the largest in Peninsula history. The complex is located on Stanford's land along Willow Road, not far from the University's Medical Center.

Massy: 'Stanford West can't proceed'

Following is a Sept. 1 letter to Mayor Betsy Bechtel of Palo Alto from Stanford Vice-President William F. Massy of Business and Finance.

During the past several weeks, we have been engaged in a careful review of the Stanford West housing proposal. President Kennedy, various vice-presidents, and staff members have been involved in that analysis.

We have regretfully concluded that Stanford West cannot proceed under the conditions that have been proposed. As I reported to you in July, the extra-jurisdictional conditions are unacceptable to the University, and the $12 to $15 million cost of the below-market-rate and mitigations requirements gave us great concern. That basic position, and those serious concerns, remain unchanged.

At the same time, we recognize the urgent need for housing at Stanford and in this area. We believe that the 46-acre site is well suited for this purpose, as evidenced by the fact that it is zoned for housing and designated as such in Palo Alto's Comprehensive Plan. We want to continue to work toward that end if Stanford West can be freed of the extra-jurisdictional conditions and excessively high costs. We are prepared to seek mutually-acceptable solutions to those issues.

The ARB, the Planning Commission, and the Council all questioned certain features of the project. We stand ready to re-examine the design and configuration of Stanford West in an effort to meet those concerns. Before undertaking such a study, however, we would first want to join in fresh discussions to establish a set of acceptable guidelines before adding to the considerable investment we have already made.

Stanford and Palo Alto have devoted hundreds of hours to Stanford West. It seems entirely appropriate that we work further to create housing that fits within the policies of both parties. We appreciate your past consideration of this proposal, and look forward to further discussions.

Rental housing

HOUSING AVAILABLE

□ **Oct. 8 to Christmas or mid-Jan. (flex):** Furn. 2BR/2BA 1st fl. condo. unit avail. for visit. scholar. Den w/single sofabed, frpl., Indry, fenced patio, pool, jacuzzi, car nego. 5 mi. fr. Stanf. $1,200/mo. util. incl. Dep. & refs. req. Adults only, no pets. Call (415) 36-1492.

□ **Beg. Sept. 1:** 4BR/2BA hse. w/AEK, frpl., grdnr. Cul-de-sac, midtwn Palo Alto. $1200/mo. + util. + $1200 sec. dep. Pref. family, nonsmokers. 1 yr. lease. Call Mary Ash, (415) 363-4749, day; 493-3501 eve. & wknd.

□ **Sept. 1 thru early Feb. '84:** Furn. 3BR hse. in french RIVIERA, Le Lavandou, 25 mi. frm. St. Tropez. Dbl. LR, wash, dishwshr, TV, fenced yrd., phone. Quiet, overlooking sea. $900/mo. or $250/wk. util. incl. Call (415) 858-2490 or Paris, (1) 727 78 31.

□ **Sept. '83 to June '84:** Fully furn. 3BR/2BA hse. on 1/3 acres in Los Altos. 7½ mi. fr. campus. Nonsmokers. $1200/mo. incl. grdnr & water. Call (415) 961-6669.

□ **Mar. 10 to Sept. 15, '84:** Charming furn. 3BR/2BA story hse. on classic st. in old Palo Alto. Lrg. study (4th BR), DR, AEK, solarium, small library, pool. Less than 1 mi. fr. Stanf. $1650/mo. incl. grdnr & pool serv. Call 497-2664 day; 321-9213 eve.

□ **Beg. Sept. 1:** Deluxe furn. garden flat on campus for nonsmoking female. Lrg. bed-sitting rm, study and BA. Light cooking. $450/mo. Call Mrs. Berger, 493-6770 eve.

□ **NOW:** Lrg. furn. 1BR junior apt, 6th floor w/nice view & balcony. $620/mo. all util. incl. Call 854-3300 ext. 3214 day; 857-9553 eve. & wknd.

□ **Sept. 26 thru Jan. 7, '84:** Completely furn. 1BR and 2 den apt. for SUBLEASE to visit. prof. Pool, whirlpool. 10 min. fr. campus. $800/mo. Call any time, (415) 326-8224.

□ **NOW:** Quiet, fully furn. ROOM in priv. hse. in Palo Alto for nonsmoker foreign or U.S. male grad. student or scholar. Incl. util., linens, bedding, Indry facil. Priv. entrance, phone. $235/mo. Call (415) 493-3589.

□ **NOW:** Partly furn. 2BR hse. in Redwood City. Newly remodeled ktchn, BA. Frpl, hrdwd floor, garage, fenced yrd. 4 mi. fr. Stanf. $800/mo. incl. water & trash pickup. Yr. to yr. rental. Call Mrs. Klumpp, 323-5049.

□ **NOW:** Furn. ROOM in pleasant Palo Alto hse. w/full hse. sharing privileges. Older grad. student or visit. prof. pref. $300/mo. incl. util. Call Teddy, 497-6701, day; 326-4740, eve.

□ **Beg. Sept. 15:** Part. furn. 3BR/2BA hse. in La Honda. AEK, 3+ acres. Children, pets OK. $600/mo. Call (415) 856-2351, eve.

□ **NOW:** 2 ROOMS for rent. One w/BA, $220; one w/shared BA, $170 nego. Bike to campus. Women. Nonsmokers pref. Call 854-0344.

□ **Dec. '83 to Jan. '84 (flex):** Fully furn. 3BR/2BA campus hse. Fam. rm., study, grdnr. Poss. reasonable rent for (outdoor) pet care. Call Martin, (415) 497-5881, day; (415) 493-4958, eve.

□ **Sept. 20 to Dec.:** Fully furn. 2BR/2BA Pearce Mitchell apt. (incl. dishes, linens). Near campus ctr., pool, jacuzzi. $800/mo. Call 497-3025, day; 322-3301, eve.

□ **NOW:** S. Lake Tahoe Vacn./Ski HSE, furn. 2BR, frpl, color TV, phone. Adj. Natl Forest, walk to lake, Tahoe Keys. $120/wknd, $200/wk. (5 days). Call Janine, 497-2501, day; (408) 739-3141 eve.

□ **NOW:** Tahoe-Donner condo. 3BR/loft/2BA, spa, pool, tennis, golf, stable. $350/week, $140/wknd. Call Bienenstock, 493-8649.

□ **Immediately, length indef.:** Oak Creek studio conv. to Med. Ctr. and Stanf. Five pools, gym, sauns, steam BA, jacuzzi, tennis crts, clbhse. Call Jack Albrecht, 497-4939, day; 857-1885, eve.

□ **Early Oct. '83:** 2BR/2½BA 2 story custom designed hse. in Crescent Pk., Palo Alto. Den, frpl, 2 car garage + attached storage rm/wrkshp. Wshr, dryr, dshwshr, frdge, elect. stove. $1600/mo. + dep. Grdnr & watr paid. 1-2 yr. lease req. Call Andrew Cochran, (415) 493-6795.

□ **Oct. 1, '83 to June 15, '84:** Lrg. furn. 1BR apt. for SUBLET. Dwntwn Palo Alto. ½ mi. to Stanf. $500/mo. Call Tim, 324-9183 or 321-1246.

□ **Beg. Sept. 24:** 2BR/1½BA 2 story condo. LR, din. area. Low util./maint. fee, patio, BBQ. 15 min. to Stanf. $800/mo. One yr. lease. Call Vicky, 497-2551, day; 964-5018, eve.

□ **Regularly available:** 1 & 2BR furn. & unfurn. apts & twnhses, & 3BR/2BA hses in Palo Alto & Menlo Pk., in good nghbrhds. Close to campus. No fee. $595 to $1200/mo. Call Shirley, 856-6049 or Jane, 968-4957.

□ **NOW:** HAWAII (Kauai), lovely, furn. 2BR/2BA twnhse, pool, tennis, priv. club atmosphere. $50/day. Call Howarth, 591-5190.

For $6 your brief housing ad will appear in two issues. Make the check out to SCHOA and send it with your ad to the Rental Housing Listing Services, P.O. Box 7772, Stanford, Calif. 94305. The deadline is Wednesday for the following issue. Questions should be directed to Dorothy, 857-0414 or Araya, 329-8828.

HOUSING NEEDED

□ **Beg. Oct. 1:** Resp. single prof. woman seeks apt. or cottage. No children or pets. Call Margaret, 967-5593, day; 965-7276, eves except Tues. & Wed.

□ **Beg. Sept. 24 for 5 wks:** Semi-retired professional man seeks hsesit or short-term rental of studio or 1BR apt. Nonsmoker, excellent refs. Call 322-5143.

□ **NOW:** Neat, responsible woman seeks HOUSESIT. Great w/plants & pets, excellent refs. Call Karen, 324-1780, day; 484-1116, eve.

□ **NOW:** Artist recently returned frm. Europe seeks quiet cottage or studio. Willing to accept some responsibilities. Call 851-1282 day.

□ **Beg. Sept.:** Medical worker avail. for HOUSESIT. Good w/pets and plants. Good refs. Call 497-5597 day; 854-7824 eve.

□ **Academic yr. '83-'84:** Four v. resp. & academic, nonsmoking Stanf. seniors seek 3-4BR hse. Pref. in faculty ghetto or close to campus. Will housesit if for whole academic yr. Refs avail. Can move in as early as Sept. 15. Write Barbara Levenson, 251 Scripps Ct., Palo Alto, CA 94306 or Vance McMahan, 5706 Tecumseh Circle, Houston, TX 78751.

□ **Nov. 1 thru April 30, '84:** Prof. fr. Weizmann Inst. in Israel on sabbat. at nearby research Inst. seeks 3BR furn. hse. for self, professional wife, & 3 teenage children. Call Barbara Harley, 856-8444.

□ **Academic yr. '83-'84:** Female grad. student, nonsmoker, avail. for HOUSESIT, short or long term, and/or exchange work for rent. Loves pet, good refs. Call Gillina, (212) 473-7967 COLLECT if necessary.

□ **Beg. Sept. 1:** Physician (single) joining Stanf. Med School seeks 1-2BR unfurn. hse. or cottage. Enjoys rural atmosphere. Resp., quiet, refs. Around $750/mo. Call Mike or Peggy, 349-2774 eve.

□ **Beg. Oct. '83 for academic yr:** Visit. prof. fr. England seeks 1BR furn. apt. Bike/bus distance fr. campus. Call 497-4377 day.

□ **Sept. 15 for 1 yr:** Finnish post-doc and family (wife, 2 children) seeks furn. 2-3BR hse. nr. Stanf. for rent/lease or EXCHANGE for furn. 2BR apt. in HELSINKI nr. universities. Call 858-2948 or write Martti Mantyla, Vattuniemenkatu 16 b A 9, 00210 Helsinki 21, Finland.

Carpools

Carpooler wanted, Dublin-San Ramon-Pleasanton area to Stanford (Medical Center), M-F, hours flexible. Also open to carpooling with Fremont-Milpitas residents convenient to I680 or 237. Call Ed at 7-5569.

Drivers needed for carpool from Noe Valley-Castro-Haight area to Stanford, M-F, 9-6. Call David Thompson, ext. 7-2454 (861-8149 after 7:30 p.m.).

Carpool partner wanted; San Bruno to Stanford, 8-5, M-F; call Bella 7-6941.

Personnel update

All regular faculty and exempt staff currently appointed 50 percent time or more should receive this week (mailed to the home) an information packet detailing recent revisions to the faculty and exempt staff base retirement plan, now called the Stanford Contributory Retirement Plan, according to Manager of Benefits and Records Jeannie Thomas.

Eligible employees who do not receive this packet by Friday, September 9 should contact the Office of Benefits and Records at 7-1778.

General information about the revised plan and more detailed information on the 46 investment options are available on request from the Office of Benefits and Records and SLAC, at the open meetings, and directly from the five investment companies. (Addresses and telephone numbers for these companies are listed in the information packet).

"Because the revised plan offers many more choices and much more flexibility than the current plan, and because the revised plan is very complex," says Thomas, "I recommend strongly that the following steps be taken before individuals make decisions about participation and selection of investment options":

1. Read carefully all materials which are being mailed to eligible faculty and staff members. These materials include: memo, summary plan description, brochure, and comparison chart;

2. Request additional literature from the Benefits Office about the investment companies (three families of mutual funds and two insurance companies) that the individual faculty and staff members determine are of interest. (The materials mailed to eligible faculty and staff this week contain a return request postcard for this purpose; additionally, this information will be available at the open meetings described below).

3. Attend one of the open meetings which will be held on campus, at SLAC, and at the Medical Center.

4. Request the prospectuses of the funds that are of interest by contacting the Benefits Office on campus (7-1778) and at SLAC (2357). (Receipt of a prospectus is a prerequisite for investing in a particular fund).

5. Consider scheduling an appointment with a representative from any of the companies available through this plan, (call 7-2241; see schedule below). Also, individuals having specific investment questions may call the companies by using the toll-free and collect telephone numbers which are published on the comparison chart included in the information packet.

6. After completing the above steps, contact the Benefits Office (campus employees, 7-2241 or 7-1778 and SLAC 2357) to schedule an appointment to execute the necessary paperwork for enrolling in SCRP or changing investment options.

Open meetings will be held to give more information about the revised plan and how to develop strategies for taking advantage of the new investment options it offers. The meetings are scheduled as follows:

Date	Time	Place
September 13, 1983	9 a.m. to 10:30 a.m.	SLAC Auditorium
September 20, 1983	10 a.m. to 11:30 a.m.	Annenburg Auditorium
September 21, 1983	5:15p.m. to 6:45 p.m.	Fairchild Auditorium
October 3, 1983	10 a.m. to 11:30 a.m.	CERAS 112
October 10, 1983	1 p.m. to 2:30 p.m.	CERAS 112

In addition to the open meetings on campus, representatives from the three families of mutual funds: (Fidelity, Scudder, and Vanguard) and the two insurance companies (Prudential and TIAA-CREF) will be available at the Office of Benefits and Records (Old Pavilion) for personal consultation. Company representatives will be available as follows:

Date	Time
September 22-23	8 a.m. to 5 p.m.
October 20-21	8 a.m. to 5 p.m.

Appointments will be made on an individual basis; please call 7-2241 to schedule an appointment with any representative(s).

Thomas says "I encourage all faculty and exempt staff members to attend the open meetings and to talk with representatives from the investment companies. The Office of Benefits and Records will make every reasonable effort to assist eligible participants to obtain sufficient information to make sound investment decisions. However, specific investment choices are individual decisions, requiring considerable attention and study and, in many cases, consultation with a financial advisor."

'83-'84 basketball tickets offered

Now, there is one more reason to buy a Stanford basketball season ticket.

The Golden Spike Restaurant in the Stanford barn will provide a coupon good for a complimentary dinner with each Stanford faculty-staff basketball season ticket purchased. The faculty-staff basketball season ticket has always been a good bargain, in that there is a special half-price offer for University employees and their families. And now there is a free dinner after the game.

"This is just one more way Stanford basketball wishes to make it easy for Stanford employees to enjoy Stanford basketball," Associate Head Coach Bruce Pearl said. "And it provides an excellent and inexpensive opportunity for some genuine family entertainment."

The 1983-84 schedule includes North Carolina (twice in the Stanford Invitational), UCLA, Oregon State, and the rest of the Pacific-10 slate. Tickets may be purchased at the Athletic Department Ticket Office.

Letters to the editor

Another view on feminism's 'failure'

Editor, *Campus Report*:

After reading Robert Greer Cohn's letter in the Aug. 10 issue, I would like to offer a different analysis of the "failure" of the feminist movement.

If there has been failure it is because, by and large, men have refused to change. One primary, even essential, presupposition of the feminist movement was and is that for there to be substantial equality and liberation, men will have to change. This was a misplaced trust. I will even grant that it was Utopian. Furthermore, since men control the institutions of our society, these, too, have not changed.

To blame the women's movement for "the drastic decline in the quality of public schools," for the lower scores on aptitude tests of "children of full-time working mothers," and for other shortcomings listed by Prof. Cohn, is patently unfair and misleading. Do not men have some impact on the lives of their children?

To portray women as the ones responsible for the "basic fabric of our culture" and the spiritual nurture of our children is a convenient way of setting them up for the blame when something goes wrong. Such a set-up fails to place any responsibility for culture and nurture with men. How so? Any analysis of a national dilemma which fails to take into account half of the population must be immediately suspect.

Recently I read *Moscow Women* by Carlen Hanssen and Karin Liden, in which the authors interviewed thirteen Russian women, revealing how jobs outside the home were simply added to traditional duties, child-care was inadequate, economic discrimination was rampant. The more I read the more I had a feeling of deja vu: how similar to America. I have no doubt that even Marxism can be foiled by intransigent male chauvinism. At least one thing is different: in Russia independent political groups are illegal: in America they are not, so there is some hope for American women.

Another hope is that slowly but surely men, like me, will change. Thanks to the feminist movement, I long ago gave up those sexist stereotypes and condescending beliefs so treasured by Prof. Cohn. I have also given up my need to dominate, to control, and to fear women in roles other than "traditional." As a result, I am convinced that I will be a better husband, a more caring parent, a more sensitive employer, and a more responsible citizen shouldering my share of the "home truths" in the future.

I think Prof. Cohn has greatly underestimated the tenacity and creativity of feminists, just as he has superficially analyzed the effects of the feminist movement on our culture.

Alexander M. Jacobs
Lutheran Campus Ministry

Parking 'misdeeds' irritate commuter

Editor, *Campus Report*:

It is unconscionable for Stanford University to charge its employees for parking. Now Stanford is furthering this misdeed by raising said parking fees on the "A" lots. Then compounding this injustice—this time the committee on parking and transportation is now directing its misdeeds at the hapless "C" lot habitues—indeed a veritable punishment for not wishing to (or more than likely unable to afford) pay "A" lot fees.

The committee's plan is to turn Plum Tree Lane (a "C" lot) into an "A" lot, forcing the "C" people to move further away from their workplace to the next furthest "C" lot (Museum Way, which during the academic year is full to capacity). Plum Tree Lane is full all year round; Museum Lane will now have to carry the load of the displaced parkers.

Who really suffers here? Stanford? The committee on parking and transportation? No. Guess who? You and me . . . the workers; the staff; the backbone of the University; and quite a large number of students also.

J. Mullen
Computer Science

Financial Aids seeks new campus jobs

Financial Aids has mailed information on employing students during the coming year to departments that have hired them in the past, according to Assistant Director Mary A. Roberts.

More than 60 percent of Stanford's undergraduates receive some combination of financial aid, so job opportunities on campus are very important to them.

Roberts asks that Student Employment Request forms be returned to Financial Aids by Sept. 1. Early listing will ensure a large pool of applicants from which to choose.

For more information or to get Employment Request forms, call Beverly Gibbs at the Financial Aids Student Employment section, 497-9765.

Two senior research positions in radiology

Two Senior Research Associate Positions in the X-Ray division of the Stanford Synchrotron Radiation Laboratory will be available starting after December 1, 1983.

The Research Associates will initiate programs in X-Ray research at SSRL, such as X-Ray scattering, X-Ray absorption spectroscopy, Mossbauer Spectroscopy, and X-Ray interferometry. The Research Associations will also initiate instrumentation development for the PEP undulator beam line and the SPEAR X-Ray scattering beam line, as well as for the existing experimental stations. The Research Associates will also consult with members of the user community to optimize usage of the X-Ray facilities of SSRL.

Candidates should have at least three years demonstrated research experience in X-Ray research and-or X-Ray instrumentation development, as well as experience in experimental data acquisition and control.

Interested candidates should submit a Curriculum Vitae and the names of three references to: Prof. George Brown, Stanford Synchrotron Radiation Laboratory, SLAC Bin 69, P.O. Box 4349, Stanford, Calif. 94305.

The closing date for applications will be Nov. 1, 1983.

Stanford University is committed to equal opportunity through affirmative action in employment and we are especially eager to identify minority persons and women with appropriate qualifications.

Alexander George, John Barton comment on Soviet action against airliner

The "uncivilized, barbaric" shooting down of a Korean commercial airliner by the Soviets probably will not develop into a major international confrontation, according to Stanford Prof. Alexander George, an expert on Soviet-American relations who studied Soviet response to perimeter reconnaissance flights in the 1950s.

While the incident should be condemned in the strongest possible terms, "I don't see this leading to a war-threatening crisis," he said in a campus interview Thursday, Sept. 1.

The "glimmering of some progress" in U.S.-Soviet relations, as marked by the recent grain deal, may be called into question, but "I don't see this becoming a spectacular confrontation," George said. U.S. Secretary of State George Shultz, on leave as a Stanford faculty member, has indicated he will proceed with previously planned meetings with Soviet officials.

While Soviet air defense policy "varies over time," George said, it is "very unusual and very severe" to shoot down an apparently innocent aircraft allegedly intruding national airspace.

Ordinarily, interceptors will signal that an intrusion has occured, then attempt to get the intruder to land, or even fire a warning shot before shooting down an unarmed aircraft.

"A critical question is whether or not they gave a clear, recognizable warning," George said. "Most likely, they will claim they gave warning, whether true or not." U.S. monitoring may disclose whether or not any voice warning was given. Tipping of wings or zooming toward the intruder would be more difficult to prove.

The response to such incidents reflects national policies of the countries involved, he said. The growing use of reconnaisance satellites and other forms of intelligence gathering has made the question of airspace intrusion less salient.

In April 1950, the Soviets shot down a Navy Privateer aircraft in the Baltic, George recalled. During the Cuban missile crisis, the inadvertent intrusion of a U.S. reconnaisance aircraft near Siberia caused a great deal of anxiety, he added. A U.S. reconnaisance plane was shot down over Cuba during the same crisis, contributing to President Kennedy's decision to issue an ultimatum to the Soviets.

"The context in which such an incident occurs is often an explanation for what happens later," he said. Recently named a MacArthur prize fellow, George is the author of a new book on *Managing U.S.-Soviet Rivalry: Problems of Crisis Prevention.*

Prof. John Barton, an expert on international law, said the shooting was "clearly wrong," even if the plane strayed into Soviet airspace.

But he noted that there had been similar incidents in the same region in previous years.

Strong protests may ultimately lead to an apology, but this is usually a long time coming and "conceivably may never happen," he said. Any compensation for the victims takes years and "usually is disguised, with no formal admission of responsibility," Barton said.

Dr. Hatem to speak on v.d. eradication

Dr. George Hatem, the physician credited with eradicating venereal disease in China, is to speak at the Medical School on his first trip back to the United States in 45 years.

"The Conquest of Venereal Disease in the People's Republic of China" is the subject of Hatem's lecture, Sept. 15 at 5 p.m. in room M112.

The lecture is free and open to the public.

Hatem went to China in 1933 to study tropical diseases but stayed on to provide medical care after joining the fledgling communist movement in 1936.

In 1954, Hatem began a venereal disease eradication program. No new cases of syphilis or gonorrhea were found in a followup survey conducted in 1964.

A graduate of the University of North Carolina, Hatem's specialized interests in dermatology and venerology had been put aside to cope with general urgent health problems during his early years in China.

Now a resident of Peking, Hatem has a Chinese family and is known in his adopted country as Ma Hai Teh, "Virtue from Overseas." He is visiting Stanford during a a six-month U.S. stay.

Staffers sponsor talk on wardrobe planning

Chris Conlan of Casual Corner (in the Stanford Shopping Center) will speak on "The Versatile and Inexpensive Wardrobe" from noon to 1:30 p.m. Tuesday, Sept. 13, in Tresidder's Room 282.

Her talk, sponsored by the Stanford Staffers, is free to all staff members.

Flu shots at Cowell

The flu shots to be provided free to all Stanford employees who want them, beginning Friday, Sept. 23, will be given at Cowell Health Center.

Employees who want vaccine for A-Brazil, A-Philippines, and B-Singapore types of influenza may come to Cowell between 1:30 and 4 p.m. each Friday, beginning Sept. 23. Pregnant women must have their doctor's permission.

Jewish services set this week

Jewish High Holyday services will be held in two places on the Stanford campus Wednesday, Thursday, and Friday, Sept. 7-9.

Liberal services under the leadership of Rabbi Ari Cartun will be held from 8 to 10 p.m. Wednesday, Sept. 7, and 10 a.m. to 1 p.m. Thursday, Sept. 8, in Memorial Auditorium.

Conservative services under the leadership of Jack Morganstein are scheduled for 8 to 10 p.m. Wednesday, Sept. 7; 8 a.m. to 1 p.m. and 8:30 to 10 p.m. Thursday, Sept. 8; and 8 a.m. to 1 p.m. Friday, Sept. 9.

Fall tennis lessons

Tennis lessons (six pupils per group) will again be offered to graduate students, staff, and-or their families on weekday mornings or Saturday mornings. Players are grouped by ability in these classes taught by Dick Gould's staff. Call 497-1160 on weekday mornings to receive detailed printed information and registration form. Lessons begin the week of Oct. 1.

Have a chat with FBI chief Friday

William Webster, director of the Federal Bureau of Investigation, will be available for informal discussion at 12:15 p.m. Friday, Sept. 9, in room 190 of the Stanford Law School.

All interested members of the Stanford community are invited to attend.

Webster was appointed director of the FBI by President Carter in 1978. Before that he served on the U.S. Court of Appeals Eighth Circuit and was a federal judge and attorney for Missouri's Eastern District.

His appearance is sponsored by the Stanford Law Forum and the Stanford Law School.

Reopening scheduled

The Stanford University Museum of Art and the Stanford Art Gallery are closed for the summer.

The Museum will reopen on September 20, the Art Gallery on October 4.

Mnookin receives APA commendation

Robert Mnookin, Stanford professor of law, received an award for distinguished contribution to child advocacy from the American Psychological Association Division of Child, Youth and Family Services Aug. 29 at the APA's annual convention in Anaheim.

Donald Routh, president-elect of the division, noted that Mnookin has substantially advanced our understanding of the enormously complex relationships among child, family, and state; in each instance, his analysis has been directed toward establishment of sensible and just policies designed to promote the welfare of children and families."

Mnookin received both undergraduate and law degrees from Harvard, and later held a clerkship under Justice Harland of the U.S. Supreme Court. After private practice in San Francisco, he joined U.C. Berkeley, where he was the first director of the Childhood and Government Project. He came to Stanford in 1980.

His articles on foster care, indeterminacy in child-custody adjudication, and bargaining in divorce are considered classics in family law.

1983 Clearinghouse open for business

Approximately 1,500 Stanford students, staff, and faculty will be looking for off-campus housing in September when the 1983-84 academic year opens.

The Clearinghouse, a nonprofit, student-run service to help new arrivals to find housing, is seeking rental houses, apartments, rooms in family homes, and houses to share.

There is a minimal fee for the first month's listing, with renewal free of charge. Call 497-3906 to list a rental at the Clearinghouse.

Besides listings of places to rent, the Clearinghouse will run the Clearinghouse Hotel, where students live while looking for permanent quarters. It also provides information on local community services and businesses for those who are new to the area.

The Clearinghouse opened for business Sept. 1 with a staff of student volunteers. Both homeowners and realtors are welcome to list rentals.

Information on local community services will be available as well as *Life off the Farm*, a complete guide to dining, shopping, transportation, recreation, entertainment, and housing in surrounding towns.

Calendar

Calendar items should be delivered in writing to Jean Miller, University Events and Services, Press Courtyard, Santa Teresa Street, by the Wednesday, 12 days before the beginning of the week in which the events occur. The next deadline is Wed., Sept. 14, to cover the week of Mon., Sept. 26, through Sun., Oct. 2. Calendar items are entered into CIT's IBM computer and may be examined by anyone. Type ADMIN INFO PUBLIC EVENTS.

TUESDAY, SEPTEMBER 13

Stanford Staffers Presentation: "The Versatile and Inexpensive Wardrobe" by Chris Conlan of Casual Corner. Noon-1:30 pm. Rm. 282, Tresidder Union. Free.

SUNDAY, SEPTEMBER 18

University Public Worship: Preacher: R.G. Hamerton-Kelly, Dean of the Chapel. 11:00 a.m. Memorial Church.

EXHIBITS

"Propaganda Posters of Two Revolutions". Features over 40 posters from the Russian Revolutions and Civil War, 1917-1922, as well as the German Revolution of of 1918-1919 and the German elections of 1920. M-F, 11 a.m. to 4 p.m. Hoover Memorial Exhibit Pavilion. June 8 - Jan. 31.

The Art of Literature: California Authors and Their Printers. A retrospective look at California literature and fine printing, 1860 to present. On the occasion of the first American conference of Assn. Typographique Internationale. Rotunda and Gallery: Green Library. Aug. 1 - Oct. 5.

Sculpture and Paintings by Amelia Solomon. Upper Lobby of Tresidder Union. Sept. 1 - Oct. 1.

Back Roads and Wilderness. Black and white photographs by James Loveless. Bechtel International Center. Sept. 2 - Sept. 30.

DATE DUE

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